Port Master Plan Update Project

(UPD #EIR-2017-035) (SCH No.2017031070)

Final Program Environmental Impact Report (Volume 3 of 4)
Appendices A Through M

December 2023

PORT of SAN DIEGO

Port Master Plan Update Project

(UPD #EIR-2017-035) (SCH No.2017031070)

Final Program Environmental Impact Report (Volume 3 of 4)

Appendices A Through M

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December 2023

20200051.01

Appendix A

Notice of Preparation (NOP)

San Diego Unified Port District
P.O. Box 120488
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NOTICE OF PREPARATION
of a
DRAFT ENVIRONMENTAL IMPACT REPORT

PROJECT TITLE: Port Master Plan Update (UPD #EIR-2017-035)

APPLICANT: San Diego Unified Port District

LOCATION: Port of San Diego (All Planning Districts)

REFERENCE: California Code of Regulations, Title 14, Sections 15082(a), 15103, 15375

The San Diego Unified Port District (District) will be the lead agency for preparing a program environmental impact report (PEIR) for the Port Master Plan Update (PMPU or proposed project). The District is soliciting input and feedback from various agencies, stakeholders, and the public pertaining to the scope and content of the environmental information that will be included in the PEIR. For certain agencies, this may be germane to statutory responsibilities in connection with the proposed project. An agency may need to use the proposed project's PEIR when considering its permit or other approval for the proposed project. The project description, location, and possible environmental effects are contained in the attached materials.

Because of time limits mandated by state law, your comments should be sent at the earliest possible date but no later than 30 days after receiving this notice. **Comments regarding environmental concerns will be accepted until 4:30 p.m. on Monday, May 1, 2017,** and should be mailed to San Diego Unified Port District, Planning and Green Port, 3165 Pacific Highway, San Diego, CA 92101 or emailed to: mmedel@portofsandiego.org.

A public scoping meeting and open house regarding the proposed PEIR will be held on Wednesday, April 12, 2017, from 5:30 p.m. to 7:30 p.m. at the San Diego Unified Port District Administration Building, Training Room, 3165 Pacific Highway, San Diego, CA 92101.

For questions about this Notice of Preparation, please contact Mayra Medel, Senior Planner, at (619) 686-6598.

Signature: _____ Date: March 30, 2017

Jason H. Giffen
Assistant ~~Vice~~ President, Planning and Green Port

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NOTICE OF PREPARATION
of a
DRAFT ENVIRONMENTAL IMPACT REPORT
for the
PORT MASTER PLAN UPDATE

(UPD #EIR-2017-035)

Publication of this Notice of Preparation (NOP) initiates the San Diego Unified Port District's (District's) compliance with the California Environmental Quality Act (CEQA) for the Port Master Plan Update (PMPU or proposed project). The NOP is the first step in the preparation of the program environmental impact report (PEIR). It describes the proposed project and is distributed to responsible agencies, trustee agencies, cooperating federal agencies, and the general public. As presented in State CEQA Guidelines Section 15375, the purpose of the NOP is "to solicit guidance from those agencies as to the scope and content of the environmental information to be included in the EIR." Additionally, opportunities to comment on the Draft PEIR will be available during public circulation. The District is the CEQA lead agency, and also the project applicant/proponent.

PROJECT SUMMARY

The planning area of the PMPU encompasses approximately 2,403 acres of land[1] and 3,535 acres of water. The PMPU would provide the official planning policies of the District consistent with the general statewide purpose, for the physical development of the tide and submerged lands (District Tidelands) conveyed and granted in trust to the District, as well as acquired uplands. In accordance with the California Coastal Act[2] (Coastal Act) and Port Act,[3] the PMPU would:

- Control the allowable land and water uses within the District;
- List known "appealable" projects;[4] and
- Include goals and policies that would implement the broad policies of the Coastal Act, as well as shape the characteristics of development, coastal access, recreation, and environmental conservation throughout the District's jurisdiction.

The PMPU would contain six elements that would apply across District Tidelands, covering the following areas:

- Land and Water Use
- Natural Resources

[1] This includes approximately 670 acres of land that is currently leased to San Diego International Airport.
[2] The Coastal Act is codified in California Public Resource Code § 30000 et seq.
[3] The Port Act is codified in California Harbors and Navigation Code Appendix 1. (Available at https://www.portofsandiego.org/document/about-port-of-san-diego-documents/7473-san-diego-unified-port-district-act-revised-2016/file.html or the Office of the District Clerk.)
[4] Coastal Act §§ 30711 and 30715.

- Mobility
- Coastal Access and Recreation
- Resiliency and Safety
- Economic Development

Additionally, the planning area would be divided into 10 Planning Districts (PDs):

- PD 1: Shelter Island
- PD 2: Harbor Island
- PD 3: Embarcadero
- PD 4: Working Waterfront
- PD 5: National City Bayfront
- PD 6: Chula Vista Bayfront
- PD 7: South Bay
- PD 8: Imperial Beach Oceanfront
- PD 9: Silver Strand
- PD 10: Coronado Bayfront

Each PD would reflect the land and water use designations established by the Land and Water Use element, have location-specific policies, and describe proposed appealable projects.

The PMPU would also contain sections that would describe the regulatory process and implementation for projects, and the plan's relation to, and compliance with, the Coastal Act.

PROJECT LOCATION

The area of San Diego Bay (Bay), encompassed by the historic mean high-tide line, comprises approximately 14,951 acres of filled and submerged lands and an existing shoreline stretching approximately 54.01 miles. These historic tideland areas are owned, controlled, or held in trust by the federal government, the State of California, the County of San Diego, the cities of San Diego and Coronado, and the District.

The planning area for the PMPU is the entirety of the District's jurisdiction, including acquired upland parcels, which amounts to approximately 2,403 acres of land and 3,535 acres of water in and around the Bay and along the Imperial Beach oceanfront. Figure 1 shows the project location and Figure 2 shows the planning area.

The District is surrounded by the incorporated cities of San Diego, National City, Chula Vista, Imperial Beach, and Coronado, all of which conveyed or granted tidelands and submerged lands to the District in accordance with the Port Act.[5] The city of San Diego, which is the largest city in the region, covers approximately 372.4 square miles and is home to an estimated population of approximately 1.37 million residents. National City is 5 miles south of downtown San Diego, with an area of approximately 9.2 square miles and an estimated population of approximately 60,000 residents. Chula Vista is the second-largest city in San Diego County, with an area of approximately 52 square miles and a population of approximately 258,000 residents. Chula Vista is 7.5 miles from downtown San Diego. The city of Imperial Beach is a beach community in the southwestern corner of San Diego County. It encompasses approximately 4.5 square miles and has a population of approximately 27,000 residents. Across Bay from downtown San Diego, the city of Coronado encompasses approximately 14 square miles and has a resident population of 24,000.

[5] Pursuant to Port Act, the District's land use and management authority and police powers supersede those of these cities.

BACKGROUND

Port Act

On December 18, 1962, the state legislature created the District with the enactment of the Port Act and charged the District with management of certain tidelands and submerged waters of the San Diego Bay. The District holds these areas in trust for all of California to promote and implement commerce, navigation, fisheries, recreation, and ecological preservation on the granted lands consistent with the uses specified in Section 87 of the Port Act. Section 19 of the Port Act specifies that the Board of Port Commissioners (Board) shall draft a port master plan (PMP) for harbor and port improvements and for the uses of all the tidelands and submerged waters which are conveyed to the District. The existing PMP and the proposed PMPU, if adopted, satisfies this obligation.

Coastal Act

Chapter 8 of the Coastal Act applies to the District and specifies the required contents of a port master plan. In summary, the PMPU must include:

- Proposed land and water uses where known;
- Projected design and location of land and water areas, berthing, navigation ways and systems intended to serve commercial traffic;
- Estimated effects on, and mitigation for, biological resources and water quality;
- Proposed list of "appealable" projects in sufficient detail to determine their consistency with Chapter 3 policies; and
- Provision for adequate hearings and public participation in the District planning and development decisions.[6]

The PMPU must also comply with Chapter 3 policies of the Coastal Act for "appealable" projects; uses that support such projects and other designated wetlands, estuaries, and recreational areas; and Chapter 8 policies of the Coastal Act for the remaining types of uses, projects, or development.[7] The PMPU would implement the Coastal Act and the applicable policies within the District.

Port Master Plan

The existing PMP was prepared in 1980 and certified by the California Coastal Commission (Coastal Commission) on January 21, 1981. It is the primary document that governs land and water uses within the District's jurisdiction. The PMP is organized into four sections: (I) Introduction, (II) Planning Goals, (III) Master Plan Interpretation, and (IV) Precise Plans. Section II establishes planning goals and related policies that pertain to development and operation of lands within the District's jurisdiction. Section III provides additional land use objectives and criteria that apply to specific land use types, including commercial, industrial, recreation, conservation, military, and public facility uses. Section IV identifies 10 PDs, each of which is guided by a Precise Plan that guides future development.

Existing land and water uses within the study area can be generally divided into six categories: Commercial, Industrial, Public Recreation, Conservation, Public Facilities, and Military. Commercial

[6] See Coastal Act § 30711. "Appealable" projects are listed in Section 30715 of the Coastal Act.
[7] Coastal Act §§ 30700, 30711, 30715.

uses comprise approximately 15 percent of the planning area at present and include a variety of allowed uses, such as commercial recreation, airport-related commercial, marine sales and services, and commercial and sport fishing on the landside and berthing uses such as commercial fishing, marine services, and recreation on the waterside. Industrial uses comprise approximately 24 percent of the planning area at present and include aviation-related industrial, maritime services/industrial uses, and marine terminal uses on the landside and specialized and terminal berthing on the waterside. Public recreation uses constitute approximately 19 percent of the planning area at present and include open space, park/plaza, golf course, and promenade on the landside and open bay on the waterside. Conservation uses comprise approximately 28 percent of the planning area at present and include wetlands and habitat replacement on the landside and open bay and estuary on the waterside. Public Facilities comprise 11 percent of the planning area at present and include harbor services, city pump station, and streets on the landside and navigation corridor, anchorage, and harbor services on the waterside. Finally, Military uses comprise three percent of the planning area at present and include the Navy Fleet school on the landside and navy berthing on the waterside.

The PMPU would be the first comprehensive update of the PMP in the District's history. In 2013, the District initiated a multi-faceted integrated planning effort that includes a comprehensive update to the PMP, which is discussed below under "Project Description." The Board previously accepted the *Port Master Plan Update Assessment Report: Vision Statement and Guiding Principles* (August 2014)[8] and the *Integrated Planning Port Master Plan Framework Report* (November 2015),[9] which set the stage for development of the PMPU. In addition, extensive public outreach and stakeholder involvement helped to form the basis for preparation of the PMPU. If approved by the Board and certified by the Coastal Commission, the PMPU will implement the 30-year planning vision by addressing allowable land and water uses, coastal access, mobility, economic development, safety, and natural resources, among other topics.

PROJECT DESCRIPTION

The proposed project involves a comprehensive update to the existing PMP to provide goals and policies, as well as land and water uses, consistent with the Port Act and Public Trust Doctrine, for the physical development and conservation of District Tidelands. The PMPU would be composed of Baywide elements, which are described below.

Planning Elements

The existing PMP includes planning goals that are applicable to the entirety of the District's jurisdiction; however, these planning goals are not categorized by topics and are not divided into elements. The PMPU would include six Baywide elements with goals and policies that pertain to the topic addressed in each element. These Baywide elements are summarized below.

The **Land and Water Use Element** would establish land and water use designations that include descriptions of each type of land and water use, as well as supportive policies and guidance for all land and water uses within District Tidelands. The District proposes to consolidate the existing PMP uses and allow for a variety of primary and secondary uses under each land and water use.

[8] Available at https://www.portofsandiego.org/document/planning-projects/8014-vision-statement-and-guiding-principles/file.html and the Office of the District Clerk. The *Port Master Plan Update Assessment Report: Vision Statement and Guiding Principles* is hereby incorporated by reference.
[9] Available at https://www.portofsandiego.org/document/planning-projects/7961-integrated-planning-framework-report/file.html and the Office of the District Clerk. The *Integrated Planning Port Master Plan Framework Report* is hereby incorporated by reference.

The purpose of this element is to designate land and water uses allowed within the District to achieve a complementary range of uses Baywide and establish functional areas for private development, District facilities and operations, coastal access and recreation, as well as conservation open space. Environmental justice and greenhouse gas emissions reduction policies may also be included in this element.

Goals and policies to further attain a balanced, multi-modal transportation network and provide for the efficient movement of goods/cargo, vehicles, bicycles, and pedestrians would be established in the **Mobility Element**. This element would guide future Baywide mobility, multi-modal facilities and road designs, transit facilities, mobility hubs, travel demand management, parking, rail corridors for freight and other goods movement, and ferry and water taxi access. Greenhouse gas emissions reduction policies may also be included in this element.

The **Coastal Access and Recreation Element** would establish goals and policies that address opportunities to enhance public coastal access and recreational opportunities, including the provision of lower cost visitor and recreational facilities. This element would also include goals and policies addressing environmental justice. Public coastal access will be discussed in terms of land connections, shoreline access, water access, views to the Bay, and wayfinding and signage. Recreation will be discussed in terms of activating public spaces, including parks and pavilions. The "Green Necklace," a comprehensive and continuous public and coastal access system, will also be addressed in this element.[10]

The primary objective of the **Natural Resources Element** would establish goals and polices regarding the conservation, development compatibility, and utilization of natural resources. This element will discuss the existing natural resources, including habitat and marine resources, and contain policies related to the minimization and mitigation of impacts on, and conservation and enhancement of, those areas. Goals and policies addressing mitigation banking may also be included in this element.

The **Resiliency and Safety Element** would establish resiliency strategies related to climate change and its effects, seismic and geologic hazards, and flooding (although not required under Section 30711 of the Coastal Act). It would also provide goals and policies related to adapting to impacts from climate change, including such items as coastal flooding. Environmental justice and greenhouse gas emissions reduction policies may also be included.

Policies to improve economic viability through the provision of balanced employment and development opportunities, attraction and retention of businesses, and promotion of fiscal strength and stability will be contained within the **Economic Development Element**. Environmental justice and greenhouse gas emissions reduction policies may also be included in this element. Although not required by Section 30711 of the Coastal Act, this element is important to the District as it currently does not collect taxes to develop and maintain public amenities on District Tidelands; instead, the District pays for public amenities through its revenue stream.

[10] It is proposed that the PMPU will include exceptions or alternatives for a continuous Green Necklace at certain locations based on factors such as safety and security, the physical characteristics of a location, and the existence of sensitive resources (species, habitat, etc.).

Planning Districts

The PMPU planning area would consist of 10 PDs. The PDs, as proposed, have been reorganized according to geographic location and renamed in a logical order that will accommodate the end users of the PMPU. The PDs also include redefined sub-district areas to simplify the numerous planning sub-areas currently contained in the PMP. Each PD would have its own planning framework (e.g., land use, water use, coastal access, mobility, conservation, etc.) and policies. In addition, each PD would be divided into sub-districts and include a list of projects that would be appealable to the Coastal Commission. Each PD and its sub-district are briefly described below, and Figure 3 shows their respective proposed locations.

1. The **Shelter Island PD** is a narrow strip of land, approximately 1 mile long and less than 0.1 mile wide, that extends off the Point Loma peninsula via Shelter Island Drive. Proposed uses along Shelter Island include hotels, restaurants, and yacht- or marine-related businesses. Fishing piers and boat launches are also located at various points along Shelter Island. The proposed sub-districts are West Shelter Island and East Shelter Island.

   Within the Shelter Island PD, the PMPU may allow for intensification of the following proposed land and water uses (and potentially others): Commercial Fishing, Marine Sales & Services, Recreation Open Space, Visitor-Serving Recreation Commercial, Commercial Fishing Berthing, Marine Services Berthing, Recreational Berthing, and Sportfishing Berthing. The PMPU may also allow for realignment of roadways within this PD.

2. Similar to the Shelter Island PD, the **Harbor Island PD** is a narrow strip of land, approximately 1.5 miles long and 317 feet wide, that extends off the San Diego mainland via Harbor Island Drive. Harbor Island includes hotels, restaurants, and marinas in the inlets between Harbor Island and the mainland of San Diego. Other uses include yacht- and sailing-oriented retail shops (e.g., charter companies, sport fishing outlets) and publicly accessible shoreline parks. The Harbor Island PD includes San Diego International Airport, although this area is not under the land use authority of the District while the current lease is in effect.[11] The proposed sub-districts are West Harbor Island, East Harbor Island, and the Airport.

   Within the Harbor Island PD, the PMPU may allow for intensification of the following proposed land and water uses (and potentially others): Recreation Open Space, Visitor-Serving Recreation Commercial, Recreational Berthing, and Institutional Berthing. The PMPU may also allow for realignment of roadways within this PD.

3. Spanning the length of the bayfront within the downtown San Diego area, the **Embarcadero PD** begins at Laurel Street to the north (just south of San Diego International Airport) and ends roughly at Park Boulevard, southeast of the Convention Center and north of the Tenth Avenue Marine Terminal (TAMT). The Embarcadero is an active waterfront area. Harbor Drive, which runs the length of the Embarcadero, provides vehicular access and on-street parking for uses along the Embarcadero. The proposed sub-districts within this PD are North Embarcadero, Central Embarcadero, and South Embarcadero. The proposed North Embarcadero sub-district along North Harbor Drive includes large parcels of land that have been dedicated to the Solar Turbines facility, just south of the airport, as well as hotels, restaurants, and public parks. Waterside uses in the proposed North Embarcadero sub-district include maritime

[11] Pursuant to Senate Bill 1896, the District transferred to the San Diego County Regional Airport Authority (Authority) via lease(s) land necessary to operate the San Diego International Airport (Airport); land use authority for the leased land was also transferred to the Authority. However, the District retains trusteeship of this land, and at such time that the term of the lease(s) expires, land use authority of the leased land shall revert to the District.

museums, merchant ships, cruise ship terminals, commercial fishing boats, and pleasure craft. The proposed Central Embarcadero sub-district consists primarily of Seaport Village, a waterfront shopping and dining complex, and Embarcadero Marina Park North. Uses within the proposed South Embarcadero sub-district include restaurants, the San Diego Convention Center, and public parks. Marinas occupy the inlet created by the two L-shaped segments that form Embarcadero Marina Parks North and South. Three high-rise hotels are also located along the waterfront in the South Embarcadero area.

Within the Embarcadero PD, the PMPU may allow for intensification of the following proposed land and water uses (and potentially others): Commercial Fishing, Visitor-Serving Recreation Commercial, Recreation Open Space, Commercial Fishing Berthing, Industrial & Deep Water Berthing, and Recreational Berthing.

4. The **Working Waterfront PD** extends along Harbor Drive from TAMT south to the city of San Diego's border with National City (Division Street). Formerly referred to as the TAMT PD, it is proposed renamed to address the regional significance of the terminal land and water facilities. This PD is proposed to be divided into three sub-districts: TAMT, Cesar Chavez Park, and Harbor Drive Industrial. The TAMT is a maritime cargo facility that is managed with multiple tenant leaseholds and open/covered terminal spaces for handling diverse cargos. Cesar Chavez Park was developed in cooperation with San Diego's Barrio Logan community; this park offers a recreational pier, picnic and playground areas, a soccer field, and open space for active play. The BAE Systems, Continental Maritime of San Diego, CP Kelco, and General Dynamics National Steel and Shipbuilding Company (NASSCO) compose the Harbor Drive Industrial sub-district. This PD is anticipated to include uses and policies that support its continuation as a water-dependent marine industrial area with supporting recreational uses.

   Within the Working Waterfront PD, the PMPU may allow for intensification of the following proposed land and water uses (and potentially others): Marine Terminal, Maritime Services & Industrial, and Industrial & Deep Water Berthing. The proposed intensification would consider growth allowed by approved plans for this PD.

5. The National City Marine Terminal (NCMT), related industrial uses, areas located within the National City Balanced Land Use Plan area, and Navy berthing space compose the **National City Bayfront PD**. Pepper Park is sited at the southernmost extent of Tidelands Avenue, approximately 0.45 mile from the edge of the Bay. The National City Aquatic Center, operated by the District, is also located in this PD. Pier 32 Marina, east of the aquatic center, is adjacent to the Sweetwater Marsh National Wildlife Refuge, which is farther to its east. The proposed sub-districts include Navy Berthing, North Corridor, Marina, and NCMT.

   Within the National City Bayfront PD, the PMPU may allow for intensification of the following proposed land and water uses (and potentially others): Marine Terminal, Maritime Services & Industrial, Recreation Open Space, Visitor-Serving Recreation Commercial, and Industrial & Deep Water Berthing. The PMPU may also allow for realignment of roadways within this PD.

6. The **Chula Vista Bayfront PD** includes the adopted Chula Vista Bayfront Master Plan area, which allows a variety of uses, such as hotel, retail, restaurant, and other uses that lie outside the District's jurisdiction. Currently, large portions of the Chula Vista Bayfront are dedicated to wildlife reserves and marshes. Other uses include public parks, marinas, a recreational vehicle campground, a salt works operation, and a boat repair facility. The proposed sub-districts include Sweetwater District, Harbor District, and Otay District.

   Within the Chula Vista Bayfront PD, the PMPU may allow for intensification of the following proposed land and water uses (and potentially others): Conservation Open Space, Recreation Open Space, Maritime Services & Industrial, Visitor-Serving Recreation Commercial,

Conservation/Inter-tidal, Recreational Berthing, and Industrial & Deep Water Berthing. The PMPU may also allow for realignment of roadways within this PD. The proposed intensification would consider growth allowed by approved plans for this PD.

7. The **South Bay PD** includes the southernmost portion of the Bay and land adjacent to Imperial Beach. The area is characterized primarily by open water and large expanses of land that are planned for conservation purposes. The proposed sub-districts include Habitat Conservation and Pond 20.

   Within the South Bay PD, the PMPU may allow for intensification of the following proposed land and water uses (and potentially others): Conservation Open Space, Visitor-Serving Recreation Commercial, and Conservation/Inter-tidal.

8. Characterized by a substantial length of ocean shoreline and open ocean, the **Imperial Beach Oceanfront PD** includes the approximately 1,300-foot-long Imperial Beach Pier—a publicly accessible pier that provides a promenade and fishing opportunities. A restaurant is located at the end of the pier. There are no proposed sub-districts within this PD.

   Within the Imperial Beach Oceanfront PD, the PMPU may allow for intensification of the following proposed land and water uses (and potentially others): Visitor-Serving Recreation Commercial.

9. Similar to the Imperial Beach Oceanfront PD, the **Silver Strand PD** is characterized by a length of shoreline, although its shoreline is bayside. This PD includes existing private-use marinas east of Silver Strand Boulevard/State Route 75. This PD, which is adjacent to Silver Strand State Beach, also includes a hotel resort off Coronado Bay Road. The proposed sub-districts include State Park Basin, Park Basin Crowne Isle, and Grand Caribe Isle/South Cays.

   Within the Silver Strand PD, the PMPU may allow for intensification of the following proposed land and water uses (and potentially others): Conservation Open Space, Recreation Open Space, Visitor-Serving Recreation Commercial, and Recreational Berthing.

10. The **Coronado Bayfront PD** is characterized by shorelines, parks, and water-oriented uses adjacent to Coronado. Uses along the north coast of the Coronado Bayfront include Naval Air Station North Island and single- and multi-family residential uses that front the Bay along 1st Street between Alameda Boulevard and A Avenue. Commercial uses are concentrated toward the eastern end of the north bayfront, including the Ferry Landing Marketplace, which offers a number of restaurants and small boutique or tourist-oriented shops. Public open spaces along the north bayfront include Bayview Park at I Avenue and 1st Street, Centennial Park at Orange Avenue and 1st Street, and Coronado Ferry Landing Park at B Avenue and 1st Street. Land uses along the east shore of the Coronado Bayfront include a marina, boat rentals, yacht clubs, hotels, Coronado Municipal Golf Course, high-rise condominiums, a community center and public parks, and Naval Amphibious Base Coronado. The proposed sub-districts of this PD include North Coronado and South Coronado.

    Within the Coronado Bayfront PD, the PMPU may allow for intensification of the following proposed land and water uses (and potentially others): Visitor-Serving Recreation Commercial and Recreational Berthing.

The PMPU will be in compliance with the Coastal Act. Section 30711 of the Coastal Act identifies the required contents of a PMP. In accordance with Section 30711(a)(4) of Chapter 8, the PMPU will contain a project list for “appealable” projects in each PD. “Appealable projects,” defined in Section 30715 of the Coastal Act, must be described with sufficient detail to be able to determine their consistency with Chapter 3 policies of the Coastal Act. Accordingly, the PMPU will provide

policies and development parameters to demonstrate consistency with Chapters 3 and 8 of the Coastal Act for "appealable projects" as well as Chapter 8 policies for non-appealable projects.

ENVIRONMENTAL CONSIDERATIONS

The PEIR will address the following potential project-related and cumulative environmental effects of the proposed project:

- Aesthetics and Visual Resources
- Air Quality and Health Risk
- Biological Resources (Marine and Terrestrial)
- Cultural Resources (Archaeological and Built Environment)
- Geologic Hazards and Soils
- Greenhouse Gas Emissions and Climate Change
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise and Vibration
- Population and Housing
- Public Services and Recreation
- Transportation, Circulation, and Parking
- Utilities and Energy Use

The PEIR will also address any other potential impacts identified during the NOP process. The PEIR will include mitigation measures (if significant impacts are identified) and a reasonable range of alternatives as well as the additional mandatory sections required by CEQA. A mitigation monitoring and reporting program will be prepared to ensure implementation of mitigation.

The Initial Study/Environmental Checklist is attached.

COMMENTS

This NOP is available for a 30-day public review period that **starts on Thursday, March 30, 2017, and ends at 4:30 p.m. on Monday, May 1, 2017**. Comments regarding the scope and content of the environmental analysis included in the PEIR should be mailed to:

San Diego Unified Port District
Planning and Green Port
Attn: Mayra Medel
3165 Pacific Highway
San Diego, CA 92101

or emailed to mmedel@portofsandiego.org

PUBLIC SCOPING MEETING

A public scoping meeting and open house to solicit comments on the scope and content of the PEIR for the proposed project will be held on **Wednesday, April 12, 2017, from 5:30 p.m. to 7:30 p.m. at the San Diego Unified Port District Administration Building, Training Room, 3165 Pacific Highway, San Diego, CA 92101.**

The District, as lead agency pursuant to CEQA, will review the written public comments received during the scoping period to determine what issues should be addressed in the PEIR.

Other opportunities for the public to comment on the environmental effects of the proposed project include:

- A minimum 45-day public review and comment period for the Draft PEIR, and
- A public hearing for the Board to consider certification of the PEIR.

For questions regarding this NOP, please contact Mayra Medel, Senior Planner, at (619) 686-6598.

ATTACHMENTS

Figure 1 – Project Location

Figure 2 – Project Boundaries

Figure 3 – Planning Districts

Initial Study/Environmental Checklist

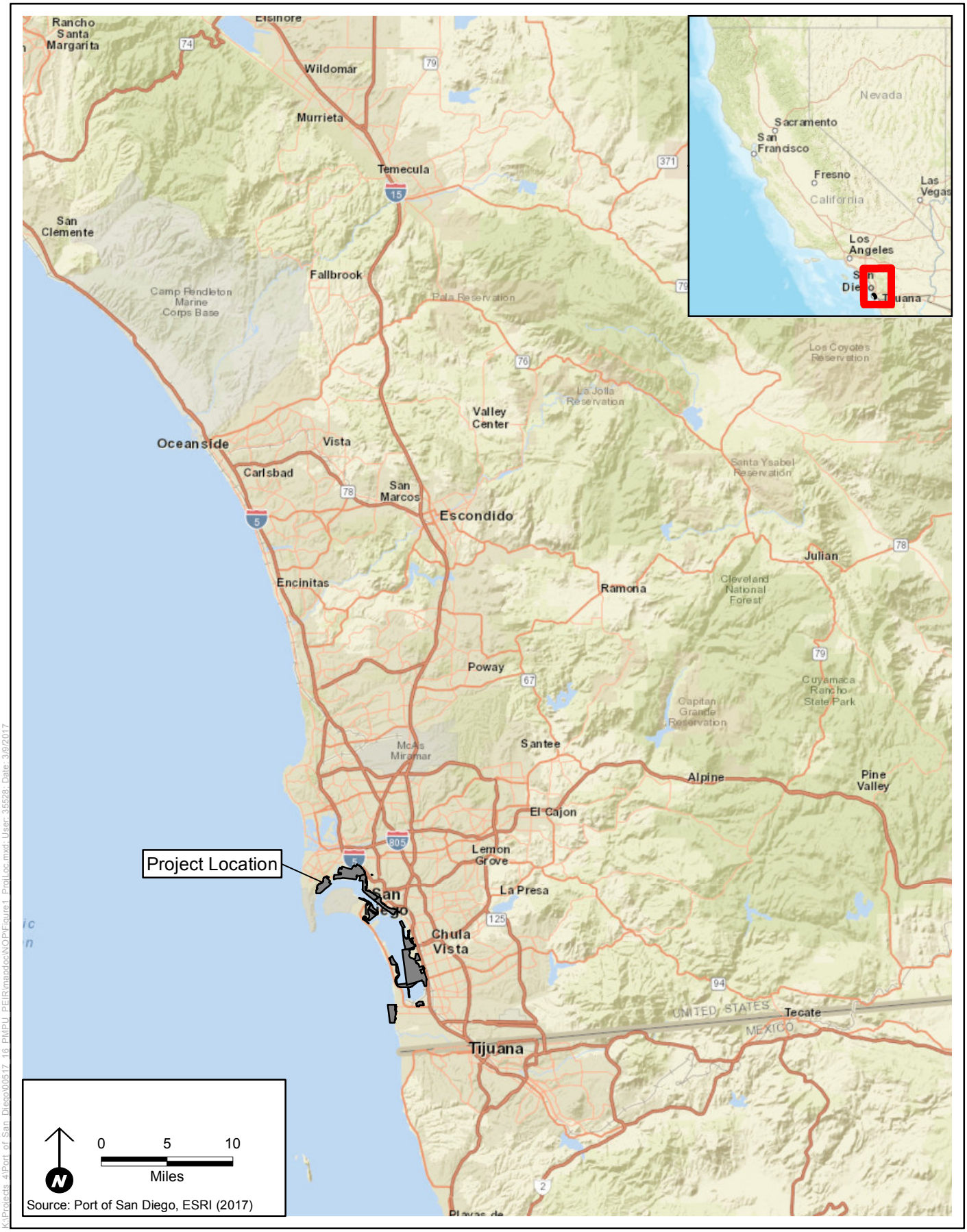

Figure 1
Project Location
San Diego Unified Port District Port Master Plan Update

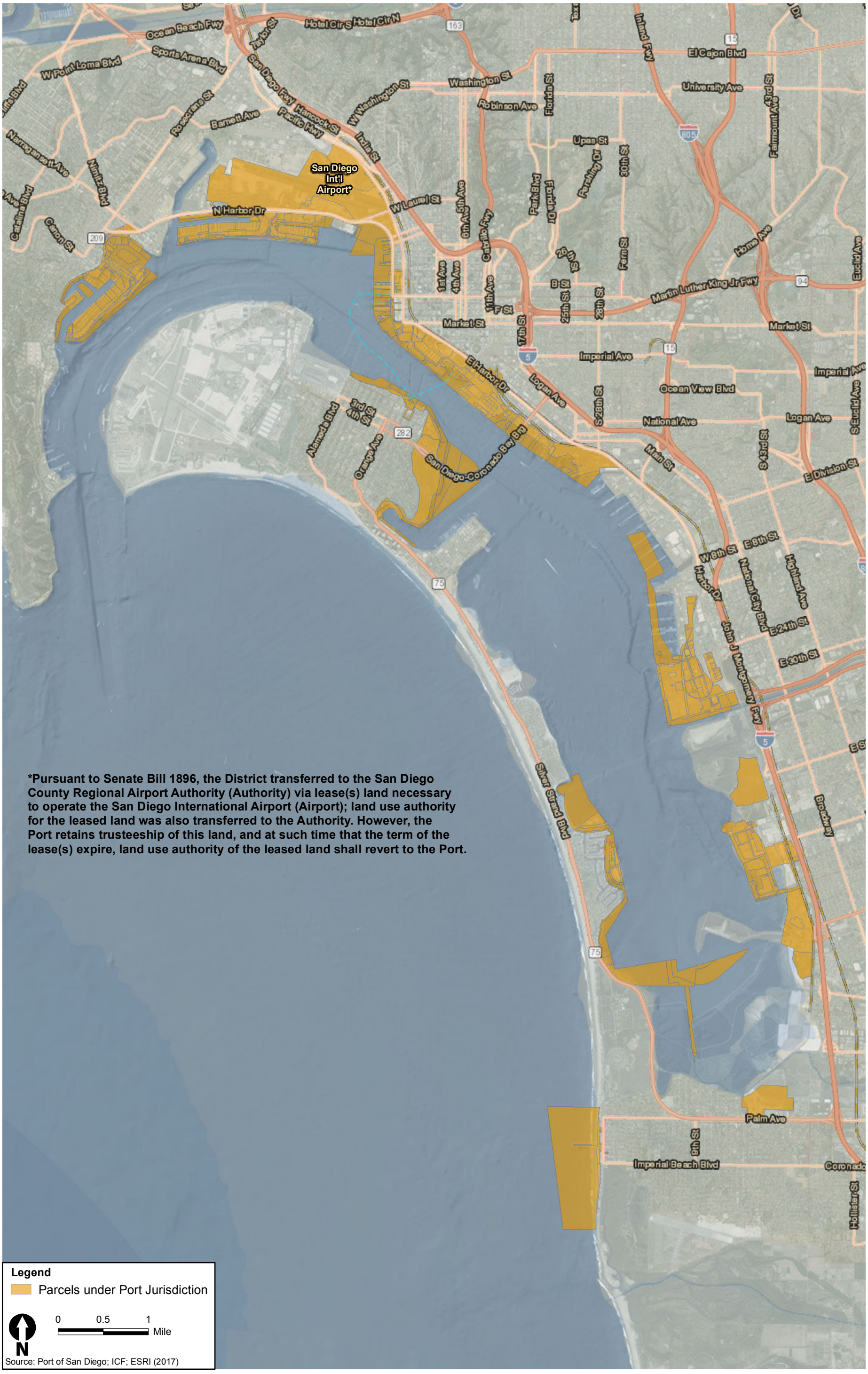

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Figure 2
Planning Area
San Diego Unified Port District Port Master Plan Update

*Pursuant to Senate Bill 1896, the District transferred to the San Diego County Regional Airport Authority (Authority) via lease(s) land necessary to operate the San Diego International Airport (Airport); land use authority for the leased land was also transferred to the Authority. However, the Port retains trusteeship of this land, and at such time that the term of the lease(s) expire, land use authority of the leased land shall revert to the Port.

Legend

- Mean Higher High Water (NOAA 2000)

Proposed Planning Districts

- 1: Shelter Island
- 2: Harbor Island
- 3: Embarcadero
- 4: Working Waterfront
- 5: National City Bayfront
- 6: Chula Vista Bayfront
- 7: South Bay
- 8: Imperial Beach Oceanfront
- 9: Silver Strand
- 10: Coronado Bayfront

0 0.5 1 Mile

N

Source: Port of San Diego; ICF; ESRI (2017)

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Figure 3
Proposed Planning Districts
San Diego Unified Port District Port Master Plan Update

PORT MASTER PLAN UPDATE
INITIAL STUDY/ENVIRONMENTAL CHECKLIST

UPD #EIR-2017-035
SCH # TO BE DETERMINED

PREPARED FOR:

San Diego Unified Port District
3165 Pacific Highway
San Diego, CA 92101
Contact: Mayra Medel
(619) 686-6598

PREPARED BY:

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Contents

Acronyms and Abbreviations

ALUCP	Airport Land Use Compatibility Plan
ARB	California Air Resources Board
Bay	San Diego Bay
CAL FIRE	California Department of Forestry and Fire Protection
CAP	Climate Action Plan
CCC	California Coastal Commission
CEQA	California Environmental Quality Act
CMP	Congestion Management Program
County	County of San Diego
CWA	Clean Water Act
District	San Diego Unified Port District
DOC	California Department of Conservation
EIR	environmental impact report
GHG	greenhouse gas
HPD	Harbor Police Department
INRMP	Integrated Natural Resources Management Plan
MHPA	Multi-Habitat Planning Area
MRZ	Mineral Resource Zone
MSCP	Multiple Species Conservation Program
OES	County of San Diego Office of Emergency Services
PM10	particulate matter 10 microns in diameter or smaller
PM2.5	particulate matter 2.5 microns in diameter or smaller
PMP	Port Master Plan
PMPU	Port Master Plan Update
RAQS	Regional Air Quality Strategy
SANDAG	San Diego Association of Governments
SDAPCD	San Diego Air Pollution Control District

SDIA	San Diego International Airport
SIP	State Implementation Plan
SR-	State Route
TIA	transportation impact analysis
TMA	transportation management area
USACE	U.S. Army Corps of Engineers
VHFHSZ	very high fire hazard severity zone

Initial Study/Environmental Checklist

1.	Project Title:	Port Master Plan Update (PMPU)
2.	Lead Agency Name and Address:	San Diego Unified Port District 3165 Pacific Highway San Diego, CA 92101
3.	Contact Person and Phone Number:	Mayra Medel, Senior Planner, (619) 686-6598
4.	Project Location:	The planning area for the PMPU is the entirety of the San Diego Unified Port District's (District's) jurisdiction, which consists of 2,403 acres of land and 3,525 acres of water in and around San Diego Bay and along the Imperial Beach oceanfront that the State Legislature has conveyed to the District to act as trustee for their administration. See Figures 1, 2, and 3 of the NOP for the project location and boundaries.
5.	Project Sponsor's Name and Address:	San Diego Unified Port District 3165 Pacific Highway San Diego, CA 92101
6.	Port Master Plan Designation:	Existing land and water uses within the study area can be generally divided into six categories: Commercial, Industrial, Public Recreation, Conservation, Public Facilities, and Military.
7.	Zoning:	No separate zoning; see Port Master Plan Designation
8.	Description of Project:	The PMPU, if approved, would provide the official planning policies and land use designations—consistent with the California State Constitution, Public Trust Doctrine, Port Act, and the California Coastal Act—for the physical development of the tidelands and submerged lands conveyed and granted in trust to the District.
9.	Surrounding Land Uses and Setting:	The PMPU study area is bordered by the City of San Diego to the north, northeast, and east; the Cities of National City and Chula Vista to the east; the City of Imperial Beach on the south; and the City of Coronado, the U.S. Naval Air Station North Island, and the Pacific Ocean to the west. See Figure 1 of the NOP.
10.	Other Public Agencies Whose Approval Is Required:	• California Coastal Commission: certification of the PMPU.

Environmental Factors Potentially Affected

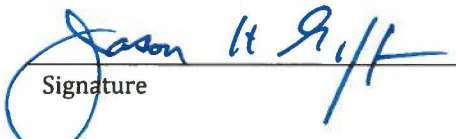
The environmental factors checked below could be affected by this project (i.e., the project would involve at least one impact that is a "potentially significant impact"), as indicated by the checklist on the following pages.

☒ Aesthetics	☐ Agriculture and Forestry Resources	☒ Air Quality
☒ Biological Resources	☒ Cultural Resources	☒ Geology and Soils
☒ Greenhouse Gas Emissions	☒ Hazards and Hazardous Materials	☒ Hydrology and Water Quality
☒ Land Use and Planning	☐ Mineral Resources	☒ Noise
☒ Population and Housing	☒ Public Services	☒ Recreation
☒ Transportation and Traffic	☐ Tribal Resources	☒ Utilities, Service Systems, and Energy
☒ Mandatory Findings of Significance		

Determination

On the basis of this initial evaluation:

- ☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions to the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☒ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed project MAY have an impact on the environment that is "potentially significant" or "potentially significant unless mitigated" but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards and (2) has been addressed by mitigation measures based on the earlier analysis, as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION pursuant to applicable standards and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the project, nothing further is required.



Signature — March 30, 2017 (Date)

Jason H. Giffen (Printed Name) — San Diego Unified Port District (For)

Evaluation of Environmental Impacts

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects such as the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained if it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an environmental impact report (EIR) is required.
4. "Negative Declaration: Less-than-Significant Impact with Mitigation Incorporated" applies when the incorporation of mitigation measures has reduced an effect from a "Potentially Significant Impact" to a "Less-than-Significant Impact." The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less-than-significant level.
5. Earlier analyses may be used if, pursuant to tiering, program EIR, or other California Environmental Quality Act (CEQA) process, an effect has been adequately analyzed in an earlier EIR or negative declaration (Section 15063(c)(3)(D)). In this case, a brief discussion should identify the following:
    a. Earlier Analysis Used. Identify and state where earlier analyses are available for review.
    b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards and state whether such effects were addressed by mitigation measures based on the earlier analysis.
    c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Incorporated," describe the mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, when appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9. The explanation of each issue should identify:
    a. The significance criteria or threshold, if any, used to evaluate each question; and
    b. The mitigation measure identified, if any, to reduce the impact to a less-than-significant level.

I. Aesthetics	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect on a scenic vista?	☒	☐	☐	☐
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a scenic highway?	☒	☐	☐	☐
c. Substantially degrade the existing visual character or quality of the site and its surroundings?	☒	☐	☐	☐
d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	☒	☐	☐	☐

a. Have a substantial adverse effect on a scenic vista?

Potentially Significant Impact. The Port Master Plan Update (PMPU) study area includes all of the lands located in the San Diego Unified Port District's (District's) jurisdiction. A scenic vista is generally defined as a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public. There are numerous public areas within the study area that could be considered scenic vistas as they provide views of the San Diego Bay (Bay), San Diego–Coronado Bay Bridge, and Downtown San Diego. The proposed project would update the existing Port Master Plan (PMP) to include updated planning policies for the physical development of the tidelands and submerged lands that constitute the District's jurisdiction. These would specifically include a comprehensive update to the land and water use designations and the list of projects appealable to the California Coastal Commission (CCC). The PMPU would include designated vista points and view corridors coupled with policies designed to protect and/or enhance views from these designated areas. However, it may also eliminate existing vista points, and subsequent projects implemented in accordance with the PMPU could have impacts on an identified vista point or view corridor. Therefore, impacts on scenic vistas would be potentially significant, and further analysis in the EIR is warranted.

b. Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings along a scenic highway?

Potentially Significant Impact. The San Diego–Coronado Bay Bridge (State Route [SR-] 75) is the only state-designated scenic highway within the study area. It spans the Bay to connect the City of San Diego to the City of Coronado. The bridge provides a panoramic view of the study area and the surrounding area, including downtown San Diego, the Pacific Ocean, Coronado, Point Loma, and the South Bay. Additionally, the bridge is a landmark around the Bay, and views of the bridge from portions of the study area may also be significant. The PMPU would not propose to alter the bridge itself; therefore, aesthetic impacts from direct modification to the bridge would not occur. It is possible that future projects implemented using the PMPU may result in changes to other scenic

resources within the study area. Therefore, the impact on designated scenic highways and scenic resources, more generally, would be potentially significant. Further analysis in the EIR is warranted.

c. Substantially degrade the existing visual character or quality of the site and its surroundings?

Potentially Significant Impact. The study area includes a multitude of developed land uses, including, but not limited to, marine terminals and marine-related industrial uses, hotels, restaurants and retail stores, open space, and recreational areas. Moreover, the concentration and location of land uses vary from planning district to planning district. The proposed project entails an update to the existing PMP that would include updated planning policies for the physical development of the study area, including updated land and water use designations. As such, it is reasonably foreseeable to assume the PMPU could intensify existing development in certain areas. Intensification of tidelands from subsequent projects, implemented in accordance with the policies and requirements of the PMPU, would have the potential to degrade the existing visual character or quality of the study area. Therefore, impacts on visual quality would be potentially significant, and further analysis in the EIR is warranted.

d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?

Potentially Significant Impact. The study area includes numerous uses that provide existing sources of light and glare. Some examples of existing light sources within the study area include marine terminals and marine-related industrial activity, commercial uses such as hotels and restaurants, and public recreational areas that include promenades and parks. Sources of glare within the study area are typically from existing buildings and transportation-related lighting. The PMPU includes several elements, and some would potentially include policies that promote energy-efficient lighting and discourage the use of highly reflective building materials that result in substantial amounts of glare. However, subsequent projects implemented in accordance with the PMPU would have the potential to result in new sources of light or glare within the study area. Therefore, impacts on light and glare would be potentially significant, and further analysis in the EIR is warranted.

II. Agriculture and Forestry Resources	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
In determining whether impacts on agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts on forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forestland, including the Forest and Range Assessment Project, the Forest Legacy Assessment Project, and the forest carbon measurement methodology provided in the forest protocols adopted by the California Air Resources Board. Would the Project:				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?	☐	☐	☐	☒
b. Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract?	☐	☐	☐	☒
c. Conflict with existing zoning for, or cause rezoning of, forestland (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☒
d. Result in the loss of forestland or conversion of forestland to nonforest use?	☐	☐	☐	☒
e. Involve other changes to the existing environment that, because of their location or nature, could result in the conversion of Farmland to nonagricultural use or the conversion of forestland to nonforest use?	☐	☐	☐	☒

a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?

No Impact. The study area is an entirely urbanized area where there are no farmlands or agricultural resources. According to the Farmland Mapping and Monitoring Program of the California Department of Conservation (California Department of Conservation [DOC] 2017), the study area is classified as Urban and Built-Up Land and does not contain any Prime Farmland or Farmland of Statewide Importance. As such, there is no potential for any actions associated with the PMPU to convert agricultural resources to nonagricultural uses. No impact would occur, and no further analysis in the EIR is warranted.

b. Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract?

No Impact. The study area is an entirely urbanized area where there are no farmlands or agricultural resources. The study area is classified as Urban and Built-Up Land, there are no parcels within the study area zoned for agricultural use, and there is no Williamson Act contract for any parcels within the study area (DOC 2013). Therefore, the proposed project would not conflict with existing zoning for agricultural use or a Williamson Act contract, and no impact would occur. No further analysis in the EIR is warranted.

c. Conflict with existing zoning for, or cause rezoning of, forestland (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

No Impact. The study area is entirely urbanized. No land zoned as forestland or timberland exists within the boundaries of the study area. No impact would occur, and no further analysis of this topic in the EIR is warranted.

d. Result in the loss of forestland or conversion of forestland to nonforest use?

No Impact. No forestland or timberland exists within the boundaries of the study area. Approval of the proposed project would not result in a loss of forestland or the conversion of forestland to other uses. No impact would occur, and no further analysis of this topic in the EIR is warranted.

e. Involve other changes to the existing environment that, because of their location or nature, could result in the conversion of Farmland to nonagricultural use or the conversion of forestland to nonforest use?

No Impact. No agricultural land, forestland, or timberland exists within or near the study area that could be converted from Farmland to nonagricultural use or from forestland to nonforest use. No impact would occur, and no further analysis in the EIR is warranted.

III. Air Quality	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
When available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the determinations below. Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	☒	☐	☐	☐
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☒	☐	☐	☐
c. Result in a cumulatively considerable net increase in any criteria pollutant for which the project region is in nonattainment for an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	☒	☐	☐	☐
d. Expose sensitive receptors to substantial pollutant concentrations?	☒	☐	☐	☐
e. Create objectionable odors that would affect a substantial number of people?	☒	☐	☐	☐

a. Conflict with or obstruct implementation of the applicable air quality plan?

Potentially Significant Impact. The San Diego Air Pollution Control District (SDAPCD) is required, pursuant to the federal and state Clean Air Acts, to reduce emissions of criteria pollutants for which the County of San Diego (County) is in nonattainment (i.e., ozone, particulate matter 10 microns in diameter or smaller [PM10], and particulate matter 2.5 microns in diameter or smaller [PM2.5]). The most recent SDAPCD air quality attainment plans are the 2016 Regional Air Quality Strategy (RAQS) and the 2002 and 2012 ozone maintenance plans. The RAQS outlines SDAPCD's plans and control measures to attain the state air quality standards for ozone, while the 2002 and 2012 maintenance plans include the SDAPCD's plans and control measures for attaining the National Ambient Air Quality Standards for ozone. The 2016 RAQS forecasts future emissions and determines the strategies necessary for the reduction of stationary-source emissions through regulatory controls. The federal Clean Air Act also mandates that the state submit and implement a State Implementation Plan (SIP) for local areas that fail to meet those standards. California Air Resources Board (ARB) mobile-source emissions projections and San Diego Association of Governments (SANDAG) growth projections are based on population and vehicle trends as well as land use plans developed by local agencies.

The PMPU will be the governing land use document for physical development of tidelands and submerged lands that are under the jurisdiction of the District. Development on these lands that could end up being greater than what is currently anticipated by the ARB and SANDAG would potentially lead to air emissions that are not accounted for in the applicable air quality plans.

Therefore, the PMPU will be evaluated for consistency with the RAQS and SIP, which will be analyzed in the EIR.

b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Potentially Significant Impact. The project entails an update to the existing PMP and, as such, would not directly result in any construction activities or operational air quality emissions. However, reasonably foreseeable subsequent projects implemented under the PMPU would have the potential to result in emissions as a result of their construction and operation. Consequently, the project has the potential to indirectly contribute to a violation of an air quality standard or an existing or projected air quality violation. This issue area will be analyzed in the EIR.

c. Result in a cumulatively considerable net increase in any criteria pollutant for which the project region is in nonattainment for an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?

Potentially Significant Impact. The San Diego Air Basin is in nonattainment for ozone at the federal and state level (8-hour standard) and is in nonattainment for ozone, PM10, and PM2.5 at the state level (1-hour standard). As mentioned in III.b., although the project would not directly result in any construction activities or operational air quality emissions, reasonably foreseeable subsequent projects implemented under the guidance put forth in the PMPU would have the potential to result in emissions as a result of their construction and operation. These potential indirect impacts of the PMPU would potentially result in a cumulatively considerable net increase in criteria pollutants, including those for which the region is in nonattainment. Further analysis will be provided in the EIR.

d. Expose sensitive receptors to substantial pollutant concentrations?

Potentially Significant Impact. Sensitive receptors are people most affected by air pollution: children younger than 14, the elderly older than 65, athletes, and people with cardiovascular and chronic respiratory diseases. These receptors are considered to be present at residential areas, hospitals, daycare facilities, elder-care facilities, elementary schools, and parks. Several sensitive receptors are present throughout the study area. An air quality technical study will be conducted to evaluate short-, medium-, and long-term pollutant emissions and concentrations associated with the reasonably foreseeable development associated with the PMPU. The study will determine if the proposed project has the potential to expose sensitive receptors to substantial pollutant concentrations. Further analysis will be provided in the EIR.

e. Create objectionable odors that would affect a substantial number of people?

Potentially Significant Impact. According to ARB's *CEQA Air Quality and Land Use Handbook*, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding facilities. Although it is not expected that any of these types of facilities would be proposed by the PMPU, there is the potential that uses are proposed that have the potential to emit odors. Therefore, impacts would be potentially significant and this topic will be analyzed further in the EIR.

IV. Biological Resources	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. 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 the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☒	☐	☐	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☒	☐	☐	☐
c. Have a substantial adverse effect on federally protected wetlands, as defined by Section 404 of the Clean Water Act (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.), through direct removal, filling, hydrological interruption, or other means?	☒	☐	☐	☐
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites?	☒	☐	☐	☐
e. Conflict with any local policies or ordinances to protect biological resources, such as a tree preservation policy or ordinance?	☒	☐	☐	☐
f. Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?	☒	☐	☐	☐

a. 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 the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Potentially Significant Impact. A biological resources analysis will be prepared as part of the EIR that will detail existing conditions and potential impacts from reasonably foreseeable development that could occur under the PMPU. The study area contains marine and upland habitats that support sensitive or special-status species (San Diego Unified Port District 2017a). Upland habitats can include coastal scrub, created bay fills, and river mouths. Ruderal lands supporting grasslands and saline flats are also present along the coastal strand environment. Marine habitat present within the study area includes subtidal vegetated habitat, open water, intertidal flats, sandy beach, and marshes. Reasonably foreseeable development, consistent with the PMPU should it be approved, would potentially result in impacts on sensitive species. Therefore, impacts would be potentially significant and further analysis in the EIR will be provided.

b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Potentially Significant Impact. As previously noted under IV.a., the study area contains riparian habitat and other sensitive natural communities. In addition, the study area contains eelgrass, which is a rooted aquatic plant that inhabits shallow, soft-bottom habitats in quiet waters of bays and estuaries as well as sheltered coastal areas. It can form dense beds that provide substrate, food, and shelter for a variety of marine organisms. Eelgrass beds are considered "special aquatic sites" under the Clean Water Act (CWA). Reasonably foreseeable development, consistent with the PMPU should it be approved, would potentially result in impacts on riparian or sensitive natural communities. Therefore, impacts would be potentially significant and further analysis in the EIR is warranted.

c. Have a substantial adverse effect on federally protected wetlands, as defined by Section 404 of the Clean Water Act (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.), through direct removal, filling, hydrological interruption, or other means?

Potentially Significant Impact. Wetlands, as defined by the U.S. Army Corps of Engineers (USACE), are present within the study area as coastal salt marshes, the largest of which are along the unarmored shorelines of south San Diego Bay (San Diego Unified Port District 2017a). A small amount of freshwater and brackish marsh, as well as riparian scrub, occurs along the mouths of the creeks and rivers that enter the Bay and the wetlands of the Tijuana Estuary. The largest of the San Diego Bay wetlands include the Sweetwater River, Otay River, Chula Vista Wildlife Reserve, South San Diego Bay National Wildlife Refuge, and Telegraph Creek. Reasonably foreseeable development, consistent with the PMPU should it be approved, would potentially result in impacts on federally protected wetlands. Therefore, impacts would be potentially significant and further analysis in the EIR is warranted.

d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites?

Potentially Significant Impact. The study area does not provide any terrestrial movement corridors as it is entirely urbanized (San Diego Unified Port District 2017a). Moreover, no marine mammal,

reptile, or fish migratory corridors occur within the study area. However, some marine fish species, such as anchovy, sardine, and topsmelt likely move into and out of the Bay for spawning, nursery, and foraging. The southern portions of the Bay, including the South San Diego Bay National Wildlife Refuge and South Bay Salt Ponds, provide stopover habitat for migrating waterfowl and shorebirds. San Diego Bay and the Imperial Beach shoreline, like all of California, is within the Pacific Flyway. Several whale species migrate along the coast of California, including the California gray whale (*Eschrichtius robustus*). Reasonably foreseeable development, consistent with the PMPU should it be approved, would potentially result in impacts on wildlife spawning, nursery, and foraging, including stopover habitat for migrating waterfowl and shorebirds. Therefore, impacts would be potentially significant and further analysis in the EIR is warranted.

e. Conflict with any local policies or ordinances to protect biological resources, such as a tree preservation policy or ordinance?

Potentially Significant Impact. There are several local regulations applicable to the project that will be addressed within the EIR, including the San Diego Bay Integrated Natural Resources Management Plan (INRMP) and the Chula Vista Bayfront Master Plan NRMP. In the City of San Diego, local habitat, species, and biological resources are protected under the City of San Diego Multiple Species Conservation Program (MSCP), which is implemented through the MSCP Subarea Plan. To implement its portion of the MSCP preserve, the City of San Diego developed the Multi-Habitat Planning Area (MHPA), which is considered an urban preserve that delineates core biological resource areas and corridors targeted for conservation. The City of Chula Vista MSCP Subarea Plan was developed in February 2003. The Subarea Plan is also consistent with the County of San Diego MSCP Subregional Plan and qualifies as a Subarea Plan document to implement the MSCP Subregional Preserve within the City of Chula Vista. Reasonably foreseeable development, consistent with the PMPU should it be approved, would potentially conflict with one or more local policies or ordinances. Therefore, impacts would be potentially significant and further analysis in the EIR is warranted.

f. Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?

Potentially Significant Impact. As noted in IV(e), there are two natural resource plans, the San Diego Bay INRMP and the Chula Vista Bayfront Master Plan NRMP, that have direct application to the treatment of biological resources in the Bay. In addition, both the City of San Diego and Chula Vista have approved habitat conservation plans. Reasonably foreseeable development, consistent with the PMPU should it be approved, would potentially conflict with approved habitat conservation plans. Therefore, impacts would be potentially significant and further analysis in the EIR is warranted.

V. Cultural Resources	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource, as defined in Section 15064.5?	☒	☐	☐	☐
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☒	☐	☐	☐
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☒	☐	☐	☐
d. Disturb any human remains, including those interred outside of formal cemeteries?	☒	☐	☐	☐

a. Cause a substantial adverse change in the significance of a historical resource, as defined in Section 15064.5?

Potentially Significant Impact. Because of the size of the study area and the important role the waterfront has played over time, historic resources are potentially present. A high-level cultural resources technical study will be prepared for the project, suitable to inform the program-level analysis of the PMPU EIR. Reasonably foreseeable future development, consistent with the PMPU should it be approved, would potentially cause a substantial change in the significance of a historical resource, as defined per State CEQA Guidelines Section 15064.5. Therefore, impacts would be potentially significant and further analysis in the EIR is warranted.

b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Potentially Significant Impact. Much of the landside portion of the study area has been created since the early 20th century by dredged fill from the Bay. However, as stated in IV.a., the size of the study area and the important role the waterfront has played over time indicate that it is at least possible that archaeological resources are present and further study would be needed. Reasonably foreseeable future development, consistent with the PMPU should it be approved, would potentially cause a substantial change in the significance of an archaeological resource, as defined per State CEQA Guidelines Section 15064.5. Therefore, impacts would be potentially significant and further analysis in the EIR is warranted.

c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Potentially Significant Impact. The study area is primarily composed of artificial fill, undivided marine deposits, and young alluvial floodplain deposits (California Geologic Survey 2008). Because of the size of the study area, it is likely that paleontological resources are present in the deeper geologic formations. Reasonably foreseeable future development, consistent with the PMPU should it be approved, would potentially cause a substantial change in the significance of a paleontological

resource or unique geologic feature. Therefore, impacts would be potentially significant and further analysis in the EIR is warranted.

c. Disturb any human remains, including those interred outside of formal cemeteries?

Potentially Significant Impact. There are no known burials within the study area. It is also unlikely that any human remains would be located within the study area given that much of the landside portion of the study area has been created over the past century. However, because there is a remote possibility that unknown human remains are present within the study area, the cultural resources study will consider if any evidence suggests their presence and will also discuss the existing regulations in place to prevent any destruction. Therefore, further analysis in the EIR is warranted.

VI. Geology and Soils	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
1. 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.	☒	☐	☐	☐
2. Strong seismic ground shaking?	☒	☐	☐	☐
3. Seismically related ground failure, including liquefaction?	☒	☐	☐	☐
4. Landslides?	☐	☐	☐	☒
b. Result in substantial soil erosion or the loss of topsoil?	☒	☐	☐	☐
c. 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 an on-site or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☒	☐	☐	☐
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☒	☐	☐	☐
e. Have soils that would be incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?	☐	☐	☒	☐

a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

1. 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.

Potentially Significant Impact. The study area is in a seismically active region of Southern California. Active faults in the study area include the Rose Canyon Fault Zone, which runs under San Diego Bay; the Coronado Fault Zone, which includes north/south-trending faults that run through

Coronado (DOC 2003); and the La Nacion Fault Zone. A geologic conditions study, which will detail the existing geologic conditions within the study area, will be prepared as part of the EIR. Reasonably foreseeable future development, consistent with the PMPU should it be approved, would potentially expose people or structures to substantial adverse effects from fault rupture; however, it is uncertain whether the PMPU would exacerbate the existing conditions and cause impacts. Therefore, further analysis is warranted in the EIR.

2. Strong seismic ground shaking?

Potentially Significant Impact. Southern California is a seismically active region, and future development under the PMPU would be susceptible to ground-shaking produced by seismic events. Reasonably foreseeable future development, consistent with the PMPU should it be approved, would potentially expose people or structures to substantial adverse effects from strong seismic ground shaking; however, it is uncertain whether the PMPU would exacerbate the existing conditions and cause impacts. Therefore, further analysis is warranted in the EIR.

3. Seismically related ground failure, including liquefaction?

Potentially Significant Impact. Liquefaction refers to the event when loose sand and silt is saturated with water and can behave like a liquid when shaken by an earthquake. There are numerous soil types throughout the study area, some of which contain silty sand adjacent to or below groundwater level. Reasonably foreseeable future development, consistent with the PMPU should it be approved, would potentially expose people or structures to substantial adverse effects from seismic-related ground failure, including liquefaction; however, it is uncertain whether the PMPU would exacerbate the existing conditions and cause impacts. Therefore, further analysis is warranted in the EIR.

4. Landslides?

No Impact. Landslide activity generally occurs in areas that lack vegetation and have steep slopes. The study area primarily contains fill areas that are flat. According to the California Geological Survey (2011), the study area has a low potential for landslides to occur. According to the City of San Diego Seismic Safety Study (2008a), there are two areas within Point Loma where historic landslides have occurred; however, these areas are not located within the study area. Therefore, no portion of the study area would be susceptible to landslides and no further analysis of landslides is warranted in the EIR.

b. Result in substantial soil erosion or the loss of topsoil?

Potentially Significant Impact. Construction and operation of development projects can cause soil erosion if adequate best management practices are not implemented. The PMPU would provide the land development guidance with a combination of policies and land use designations that would lead to future development. As such, reasonably foreseeable future development, consistent with the PMPU, would potentially result in substantial soil erosion if adequate best management practices are not implemented. Further analysis is warranted in the EIR.

c. 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 an on-site or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Potentially Significant Impact. There are numerous soil types throughout the study area, some of which may be unstable in their existing condition. Reasonably foreseeable future development,

consistent with the PMPU should it be approved, would potentially be located on soil that is unstable or that would become unstable, leading to lateral spreading, subsidence, or collapse; however, it is uncertain whether the PMPU would exacerbate the existing conditions and cause impacts. Therefore, impacts would be potentially significant and further analysis will be provided in the EIR.

d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Potentially Significant Impact. Expansive soils are fine-grained soils (generally, high-plasticity clays) that can undergo a significant increase in volume with an increase in water content or, conversely, a significant decrease in volume with a decrease in water content. Changes in the water content of an expansive soil can result in severe distress to structures built upon it. Although both expansive and liquefiable soil conditions are influenced by the presence of groundwater, soil expansion differs from soil liquefaction in that soil expansion is not seismically induced. There is the potential that expansive soils are located within the study area, as defined by Table 18-1-B of the Uniform Building Code. Reasonably foreseeable future development, consistent with the PMPU should it be approved, would potentially be located on expansive soil; however, it is uncertain whether the PMPU would exacerbate the existing conditions and cause impacts. Therefore, impacts would be potentially significant and further analysis will be provided in the EIR.

e. Have soils that would be incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?

No Impact. The entire study area is urbanized and has sewer service. No septic tanks or alternative wastewater disposal systems would be required for any project that would be proposed in accordance with the PMPU. Therefore, no impact would occur and no further analysis is warranted in the EIR.

VII. Greenhouse Gas Emissions		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:					
a.	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☒	☐	☐	☐
b.	Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☒	☐	☐	☐

a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Potentially Significant Impact. The project entails an update to the existing PMP and, as such, would not directly result in any construction- or operation-related greenhouse gas (GHG) emissions. However, reasonably foreseeable subsequent projects implemented under the PMPU would have the potential to result in GHG emissions from their future construction and operation. Consequently, the project has the potential to indirectly exceed an established threshold for GHG emissions. This issue area will be analyzed in the EIR.

b. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Potentially Significant Impact. The District has enacted a variety of policies and plans to reduce GHG emissions as part of its Climate Action Plan (CAP). However, The CAP has a time horizon through 2035 and the PMPU's time horizon may be longer. As a result, reasonably foreseeable future projects under the PMPU would potentially increase GHG emissions around the port. Therefore, the project may conflict with or impede implementation of plans, policies, or regulations that were adopted to reduce GHG emissions. This issue will be analyzed in the EIR.

VIII. Hazards and Hazardous Materials	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☒	☐	☐	☐
b. 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?	☒	☐	☐	☐
c. Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?	☒	☐	☐	☐
d. 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?	☒	☐	☐	☐
e. Be located within an airport land use plan area or, where such a plan has not been adopted, be within 2 miles of a public airport or public use airport and result in a safety hazard for people residing or working in the project area?	☒	☐	☐	☐
f. Be located within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☒	☐	☐	☐
h. Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including in areas where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Potentially Significant Impact. The project is a comprehensive update to the existing PMP. Although the PMPU would not directly create a significant hazard, the indirect effect of the PMPU's implementation would lead to reasonably foreseeable future development planned in accordance with the policies contained within the PMPU. This anticipated future development would have the potential to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Therefore, further analysis is warranted in the EIR.

b. 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?

Potentially Significant Impact. See VIII.a. The indirect effect of the PMPU's implementation would lead to reasonably foreseeable future development planned in accordance with the policies contained within the PMPU. This anticipated future development would have the potential to create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions. Therefore, further analysis is warranted in the EIR.

c. Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?

Potentially Significant Impact. There are many schools within 0.25 mile of the study area. The indirect effect of the PMPU's implementation would lead to reasonably foreseeable future development planned in accordance with the policies contained within the PMPU. This anticipated future development would potentially involve handling acutely hazardous materials and could emit hazardous emissions near a school. Therefore, further analysis is warranted in the EIR.

d. 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?

Potentially Significant Impact. There are known hazardous materials sites within the study area. The indirect effect of the PMPU's implementation would lead to reasonably foreseeable future development planned in accordance with the policies contained within the PMPU. This anticipated future development would potentially be located within or near existing hazardous material sites. Therefore, further analysis is warranted in the EIR.

e. For a project within 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, would the project result in a safety hazard for people residing or working in the project area?

Potentially Significant Impact. The study area includes the San Diego International Airport (SDIA). It is within Review Areas 1 and 2 of the Airport Influence Area, per the Airport Land Use Compatibility Plan (ALUCP) for this airport (SDIA 2014). Future development planned in accordance with the policies contained within the PMPU is reasonably foreseeable. This anticipated future development would potentially be located within 2 miles of the SDIA. Therefore, further analysis is warranted in the EIR.

f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

No Impact. The study area is not located within the vicinity of a private airstrip. No hazard impacts related to private airstrips would occur with implementation of the proposed project, and no further analysis of this threshold is warranted in the EIR.

g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Potentially Significant Impact. Applicable emergency response plan requirements are set forth by the County of San Diego Office of Emergency Services (OES) Operational Area Emergency Plan and other local police and fire departments within or adjacent to the study area. OES coordinates emergency response at the local level in the event of a disaster, including fires. Emergency response coordination is generally facilitated by the Operational Area Emergency Operations Center as well as other local responding agencies. Reasonably foreseeable projects implemented in accordance with the PMPU would have the potential to conflict with adopted emergency response or evacuation plans. Therefore, further analysis is warranted in the EIR.

h. Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including in areas where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

No Impact. State law requires that all local jurisdictions identify very high fire hazard severity zones (VHFHSZs) within their areas of responsibility (California Government Code, Section 51175–51189). Inclusion within these zones is based on vegetation density, slope severity, and other relevant factors that contribute to fire severity. According to the VHFHSZ Maps (California Department of Forestry and Fire Protection [CAL FIRE] 2009), the study area is located within a "non-VHFSZ." The study area is located in and around San Diego Bay and is completely developed. There are no wildlands or heavily vegetated areas near the study area; therefore, subsequent projects implemented under the PMPU would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. No impacts would occur, and no further analysis is warranted in the EIR.

IX. Hydrology and Water Quality		Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:					
a.	Violate any water quality standards or waste discharge requirements?	☒	☐	☐	☐
b.	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, resulting in a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?	☒	☐	☐	☐
c.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site?	☒	☐	☐	☐
d.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site?	☒	☐	☐	☐
e.	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?	☒	☐	☐	☐
f.	Otherwise substantially degrade water quality?	☒	☐	☐	☐
g.	Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h.	Place within a 100-year flood hazard area structures that would impede or redirect floodflows?	☒	☐	☐	☐
i.	Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☒	☐
j.	Contribute to inundation by seiche, tsunami, or mudflow?	☒	☐	☐	☐

a. Violate any water quality standards or waste discharge requirements?

Potentially Significant Impact. The proposed project entails the comprehensive update to the existing PMP, which would not directly result in construction or operational activities that would violate any water quality standards. However, projects implemented subsequent to the PMPU would have the potential to result in water quality violations and this would be considered an indirect effect of the proposed project. Therefore, further analysis is warranted in the EIR.

b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, resulting in a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?

Potentially Significant Impact. See IX. There are groundwater wells within or adjacent to the study area, including the National City Wells operated by the Sweetwater Authority. Reasonably foreseeable future projects implemented subsequent to, and consistent with, the PMPU would have the potential to result in the interference of groundwater recharge. Impacts would be potentially significant, and further analysis is warranted in the EIR.

c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site?

Potentially Significant Impact. See IX. Reasonably foreseeable future projects implemented subsequent to, and consistent with, the PMPU would have the potential to result in the alteration of drainage patterns and erosion/siltation. Impacts would be potentially significant, and further analysis is warranted in the EIR.

d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site?

Potentially Significant Impact. See IX. Reasonably foreseeable future projects implemented subsequent to, and consistent with, the PMPU would have the potential to result in the alteration of drainage patterns and result in flooding, as it is not specifically known what types of proposed changes to land uses would occur. Therefore, further analysis is warranted in the EIR.

e. 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?

Potentially Significant Impact. See IX. Reasonably foreseeable future projects implemented subsequent to, and consistent with, the PMPU would have the potential to create or contribute runoff. Therefore, further analysis is warranted in the EIR.

f. Otherwise substantially degrade water quality?

Potentially Significant Impact. As described in IX.a. through e., the proposed project would have the potential to indirectly cause significant water quality impacts. Therefore, this issue will be analyzed further in the EIR.

g. Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

No Impact. Pursuant to the Port Act and Public Trust Doctrine, no housing would be allowed within the study area under the PMPU. Therefore, further analysis in the EIR is not warranted.

h. Place within a 100-year flood hazard area structures that would impede or redirect floodflows?

Potentially Significant Impact. The study area includes several portions of the 100-year floodplain, as designated on Flood Insurance Rate Maps (Federal Emergency Management Agency 2012). Reasonably foreseeable future development under the PMPU would have the potential to be located within the 100-year floodplain; however, it is uncertain whether the PMPU will exacerbate the existing conditions and cause impacts. Therefore, this issue will be analyzed in the EIR.

i. Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?

Less-than-Significant Impact. Dam failures are rated as a low-probability, high-loss event. Only two major dam failures have been recorded in San Diego County. These occurred in 1916 and were caused by a flood event (County of San Diego 2010). Portions of the study area are located within a mapped dam inundation zone (California Office of Emergency Services 2003). The portions of the study area include a portion of the National City Bayfront near Civic Center Drive (Planning District 5) and the Chula Vista Bayfront (Planning District 6), which would be subject to inundation if the Sweetwater Dam were to fail. In addition, the majority of the southernmost portion of the Bay, which encompasses South Bay (Planning District 7), would be subject to inundation if the Upper and Lower Otay Dams were to fail, or if the Rodriguez Reservoir (located in Mexico) were to fail.

Information in this paragraph is based on GIS data from the San Diego County Office of Emergency Services (2015). The Sweetwater Reservoir is located approximately 6.5 miles east of the study area, and inundation is projected to occur in the study area within approximately 90 minutes if the dam were to fail. The Upper and Lower Otay Dams are approximately 10 miles to the east of the study area, and inundation is projected to occur in the study area within approximately 33 minutes if the dams were to fail. The Rodriguez Reservoir is located approximately 18 miles to the southeast of the study area in Mexico, and inundation is projected to occur in the study area within approximately 88 minutes if the dam were to fail.

The Division of Safety of Dams, within the State Department of Water Resources, is responsible for annual inspections of dams within California. In addition, each water district (or applicable water agency) is responsible for the safety of each dam. The Sweetwater Authority, which operates the Sweetwater Reservoir, is making required improvements that are in the final design stage to improve the safety of the dam (San Diego Union Tribune 2017). The City of San Diego operates the Upper and Lower Otay Reservoirs. The reservoirs have spilled over on a few occasions in the past 10 years, but no downstream flooding occurred (KPBS 2017). It is not known if the Rodriguez Reservoir in Mexico has experienced any failure or spillovers, nor is it known how often it is inspected for safety.

As the dams are not within the vicinity of the study area, there are no uses that could be proposed under the PMPU that would be expected to interfere with the dams or otherwise contribute to the potential failure of the dam. Existing uses within the study area are currently located within the dam inundation zones. No permanent housing would be implemented under the PMPU, as residential uses are not allowed within lands under the District's jurisdiction. If a dam failure were to occur, the uses within the study area are far enough away from the dams that no significant damage to structures

would occur. In addition, people within the study area could be evacuated in the amount of time it would take for inundation to reach the study area.

Therefore, it is highly unlikely that the proposed project would expose people or structures to a significant risk of loss, injury, or death involving flooding as a result of the failure of a levee or dam. Impacts would be less than significant, and no further analysis is warranted in the EIR.

j. Contribute to inundation by seiche, tsunami, or mudflow?

Potentially Significant Impact. The proposed project entails the comprehensive update to the existing PMP, which would not directly result in the contribution to inundation by seiche or tsunami. However, projects implemented subsequent to, and consistent with, the PMPU would have the potential to result in significant impacts. The study area is located within a designated high-risk zone for a tsunami (County of San Diego 2009); therefore, inundation from a tsunami or seiche is possible. Further analysis is warranted in the EIR.

X. Land Use and Planning	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Physically divide an established community?	☒	☐	☐	☐
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☒	☐	☐	☐
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?	☒	☐	☐	☐

a. Physically divide an established community?

Potentially Significant Impact. The proposed project entails the comprehensive update to the existing PMP. The PMPU is expected to include policies that would promote connectivity between planning districts and the region as a whole. However, more detailed analysis is needed in the EIR to determine if the project would have the potential to physically divide an established community.

b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Potentially Significant Impact. The PMP is the guiding land use policy document for all areas under the District's jurisdiction. The PMPU is being developed to be consistent with the Public Trust Doctrine and the Port Act and applicable provisions of the California Coastal Act. Further analysis is needed to determine if reasonably foreseeable future projects, consistent with the PMPU, would have the potential to result in inconsistencies with applicable regulations, which could then lead to a conflict with applicable land use plans.

c. Conflict with any applicable habitat conservation plan or natural community conservation plan?

Potentially Significant Impact. As previously detailed in IV.e., there are several resource management and habitat conservation plans applicable to the project that will be addressed within the EIR, including the San Diego Bay INRMP, the Chula Vista Bayfront Master Plan NRMP, the City of San Diego MSCP Subarea Plan, and the City of Chula Vista MSCP Subarea Plan. Further analysis is needed to determine if policies being proposed in the PMPU and/or reasonably foreseeable future projects that would be proposed consistent with the PMPU could conflict with applicable habitat conservation plans.

XI. Mineral Resources	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. 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?	☐	☐	☐	☒
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

a. 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?

No Impact. The Surface Mining and Reclamation Act of 1975 required the State Geologist to initiate mineral land classification to help identify and protect mineral resources in areas within the state. In accordance with guidelines established by the State Mining and Geology Board, mineral deposits in western San Diego County have been classified into Mineral Resource Zones (MRZ). The study area does not contain aggregate resources and is not located in an MRZ that contains important resources, as shown in Figure CE-6 of the Conservation Element of the City of San Diego General Plan (City of San Diego 2008b). The study area is not designated or zoned as land with available mineral resources. Therefore, the proposed project would not result in the loss of known mineral resources. No impact would occur, and no further analysis is warranted in the EIR.

b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

No Impact. See XI.a., above. The study area is not designated for mineral extraction. The study area and surrounding area do not contain locally important mineral resources. Therefore, implementation of the proposed project would not result in the loss of availability of a locally important mineral resource recovery site. No impact would occur, and no further analysis is warranted in the EIR.

XII. Noise	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Expose persons to or generate noise levels in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies?	☒	☐	☐	☐
b. Expose persons to or generate excessive groundborne vibration or groundborne noise levels?	☒	☐	☐	☐
c. Result in a substantial permanent increase in ambient noise levels in the project vicinity, above levels existing without the project?	☒	☐	☐	☐
d. Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity, above levels existing without the project?	☒	☐	☐	☐
e. Be located within an airport land use plan area, or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport and expose people residing or working in the project area to excessive noise levels?	☒	☐	☐	☐
f. Be located in the vicinity of a private airstrip and expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

a. Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Potentially Significant Impact. The PMPU would potentially result in noise from construction or operational activities from development that could occur pursuant to the PMPU. More specifically, reasonably foreseeable future projects implemented subsequent to, and consistent with, the PMPU would have the potential to expose persons to or generate noise levels in excess of standards. Further analysis will be provided in the EIR.

b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Potentially Significant Impact. Reasonably foreseeable future projects implemented subsequent to, and consistent with, the PMPU would have the potential to expose persons to or generate excessive groundborne vibration or groundbourne noise in excess of standards. Further analysis of this issue will be provided in the EIR.

c. A substantial permanent increase in ambient noise levels in the project vicinity, above levels existing without the project?

Potentially Significant Impact. As described in XII.a., the proposed project could indirectly increase ambient noise levels during the future construction and operation of reasonably foreseeable projects. Therefore, this issue will be evaluated in the EIR.

d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity, above levels existing without the project?

Potentially Significant Impact. As described in XII.a., the proposed project could indirectly increase ambient noise levels during construction and operation. Therefore, this issue will be evaluated in the EIR.

e. Fo**r **a project located within an airport land use land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Potentially Significant Impact. The study area includes the SDIA. It is within Review Areas 1 and 2 of the Airport Influence Area, according to the ALUCP for this airport (SDIA 2014). Therefore, further analysis is warranted in the EIR.

f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The project is not located within the vicinity of a private airstrip. No impacts related to private airstrips would occur with implementation of the proposed project. No impact would occur, and no further analysis is warranted in the EIR.

XIII. Population and Housing	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	☒	☐	☐	☐
b. Displace a substantial number of existing housing units, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c. Displace a substantial number of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

a. Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure?

Potentially Significant Impact. The PMPU would directly induce growth by planning for additional marine-related commercial and industrial uses within the study area. However, no residential uses would be proposed under the PMPU. The proposed project would also have the potential to indirectly induce growth, as subsequent uses could require the extension of infrastructure to accommodate growth. Therefore, further analysis will be included within the EIR.

b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

No Impact. There is no housing within the study area; therefore, no housing would be displaced. No impact would occur, and no further analysis is warranted in the EIR.

c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No Impact. Please see XIII.b. There is no housing within the study area that would be displaced, and no housing would be proposed or implemented under the PMPU. No impact would occur, and no further analysis is warranted in the EIR.

XIV. Public Services	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:				
1. Fire protection?	☒	☐	☐	☐
2. Police protection?	☒	☐	☐	☐
3. Schools?	☒	☐	☐	☐
4. Parks?	☒	☐	☐	☐
5. Other public facilities?	☒	☐	☐	☐

a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:

1. Fire protection?

Potentially Significant Impact. The study area is served by numerous fire departments. The San Diego Harbor Police Department (HPD) provides marine firefighting services in and around San Diego Bay for the District. Specifically, HPD's jurisdiction includes all tidelands extending through five neighboring cities (San Diego Unified Port District 2017b). Other fire departments within the neighboring cities include the City of San Diego Fire-Rescue Department, the Coronado Fire Department, the National City Fire Department, the Chula Vista Fire Department, and the Imperial Beach Fire Department. The PMPU would have the potential to result in the need for new or physically altered fire department facilities, as it could allow for new uses that in turn require additional firefighting personnel and facilities. Therefore, further analysis in the EIR is warranted.

2. Police protection?

Potentially Significant Impact. The study area is served by numerous fire departments. The HPD provides law enforcement services in and around San Diego Bay for the District. Other police departments within the neighboring cities include the City of San Diego Police Department, the Coronado Police Department, the National City Police Department, the Chula Vista Police Department, and the Imperial Beach Police Department (City of San Diego 2015). The PMPU would have the potential to result in the need for new or physically altered fire department facilities, as it could allow

for new uses that in turn require additional law enforcement personnel and facilities. Therefore, further analysis in the EIR is warranted.

3. Schools?

Potentially Significant Impact. Physical impacts on school facilities and services are usually associated with in-migration and population growth, which increase the demand for schools and result in the need for new or expanded facilities. The PMPU would not result in the construction of housing that would in turn generate new students within any of the school districts that are within or adjacent to the study area. However, the PMPU would allow for new employment by intensifying development within the District Tidelands, which in turn could increase the need for housing in the area and place a demand on schools. Therefore, the EIR will discuss the project's potential to result in an increased demand for schools that would require the need for new or physically altered facilities.

4. Parks?

Potentially Significant Impact. There are many parks and recreational facilities within the study area. The District manages 20 parks within the study area, and there are other parks operated by neighboring cities adjacent to the study area. The PMPU would have the potential to result in indirect significant impacts on the environment by planning for new or expanded park facilities, the physical construction of which may result in the significant impact. Therefore, further analysis in the EIR is warranted.

5. Other public facilities?

Potentially Significant Impact. There are numerous other public facilities within the study area. The PMPU would have the potential to result in indirect significant impacts on the environment related to the physical construction of new or expanded public facilities. Therefore, further analysis in the EIR is warranted.

XV. Recreation	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☒	☐	☐	☐
b. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☒	☐	☐	☐

a. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Potentially Significant Impact. An increase in the use of existing parks and recreational facilities typically results from an increase in the number of housing units or residents in an area. The proposed project would not increase housing units or residents within the study area. However, the anticipated intensification of land uses associated with the proposed project could bring an increased number of workers to the project area. In addition, the anticipated intensification could result in more visitors to the area. These increases could have a potential impact on the neighborhood parks and recreational facilities. Moreover, as noted in XIV.a.4., the PMPU would have the potential to result in indirect impacts on population growth, which could lead to greater use of the existing parks and recreational facilities, and the need for future parks and recreational facilities. Therefore, further analysis is warranted in the EIR.

b. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

Potentially Significant Impact. The PMPU may include new or expanded recreational facilities within the study area indirectly through land use designations and policies. Therefore, further analysis is warranted in the EIR.

XVI. Transportation/Traffic	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and nonmotorized travel, and relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☒	☐	☐	☐
b. Conflict with an applicable congestion management program, including, but not limited to, level-of-service standards and travel demand measures or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that would result in substantial safety risks?	☒	☐	☐	☐
d. Substantially increase hazards because of a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☒	☐	☐	☐
e. Result in inadequate emergency access?	☒	☐	☐	☐
f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities or otherwise decrease the performance or safety of such facilities?	☒	☐	☐	☐

a. Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and nonmotorized travel, and relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Potentially Significant Impact. The PMPU would have the potential to indirectly increase vehicular traffic that could conflict with local policies that measure the effectiveness of the circulation system. A transportation impact analysis (TIA) will be prepared for the proposed project, and this issue will be furthered analyzed in the EIR.

b. Conflict with an applicable congestion management program, including, but not limited to, level-of-service standards and travel demand measures or other standards established by the county congestion management agency for designated roads or highways?

No Impact. Federal Highway Administration 23 CFR 450.320 requires that each transportation management area (TMA) address congestion management through a process involving an analysis of multimodal metropolitan wide strategies that are cooperatively developed to foster safety and integrated management of new and existing transportation facilities eligible for federal funding. SANDAG has been designated as the TMA for the San Diego region. San Diego Forward: The Regional Plan, the region's long-range transportation plan and Sustainable Communities Strategy, meets the requirements of 23 CFR 450.320 by incorporating the following federal congestion management process: performance monitoring and measurement of the regional transportation system, multimodal alternatives and non-single occupancy vehicle analysis, land use impact analysis, the provision of congestion management tools, and integration with the Regional Transportation Improvement Program process.

California State Proposition 111, passed by voters in 1990, established a requirement that urbanized areas prepare and regularly update a Congestion Management Program (CMP). The requirements within the State CMP were developed to monitor the performance of the transportation system, develop programs to address near-term and long-term congestion, and better integrate transportation and land use planning. SANDAG provided regular updates for the state CMP from 1991 through 2008. In October 2009, the San Diego region elected to be exempt from the State CMP and, since this decision, SANDAG has been abiding by 23 CFR 450.320 to ensure the region's continued compliance with the federal congestion management process. Therefore, the proposed project would have no impact on an applicable CMP and no further analysis is warranted.

c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that would result in substantial safety risks?

Potentially Significant Impact. As discussed in VIII.e., the study area includes the SDIA. It is within Review Areas 1 and 2 of the Airport Influence Area, per the ALUCP for this airport (SDIA 2014). Therefore, further analysis is warranted in the EIR.

d. Substantially increase hazards because of a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Potentially Significant Impact. The PMPU would have the potential to indirectly increase vehicular traffic and could substantially increase hazards because of a design feature. This issue will be further addressed in the TIA and the EIR.

e. Result in inadequate emergency access?

Potentially Significant Impact. The PMPU would have the potential to indirectly result in inadequate emergency access by not properly considering such access in future development proposed under the PMPU. Therefore, this issue will be analyzed in the EIR.

f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities or otherwise decrease the performance or safety of such facilities?

Potentially Significant Impact. See XVI.a. The PMPU would have the potential to indirectly increase vehicular traffic that could result in conflicts with any adopted policies, plans, or programs regarding public transit or bicycle or pedestrian facilities. Further analysis will be included in the EIR.

XVII. Tribal Cultural Resources	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☐	☒	☐
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☒	☐

Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?

b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

Less-than-Significant Impact. A records search at the South Coast Information Center will be conducted for the proposed project to determine if tribal cultural resources are present within the project site. The Native American Heritage Commission will also be contacted to determine if sacred lands have been identified in the project site and to identify a list of interested tribes to be contacted.

Pursuant to AB 52, tribes can request to be notified of projects in particular geographies. However, at present, no Native American tribes have requested consultation for CEQA projects within the District's jurisdiction. As such and given the relatively recent creation land within the District's Tidelands, it is unlikely that any tribal resource impacts would occur within the study area.

XVIII. Utilities, Service Systems, and Energy	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☒	☐	☐	☐
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☒	☐	☐	☐
c. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☒	☐	☐	☐
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or would new or expanded entitlements be needed?	☒	☐	☐	☐
e. Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☒	☐	☐	☐
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☒	☐	☐	☐
g. Comply with federal, state, and local statutes and regulations related to solid waste?	☒	☐	☐	☐
h. Result in the wasteful, inefficient, and unnecessary consumption of energy?	☒	☐	☐	☐

a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Potentially Significant Impact. Wastewater treatment to existing uses within the study area is provided by several jurisdictions, including the relevant wastewater departments/divisions of the Cities of San Diego, National City, Chula Vista, Imperial Beach, and Coronado. The PMPU would plan for an intensification of land uses that may require expanded wastewater treatment requirements and, if not properly addressed, may cause an exceedance of treatment requirements from the RWQCB. Therefore, impacts would be potentially significant and further analysis in the EIR is warranted.

b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Potentially Significant Impact. XVII.a. above discusses wastewater service. Water service to existing uses within the study area is provided by several jurisdictions, including the City of San Diego, the Sweetwater Authority (serving National City and Chula Vista), and the Cal-Am Water Company (serving Imperial Beach and Coronado). The PMPU would plan for an intensification of land uses that may require new water or wastewater treatment facilities. Therefore, impacts would be potentially significant and further analysis in the EIR is warranted.

c. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Potentially Significant Impact. The PMPU would plan for an intensification of land uses that may require new stormwater drainage facilities or the expansion of existing facilities. Therefore, impacts would be potentially significant and further analysis in the EIR is warranted.

d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or would new or expanded entitlements be needed?

Potentially Significant Impact. See XVII.b. Impacts would be potentially significant, and further analysis in the EIR is warranted.

e. Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Potentially Significant Impact. See XVII.a. and b. Impacts would be potentially significant, and further analysis in the EIR is warranted.

f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Potentially Significant Impact. The PMPU would plan for an intensification of land uses that may generate solid waste that would exceed existing landfill capacity. Therefore, impacts would be potentially significant and further analysis in the EIR is warranted.

g. Comply with federal, state, and local statutes and regulations related to solid waste?

Potentially Significant Impact. The PMPU would plan for an intensification of land uses that may generate solid waste that would potentially conflict with existing solid waste regulations. Therefore, impacts would be potentially significant and further analysis in the EIR is warranted.

h. Result in the wasteful, inefficient, and unnecessary consumption of energy?

Potentially Significant Impact. The PMPU would plan for an intensification of land uses that may require additional energy during construction and operation beyond what is currently used within the study area.

According to Appendix F, *Energy Conservation*, of the State CEQA Guidelines, a project has the potential to result in wasteful, inefficient, and unnecessary consumption of energy when considering the following:

- The project's energy requirements and its energy-use efficiencies by amount and fuel type for each stage of the project, including construction, operation, maintenance, and/or removal.
- The effects of the project on local and regional energy supplies and on requirements for additional capacity.
- The effects of the project on peak- and base-period demands for electricity and other forms of energy.
- The degree to which the project complies with existing energy standards.
- The effects of the project on energy resources.

Considering the proposed project may result in an increase in energy demand, impacts associated with the consumption of energy are considered potentially significant and will be further analyzed in the EIR.

XIV. Mandatory Findings of Significance	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☒	☐	☐	☐
b. Does the project have impacts that are individually limited but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☒	☐	☐	☐
c. Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐

a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?

Potentially Significant Impact. The proposed project involves a comprehensive update to the existing PMP, which would include new land use designations within the planning districts and policies that would be applicable to subsequent projects implemented under the PMPU. Although it is likely that the proposed project would include policies that aim to improve the quality of the environment, including fish and wildlife habitat and archaeological historical resources, the proposed land use designations and policies will require further evaluation to reach a determination. Therefore, the PMPU would have the potential to result in a significant impact and further analysis in the EIR is warranted.

b. Does the project have impacts that are individually limited but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

Potentially Significant Impact. A cumulative impact could occur for a given resource area if the project were to result in an incrementally considerable contribution to a significant cumulative impact from past, present, or reasonably foreseeable future projects. As discussed in Sections I

though XVII, the proposed project could result in potentially significant impacts in several resource areas. Even issues that were found to be less than significant with implementation of the project could contribute to a cumulatively significant impact. However, the PMPU would not have the potential to contribute to a cumulatively significant impact on agricultural or mineral resources, as no such resources are present or adjacent to the study area. As such, the potential cumulative impact from all resource issues, excluding agricultural and mineral resources, will be evaluated in the EIR.

c. Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?

Potentially Significant Impact. Given the analysis provided in I. though XVIII., the proposed project could result in a potentially significant impact that could cause substantial adverse effects on human beings, either directly or indirectly. Therefore, these issue areas will be further analyzed in the EIR.

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Appendix B

Notice of Preparation (NOP)
Comment Letters

STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT

EDMUND G. BROWN JR.
GOVERNOR

KEN ALEX
DIRECTOR

Notice of Preparation

March 30, 2017

To: Reviewing Agencies

Re: Port Master Plan Update (PMPU)
SCH# 2017031070

Attached for your review and comment is the Notice of Preparation (NOP) for the Port Master Plan Update (PMPU) draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Mayra Medel
San Diego Unified Port District
Land Use Planning Department
P.O. Box 120488
San Diego, CA 92112-0488

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Attachments
cc: Lead Agency

Document Details Report
State Clearinghouse Data Base

SCH# 2017031070
Project Title Port Master Plan Update (PMPU)
Lead Agency San Diego Unified Port District

Type NOP Notice of Preparation

Description The PMPUI would provide the official planning policies of the District consistent with the general statewide purpose, for the physical development of the tide and submerged lands conveyed and granted in trust to the district, and acquired uplands. Pursuant to the California Coastal Act and Port Act, the PMPU would control the allowable land and water uses within the District; list known "appealable" projects' and include goals and policies that would implement the broad policies of the Coastal Act and shape the characteristics of development, coastal access, recreation and environmental conservation throughout District Jurisdiction. The PMPU would contain six bay wide elements and be divided into 10 planning districts. The PMPU would also describe the regulatory process and implementation for projects and its consistency with the coastal act.

Lead Agency Contact

Name Mayra Medel
Agency San Diego Unified Port District
Phone 619-686-6598 **Fax**
email
Address Land Use Planning Department
P.O. Box 120488
City San Diego **State** CA **Zip** 92112-0488

Project Location

County San Diego
City
Region
Cross Streets Shelter Island Dr., Harbor Dr., Goesno Pl., Marina Pkway, Seacoast Dr., Glorietta Blvd
Lat / Long 32° 38' 59" N / 117° 6' 43" W
Parcel No.
Township **Range** **Section** **Base**

Proximity to:

Highways I-5, SR-163,-54,-75
Airports SD Int'l Airport, NAS N. Island
Railways BNSF, MTS
Waterways
Schools Various
Land Use All Commercial, Industrial, Pub. Recreation, Conservation, Military, and Pub. facilities land/water uses in existing port mstr. plan.

Project Issues Aesthetic/Visual; Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Coastal Zone; Cumulative Effects; Drainage/Absorption; Flood Plain/Flooding; Forest Land/Fire Hazard; Geologic/Seismic; Growth Inducing; Housing; Job Generation; Landuse; Minerals; Noise; Other Issues; Population/Housing Balance; Public Services; Recreation/Parks; Septic System; Sewer Capacity; Social; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Wildlife

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Reviewing Agencies Resources Agency; Department of Boating and Waterways; California Coastal Commission; Department of Parks and Recreation; Department of Water Resources; Department of Fish and Wildlife, Region 5; Department of Fish and Wildlife, Marine Region; Native American Heritage Commission; Public Utilities Commission; State Lands Commission; Caltrans, Division of Aeronautics; California Highway Patrol; Caltrans, District 11; Regional Water Quality Control Board, Region 9

Document Details Report
State Clearinghouse Data Base

Date Received 03/30/2017 ***Start of Review*** 03/30/2017 ***End of Review*** 04/28/2017

Print Form

Appendix C

Notice of Completion & Environmental Document Transmittal

2017031070

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH #

Project Title: Port Master Plan Update (PMPU)

Lead Agency: San Diego Unified Port District (District) | Contact Person: Mayra Medel

Mailing Address: 3165 Pacific Highway | Phone: (619) 686-6598

City: San Diego | Zip: 92101-1128 | County: San Diego

Project Location: County: San Diego (SD) | City/Nearest Community: Chula Vista, Coronado, IB, Natl. City, SD

Cross Streets: Shelter Island Dr., Harbor Dr., Goesno Pl., Marina Pkwy., Seacoast Dr., Glorietta Blvd. | Zip Code: 92101

Longitude/Latitude (degrees, minutes and seconds): 32 ° 38 ′ 59 ″ N / 117 ° 6 ′ 43 ″ W | Total Acres: ~6,000

Assessor's Parcel No.: All parcels in District jurisdiction | Section: | Twp.: | Range: | Base:

Within 2 Miles: State Hwy #: I-5,-15 & SR-163,-54,-75 | Waterways: San Diego Bay, Pacific Ocean, Sweetwater River

Airports: SD Int'l Airport, NAS N.Island | Railways: BNSF, MTS | Schools: Various

Document Type:

CEQA: ☒ NOP ☐ Draft EIR ☐ Supplement/Subsequent EIR (Prior SCH No.) ☐ Early Cons ☐ Neg Dec ☐ Mit Neg Dec Other:

NEPA: ☐ NOI ☐ Other: ☐ Joint Document ☐ EA ☐ Final Document ☐ Draft EIS ☐ Other: ☐ FONSI

Governor's Office of Planning & Research

MAR 30 2017

STATE CLEARINGHOUSE

Local Action Type:

☐ General Plan Update ☐ Specific Plan ☐ Rezone ☐ Annexation
☐ General Plan Amendment ☒ Master Plan ☐ Prezone ☐ Redevelopment
☐ General Plan Element ☐ Planned Unit Development ☐ Use Permit ☐ Coastal Permit
☐ Community Plan ☐ Site Plan ☐ Land Division (Subdivision, etc.) ☒ Other: Port Master Plan

Development Type:

☐ Residential: Units Acres
☐ Office: Sq.ft. Acres Employees
☐ Commercial: Sq.ft. Acres Employees
☐ Industrial: Sq.ft. Acres Employees
☐ Educational:
☐ Recreational:
☐ Water Facilities: Type MGD
☐ Transportation: Type
☐ Mining: Mineral
☐ Power: Type MW
☐ Waste Treatment: Type MGD
☐ Hazardous Waste: Type
☒ Other: Port Master Plan Update (PMPU)

Project Issues Discussed in Document:

☒ Aesthetic/Visual ☐ Fiscal ☒ Recreation/Parks ☒ Vegetation
☒ Agricultural Land ☒ Flood Plain/Flooding ☐ Schools/Universities ☒ Water Quality
☒ Air Quality ☒ Forest Land/Fire Hazard ☒ Septic Systems ☒ Water Supply/Groundwater
☒ Archeological/Historical ☒ Geologic/Seismic ☒ Sewer Capacity ☒ Wetland/Riparian
☒ Biological Resources ☒ Minerals ☒ Soil Erosion/Compaction/Grading ☒ Growth Inducement
☒ Coastal Zone ☒ Noise ☒ Solid Waste ☒ Land Use
☒ Drainage/Absorption ☒ Population/Housing Balance ☒ Toxic/Hazardous ☒ Cumulative Effects
☐ Economic/Jobs ☒ Public Services/Facilities ☒ Traffic/Circulation ☒ Other: GHG/Energy

Present Land Use/Zoning/General Plan Designation:

All Commercial, Industrial, Pub. Recreation, Conservation, Military, and Pub. Facilities land/water uses in existing Port Mstr Plan.

Project Description: *(please use a separate page if necessary)*

The PMPU would provide the official planning policies of the District consistent with the general statewide purpose, for the physical development of the tide and submerged lands conveyed and granted in trust to the District, and acquired uplands. Pursuant to the California Coastal Act (Coastal Act) and Port Act, the PMPU would control the allowable land and water uses within the District; list known "appealable" projects; and include goals and policies that would implement the broad policies of the Coastal Act and shape the characteristics of development, coastal access, recreation, and environmental conservation throughout District jurisdiction. The PMPU would contain six baywide elements and be divided into 10 Planning Districts. The PMPU would also describe the regulatory process and implementation for projects and its consistency with the Coastal Act.

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

NOP Distribution List TP

County: San Diego

SCH# 2017031070

sources Agency

Resources Agency
Nadell Gayou

- [■] **Dept. of Boating & Waterways**
  Denise Peterson
- [■] **California Coastal Commission**
  Elizabeth A. Fuchs
- [ ] **Colorado River Board**
  Lisa Johansen
- [ ] **Dept. of Conservation**
  Crina Chan
- [ ] **California Energy Commission**
  Eric Knight
- [ ] **Cal Fire**
  Dan Foster
- [ ] **Central Valley Flood Protection Board**
  James Herota
- [ ] **Office of Historic Preservation**
  Ron Parsons

Dept of Parks & Recreation
Environmental Stewardship Section

- [ ] **California Department of Resources, Recycling & Recovery**
  Sue O'Leary
- [ ] **S.F. Bay Conservation & Dev't. Comm.**
  Steve Goldbeck
- [■] **Dept. of Water Resources**
  Resources Agency
  Nadell Gayou

Fish and Game

- [ ] **Depart. of Fish & Wildlife**
  Scott Flint
  Environmental Services Division
- [ ] **Fish & Wildlife Region 1**
  Curt Babcock
- [ ] **Fish & Wildlife Region 1E**
  Laurie Harnsberger
- [ ] **Fish & Wildlife Region 2**
  Jeff Drongesen
- [ ] **Fish & Wildlife Region 3**
  Craig Weightman
- [ ] **Fish & Wildlife Region 4**
  Julie Vance
- [■] **Fish & Wildlife Region 5**
  Leslie Newton-Reed
  Habitat Conservation Program
- [ ] **Fish & Wildlife Region 6**
  Tiffany Ellis
  Habitat Conservation Program
- [ ] **Fish & Wildlife Region 6 I/M**
  Heidi Calvert
  Inyo/Mono, Habitat Conservation Program
- [■] **Dept. of Fish & Wildlife M**
  William Paznokas
  Marine Region

Other Departments

- [ ] **Food & Agriculture**
  Sandra Schubert
  Dept. of Food and Agriculture
- [ ] **Dept. of General Services**
  Cathy Buck
  Environmental Services Section
- [ ] **Delta Stewardship Council**
  Kevan Samsam
- [ ] **Housing & Comm. Dev.**
  CEQA Coordinator
  Housing Policy Division

Independent Commissions,Boards

- [ ] **Delta Protection Commission**
  Erik Vink
- [ ] **OES (Office of Emergency Services)**
  Monique Wilber
- [■] **Native American Heritage Comm.**
  Debbie Treadway
- [■] **Public Utilities Commission**
  Supervisor
- [ ] **Santa Monica Bay Restoration**
  Guangyu Wang
- [■] **State Lands Commission**
  Jennifer Deleong
- [ ] **Tahoe Regional Planning Agency (TRPA)**
  Cherry Jacques

Cal State Transportation Agency CalSTA

- [■] **Caltrans - Division of Aeronautics**
  Philip Crimmins
- [ ] **Caltrans – Planning HQ LD-IGR**
  Christian Bushong
- [■] **California Highway Patrol**
  Suzann Ikeuchi
  Office of Special Projects

Dept. of Transportation

- [ ] **Caltrans, District 1**
  Rex Jackman
- [ ] **Caltrans, District 2**
  Marcelino Gonzalez
- [ ] **Caltrans, District 3**
  Eric Federicks – South
  Susan Zanchi - North
- [ ] **Caltrans, District 4**
  Patricia Maurice
- [ ] **Caltrans, District 5**
  Larry Newland
- [ ] **Caltrans, District 6**
  Michael Navarro
- [ ] **Caltrans, District 7**
  Dianna Watson
- [ ] **Caltrans, District 8**
  Mark Roberts
- [ ] **Caltrans, District 9**
  Gayle Rosander
- [ ] **Caltrans, District 10**
  Tom Dumas
- [■] **Caltrans, District 11**
  Jacob Armstrong
- [ ] **Caltrans, District 12**
  Maureen El Harake

Cal EPA

Air Resources Board

- [ ] Airport & Freight
  Jack Wursten
  - [ ] Transportation Projects
    Nesamani Kalandiyur
  - [ ] Industrial/Energy Projects
    Mike Tollstrup
- [ ] **State Water Resources Control Board**
  Regional Programs Unit
  Division of Financial Assistance
- [ ] **State Water Resources Control Board**
  Cindy Forbes – Asst Deputy
  Division of Drinking Water
- [ ] **State Water Resources Control Board**
  Div. Drinking Water #_____
- [ ] **State Water Resources Control Board**
  Student Intern, 401 Water Quality Certification Unit
  Division of Water Quality
- [ ] **State Water Resouces Control Board**
  Phil Crader
  Division of Water Rights
- [ ] **Dept. of Toxic Substances Control**
  CEQA Tracking Center
- [ ] **Department of Pesticide Regulation**
  CEQA Coordinator

Regional Water Quality Control Board (RWQCB)

- [ ] **RWQCB 1**
  Cathleen Hudson
  North Coast Region (1)
- [ ] **RWQCB 2**
  Environmental Document Coordinator
  San Francisco Bay Region (2)
- [ ] **RWQCB 3**
  Central Coast Region (3)
- [ ] **RWQCB 4**
  Teresa Rodgers
  Los Angeles Region (4)
- [ ] **RWQCB 5S**
  Central Valley Region (5)
  - [ ] **RWQCB 5F**
    Central Valley Region (5)
    Fresno Branch Office
  - [ ] **RWQCB 5R**
    Central Valley Region (5)
    Redding Branch Office
- [ ] **RWQCB 6**
  Lahontan Region (6)
  - [ ] **RWQCB 6V**
    Lahontan Region (6)
    Victorville Branch Office
- [ ] **RWQCB 7**
  Colorado River Basin Region (7)
- [ ] **RWQCB 8**
  Santa Ana Region (8)
- [■] **RWQCB 9**
  San Diego Region (9)

- [ ] **Other** _____
  _____
  _____
- [ ] _____
  Conservancy

Last Updated 2/3/17

U.S. Department of Homeland Security
FEMA Region IX
1111 Broadway, Suite 1200
Oakland, CA. 94607-4052

FEMA

April 3, 2017

Mayra Medel, Project Manager
San Diego Unified Port District
Planning & Green Port
3165 Pacific Highway
San Diego, California 92101

Dear Ms. Medel:

This is in response to your request for comments regarding the San Diego Port of San Diego Notice of Preparation of Draft Environmental Impact Report Port Master Plan Update/Initial Study and Checklist.

Please review the current effective countywide Flood Insurance Rate Maps (FIRMs) for the County of San Diego (Community Number 060284) and City of San Diego (Community Number 060295), Maps revised April 5, 2016. Please note that the City of San Diego, San Diego County, California is a participant in the National Flood Insurance Program (NFIP). The minimum, basic NFIP floodplain management building requirements are described in Vol. 44 Code of Federal Regulations (44 CFR), Sections 59 through 65.

A summary of these NFIP floodplain management building requirements are as follows:

- All buildings constructed within a riverine floodplain, (i.e., Flood Zones A, AO, AH, AE, and A1 through A30 as delineated on the FIRM), must be elevated so that the lowest floor is at or above the Base Flood Elevation level in accordance with the effective Flood Insurance Rate Map.

- If the area of construction is located within a Regulatory Floodway as delineated on the FIRM, any ***development*** must not increase base flood elevation levels. **The term *development* means any man-made change to improved or unimproved real estate, including but not limited to buildings, other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, and storage of equipment or materials.** A hydrologic and hydraulic analysis must be performed *prior* to the start of development, and must demonstrate that the development would not cause any rise in base flood levels. No rise is permitted within regulatory floodways.

- All buildings constructed within a coastal high hazard area, (any of the "V" Flood Zones as delineated on the FIRM), must be elevated on pilings and columns, so that the lowest horizontal structural member, (excluding the pilings and columns), is elevated to or above the base flood elevation level. In addition, the posts and pilings foundation and the structure attached thereto, is anchored to resist flotation, collapse and lateral movement due to the effects of wind and water loads acting simultaneously on all building components.

- Upon completion of any development that changes existing Special Flood Hazard Areas, the NFIP directs all participating communities to submit the appropriate hydrologic and hydraulic data to FEMA for a FIRM revision. In accordance with 44 CFR, Section 65.3, as soon as practicable, but not later than six months after such data becomes available, a community shall notify FEMA of the changes by submitting technical data for a flood map revision. To obtain copies of FEMA's Flood Map Revision Application Packages, please refer to the FEMA website at http://www.fema.gov/business/nfip/forms.shtm.

Please Note:

Many NFIP participating communities have adopted floodplain management building requirements which are more restrictive than the minimum federal standards described in 44 CFR. Please contact the local community's floodplain manager for more information on local floodplain management building requirements. The San Diego floodplain manager can be reached by calling Jamal Batta, CFM, P.E., at (619) 533-7482. The San Diego County floodplain manager can be reached by calling Sara Agahi, Flood Control District Manager at (858) 694-2665.

If you have any questions or concerns, please do not hesitate to call Mark Delorey of the Mitigation staff at (510) 627-7057.

Sincerely,

Gregor Blackburn, CFM, Branch Chief
Floodplain Management and Insurance Branch

cc:
Jamal Batta, CFM, P.E., Floodplain Manager, City of San Diego
Sara Agahi, Flood Control District Manager, San Diego County
Garret Tam Sing/Salomon Miranda, State of California, Department of Water Resources, Southern Region IX
Mark Delorey, NFIP Compliance Officer, DHS/FEMA Region IX
Alessandro Amaglio, Environmental Officer, DHS/FEMA Region IX

STATE OF CALIFORNIA
NATIVE AMERICAN HERITAGE COMMISSION
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
Phone (916) 373-3710
Fax (916) 373-5471
Email: nahc@nahc.ca.gov
Website: http://www.nahc.ca.gov
Twitter: @CA_NAHC

Edmund G. Brown Jr., Governor

April 5, 2017

Mayra Medel
San Diego Unified Port District
Land Use Planning Department
P. O. Box 120488
San Diego, CA 92112-0488

sent via e-mail:
mmedel@portofsandiego.org

RE: SCH# 2017031070; Port Master Plan Update Project, Notice of Preparation for Draft Environmental Impact Report, San Diego County, California

Dear Ms. Medel:

The Native American Heritage Commission has received the Notice of Preparation (NOP) for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code § 21000 et seq.), specifically Public Resources Code section 21084.1, states that a project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, § 15064.5 (b) (CEQA Guidelines Section 15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an environmental impact report (EIR) shall be prepared. (Pub. Resources Code § 21080 (d); Cal. Code Regs., tit. 14, § 15064 subd.(a)(1) (CEQA Guidelines § 15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources with the area of project effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a **separate category of cultural resources**, "tribal cultural resources" (Pub. Resources Code § 21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment (Pub. Resources Code § 21084.2). Please reference California Natural Resources Agency (2016) "Final Text for tribal cultural resources update to Appendix G: Environmental Checklist Form," http://resources.ca.gov/ceqa/docs/ab52/Clean-final-AB-52-App-G-text-Submitted.pdf. Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code § 21084.3 (a)). **AB 52 applies to any project for which a notice of preparation or a notice of negative declaration or mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. § 800 et seq.) may also apply.

The NAHC recommends **lead agencies consult with all California Native American tribes** that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments. **Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.**

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a **lead agency** shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:
    a. A brief description of the project.
    b. The lead agency contact information.
    c. Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code § 21080.3.1 (d)).

d. A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code § 21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A **lead agency** shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code § 21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or environmental impact report. (Pub. Resources Code § 21080.3.1(b)).
   a. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code § 65352.4 (SB 18). (Pub. Resources Code § 21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:
   a. Alternatives to the project.
   b. Recommended mitigation measures.
   c. Significant effects. (Pub. Resources Code § 21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:
   a. Type of environmental review necessary.
   b. Significance of the tribal cultural resources.
   c. Significance of the project's impacts on tribal cultural resources.
   d. If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code § 21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code sections 6254 (r) and 6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code § 21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:
   a. Whether the proposed project has a significant impact on an identified tribal cultural resource.
   b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code section 21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code § 21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:
   a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
   b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code § 21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code section 21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code section 21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code § 21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code section 21084.3 (b). (Pub. Resources Code § 21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

a. Avoidance and preservation of the resources in place, including, but not limited to:
    i. Planning and construction to avoid the resources and protect the cultural and natural context.
    ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
    i. Protecting the cultural character and integrity of the resource.
    ii. Protecting the traditional use of the resource.
    iii. Protecting the confidentiality of the resource.
c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
d. Protecting the resource. (Pub. Resource Code § 21084.3 (b)).
e. Please note that a federally recognized California Native American tribe or a nonfederally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code § 815.3 (c)).
f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code § 5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An environmental impact report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:
    a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code sections 21080.3.1 and 21080.3.2 and concluded pursuant to Public Resources Code section 21080.3.2.
    b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
    c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code section 21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code § 21082.3 (d)).

    This process should be documented in the Cultural Resources section of your environmental document.

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires **local governments** to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code § 65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code § 65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code section 65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code sections 5097.9 and 5097.993 that are within the city's or county's jurisdiction. (Gov. Code § 65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason,

we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/

NAHC Recommendations for Cultural Resources Assessments

To 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 to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have been already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
    b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
    a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
    b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
    a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, section 15064.5(f) (CEQA Guidelines section 15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
    b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
    c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code section 7050.5, Public Resources Code section 5097.98, and Cal. Code Regs., tit. 14, section 15064.5, subdivisions (d) and (e) (CEQA Guidelines section 15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

Please contact me if you need any additional information at gayle.totton@nahc.ca.gov.

Sincerely,

Gayle Totton, M.A., PhD.
Associate Governmental Program Analyst

cc: State Clearinghouse

San Diego County Archaeological Society, Inc.

Environmental Review Committee

8 April 2017

RECEIVED
APR 11 2017
Planning & Green Port

To: Ms. Mayra Medel
Planning and Green Port
San Diego Unified Port District
3165 Pacific Highway
San Diego, California 92101

Subject: Notice of Preparation of a Draft Environmental Impact Report
Port Master Plan Update

Dear Ms. Medel:

Thank you for the Notice of Preparation for the subject project, received by this Society last week.

We are pleased to note the inclusion of cultural resources in the list of subject areas to be addressed in the DEIR, and look forward to reviewing it during the upcoming public comment period. To that end, please include us in the distribution of the DEIR, and also provide us with a copy of any cultural resources technical report(s).

SDCAS appreciates being included in the City's environmental review process for this project.

Sincerely,

James W. Royle, Jr., Chairperson
Environmental Review Committee

cc: SDCAS President
File

P.O. Box 81106 San Diego, CA 92138-1106 (858) 538-0935

April 12, 2017

Initial Comments on the March 30, 2017 Notice of Preparation of a Draft Environmental Impact Report for the San Diego Unified Port District's Port Master Plan Update Program

My name is Donald Wood, and while I work closely with a number of community planning and environmental organizations, these initial comments are my own.

I taught program and project planning at SDG&E for more than twenty years, and spent over three decades leading and working with Citizens Coordinate for Century 3, San Diego's oldest and most respected community and land use planning organization.

When we call something a program, I think of an ongoing effort to reach clear goals, helping change people's values, aspirations and behavior. When we call something a project, I think of a specific property which we take action on, such as redevelopment of the embarcadero, the Chula Vista bayfront redevelopment effort, and other activities that apply to one specific piece of property.

I think of the port's master plan as a long term visioning program or process, setting long term global goals for the entire bay area , creating new strategies and tactics to achieve that vision. The first port master plan was adopted in 1980, and has helped guide the port's efforts for 37 years. Because it is not tied to any particular piece of property, but instead pursues a global vision of what the bay and its surroundings could become, I think of it as a program, or a process; not a project.

The March 30 Notice of Preparation of a Draft EIR (NOP, DEIR) appears to conflates the terms "program EIR" and "project EIR" in their notice. The first sentence says it says the port is preparing a "Program EIR (PEIR)", but then refers to the Port Master Plan Update as a "proposed project". To my mind, these are two different things.

In the pending DEIR Scoping Memo, staff should clarify how the port is using the terms "program" and "project", within the context of its ongoing planning efforts, its enabling legislation and under the California Environmental Quality Act (CEQA). It should also clearly explain how its program and its projects will work together over time to help achieve the port board's adopted vision.

For purposes of the scoping memo, and this environmental review process, I believe that the port should treat this global port master planning update process as a program, and plan on developing future project EIRs for major individual bayfront properties, like Harbor Island redevelopment and Seaport Village, just as it did separate project EIRs on the Chula Vista Bayfront redevelopment project and the most recent convention center expansion. Doing a general program EIR of the global PMPU

process does not excuse the port from doing individual project EIRs on future major redevelopment projects. The EIR proposes to divide the bayfront into multiple districts. As part of that process, the program EIR should indicate for each district which proposed future activities and development efforts will get project EIRs.

The scoping notice makes no mention of the Ports adopted Climate Action Plan. Any program EIR should detail how the Port plans to coordinate its planned actions in a manner which fully complies with its adopted CAP, and for each district and proposed future project, detail projected reductions in vehicle miles traveled (VMTs) and reductions in greenhouse gas emissions the port plans to achieve as its implements its updated port master plan.

In all the years I taught planning, I started by telling my students that a good plan is similar to a good newspaper article, in that it reflects the five W. The first w is for who, it identifies the individuals or groups that are to implement the plan. The second w describes exactly what actions are going to be taken. The third w states clearly when those actions are going to be taken. The fourth w notes exactly where the action is to be taken, and the fifth w explains why those actions will be taken. Any document that does not contain those elements cannot call itself a real plan.

Any real plan starts off by identifying its end goals, the results I hopes to achieve. In each part of the planning process, clarity is critical. Vague or murky goals will results in not much getting done over time. At the beginning of this master plan update process, the port board adopted a vision statement and guiding principles document that lays out some long term values and some global goals, like preserving public access to the bayfront and shorelines of San Diego Bay; enhancing mobility around and across the bay, maintaining the bays ecosystem, and streamlining the individual project planning and approval process.

More recently the board and port staff have begun to discuss a position that land use zoning and planning objectives should be vague, and not concrete, in order to maintain "flexibility" in future land use planning and zoning decision making. This runs the risk of ending up with a bowl of mush instead of a real plan. The port should refine its initial vision, developing concrete long term goals for each of the planning districts, with realistic timelines and budgets to achieve those goals, instead of using terms like "mixed use" zoning, which could mean just about anything a future port board chooses to put there. True planning is about setting concrete goals, adopting a strategy and tactics to get us there; It's not about fuzzy thinking on anyone's part.

As a subset of the mixed use planning category, the port should add a subcategory for hotels and visitor services. The updated master plan should clearly indicate where the port proposes to locate future hotels and other buildings around the bay, and where it plans to locate future bayside parks and open space to fully mitigate the impacts of the proposed new hotels and buildings

When it comes to master plan goals and priorities, the port should make the preservation and enhancement of public access to the bayfront and shorelines its top priority, in keeping with directions it has previously received from the California Coastal Commission.

In earlier planning discussions, the port staff has attempted to make differentiate between what it considers "appealable" versus "un-appealable" projects, apparently based on the original Port enabling act language. Given recent regulatory developments tied to a new Harbor Island restaurant and the proposed replacement of the old Anthony's restaurant on the North Embarcadero, the port would be well advised to assume that all future proposed projects will be appealable to the coastal commission, and act accordingly. Doing so might help avoid long drawn out regulatory review processes and legal complications.

The scoping memo and the PMPU DEIR should also detail how the port district plans to work with the Navy, the California Coastal Commission, the California State Lands Commissions, the airport, and each of its surrounding port member cities to make sure that the ports long term plans are coordinated with the long range redevelopment and climate action plans of those agencies. As noted above the PMPU must also reflect and support the goals and strategies already adopted as part of the port's own climate action plan.

Thanks for allowing us this opportunity to provide initial comment on the NOP and the upcoming EIR process.

Don Wood

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4539 Lee Avenue
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Alice Ayala

From: Don Wood <dwood8@cox.net>
Sent: Friday, April 28, 2017 12:18 PM
To: Myra Medel
Cc: Ann Moore; Bob Nelson; Dan Malcolm; Garry Bonelli; Jason Giffen; Linda Scott; Lucy Contreras; Mark Mcintire; Marshall Merrifield; Mayra Medel; Rafael Castellanos; Randa Coniglio; Robert (Dukie) Valderrama; Shaun Sumner; Tanya Castaneda; Candice Damon; Christopher McGrath; David Armesy; Joseph Smith; Scott Jordon
Subject: Port Master Plan Update Draft Environmental Impact Report (DEIR) scoping comments
Attachments: April 30 2017 PMPU DEIR NOP scoping comments.docx

Follow Up Flag: Follow up
Flag Status: Completed

Myra:

Attached are my Port Master Plan Update Draft Environmental Impact Report scoping comments in
response to the March 30, 2017 Notice of Preparation of a DEIR. Please distribute these to Leslie
and the other members of your team.

Thanks.

Don Wood
619-463-9035
Dwood8@cox.net

April 30, 2017

Scoping Comments responding to the March 30, 2017 Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) of the San Diego Unified Port District's Port Master Plan Update Program

My name is Donald Wood. While I work closely with a number of local community planning and environmental organizations, these NOP DEIR scoping comments are my own, based in part on discussions I have had with friends and colleagues at various planning and environmental groups, including Citizen's Coordinate for Century 3 (C-3), the Sierra Club, The Navy Broadway Complex Coalition (NBCC) the Environmental Health Coalition (EHC) and other organizations interested in urban planning around San Diego Bay. We have also worked with the Southwest Interpretive Association. We endorse SWIA's comments and incorporate them into these comments by reference.

The NOP and several flyers issued by the port ask for DEIR scoping comments on 1) potentially significant effects to be analyzed in depth, 2) mitigation measures, and 3) alternatives the DEIR should examine.

Potentially significant effects to be analyzed in depth

Program and Project Planning issues

The March 30 Notice of Preparation of a Draft EIR (NOP, DEIR) appears to conflates the terms "program EIR" and "project EIR". The first sentence says it says the port is preparing a "Program EIR (PEIR)", but then refers to the Port Master Plan Update as a "proposed project". These are two different things.

In the pending DEIR Scoping Memo, staff should clarify how the port is using the terms "program" and "project", within the context of its ongoing planning efforts, its enabling legislation and complying with California Environmental Quality Act (CEQA) and the California Coastal Act. It should also clearly explain how its program and its individual project planning and zoning efforts are supposed to work together over time to help achieve the port board's adopted long term vision.

I taught program and project planning at SDG&E for more than twenty years, and spent over three decades leading and working with Citizens Coordinate for Century 3 (C-3), San Diego's oldest and most respected community and land use planning organization. I also worked

downtown for several decades and have been involved in downtown San Diego waterfront planning issues since the 1980s.

When we call something a program, we think of an ongoing effort to achieve a long term vision, reach clear goals, helping change people's values, aspirations and behavior. When we call something a project, we think of a specific property which we take action on, such as redevelopment of the downtown embarcadero, the Chula Vista bayfront, Harbor Island, Seaport Village, and other activities that apply to one specific parcel of property.

We see the port's master plan update as a long term visioning program or process, setting long term global goals for the entire bay area, and creating new strategies and tactics to achieve that vision. The first port master plan was adopted in 1980, and has helped guide the port's efforts for 37 years. During that time, the port adopted about 40 port master plan amendments to accommodate individual bayfront redevelopment projects.

Because it is not focused on any particular piece of property, but instead pursues a global vision of what the bay and its surroundings could become, we think of this port master plan update effort as a program, or a process; not an individual project. Adopting a clear set of goals around the port's long term vision now may help the port to avoid the kind of port master plan amendments which resulted in unclear or vague goal setting in the 1980 port master plan.

For purposes of the scoping memo, and this environmental review process, we believe that the port should treat this global port master planning update process as a program, and develop future individual project EIRs for major individual bayfront properties, like the Navy Pier Veterans Park, Harbor Island East, Seaport Village and other future individual projects, just as it did separate project EIRs on the Chula Vista Bayfront redevelopment plan project and the convention center expansion projects.

Doing a general program DEIR of the global PMPU process does not excuse the port from doing individual project EIRs on future individual redevelopment projects. The NOP indicated that the pending draft program EIR proposes to divide the bayfront into multiple new planning districts. As part of that process, the program EIR should indicate which proposed future redevelopment project efforts will get individual project EIRs in each district.

The scoping notice makes no mention of the ports adopted Climate Action Plan (CAP), which needs to be updated to comply with recently adopted state laws setting higher greenhouse gas (GHG) emission and vehicle miles traveled (VMT) reduction goals than those reflected in the port's current CAP.

The draft PEIR should detail how the Port proposes to coordinate its planning actions in a manner which fully complies with state law and its updated CAP, and for each planning district and each proposed future project, detail projected reductions in vehicle miles traveled (VMTs) and projected reductions in greenhouse gas emissions the port plans to achieve.

When teaching planning classes, I told my students that a good plan is similar to a good newspaper article, in that it reflects the five W. The first w is for who, it identifies the individuals or groups that are to implement the plan. The second w describes exactly what actions are going to be taken. The third w states clearly when those actions are going to be taken. The fourth w notes exactly where the action is to be taken, and the fifth w explains why those actions will be taken. Any document that does not contain those elements cannot call itself a real plan.

Any real plan starts off by identifying its end goals, the results it hopes to achieve. In each part of the planning process, clarity is critical. Vague or murky planning goals will results in not much getting done over time, and lots of litigation.

This may avoid the kind of stop and start, hurky jerky planning the port has experienced in the past. In the early 1990s, the port district and its neighboring agencies adopted the North Embarcadero Visionary Plan (NEVP), which proposed to create a large oval park at the foot of Broadway, and incorporated the NEVP into the port master plan. Then the port decided to throw that adopted plan under the bus in favor of building a new cruise ship terminal on the Broadway Pier, despite protests from various cruise lines that their business plans did not require such a facility. After the new terminal was built, there was a serious drop off in cruise ships port visits here, and instead of paying off the $25 million plus terminal through increased cruise ship visit docking fees predicted by port marketing staff, the port had to fund it using other funds. Cruise ship traffic has remained retarded since the Broadway Pier cruise ship terminal was built, buy may increase in the future.

In 2011, the Port empaneled a North Embarcadero Port Master Plan Amendment Citizen's Advisory Committee, made up of key stakeholders, which worked with port staff and consultants for many months to develop clear, detailed recommendations for the redevelopment of the embarcadero after NEVP phase 1 was completed. But in August of 2011, port staff dissolved the CAC without any explanation, and to our knowledge, the port board has not yet reviewed or acted on the CAC's report or recommendations. The NEVP 2 planning process appears to have resumed this year, after a six year hiatus.

At the beginning of this master plan update process, the port board adopted a vision statement and guiding principles documents that lays out some long term values and global goals, like preserving public access to the bayfront and shorelines of San Diego Bay; enhancing mobility around the bay, maintaining the bay's ecosystem, and streamlining the individual project planning and approval process.

More recently port staff has begun to suggest that the port's PMPU land use zoning and planning language should be kept vague in order to maintain "flexibility" in future land use planning and zoning decision making. This has undermined public confidence in the process. It hearkens back to a time when the port district practiced a passive, developer driven planning and zoning model, where the port waited until an individual developer approached the port board with a proposal,

then amended its master plan and tideland zoning to accommodate the proposed project, usually via a sole source lease process.

The port has begun to refine and improve its project planning efforts, first adopting its own vision for individual parcels around the harbor, then using a competitive proposal process to choose project developers. In the 21st century, it is important that the district not fall back on its old habits. It has to have a long term vision for the public tidelands it manages, and individual project plans should fit within that vision. Hopefully the days of piecemeal, developer driven planning are over.

Without clear long term plans, there will be no realistic way for the port to determine how the environmental impacts of individual projects contribute to the port's long term greenhouse gas emission reduction goals, or VMP reduction targets.

The port should refine its initial vision, developing concrete long term goals for each of the planning districts, with realistic timelines and budgets to achieve those goals, instead of using terms like "mixed use" zoning, which could mean just about anything the port chooses to put there later. True planning is about setting concrete goals, adopting a strategy and tactics to achieve those goals; it's not about flexibility or fuzzy thinking on anyone's part. The port staff should also help educate the public on its use of the term "mixed use". Many participants in the process distrust this term, since it implies that the property zoned for mixed use could be used for almost anything.

As a subset of the mixed use planning category, the port should add a subcategory for hotels and visitor services. The updated master plan should clearly indicate where the port proposes to locate new hotels and other large building complexes around the bay, and where it plans to locate new bayside parks and recreational open space to help mitigate the impacts of the proposed new commercial developments.

When it comes to master plan goals and priorities, the port should make the preservation and enhancement of public access to the bayfront and shorelines its top priority, in keeping with planning guidance it received from the California Coastal Commission in 2014.

In earlier planning discussions, port staff has attempted to differentiate between what it considers "appealable" versus "un-appealable" projects, apparently based on language in the California Coastal Act. Given recent regulatory developments tied to a new Harbor Island restaurant and the proposed replacement of the old Anthony's restaurant on the North Embarcadero, the port might be well advised to assume that all future proposed projects will be appealable to the coastal commission, and act accordingly. Doing so might help avoid long drawn out regulatory review processes and legal complications.

The scoping memo and the PMPU DEIR should also detail how the port district plans to work with the Navy, the California Coastal Commission, the California State Lands Commissions, the

airport, and each of its surrounding port member cities to make sure that the ports long term plans are coordinated with the long range redevelopment and climate action plans of those agencies. Simply saying the port will "consider" those agencies plans is not sufficient. The port should commit to adopting goals and policies that comply with, and are consistent with, the plans and policies of its member cities and neighboring agencies.

As noted above the PMPU and all future projects must also reflect, support and exceed the goals already adopted as part of the port's own climate action plan, which must be updated to comply with current state law.

DEIR Scoping Comments

Stop allowing privatization of publicly owned tidelands around San Diego Bay.

Eliminate fences and walls around existing and future hotel projects. The public should be able to walk through all future projects, and new projects must not limit public access to the bay. Too often the port has gone along with allowing new tenants to fence off their leased tidelands property and only allow paying customers to come onto "their" property. Public walkways should always allow the public to walk along the bay next to future hotel complexes. The DEIR should examine the impact this policy would have on public access and viewsheds to the harbor.

Maritime Museum Expansion

The DEIR should examine the benefits and liabilities of expanding the San Diego Maritime Museum's use of the embarcadero. Visiting and viewing the old ships and other vessels is one of key reason tourists and residents enjoy the downtown bayfront. The museum will require additional dockage space as the collection grows. I have heard that the museum has recently asked port staff to consider building a new administrative building on the bayfront near their leasehold. Instead of building a new building on land, the museum and the port should look at ways to manage museum administrative activities aboard one of its vessels.

Future cruise ship berthing area determination

As part of the DEIR process, the port should analyze in depth where cruise ships should be berthed around the bay in the future.

That analysis should include the following alternatives:

- **Status Quo**

  As mentioned above, the current doldrums in cruise ship visits have turned the Broadway cruise ship terminal and the B Street pier terminal into White Elephants. At the 4/27/17 master plan update workshop, we learned that port engineers estimate the cost of deferred maintenance and reconstruction of the B Street pier could cost over $100 million dollars.

We understand that port staff has been discussing alternative sites where it could place future cruise ship berths, perhaps even dismantling the existing Broadway cruise ship terminal and moving it to another site.

We support this kind of analysis and believe it should be done within the PMPU DEIR planning process.

We believe that the north embarcadero can be used for more public purposes, and the port should examine alternative uses for the two existing cruise ship berthing sites. This could allow the Broadway Pier to be returned to public park use, as envisioned in the original North Embarcadero Visionary Plan. The B Street pier could be converted to a public shopping and restaurant complex like Seattle's Pike's Market, as envisioned in the 2011 report of the North Embarcadero Port Master Plan Amendment Citizen's Advisory Committee.

- **Convention Center lagoon pier expansion**

This could be modeled after Vancouver's successful cruise ship terminal, which is physically connected to its convention center. This has allowed the city to get convention center attendees to travel to the conventions via cruise ships, creating profitable convention center marketing opportunities. One issue that would have to be addressed is the capped toxic materials beneath the lagoon. Those materials might have to be removed in order to dredge the lagoon for cruise ship use.

- **Moving cruise ship terminal to Harbor Island**

This is an alternative examined during the Ports long term visioning process for this PMPU. It offers a way to more closely connect cruise ship passengers arriving by air at San Diego International Airport to new hotels and cruise ship berthing facilities along the south shore of Harbor Island. The DEIR should examine the potential greenhouse gas reductions and VMT reductions that could be achieved by eliminating the need for cruise passengers to travel by taxi or car between the airport and the existing cruise ship terminals.

Commuter Ferry Network expansion

The port should use this DEIR process to look at the positive economic and environmental effects that could be achieved by expanding the current San Diego Bay ferry system to provide regular commuter trips to and from downtown and residential and commercial sites around the bay. The DIR should carefully examine potential GHG and VMT reductions associated with creating new ferry landings at Harbor Island, NTC and Seaport Village. The expanded ferry system could be modeled on the successful San Francisco Bay commuter ferry system which links that city with outlying residential areas like Sausalito, Tiburon, and other small cities and towns around the bay.

Commercial Saturation Studies

The current port district study of hotels saturation should be expanded to determine restaurant saturation levels for waterfront cafes and restaurants. At what point do new hotels and restaurants begin to cannibalize sales from their existing neighbors, without generating new revenues for the port?

Undergrounding future parking facilities

Thanks to the Port and the Seaport redevelopment group for putting new parking at the Seaport Village redevelopment project below grade. The DEIR should determine the environmental effects undergrounding all future tidelands parking would have on increasing developable properties, public access and the environment.

Keep mitigation measures on port tidelands

The DEIR should limit proposed mitigation measures be limited to public tidelands under the jurisdiction of the port district. No off site mitigation activities should be proposed or considered, since they would not contribute to maintaining or improving the environment, water or air quality in and around a Diego Bay. Mitigation measures should be located in the same planning district where negative environmental impacts are experienced where possible.

Navigational effects

When considering any proposed new piers or docking facilities, the port should carefully analyze potential impacts on harbor ship and boat traffic, to ensure that new facilities won't block passage of ships or boats running along the bayfront.

Navy Pier

In 2004, as part of the deal that led to the California Coastal Commission's (CCC) approval of bringing the aircraft carrier Midway to San Diego, the port and the Midway Museum (Midway) agreed to identify and purchase or lease upland parking to serve visitors and employees of the museum, and to build a new public veterans park at grade on Navy Pier. In the thirteen years since that agreement was made, the port and the Midway have failed to live up to that deal. The Midway wishes to keep close in parking for museum visitors and both organizations want to keep parking revenues coming in from Navy Pier, which we have read is the highest paying parking lot on the embarcadero.

While the Midway Museum has submitted some initial concepts to the port outlining some alternatives to this deal, no completed plans to build the veterans park on Navy Pier have been submitted to the port and no EIR has been undertaken. Recently the port has submitted a request to the coastal commission be allowed to keep using Navy Pier as a parking lot for four more years. The DEIR should examine the environmental impacts of expanding parking on Navy Pier

and continuing to use it for museum visitor parking, versus obtaining upland parking, either on or off port tidelands, and moving all those cars off the waterfront. This examination should identify impacts on air quality and traffic around the embarcadero.

West Shelter Island

The port has recently asked Oliver McMillan to include the addition of a new Harbor Police Department (HDP) headquarters in its proposal for a new hotel complex along the north side of the East Harbor Island Lagoon. At its PMPU planning workshop on 4/27/17, the port board discussed several options for the land underneath the existing HPD headquarters at the west end of Shelter Island. It was noted that there are two parks nearby, the Yokohama Peace Bell Park, and the Ilan Lael Peace Park created by James Hubbell. Several port board members supported the idea of adding the old HPD HQ site to the parks on the west end of Shelter Island. The DEIR should look at the potential benefits and environmental impacts of zoning the west end of Shelter Island for parkland use versus zoning the area for the construction of a small hotel on the old HPD HQ site.

Harbor Drive linear park

As partial compensation for eliminating the promised Broadway Landing Park, the port signed a legal settlement with the Navy Broadway Complex Coalition (NBCC) committing to working with the Lane Field Hotel developer to create a linear park along the western edge of the Lane Field Hotels site. The southern half of that park has been constructed.

This linear park will eventually run from Broadway north to B St. The County has built its beautiful County Administrative Center Waterfront Park stretching from Ash St. north to Grape Street. There have been discussions regarding the possibility of eventually creating a linear park running along the east side of Harbor Drive running from Broadway all the way north to Hawthorne Street as an partial offset for the loss of the Broadway Landing Park. At the 4/27/17 PMPU workshop the port was asked to adopt a zoning overlay to create an underlying parkland use beneath the western edge of the Wyndham Hotel complex site, so that if the hotel complex is redeveloped, or the lease runs out, that small portion of the site would become part of the proposed linear park.

The DEIR should analyze the environmental and other effects and benefits of creating a linear park running along the east side of Harbor Drive from Broadway north to Hawthorne Street, versus leaving a large gap in the planned linear park on the western end of the Wyndham Hotel complex site.

Working Waterfront planning district

Truck traffic going into and out of the Tenth Avenue Marine Terminal has serious negative environmental impacts on the neighboring Barrio Logan community. The DEIR should carefully

identify and examine those negative impacts on Barrio Logan, and examine alternative transportation mechanisms to keep the terminal working while substantially reducing the negative environmental impacts on the neighborhood to the immediate east of the terminal.

Thanks for this opportunity to provide public scoping comments and help establish the scope of the PMPU program DEIR.

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Alice Ayala

From:	Bill Tippets <billtippets@gmail.com>
Sent:	Friday, April 28, 2017 1:58 PM
To:	Mayra Medel; Lesley Nishihira; Jason Giffen; Robert Valderrama; Ann Moore; Bob Nelson - Port; Rafael Castellanos; Marshall Merrifield; Dan Malcolm; Garry Bonelli; Randa Coniglio
Cc:	Mike McCoy; Don Wood; Diane Coombs; joyw@environmentalhealth.org; Jim Peugh; Matt O'Malley; Julia Chunn-Heer; Zach Plopper; Sophie Wolfram
Subject:	Southwest Wetlands Interpretive Association's Comments on the Port of San Diego NOP for the Master Plan Update EIR
Attachments:	MPU NOP Comments_BT_27Apr17.pdf
Follow Up Flag:	Follow up
Flag Status:	Completed

Ms. Medel and Port of San Diego Commissioners and Staff,

Attached are the SWIA Board's comments and recommendations regarding the Port's NOP for the MPU EIR. Our comments reflect our engagement with the Integrated Planning process and the first two workshops that have been held to begin preparation of the draft MPU.

Please include these comments in the MPU/EIR administrative file and provide them to the consultants who are assisting the Port to prepare the MPU. We are extremely concerned about how the MPU will adhere to and fulfill the trust land (state tidelands) responsibilities granted the Port by the State Lands Commission. As discussed at the recent April 27 workshop, it has become apparent to the Commissioners, staff, stakeholders and public that retention/enhancement of the tideland's resources and open space characteristics are the foundation upon which development should be located. This will require redistribution of infrastructure and facilities on Port tidelands - necessitating future zoning/use overlays and phasing of development/redevelopment.

SWIA will continue to participate in the MPU process and work with the Port and other stakeholders so that an effective, efficient MPU is produced that avoids, minimizes and mitigates impacts.

Regards,

Bill Tippets

Southwest Wetlands Interpretive Association

700 Seacoast Drive, Suite 108

Imperial Beach, CA 91932

28 April 2017

Mayra Medel (mmedel@portofsandiego.org)
San Diego Unified Port District, Planning and Green Port
3165 Pacific Hwy
San Diego, CA 92101

(submitted 28 April 2017 via email to mmedel@portofsandiego.org)

California Environmental Quality Act (CEQA) Notice of Preparation (NOP) of a Draft Program Environmental Impact Report (PEIR) for the "Port Master Plan Update."

Dear Ms. Medel:

The Southwest Wetlands Interpretive Association (SWIA) is a non-profit organization dedicated to helping preserve and enhance wetlands throughout southern California – and particularly in the Tijuana River watershed and South San Diego Bay. Historical losses of Bay wetlands (particularly vegetated and shallow-subtidal types) have occurred from development, and climate change and sea level rise represent significant additional threats to natural resources and infrastructure/developments in and around San Diego Bay. SWIA supports planning that will implement a long-term sustainable vision - and reality - for the public trust tidelands (and water) managed by the Port of San Diego (Port).

The Port manages state public trust lands (e.g., tidelands) on behalf of the State Lands Commission, and that management – and all conservation and development of those lands – must comply with the underlying public trust doctrine and legal case law regarding environmental protection of trust lands (e.g., Marks v. Whitney, 6 C.3d 251 (1971)). The Port Master Plan Update (PMPU) is intended to provide a credible, sustainable, resilient and practical roadmap for Port activities over the next 30 years; one that builds upon numerous commitments made by the Port as the trustee for these state tidelands and through adoption of previous plans such as the San Diego Bay Integrated Natural Resources Management Plan, Chula Vista Bayfront Plan/Natural Resources Management Plan, Climate Action Plan, and the various Integrated Planning Process documents that were developed and approved by the Port to guide the MPU.

We provide the following comments on the NOP issued by the Port of San Diego on March 30, 2017.

Background: As described by the Port, it has jurisdiction over approximately 2,403 acres of land and 3,535 acres of water. The PMPU would provide the official planning policies of the District, consistent with the general statewide purpose, for the physical development of the tide and submerged lands conveyed and granted in trust to the District, as well as acquired uplands. In accordance with the California Coastal Act and Port Act, the PMPU would: 1) control the allowable land and water uses within the District; 2) list known "appealable" projects, and; 3) include goals and policies that would implement the broad policies of the Coastal Act, as well as shape the characteristics of development, coastal access, recreation, and environmental conservation throughout the District's jurisdiction. The PMPU would be the first comprehensive update of the PMP since it was approved by the CA Coastal Commission in 1981. The PMPU would contain six elements that would apply across the District's jurisdiction, covering Land and Water Use, Mobility, Coastal Access and Recreation, Natural Resources, Resiliency and Safety, and Economic Development. The PMPU would also include specific policies, established land and water use designations, and appealable projects for each of the 10 proposed Planning Districts.

The Draft PEIR will address the following potential project-related and cumulative environmental effects of the proposed project: aesthetics, air quality, biological resources, cultural resources, geologic hazards and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, population and housing, public services, transportation and traffic (including parking), utilities and energy, and other potential impacts identified during the NOP process. The PEIR will also address feasible mitigation measures and a reasonable range of alternatives, as well as the additional mandatory sections required by CEQA.

The PMPU is a "master plan" and the PEIR analyzes that plan at the programmatic level. However, as the Port Commissioners have repeatedly stated, a key objective of the PMPU is to provide project "streamlining approval" compared to the existing Master Plan. This means that the PMPU must identify with sufficient specificity (type, location, size, intensity, etc.) the foreseeable projects in order to achieve streamlining. Also, because the PMPU will address Port activities and buildout over a 30 year period, during which climate change effects – and particularly sea level rise – are expected to markedly alter environmental conditions, the PEIR must address this issue: Lead agencies must analyze potentially significant impacts associated with placing projects in hazardous locations, including locations potentially affected by climate change. (See CEQA Guidelines § 15126.2(a).)

A crucial component of any EIR is the identification of project alternatives. The PMPU is a "master plan" that will establish potential development in 10 planning districts over a 30-year period. It is essential that the PMPU develop and clearly describe a "reasonable range of alternatives" as well as the proposed (preferred) project. The range of reasonable alternatives should include alternatives to the goals as well as the land use maps.

NOP: The Port has determined it will prepare a programmatic environmental impact report (PEIR) for the PMPU. A PEIR is only required to evaluate – at a program level vs. specific projects level – the potential effects of the implementing the PMPU. Although the Port has previously released a series of documents as part of its Integrated Planning process, those documents alone do not provide sufficient information to allow the public to adequately comment on the scope and scale (intensity) or even relationships among possible future projects that will have to be processed under the PEIR. Therefore, our comments are constrained because the content of the PMPU has not been drafted and released to the public. However, we assume the kinds of major designated uses will be similar to existing Port developments, although locations and intensities (and implementation) could vary substantially.

We agree with the list of potential project-related and cumulative environmental effects of the proposed project, as listed on Page 9 of the NOP.

Initial Study/Checklist: The Initial Study and Environmental Checklist indicate that most of the potential project-related and cumulative environmental effects could be significant and that an EIR must be prepared (Page 2 of the IS).

The IS section, "Evaluation of Environmental Impacts," provides a reasonable overview of how the project applicant (or its consultant) will assess potential impacts. However, we have several concerns/comments regarding impact evaluation for this project:

1. The Port has not yet provided the list (and locations, extent and intensity) of future appealable projects, which is required under the Port Act. As the Port Commissioners have stated throughout the Integrated Planning phase, they expect the PMPU to expedite (streamline) the processing of all future projects and reduce the number and complexity of approving those projects, which presumably includes appealable projects. The PMPU must clearly identify and provide as much information about future appealable projects – and non-appealable ones – in the PMPU EIR so that the public can understand the scope of potential impacts and determine whether proposed avoidance, minimization and mitigation measures are sufficient.
2. The document does not describe how the Port will be defining/delineating the "thresholds of significance" for potential impacts. As noted previously, the Port has adopted numerous documents that address environmental resources and development of tidelands, establish goals and objectives for natural resource conservation, establish greenhouse gas (GHG) emission reduction targets, etc. that should be consulted and used to establish significance thresholds. Similarly, federal and state laws and regulations will affect significance thresholds. For example, the GHG emission reduction targets in the Port's CAP, which was approved within the last year or so, does not reflect recent state law (SB 32) that established a statewide GHG emission reduction target of 40% below the 1990 baseline by 2030.
3. The Port tidelands fall within the five cities that adjoin the Bay. Port projects do not require approval from the cities, but can (will) have substantial direct and indirect effects on those jurisdictions (e.g., Port developments that create GHG emissions that are greater than those the cities have planned for, increased Port facilities' traffic, aesthetic and visual features of Port projects that affect the cities). The potential impacts on adjacent cities must be fully analyzed.

Aesthetics – We concur with the IS checklist. The Bay is an incredible natural, aesthetic resource, notwithstanding existing development, and future development has the potential to seriously degrade those values. Future development – and redevelopment of existing infrastructure – should be held to stringent aesthetic standards. In this regard, how the PMPU lays out principles and guidelines for maintaining the Bay's aesthetics will greatly affect whether the project can avoid or mitigate those potential significant impacts.

Agricultural Resources – We concur with the IS checklist.

Air Quality – We concur with the IS checklist. Many of the identified/proposed land and water uses and the foreseeable projects to be implemented under the PMPU will emit air quality pollutants, adding to pollutants in a region that currently is in non-attainment for certain standards. Port jurisdiction lands adjoin existing impaired air quality areas and any increased air pollutants from future Port projects could add to cumulative air quality problems.

Biological Resources - We concur with the IS checklist. As mentioned previously, large amounts of the Bay's sensitive habitats (e.g., subtidal, intertidal, mashes, riparian) have been lost to development. And, climate change/sea level rise present serious additional threats to the remnants. The PMPU should provide guidance to conserve, restore and restore sensitive Bay habitats and avoid/minimize further impacts. However, because the Port has yet to identify the actual types, locations, and intensities of future developments/activities that will be authorized by the PMPU, we can only make reasonable assumptions that potential significant impacts could occur.

As noted previously and as identified in the IS, the Port-adopted SD INRMP (and the Chula Vista NRMP) contain vast amounts of information about the biology and natural resources that remain in the Bay/tidelands. And, they present guidance and recommendations for conserving, restoring and increasing those habitats. How will these documents, as well as other local jurisdiction plans/commitments as well as state and federal laws/regulations, be treated (used)in determining the thresholds of significance for impacts to biological resources that will be used in the PEIR?

Cultural Resources – We concur with the IS checklist.

Geology and Soils – We concur with the IS checklist. In addition to the information presented in the IS, recent reports have documented that the Rose Canyon Fault is linked with/part of the Newport-Inglewood Fault, which substantially increases the potential power of seismic activity. This new information must be included in the PEIR assessment and evaluation of environmental impacts, as it could greatly affect what, where and how (whether) future projects are allowed.

Greenhouse Gas Emissions – We concur with the IS checklist. As noted in the IS, the Port has a CAP; but the CAP's GHG emission reduction targets are lower than most of the CAPs in the San Diego Region, and well below what the state has established (i.e., SB 32 now establishes the 2030 reduction target as 40% below the 1990 baseline). Because several of the Port-supported/facilitated activities directly affect adjacent cities (e.g., offloaded ship cargo requires trucks/rail transport, hotels will draw people through the cities to Port facilities), it will be critical how the PMPU will address the Port's and adjacent cities' GHG emissions and CAP targets.

We are concerned about how the PMPU will address GHG emissions from its facilities as well as from its tenants. The PMPU should review how the SD Airport Authority is preparing to reduce its overall energy use by 30% and transform its supply to 100% green energy – and have similar goals.

Hazards and Hazardous Materials – We concur with the IS checklist.

Hydrology and Water Quality – We concur with most of the IS checklist. Projected sea level rise, combined with storm surge, will likely increase flooding hazard areas around the Bay. It seems highly likely that areas with existing hotels, motels, etc. or where future hotels and motels may be located could be within flood hazard areas. While those are not "housing" they are functionally buildings that house people, and the risks are similar. [Note: the IS does identify potentially significant impacts to other structures that could be located within the flood hazard areas.] Sea level rise could also exacerbate the known tsunami threat in the Bay to existing and future developments that are implemented per the PMPU (e.g., the recently released US Geological Service Coastal Storm Modeling System, or CoSMoS, projects serious coastal beach losses throughout southern California).

Water circulation and water quality varies within the Bay. Circulation is constrained as one proceeds from North to Central to South bay and any future projects that degrade could impact water quality or impede circulation – especially in South Bay - would cause serious impacts. Several areas of the Bay, particularly bay sediments, have elevated levels of toxic contaminants, and any developments in/around those areas could increase the recirculation of toxic materials, which would be a significant impact. The effects of sea level rise on circulation and water quality in conjunction with foreseeable projects implemented per the PMPU must be fully evaluated.

Land Use and Planning – We concur with the IS checklist (potentially significant impacts), but have concerns that are not included in the explanations. As presented in the Vision Statement and Guiding Principles, connectivity between the Port and cities is important. In fact, one of the most important findings of the visioning process was that the Port is not effectively connected to primary "entry points" that exist in the adjacent cities. Because the Port is an independent jurisdiction, its PMPU is not subject to approval by the adjacent cities. The PMPU could allow developments that conflict with or constrain related developments and infrastructure in those cities, resulting in impacts to both the Port and cities. This argues for including as much specificity in the land and water uses and actual projects in the PMPU that may result from its approval. This same argument applies to all of the evaluation categories.

As noted previously, the Port has adopted several key natural resource plans/documents whose information, requirements, and recommendations could be affected by projects implemented per the PMPU and that must be addressed in the PEIR. The Port also has adopted guidance for Pond 20. Similarly, local state and federal jurisdictions have adopted resource plans that must be addressed in light of future projects that could be implemented per the PMPU. And, to reiterate a previous concern, the PEIR must analyze potentially significant impacts associated with placing projects in hazardous locations, including locations potentially affected by climate change. (See CEQA Guidelines § 15126.2(a).)

Mineral Resources - We concur with the IS checklist.

Noise - We concur with the IS checklist. Although this section addresses noise effects on people, we are concerned about noise effects on wildlife – particularly in South Bay. Several sensitive and threatened bird species use and breed around the Bay, and excessive noise can negatively affect their reproductive success. This concern must be included and analyzed in the Biological Resources section.

Population and Housing – We concur with the IS checklist. We strongly agree with the IS statement about the potential for future projects implemented under the PMPU to add to the burden on infrastructure (especially transportation) to serve increased growth in/around the Bay. This argues for a PMPU that directly addresses direct and indirect impacts on surrounding land uses and transportation infrastructure.

Public Services – We concur with the IS checklist. Although each of the "public services" items is important, we believe the issue of parks/open space is particularly important. As fully analyzed and described in the Port's Integrated Planning process findings, the Port's parks are inadequate in size, variety/amenities, and locations. Because the PMPU has not been drafted, we cannot adequately comment the potential impacts of the PMPU on parks. We believe the PEIR would be required to find the PMPU to have significant, unmitigated impacts on parks unless it provides a much more robust parks element/set of projects that increases total park acreage and diversity – and serves the public and each of the five Bay cities (and complements parklands in those cities). The future park element should provide the guidance and sufficient specificity to ensure attainment of the "Green Necklace" concept that has been included in the Port's Integrated Planning documents - and that links to general open space and conservation (habitat) lands and waters managed by the Port.

Parks and Recreation – We concur with the IS checklist. As noted above, the Port currently is deficient in parklands, and future projects that may be implemented under the PMPU will likely increase demand for parks. It is essential that the PMPU increase park acreage and diversity – and shoreline/water access - to meet existing and expected future demands for parklands.

Transportation and Traffic – We concur with the IS checklist. As stated in previous comments, the PMPU and foreseeable projects that it will facilitate will increase the burden on local transportation infrastructure. The Integrated Planning documents, which are part of the foundation for the undrafted PMPU stress the need for the Port to improve connections within its lands and waters. Projects could increase vehicle miles traveled (VMT) by Port employees, tenants, and visitors, creating potentially significant impacts on traffic and circulation (and air quality/GHGs) as a result of implementing the PMPU's future projects. The PMPU, if "correctly" drafted, could benefit both the Port's "internal" connectivity and links to the surrounding cities – reducing VMT and related emissions. We strongly recommend the Port to increase transit and active transportation alternatives and to reduce vehicular use (SB 743 requires lead agencies to use VMT to evaluate transportation/traffic impacts, not LOS). While not directly a PEIR issue, we strongly encourage the Port's PMPU to include a contiguous transit/active transportation system (in coordination with the Bay cities) in association with the Green Necklace park element, utilizing integration with the Bay cities' transportation system/infrastructure.

Tribal Cultural Resources – No comment.

Utilities, Service Systems and Energy – We generally concur with the IS checklist. The Port has adopted its CAP (although as previously noted its GHG emission reduction targets are below the state target for 2030) and has developed a long-range plan to reduce energy consumption. We strongly support the

Port's actions and encourage it to become 100 percent clean energy by 2030 (which would substantially improve the Port's GHG emissions alignment with state energy and climate change policies and goals).

Mandatory Findings of Significance – We concur with the IS checklist. As noted throughout our comments, we agree with the NOP/IS that the PMPU has significant potential to impact the environment. Because the PMPU has not been drafted, it is difficult to adequately comment on the likely environmental impacts. We have provided a number of recommendations that we believe the PMPU must incorporate so that the foreseeable projects that will be implemented per the PMPU can avoid, minimize and mitigate those impacts. The PMPU must provide sufficient specificity regarding the anticipated, future projects to allow for the PEIR to serve as the "tiering/master EIR" for processing those projects.

We look forward to continued involvement with the Port's PMPU and PEIR efforts. We request that these comments be provided to all appropriate Port staff and Commissioners, as appropriate.

Please contact Bill Tippets (billtippets@gmail.com) regarding these comments.

Sincerely,

Michael R. McCoy

William E. Tippets

Mike McCoy
President

Bill Tippets
Board Member

Cc: SWIA Board

Alice Ayala

From: Haas, Jeremy@Waterboards <Jeremy.Haas@waterboards.ca.gov>
Sent: Friday, April 28, 2017 3:29 PM
To: Mayra Medel
Cc: Karen Holman; Barker, David@Waterboards; Chan, Julie@Waterboards
Subject: RE: Notice of Preparation of a Draft EIR for the Port Master Plan Update
Attachments: nop_comment_pmp_4-28-17.pdf

Follow Up Flag: Follow up
Flag Status: Completed

Ms. Medel,
Attached please find a comment letter on the Port District's NOP for the Port Master Plan Update. We look forward to participating in the process. Please feel free to contact me anytime if you have any questions about the attached letter or other issues pertaining to the San Diego Water Board.

Jeremy Haas
Environmental Program Manager
Healthy Waters Branch
California Regional Water Quality Control Board, San Diego Region
(619) 521-3009 work/voice mail
jeremy.haas@waterboards.ca.gov
http://www.waterboards.ca.gov/sandiego

From: Mayra Medel [mailto:mmedel@portofsandiego.org]
Sent: Thursday, March 30, 2017 8:59 AM
To: Mayra Medel <mmedel@portofsandiego.org>
Subject: Notice of Preparation of a Draft EIR for the Port Master Plan Update

To All Interested Parties,

Notice is hereby given that the San Diego Unified Port District (District), as lead agency under the California Environmental Quality Act (CEQA), has prepared a Notice of Preparation (NOP) of a Draft Environmental Impact Report (EIR) for the "**Port Master Plan Update (PMPU)**." Pursuant to CEQA, the NOP is available for a 30-day public review period that ends at **4:30 p.m. on Monday, May 1, 2017**. Comments regarding the scope and content of the environmental information that should be included in the EIR and other environmental concerns should be mailed to:

San Diego Unified Port District
Planning and Green Port
Attn: Mayra Medel
3165 Pacific Highway

San Diego, CA 92101

Or emailed to: mmedel@portofsandiego.org

The NOP, which includes an Initial Study, is attached to this email and also available for download by clicking this link, or copying and pasting the link into your internet browser: https://www.portofsandiego.org/environment/ceqa-coastal-act-notices.html

A public scoping meeting and open house to solicit comments on the scope and content of the EIR for the PMPU will be held on **Wednesday, April 12, 2017, from 5:30 p.m. to 7:30 p.m.** at the District Administration Building Training Room, 3165 Pacific Highway, San Diego, CA 92101.

Questions? Please call the District Planning and Green Port Department at (619) 686-6254.

Unified Port of San Diego

Mayra Medel | Senior Planner

PORT OF SAN DIEGO

3165 Pacific Highway • San Diego, CA 92101

O: 619.686.6598 F: 619.686.6508

CALIFORNIA
Water Boards

EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIQUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

San Diego Regional Water Quality Control Board

April 28, 2017

San Diego Unified Port District
Planning and Green Port
Attn: Mayra Medel
Via email:
mmedel@portofsandiego.org

In reply refer to / attn:
Jhaas: 255177

Subject: Notice of Preparation Draft EIR for the Port Master Plan Update

Ms. Medel,

Thank you for the opportunity to provide comments on preparation of the San Diego Unified Port District's Port Master Plan Update (PMPU). The Port District and the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) share common legislative mandates (the San Diego Unified Port District Act and Porter-Cologne Water Quality Control Act, respectively) to protect the integrity of San Diego Bay waters for safe and sustainable human and wildlife uses.

In recognition of the regional importance of San Diego Bay, the San Diego Water Board has adopted and is implementing a Healthy Waters Strategy for San Diego Bay[1] with the assistance of the Port District and other community partners. Together our two organizations have cultivated a strong and productive relationship toward that objective, and in that vein we now offer the following comments on the PMPU.

Assistance evaluating water quality

The San Diego Water Board stands ready to provide the Port District with assistance evaluating potential effects to water quality and associated beneficial uses. The CEQA checklist findings reasonably anticipate potentially significant impacts to water quality and associated beneficial uses from potential land and water use changes resulting from the PMPU. In an effort to optimize our own efforts, we have recently, with assistance from Port District staff, begun comprehensive assessments of water quality conditions for areas within the Bay that support key beneficial uses, including fish and shellfish consumption, contact and non-contact recreation, and habitats and ecosystems.[2]

For instance, numerous studies, have demonstrated that areas in San Diego Bay with relatively poor circulation and high exposure to chemical inputs (such as marinas with high concentrations of vessels) will accumulate pollutants in sediments, and possibly the water column, at levels that adversely affect marine organisms and are unlikely to be amenable to traditional mitigation measures. Such knowledge should be used to effectively guide PMPU planning decisions.

[1] The Strategy is available at: http://www.waterboards.ca.gov/sandiego/water_issues/programs/sdbay_strategy/

[2] For more information, please see http://www.waterboards.ca.gov/sandiego/water_issues/programs/key_areas/

Increase ecological integrity
The PMPU should seek to increase the integrity of the Bay's ecosystems and maintain their diversity. Instead of gaging each Port function independently, the PMPU should seek to evaluate alternatives that would measurably increase ecosystem integrity.

For example, since eelgrass beds and intertidal habitats play crucial roles in the life history of several Bay sportfish species, such as halibut, spiny lobster, spotted sand bass, improving habitat integrity also improves commercial, recreational, and subsistence fishing opportunities.

Additionally, in order to assess potential impacts to biological resources, the PMPU should also identify and characterize the current and anticipated habitats in tidal and subtidal areas within each proposed planning district. The descriptions in the scoping document are of limited utility in this regard because they identify existing and planned development uses, but omit information on the adjacent habitat and ecosystems.

Incorporate climate change adaptation planning
The PMPU and evaluation of potential impacts should rely on the most recent scientific estimates of sea level rise from the State of California Ocean Protection Council.[3] Sea level rise and associated effects on storm surges threaten water quality and associated human and wildlife beneficial uses and health. Of particular concern for public health are exposure to damaged wastewater pipes that could spill sewage into the Bay and exposure to contaminants in soils mobilized by high water levels. Of particular concern to habitats and ecosystems is the need to allow shallow and intertidal habitats to migrate landward as sea levels rise. Alternatives that provide for migration of intertidal habitats may be the only way to preserve their existence under projected climate change scenarios.

Accordingly, the PMPU's proposed Resiliency and Safety Element should (1) identify vulnerable structures, infrastructure, and habitat types; and (2) specify adaptation strategies that lead to the removal of major threats to public health and allow for habitat diversity under the most likely range of climate change scenarios.

Thank you for the opportunity to comment on the scoping document. If you have further questions, please contact me at Jeremy.Haas@waterboards.ca.gov or 619-521-3009.

Respectfully,

JEREMY HAAS
Environmental Program Manager
Healthy Waters Branch
San Diego Water Board

cc: David Barker, Surface Waters Protection Branch
Julie Chan, Groundwater Protection Branch
Karen Holman, SDUPD

[3] Available at http://www.opc.ca.gov/2017/04/ocean-protection-council-science-advisory-team-working-group-releases-report-on-sea-level-rise-science/

Alice Ayala

From: Dodson, Kimberly@DOT <kimberly.dodson@dot.ca.gov>
Sent: Monday, May 01, 2017 8:32 AM
To: Mayra Medel
Cc: Scott Morgan; State.Clearinghouse@opr.ca.gov
Subject: I-5 Port Master Plan Notice of Preparation SCH #2017031070
Attachments: SD_5_Port of San Diego Master Plan NOP.pdf

Follow Up Flag: Follow up
Flag Status: Completed

Mayra:

Please see the attached comments. We received the Notice of Preparation for the Port Master Plan Update (PMPU) draft Environmental Impact Report (EIR) on April 2, 2017. We are providing comments as stated on the routing letter from the State of California Governor's Office of Planning and Research State Clearinghouse and Planning Unit within the 30 days of receipt of the NOP.

A hard copy will be mailed separately.

Regards,

KIMBERLY D. DODSON, GISP
Caltrans District 11 Planning | Associate Transportation Planner
4050 Taylor St., MS-240 | San Diego, CA 92110 | 619-688-2510
kimberly.dodson@dot.ca.gov | http://www.dot.ca.gov/d11/index.html

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Making Conservation a California Way of Life.

April 27, 2017

11-SD-5, 15, 54, 75, 163
PM VAR
Port Master Plan Update (PMPU)
SCH#2017031070

Ms. Mayra Medel
San Diego Unified Port District
Land Use Planning Department
P.O. Box 120488
San Diego, CA 92112-0488

Dear Ms. Medel:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the Notice of Preparation for Draft Environmental Impact Report (EIR) for the proposed Port Master Plan Update located near I-5, I-15, SR-54, SR-75 and SR-163. The mission of Caltrans is to provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability. The Local Development-Intergovernmental Review (LD-IGR) Program reviews land use projects and plans to ensure consistency with our mission and state planning priorities.

Caltrans would like to submit the following comments:

Traffic Impact Study

A traffic impact study (TIS) is necessary to determine this proposed project's near-term and long-term impacts to the State facilities – existing and proposed – and to propose appropriate mitigation measures.

- The geographic area examined in the TIS should include, at a minimum, all regionally significant arterial system segments and intersections, including State highway facilities where the project will add over 100 peak hour trips. State highway facilities that are experiencing noticeable delays should be analyzed in the scope of the traffic study for projects that add 50 to 100 peak hour trips.
- In order to address potential impacts, this analysis should include the proposed Intermodal Transit Center (ITC) and I-5 direct connector ramps, which are both revenue constrained projects addressed in SANDAG's *San Diego Forward*

(2015) for the year 2035. A Project Study Report-Project Development Support (PSR-PDS) for the I-5 direct connector ramps, developed by SANDAG and Caltrans as a result of recent joint planning efforts from previously identified airport ground access needs, was anticipated to be available in late March 2017 and should be used for reference.

- A focused analysis may be required for project trips assigned to a State highway facility that is experiencing significant delay, such as where traffic ques exceed ramp storage capacity. A focused analysis may also be necessary if there is an increased risk of a potential traffic accident.
- In addition, the TIS could also consider implementing vehicles miles traveled (VMT) analysis into their modeling projections.
- Caltrans recommends coordinating early with relevant agencies, including SANDAG, MTS, City of National City, Cit y of San Diego, City of Chula Vista, and the California Coastal Commission, to determine modeling assumptions used within the TIS.
- Any increase in goods movement operations and its impacts to State highway facilities should be addressed in the TIS.
- The data used in the TIS should not be more than 2 years old.

Transportation Demand Management

For freight activity at the Port of San Diego, the Port Master Plan will need to take into account the vision and guiding principles established in the *California Sustainable Freight Action Plan.*

Recognizing that some of the above projects are long-range improvements, Caltrans can coordinate with Port of San Diego in providing additional wayfinding signage between Caltrans Right of Way (R/W) and the Port. In addition, Caltrans encourages the Port to include Transportation Demand Management (TDM) strategies into the Port Master Plan Update.

Goods Movement

Please identify where existing freight cargo facilities will be located in the EIR. If freight operations will change at the Working Waterfront including Tenth Avenue Marine Terminal, please identify where these operations will move or address how this change will be mitigated.

Mitigation

Caltrans endeavors that any direct and cumulative impacts to the State Highway System be eliminated or reduced to a level of insignificance pursuant to the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) standards.

Any work performed within Caltrans right-of-way (R/W) will require discretionary review and approval by Caltrans and an encroachment permit will be required for any work within the Caltrans R/W prior to construction. As part of the encroachment permit process, the applicant must provide an approved final environmental document including the California Environmental Quality Act (CEQA) determination addressing any environmental impacts within the Caltrans's R/W, and any corresponding technical studies.

If you have any questions, please contact Kimberly Dodson, of the Caltrans Development Review Branch, at (619) 688-2510 or by e-mail sent to kimberly.dodson@dot.ca.gov.

Sincerely,

JACOB ARMSTRONG, Chief
Development Review Branch

Alice Ayala

From: Joy Williams <Joy@environmentalhealth.org>
Sent: Monday, May 01, 2017 10:18 AM
To: Mayra Medel
Subject: EHC comments on Port Master Plan Update NOP
Attachments: EHC Comments_PMPU_NOP_May1_2017.pdf

Hello Mayra,

Our comment letter is attached. Thank you for the opportunity to comment on this matter.

Joy

Joy Williams
Research Director
Environmental Health Coalition
2727 Hoover Avenue, Ste. 202
National City, CA 91950
(619) 474-0220 X110
JoyW@environmentalhealth.org

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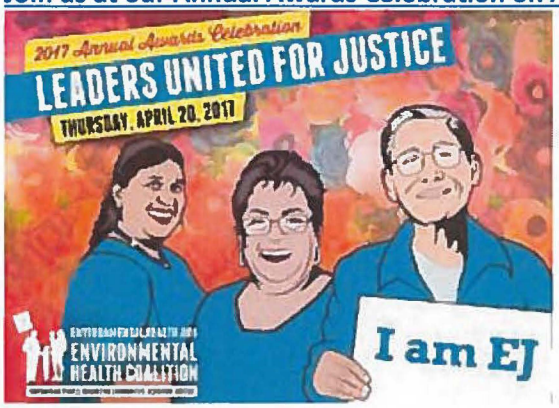

ENVIRONMENTAL HEALTH COALITION
2727 HOOVER AVE., SUITE 202 · NATIONAL CITY, CA 91950 · (619) 474-0220 · WWW.ENVIRONMENTALHEALTH.ORG

May 1, 2017

Mayra Medel, Senior Planner
San Diego Unified Port District, Planning and Green Port
3165 Pacific Hwy
San Diego, CA 92101

Via email to: mmedel@portofsandiego.org

Re: EHC Comments on California Environmental Quality Act (CEQA) Notice of Preparation (NOP) of a Draft Program Environmental Impact Report for the Port Master Plan Update

Dear Ms. Medel,

Environmental Health Coalition (EHC) is a 37-year-old nonprofit organization. EHC builds grassroots campaigns to confront the unjust consequences of toxic pollution, discriminatory land use, and unsustainable energy policies. Through leader development, organizing and advocacy, EHC improves the health of children, families, neighborhoods and the natural environment in the San Diego/Tijuana region.

Thank you for the opportunity to review and comment on the Notice of Preparation (NOP) for the environmental review of the Port Master Plan Update. We concur that the potential impacts of the PMPU are significant in many areas, and that a full environmental impact report is required. Our comments are as follows.

I. Planning Elements: Include EJ and GHG Reduction in all planning elements

The draft project summary for the PMPU sets forth six planning elements that would apply across all land and water use categories. Short descriptions are included of the planning pieces and policies that may be included in each element. In several cases, the NOP states that environmental justice (EJ) and/or greenhouse gas (GHG) reduction policies may be included. EHC recommends that both types of policies be included in all planning elements.

A. **Land and Water Use Element**. According to the project description, EJ and GHG reduction policies may be included. EHC recommends including both types of policy in this element.

B. **Mobility Element**. The project description states that GHG reduction policies may be included. EHC recommends that EJ policies must be included to ensure that freight and goods movement do not disproportionately impact disadvantaged communities adjacent to the Tidelands, and that access to the waterfront from adjacent communities is a consideration in mobility planning. The Mobility Element is also an important area for addressing potential GHG reductions, by (1) reducing overall vehicle miles

traveled (VMT) by vehicles traveling to and within the Tidelands; and (2) electrification of diesel equipment, such as heavy duty trucks that travel to and from the cargo terminals. EHC recommends that goals for the Mobility Element specify a freight transport system that is "environmentally sustainable" as well as economically competitive, and that the element be strengthened with measurable objectives, such as:

- Transition to a 100% Zero Emission Freight System by 2030;
- Reduce Estimated Cancer Risk from all Port operations to below 10 per million at all locations downwind of the Tidelands;
- Adopt a legally binding Climate Action Plan that meets the State's 2030 climate goals;
- Ensure that all workers on the Tidelands have parking available on the Tidelands or use alternative means to travel to work.

C. **Coastal Access and Recreation Element**. According to the project description, this element will include EJ, and lower cost visitor and rec facilities. We concur that EJ is important in this element, to assure that Green Necklace resources are equitably distributed across communities and income levels, and that transit-dependent community residents can access the waterfront. Public access planning should include connectivity between adjacent communities and tideland, and access for walking, biking, and transit. GHG reduction opportunities in this element include the potential for additional carbon sequestration as more vegetated green space is developed.

D. **Natural Resources Element**. The project description does not mention EJ or GHG reduction policies in this element. EHC recommends that both be included. A recent survey of people who fish in San Diego Bay was recently completed by the Regional Water Quality Control Board.[1] This new survey confirms key findings of the fisher survey that was done by EHC in 2004, when we surveyed people fishing off of local piers; a subset of those who fish the bay are subsistence fishers who come from low-income areas, and who fish often, eat the fish, feed it to their families, and frequently cook the fish in ways that increase exposure to the contaminants in the fish, such as PCBs and mercury. This being the case, an important dimension of EJ related to Natural Resources is that fish caught in San Diego Bay should be safe to eat. GHG reduction policies that may belong in this element include the potential for carbon sequestration as eelgrass areas are restored.

E. **Resiliency and Safety**. As described in the project summary, this element may include EJ and GHG policies. EHC recommends that both sets of policies be included. It is essential to ensure that Port resources important to EJ communities, such as waterfront work places and parks, be protected against sea level rise.

F. **Economic Development**. The description of the element indicates it may include EJ and GHG. EHC recommends inclusion of both, to ensure that benefits such as jobs are equitably distributed, and that growth is environmentally sustainable. We recommend also that this element include economic justice

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[1] http://www.sccwrp.org/fishconsumption/data.html

provisions to ensure high quality jobs; policies such as project labor agreements and local hire fit into this category.

II. Potential Impacts: Significant in Many Areas

A. Overall Comments

1. **Full EIR**. EHC concurs that a full EIR is required. Impacts are potentially significant in many areas.
2. **Quantification of impact.** In all planning areas, intensification of land use is expected; however, the NOP project description does not indicate how much, or what kinds of projects are anticipated. No draft project list is included. Whereas the EIR is a program level analysis, it still requires upper boundaries on potential growth and impacts. If no project list is included, plausible worst case scenarios for all land and water uses must be developed that can be used for CEJA analysis.
3. **NOP Project Description**. The project description should include all known and foreseeable appealable and nonappleable projects.

B. Environmental Review of Specific Impacts

1. Air quality. EHC agrees that all air quality impacts are potentially significant. We agree also that an air quality study to evaluate short-, medium-, and long-term pollution impacts associated with "reasonably foreseeable development" is indicated to delineate these potential impacts. The study should be based on a plausible worst case scenario for land and water development. The analysis should include identification of hot spot impacts as well as regional impacts. Regarding Thresholds of Significance, the Port District does not have its own standards for significance of air quality impacts. EHC recommends that the appropriate threshold for Particulate Matter (PM) and ozone should be set at No Net Increase, especially since both are currently out of attainment in our air basin. No Net Increase is also an appropriate threshold of significance for toxic air contaminant emissions, given that the existing cumulative health risk to the community from Port operations is estimated at greater than 10/million, with a maximum cancer risk of 38/million (as indicated in the FEIR for the Tenth Avenue Marine Terminal Redevelopment Project).

   Mitigations for air quality impacts include the goals listed above for the Mobility Element:

- Transition to a 100% Zero Emission Freight System by 2030;
- Reduce Estimated Cancer Risk from all Port operations to below 10 per million at all locations downwind of the Tidelands;
- Adopt a legally binding Climate Action Plan that meets the State's 2030 climate goals;
- Ensure that all workers on the Tidelands have parking available on the Tidelands or use alternative means to travel to work.

2. Greenhouse Gases. EHC agrees that climate-harming emissions may increase with expansion of land and water uses and are potentially significant. Analysis should be based on worst case analysis of potential emissions. The Threshold of Significance for GHG emissions should be based on the state's GHG emissions reductions targets of 40% below 1990 levels by 2030, set by the California Global Warming Solutions Act, SB 32. Emissions above state targets should be considered significant. Mitigations for GHG impacts include the following:

    - A legally binding Climate Action Plan with goals that match the State's GHG reductions targets;
    - Transition to a fully electrified freight system at the earliest possible time;
    - Maximum local hire of workers on Tidelands to reduce transportation related emissions;
    - On- and Off-site clean energy for all Port and tenant energy uses.

3. Hazards and Hazardous materials. EHC agrees this impact could be significant and that it is essential to analyze sea level rise impacts that could result in hazardous materials entering San Diego Bay, or carry hazardous materials from the industrial waterfront into the community.

4. Land Use Planning. We concur that this impact is potentially significant. One mitigation that reduces potential conflicts with land use plans is to re-commit to adherence with Port Policy 725, the Transition Zone Policy.

5. Noise. EHC agrees noise is a significant impact of Port and tenant operations. We recommend the EIR analyze night-time noise as well as daytime noise, and also include analysis of impacts to workers on the Tidelands. Regarding the Threshold of Significance, the Port District does not have its own Threshold of Significance for ambient noise, and should adopt the City's residential noise standard for noise at homes and schools -- **without** using the procedure of averaging noise standards for two adjoining zoning types. This procedure is clearly discriminatory toward residents living adjacent to industrial land uses. There is no reason to believe these folks are less sensitive to noise, or that noises emanating from industrial sources are somehow less injurious to their health and wellbeing than the same noise levels from sources that are allowable in a residential zone. The Port should adopt the City noise standard of 40 to 50 dB for residences.

6. Population and Housing. We agree this is potentially a significant impact. We suggest that one mitigation is to maximize local hire of workers who are already in the area.

7. Recreation. EHC agrees that this is a potentially significant impact. New and expanded facilities will be important as the intensification of other land and water uses occurs. This impact has an environmental justice dimension also; recreation facilities must be low cost and accessible to all, including transit-dependent people.

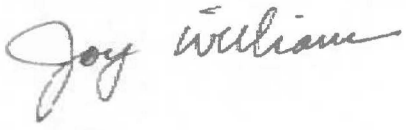
8. Traffic and Transportation. We agree this impact is likely to be significant. Transportation impact analysis should include estimates of VMT and not just congestion/level of service impacts, given that VMT links more directly to air quality and GHG impacts. Include parking impacts on adjacent communities. Include mitigations for biking and walking hazards, such as Class 1 bike routes and walking routes separated from traffic. The concept of a Harbor Drive haul road, to separate truck traffic on Harbor from other traffic, may have a place as a mitigation for this impact.

9. Utilities, Service Systems, and Energy. We concur this is potentially significant. CEQA environmental review must include worst case analysis, including circumstances such as high-water-use projects and continuing droughts. Anticipated impacts of climate change to cause increased heat and drought should be factored in to the analysis. A mitigation for increased energy consumption linked to intensification of land uses: Require energy generation and/or storage requirements to new projects that will increase energy use.

10. Mandatory Findings of Significance: EHC agrees this is a significant impact.

Thank you for the opportunity to comment on this NOP. We look forward to a full project description as the CEQA process unfolds.

Sincerely,



Joy Williams
Research Director

Alice Ayala

From: Haskell, Hilary A <HHaskell@semprautilities.com>
Sent: Monday, May 01, 2017 8:05 AM
To: Mayra Medel
Cc: Olivo-Gomez, Edalia
Subject: Port Master Plan Update NOP Comments
Attachments: Port Master Plan CEQA Guidelines Final.pdf

Follow Up Flag: Follow up
Flag Status: Completed

Ms. Medel

Please see attached for SDG&E's comment letter in response to the NOP for the Port Master Plan Update.

Thank you,

Hilary Haskell
Environmental Specialist
San Diego Gas & Electric
Email: hhaskell@semprautilities.com
Office: 858.654.1239
Mobile: 714.225.4451

SDGE

A Sempra Energy utility®

April 28, 2017

Mayra Medel
San Diego Unified Port District, Planning and Green Port
3165 Pacific Highway
San Diego, CA 92101
Via email: mmedel@portofsandiego.org

Subject: Response to the Notice of Preparation for the Draft Program Environmental Impact Report for the Port Master Plan Update

Dear Ms. Medel

San Diego Gas & Electric Company (SDG&E) appreciates the opportunity to comment on the above-referenced Notice of Preparation (NOP). SDG&E wants to ensure that the Draft Program Environmental Impact Report (DPEIR) adequately addresses the public utility implications of the Port Master Plan Update (Proposed Project).

The Initial Study Checklist included as part of the NOP does not currently discuss the need to relocate or alter any SDG&E facilities. If these relocations or alterations are required, they must be addressed in the DPEIR. Please refer to the attached "Guidelines for Private Developer and Agency Initiated Utility Projects that Require CEQA Environmental Documents" for more information.

In addition, the following information is provided for your consideration:

- Any temporary or permanent relocation of facilities or placement of facilities underground and/or associated temporary outages shall be completed at the cost of the project developer.

- Please note that access to any transmission and distribution facilities must be provided during and after construction.

- Proposed access roads and grading must comply with SDG&E Guidelines for any encroachment to, and into any transmission rights-of-way. Furthermore, any

grading to be performed within SDG&E right-of-way would require a "permission to grade letter" from SDG&E.

- Any changes in grade shall not direct drainage in a manner that increases the potential for erosion around SDG&E facilities or access roads.
- Project grades shall be coordinated to assure clearances as required by California Public Utilities Commission General Order 95.
- Any temporary or permanent relocation of facilities or placement of facilities underground and/or associated temporary outages shall be completed at the cost of the Port of San Diego.

We appreciate the opportunity to comment on this NOP. If you have any questions, please feel free to contact me at (858) 654-1239 or hhaskell@semprautilities.com

Sincerely,

Hilary Haskell

Hilary Haskell
Environmental Specialist-Environmental Project Permitting
Cc: Edalia Olivo-Gomez-Environmental Project Permitting

Guidelines for
Private Developer and Agency Initiated Utility Projects that Require CEQA Environmental Documents

General

These guidelines are provided to assist developers and local agencies in preparing discussions of electric utility work in California Environmental Quality Act (CEQA) environmental documents (Environmental Impact Report, Mitigated Negative Declaration, Negative Declaration, or Certified Regulatory Programs) addressing the "whole of the action" for their projects. Adequately describing and addressing all project elements and impacts associated to SDG&E facilities may be of great assistance in developing an accurate and adequate CEQA document, and in expediting SDG&E's regulatory permitting process through the California Public Utilities Commission (CPUC) of the State of California.

SDG&E recommends including an accurate description and impact analysis of activities associated with the electric utility work on its facilities in CEQA documents prepared by developers or agencies. Including this discussion can support SDG&E's claim of exemption from the permitting requirements of the CPUC, General Order 131-D (GO 131-D), as discussed in more detail below.

General Order 131-D states that "...no electric public utility.... shall begin construction...modification...alteration...or addition to an existing electric transmission/power/distribution line...without first complying with the provisions of this General Order." The General Order defines "transmission lines" as operating at or above 200 kilovolts (kV), "power lines" as operating between 50 and 200 kV, and "distribution lines" as operating below 50 kV. Construction of new transmission lines requires the issuance of a Certificate of Public Convenience and Necessity (CPCN) from the CPUC, while construction of new power lines requires the issuance of a Permit to Construct (PTC). However, the CPUC has identified certain activities which may qualify for an exemption (expedited approval via what is known as an Advice Letter to the CPUC) to the General Order's PTC, which otherwise may take upwards of 18-24 months for SDG&E to obtain. The activities which are exempt from PTC requirements include, in relevant part, "the minor relocation of existing power line facilities up to 2,000 feet in length" and "power lines or substations to be relocated or constructed which have undergone environmental review pursuant to CEQA as part of a larger project, and for which the final CEQA document ... finds no significant unavoidable environmental impacts caused by the proposed line or substation." General Order 131-D Sections III.B.1.c and III.B.1.f, respectively.

If the developer or local agency prepares a CEQA document that adequately describes the electric utility work and addresses the environmental impacts as a result of electric utility work on the electrical facility in such a way that those impacts can be separately

identified, SDG&E may be able to rely on this document to qualify for the exemption under GO131-D. SDG&E engineering and environmental staff is available for early coordination and provides the following guidelines to facilitate the timely permitting and construction of developer and agency projects that include electric utility work on SDG&E facilities.

These guidelines are not intended to provide legal advice or counsel to developers or agencies regarding compliance with CEQA. Developers and agencies should consult with their lead agency and/or own counsel for advice on compliance with CEQA. The SDG&E Environmental Project Permitting Team is available to answer any questions and to coordinate early on in order to provide the developer or agency with a project description so that they may complete their CEQA analysis of the proposed electric utility work.

Guidelines

Project Description

The overall description for the larger project should discuss the proposed electric utility work as a part of the developer's or agency's larger project.

It is imperative that a *separate* description of the proposed electric utility work is provided in the CEQA document. This description should include the following:

- An exhibit that shows the existing location of electric facilities.
- The need for the electric facility relocation.
- The length (transmission line) or size (substation) and voltage of the electric facility to be removed or relocated.*
- The number, type, and size of equipment that will be installed.*
- The location of temporary and permanent access roads required for initial construction and long-term maintenance.*
- Identification and description of any temporary areas required for the electric utility work, such as work area around structures, pulling and tensioning sites, material staging areas and temporary access roads.*
- A separate exhibit that clearly shows the preferred transmission line routing or the preferred location of the substation enclosure with associated pads and equipment.
- A diagram of a typical transmission structure or a site layout plan for the substation.*

- A discussion of any alternative routes or locations for the electric utility work on the transmission line or substation, and an analysis of why those alternative routes or locations were not selected over the preferred transmission routing or the preferred substation location. A "no project" alternative should also be included to discuss how the larger project would be implemented without the electric utility work.*
- The types and numbers of construction equipment, and number of personnel that will be required to remove or relocate the electric facility.*
- The anticipated construction schedule including hours per day, daily start and stop times, and total duration for the electric utility work on the electric facility.*

Note: Items above marked with an asterisk* denote information that can be provided by SDG&E to the developer or agency.

Project Setting

The existing environmental conditions, natural or man-made, within the area of the proposed electric utility work should be thoroughly described in the developer's or agency's environmental document. The location of existing and proposed electric facilities should be indicated on a map or diagram showing existing environmental features (habitat, wetlands, cultural resources, etc.) in the project area, including any off-site work needed to accommodate the electric utility work.

Impacts

The potential environmental impacts of the proposed electric utility work should be fully analyzed per Appendix G of the *CEQA Guidelines*. The developer or agency should ensure that impacts associated with the electric utility work are described and addressed *separately* from the impacts associated with other components of the project. This separate discussion is necessary in order to ensure that the CEQA document clearly addresses which impacts are associated with the electric utility work and which impacts are a result of the other activities associated with the project. All impacts resulting from the electric utility work on the electric facility must be less than significant, and no significant, unavoidable impacts can occur for the electric utility work to be considered exempt from the GO 131-D permitting process with the CPUC. Please refer to Appendix A, CEQA Impact Areas, for a suggested listing of impacts that should be considered as part of this analysis pursuant to Appendix G of the *CEQA Guidelines*. This listing is not all-inclusive and is meant to provide guidance regarding what topics should be addressed in the impact analysis.

Findings

A finding in the developer's or agency's CEQA document that the project as a whole does not have a significant effect on the environment is not adequate for SDG&E claim exemption from the permitting requirements of GO 131-D to the CPUC, unless the project as a whole would result in "no impact" or a "less than significant impact" for all CEQA Impact Areas (i.e., no separate finding is necessary as all impacts associated with the proposed project would have "no impact" or a "less than significant impact"). For SDG&E to claim an exemption from GO 131-D requirements, the developer's or agency's environmental document **must make a separate finding** that the proposed electric utility work on SDG&E's electric facilities as a part of the larger project does not have the potential for a significant effect on the environment. Please see below for an example finding based on the *La Pata Avenue Gap Closure and Camino Del Rio Extension Project Addendum No. 2 to Final EIR No. 610*:

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less than Significant Impact. *As stated in the Addendum to the EIR No. 610, the project remains consistent with the goals and policies of the County of Orange's Natural Resource Element of the General Plan and the City of San Clemente's Natural and Historic/Cultural Resources Element of the General Plan. There are no local policies or ordinances protecting biological resources (e.g., a tree preservation policy or ordinance). Therefore, the proposed roadway project would not conflict with any local policies or ordinances protecting biological resources. The SDG&E utility relocation refinements would not change this finding. Therefore, impacts would remain less than significant.*

In order for the electric utility work on the electric facility to no have a significant effect on the environment, the developer or agency may need to implement mitigation measures. If mitigation measures are required for the electric utility work, the developer or agency will pay all costs associated with implementing those measures. Mitigation costs would be paid for by the developer or agency if either SDG&E can claim exemption under GO 131-D or if SDG&E needs to obtain a PTC or a CPCN from the CPUC for the electric utility work as a part of the developer's or agency's larger project as a whole. Mitigation measures provided, implemented, and paid for by the developer or agency may include, but are not limited to:

- biological and/or cultural resource surveys and related analyses
- environmental monitoring during construction (air, water, biology, cultural etc.)
- environmental mitigation such as re-vegetation, habitat restoration, purchase of mitigation land, and curation/protection of cultural or historical resources
- post-project monitoring and maintenance of re-vegetation and/or habitat restoration areas

Process

The developer or agency should use the above guidelines in preparing CEQA environmental documents for larger projects to assure that the CEQA documents contain a complete discussion of the proposed electric utility work and its potential environmental impacts. Upon the lead agency's certification of the environmental document, the developer or agency will provide SDG&E a copy of the resolution, ordinance or other acknowledgement prepared by the lead agency certifying the CEQA document.

Upon receiving lead agency certification of the CEQA document from the developer or agency, SDG&E will do one of the following:

- Prepare and file an Advice Letter with the CPUC for the electric utility work on its electric facilities for the developer or agency project claiming exemption under GO 131-D. This process requires approximately 6 months or more to complete.

- Submit the certified CEQA document to the CPUC along with an application for a PTC or an application for a CPCN. This process is lengthier than an Advice Letter, and can require years rather than months to complete.

If it is determined that the utility work required is statutorily or categorically exempt from CEQA pursuant to Section 15260 et seq. of the CEQA Guidelines, no Advice Letter is required to be filed with the CPUC. In such a case, SDG&E will retain the developer's or agency's CEQA document in the project file in support of a claim of exemption.

Permits

With the exception of any CPUC issued permits (PTC or CPCN), the developer or agency is solely responsible for obtaining all permits and approvals, and providing any mitigation required by those permits, for the electric utility work on SDG&E electrical facilities that are a component part of their larger project. This remains the sole responsibility of the agency or developer regardless of whether SDG&E claims an exemption from GO 131-D for the electric utility work as part of a larger project, or whether SDG&E is required to obtain an Advice Letter, PTC or CPCN for the electric utility work.

Appendix A: CEQA Impact Areas

The following list of CEQA impact areas includes the topics that should be addressed in the impact analysis for a given project. This list is not intended to be exhaustive.

- Land Use: As part of the larger project, will the electric utility work on the electric facility be compatible or incompatible with the adjacent, proposed or existing, land uses (e.g. schools)? Describe.

- Water Quality: As part of the larger project, will the electric utility work on the electric facility change drainage or runoff patterns or otherwise adversely affect water quality? Describe how. The water quality impact analysis for the larger project should include electric utility work related water impacts in support of a finding of non-significance.

- Air Quality: As part of the larger project, will the electric utility work on the electric facility contribute to exceeding or impacting any air quality standards? The type, number, and duration of equipment used for electric utility work shall be included in the short-term air quality discussion and calculations. The air quality analysis for the larger project should include electric utility work related air quality impacts in support of a finding of non-significance.

- Biological Resources: As part of the larger project, will the electric utility work on the electric facility impact threatened or endangered species or their habitats? Describe the locations, type (such as coastal sage scrub, chaparral, wetlands, riparian, grassland etc.) and amounts of impacts. An exhibit should show the location of the electric facility, including any temporary work areas or permanent access roads, with relation to known sensitive habitats and endangered species sightings. The biological impact analysis for the larger project should include electric utility work related biological impacts in support of a finding of non-significance.

- Aesthetics: As part of the larger project, will the electric utility work on the electric facility create substantial light or glare, or have a negative aesthetic effect? Describe and depict in drawings, cross sections, or visual simulations as necessary to support. The visual impact analysis for the larger project should include electric utility work related cultural impacts in support of a finding of non-significance.

- Cultural resources: As part of the larger project, will the electric utility work on the electric facility have the potential to disturb or physically change any known archaeological, paleontological or historical resources? An exhibit should show the location of the electric facility with relation to known cultural resource locations. The cultural resource impact analysis for the larger project should include electric utility work related cultural impacts in support of a finding of non-significance.

- Noise: As part of the larger project, could the electric utility work on the electric facility have the potential to substantially increase noise levels to sensitive receptors? The noise study for the larger project should include electric utility work related noise impacts in support of a finding of non-significance. SDG&E can provide informational support to the developer or agency in the preparation of noise studies for the electric utility work.

Alice Ayala

From: Hentrich, Katie <Katie.Hentrich@sandag.org>
Sent: Monday, May 01, 2017 11:22 AM
To: Mayra Medel
Cc: Litchney, Seth
Subject: Port Master Plan Update NOP - SANDAG Comments
Attachments: Port Master Plan Update NOP - SANDAG Comments.pdf

Dear Ms. Medel,

Thank you for the opportunity to comment on the Port of San Diego's Port Master Plan Update NOP. Please see the attached comment letter from SANDAG. If you have any questions or concerns, please contact myself or Seth Litchney (seth.litchney@sandag.org).

Thank you,

Katie Hentrich
Regional Energy/Climate Planner

SANDAG
(619) 595-5609
401 B Street, Suite 800, San Diego, CA 92101

SANDAG

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Planning & Green Port

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sandag.org

May 1, 2017

File Number 3300300

Ms. Mayra Medel
San Diego Unified Port District
Planning and Green Port
3165 Pacific Highway
San Diego, CA 92101

Dear Ms. Medel:

SUBJECT: Port Master Plan Update Notice of Preparation

Thank you for the opportunity to comment on the San Diego Unified Port District's (Port) Port Master Plan Update Notice of Preparation (NOP). The San Diego Association of Governments (SANDAG) is submitting comments based on the policies included in San Diego Forward: The Regional Plan (Regional Plan). These policies will help provide people with more travel and housing choices, protect the environment, create healthy communities, and stimulate economic growth. The Port plays an important role in our region, and SANDAG is committed to working collaboratively to better coordinate future land use and transportation plans for the Port.

Regional Transportation and Traffic Analysis

In October 2009, the San Diego region elected to be exempt from the State Congestion Management Plan (CMP). Since this decision, SANDAG has been abiding by 23 Code of Federal Regulations §450.320 to ensure the region's continued compliance with the federal congestion management process. Local jurisdiction projects that receive federal funds to develop capacity-increasing improvements are required to provide sufficient documentation that an appropriate multimodal alternative and non-single occupant vehicle (SOV) analysis has been performed. This analysis is required to be completed prior to submitting a project for inclusion within the Regional Transportation Improvement Program. Should the Port wish to use federal funds in the development of any elements of this project, SANDAG encourages the Port to consider the SANDAG CMP, as outlined in Appendix U7 of the Regional Plan.

Please include a discussion on impacts and mitigation measures associated with traffic congestion on nearby and surrounding streets to the Port Master Plan Update, including but not limited to Interstate 5 (I-5) connections and improvements, Pacific Highway, Hawthorne Street, Grape Street, Harbor Drive, Silver Strand Boulevard, as well as other arterials and streets.

SANDAG encourages the Port to collaborate and coordinate with other public stakeholders and agencies to pursue fiscal opportunities to implement regional transportation projects, such as access to regional transit routes and facilities, that have a regional impact on circulation and accessibility to a number of key destinations within the Port's jurisdiction.

Goods Movement

When drafting the Environmental Impact Report (EIR) for the Port Master Plan Update, please consider the potential impacts on goods movement in the following areas:

- Consider any impacts for the I-5, as it is the primary corridor providing access to the Port Master Plan Districts
- Consider any impacts for Harbor Drive and Bay Marina Drive in relation to the Working Waterfront and National City Bayfront Districts; these are primary last-mile freight corridors
- Consider any impacts for all multimodal facilities and local communities within the Port Master Plan Districts

Transportation Demand Management

When preparing the EIR for the Port Master Plan Update, please consider the integration of transportation demand management (TDM) strategies to help reduce greenhouse gas emissions associated with SOV trips throughout the Port. TDM measures encourage the use of alternative travel modes to assist with mitigating traffic impacts and parking demand within and around the planning districts. TDM strategies should be tailored to meet the unique needs of all ten planning districts and can include:

- Provision of safe pedestrian and bicycle facilities with enhanced wayfinding signage that connects to public transit and other transportation services. Pedestrian and bicycle facilities should provide connections to other planning districts and destinations throughout the Port.
- Provision of secure and convenient bike parking and amenities, such as bicycle repair stands, for employees and visitors.
- Implementation of mobility hub elements such as:
    - Provision of adequate curb space, where feasible, to facilitate pick-up and drop-off options for connecting transit and shared mobility services, such as carshare, on-demand rideshare, and shuttle services. This could include improving and expanding designated passenger pick-up areas to reduce congestion and parking demand near the waterfront.
    - Provision and promotion of shared mobility services (e.g., carshare, on-demand rideshare, and shuttle services) to reduce SOV trips, improve circulation within and around the planning districts, and reduce on-site parking demand.
    - Interactive transportation kiosks in employment and high pedestrian traffic areas that display real-time information about regional transit services, bikeshare, carshare, on-demand rideshare, and other transportation options.

- Coordination with adjacent local agencies and stakeholders that are developing and implementing mobility plans may also be helpful. For example, the San Diego County Regional Airport Authority (SDCRAA) is in the process of developing an EIR for its Airport Development Plan. Collaboration with SDCRAA would create seamless connectivity and help align TDM and multimodal infrastructure investments within the Harbor Island Planning District.
- Encourage Port employers to use transportation alternatives to driving alone. Eliminate subsidized parking for employees and offer an equivalent subsidy to employees that use commute alternatives to driving alone (transit, vanpool, carshare, on-demand rideshare, bike, and walk).

Please consider partnering with the SANDAG TDM program, iCommute, to promote regional TDM programs and services to employers. This includes the SANDAG Vanpool Program, Guaranteed Ride Home services, multimodal trip planning, and bike encouragement programs. More information on available regional TDM programs can be accessed through iCommuteSD.com.

Other Considerations

Several objectives from the Regional Plan can help to support the goals of the Port Master Plan Update. These objectives can be found in documents, such as the San Diego Regional Plug-in Electric Vehicle Readiness Plan, and in the ongoing efforts of the Shoreline Preservation Working Group. In addition, SANDAG has a number of additional resources that can be used for additional information or clarification on topics discussed in this letter. These can be found on the SANDAG website:

1. SANDAG Regional Parking Management Toolbox
2. Riding to 2050, the San Diego Regional Bike Plan
3. Regional Multimodal Transportation Analysis: Alternative Approaches for Preparing Multimodal Transportation Analysis in Environmental Impact Reports
4. Planning and Designing for Pedestrians, Model Guidelines for the San Diego Region
5. Integrating Transportation Demand Management into the Planning and Development Process—A Reference for Cities

When available, please send any additional environmental documents related to this project to:

Intergovernmental Review
c/o SANDAG
401 B Street, Suite 800
San Diego, CA 92101

We appreciate the opportunity to comment on the Port's Port Master Plan Update NOP. If you have any questions, please contact me at (619) 699-1943 or via email at seth.litchney@sandag.org.

Sincerely,

SETH LITCHNEY
Senior Regional Planner

KHE/hbr

Alice Ayala

From: Roger Lewis <lewisrm1@hotmail.com>
Sent: Monday, May 01, 2017 3:51 PM
To: Mayra Medel
Subject: C-3: NOP comments
Attachments: C-3 PORT OF SAN DIEGO NOP COMMENTS.pdf; C3 Letter To Port Addressing Waterfront Issues - February 2012.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Ms. Medel -

Good afternoon. Please find attached comments submitted on behalf of C-3 regarding the UPoSd Master Plan NOP. As referenced in the comments document, attached as well are comments previously submitted related to the Master Plan document in 2012.

Thank You,
- rl

Roger Lewis
President, Citizens Coordinate for Century 3
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CITIZENS COORDINATE FOR CENTURY 3

May 1, 2017

Mayra Medel
San Diego Unified Port District, Planning and Green Port
3165 Pacific Highway
San Diego, CA 92101

(submitted via email on May 1, 2017 to mmedel@portofsandiego.org)

Dear Ms. Medel:

Citizen's Coordinate for Century Three (C3) appreciates the opportunity to provide the San Diego Unified Port District with our comments on the Notice of Preparation (NOP) of a Draft Environmental Impact Report for the Port Master Plan Update. While our comments apply to the Program which includes All Planning Districts, our particular focus is on North Embarcadero (Planning District 3).

Background. C3 is a nonpartisan, nonprofit organization of informed citizens, which works for the conservation, and improvement of the San Diego region. We strive to present objective information, constructive opinion and educational programs that reflect the deliberation of its members. C3 strives to weigh all matters in view of the contribution toward achieving the highest standards of environmental quality, physical design, economic benefit, and social progress.

C3 has previously submitted several years ago our concerns about the piecemeal planning process the Port of San Diego has periodically taken and our specific ideas on the development of North Embarcadero. Our previous comments are contained in the two attached letters.

Comments on Notice of Preparation. Our specific comments on the NOP are as follows:

1. The preparation of the EIR at this time further reinforces our concerns about the piecemeal planning the Port has exhibited with respect to the Waterfront. The NOP states:

> "The Port Master Plan Update would provide the official planning policies of the District consistent with the general statewide purpose, for the physical development of the tide and submerged lands conveyed and granted to the District as well the acquired land lands. In accordance with the California Coastal Act and Port Act, the PMPU would: 1) control the allowable land and water uses within the District; 2) list known "appealable" projects, and; 3) include goals and policies of the Coastal Act, as shape the characteristic of the development, coastal access, recreation, and environmental conservation throughout the District's jurisdiction."

There are possible and/or pending projects that could significantly impact the environmental impacts of the development within the Port's Planning Districts. These projects are evolving in a piecemeal fashion and without an overall update of the allowable and permitted uses in a comprehensive master plan process. The Port runs the risk of approving projects which could conflict with the overall integrated logical development of our precious Waterfront and result in significant environmental impacts that would not be analyzed in this EIR.

2. There is an unclear distinction between Program and Project terminology used for the description of the Port Master Plan Update. The Notice of Preparation states this is a Program EIR but then refers to the Port Master Plan as a "proposed project". The Project Description of the EIR should make it clear this EIR is focusing on the overall Program objectives of the Planning Districts and that individual projects such as Seaport Village Development will require their own EIR.

3. There are major land use decisions which have not been incorporated that could impact the Environment that are not part of the EIR process. For example, the long terms plans for the location of parking on the waterfront will have a profound impact on traffic patterns and thus the viable alternatives for traffic flow. This would importantly include any realignment or narrowing of Harbor Drive and possibly reconfiguring Grape Street.

The amount and location of parking in the yet to be fully defined Seaport Village Project will impact North Embarcadero area immediately next to its Planning District (Central Embarcadero). Whether 1220 Pacific Highway (Navy Building next to Lane Field) is available for future reuse for parking is not yet known, yet it could be a logical location for a parking reservoir.

4. There should be a concerted effort to integrate potential "other Agency projects" into the EIR analyses. The EIR should not just "consider" in a general sense projects such as the Navy Broadway Complex in its review. To the extent there are specifics identified by project applicants they should be incorporated into the environmental review. Furthermore, doing a Program EIR does not excuse the Port from doing individual project EIR's on future redevelopment projects that relate to these other Agency projects or Port Projects within the Planning Districts.

5. The EIR should consider a broad range of alternatives for development of key Port properties including the "B" Street Pier. The long term economic condition and viability of the Cruise Ship industry should be considered in the context of the potential alternative development of the "B" Street Pier into uses that could activate this significant waterfront location.

Concluding Remarks. The Port Master Plan Update should analyze impacts at the Programmatic level. There have been statements by the Port Commissioners that this EIR could assist in streamlining projects. This means the Master Plan Update must identify in sufficient detail (type, location, size intensity) to allow for streamlining. As has been stated above, we remain significantly concerned the preparation of this EIR and its scope further reinforces our objections to piecemeal planning that has characterized some Port decisions.

Thank you for consideration of our comments.

Sincerely,

Roger Lewis, President
Citizens Coordinate for Century III

CITIZENS COORDINATE FOR CENTURY 3

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San Diego, CA 92117-7005
Phone 858.277.0900
E-mail c3sandiego@sbcglobal.net

February 1, 2012

Lou Smith, Chairman
San Diego Unified Port District
2165 Pacific Highway
San Diego, CA 92101

Dear Chairman Smith:

On behalf of Citizen's Coordinate for Century Three ("C3") and at the direction of our Board of Directors, we wish to express significant concerns regarding recent developments and processes related to North Embarcadero projects.

As you are aware, C3 is a nonpartisan, nonprofit organization of informed citizens, which works for the conservation, and improvement of the San Diego region. We strive to present objective information, constructive opinion and educational programs that reflect the deliberation of its members. C3 strives to weigh all matters in view of the contribution toward achieving the highest standards of environmental quality, physical design, economic benefit, and social progress.

HISTORICAL CONTEXT AND OBSERVATIONS

Efforts to achieve the type of waterfront we would like to have for the North Embarcadero have been compromised by a questionable public input process, an example of which resulted in the negatively perceived Broadway Pier Cruise Ship Terminal. What often seems as indifference by the Port of San Diego to public input into the decision-making process by an informed citizenry, as relates to the waterfront decision-making process, continues to perpetuate concerns by the California Coastal Commission regarding the Port's transparency and good urban planning.

With the approval of the North Embarcadero Phase 1 by the Coastal Commission on April 10, 2010, the start of construction this month for this project, and the pending North Embarcadero Plan Amendment, we are at a critical juncture in determining the future of our waterfront. Based upon decisions and actions taken since the April 10, 2010 approval of Phase 1, as well as the significant compliance conditions imposed on the project, it is evident that we have a long way to go with respect to ensuring an open, transparent community-involved planning effort that ensures good planning decisions.

The recent introduction of a proposal for development of Navy Pier for significantly increased parking (the current lease agreement and Coastal Commission permit process require all existing pier parking to be relocated) as well as an elevated intensive-use park which would wall off the waterfront, with minimal public participation in creation of the concept, amplifies these concerns.

While initially encouraged by the recent decision to reconvene the Citizen Advisory Committee ("CAC") for North Embarcadero to consider the Navy Pier Proposal and Harbor Drive realignments we were very disappointed to find at the January 17 meeting that the CAC will not continue to meet and discuss future North Embarcadero planning issues. **To not have a Citizens Advisory Committee is a critical mistake and is contrary to finding consensus solutions to future North Embarcadero development.**

Our specific concerns and recommendations are as follows:

ISSUE: PIECEMEAL DEVELOPMENT PLANNING AND PROJECT APPROVALS.

Major waterfront projects such as the Midway Museum's "Wings of Freedom Project", the proposed construction of the B Street dolphin mooring and future planning for refurbishment of the B Street cruise ship terminal are examples of proposed projects having lasting impacts on our remaining "front porch." Developments within the South Embarcadero, such as the Convention Center expansion or the rerouting of access to the airport all have an impact within North Embarcadero. Neither the Midway Museum nor the B Street pier have been presented to the North Embarcadero Joint Powers Authority prior to Port of San Diego policy or administrative actions, nor presented within the context of the entire North Embarcadero Planning Area.

C3 has had extensive involvement during previous years in the North and South Embarcadero planning process" In collaboration with more than a dozen other community design and planning organizations, C3 hosted a North Embarcadero Community Planning Workshop in October 2010. One of the major themes that emerged from the workshop was the need for comprehensive, integrated planning as well as the consideration of development impacts beyond current North Embarcadero boundaries.

Workshop participants embraced the expansion of the planning area. The North Embarcadero is not an isolated island. All projects on public tidelands extending south from the airport to the Tenth Avenue Marine Terminal should be looked at on a comprehensive, land use basis, not chipped away at via piecemeal planning efforts.

Recommendation: C3 requests that the following occur for future North Embarcadero Planning efforts:

- All private and public projects should be presented as a group to the North Embarcadero Joint Powers Authority Board in a public meeting **prior** to any regulatory or policy approvals by the Port of San Diego;
- The North Embarcadero Planning Area should be expanded north to the airport and south to the Tenth Avenue Terminal;

- Approval for specific projects should include discussion and analysis of implications for other projects/issues within the North Embarcadero area;

As an example, the Navy Pier redevelopment proposal should acknowledge and discuss possible mitigations for loss of public views created by construction of the cruise ship terminal on Broadway Pier.

THE PORT OF SAN DIEGO'S PERCEIVED INDIFFERENCE TO PREVIOUS REGULATORY DECISIONS AND THE ABSENCE OF AN APPROPRIATE CITIZEN REVIEW PROCESS FOR THE MIDWAY MUSEUM "WINGS OF FREEDOM" PROPOSAL

Our concerns center upon:

- Non-compliance with prior regulatory approval conditions granted the Midway Museum, particularly relating to public view sheds of the bay, establishing a 5.7 acre park on Navy Pier, and the removal of all public parking from the pier to an off site location;
- The accelerated public review and input process with respect to the original unveiling of the project and the originally planned request for Port approval on January 10, 2012, in order that the project be included in the Port Master Plan Amendment;
- The lack of input from the Citizen's Advisory Committee for the Port Master Plan Amendment when that opportunity existed during the ten occasions that the committee met in 2011.

C3 acknowledges the success of the Midway museum and that it is an important asset to our regional economy. Its local programs and community services are a major benefit for local schools as well as visitors to our waterfront. On the other hand, the Midway museum does have several negative environmental impacts needing to be mitigated. Those negative impacts, which were addressed in the original agreement approving the siting of the Midway to its location, relate to public views, public access, as well as the need to remove all parking from Navy Pier to an off site location. The Coastal Commission recognized these necessary mitigation measures over ten years ago and included these conditions in the Coastal Development Permit for the Midway Museum.

On June 28, 2001, when the California Coastal Commission approved the Midway Museum Proposal ("Revised Findings on San Diego Unified Port District Port Master Plan Amendment-10B). The staff report stated:

> "In order to further mitigate for the visual impacts of the Midway, the proponents of the museum have indicated a long-term goal of creating a memorial park on the existing Navy Pier adjacent to the proposed Midway site. This proposal involves creating a free, visually attractive public open space area next to the Midway, where currently, the pier is occupied by a two-story Navy building, and as proposed, would contain the parking required for the Midway museum."

Further the Coastal Commission report stated that the Port intended to include the following language in the Port Master Plan Amendment as it relates to the Midway:

> "Parking for visitors to the Midway and its museum will be provided, **on an interim basis** (emphasis added), at the Navy Pier, pursuant to the lease with the United States Navy. When and if the Navy determines that its use of the Navy Pier is no longer necessary, the Port will accept the proposal by the San Diego Aircraft Carrier Museum to convert the Navy Pier into a "public park" use, thereby allowing the pier to be converted into a memorial public park complementing the Midway and its museum, while affording **additional** open space and bay vistas (emphasis added). Vehicle parking for museum visitors would be shifted to nearby offsite locations."

The intent of this Coastal Commission approval was crystal clear. Navy Pier was eventually to become a park, parking was to be provided off site, and the site was to provide unimpeded views to the bay. The "Wings of Freedom" proposal (which includes staging for the symphony) will obstruct views, does not provide for a park on the entire site, and maintains parking on site (a double-deck structure with an additional 200 parking spaces added) rather than off site.

The Midway Museum's "Wings of Freedom" proposal was not presented to the Citizens Advisory Committee when the opportunity existed during the spring and summer of 2011. On June 1, 2011 the Midway Museum presented general information on their history and Coastal Development Permit requirements. However, no specifics were brought forward to the public regarding the "Wings of Freedom" proposal until the Port's meeting on November 8, 2011, long after the Port dissolved the Citizens Advisory Committee. Furthermore, the Midway Museum project proposal was never presented to the North Embarcadero Joint Powers Authority, which (at least in theory) should consider such projects within the context of all North Embarcadero waterfront planning.

The Citizen's Advisory Committee for the Port Master Plan Amendment met ten times during this period. These meetings were the appropriate venue to seek initial public input on the proposed Midway Museum project within the context of overall proposed revisions to the North Embarcadero Plan. Neither the project and/or its potential impact upon North Embarcadero development were discussed at the CAC or the Joint Powers Authority.

Three community workshops within a 12-day period during the holiday season (November 29th, December 6th, and December 10th) was not an effective timeframe to seek public input and response for presentation to the Port Commission originally anticipated for January 2012.

Recommendations:

- The "Wings of Freedom" project should be rejected as inconsistent with the terms and conditions of the original regulatory approvals for the Midway Museum;

- The Citizen Advisory Committee should be reconstituted to consider the proposal within the context of the entire Port Master Plan Amendment **before** preparation of an Environmental Impact Report, particularly in light of the recent California Coastal Commission Consistency Determination as relates to the Navy Broadway Complex;
- The Midway Museum should work in collaboration with C3 and other groups to identify acceptable solutions to address the Midway Museum's Navy Pier requirements;

A project of this scale and importance should not be squeezed into a schedule driven by the need to proceed with the timing of the Port Master Plan Amendment. Opportunities now exist that may allow for a better solution for all parties. As an example, the possible demise of the Navy Broadway Complex ("NBC") proposal may allow for an adjacent parking solution on the NBC site for the Midway Museum rather than on the Navy Pier. There is a perception that the PMPA CAC was a token effort to show citizen participation to the Coastal Commission without any intent to involve them during the entire process or as evidenced by the 1/17/12 special meeting, even listen to their input. It is not too late to reconvene a CAC with their own chair to look at the PMPA in a comprehensive manner, rather than the continued piecemeal approach to planning with projects such as the Midway proposal.

ISSUE: LACK OF A FULLY TRANSPARENT AND OPEN PROCESS RELATIVE TO THE PUBLIC/COMMUNITY INPUT

Two recent actions by the Port of San Diego indicate there are no serious intentions or consideration of alternatives other than to continue with the "B" Street Pier as a cruise ship location. On June 2, 2011, based upon plans and information submitted by the San Diego Unified Port District, the California Coastal Commission granted a Waiver of Coastal Development Permit (# 6-11-040-W) to construct a pile-supported concrete mooring dolphin and catwalk at the end of the "B" Street Pier to accommodate larger cruise ships that extend 100 feet or more west of the end pier.

The proposal for the dolphin moorings at the "B" Street Pier never went through the vetting and discussion process in a public meeting of the Joint Powers Authority Board or the Port Commission. Rather, the dolphin pier proposal was forwarded as an administrative action to the California Coastal Commission with obviously significant staff effort and only disclosed "after the fact" at the Citizen's Advisory Committee meeting.

The proposed project will extend westward of lands legislatively granted to the Port District and onto non-granted sovereign land in the San Diego bay. The project will also extend beyond the U.S. Army Corps of Engineers pier-head line into navigable waters. If completed as proposed, the structure would extend 170 feet into San Diego bay, extending beyond the west end of the "B" Street Pier.

At the July 20, 2011 meeting of the Citizens Advisory Committee, Port staff provided a presentation on the future of the cruise ship industry, which included an indication by Port staff that they had conducted some preliminary planning studies as to how the existing "B" Street Terminal could be retrofitted to bring the terminal up to current cruise ship standards of service.

State Lands Commission consideration of dolphin mooring proposal

With minimal public notice, the Port applied to the State Lands Commission for approval of the "B" Street Terminal's dolphin mooring proposal. On October 27, 2011, the California Lands Commission, which must approve development beyond the Port's jurisdiction on navigable waters, continued the item regarding the mooring dolphin proposal based in part upon objections raised by several individual members of C3 and the attorney for the Navy Broadway Complex Coalition.

Recent January 13, 2012 correspondence by the Port to the State Lands Commission indicated that the dolphin mooring proposal would be withdrawn pending evaluation of environmental issues raised in public comments. However it is clear from the language in this correspondence that the Port has no intention than to proceed with this proposal when it states: "The proposed project is very important to the future of San Diego's Cruise Ship business."

It is apparent that the Port has no serious consideration for uses on or near the "B" Street Pier other than for cruise ships. The mooring dolphins are not a minor temporary addition to the "B" Street pier. It is another indication that the Port of San Diego intends to use this terminal for the foreseeable future exclusively for cruise ship operations (notwithstanding the questionable future prospects of such operations due to security concerns in Mexico). Preliminary planning studies for retrofit further solidifies this observation.

The application for the dolphin mooring permit by Port staff lacked transparency and citizen input. The extent of the improvements, particularly in relation to the "charge" of the Citizen's Advisory Committee, should have been disclosed by Port staff and discussed by the committee. Such a project clearly involved extensive planning efforts that were not provided in an open collaborative environment. Memories of how the Broadway Pier Cruise Ship Terminal was handled with the public and Coastal Commission staff are fresh in the mind of C3 and the general public. It is actions such as these that engender continued distrust by the public who spend extensive personal time and energy trying to improve what remains of our waterfront.

The "B" Street Pier, because of its size and location, offers the potential for a unique non-cruise ship use that could provide a unique anchor destination with revenue generating potential for the North Embarcadero. With the start of Phase I and the County Administration Waterfront Park, we have a unique yet to be fully defined opportunity for enhancement of the North Embarcadero experience. The walling off of access associated with Homeland Security requirements as relates to the cruise ship industry is a liability, not an asset for the area. Also and very importantly, the vast space of the "B" Street Pier could be considered as partial mitigation for the loss of views resulting from the Broadway Cruise Ship Terminal.

Recommendations: A reconstituted Citizens Advisory Committee should consider the Midway Museum Navy Pier proposal the "B" Street pier dolphin mooring proposals, and any proposed Harbor Drive realignments among other issues. With respect to the Citizens Advisory Committee, it should include a public citizen chair who conducts the meeting, sets the agenda, and allows formal votes on critical

North Embarcadero Planning issues. While the Port is evaluating the environmental issues raised in public comments, all further work on the dolphin mooring project or improvements to the "B" Street Terminal should be suspended.

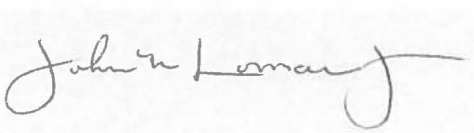
Interestingly, when the Port of San Diego, the City of San Diego, the County of San Diego, the Centre City Development Corporation, and the Navy worked together as an Alliance in the late 1990's, there existed a Memorandum of Understanding (MOU) signed by all agencies in June 1997. Within that MOU it is stated: "Projects within the North Embarcadero area will be reviewed on a timely basis by the Steering Group (precursor to the JPA) and considered as an integral part of the planning process. Further, the Alliance will quickly implement a process that is inclusive of all interest groups, property owners, and the public at large. This process will extend beyond the Steering Group meetings to a proactive outreach effort consisting of public workshops designed to maximize communication and elicit the best possible ideas, priorities, and preferences at the public at large."

In closing, C3 strongly recommends that all future planning efforts on the part of the Port of San Diego take to heart our organization's desire to not further wall off San Diego's waterfront and that every opportunity is utilized to accomplish projects that we can all be proud of for future generations. As President Theodore Roosevelt expressed when he visited San Diego on July 29, 1915:

"I hope you in San Diego, whose city is just entering in its great period of development, will recognize what so many old communities have failed to recognize. That beauty is not only worthwhile for its own sake but that it is also valuable commercially. Keep your waterfront and develop it so that it will add to the beauty of your city. Do not let a number of private individuals make it hideous with buildings and then force your children to pay for them an exorbitant sum to get rid of the ugliness they have created"

Thank you for consideration of this request.

Sincerely,



John Lomac, 2012 President
Citizens' Coordinate for Century Three

Cc: Port Commissioners
Congressional Representative Bob Filner
Congressional Representative Susan Davis
State Senator Chris Kehoe
Assemblymember Toni Atkins
California Coastal Commission
San Diego County Board of Supervisors
Mayor Jerry Sanders
San Diego City Councilmembers

Rear Admiral Dixon Smith, United States Navy
Centre City Development Corporation Board
Wayne Darbeau, President/CEO, San Diego Unified Port District
Walt Ekard, Chief Administrative Officer, County of San Diego
Citizen's Advisory Committee, Port Master Plan Amendment
League of Women Voters
Partners for Livable Places
Common Cause
AIA, San Diego
Urban Land Institute San Diego
San Diego Downtown Partnership
Voice of San Diego
San Diego Union Tribune
San Diego Reader
San Diego City Beat

Cc: Channel 6 XETV
Channel 7/39 KNSD
Channel 8 KFMB
Channel 10 KGTV
Channel 51, KUSI
Channel 69, KSWB

Alice Ayala

From: Steinert, Kurtis <KSteinert@sandiego.gov>
Sent: Monday, May 01, 2017 4:30 PM
To: Mayra Medel
Cc: Murphy, Jeff; Muto, Alyssa; Galloway, Tait; Tomlinson, Tom
Subject: Comment Letter for the Port Master Plan Notice of Preparation
Attachments: Comment Letter for the Port Master Plan Notice of Preparation.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Dear Ms. Medel:

Please find attached our comment letter for the Notice of Preparation of a Program Environmental Impact Report for the Port of San Diego's Port Master Plan Update.

Kurtis Steinert, AICP
Senior Planner, Environment and Policy Analysis
City of San Diego
Planning Department
1010 Second Ave, Ste 1200 , MS 413, San Diego, CA 92101
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The City of
SAN DIEGO
Planning Department

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MAY 1 2017
Planning & Green Port

May 1, 2017

San Diego Unified Port District
Planning and Green Port
Ms. Mayra Medel, Senior Planner
3565 Pacific Highway
San Diego, CA 92101

Subject: Notice of Preparation of a Draft Environmental Impact Report, Port Master Plan Update (UPD #EIR 2017-035)

Dear Ms. Medel:

The City of San Diego ("City") Planning Department has received the Notice of Preparation (NOP) of a Draft Program Environmental Impact Report (Draft PEIR) for the Port Master Plan (proposed project), prepared by the San Diego Unified Port District (District) and distributed it to applicable City departments for review.

The City, as a Responsible Agency under CEQA, has reviewed the NOP and appreciates this opportunity to provide comments to the District. Considering that the proposed plan has the potential to significantly impact our jurisdiction, the City wants to ensure that the District's proposed project adequately analyzes all potential impacts so that the resulting plan complements our respective goals and interests relative to development along and adjacent to San Diego's Port.

Of particular concern is the District's potential plans for the Convention Center site. As you are aware, the existing Port Master Plan incorporates the proposed Phase III expansion of the Convention Center. A similar planned expansion is identified in the City's Downtown Community Plan Area. The Convention Center, which significantly contributes to the City's tourism industry, is the third largest income generator that helps fund essential public services such as public safety, fire and parks and recreation services.

However, pursuant to the project description described in the NOP, it appears that the District is analyzing a Mixed-Use Overlay that will allow for additional and alternative uses on the Phase III expansion area (i.e. hotel). Additionally, the City noted the omission of the area planned for rooftop park/plaza, which would provide valuable and significant park space and coastal public access to this area.

It is the City's position that the proposed project maintain the existing "commercial recreation zone" and ultimate development of the Phase III Expansion of the Convention Center as planned in the existing Port Master Plan; a plan that was unanimously approved by both the Port District Board of Commissioners and Coastal Commission a few years ago.

Should the District move forward with the Mixed-Use Overlay for the convention site, a policy direction strongly opposed by the City, the PEIR will need to address the environmental impacts outlined in this letter which include mobility, air quality, noise, view shed, coastal access and public facilities. In addition, the City is providing the following comments related to the preparation of the Draft Master Plan since these could affect the scope and alternatives of the Draft PEIR.

1. The Draft PEIR should address how the proposed Mixed-Use Overlay would impact the Phase III expansion of the Convention Center and the existing Convention Center, such as coastal access, impact to truck loading and resulting traffic, noise, air quality, GHG impacts, and impacts to public views.

2. A separate land use under the commercial land use category entitled "Convention Center" provides a clearer understanding of the ultimate intended use and allows for a more defensible environmental analysis within the PEIR.

3. The Draft Port Master Plan should include objectives addressing the importance of the convention center as significant regional land use for visitors and regional economic generator for commerce and tourism, which would frame the analysis within the PEIR.

4. The Draft Port Master Plan should incorporate the existing Phase III expansion discussion from the current Port Master Plan and include a figure showing the existing convention center as well as future expansions, again providing clarity of the area intended for this use.

5. The Draft Port Master Plan should not include any land use discussion or uses that would compromise the ability to fully implement the Phase III expansion. If any proposed land uses compromise the implementation of the Phase III expansion, as a Responsible Agency it is imperative that the District conduct a comprehensive analysis of an alternative that would allow for full implementation of the Phase III expansion at the same level of analysis as the proposed project.

6. The Draft PEIR should include discussion of the Convention Center expansion should it occur outside of the port tidelands in the cumulative condition.

7. The City would also like to emphasize its continued support for a full 150-foot setback for park and open space stretching from the County Waterfront Park to 1220 North Harbor Drive, as originally proposed and agreed upon by members of the North Embarcadero Visionary Plan.

City staff from different departments have reviewed the NOP and have the following comments regarding the content of the DEIR scope. Should you have any technical questions pertaining to the specific comments, the contact person's name and contact information is provided.

Planning Department – Tait Galloway, Program Manager – tgalloway@sandiego.gov, 619-533-4550

Long-Range and Environmental Staff from the Planning Department have reviewed the NOP and have the following comments regarding the content of the DEIR scope:

Mobility

1) A transportation impact study, or mobility and circulation analysis, should compare the impacts of the Port Master Plan project against existing conditions and future 2035 and 2050 traffic demand in order to establish significance of impacts and identify project mitigation measures. The following recommendations for the traffic analysis are provided for consideration in the preparation of the traffic and circulation analysis.

   a) The transportation impact study should use the City's roadway classifications.

   b) The transportation modeling for the transportation impact study should reflect current roadway conditions lane configurations and any proposed roadway improvements.

   c) The transportation impact study and transportation modeling should analyze future transportation and circulation impacts.

   d) The transportation impact study should include a parking demand analysis that incorporates current conditions and future projects that may impact parking.

   e) The transportation impact study should provide appropriate measures to reduce vehicle trips and new vehicle miles traveled.

   f) The transportation impact study should provide appropriate measures to avoid, minimize, or mitigate Port Master Plan impacts expected along and at intersections of Rosecrans, Shelter Island Drive, Harbor Island Drive, Washington Street, Pacific Highway, Kettner Boulevard, Sassafras Street, Laurel Street, Grape Street, Hawthorn

Street, India Street, Harbor Drive, North Harbor Drive, Cesar Chavez Parkway, 28th Street, National Avenue, and 32nd Street, and any other locations which will be impacted by the reassignment of existing traffic and generation of additional traffic due to the proposed development and facilities. All intersection level of service analysis should include queuing analysis.

2) The Draft PEIR should include analysis of vehicular circulation from Port lands to Interstate-5 and State Route 15, within the City of San Diego.

3) The Draft PEIR should address the traffic impacts of the proposed project, including a "plan-to-ground" comparison, comparing existing conditions to projected traffic conditions in the future years 2035 and 2050 with the proposed project.

4) The Draft PEIR should address how vehicle traffic (cars and freight trucks) associated with the proposed project would affect at grade rail crossings and all rail operations in the rail corridor from West Washington Street to 32nd Street for both existing and future 2035 and 2050 vehicle and rail traffic conditions. This should include any additional future rail operation that would result from the proposed project

5) The Draft PEIR should identify City street and roadway improvement measures to avoid, reduce, or mitigate the proposed project traffic impacts based on the future 2035 and 2050 traffic demand that are consistent with all applicable City standards and regulations.

6) The Draft PEIR should address freeway and ramp improvement measures to avoid, reduce, or mitigate the proposed project traffic impacts on W. Washington Street, Laurel Street, Pacific Highway, Kettner Boulevard, India Street, Hawthorn Street, Grape Street, Logan Street, Cesar Chavez Parkway, 28th Street, National Avenue, and 32nd Street based on the future 2035 and 2050 traffic demand including, but not limited to direct truck access connection road(s) from Harbor Drive to Interstate 5 and/or State Route 15.

7) The Draft PEIR should address transit priority strategies to avoid, lessen or mitigate impacts, including but not limited to signal priority treatments at signalized intersections serving rapid bus routes and transit queue jumps at severely congested intersections during traffic periods to reduce the future 2035 and 2050 potential impacts to transit services.

8) The Draft PEIR should address transit improvements to and from the Cruise Ship Terminal, which could include a mobility hub, to increase the transit ridership and to reduce the future 2035 and 2050 traffic impacts along Harbor Drive.

9) The Draft PEIR should address how the proposed project would impact existing and planned bicycle and pedestrian facilities within City rights-of-way including Pacific Highway and Harbor Drive.

10) The Draft PEIR should address if any proposed mitigation measure would result in the need for the City to amend the Circulation Element of an affected community plan, public facilities financing plan, or impact fee study, including but not limited to the following community plan areas: Midway - Pacific Highway, Peninsula, Uptown, Downtown, Barrio Logan, Southeastern San Diego, and Otay Mesa - Nestor.

11) The Draft PEIR should address transportation demand management strategies to mitigate or avoid/lessen impacts, including but not limited to free or reduced cost transit passes for employees of the Port and Port tenants, to increase transit ridership and to reduce the future 2035 and 2050 traffic impacts.

12) The Draft PEIR should address intelligent transportation system strategies to mitigate or avoid/lessen impacts, including but not limited to traffic signal control, traffic monitoring, parking availability, electronic messaging systems during traffic periods to reduce the future 2035 and 2050 traffic impacts.

13) The Draft PEIR should provide a Transportation Improvements Phasing Plan for the required transportation mitigation measures based on the traffic need and the existing right-of-way constrains that are consistent with all applicable City standards and regulations.

Greenhouse Gas

14) As noted in the NOP, the City concurs that the Draft PEIR should include an analysis of the Port Master Plan potential impacts and cumulative impacts on Greenhouse Gases pursuant to the CEQA Guidelines. Please be advised that the City has an adopted Climate Action Plan (December 2015). It is requested that the proposed project consider the methods and strategies proposed in the City's CAP for reducing GHG emissions, and where feasible incorporate such design and/or operational mitigation measures for the implementation of future projects. The City is available to continue to discuss these coordinated opportunities.

Noise

15) The Draft PEIR should address both roadway and rail noise associated with Port traffic and Port operational noise that could affect sensitive noise receptors, including, but not limited to housing, for existing conditions and future 2035 and 2050.

Air Quality

16) The Draft PEIR should determine if the proposed project would expose sensitive receptors to substantial pollutant concentrations within the project area and its surrounding community plan areas: Midway - Pacific Highway, Peninsula, Uptown, Downtown, Barrio Logan, Southeastern San Diego, and Otay Mesa Nestor.

Visual Character

17) The Draft PEIR should address how any future structures that could result from the development of the Port Master Plan would impact view corridors within project area and within its surrounding community plan areas: Midway - Pacific Highway, Peninsula, Uptown, Downtown, Barrio Logan, Southeastern San Diego, and Otay Mesa Nestor.

18) The Draft PEIR should address how the proposed project would affect the existing and future visual character or quality of the project area and its surrounding community plan areas: Midway - Pacific Highway, Peninsula, Uptown, Downtown, Barrio Logan, Southeastern San Diego, and Otay Mesa Nestor.

Land Use Plans

19) The Draft PEIR should address how the proposed project would affect the existing and future land uses within following community plan areas: Midway - Pacific Highway, Peninsula, Uptown, Downtown, Barrio Logan, Southeastern San Diego, and Otay Mesa Nestor.

Public Facilities

20) The Draft PEIR should address how the proposed project would affect the existing and future public facilities within following community plan areas: Midway - Pacific Highway, Peninsula, Uptown, Downtown, Barrio Logan, Southeastern San Diego, and Otay Mesa Nestor.

21) The Draft PEIR should address how the proposed project would affect the existing and future population based parks within following community plan areas: Midway - Pacific Highway, Peninsula, Uptown, Downtown, Barrio Logan, Southeastern San Diego, and Otay Mesa Nestor.

Coastal Access

22) The NOP identifies a potential significant impact based on potential conflicts with existing land use plans as part of its analysis the Draft PEIR. It is recommended that this analysis include how the proposed project would affect coastal access plans adopted by the City for surrounding communities.

Transportation & Storm Water Department, Storm Water Division – Mark G. Stephens, Associate Planner– MGStephens@sandiego.gov, 858-541-4361

The Notice of Preparation (NOP) and Initial Study/Environmental Checklist (under "IX. Hydrology and Water Quality" and "XVIII. Utilities, Service Systems, and Energy") appropriately identify several topical areas relating to hydrology and water quality, as well as storm water drainage facilities, with potentially significant impacts warranting analysis in the Draft PEIR. Please contact the City of San Diego Storm Water Division for any information needed regarding the City's storm drain system or water pollution prevention responsibilities.

Please coordinate with the City Storm Water Division to assure potential impacts to City storm water infrastructure are addressed, including drainage facility capacity and operation and maintenance. As a program level environmental document, to the extent some project details are unknown at this time, please establish a framework assuring environmental reviews for subsequent projects potentially affecting the City of San Diego drainage system fully address drainage facility capacity and operation and maintenance.

Under "III. Air Quality" (or "IX. Hydrology and Water Quality"), please address potential effects of air emissions on water quality. Through aerial deposition, certain pollutants may have the potential to be transported by storm water runoff.

1) The first sentence in the "XIV. Public Services, (a) 2. Police Protection" narrative (last paragraph on page 32 of the Initial Study/Environmental Checklist) appears to have a typographical error, and should probably read: "The study area is served by numerous police departments."

2) When considering infrastructure improvements such as roadway modifications under "XVI. Transportation/Traffic," include potential storm water impacts. As described under Comment 2 above, if any City Storm Water infrastructure would be impacted, please coordinate with the City Storm Water Division when considering improvements, such as roadway redesign, additional curbs/gutters, new/expanded impervious surfaces, or the proposed addition of any facilities to the City Storm Water Division's facility inventory.

3) Please note that new storm water drainage facilities or the expansion or modification of existing drainage facilities may be tidally influenced.

Thank you for the opportunity to provide comments on the NOP. These comments are preliminary in nature, and the City expects to provide more detailed input once the Draft PEIR is available. Continued coordinated planning between the City, the Port District, and local, regional, state, and federal agencies will be essential to addressing impacts from the District's future growth. The City looks forward to working with the Port District toward that end.

Please contact me directly or Alyssa Muto, Deputy Director, via email at amuto@sandiego.gov or via phone at 619-533-5103 if there are any questions regarding the contents of this letter or if the District would like to meet with City staff to discuss our comments.

Once the Draft PEIR is prepared please provide the Planning Department digital copies of the document for distribution.

Sincerely,

JEFF MURPHY, Director
Planning Department

JM/kps

cc: Reviewing Departments (via email)
Review and Comment online file

Alice Ayala

From: Bill Tippets <billtippets@gmail.com>
Sent: Monday, May 01, 2017 4:56 PM
To: Mayra Medel
Cc: WILLIAM TIPPETS; Don Wood; Mike McCoy
Subject: NOP for the MPU EIR - additional comments

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Myra,

Please add these to my previous NOP comments:

During MPU Workshop #2 it appeared that most of the Commissioners (based on a discussion among Commissioners Castellanos, Nelson, Moore and possibly Merrifield) agreed that the retention and enhancement of natuaral resource values of the Bay are critical to how the Port should approach the long-term planning in the MPU...and there was a general acknowledgment that development should relate to/integrate with the resource values (development should "fit" within the natural resources and qualities of the Bay). Also, as clearly described by Commissioner Ann Moore, the Commissioners acknowledged that the MPU will have future land use designations in some parts of the tidelands that will differ from what currently occur there. That is, the MPU must identify how and where to changed uses are appropriate/necessary. I have recommended that they/staff talk with representative of the cities and county, whose Multiple Species Conservation Plans also necessitated changes to existing land uses and designated new land uses to meet future needs/commitments (for habitat and species conservation and development) with respect to their general plans/planning.

The Port's Integrated Planning/Vision Plan documents documented that only about 8% of its current land uses are "open space/parks," which is a severe "parks and open space" deficit when compared with other "great ports" (November 20, 2014 workshop presentation). Based on substantial, relevant documentation by the IP consultants, HKS, the Port's open space/parks should comprise about 22% of the land base. The consultants calculated that the deficit was about 214 acres (before accounting for the future Chula Vista Bayfront MP and North Embarcadero projects). Even with those projects, the Port would have a deficit of about 100 acres. As described in the IP/VP documents, the Port has sufficient underutilized and inappropriately distributed development and infrastructure to allow for the creation of the needed parks and open space. The Port's MPU must address this existing, significant failing by adding more open space/park lands - which can create substantial economic and social (and environmental) benefits.

We know that open space near/around development increases property values and overall desirability of properties near/around open space. Here are recent studies of the economic and social contributions that open space have on adjacent/nearby developed property:

1. https://sites.duke.edu/urbaneconomics/?p=1441 (general overview)

2.http://www.americantrails.org/resources/economics/Economic-Benefits-Trails-Open-Space-Walkable-Community.html (great overview, includes benefits to municipalities)

3. https://www.tn.gov/assets/entities/tacir/attachments/2016_Economic_Impact_of_Open_Space.pdf (Tennessee park lands study)

4. http://urbanland.uli.org/news/open-space-development-outlook/ (Urban Land Institute forum)

Projected sea level rise (SLR) will seriously compromise portions of the Bay, including existing developed areas. Recent studies from the US Geological Survey's CoSMoS program (https://walrus.wr.usgs.gov/coastal_processes/cosmos/socal3.0/), as well as other studies (Climate Central's Surging Seas (http://www.climatecentral.org/) clearly illustrate the likely effects from sea level rise on coastal areas, including SD Bay. The maps that show projected SLR effects in 50-100 years indicate parts of the bay where we should consider focused shoreline retreat/resiliency (e.g., see CoSMoS "visualization map" for a projected SLR of 5 feet and a 20-year storm event: http://data.pointblue.org/apps/ocof/cms/index.php?page=flood-map). The Port's resilience/climate change adaptation/resilience approach must accommodate SLR. Resilience should include both "hardened engineered solutions" (retain/reinforce improved areas in-place) as well as "transitional solutions" (allowing landward encroachment).

The Green Necklace remains an elusive, but essential, part of the MPU. The combined actions of increasing park and open space acreage and creating areas for accommodating SLR can

provide important contributions to the Green Necklace. Those new open space areas will also add value to Port tidelands and adjoining Bay city properties. I raised this issue with the Commissioners - the Port will gain economic value for its development-designated lands and increase the Bay cities' lands - which means the Port should be working more closely with the cities to "share" those economic benefits.

The MPU represents the most appropriate, if not last practical decision-making point for the Port to identify and designate new park and open space and SLR accommodation lands. The preferred project, and all the alternatives, must include additional open space/park lands.

Thank you,

Bill Tippets

Alice Ayala

From: Sophie Wolfram <sophie@climateactioncampaign.org>
Sent: Monday, May 01, 2017 3:28 PM
To: Mayra Medel
Cc: Nicole Capretz
Subject: Climate Action Campaign comments on PMPU NOP
Attachments: CAC Comments PMPU NOP.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Dear Ms. Medel,

Please find attached Climate Action Campaign's comments regarding the Port's NOP for the MPU EIR.

Thank you for taking our comments into consideration, and we look forward to continued participation in the MPU process.

Sincerely,
Sophie Wolfram

Sophie Wolfram
Policy Advocate and Education Coordinator
Climate Action Campaign
(914) 715-2451

Follow us on Twitter: @sdclimateaction
Our Mission is Simple: Stop Climate Change

CLIMATE ACTION
CAMPAIGN

May 1, 2017

Mayra Medel (mmedel@portofsandiego.org)
San Diego Unified Port District, Planning and Green Port
3165 Pacific Hwy
San Diego, CA 92101

Re: California Environmental Quality Act (CEQA) Notice of Preparation (NOP) of a Draft Program Environmental Impact Report (PEIR) for the "Port Master Plan Update."

Dear Ms. Medel:

Climate Action Campaign (CAC) is an environmental nonprofit organization with a simple mission: to stop climate change and protect our quality of life. We are committed to helping governmental entities in the San Diego region develop and implement policies, plans, and regulations that will stop climate change and protect the people and places we love for generations to come.

CAC appreciates the opportunity to review the the Notice of Preparation (NOP) for the programmatic Environmental Impact Report (PEIR) for the Port Master Plan Update (PMPU). We concur with the determination that the proposed project may have a significant effect on the environment and that an environmental impact report (EIR) is required.

We offer the following comments to ensure the impacts of the PMPU with respect to greenhouse gas emissions, air quality, and sea level rise are fully analyzed and mitigated.

I. Greenhouse Gases (GHGs)

CAC agrees with the conclusions that the proposed project may generate GHG emissions that will have a significant impact on the environment and that the project may conflict with emissions reductions targets established in the Port's Climate Action Plan (CAP).

We offer recommendations below on baselines and thresholds of significance to use in the PEIR, and we recommend a legally binding CAP with reductions in line with state goals as mitigation for GHG impacts of the proposed project.

A. Baseline

- The baseline against which emissions increases or reductions are measured should be a reflection of the best available data on currently existing conditions; business as usual (BAU) projections should not be used as a baseline. CEQA greenhouse gas analysis is governed by Guideline section 15064.4, which states that in evaluating the significance of GHG impacts, the lead agency should

consider the "extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting" (Guideline §15064.4(b)(1). The CEQA guidelines further state that the existing environmental setting "will normally constitute the baseline physical conditions by which a Lead Agency determines whether an impact is significant" (Guideline §15125(a)).

B. Thresholds of Significance

- The thresholds of significance for GHGs should be any level of emissions that will cause a violation of the state's GHG emissions reductions targets of 40% below 1990 levels by 2030, set by the California Global Warming Solutions Act, SB 32. Emissions above state targets should be considered significant.

C. Legally Binding Climate Action Plan (CAP) In Line With State Goals

- We recommend that the Port utilize the CAP act as mitigation for GHG impacts from the PMPU, which would require that the Port update the document to be legally binding with enforceable, specific measures leading to reductions in line with state goals.
  i. Mitigation measures under CEQA are legally binding, a fact confirmed in court by *Sierra Club v. County of San Diego*, 231 Cal. App. 4th 1152, 1167(2014). Therefore, if the CAP is used as mitigation under CEQA, that document must be legally enforceable.
  ii. The Port's current targets of 10% emissions reductions below 2006 levels by 2020 and 25% by 2035, set forth in the CAP, do not track the state's emissions reductions targets. The CAP should be updated with new targets in line with state goals. Governor Brown signed Executive Order B-30-15 in 2015, setting a GHG reduction goal of 40 percent below 1990 levels by 2030; in 2016, SB 32 was signed into law, reinforcing the executive order of the previous year. These targets are in line with what is needed to protect our quality of life using best available science and are consistent with the Executive Order S-3-05, which calls for an 80 percent statewide GHG reduction by 2050.
- If the CAP is mitigation for the PMPU, it must mitigate emissions through the planning horizon of the proposed project. In Cleveland Nat'l Forest Foundation v. SANDAG on the Regional Transportation Plan, Judge Taylor recognized a shortcoming regarding a truncated planning horizon (Cleveland Nat'l Forest Foundation v. SANDAG, Case No. 2011-00101593, Final Ruling, p. 12). The NOP acknowledges that the horizon of the PMPU will likely extend beyond 2035, which is the year to which the CAP extends. Accordingly, the CAP should be updated to align with the planning horizon of the PMPU in order to function as mitigation for the proposed project.

D. Mitigation Measures

- We recommend that the mitigation measures planned as strategies in the CAP include, among other measurable, enforceable strategies:
  i. Electrification of cargo-handling and other equipment
  ii. Hybrid or other clean technologies for equipment that cannot be run on batteries or electricity
  iii. On-site and off-site clean energy

II. Air Quality

CAC agrees that all air quality impacts are potentially significant and that a study of possible exposure of sensitive receptors to substantial pollution concentrations is warranted. We suggest that the study should be based on a plausible worst-case scenario for land and water development in order to plan proactively to protect public health in adjacent communities.

III. Sea Level Rise

Because the PMPU will address Port activities and buildout over a 30-year period during which climate change effects – and particularly sea level rise – are expected to markedly alter environmental conditions, the PEIR must address this issue: CEQA Guidelines state, "Lead agencies must analyze potentially significant impacts associated with placing projects in hazardous locations, including locations potentially affected by climate change" (Guideline § 15126.2(a)).

A recent state-commissioned report by a Working Group of the California Ocean Protection Council Science Advisory Team found that California will be affected by sea level rise to a greater degree than the global average. Of great relevance to the Port is the finding that even aggressive reductions of greenhouse gas emissions do not eliminate the risk of extreme sea level rise along the California coast. The reports' authors caution against waiting for scientific certainty and instead urge those endowed with decision-making power to engage in hazard mitigation today to protect the people and the natural resources of coastal California.

IV. Conclusion

In closing, we wish to underscore our concern that GHG impacts be considered throughout the the PMPU process and that mitigation be addressed proactively through the development of a legally binding CAP.

Thank you for taking these comments into consideration. We look forward to continued involvement in the PMPU and PEIR process.

Sincerely,

Sophie Wolfram, Policy Advocate
sophie@climateactioncampaign.org
(914) 715-2451

Alice Ayala

From: Duncan McFetridge <sofar@nethere.com>
Sent: Monday, May 01, 2017 4:00 PM
To: Mayra Medel
Subject: CNFF & SOFAR Comment PMPU
Attachments: CNFF Ltr to Port re Master Plan Update.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Dear Mayra Medel,

Please find attached our comment letter from CNFF & SOFAR on the Port Master Plan Update NOP.

Thanks,
Duncan McFetridge

SAVE OUR FOREST AND RANCHLANDS

P.O. Box 475 Descanso, CA 91916
www.sofar.org sofar@nethere.com

CLEVELAND NATIONAL FOREST FOUNDATION

P.O. Box 779 Descanso, CA 91916
www.cnff.org info@cnff.org

May 1, 2017

San Diego Unified Port District

Attn: Mayra Medel

3165 Pacific Highway

San Diego, CA 92101

Via email:mmedel@portofsandiego.org

Re: Port Master Plan Update (PMPU)

Dear Mayra Medel,

The Cleveland National Forest Foundation (CNFF) and Save Our Forest and Ranchlands (SOFAR) appreciate the opportunity to submit comments on the NOP for the Port Master Plan Update. We are especially concerned with the Mobility Element of the plan which covers extensive responsibilities regarding the transport of goods and cargo, passenger mobility and greenhouse gas reductions. Since, the NOP states, "this element would guide future Baywide mobility, multimodal facilities and road designs, transit facilities, mobility hubs, travel demand management, parking, rail corridors for freight and other goods movement, and ferry and water taxi access,"[1] the impact analysis necessarily requires recognition of the current state of transit and rail freight in the downtown area in which the port infrastructure is situated. The port is not an island unto

[1] https://www.portofsandiego.org/environment/environmental-downloads/ceqa-coastal-act-notices/8273-port-master-plan-update-nop/file.html

itself. Its proper function is integral to the larger whole of which it is a part – the metropolitan center of the San Diego region.

With this in mind we wish to bring forward the importance of five pivotal studies which highlight the critical need to implement a functional transit system, especially in the downtown area and along the Coastal Corridor connecting San Diego and Los Angeles: The Independent Transit Planning Review (ITPR), the Urban Area Transit Strategy (UATS)[2], Destination Lindbergh[3], the LOSSAN DEIR[4] and the Complete Mobility Plan[5]. If the Port of San Diego is going to handle expanded passenger and freight service for the future well-being of our region then the current glaring deficiencies in transit and rail freight traffic require extensive analysis and disclosure. Fortunately much of this effort has already been undertaken by the five studies.

The Independent Transit Planning Review Services report authored by seven of the nation's most authoritative transit experts, begins with a core definition and assessment of the setting in which the port exists and functions: "The Downtown region is a key to the success of the regional transportation center. It is the major regional center and should be supported with an efficient, seamless and convenient transit system. Issues such as capacity, interlining, transit priorities and service levels need to be addressed. Downtown San Diego may need a large, multi-modal transfer station." [6] With this definition in mind, the question immediately arises: If the downtown area lacks a seamless transit system, what is the Port's responsibility in responding to this inadequacy? The answer lies in CEQA because it requires the description of existing conditions, disclosure of impacts and an analysis of alternatives to avoid or mitigate those impacts. The four other studies, the Urban Area Transit Strategy, LOSSAN Corridor, Destination Lindbergh and the Complete Mobility Plan, add content and structural details to the transit issue.

For example, the Complete Mobility Plan determines that in order for the downtown area to function successfully, there will need to be a 50% increase in the

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[2] http://www.sandag.org/uploads/2050RTP/F2050RTPTA7.pdf

[3] https://d3n8a8pro7vhmx.cloudfront.net/transitsandiego/pages/18/attachments/original/1490047986/Destination_Lindbergh_Appendix_16_in_2011_RTP_.pdf?1490047986

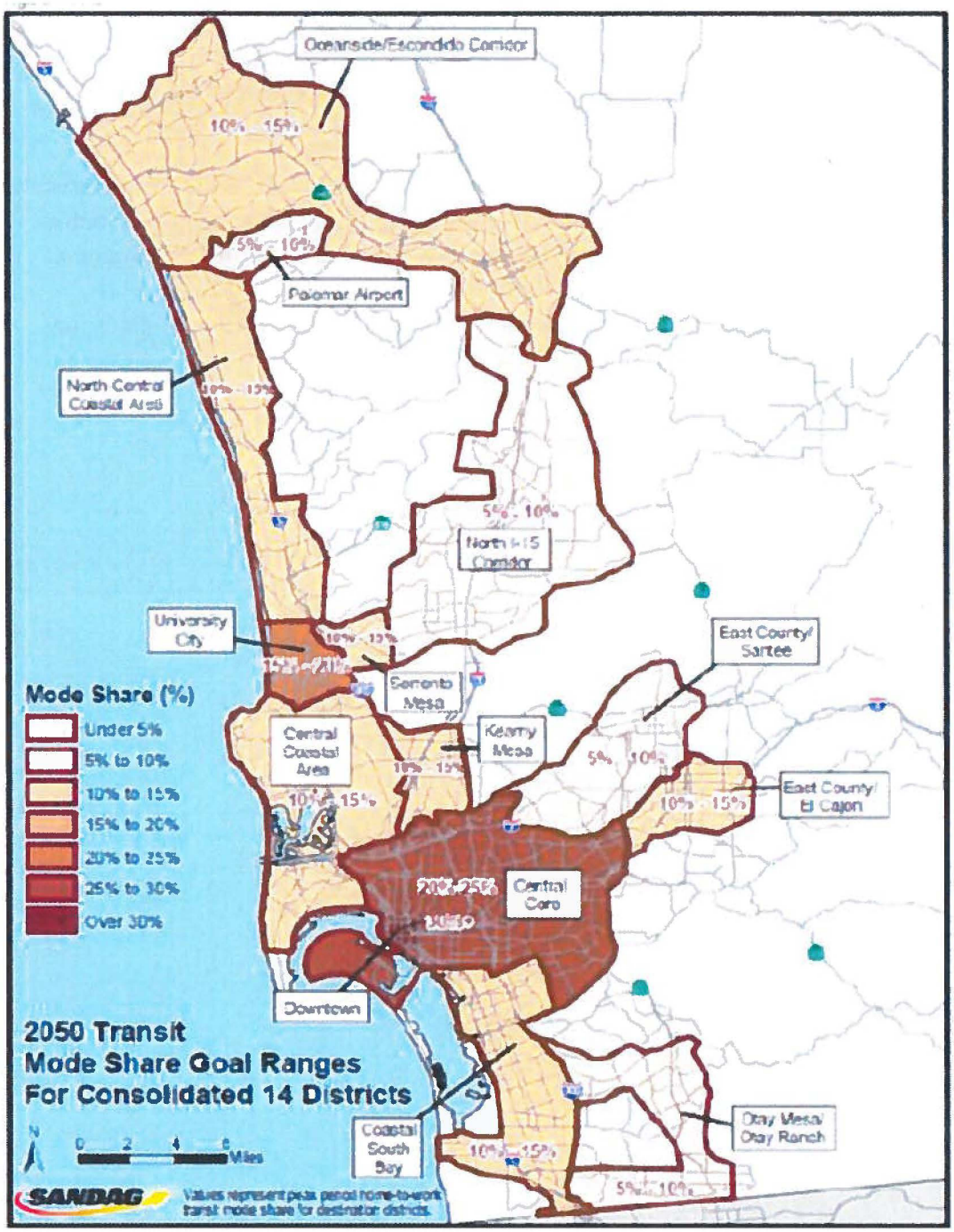
[4] https://books.google.com/books?id=57E2AQAAMAAJ&printsec=frontcover&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false

[5] https://www.dropbox.com/s/po66p3hfc70iipu/Complete_Community_Complete_Mobility_FINAL_09-08.pdf?dl=0

[6] http://www.sandag.org/uploads/publicationid/publicationid_1274_6239.pdf

transit mode share. Transit in the downtown area necessarily integrates with transit to port facilities. This fact is confirmed by the Destination Lindbergh study which concluded that up to a 20% transit mode share could serve passengers to the airport by integrating a transit hub that serves the downtown and connects to the airport.

All of these studies are further confirmed by the UATS which illustrates the aforementioned transit potential by means of a remarkable mode share map. See below. A quick look at the map tells the whole story. The downtown area could experience a 30% transit mode share. The coastal area, which is especially pertinent to the port because it falls within the LOSSAN corridor between San Diego and Los Angeles, has the potential of a 15% transit mode share.


Oceanside/Escondido Corridor
Palomar Airport
North Central Coastal Area
North I-15 Corridor
University City
Sorrento Mesa
Kearny Mesa
Central Coastal Area
East County/ Santee
East County/ El Cajon
Central Core
Downtown
Coastal South Bay
Otay Mesa/ Otay Ranch
Mode Share (%)
Under 5%
5% to 10%
10% to 15%
15% to 20%
20% to 25%
25% to 30%
Over 30%
2050 Transit
Mode Share Goal Ranges
For Consolidated 14 Districts
SANDAG

On the subject of Port movement of goods and cargo, the LOSSAN Corridor DEIR is especially pertinent to the Port's impact report. The LOSSAN corridor handles both freight and passenger service on the second most traveled corridor in North America. On the passenger side the benefits of double tracking with tunnels and rail improvements by 2020 results in an estimated travel time from San Diego to Los Angeles of less than 2 hours, which contrasts with an auto travel time of over 3 hours! The benefits to rail freight include increased efficiency, reduction in greenhouse gas emissions and would most likely result in the economically and environmentally superior alternative.[7]

The stakes regarding CEQA documents have changed considerably since the Port's last plan update. It is now even more evident that reducing greenhouse gas emissions ("GHG") is one of the most urgent challenges of our time. Governor Schwarzenegger's Executive Order S-3-05, signed in 2005, established a long-term goal of reducing California's emissions to 80 percent below 1990 levels by 2050. The order also directed several state agencies (collectively known as the "Climate Action Team") to carry its goal forward. The following year, the Legislature enacted the Global Warming Solutions Act of 2006 ("AB 32"), codified at Health and Safety Code § 38500, *et seq*. By these authorities, California has committed to reducing emissions to 1990 levels by 2020, and to 80 percent below 1990 levels by 2050. In 2015, Governor Brown took further action to meet this challenge by issuing Executive Order B-30-15, which sets an interim target of 40 percent below 1990 levels by the year 2030.

Unfortunately, as the following figure clearly shows, there is a tremendous gap between the San Diego region's forecasted GHG emission levels and the California emissions target.

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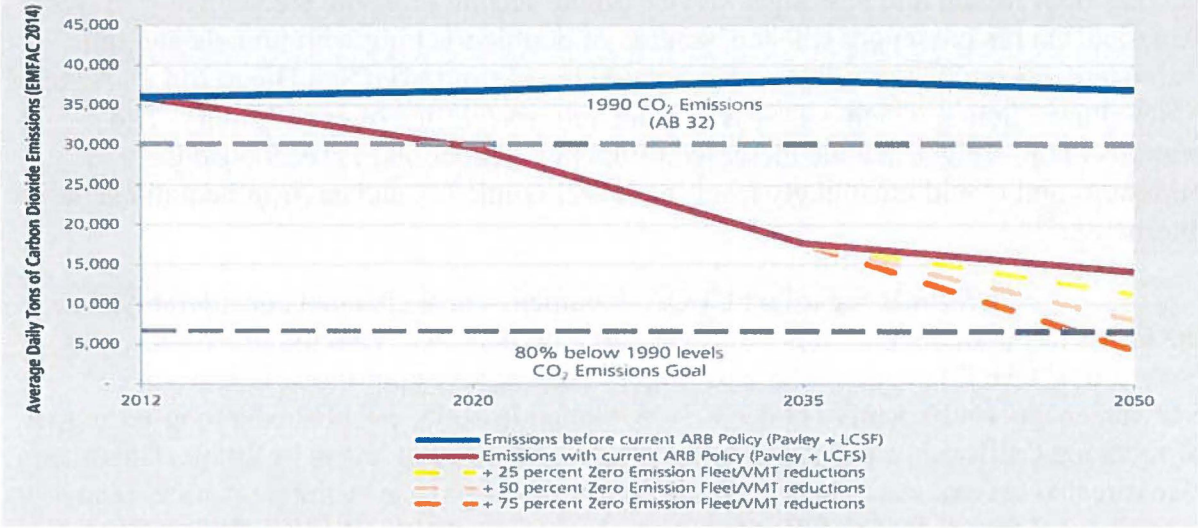
[7] https://books.google.com/books?id=57E2AQAAMAAJ&printsec=frontcover&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false

Figure D.1
Total Projected Carbon Dioxide Emissions from Cars and Light-Duty Trucks for the San Diego Region



Source: 2015 RTP/SCS Appendix D: 2012 Greenhouse Gas Inventory for San Diego County and Projections, pg. 39

The Port, like every other major land use agency in California, is at a critical juncture. The current plan update provides a key opportunity to set forth detailed mobility strategies to ensure that the Port contributes to move the region in a sustainable direction. For example, the City's Climate Action Plan establishes an ambitious goal to cut GHG emissions in half by 2035, thus the Port could play a critical role in supporting this goal through its own plan update.

In this regard, recent court rulings have strengthened climate change executive orders, AB32 and other statewide climate policies. Public agencies are now obligated to use their best efforts to discover and disclose all impacts as well as address feasible mitigation and alternatives. Much of this critical work has already been completed by the studies referred to in this letter. We urge the Port to incorporate these studies and play a leading role in our region by furthering CEQA's mission of having an informed public and agency accountability, with the hope of a more ecologically and economically vibrant future.

Sincerely,

Duncan Mc Fetridge

Duncan McFetridge,
Director, CNFF
President, SOFAR

Alice Ayala

From: Eric Chavez - NOAA Federal <eric.chavez@noaa.gov>
Sent: Monday, May 01, 2017 4:44 PM
To: Mayra Medel
Cc: Penny Ruvelas; Dan Lawson; Eileen Maher
Subject: Notice of Preparation of a Draft Environmental Impact Report for the Port Master Plan Update
Attachments: 18MAR2014_Comments on Port 50 year vision_EC_DL.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Hello,

NOAA's National Marine Fisheries Service would like to provide the following comments pertaining to the Notice of Preparation of a Draft Environmental Impact Report for the Port Master Plan Update:

NOAA's National Marine Fisheries Service (NMFS) and the living marine resources under our jurisdiction known to be present within the project location (e.g., green sea turtles, essential fish habitat and habitat areas of particular concern) should be specifically considered within the Draft Environmental Impact Report (Draft EIR). In addition, the comments we provided in our March 18, 2014 letter (attached again for your convenience) are still appropriate and should be addressed in the Draft EIR.

Thank you for considering our comments and please feel free to contact me if you have any questions.

Regards,
Eric

--
Eric Chavez
Protected Resources Division
NOAA Fisheries West Coast Region
U.S. Department of Commerce
Phone: (562) 980-4064
Eric.Chavez@noaa.gov
www.westcoast.fisheries.noaa.gov

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
West Coast Region
501 West Ocean Boulevard, Suite 4200
Long Beach, California 90802-4213

March 18, 2014

Keith Walzak
Port of San Diego
Environmental & Land Use Management
3165 Pacific Highway
San Diego, California 92101

Dear Mr. Walzak:

NOAA's National Marine Fisheries Service (NMFS) would like to thank the Unified Port of San Diego (Port) for the information provided on the Integrated Port Master Planning Process (Master Plan) during a webinar on March 3, 2014. Our understanding is that this comprehensive planning process is intended to develop a long-term vision that will guide the Port's development and operations over the next 50 years. The first phase, currently underway, is the visioning process to identify guiding principles for the revised Master Plan. In response to the Port's request, NMFS is providing feedback on important things to consider with respect to living marine resources and the Port's responsibilities under the Magnuson Stevens Act (MSA), Endangered Species Act (ESA), and Fish and Wildlife Coordination Act (FWCA) when identifying those guiding principles. To be consistent with the structure of the various stakeholder meetings the Port has held recently, our comments are based on the three questions posed to stakeholders during those meetings.

Question # 1: What does NMFS find most exciting about the waterfront in San Diego Bay?

Perhaps the most exciting aspect about San Diego Bay (Bay) in general is the various NMFS trust resources that are found in the system, despite the extensive commercial, residential and military development and activity that exists. These resources include substantial eelgrass (*Zostera spp.*) habitat, green sea turtles (*Chelonia mydas*), important commercial and recreational fish species, and various marine mammals. For instance, the eelgrass resources in San Diego Bay comprise approximately 50% of all eelgrass found in Southern California (U.S. Navy 2009). Eelgrass habitat provides important physical and biological functions, including enhanced water clarity, increased sediment stabilization, and important nursery habitat for fish. In addition, green sea turtles, listed as endangered under theESA, utilize eelgrass habitat for foraging. Marine mammals that can be found in San Diego Bay include pinnipeds, like the California sea lion (*Zalopohus californianus*) and harbor seals (*Phoca vitulina*), and cetaceans, including coastal bottlenose dolphins (*Tursiops truncates*) and the occasional migrating gray whale (*Eschrichtius robustus*).

Planning Port development projects in a comprehensive manner, instead of using a more piecemeal approach, is also an exciting proposition. This type of planning strategy would facilitate improved conservation and management of these important resources. For instance, the Port discussed implementing a more sustainable or "smart growth" approach into the Master Plan to link various open spaces together throughout the Bay and surrounding watersheds (i.e., a "green ring"). Maximizing habitat connectivity would provide substantially greater benefits to living marine resources when compared to disconnected habitats. Therefore, NMFS supports this idea and urges the Port to ensure this concept is extended into aquatic habitats within the Bay so that areas where habitats have been (or may be) conserved, enhanced or restored are linked together to improve the functioning of these habitats.

As an example, the Port could help create a system of connected habitats that would include the San Diego Bay National Wildlife Refuge and Sweetwater Marsh units with other areas, such as the F, G, and J Street marshes and the former San Diego Bay Power Plant property. In addition. opportunities to preserve, enhance and/or restore aquatic habitats in the North, North Central and South Central portions of the Bay should be pursued. These regions of the bay have been significantly impacted by coastal development, and every effort should be made to expand functional habitats in these areas and link them to habitat areas within the South Bay.
One way to protect these habitat areas and achieve this improved habitat connectivity would be through the creation of an "umbrella mitigation bank" that would include multiple sites within the Bay. This approach would provide additional benefits, including facilitating the permitting process for development projects for the Port and its tenants, creating a revenue stream for the Port, and helping to accommodate sea level rise on Port property within the Bay.

Question # 2: What is NMFS most concerned about regarding the waterfront in San Diego Bay?

NMFS is most concerned that our trust resources, already marginalized in San Diego Bay, will be further impacted by future development and climate change, especially if they are not identified as a priority in processes like this comprehensive planning effort. Due to armoring and other shoreline modification activities, only 26% of the Bay shoreline remains in a natural condition or is made of materials indigenous to the bay (U.S. Navy and Port of San Diego 2013). In addition, San Diego Bay has a long history of dredge and fill activities to accommodate safe passage of ships and various activities. As a result, only approximately 18% of the original Bay floor remains undisturbed by dredge or fill (U.S. Navy and Port of San Diego 2013). According to the National Research Council, sea levels are also expected to rise between 4.7 and 24 inches by 2050 and between 17 and 66 inches by 2100 (NRC 2012). Given the paucity of undeveloped areas in San Diego Bay that could accommodate such a rise in sea level, the impact to local habitats and our trust resources could be severe. For instance, eelgrass growth is limited to a relatively narrow depth range due to desiccation stress and limited light penetration at its shoreward and bayward extents, respectively. As a result, when sea level rise projections are considered for San Diego Bay, the amount of habitat suitable for eelgrass could potentially be drastically reduced.

These anticipated impacts underscore the need to plan for, and accommodate, sea level rise with respect to Port development projects. This approach would support the intent of the Port's recently adopted comprehensive Climate Action Plan to foster sustainable growth and minimize future costs of reacting to climate change through proactive, long-range planning. It would also be consistent with planning procedures that have already been implemented for major Port projects. For instance, the Chula Vista Bayfront Master Plan Development Policies include a section on Climate Change and Sea Level Rise that states,

"Buffers should take into account and adapt for rises in sea level by incorporating wetland migration areas or other sea level rise adaptation strategies as appropriate...Development shall consider the potential changes in functionality of Wildlife Habitat Area due to rising sea levels and coordinate management with the District and City Climate Mitigation and Adaptation Plans. Siting and design of new shoreline development shall take into account predicted future changes in sea level. In particular, an acceleration of the historic rate of sea level rise shall be considered and based upon up-to-date scientific papers and studies, agency guidance...and reports by national and international groups such as the National Research Council and the Intergovernmental panel on Climate Change."

Question # 3: What should be included in the Port's Guiding Principles?

As noted in our comments above, NMFS believes the Port's Guiding Principles should include: 1) Planning Port development projects and managing natural resources in a comprehensive manner; 2) Conserving and restoring the few habitat areas that remain in San Diego Bay to establish a network of aquatic habitat areas, consistent with the "green ring" concept; and 3) Identifying climate change adaptation as a high priority in Port planning, especially with regard to projected sea level rise.

Because these principles are interrelated, there are synergies to be gained by implementing them together. In addition, these principles are consistent with many of the initiatives and objectives identified in the Port and U.S. Navy's San Diego Bay Integrated Natural Resource Management Plan (INRMP). As an example, one of the seven initiatives identified within the San Diego Bay INRMP reads,

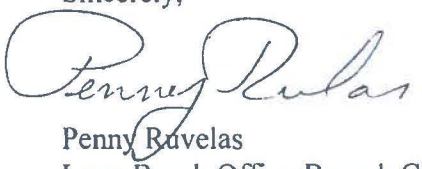
"*Sustainability By Design. A new initiative on sustainability in the interface between the built and natural environment will provide a means for baywide sustainability planning. This initiative adds habitat value, sea level rise, and shore access for the strategic missions of the Port and Navy to conventional sustainability "green building" concerns*".

Other initiatives within the San Diego Bay INRMP focus on habitat enhancement of shoreline structures, water and sediment quality, and invasive species detection and control. Therefore, NMFS encourages the Port to use the San Diego Bay INRMP, which was developed in conjunction with the U.S. Navy and various resource agencies, to help guide this planning process.

In addition to focusing on living marine resources and environmental sustainability, NMFS also believes that the Port should consider the quality and quantity of access and infrastructure for commercial and recreational fishing opportunities in their long term planning. While fishery management for any specific resource is dynamic and may be unpredictable, overall NMFS is optimistic that fishery resources in southern California and in the San Diego area will be available for commercial and recreational use in the future. If the concepts espoused by the guiding principles suggested above can be implemented along with effective fisheries management, the opportunities could improve locally, as well as regionally, as long as the infrastructure along the coast is available to support the activity and associated industries. San Diego has a rich history as major port for fishing activity, and the Port should allow room for the fishing industry to adapt to future status of fishery resources.

NMFS would like to thank the Port for the opportunity to provide comments at this important stage and request that we continue to coordinate on this important process. If you have any questions, please feel free to contact Eric Chavez at Eric.Chavez@noaa.gov or Dan Lawson at Dan.Lawson@noaa.gov.

Sincerely,



Penny Ruvelas
Long Beach Office Branch Chief
for Protected Resources Division

cc: Administrative File: 150316WCR2014PR_N731

References

National Research Council (NRC), Committee on Sea Level Rise in California, Oregon, and Washington. 2012. Sea-Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future. National Academies Press, Washington, D.C. pp.250. ISBN 978-309-24494-3.

U.S. Department of the Navy, Naval Facilities Engineering Command Southwest and Port of San Diego. 2009. 2008 San Diego Bay Eelgrass Inventory and Bathymetry Update. San Diego, California. Prepared by Merkel & Associates, Inc.

U.S. Department of the Navy, Naval Facilities Engineering Command Southwest and Port of San Diego. 2013. San Diego Bay Integrated Natural Resources Management Plan, Final September 2013. San Diego, California. Prepared by Tierra Data Inc., Escondido, California.

Alice Ayala

From: Pat Evans <pat.evans@visitsandiego.com>
Sent: Monday, May 01, 2017 6:13 PM
To: Mayra Medel
Cc: Rip Rippetoe
Subject: Notice of Preparation of a Draft Environmental Impact Report, Port Master Plan Update (UPD #EIR 2017-35)
Attachments: Let re NOP of Draft EIR - UPD-EIR-2017-35 (5-1-17).pdf
Follow Up Flag: Follow up
Flag Status: Flagged

Ms. Medel:

Attached is a copy of correspondence regarding the Notice of Preparation of a Draft Environmental Impact Report, Port Master Plan Update (UPD #EIR 2017-35). Please contact Mr. Rippetoe at (619) 300-7645 if you have questions. Thank you. P. Evans

PAT EVANS
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SAN DIEGO convention center CORPORATION

Clifford "Rip" Rippetoe, CFE
President & CEO

May 1, 2017

San Diego Unified Port District
Planning and Green Port
Ms. Mayra Medel, Senior Planner
3565 Pacific Highway
San Diego, CA 92101

Subject: Notice of Preparation of a Draft Environmental Impact Report, Port Master Plan Update (UPD #EIR 2017-035)

Dear Ms. Medel:

The San Diego Convention Center Corporation ("SDCCC") has been notified of the Notice of Preparation (NOP) of a Draft Program Environmental Impact Report (Draft PEIR) for the Port Master Plan (proposed project), prepared by the San Diego Unified Port District (District).

The SDCCC appreciates this opportunity to provide comments to the District. Considering that the proposed plan has the potential to significantly impact our operation, the SDCCC wants to ensure that the District's proposed project adequately analyzes all potential impacts to the San Diego Convention Center Corporation.

As you are aware, the existing Port Master Plan incorporates the proposed Phase III expansion of the Convention Center. A similar planned expansion is identified in the City of San Diego's Downtown Community Plan Area. The Convention Center, which significantly contributes to the City's tourism industry, is the third largest income generator that helps fund essential public services such as public safety, fire and parks and recreation services.

However, pursuant to the project description described in the NOP, it appears that the District is analyzing a Mixed-Use Overlay that will allow for additional and alternative uses on the Phase III expansion area (i.e. hotel).

It is the SDCCC's position that the proposed project maintain the existing "commercial recreation zone" and ultimate development of the Phase III Expansion of the Convention Center as planned in the existing Port Master Plan; a plan that was unanimously approved by both the Port District Board of Commissioners and Coastal Commission a few years ago.

The SDCCC concurs with the City of San Diego's letter dated May 1, 2017. We share the concerns listed by the various departments who contributed to its content. Of particular concern is the District's potential plans for the Convention Center site.

The District moving forward with the Mixed-Use Overlay for the convention site, a policy direction strongly opposed by the SDCCC, would substantially damage SDCCC's potential contribution to the regional economy. The SDCCC books decades into the future and in fact has definite bookings through the year 2034 and tentative bookings into the year 2045. This

demonstrates the success of the decision thirty years ago to build a convention center on this site. This success is currently demonstrated by the $1.1 billion regional impact projected for this fiscal year.

Thank you for the opportunity to provide comments on the NOP. These comments are preliminary in nature, and the SDCCC expects to provide more detailed input once the Draft PEIR is available. The SDCCC looks forward to working with the Port District toward that end.

Please contact me directly at rip.rippetoe@visitsandiego.com or via phone at 619-300-7645 if there are any questions regarding the contents of this letter or if the District would like to meet with SDCCC representatives to discuss our comments.

Once the Draft PEIR is prepared please provide SDCCC with digital copies of the document.

Sincerely,

Clifford Rippetoe

Clifford "Rip" Rippetoe
President & CEO

cc: Board of Directors

Alice Ayala

From: Tamura Lynda <ltamura@san.org>
Sent: Monday, May 01, 2017 12:46 PM
To: Mayra Medel
Cc: Anasis Ted; Sheredy Kim
Subject: Notice of Preparation for a Draft EIR for the PMPU
Attachments: Scoping Comments - Port of SD PMPU NOP 5-1-17.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

San Diego Unified Port District
Planning and Green Port
Attn: Mayra Medel
3165 Pacific Highway
San Diego, CA 92101

Dear Ms. Medel:

Attached please find the San Diego County Regional Airport Authority's comments on the NOP of a Draft EIR for the Port Master Plan Update. A hard copy of these comments will follow by mail.

Thank you,

Lynda Tamura
Assistant Airport Planner | Airport Planning & Noise Mitigation
T 619.400.2477 | F 619.400.2459
ltamura@san.org

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San Diego County Regional Airport Authority, PO BOX 82776, San Diego, CA 92138

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MAY 1 2017

Planning & Green Port

May 1, 2017

San Diego Unified Port District
Planning and Green Port
Attn: Mayra Medel
3165 Pacific Highway
San Diego, CA 92101

Re: Port Master Plan Update (PMPU)

Dear Ms. Medel:

The San Diego County Regional Airport Authority (SDCRAA) appreciates the opportunity to review and provide comments on the scope and content of the Notice of Preparation (NOP) of a Draft Environmental Impact Report (EIR) for the PMPU. The issues that should be addressed include:

1. Land Use Compatibility/Airport Proximity. The SDCRAA is the Airport Land Use Commission (ALUC) for San Diego County. Pursuant to California Public Utilities Code §21676(b), amendments to a general or specific plan, zoning ordinance, or building code within an Airport Influence Area (AIA) are subject to review by the local ALUC for a determination of consistency with the applicable Airport Land Use Compatibility Plan (ALUCP). Land uses governed by this amendment are located within the AIA for the San Diego International Airport (SDIA) ALUCP and, therefore, are subject to the required ALUC review. Any land use changes/intensifications that are proposed within the AIA should take into account the proximity of the airport and consider consistency with the allowed uses as delineated within the ALUCP. As such, the SDCRAA concurs with the statement that the EIR will evaluate whether the project would result in a safety hazard for people staying or working in the project area, whether the project would expose people staying or working in the project area to excessive noise levels, and whether air traffic patterns would be affected.

2. Circulation, Traffic, Roadway Modifications, Transit Opportunities, Parking. The SDCRAA adopted the SDIA Master Plan in May 2008 which included analyses of the circulation and traffic through the year 2030 in the environs surrounding SDIA. The PMPU should include analyses of the circulation and traffic impacts, including cumulative project impacts as the city-dedicated streets that serve the Airport also serve Planning Districts 2 (Harbor Island) and 3 (Embarcadero) of the PMPU. The NOP states that the PMPU may allow for realignment of roadways within the Harbor Island Planning District. The SDCRAA requests that any

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proposed realignment of roadways that directly affects North Harbor Drive or other roadways connecting to the airport be coordinated with SDCRAA and Airport Development Plan (ADP) planning efforts.

As the SDCRAA continues to explore airport transit improvements, any potential opportunities to improve transit connectivity to and through Planning Districts 2 and 3 is encouraged. In addition, as vehicle parking is constrained at and surrounding SDIA, any potential uses that increase the demand for vehicle use and parking should be identified and describe how the demand for parking will be served.

3. Cumulative Impacts. The SDCRAA is currently involved in the next master planning phase for SDIA in accordance with the proposed ADP. An EIR is being prepared to evaluate ADP improvements involving replacement of Terminal 1, extension of Terminal 2 West, and improvements of airport and airline support facilities including roadway modifications and new parking facilities. The ADP EIR will consider the cumulative impacts of the PMPU project in its cumulative impacts analysis. Likewise, the PMPU EIR should consider the cumulative impacts of the ADP Project.

4. Agency Communication and Coordination. The SDCRAA is encouraging the continuation of communication and coordination between our agencies to ensure that the data and analyses presented in the EIRs are accurate and that no conflict between the ADP and PMPU planning efforts would occur. Such coordination has proved to be beneficial in the past, and we look forward to continuing such efforts.

Thank you for the opportunity to provide comments. Please contact me if you have any questions at (619) 400-2478 or tanasis@san.org.

Thank you,

Ted Anasis, AICP
Manager, Airport Planning

TA/ljt

State of California – Natural Res[illegible]es Agency
DEPARTMENT OF FISH AND WILDLIFE
Marine Region
1933 Cliff Drive, Suite 9
Santa Barbara, CA 93109
www.wildlife.ca.gov

EDM[illegible]D G. BROWN JR., Governor
CHARLTON H. BONHAM, Director

May 4, 2017

RECEIVED
MAY 8 2017
Planning & Green Port

Mayra Medel
San Diego Unified Port District
3165 Pacific Highway
San Diego, CA 92101
mmedel@portofsandiego.org

Subject: Port Master Plan Update Notice of Preparation of a Draft Program Environmental Impact Report

Dear Ms. Medel:

The California Department of Fish and Wildlife (Department) has reviewed the Port of San Diego District's (District) Notice of Preparation (NOP) of a Draft Program Environmental Impact Report (DPEIR) for the Port Master Plan Update (Project). The purpose of the Project is to identify and evaluate planning policies and goals consistent with the statewide purposes of development of the tide and submerged lands granted in trust to the District. The Project will focus on current and future development projects and develop goals and policies to: 1) control the allowable land and water uses within the District; 2) list known projects, and; 3) include goals and policies that would implement the broad policies of the Coastal Act for development, coastal access, recreation, and environmental conservation within the District's jurisdiction. The Project will evaluate environmental impacts of specific proposed project developments, alternatives, policies, land and water use designations, safety and coastal access for each of ten proposed planning districts. Potential cumulative impacts to biological resources, water quality, noise and hydrology will also be evaluated. The Port has jurisdiction over 3,535 acres of water and 2,403 acres of land area.

As a trustee for the State's fish and wildlife resources, the Department has jurisdiction over the conservation, protection and management of fish, wildlife, and habitats necessary for biologically sustainable populations of those species (Fish and G. Code §1802). In this capacity, the Department administers the California Endangered Species Act, the Native Plant Protection Act, and other provisions of the California Fish and Game Code that afford protection to the State's fish and wildlife resources. The Department is also responsible for marine biodiversity protection under the Marine Life Protection Act (MLPA) in coastal marine waters of California and is recognized as a "Trustee Agency" under the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.; hereafter CEQA; Cal. Code Regs., § 15000 et seq.; hereafter CEQA Guidelines). As a Trustee Agency, the Department is responsible for providing biological expertise to review and comment upon environmental documents and impacts arising from the Project activities (CEQA Guidelines, § 15386; Fish and G.

Code, § 1802). To enable the Department to adequately review and comment on the proposed project from the standpoint of the protection of plants, fish, and wildlife, we recommend the following information be included in the DPEIR. The Department has the following general and specific comments and recommendations:

Biological Significance
San Diego Bay is California's third largest bay, after San Francisco and Humboldt Bays. The marine and estuarine habitats of San Diego Bay provide refuge and nursery habitat for more than 80 species of fish and over 600 invertebrate species, many with important commercial and recreational fisheries value. Numerous sensitive species, including species on listed under the Federal Endangered Species Act (ESA), or are listed as California species of special concern (SSC), occur in the San Diego Bay. The Bay sandy bottom and mud flat habitats are critically important for foraging and nursery grounds for shorebirds, demersal fish, sharks and rays. For example, Leopard Sharks (*Triakis semifasciata*), a federally managed groundfish species, have been observed following the tide onto mudflats to forage for food (Ackerman et al, 2000).

The Bay open water is locally important for foraging habitat to listed and/or sensitive species such as seabirds, shorebirds, Pacific Green Sea Turtles (*Chelonia mydas*), and marine mammals (dolphins and pinnipeds). The Bay is also especially valuable as a breeding and nursery ground for fish and invertebrates such as California Halibut (*Paralichthys californicus*), Spotted Sand Bass (*Paralabrax maculatofasciatus)* and Barred Sand Bass (*Paralabrax nebulifer)*, Northern Anchovies (*Engraulis mordax*) and the California Spiny Lobster (*Panulirus interruptus*). The Bay is used by migratory birds not only for foraging, but also for nesting, shelter and resting stop over areas. The sandy beach is important for nesting and roosting habitat for shorebirds and seabirds, which are especially vulnerable to human disturbances within an already densely populated and industrialized Bay area.

California Endangered Species Act (CESA):
The Department considers adverse impacts to a species protected by the California Endangered Species Act (CESA), for the purposes of CEQA, to be significant without mitigation. As to CESA, take of any endangered, threatened, or candidate species that results from the project is prohibited, except as authorized by state law (Fish and Game Code, §§ 2080, 2085). Consequently, if the Project, Project construction, or any Project-related activity during the life of the Project will result in take of a species designated as endangered or threatened, or a candidate for listing under CESA, the Department recommends that the project proponent seek appropriate take authorization under CESA prior to implementing the project. Appropriate authorization from the Department may include an incidental take permit (ITP) or a consistency determination in certain circumstances, among other options (Fish and Game Code §§ 2080.1, 2081, subds. (b),(c)). Early consultation is encouraged, as significant modification to a project and mitigation measures may be required in order to obtain a CESA Permit. Revisions to the Fish and Game Code, effective January 1998, may require that the Department issue a separate CEQA document for the issuance of an ITP unless the project CEQA document addresses all project impacts to CESA-listed species and specifies a mitigation monitoring and reporting program that will meet the requirements of an ITP.

For these reasons, biological mitigation monitoring and reporting proposals should be of sufficient detail and resolution to satisfy the requirements for a CESA ITP.

The Department maintains a list of rare, threatened, and endangered plants and animals that can be found on the Department's web site: http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/TEAnimals.pdf. The Department recommends that the DPEIR include a full impact analysis of CESA listed species and their habitats that may be in the Project area. Adverse impacts from the Project leading to take of CESA listed species would require take authorization from the Department according to Fish and Game Code §2081.

A fully protected species may not be taken or possessed at any time and must be avoided by all Project impacts. The following Fully Protected species may potentially occur in the Project area: California Brown Pelican *(Pelecanus occidentalis)* and California Least Tern *(Sterna antillarum browni)* (FGC §4700(b) and §3511(a)). The DPEIR should include a full impact analysis of California Fully Protected Species that may be in the Project areas. More information regarding Fully Protected species can be found on the Department's website: https://www.dfg.ca.gov/wildlife/nongame/t e spp/fully pro.html.

California Species of Special Concern (CSSC):
Species of plants and animals need not be officially listed as Endangered, Rare, or Threatened (E, R, or T) on any State or federal list to be considered E, R, or T under CEQA. If a species can be shown to meet the criteria for E, R, or T, as specified in the CEQA Guidelines (California Code of Regulations, Title 14, Chapter 3, §15380), it should be fully considered in the environmental analysis for the Project. This should include CSSC that are known to the Project area vicinity or found in the Department's CNDDB or the RareFind databases (http://www.dfg.ca.gov/biogeodata/bios/). This may include, but not limited to, species such as Western snowy plover *(Charadrius alexandrinus nivosus)*, as such, impacts to this species and their habitats must be identified, avoided and unavoidable impacts mitigated to a level of less than significant. The DPEIR should also include a discussion of the potential impacts to CSSC's that may occur within the various project sites and the alternative sites.

State Marine Protected Areas
Cabrillo State Marine Reserve is located immediately north and adjacent to the mouth of San Diego Bay. Although San Diego Bay is not a marine protected area, it is the largest natural embayment in southern California used as a Pacific Flyway stop over for millions of birds traveling between northern breeding grounds and southern wintering sites. The Bay deep and shallow waters nearshore are also important to help maintain local Bay biodiversity, fisheries opportunities and a healthy marine food web. The Bay helps to strike a balance between fish nursery/breeding grounds inside the Bay and recruitment not only to the open Pacific Ocean, but also to the nearby Cabrillo State Marine Reserve. The Department recommends that the DPEIR include a comprehensive discussion of the potential impacts to marine protected areas that may result from the Project.

Fish and Wildlife Resources Assessments

The DPEIR should provide a complete survey assessment of the flora and fauna within and adjacent to the project areas, with particular emphasis upon identifying rare, endangered, threatened, sensitive, and locally unique species and sensitive habitats. The following specific items should be included:

a) The Project area has potential habitats for endangered, threatened and sensitive marine species. The DPEIR should clearly identify these species and habitats currently on or adjacent to the Project areas. Species and their habitats that are part of federal and state fishery management plans should also be included.

b) Species to be addressed should also include those that meet the CEQA definition (see CEQA Guidelines, § 15380). Focused species-specific surveys, conducted at the appropriate time of year and time of day when the sensitive species are active or otherwise identifiable, are required. Prepare a focused inventory of the rare, threatened, endangered and sensitive species found within the areas of potential effects.

c) Specific impact analysis of marine habitats should be conducted for intertidal sand and mud flats, sand beaches, eelgrass beds, Olympia Oyster (*Ostrea lurida*) beds and saltmarsh and ponds and shallow intertidal and subtidal habitats.

Recommendations

The Department recommends that following be addressed in the DPEIR:

1. The DPEIR should contain a complete discussion of the purpose and need for, and description of, the proposed Project and the alternatives for buildings, dredging, dredge fill areas, shipping routes, anchorage areas, docks and wharf improvements. The DPEIR should include alternatives that could be developed to avoid adverse impacts and losses to eelgrass, mud flats, sandy flats, salt flats, and shallow water habitats, and to fully avoid or minimize temporary impacts to marine species and birds.

2. As required by CEQA, the DPEIR should clearly identify potential construction and operational impacts to marine species and habitats that may occur within and adjacent to affected areas. The potential for local resident and migratory species or habitat impacts by the proposed developments should be analyzed, including temporary and permanent impacts with emphasis on the significance of the local San Diego Bay area.

3. A discussion of potential adverse impacts from dredging, contaminants, filling, water turbidity, lighting, noise, human activity, spread or introduction of invasive species, and drainage should be included. The latter subject should address: project-related changes on drainage patterns on and downstream of the project site; the volume, velocity, and frequency of existing and post-project surface flows; polluted runoff; soil erosion and/or sedimentation in water bodies; and post-project fate of runoff from the Project sites.

4. An analysis should be conducted regarding indirect project impacts on biological resources of nearby open Bay waters, adjacent eelgrass and subtidal habitats, and sandy beach and intertidal ecosystems. Impacts on, and maintenance of, wildlife corridor/movement areas, including access to undisturbed habitats in adjacent waters, intertidal flats and upland areas, should be fully evaluated.

5. Mitigation measures and monitoring proposed to address Project impacts should be included. Unavoidable temporal or permanent marine habitat impacts identified during or after construction may require compensatory mitigation areas for those impacts. The DPEIR should include a comprehensive discussion identifying potential mitigation areas and measures that may be necessary to fully mitigate any unavoidable significant impacts to habitat and species in the Project areas. For proposed preservation and/or restoration, the DPEIR should include measures to perpetually protect the targeted habitat values from direct and indirect negative impacts. The objective should be to offset the project-induced qualitative and quantitative losses of wildlife habitat values. Issues that should be addressed include restrictions on access, proposed shallow water and intertidal habitat dedications, monitoring and management programs, control of illegal dumping, water pollution and increased human intrusion.

6. The zoning of areas for development projects or other uses that are nearby or adjacent to natural areas may inadvertently contribute to wildlife-human interactions and introduction of non-native species. A discussion of possible conflicts and mitigation measures to reduce these conflicts should be included.

7. A cumulative effects analysis should be developed as described under CEQA Guidelines, section 15130. General and specific plans, as well as past, present, and anticipated future projects, should be analyzed relative to their impacts on fish and wildlife habitats.

8. The Department also recognizes the potential for sound impacts associated with underwater construction activities; including but not limited to steel bulkhead sheet piles, dredging and drilling. The Department is a signatory agency to the Agreement in Principle for Interim Criteria for Injury to Fish from Pile Driving Activities, June 12, 2008. The agreed upon sound pressure levels are 206 dB peak and 187 dB accumulated sound exposure level (SEL). The Department recommends that the DPEIR include a discussion of sound impacts as well as a discussion of sound pressure level monitoring be included for proposed in water work if applicable.

9. The Department recommends that the DPEIR include a discussion of measures be taken to avoid project impacts to nesting birds. Proposed Project activities (including, but not limited to, staging and disturbances to native and nonnative vegetation, structures, and substrates) should occur outside of the avian breeding season which generally runs from February 1- September 1 to avoid take of birds or their eggs. If avoidance of the avian breeding season is not feasible, the Department recommends surveys by a qualified biologist to detect protected native birds occurring in suitable nesting habitat and any other such habitat within 300 feet of the disturbance area. Reductions in the nest buffer

distance may be appropriate depending on the avian species involved, ambient levels of human activity or other factors.

10. Policies and Goals in the Port Master Plan Update: Development goals and policies should be developed to help avoid impacts to federal and state listed species, preserve important habitat areas of the south and north Bay, and to protect California species of special concern and their habitats. Developments should be sited to avoid or minimize losses and degradation to natural habitat areas and functions. For example, fill areas or overwater structure footprints should be minimized and sited in areas that are already highly disturbed instead of siting them in functional habitats or adjacent to wildlife corridors or migration routes. This would minimize quality habitat degradation and losses. Surface Bay water losses and shading impacts to habitats that can support eelgrass or bird foraging habitats should be avoided. Locally or regionally rare habitats and endemic species should also be protected from developments and additional human disturbances.

The Department appreciates the opportunity to comment on the NOP for the DPEIR. Department staff is available for consultation regarding potential effects to fish and wildlife resources, as well as specific measures which would mitigate potential effects of the project. If you have any questions regarding these comments, please contact Ms. Loni Adams, Environmental Scientist, (858) 627-3985 or Loni.Adams@wildlife.ca.gov.

Sincerely,

Craig Shuman, D. Env.
Marine Regional Manager

ec: Becky Ota, Environmental Program Manager
Department of Fish and Wildlife
Becky.Ota@wildlife.ca.gov

William Paznokas, Senior Environmental Scientist (Supervisor)
Department of Fish and Wildlife
William.Paznokas@wildife.ca.gov

Ms. Loni Adams, Environmental Scientist
Department of Fish and Wildlife
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Mr. Eric Chavez
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Literature Cited:

Ackerman, J.T., M.C. Kondratieff, S.A. Matern and J.J. Cech Jr. 2000. Tidal influences on spatial dynamics of the leopard shark, *Triakis semifasciata*, in Tomales Bay. Environmental Biology of Fishes 58: 33–43

From:	Scott
To:	Mayra Medel
Cc:	johnamcnab@yahoo.com; davidkennedydds@gmail.com; shellifun@yahoo.com; dmitrovich@sbcglobal.net; scott300@earthlink.net; sdwatch@cox.net; mrjohnstump@cox.net; bking@bernardkinglaw.com
Subject:	Fwd: SEA"s PMPA EIR Comment Letter
Date:	Monday, May 08, 2017 2:16:01 PM
Attachments:	sea#3.pdf.pdf

May 8, 2017

Re: Save Everyone's Access (SEA) Port of San Diego Master Plan Amendment EIR Comment Letter

Dear Ms. Medel,

San Diego port board trustees are targeting for international hotel speculators almost 200 acres of the last remaining downtown San Diego Bayfront public tidelands.

For this combined North and South Embarcadero expanse, the board has approved developers for, and commenced construction of, over ten [10] high rise hotel projects.

To permit, and to fast track, such an unprecedented privatization of a finite, invaluable public resource, the port is refusing over decades to comply with, install, or mitigate the takings of the public elements in public piers and parks of the current Port Master Plan (PMP) document.

Draft EIR Deficiencies:

- **PUBLIC ELEMENT TAKINGS DETERMINATION per CURRENT PORT MASTER PLAN**

The PEIR should designate the PMP's public elements the board is proposing to eliminate, such as major Broadway Landing Park, Central Park, Navy Pier Memorial Park, and Ruocco Park as slated for partial privatization by a commercial tower.

Also as baseline public elements the EIR should contemplate by installed or mitigated, should be the public piers which have been or are slated for cancelation of their "Public/Recreational" status as designated in the current Plan.

- **MAPPING AND LISTING OF PARCEL, PIER, PARKING, AND STREET ACREAGE**

As the PMPA anticipates finalizing the use, more accurately the total commercialization of, a vast expanse of bayfront public

bayfront tidelands under the eliminating of trustee-guiding law, any PEIR should accurately quantify the acreage of all parcels noted below prior to any bundling.

- **MITIGATION FOR MAJOR PARKS, PUBLIC PIERS, and FISHING, SMALL CRAFT, WATERSIDE ACCESS, of PUBLIC PARKING, AND for BAY VIEW SHED IMPACTS DUE TO PARCEL TAKINGS FOR HONG KONG SIZE AND SCALE BUNDLED, WALLED, and HIGH RISE COMMERCIAL DEVELOPMENT**

With heretofore missing MAPPING AND PARCEL baseline data, accurate mitigation can proceed on an acre-for-acre basis for the current PMP-designated public elements this port board would abandon arbitrarily with prejudice.

Any park installation mitigation acreage should avoid the health impacts of air and noise pollution near the Lindbergh Field runway and idling traffic at the N. Harbor/Grape St. intersection.

- **FULL REVELATION OF BOARD PROJECTS - INCOMPLETE SCOPING LIST**

Coastal Commission has raised issues as yet unresolved by the port board, such as mitigations including the loss of Broadway Pier view shed and those listed herein, placement of a hostel, required off-site placement for parking for the popular Midway Museum attraction, needed small craft launch and storage facilities, and off or on-project site parking lots or structures as served by trams.

Note: the port board is in possession of numerous proposed mitigation project renderings for the PEIR planning areas districts.

Despite long-standing criticism the board favors developers by ignoring their own plan/law and permitting piecemeal development, the board has prematurely approved its "revisions" of commercial parcelization, bundling, and developer approval *prior to* the cumulative study and completion of a Programmatic EIR.

The board's PMP multiple public element takings include cancellation of major parks in Broadway Landing Park, Navy Pier Memorial Park, and Central Park. The PMP's N.Embarcadero Crescent Pier has been cancelled, and B Street Pier, Broadway Pier, and Navy Pier have seen the loss by use or delay of their PMP designations as "public/recreational" plan elements to provide missing public access to the waterside of San Diego Bay.

Over years, these board takings have been strongly opposed by the public, who, to support legal board trustee compliance with the Coastal and Port Acts for balanced bay development, has spent years as members of a port-called Citizens Advisory Council, has submitted numerous major park rendering options by local architects, and has attended uncountable meetings and workshops, only to meet deaf ears of a virtually all male, unelected,

and developer interest-packed port board.

As the PMEIR consultants study alternatives to a massed, dense bayfront privatization scheme, they have on record ample professionally-rendered

park development alternative rendering as presented over time by local park architects including Lindsay Michael Brown, Tyler Starow, Jim Frost,

Jim Hubbell, Phil Bona, Howard Blackson et al.

The port board plans to literally eliminate the law, the current Port Master Plan, rather than either implement its public elements or fully mitigate

their takings.

We urge the PEIR to quantify each and every board-bundled parcel of tideland slated for privatization, citing the exact acreage never

before supplied in the port's "develop first, revisit the law later" privatization effort. Since current and past boards have refused any meaningful mitigation,

such quantification of park, pier, parking, and area streets is required before professional EIR consultants can a. assess the accurate acreage of PMP-

denied designated and existing park, public pier, and public parking and then b. designate which areas of the 200 acres in the PMPA EIR redevelopment

zone must be alloted for full mitigation in character, size, and locale of board public element takings.

This is a port trustee fudiciary that has claimed poverty as the reason to put off and then eliminate public elements. EIR consultants can rest

assured any mitigation of park and public pier can be covered by the doubling or tripling of port revenue, an income stream that has already and

will increase greatly as hotels on one hand contemplates over ten hotels on bundled parcels

Public access groups such as the Navy Broadway Complex Coalition (NBCC), Project for Public Spaces (PPS), Save Everyone's Access (SEA), and

the Ilan—Lael Foundation have participated in hearings, workshops, tours, publications, or lawsuits over years, all in support of major public elements to

open up the waterfront to downtown, instead of repeating the South Embarcadero bay wall-off on the north. Famous public space advocate

even produced an inspiring media presentation to the port board and civic leaders called "34 Great Waterfronts of the World", a world park

expert's informed take which the port board promptly ignored.

With the exception of a passive use strip park even port officials acknowledge is a dead zone at the base of new monolithic high rise hotels,

all public entreaties and renderings for the park the law, the Coastal Act's PMP, has been rejected out of hand by successive port boards dominated

by the same developer insiders.

To accommodate the demands of overseas interests like the Chinese Lane Field developers of the two new Lane Field hotels, the board is bundling

huge parcels for multiple hotel projects. The gift of a divested public resource asset by the board is not limited to bayfront tideland park space. The

board judiciary trustees have seen fit to deliver both free infrastructure improvements and below market sweetheart deal leases to bayfront developers

as well.

As a final insult to the rule of law and the Public Trust Doctrine, the board has rejected the findings of its own consultant HKS, Inc. HKS well

notes this port authority aberrationally lacks both a Park Planning Department and Park Director, not surprising in that HKS found that but 8.1% of shoreline

tidelands have been devoted to park to date. This figure, based on total tideland land area, is even more *de minimus* if the vast bay military reservations are

substracted from that paltry percentage for public coastal access.

Again re the critical ignored-to-date mitigation aspect so required by arbitrary trustee ignoring the law and then refusing mitigation, HKS further noted

that the northern urban downtown embarcadeos of San Diego Bay at issue are particularly deficient in park space and waterside access for small craft,

fishing, festivals and recreation, and views of the bay expanse.

This is a historical divestment of a public asset by the trustees charged with its preservation and provision of access for the public owners. For

this reason, we urge the PEIR consulting team to first fully quantify, and then mitigate, significant tideland loss in all its aspects as provided by law.

Scott Andrews
Save Everyone's Access (SEA)

Appendix C

Air Quality/Greenhouse Gas Calculations

Air Quality and Greenhouse Gas Calculations

- **Construction Emission Calculation Sheets**
  - **CalEEMod**
  - **Slip Construction**
- **Operational Emission Calculation Sheets**
  - **CalEEMod**
  - **Fishing and Boating**
  - **Mobile Sources**

Construction Emission Calculation Sheets

- **CalEEMod**
- **Slip Construction**

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

PMPU Construction

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hotel	3,910.00	Room	130.33	5,677,320.00	0
High Turnover (Sit Down Restaurant)	340.00	1000sqft	7.81	340,000.00	0
Office Park	172.00	1000sqft	3.95	172,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2050
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	539.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Grading -

Demolition - Demo SF assumed to be the same as new construction SF

Vehicle Trips - Mobile estimated in VMT

Construction Off-road Equipment Mitigation - Tier 4 Final all; 3x daily

Area Mitigation - low VOC coatings 75 g/L

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	75

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	75
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblAreaMitigation	UseLowVOCPaintParkingValue	250	75
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	75
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	75
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblVehicleTrips	ST_TR	122.40	0.00
tblVehicleTrips	ST_TR	8.19	0.00
tblVehicleTrips	ST_TR	1.64	0.00
tblVehicleTrips	SU_TR	142.64	0.00
tblVehicleTrips	SU_TR	5.95	0.00
tblVehicleTrips	SU_TR	0.76	0.00
tblVehicleTrips	WD_TR	112.18	0.00
tblVehicleTrips	WD_TR	8.36	0.00
tblVehicleTrips	WD_TR	11.07	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	4.2422	58.4855	28.4562	0.1311	33.4275	1.9543	35.3818	5.3781	1.8266	7.2047	0.0000	13,866.6687	13,866.6687	1.5285	1.5905	14,378.8436
2022	3.3138	48.6089	26.5400	0.1283	33.4276	1.6134	34.8912	10.1417	1.4843	11.6260	0.0000	13,585.1479	13,585.1479	1.5234	1.5476	14,084.4273
2023	3.3764	34.5496	28.5324	0.0635	19.8049	1.4254	21.0717	10.1417	1.3113	11.3071	0.0000	6,160.0484	6,160.0484	1.9482	3.6600e-003	6,209.8437
2024	9.2701	60.5597	89.5274	0.4119	28.0781	1.3362	29.0663	7.6031	1.2293	8.5347	0.0000	43,276.8298	43,276.8298	1.9473	3.6299	44,402.7118
2025	8.7471	58.7887	85.5946	0.4016	28.0781	0.8970	28.9752	7.6031	0.8459	8.4490	0.0000	42,399.0845	42,399.0845	1.7393	3.5405	43,497.6265
2026	8.3737	58.0190	82.3413	0.3920	28.0782	0.8900	28.9681	7.6031	0.8393	8.4424	0.0000	41,559.9979	41,559.9979	1.7207	3.4568	42,633.1509
2027	8.0276	57.3021	79.5509	0.3828	28.0782	0.8820	28.9602	7.6031	0.8319	8.4351	0.0000	40,736.0463	40,736.0463	1.7051	3.3737	41,784.0229
2028	7.7057	56.7062	77.2316	0.3743	28.0783	0.8738	28.9521	7.6032	0.8243	8.4275	0.0000	39,979.1330	39,979.1330	1.6943	3.2959	41,003.6699
2029	7.3890	56.0626	75.1731	0.3662	28.0783	0.8654	28.9437	7.6032	0.8165	8.4197	0.0000	39,256.5550	39,256.5550	1.6857	3.2199	40,258.2407
2030	7.0236	51.0485	73.4728	0.3631	28.0784	0.4789	28.5572	7.6032	0.4617	8.0649	0.0000	38,962.6796	38,962.6796	1.1941	3.1536	39,932.2891
2031	6.7235	50.7065	71.9079	0.3569	28.0784	0.4725	28.5509	7.6032	0.4558	8.0590	0.0000	38,406.9274	38,406.9274	1.1859	3.0970	39,359.4793
2032	6.4523	50.4339	70.5721	0.3514	28.0785	0.4667	28.5451	7.6032	0.4504	8.0536	0.0000	37,920.8725	37,920.8725	1.1790	3.0482	38,858.7103
2033	6.2122	50.2051	69.4378	0.3466	28.0785	0.4614	28.5399	7.6033	0.4455	8.0488	0.0000	37,491.0743	37,491.0743	1.1734	3.0056	38,416.0751
2034	5.9954	49.9919	68.4173	0.3423	28.0786	0.4564	28.5349	7.6033	0.4408	8.0441	0.0000	37,107.6409	37,107.6409	1.1681	2.9676	38,021.1905
2035	5.7099	49.0291	67.5172	0.3385	28.0786	0.3940	28.4726	7.6033	0.3788	7.9821	0.0000	36,771.7054	36,771.7054	1.1543	2.9344	37,675.0182
2036	652.8069	49.0291	67.5172	0.3385	28.0786	0.3940	28.4726	7.6033	0.3788	7.9821	0.0000	36,771.7054	36,771.7054	1.1543	2.9344	37,675.0182
2037	652.8069	1.1252	9.1578	0.0310	4.2388	0.0210	4.2598	1.1243	0.0201	1.1444	0.0000	3,398.9120	3,398.9120	0.0511	0.0584	3,417.5771
Maximum	**652.8069**	**60.5597**	**89.5274**	**0.4119**	**33.4276**	**1.9543**	**35.3818**	**10.1417**	**1.8266**	**11.6260**	**0.0000**	**43,276.8298**	**43,276.8298**	**1.9482**	**3.6299**	**44,402.7118**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	1.5394	29.0481	30.1710	0.1311	14.6136	0.4646	15.0782	2.5290	0.4471	2.9761	0.0000	13,866.6687	13,866.6687	1.5285	1.5905	14,378.8436
2022	1.1369	24.8927	29.2258	0.1283	14.6137	0.2826	14.8962	3.9792	0.2730	4.0420	0.0000	13,585.1479	13,585.1479	1.5234	1.5476	14,084.4273
2023	0.8162	3.3340	33.4804	0.0635	7.8141	0.1024	7.8770	3.9792	0.1024	4.0420	0.0000	6,160.0484	6,160.0484	1.9482	3.6600e-003	6,209.8437
2024	8.1264	49.3507	90.8208	0.4119	28.0781	0.4157	28.4938	7.6031	0.3955	7.9986	0.0000	43,276.8298	43,276.8298	1.9473	3.6299	44,402.7118
2025	7.7075	48.5537	86.9702	0.4016	28.0781	0.4103	28.4884	7.6031	0.3904	7.9936	0.0000	42,399.0845	42,399.0845	1.7393	3.5405	43,497.6265
2026	7.3341	47.7840	83.7169	0.3920	28.0782	0.4032	28.4814	7.6031	0.3838	7.9870	0.0000	41,559.9979	41,559.9979	1.7207	3.4568	42,633.1509
2027	6.9880	47.0671	80.9265	0.3828	28.0782	0.3953	28.4735	7.6031	0.3764	7.9796	0.0000	40,736.0463	40,736.0463	1.7051	3.3737	41,784.0229
2028	6.6662	46.4712	78.6072	0.3743	28.0783	0.3871	28.4653	7.6032	0.3688	7.9720	0.0000	39,979.1330	39,979.1330	1.6943	3.2959	41,003.6699
2029	6.3494	45.8277	76.5487	0.3662	28.0783	0.3787	28.4570	7.6032	0.3610	7.9642	0.0000	39,256.5550	39,256.5550	1.6857	3.2199	40,258.2407
2030	6.0423	45.3486	74.7760	0.3631	28.0784	0.3715	28.4498	7.6032	0.3543	7.9575	0.0000	38,962.6796	38,962.6796	1.1941	3.1536	39,932.2891
2031	5.7422	45.0066	73.2112	0.3569	28.0784	0.3651	28.4435	7.6032	0.3484	7.9516	0.0000	38,406.9274	38,406.9274	1.1859	3.0970	39,359.4793
2032	5.4710	44.7339	71.8753	0.3514	28.0785	0.3593	28.4378	7.6032	0.3430	7.9463	0.0000	37,920.8725	37,920.8725	1.1790	3.0482	38,858.7103
2033	5.2309	44.5052	70.7410	0.3466	28.0785	0.3541	28.4326	7.6033	0.3382	7.9414	0.0000	37,491.0743	37,491.0743	1.1734	3.0056	38,416.0751
2034	5.0141	44.2920	69.7205	0.3423	28.0786	0.3490	28.4276	7.6033	0.3335	7.9367	0.0000	37,107.6409	37,107.6409	1.1681	2.9676	38,021.1905
2035	4.8209	44.1025	68.8597	0.3385	28.0786	0.3444	28.4230	7.6033	0.3291	7.9324	0.0000	36,771.7054	36,771.7054	1.1543	2.9344	37,675.0182
2036	652.7187	44.1025	68.8597	0.3385	28.0786	0.3444	28.4230	7.6033	0.3291	7.9324	0.0000	36,771.7054	36,771.7054	1.1543	2.9344	37,675.0182
2037	652.7187	0.4963	9.1959	0.0310	4.2388	0.0150	4.2539	1.1243	0.0142	1.1385	0.0000	3,398.9120	3,398.9120	0.0511	0.0584	3,417.5771
Maximum	**652.7187**	**49.3507**	**90.8208**	**0.4119**	**28.0786**	**0.4646**	**28.4938**	**7.6033**	**0.4471**	**7.9986**	**0.0000**	**43,276.8298**	**43,276.8298**	**1.9482**	**3.6299**	**44,402.7118**

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	1.41	22.09	-2.50	0.00	10.88	58.63	12.18	12.08	57.92	16.30	0.00	0.00	0.00	0.00	0.00	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	171.7904	4.0300e-003	0.4486	3.0000e-005		1.5900e-003	1.5900e-003		1.5900e-003	1.5900e-003		0.9678	0.9678	2.4900e-003		1.0301
Energy	11.6235	105.6679	88.7610	0.6340		8.0308	8.0308		8.0308	8.0308		126,801.4143	126,801.4143	2.4304	2.3247	127,554.9318
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**183.4139**	**105.6719**	**89.2096**	**0.6340**	**0.0000**	**8.0324**	**8.0324**	**0.0000**	**8.0324**	**8.0324**		**126,802.3821**	**126,802.3821**	**2.4329**	**2.3247**	**127,555.9619**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	144.2819	4.0300e-003	0.4486	3.0000e-005		1.5900e-003	1.5900e-003		1.5900e-003	1.5900e-003		0.9678	0.9678	2.4900e-003		1.0301
Energy	11.6235	105.6679	88.7610	0.6340		8.0308	8.0308		8.0308	8.0308		126,801.4143	126,801.4143	2.4304	2.3247	127,554.9318
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**155.9053**	**105.6719**	**89.2096**	**0.6340**	**0.0000**	**8.0324**	**8.0324**	**0.0000**	**8.0324**	**8.0324**		**126,802.3821**	**126,802.3821**	**2.4329**	**2.3247**	**127,555.9619**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	15.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/14/2021	7/20/2022	5	200	
2	Site Preparation	Site Preparation	7/21/2022	1/4/2023	5	120	
3	Grading	Grading	1/5/2023	3/13/2024	5	310	
4	Building Construction	Building Construction	3/14/2024	1/30/2036	5	3100	
5	Paving	Paving	1/31/2036	12/3/2036	5	220	
6	Architectural Coating	Architectural Coating	12/4/2036	10/7/2037	5	220	

Acres of Grading (Site Preparation Phase): 180

Acres of Grading (Grading Phase): 930

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 9,283,980; Non-Residential Outdoor: 3,094,660; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	7.00	231	0.29
Demolition	Excavators	3	8.00	158	0.38
Grading	Excavators	2	8.00	158	0.38

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	28,152.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	2,582.00	1,014.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	516.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					30.8425	0.0000	30.8425	4.6707	0.0000	4.6707			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411		3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**30.8425**	**1.5513**	**32.3938**	**4.6707**	**1.4411**	**6.1117**		**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0303	27.0128	6.4698	0.0911	2.4618	0.4022	2.8640	0.6748	0.3848	1.0596		10,001.2334	10,001.2334	0.4700	1.5873	10,485.9970
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0468	0.0320	0.4213	1.1600e-003	0.1232	7.4000e-004	0.1240	0.0327	6.8000e-004	0.0334		117.4904	117.4904	3.6200e-003	3.1800e-003	118.5293
Total	**1.0771**	**27.0448**	**6.8911**	**0.0923**	**2.5850**	**0.4030**	**2.9880**	**0.7075**	**0.3855**	**1.0930**		**10,118.7238**	**10,118.7238**	**0.4736**	**1.5905**	**10,604.5263**

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.0286	0.0000	12.0286	1.8216	0.0000	1.8216			0.0000			0.0000
Off-Road	0.4623	2.0032	23.2798	0.0388		0.0616	0.0616		0.0616	0.0616	0.0000	3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**0.4623**	**2.0032**	**23.2798**	**0.0388**	**12.0286**	**0.0616**	**12.0902**	**1.8216**	**0.0616**	**1.8832**	**0.0000**	**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0303	27.0128	6.4698	0.0911	2.4618	0.4022	2.8640	0.6748	0.3848	1.0596		10,001.2334	10,001.2334	0.4700	1.5873	10,485.9970
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0468	0.0320	0.4213	1.1600e-003	0.1232	7.4000e-004	0.1240	0.0327	6.8000e-004	0.0334		117.4904	117.4904	3.6200e-003	3.1800e-003	118.5293
Total	**1.0771**	**27.0448**	**6.8911**	**0.0923**	**2.5850**	**0.4030**	**2.9880**	**0.7075**	**0.3855**	**1.0930**		**10,118.7238**	**10,118.7238**	**0.4736**	**1.5905**	**10,604.5263**

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					30.8425	0.0000	30.8425	4.6707	0.0000	4.6707			0.0000			0.0000
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553		3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**	**30.8425**	**1.2427**	**32.0852**	**4.6707**	**1.1553**	**5.8259**		**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6308	22.8610	5.5570	0.0883	2.4619	0.2202	2.6821	0.6748	0.2107	0.8855		9,723.9760	9,723.9760	0.4677	1.5447	10,195.9837
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0438	0.0285	0.3889	1.1200e-003	0.1232	7.0000e-004	0.1239	0.0327	6.4000e-004	0.0333		114.3907	114.3907	3.2800e-003	2.9500e-003	115.3516
Total	**0.6746**	**22.8895**	**5.9460**	**0.0895**	**2.5851**	**0.2209**	**2.8060**	**0.7075**	**0.2113**	**0.9188**		**9,838.3667**	**9,838.3667**	**0.4709**	**1.5476**	**10,311.3353**

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.0286	0.0000	12.0286	1.8216	0.0000	1.8216			0.0000			0.0000
Off-Road	0.4623	2.0032	23.2798	0.0388		0.0616	0.0616		0.0616	0.0616	0.0000	3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**0.4623**	**2.0032**	**23.2798**	**0.0388**	**12.0286**	**0.0616**	**12.0902**	**1.8216**	**0.0616**	**1.8832**	**0.0000**	**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6308	22.8610	5.5570	0.0883	2.4619	0.2202	2.6821	0.6748	0.2107	0.8855		9,723.9760	9,723.9760	0.4677	1.5447	10,195.9837
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0438	0.0285	0.3889	1.1200e-003	0.1232	7.0000e-004	0.1239	0.0327	6.4000e-004	0.0333		114.3907	114.3907	3.2800e-003	2.9500e-003	115.3516
Total	**0.6746**	**22.8895**	**5.9460**	**0.0895**	**2.5851**	**0.2209**	**2.8060**	**0.7075**	**0.2113**	**0.9188**		**9,838.3667**	**9,838.3667**	**0.4709**	**1.5476**	**10,311.3353**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836		3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**19.6570**	**1.6126**	**21.2696**	**10.1025**	**1.4836**	**11.5860**		**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0526	0.0342	0.4667	1.3500e-003	0.1479	8.4000e-004	0.1487	0.0392	7.7000e-004	0.0400		137.2688	137.2688	3.9400e-003	3.5400e-003	138.4219
Total	**0.0526**	**0.0342**	**0.4667**	**1.3500e-003**	**0.1479**	**8.4000e-004**	**0.1487**	**0.0392**	**7.7000e-004**	**0.0400**		**137.2688**	**137.2688**	**3.9400e-003**	**3.5400e-003**	**138.4219**

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.6662	0.0000	7.6662	3.9400	0.0000	3.9400			0.0000			0.0000
Off-Road	0.4656	2.0175	20.8690	0.0380		0.0621	0.0621		0.0621	0.0621	0.0000	3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**0.4656**	**2.0175**	**20.8690**	**0.0380**	**7.6662**	**0.0621**	**7.7283**	**3.9400**	**0.0621**	**4.0020**	**0.0000**	**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0526	0.0342	0.4667	1.3500e-003	0.1479	8.4000e-004	0.1487	0.0392	7.7000e-004	0.0400		137.2688	137.2688	3.9400e-003	3.5400e-003	138.4219
Total	**0.0526**	**0.0342**	**0.4667**	**1.3500e-003**	**0.1479**	**8.4000e-004**	**0.1487**	**0.0392**	**7.7000e-004**	**0.0400**		**137.2688**	**137.2688**	**3.9400e-003**	**3.5400e-003**	**138.4219**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**19.6570**	**1.2660**	**20.9230**	**10.1025**	**1.1647**	**11.2672**		**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0492	0.0306	0.4332	1.3100e-003	0.1479	8.0000e-004	0.1487	0.0392	7.3000e-004	0.0400		133.7136	133.7136	3.5800e-003	3.2900e-003	134.7841
Total	**0.0492**	**0.0306**	**0.4332**	**1.3100e-003**	**0.1479**	**8.0000e-004**	**0.1487**	**0.0392**	**7.3000e-004**	**0.0400**		**133.7136**	**133.7136**	**3.5800e-003**	**3.2900e-003**	**134.7841**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.6662	0.0000	7.6662	3.9400	0.0000	3.9400			0.0000			0.0000
Off-Road	0.4656	2.0175	20.8690	0.0381		0.0621	0.0621		0.0621	0.0621	0.0000	3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**0.4656**	**2.0175**	**20.8690**	**0.0381**	**7.6662**	**0.0621**	**7.7283**	**3.9400**	**0.0621**	**4.0020**	**0.0000**	**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0492	0.0306	0.4332	1.3100e-003	0.1479	8.0000e-004	0.1487	0.0392	7.3000e-004	0.0400		133.7136	133.7136	3.5800e-003	3.2900e-003	134.7841
Total	**0.0492**	**0.0306**	**0.4332**	**1.3100e-003**	**0.1479**	**8.0000e-004**	**0.1487**	**0.0392**	**7.3000e-004**	**0.0400**		**133.7136**	**133.7136**	**3.5800e-003**	**3.2900e-003**	**134.7841**

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**9.2036**	**1.4245**	**10.6281**	**3.6538**	**1.3105**	**4.9643**		**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0547	0.0340	0.4813	1.4500e-003	0.1643	8.8000e-004	0.1652	0.0436	8.1000e-004	0.0444		148.5707	148.5707	3.9800e-003	3.6600e-003	149.7602
Total	**0.0547**	**0.0340**	**0.4813**	**1.4500e-003**	**0.1643**	**8.8000e-004**	**0.1652**	**0.0436**	**8.1000e-004**	**0.0444**		**148.5707**	**148.5707**	**3.9800e-003**	**3.6600e-003**	**149.7602**

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.5894	0.0000	3.5894	1.4250	0.0000	1.4250			0.0000			0.0000
Off-Road	0.7616	3.3000	32.9991	0.0621		0.1015	0.1015		0.1015	0.1015	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**0.7616**	**3.3000**	**32.9991**	**0.0621**	**3.5894**	**0.1015**	**3.6909**	**1.4250**	**0.1015**	**1.5265**	**0.0000**	**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0547	0.0340	0.4813	1.4500e-003	0.1643	8.8000e-004	0.1652	0.0436	8.1000e-004	0.0444		148.5707	148.5707	3.9800e-003	3.6600e-003	149.7602
Total	**0.0547**	**0.0340**	**0.4813**	**1.4500e-003**	**0.1643**	**8.8000e-004**	**0.1652**	**0.0436**	**8.1000e-004**	**0.0444**		**148.5707**	**148.5707**	**3.9800e-003**	**3.6600e-003**	**149.7602**

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286		6,009.7487	6,009.7487	1.9437		6,058.3405
Total	**3.2181**	**32.3770**	**27.7228**	**0.0621**	**9.2036**	**1.3354**	**10.5390**	**3.6538**	**1.2286**	**4.8823**		**6,009.7487**	**6,009.7487**	**1.9437**		**6,058.3405**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0514	0.0306	0.4498	1.4000e-003	0.1643	8.4000e-004	0.1651	0.0436	7.8000e-004	0.0444		144.8316	144.8316	3.6200e-003	3.4200e-003	145.9407
Total	**0.0514**	**0.0306**	**0.4498**	**1.4000e-003**	**0.1643**	**8.4000e-004**	**0.1651**	**0.0436**	**7.8000e-004**	**0.0444**		**144.8316**	**144.8316**	**3.6200e-003**	**3.4200e-003**	**145.9407**

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.5894	0.0000	3.5894	1.4250	0.0000	1.4250			0.0000			0.0000
Off-Road	0.7616	3.3000	32.9991	0.0621		0.1015	0.1015		0.1015	0.1015	0.0000	6,009.7487	6,009.7487	1.9437		6,058.3405
Total	**0.7616**	**3.3000**	**32.9991**	**0.0621**	**3.5894**	**0.1015**	**3.6909**	**1.4250**	**0.1015**	**1.5265**	**0.0000**	**6,009.7487**	**6,009.7487**	**1.9437**		**6,058.3405**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0514	0.0306	0.4498	1.4000e-003	0.1643	8.4000e-004	0.1651	0.0436	7.8000e-004	0.0444		144.8316	144.8316	3.6200e-003	3.4200e-003	145.9407
Total	**0.0514**	**0.0306**	**0.4498**	**1.4000e-003**	**0.1643**	**8.4000e-004**	**0.1651**	**0.0436**	**7.8000e-004**	**0.0444**		**144.8316**	**144.8316**	**3.6200e-003**	**3.4200e-003**	**145.9407**

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1664	43.1714	15.2982	0.2037	6.8675	0.2662	7.1337	1.9771	0.2546	2.2316		22,023.3770	22,023.3770	0.6948	3.1886	22,990.9598
Worker	6.6322	3.9445	58.0624	0.1813	21.2105	0.1088	21.3193	5.6260	0.1001	5.7262		18,697.7540	18,697.7540	0.4673	0.4413	18,840.9443
Total	**7.7986**	**47.1159**	**73.3606**	**0.3850**	**28.0781**	**0.3749**	**28.4530**	**7.6031**	**0.3547**	**7.9578**		**40,721.1309**	**40,721.1309**	**1.1621**	**3.6299**	**41,831.9041**

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0270		0.0408	0.0408		0.0408	0.0408	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**0.3278**	**2.2347**	**17.4603**	**0.0270**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1664	43.1714	15.2982	0.2037	6.8675	0.2662	7.1337	1.9771	0.2546	2.2316		22,023.3770	22,023.3770	0.6948	3.1886	22,990.9598
Worker	6.6322	3.9445	58.0624	0.1813	21.2105	0.1088	21.3193	5.6260	0.1001	5.7262		18,697.7540	18,697.7540	0.4673	0.4413	18,840.9443
Total	**7.7986**	**47.1159**	**73.3606**	**0.3850**	**28.0781**	**0.3749**	**28.4530**	**7.6031**	**0.3547**	**7.9578**		**40,721.1309**	**40,721.1309**	**1.1621**	**3.6299**	**41,831.9041**

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1306	42.7467	15.0418	0.1995	6.8676	0.2653	7.1329	1.9771	0.2538	2.2309		21,603.2521	21,603.2521	0.7126	3.1262	22,552.6783
Worker	6.2490	3.5723	54.4681	0.1751	21.2105	0.1041	21.3147	5.6260	0.0959	5.7219		18,239.3580	18,239.3580	0.4257	0.4143	18,373.4501
Total	**7.3797**	**46.3190**	**69.5099**	**0.3746**	**28.0781**	**0.3695**	**28.4476**	**7.6031**	**0.3497**	**7.9528**		**39,842.6101**	**39,842.6101**	**1.1383**	**3.5405**	**40,926.1284**

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0270		0.0408	0.0408		0.0408	0.0408	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**0.3278**	**2.2347**	**17.4603**	**0.0270**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1306	42.7467	15.0418	0.1995	6.8676	0.2653	7.1329	1.9771	0.2538	2.2309		21,603.2521	21,603.2521	0.7126	3.1262	22,552.6783
Worker	6.2490	3.5723	54.4681	0.1751	21.2105	0.1041	21.3147	5.6260	0.0959	5.7219		18,239.3580	18,239.3580	0.4257	0.4143	18,373.4501
Total	**7.3797**	**46.3190**	**69.5099**	**0.3746**	**28.0781**	**0.3695**	**28.4476**	**7.6031**	**0.3497**	**7.9528**		**39,842.6101**	**39,842.6101**	**1.1383**	**3.5405**	**40,926.1284**

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1000	42.2874	14.8571	0.1955	6.8677	0.2632	7.1309	1.9771	0.2518	2.2289		21,190.5406	21,190.5406	0.7303	3.0652	22,122.2269
Worker	5.9063	3.2619	51.3995	0.1696	21.2105	0.0992	21.3097	5.6260	0.0913	5.7173		17,812.9829	17,812.9829	0.3894	0.3916	17,939.4260
Total	**7.0063**	**45.5493**	**66.2566**	**0.3650**	**28.0782**	**0.3624**	**28.4406**	**7.6031**	**0.3430**	**7.9462**		**39,003.5235**	**39,003.5235**	**1.1197**	**3.4568**	**40,061.6529**

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0270		0.0408	0.0408		0.0408	0.0408	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**0.3278**	**2.2347**	**17.4603**	**0.0270**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1000	42.2874	14.8571	0.1955	6.8677	0.2632	7.1309	1.9771	0.2518	2.2289		21,190.5406	21,190.5406	0.7303	3.0652	22,122.2269
Worker	5.9063	3.2619	51.3995	0.1696	21.2105	0.0992	21.3097	5.6260	0.0913	5.7173		17,812.9829	17,812.9829	0.3894	0.3916	17,939.4260
Total	**7.0063**	**45.5493**	**66.2566**	**0.3650**	**28.0782**	**0.3624**	**28.4406**	**7.6031**	**0.3430**	**7.9462**		**39,003.5235**	**39,003.5235**	**1.1197**	**3.4568**	**40,061.6529**

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0747	41.8366	14.7078	0.1912	6.8677	0.2610	7.1287	1.9771	0.2497	2.2268		20,752.1698	20,752.1698	0.7464	3.0013	21,665.2077
Worker	5.5855	2.9959	48.7584	0.1646	21.2105	0.0935	21.3040	5.6260	0.0860	5.7120		17,427.4022	17,427.4022	0.3577	0.3724	17,547.3171
Total	**6.6602**	**44.8324**	**63.4662**	**0.3558**	**28.0782**	**0.3545**	**28.4327**	**7.6031**	**0.3357**	**7.9388**		**38,179.5720**	**38,179.5720**	**1.1041**	**3.3737**	**39,212.5249**

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0270		0.0408	0.0408		0.0408	0.0408	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**0.3278**	**2.2347**	**17.4603**	**0.0270**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0747	41.8366	14.7078	0.1912	6.8677	0.2610	7.1287	1.9771	0.2497	2.2268		20,752.1698	20,752.1698	0.7464	3.0013	21,665.2077
Worker	5.5855	2.9959	48.7584	0.1646	21.2105	0.0935	21.3040	5.6260	0.0860	5.7120		17,427.4022	17,427.4022	0.3577	0.3724	17,547.3171
Total	**6.6602**	**44.8324**	**63.4662**	**0.3558**	**28.0782**	**0.3545**	**28.4327**	**7.6031**	**0.3357**	**7.9388**		**38,179.5720**	**38,179.5720**	**1.1041**	**3.3737**	**39,212.5249**

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0545	41.4666	14.6165	0.1871	6.8678	0.2589	7.1267	1.9771	0.2477	2.2248		20,336.5661	20,336.5661	0.7633	2.9398	21,231.7108
Worker	5.2839	2.7700	46.5304	0.1602	21.2105	0.0874	21.2979	5.6260	0.0804	5.7064		17,086.0926	17,086.0926	0.3300	0.3561	17,200.4610
Total	**6.3383**	**44.2365**	**61.1469**	**0.3473**	**28.0783**	**0.3463**	**28.4245**	**7.6032**	**0.3280**	**7.9312**		**37,422.6586**	**37,422.6586**	**1.0933**	**3.2959**	**38,432.1718**

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2028

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0270		0.0408	0.0408		0.0408	0.0408	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**0.3278**	**2.2347**	**17.4603**	**0.0270**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0545	41.4666	14.6165	0.1871	6.8678	0.2589	7.1267	1.9771	0.2477	2.2248		20,336.5661	20,336.5661	0.7633	2.9398	21,231.7108
Worker	5.2839	2.7700	46.5304	0.1602	21.2105	0.0874	21.2979	5.6260	0.0804	5.7064		17,086.0926	17,086.0926	0.3300	0.3561	17,200.4610
Total	**6.3383**	**44.2365**	**61.1469**	**0.3473**	**28.0783**	**0.3463**	**28.4245**	**7.6032**	**0.3280**	**7.9312**		**37,422.6586**	**37,422.6586**	**1.0933**	**3.2959**	**38,432.1718**

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0358	41.0205	14.5332	0.1830	6.8678	0.2563	7.1241	1.9772	0.2451	2.2223		19,918.7161	19,918.7161	0.7795	2.8779	20,795.8158
Worker	4.9858	2.5724	44.5552	0.1563	21.2105	0.0816	21.2921	5.6260	0.0751	5.7011		16,781.3645	16,781.3645	0.3053	0.3421	16,890.9268
Total	**6.0216**	**43.5930**	**59.0884**	**0.3393**	**28.0783**	**0.3379**	**28.4162**	**7.6032**	**0.3202**	**7.9234**		**36,700.0806**	**36,700.0806**	**1.0848**	**3.2199**	**37,686.7426**

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2029

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0270		0.0408	0.0408		0.0408	0.0408	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**0.3278**	**2.2347**	**17.4603**	**0.0270**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0358	41.0205	14.5332	0.1830	6.8678	0.2563	7.1241	1.9772	0.2451	2.2223		19,918.7161	19,918.7161	0.7795	2.8779	20,795.8158
Worker	4.9858	2.5724	44.5552	0.1563	21.2105	0.0816	21.2921	5.6260	0.0751	5.7011		16,781.3645	16,781.3645	0.3053	0.3421	16,890.9268
Total	**6.0216**	**43.5930**	**59.0884**	**0.3393**	**28.0783**	**0.3379**	**28.4162**	**7.6032**	**0.3202**	**7.9234**		**36,700.0806**	**36,700.0806**	**1.0848**	**3.2199**	**37,686.7426**

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0211	40.7167	14.4860	0.1794	6.8678	0.2545	7.1223	1.9772	0.2434	2.2206		19,551.1981	19,551.1981	0.7948	2.8237	20,412.5318
Worker	4.6933	2.3971	42.8298	0.1527	21.2105	0.0762	21.2868	5.6260	0.0701	5.6962		16,513.9348	16,513.9348	0.2831	0.3298	16,619.3045
Total	**5.7144**	**43.1139**	**57.3158**	**0.3322**	**28.0784**	**0.3307**	**28.4091**	**7.6032**	**0.3135**	**7.9167**		**36,065.1328**	**36,065.1328**	**1.0779**	**3.1536**	**37,031.8362**

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2030

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0310		0.0408	0.0408		0.0408	0.0408	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**0.3278**	**2.2347**	**17.4603**	**0.0310**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0211	40.7167	14.4860	0.1794	6.8678	0.2545	7.1223	1.9772	0.2434	2.2206		19,551.1981	19,551.1981	0.7948	2.8237	20,412.5318
Worker	4.6933	2.3971	42.8298	0.1527	21.2105	0.0762	21.2868	5.6260	0.0701	5.6962		16,513.9348	16,513.9348	0.2831	0.3298	16,619.3045
Total	**5.7144**	**43.1139**	**57.3158**	**0.3322**	**28.0784**	**0.3307**	**28.4091**	**7.6032**	**0.3135**	**7.9167**		**36,065.1328**	**36,065.1328**	**1.0779**	**3.1536**	**37,031.8362**

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2031

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0099	40.5317	14.4663	0.1764	6.8679	0.2531	7.1209	1.9772	0.2420	2.2192		19,232.6111	19,232.6111	0.8066	2.7778	20,080.5639
Worker	4.4045	2.2402	41.2846	0.1496	21.2105	0.0713	21.2818	5.6260	0.0656	5.6916		16,276.7696	16,276.7696	0.2630	0.3192	16,378.4625
Total	**5.4144**	**42.7719**	**55.7509**	**0.3259**	**28.0784**	**0.3243**	**28.4027**	**7.6032**	**0.3076**	**7.9108**		**35,509.3807**	**35,509.3807**	**1.0696**	**3.0970**	**36,459.0264**

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2031

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0310		0.0408	0.0408		0.0408	0.0408	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**0.3278**	**2.2347**	**17.4603**	**0.0310**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0099	40.5317	14.4663	0.1764	6.8679	0.2531	7.1209	1.9772	0.2420	2.2192		19,232.6111	19,232.6111	0.8066	2.7778	20,080.5639
Worker	4.4045	2.2402	41.2846	0.1496	21.2105	0.0713	21.2818	5.6260	0.0656	5.6916		16,276.7696	16,276.7696	0.2630	0.3192	16,378.4625
Total	**5.4144**	**42.7719**	**55.7509**	**0.3259**	**28.0784**	**0.3243**	**28.4027**	**7.6032**	**0.3076**	**7.9108**		**35,509.3807**	**35,509.3807**	**1.0696**	**3.0970**	**36,459.0264**

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2032

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0016	40.3909	14.4729	0.1737	6.8679	0.2518	7.1198	1.9772	0.2409	2.2181		18,953.5663	18,953.5663	0.8175	2.7379	19,789.9020
Worker	4.1416	2.1083	39.9421	0.1468	21.2105	0.0667	21.2773	5.6260	0.0614	5.6874		16,069.7595	16,069.7595	0.2453	0.3103	16,168.3555
Total	**5.1432**	**42.4992**	**54.4151**	**0.3205**	**28.0785**	**0.3185**	**28.3970**	**7.6032**	**0.3023**	**7.9055**		**35,023.3258**	**35,023.3258**	**1.0627**	**3.0482**	**35,958.2575**

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2032

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0310		0.0408	0.0408		0.0408	0.0408	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**0.3278**	**2.2347**	**17.4603**	**0.0310**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0016	40.3909	14.4729	0.1737	6.8679	0.2518	7.1198	1.9772	0.2409	2.2181		18,953.5663	18,953.5663	0.8175	2.7379	19,789.9020
Worker	4.1416	2.1083	39.9421	0.1468	21.2105	0.0667	21.2773	5.6260	0.0614	5.6874		16,069.7595	16,069.7595	0.2453	0.3103	16,168.3555
Total	**5.1432**	**42.4992**	**54.4151**	**0.3205**	**28.0785**	**0.3185**	**28.3970**	**7.6032**	**0.3023**	**7.9055**		**35,023.3258**	**35,023.3258**	**1.0627**	**3.0482**	**35,958.2575**

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2033

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.9960	40.2709	14.4985	0.1713	6.8680	0.2507	7.1187	1.9772	0.2398	2.2170		18,704.2284	18,704.2284	0.8275	2.7027	19,530.3055
Worker	3.9071	1.9996	38.7823	0.1444	21.2105	0.0626	21.2731	5.6260	0.0576	5.6836		15,889.2991	15,889.2991	0.2297	0.3029	15,985.3167
Total	**4.9031**	**42.2705**	**53.2808**	**0.3156**	**28.0785**	**0.3133**	**28.3918**	**7.6033**	**0.2974**	**7.9006**		**34,593.5275**	**34,593.5275**	**1.0572**	**3.0056**	**35,515.6222**

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2033

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0310		0.0408	0.0408		0.0408	0.0408	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**0.3278**	**2.2347**	**17.4603**	**0.0310**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.9960	40.2709	14.4985	0.1713	6.8680	0.2507	7.1187	1.9772	0.2398	2.2170		18,704.2284	18,704.2284	0.8275	2.7027	19,530.3055
Worker	3.9071	1.9996	38.7823	0.1444	21.2105	0.0626	21.2731	5.6260	0.0576	5.6836		15,889.2991	15,889.2991	0.2297	0.3029	15,985.3167
Total	**4.9031**	**42.2705**	**53.2808**	**0.3156**	**28.0785**	**0.3133**	**28.3918**	**7.6033**	**0.2974**	**7.9006**		**34,593.5275**	**34,593.5275**	**1.0572**	**3.0056**	**35,515.6222**

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2034

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.9920	40.1485	14.5283	0.1691	6.8680	0.2494	7.1174	1.9773	0.2385	2.2158		18,477.7859	18,477.7859	0.8363	2.6708	19,294.5951
Worker	3.6943	1.9089	37.7320	0.1423	21.2105	0.0588	21.2694	5.6260	0.0541	5.6802		15,732.3083	15,732.3083	0.2156	0.2968	15,826.1425
Total	**4.6863**	**42.0573**	**52.2603**	**0.3114**	**28.0786**	**0.3082**	**28.3868**	**7.6033**	**0.2927**	**7.8959**		**34,210.0942**	**34,210.0942**	**1.0519**	**2.9676**	**35,120.7376**

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2034

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0310		0.0408	0.0408		0.0408	0.0408	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**0.3278**	**2.2347**	**17.4603**	**0.0310**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.9920	40.1485	14.5283	0.1691	6.8680	0.2494	7.1174	1.9773	0.2385	2.2158		18,477.7859	18,477.7859	0.8363	2.6708	19,294.5951
Worker	3.6943	1.9089	37.7320	0.1423	21.2105	0.0588	21.2694	5.6260	0.0541	5.6802		15,732.3083	15,732.3083	0.2156	0.2968	15,826.1425
Total	**4.6863**	**42.0573**	**52.2603**	**0.3114**	**28.0786**	**0.3082**	**28.3868**	**7.6033**	**0.2927**	**7.8959**		**34,210.0942**	**34,210.0942**	**1.0519**	**2.9676**	**35,120.7376**

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2035

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904		2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**		**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.9885	40.0288	14.5534	0.1672	6.8681	0.2481	7.1162	1.9773	0.2373	2.2146		18,274.7555	18,274.7555	0.8429	2.6424	19,083.2738
Worker	3.5047	1.8390	36.8461	0.1404	21.2105	0.0555	21.2660	5.6260	0.0510	5.6770		15,599.4031	15,599.4031	0.2034	0.2920	15,691.4997
Total	**4.4931**	**41.8678**	**51.3995**	**0.3076**	**28.0786**	**0.3036**	**28.3822**	**7.6033**	**0.2884**	**7.8916**		**33,874.1586**	**33,874.1586**	**1.0463**	**2.9344**	**34,774.7734**

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2035

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0310		0.0408	0.0408		0.0408	0.0408	0.0000	2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**0.3278**	**2.2347**	**17.4603**	**0.0310**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.9885	40.0288	14.5534	0.1672	6.8681	0.2481	7.1162	1.9773	0.2373	2.2146		18,274.7555	18,274.7555	0.8429	2.6424	19,083.2738
Worker	3.5047	1.8390	36.8461	0.1404	21.2105	0.0555	21.2660	5.6260	0.0510	5.6770		15,599.4031	15,599.4031	0.2034	0.2920	15,691.4997
Total	**4.4931**	**41.8678**	**51.3995**	**0.3076**	**28.0786**	**0.3036**	**28.3822**	**7.6033**	**0.2884**	**7.8916**		**33,874.1586**	**33,874.1586**	**1.0463**	**2.9344**	**34,774.7734**

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2036

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904		2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**		**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.9885	40.0288	14.5534	0.1672	6.8681	0.2481	7.1162	1.9773	0.2373	2.2146		18,274.7555	18,274.7555	0.8429	2.6424	19,083.2738
Worker	3.5047	1.8390	36.8461	0.1404	21.2105	0.0555	21.2660	5.6260	0.0510	5.6770		15,599.4031	15,599.4031	0.2034	0.2920	15,691.4997
Total	**4.4931**	**41.8678**	**51.3995**	**0.3076**	**28.0786**	**0.3036**	**28.3822**	**7.6033**	**0.2884**	**7.8916**		**33,874.1586**	**33,874.1586**	**1.0463**	**2.9344**	**34,774.7734**

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2036

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0310		0.0408	0.0408		0.0408	0.0408	0.0000	2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**0.3278**	**2.2347**	**17.4603**	**0.0310**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.9885	40.0288	14.5534	0.1672	6.8681	0.2481	7.1162	1.9773	0.2373	2.2146		18,274.7555	18,274.7555	0.8429	2.6424	19,083.2738
Worker	3.5047	1.8390	36.8461	0.1404	21.2105	0.0555	21.2660	5.6260	0.0510	5.6770		15,599.4031	15,599.4031	0.2034	0.2920	15,691.4997
Total	**4.4931**	**41.8678**	**51.3995**	**0.3076**	**28.0786**	**0.3036**	**28.3822**	**7.6033**	**0.2884**	**7.8916**		**33,874.1586**	**33,874.1586**	**1.0463**	**2.9344**	**34,774.7734**

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2036

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1405	4.8761	15.8203	0.0281		0.1874	0.1874		0.1874	0.1874		2,656.5168	2,656.5168	0.1022		2,659.0727
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1405**	**4.8761**	**15.8203**	**0.0281**		**0.1874**	**0.1874**		**0.1874**	**0.1874**		**2,656.5168**	**2,656.5168**	**0.1022**		**2,659.0727**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0204	0.0107	0.2141	8.2000e-004	0.1232	3.2000e-004	0.1235	0.0327	3.0000e-004	0.0330		90.6240	90.6240	1.1800e-003	1.7000e-003	91.1590
Total	**0.0204**	**0.0107**	**0.2141**	**8.2000e-004**	**0.1232**	**3.2000e-004**	**0.1235**	**0.0327**	**3.0000e-004**	**0.0330**		**90.6240**	**90.6240**	**1.1800e-003**	**1.7000e-003**	**91.1590**

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2036

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2805	1.2154	17.2957	0.0281		0.0374	0.0374		0.0374	0.0374	0.0000	2,656.5168	2,656.5168	0.1022		2,659.0726
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2805**	**1.2154**	**17.2957**	**0.0281**		**0.0374**	**0.0374**		**0.0374**	**0.0374**	**0.0000**	**2,656.5168**	**2,656.5168**	**0.1022**		**2,659.0726**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0204	0.0107	0.2141	8.2000e-004	0.1232	3.2000e-004	0.1235	0.0327	3.0000e-004	0.0330		90.6240	90.6240	1.1800e-003	1.7000e-003	91.1590
Total	**0.0204**	**0.0107**	**0.2141**	**8.2000e-004**	**0.1232**	**3.2000e-004**	**0.1235**	**0.0327**	**3.0000e-004**	**0.0330**		**90.6240**	**90.6240**	**1.1800e-003**	**1.7000e-003**	**91.1590**

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2036

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	651.9886					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1179	0.7577	1.7943	2.9700e-003		9.9000e-003	9.9000e-003		9.9000e-003	9.9000e-003		281.4481	281.4481	0.0104		281.7081
Total	**652.1065**	**0.7577**	**1.7943**	**2.9700e-003**		**9.9000e-003**	**9.9000e-003**		**9.9000e-003**	**9.9000e-003**		**281.4481**	**281.4481**	**0.0104**		**281.7081**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.7004	0.3675	7.3635	0.0281	4.2388	0.0111	4.2499	1.1243	0.0102	1.1345		3,117.4640	3,117.4640	0.0407	0.0584	3,135.8690
Total	**0.7004**	**0.3675**	**7.3635**	**0.0281**	**4.2388**	**0.0111**	**4.2499**	**1.1243**	**0.0102**	**1.1345**		**3,117.4640**	**3,117.4640**	**0.0407**	**0.0584**	**3,135.8690**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2036

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	651.9886					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0104		281.7081
Total	**652.0183**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0104**		**281.7081**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.7004	0.3675	7.3635	0.0281	4.2388	0.0111	4.2499	1.1243	0.0102	1.1345		3,117.4640	3,117.4640	0.0407	0.0584	3,135.8690
Total	**0.7004**	**0.3675**	**7.3635**	**0.0281**	**4.2388**	**0.0111**	**4.2499**	**1.1243**	**0.0102**	**1.1345**		**3,117.4640**	**3,117.4640**	**0.0407**	**0.0584**	**3,135.8690**

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2037

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	651.9886					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1179	0.7577	1.7943	2.9700e-003		9.9000e-003	9.9000e-003		9.9000e-003	9.9000e-003		281.4481	281.4481	0.0104		281.7081
Total	**652.1065**	**0.7577**	**1.7943**	**2.9700e-003**		**9.9000e-003**	**9.9000e-003**		**9.9000e-003**	**9.9000e-003**		**281.4481**	**281.4481**	**0.0104**		**281.7081**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.7004	0.3675	7.3635	0.0281	4.2388	0.0111	4.2499	1.1243	0.0102	1.1345		3,117.4640	3,117.4640	0.0407	0.0584	3,135.8690
Total	**0.7004**	**0.3675**	**7.3635**	**0.0281**	**4.2388**	**0.0111**	**4.2499**	**1.1243**	**0.0102**	**1.1345**		**3,117.4640**	**3,117.4640**	**0.0407**	**0.0584**	**3,135.8690**

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2037

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	651.9886					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0104		281.7081
Total	**652.0183**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0104**		**281.7081**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.7004	0.3675	7.3635	0.0281	4.2388	0.0111	4.2499	1.1243	0.0102	1.1345		3,117.4640	3,117.4640	0.0407	0.0584	3,135.8690
Total	**0.7004**	**0.3675**	**7.3635**	**0.0281**	**4.2388**	**0.0111**	**4.2499**	**1.1243**	**0.0102**	**1.1345**		**3,117.4640**	**3,117.4640**	**0.0407**	**0.0584**	**3,135.8690**

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00		
Hotel	0.00	0.00	0.00		
Office Park	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
High Turnover (Sit Down	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Office Park	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High Turnover (Sit Down Restaurant)	0.584721	0.061219	0.165591	0.108994	0.022611	0.007030	0.011356	0.006685	0.000606	0.000664	0.026637	0.000823	0.003063
Hotel	0.584721	0.061219	0.165591	0.108994	0.022611	0.007030	0.011356	0.006685	0.000606	0.000664	0.026637	0.000823	0.003063
Office Park	0.584721	0.061219	0.165591	0.108994	0.022611	0.007030	0.011356	0.006685	0.000606	0.000664	0.026637	0.000823	0.003063

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	11.6235	105.6679	88.7610	0.6340		8.0308	8.0308		8.0308	8.0308		126,801.4143	126,801.4143	2.4304	2.3247	127,554.9318
NaturalGas Unmitigated	11.6235	105.6679	88.7610	0.6340		8.0308	8.0308		8.0308	8.0308		126,801.4143	126,801.4143	2.4304	2.3247	127,554.9318

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
High Turnover (Sit Down Restaurant)	162101	1.7482	15.8922	13.3495	0.0954		1.2078	1.2078		1.2078	1.2078		19,070.6849	19,070.6849	0.3655	0.3496	19,184.0125
Hotel	900594	9.7123	88.2935	74.1666	0.5298		6.7103	6.7103		6.7103	6.7103		105,952.2411	105,952.2411	2.0308	1.9425	106,581.8623
Office Park	15117.2	0.1630	1.4821	1.2449	8.8900e-003		0.1126	0.1126		0.1126	0.1126		1,778.4883	1,778.4883	0.0341	0.0326	1,789.0570
Total		**11.6235**	**105.6678**	**88.7610**	**0.6340**		**8.0308**	**8.0308**		**8.0308**	**8.0308**		**126,801.4144**	**126,801.4144**	**2.4304**	**2.3247**	**127,554.9318**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
High Turnover (Sit Down Restaurant)	162.101	1.7482	15.8922	13.3495	0.0954		1.2078	1.2078		1.2078	1.2078		19,070.6849	19,070.6849	0.3655	0.3496	19,184.0125
Hotel	900.594	9.7123	88.2935	74.1666	0.5298		6.7103	6.7103		6.7103	6.7103		105,952.2411	105,952.2411	2.0308	1.9425	106,581.8623
Office Park	15.1172	0.1630	1.4821	1.2449	8.8900e-003		0.1126	0.1126		0.1126	0.1126		1,778.4883	1,778.4883	0.0341	0.0326	1,789.0570
Total		**11.6235**	**105.6678**	**88.7610**	**0.6340**		**8.0308**	**8.0308**		**8.0308**	**8.0308**		**126,801.4144**	**126,801.4144**	**2.4304**	**2.3247**	**127,554.9318**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

PMPU Construction - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	144.2819	4.0300e-003	0.4486	3.0000e-005		1.5900e-003	1.5900e-003		1.5900e-003	1.5900e-003		0.9678	0.9678	2.4900e-003		1.0301
Unmitigated	171.7904	4.0300e-003	0.4486	3.0000e-005		1.5900e-003	1.5900e-003		1.5900e-003	1.5900e-003		0.9678	0.9678	2.4900e-003		1.0301

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	39.2979					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	132.4515					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0411	4.0300e-003	0.4486	3.0000e-005		1.5900e-003	1.5900e-003		1.5900e-003	1.5900e-003		0.9678	0.9678	2.4900e-003		1.0301
Total	**171.7904**	**4.0300e-003**	**0.4486**	**3.0000e-005**		**1.5900e-003**	**1.5900e-003**		**1.5900e-003**	**1.5900e-003**		**0.9678**	**0.9678**	**2.4900e-003**		**1.0301**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	11.7894					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	132.4515					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0411	4.0300e-003	0.4486	3.0000e-005		1.5900e-003	1.5900e-003		1.5900e-003	1.5900e-003		0.9678	0.9678	2.4900e-003		1.0301
Total	**144.2819**	**4.0300e-003**	**0.4486**	**3.0000e-005**		**1.5900e-003**	**1.5900e-003**		**1.5900e-003**	**1.5900e-003**		**0.9678**	**0.9678**	**2.4900e-003**		**1.0301**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

PMPU Construction

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hotel	3,910.00	Room	130.33	5,677,320.00	0
High Turnover (Sit Down Restaurant)	340.00	1000sqft	7.81	340,000.00	0
Office Park	172.00	1000sqft	3.95	172,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2050
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	539.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Grading -

Demolition - Demo SF assumed to be the same as new construction SF

Vehicle Trips - Mobile estimated in VMT

Construction Off-road Equipment Mitigation - Tier 4 Final all; 3x daily

Area Mitigation - low VOC coatings 75 g/L

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	75

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	75
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblAreaMitigation	UseLowVOCPaintParkingValue	250	75
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	75
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	75
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblVehicleTrips	ST_TR	122.40	0.00
tblVehicleTrips	ST_TR	8.19	0.00
tblVehicleTrips	ST_TR	1.64	0.00
tblVehicleTrips	SU_TR	142.64	0.00
tblVehicleTrips	SU_TR	5.95	0.00
tblVehicleTrips	SU_TR	0.76	0.00
tblVehicleTrips	WD_TR	112.18	0.00
tblVehicleTrips	WD_TR	8.36	0.00
tblVehicleTrips	WD_TR	11.07	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	4.2316	59.4714	28.5269	0.1311	33.4275	1.9548	35.3823	5.3781	1.8271	7.2052	0.0000	13,862.5631	13,862.5631	1.5278	1.5912	14,374.9368
2022	3.3012	49.4708	26.6045	0.1283	33.4276	1.6134	34.8915	10.1417	1.4843	11.6260	0.0000	13,582.9606	13,582.9606	1.5226	1.5486	14,082.5098
2023	3.3810	34.5538	28.5085	0.0635	19.8049	1.4254	21.0717	10.1417	1.3113	11.3071	0.0000	6,151.8818	6,151.8818	1.9485	3.9600e-003	6,201.7724
2024	9.8119	62.8715	87.2172	0.4023	28.0781	1.3362	29.0675	7.6031	1.2293	8.5358	0.0000	42,283.5439	42,283.5439	1.9475	3.6732	43,423.0237
2025	9.2687	61.0418	83.5329	0.3923	28.0781	0.8982	28.9763	7.6031	0.8470	8.4501	0.0000	41,432.9922	41,432.9922	1.7653	3.5813	42,544.3514
2026	8.8790	60.2200	80.4747	0.3830	28.0782	0.8910	28.9691	7.6031	0.8403	8.4434	0.0000	40,618.6231	40,618.6231	1.7448	3.4956	41,703.9335
2027	8.5150	59.4569	77.8468	0.3741	28.0782	0.8830	28.9612	7.6031	0.8328	8.4360	0.0000	39,816.5089	39,816.5089	1.7275	3.4107	40,876.0773
2028	8.1736	58.8228	75.6614	0.3658	28.0783	0.8747	28.9530	7.6032	0.8252	8.4283	0.0000	39,078.5363	39,078.5363	1.7151	3.3314	40,114.1829
2029	7.8366	58.1411	73.7134	0.3580	28.0783	0.8663	28.9446	7.6032	0.8173	8.4205	0.0000	38,372.4710	38,372.4710	1.7051	3.2542	39,384.8445
2030	7.4495	53.0968	72.1104	0.3551	28.0784	0.4797	28.5580	7.6032	0.4625	8.0656	0.0000	38,092.8275	38,092.8275	1.2121	3.1867	39,072.7560
2031	7.1270	52.7310	70.6301	0.3490	28.0784	0.4732	28.5516	7.6032	0.4565	8.0597	0.0000	37,549.5089	37,549.5089	1.2026	3.1291	38,512.0562
2032	6.8353	52.4400	69.3659	0.3437	28.0785	0.4674	28.5459	7.6032	0.4511	8.0543	0.0000	37,074.2006	37,074.2006	1.1946	3.0795	38,021.7630
2033	6.5770	52.1975	68.2916	0.3390	28.0785	0.4622	28.5407	7.6033	0.4462	8.0495	0.0000	36,653.7686	36,653.7686	1.1880	3.0363	37,588.2722
2034	6.3452	51.9726	67.3262	0.3348	28.0786	0.4571	28.5356	7.6033	0.4415	8.0447	0.0000	36,278.4637	36,278.4637	1.1817	2.9977	37,201.3294
2035	6.0465	51.0006	66.4699	0.3312	28.0786	0.3947	28.4733	7.6033	0.3794	7.9827	0.0000	35,949.3907	35,949.3907	1.1670	2.9641	36,861.8712
2036	652.8835	51.0006	66.4699	0.3312	28.0786	0.3947	28.4733	7.6033	0.3794	7.9827	0.0000	35,949.3907	35,949.3907	1.1670	2.9641	36,861.8712
2037	652.8835	1.1706	8.8602	0.0295	4.2388	0.0210	4.2598	1.1243	0.0201	1.1444	0.0000	3,228.3159	3,228.3159	0.0544	0.0630	3,248.4492
Maximum	**652.8835**	**62.8715**	**87.2172**	**0.4023**	**33.4276**	**1.9548**	**35.3823**	**10.1417**	**1.8271**	**11.6260**	**0.0000**	**42,283.5439**	**42,283.5439**	**1.9485**	**3.6732**	**43,423.0237**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	1.5288	30.0340	30.2417	0.1311	14.6136	0.4651	15.0787	2.5290	0.4476	2.9766	0.0000	13,862.5631	13,862.5631	1.5278	1.5912	14,374.9368
2022	1.1243	25.7546	29.2902	0.1283	14.6137	0.2829	14.8966	3.9792	0.2733	4.0420	0.0000	13,582.9606	13,582.9606	1.5226	1.5486	14,082.5098
2023	0.8209	3.3382	33.4565	0.0635	7.8141	0.1024	7.8770	3.9792	0.1024	4.0420	0.0000	6,151.8818	6,151.8818	1.9485	3.9600e-003	6,201.7724
2024	8.6682	51.6625	88.5107	0.4023	28.0781	0.4169	28.4950	7.6031	0.3966	7.9997	0.0000	42,283.5439	42,283.5439	1.9475	3.6732	43,423.0237
2025	8.2292	50.8068	84.9085	0.3923	28.0781	0.4114	28.4895	7.6031	0.3915	7.9946	0.0000	41,432.9922	41,432.9922	1.7653	3.5813	42,544.3514
2026	7.8395	49.9850	81.8503	0.3830	28.0782	0.4042	28.4824	7.6031	0.3848	7.9879	0.0000	40,618.6231	40,618.6231	1.7448	3.4956	41,703.9335
2027	7.4754	49.2220	79.2224	0.3741	28.0782	0.3962	28.4744	7.6031	0.3774	7.9805	0.0000	39,816.5089	39,816.5089	1.7275	3.4107	40,876.0773
2028	7.1341	48.5879	77.0370	0.3658	28.0783	0.3880	28.4662	7.6032	0.3697	7.9729	0.0000	39,078.5363	39,078.5363	1.7151	3.3314	40,114.1829
2029	6.7970	47.9062	75.0890	0.3580	28.0783	0.3795	28.4578	7.6032	0.3618	7.9650	0.0000	38,372.4710	38,372.4710	1.7051	3.2542	39,384.8445
2030	6.4682	47.3969	73.4137	0.3551	28.0784	0.3723	28.4507	7.6032	0.3551	7.9583	0.0000	38,092.8275	38,092.8275	1.2121	3.1867	39,072.7560
2031	6.1457	47.0311	71.9334	0.3490	28.0784	0.3659	28.4443	7.6032	0.3492	7.9524	0.0000	37,549.5089	37,549.5089	1.2026	3.1291	38,512.0562
2032	5.8540	46.7401	70.6692	0.3437	28.0785	0.3601	28.4385	7.6032	0.3438	7.9470	0.0000	37,074.2006	37,074.2006	1.1946	3.0795	38,021.7630
2033	5.5957	46.4976	69.5949	0.3390	28.0785	0.3548	28.4333	7.6033	0.3389	7.9421	0.0000	36,653.7686	36,653.7686	1.1880	3.0363	37,588.2722
2034	5.3638	46.2727	68.6295	0.3348	28.0786	0.3497	28.4283	7.6033	0.3341	7.9374	0.0000	36,278.4637	36,278.4637	1.1817	2.9977	37,201.3294
2035	5.1575	46.0740	67.8124	0.3312	28.0786	0.3451	28.4237	7.6033	0.3298	7.9331	0.0000	35,949.3907	35,949.3907	1.1670	2.9641	36,861.8712
2036	652.7954	46.0740	67.8124	0.3312	28.0786	0.3451	28.4237	7.6033	0.3298	7.9331	0.0000	35,949.3907	35,949.3907	1.1670	2.9641	36,861.8712
2037	652.7954	0.5416	8.8984	0.0295	4.2388	0.0150	4.2539	1.1243	0.0142	1.1385	0.0000	3,228.3159	3,228.3159	0.0544	0.0630	3,248.4492
Maximum	**652.7954**	**51.6625**	**88.5107**	**0.4023**	**28.0786**	**0.4651**	**28.4950**	**7.6033**	**0.4476**	**7.9997**	**0.0000**	**42,283.5439**	**42,283.5439**	**1.9485**	**3.6732**	**43,423.0237**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	1.40	21.36	-2.54	0.00	10.88	58.58	12.18	12.08	57.86	16.30	0.00	0.00	0.00	0.00	0.00	0.00

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	171.7904	4.0300e-003	0.4486	3.0000e-005		1.5900e-003	1.5900e-003		1.5900e-003	1.5900e-003		0.9678	0.9678	2.4900e-003		1.0301
Energy	11.6235	105.6679	88.7610	0.6340		8.0308	8.0308		8.0308	8.0308		126,801.4143	126,801.4143	2.4304	2.3247	127,554.9318
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**183.4139**	**105.6719**	**89.2096**	**0.6340**	**0.0000**	**8.0324**	**8.0324**	**0.0000**	**8.0324**	**8.0324**		**126,802.3821**	**126,802.3821**	**2.4329**	**2.3247**	**127,555.9619**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	144.2819	4.0300e-003	0.4486	3.0000e-005		1.5900e-003	1.5900e-003		1.5900e-003	1.5900e-003		0.9678	0.9678	2.4900e-003		1.0301
Energy	11.6235	105.6679	88.7610	0.6340		8.0308	8.0308		8.0308	8.0308		126,801.4143	126,801.4143	2.4304	2.3247	127,554.9318
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**155.9053**	**105.6719**	**89.2096**	**0.6340**	**0.0000**	**8.0324**	**8.0324**	**0.0000**	**8.0324**	**8.0324**		**126,802.3821**	**126,802.3821**	**2.4329**	**2.3247**	**127,555.9619**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	15.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/14/2021	7/20/2022	5	200	
2	Site Preparation	Site Preparation	7/21/2022	1/4/2023	5	120	
3	Grading	Grading	1/5/2023	3/13/2024	5	310	
4	Building Construction	Building Construction	3/14/2024	1/30/2036	5	3100	
5	Paving	Paving	1/31/2036	12/3/2036	5	220	
6	Architectural Coating	Architectural Coating	12/4/2036	10/7/2037	5	220	

Acres of Grading (Site Preparation Phase): 180

Acres of Grading (Grading Phase): 930

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 9,283,980; Non-Residential Outdoor: 3,094,660; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	7.00	231	0.29
Demolition	Excavators	3	8.00	158	0.38
Grading	Excavators	2	8.00	158	0.38

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	28,152.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	2,582.00	1,014.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	516.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					30.8425	0.0000	30.8425	4.6707	0.0000	4.6707			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411		3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**30.8425**	**1.5513**	**32.3938**	**4.6707**	**1.4411**	**6.1117**		**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0160	27.9947	6.5634	0.0912	2.4618	0.4027	2.8645	0.6748	0.3853	1.0601		10,003.6232	10,003.6232	0.4691	1.5878	10,488.5025
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0505	0.0360	0.3984	1.1000e-003	0.1232	7.4000e-004	0.1240	0.0327	6.8000e-004	0.0334		110.9949	110.9949	3.8400e-003	3.4400e-003	112.1170
Total	**1.0665**	**28.0308**	**6.9619**	**0.0923**	**2.5850**	**0.4035**	**2.9885**	**0.7075**	**0.3860**	**1.0935**		**10,114.6181**	**10,114.6181**	**0.4729**	**1.5912**	**10,600.6195**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.0286	0.0000	12.0286	1.8216	0.0000	1.8216			0.0000			0.0000
Off-Road	0.4623	2.0032	23.2798	0.0388		0.0616	0.0616		0.0616	0.0616	0.0000	3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**0.4623**	**2.0032**	**23.2798**	**0.0388**	**12.0286**	**0.0616**	**12.0902**	**1.8216**	**0.0616**	**1.8832**	**0.0000**	**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0160	27.9947	6.5634	0.0912	2.4618	0.4027	2.8645	0.6748	0.3853	1.0601		10,003.6232	10,003.6232	0.4691	1.5878	10,488.5025
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0505	0.0360	0.3984	1.1000e-003	0.1232	7.4000e-004	0.1240	0.0327	6.8000e-004	0.0334		110.9949	110.9949	3.8400e-003	3.4400e-003	112.1170
Total	**1.0665**	**28.0308**	**6.9619**	**0.0923**	**2.5850**	**0.4035**	**2.9885**	**0.7075**	**0.3860**	**1.0935**		**10,114.6181**	**10,114.6181**	**0.4729**	**1.5912**	**10,600.6195**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					30.8425	0.0000	30.8425	4.6707	0.0000	4.6707			0.0000			0.0000
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553		3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**	**30.8425**	**1.2427**	**32.0852**	**4.6707**	**1.1553**	**5.8259**		**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6146	23.7193	5.6416	0.0884	2.4619	0.2206	2.6825	0.6748	0.2110	0.8858		9,728.0936	9,728.0936	0.4667	1.5454	10,200.2941
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0474	0.0321	0.3688	1.0600e-003	0.1232	7.0000e-004	0.1239	0.0327	6.4000e-004	0.0333		108.0858	108.0858	3.4900e-003	3.1900e-003	109.1237
Total	**0.6620**	**23.7514**	**6.0104**	**0.0894**	**2.5851**	**0.2213**	**2.8064**	**0.7075**	**0.2117**	**0.9192**		**9,836.1794**	**9,836.1794**	**0.4702**	**1.5486**	**10,309.4178**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.0286	0.0000	12.0286	1.8216	0.0000	1.8216			0.0000			0.0000
Off-Road	0.4623	2.0032	23.2798	0.0388		0.0616	0.0616		0.0616	0.0616	0.0000	3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**0.4623**	**2.0032**	**23.2798**	**0.0388**	**12.0286**	**0.0616**	**12.0902**	**1.8216**	**0.0616**	**1.8832**	**0.0000**	**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6146	23.7193	5.6416	0.0884	2.4619	0.2206	2.6825	0.6748	0.2110	0.8858		9,728.0936	9,728.0936	0.4667	1.5454	10,200.2941
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0474	0.0321	0.3688	1.0600e-003	0.1232	7.0000e-004	0.1239	0.0327	6.4000e-004	0.0333		108.0858	108.0858	3.4900e-003	3.1900e-003	109.1237
Total	**0.6620**	**23.7514**	**6.0104**	**0.0894**	**2.5851**	**0.2213**	**2.8064**	**0.7075**	**0.2117**	**0.9192**		**9,836.1794**	**9,836.1794**	**0.4702**	**1.5486**	**10,309.4178**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836		3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**19.6570**	**1.6126**	**21.2696**	**10.1025**	**1.4836**	**11.5860**		**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0568	0.0385	0.4425	1.2700e-003	0.1479	8.4000e-004	0.1487	0.0392	7.7000e-004	0.0400		129.7029	129.7029	4.1900e-003	3.8300e-003	130.9484
Total	**0.0568**	**0.0385**	**0.4425**	**1.2700e-003**	**0.1479**	**8.4000e-004**	**0.1487**	**0.0392**	**7.7000e-004**	**0.0400**		**129.7029**	**129.7029**	**4.1900e-003**	**3.8300e-003**	**130.9484**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.6662	0.0000	7.6662	3.9400	0.0000	3.9400			0.0000			0.0000
Off-Road	0.4656	2.0175	20.8690	0.0380		0.0621	0.0621		0.0621	0.0621	0.0000	3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**0.4656**	**2.0175**	**20.8690**	**0.0380**	**7.6662**	**0.0621**	**7.7283**	**3.9400**	**0.0621**	**4.0020**	**0.0000**	**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0568	0.0385	0.4425	1.2700e-003	0.1479	8.4000e-004	0.1487	0.0392	7.7000e-004	0.0400		129.7029	129.7029	4.1900e-003	3.8300e-003	130.9484
Total	**0.0568**	**0.0385**	**0.4425**	**1.2700e-003**	**0.1479**	**8.4000e-004**	**0.1487**	**0.0392**	**7.7000e-004**	**0.0400**		**129.7029**	**129.7029**	**4.1900e-003**	**3.8300e-003**	**130.9484**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**19.6570**	**1.2660**	**20.9230**	**10.1025**	**1.1647**	**11.2672**		**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0534	0.0344	0.4116	1.2300e-003	0.1479	8.0000e-004	0.1487	0.0392	7.3000e-004	0.0400		126.3637	126.3637	3.8100e-003	3.5600e-003	127.5200
Total	**0.0534**	**0.0344**	**0.4116**	**1.2300e-003**	**0.1479**	**8.0000e-004**	**0.1487**	**0.0392**	**7.3000e-004**	**0.0400**		**126.3637**	**126.3637**	**3.8100e-003**	**3.5600e-003**	**127.5200**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.6662	0.0000	7.6662	3.9400	0.0000	3.9400			0.0000			0.0000
Off-Road	0.4656	2.0175	20.8690	0.0381		0.0621	0.0621		0.0621	0.0621	0.0000	3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**0.4656**	**2.0175**	**20.8690**	**0.0381**	**7.6662**	**0.0621**	**7.7283**	**3.9400**	**0.0621**	**4.0020**	**0.0000**	**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0534	0.0344	0.4116	1.2300e-003	0.1479	8.0000e-004	0.1487	0.0392	7.3000e-004	0.0400		126.3637	126.3637	3.8100e-003	3.5600e-003	127.5200
Total	**0.0534**	**0.0344**	**0.4116**	**1.2300e-003**	**0.1479**	**8.0000e-004**	**0.1487**	**0.0392**	**7.3000e-004**	**0.0400**		**126.3637**	**126.3637**	**3.8100e-003**	**3.5600e-003**	**127.5200**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**9.2036**	**1.4245**	**10.6281**	**3.6538**	**1.3105**	**4.9643**		**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0593	0.0382	0.4573	1.3700e-003	0.1643	8.8000e-004	0.1652	0.0436	8.1000e-004	0.0444		140.4041	140.4041	4.2400e-003	3.9600e-003	141.6889
Total	**0.0593**	**0.0382**	**0.4573**	**1.3700e-003**	**0.1643**	**8.8000e-004**	**0.1652**	**0.0436**	**8.1000e-004**	**0.0444**		**140.4041**	**140.4041**	**4.2400e-003**	**3.9600e-003**	**141.6889**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.5894	0.0000	3.5894	1.4250	0.0000	1.4250			0.0000			0.0000
Off-Road	0.7616	3.3000	32.9991	0.0621		0.1015	0.1015		0.1015	0.1015	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**0.7616**	**3.3000**	**32.9991**	**0.0621**	**3.5894**	**0.1015**	**3.6909**	**1.4250**	**0.1015**	**1.5265**	**0.0000**	**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0593	0.0382	0.4573	1.3700e-003	0.1643	8.8000e-004	0.1652	0.0436	8.1000e-004	0.0444		140.4041	140.4041	4.2400e-003	3.9600e-003	141.6889
Total	**0.0593**	**0.0382**	**0.4573**	**1.3700e-003**	**0.1643**	**8.8000e-004**	**0.1652**	**0.0436**	**8.1000e-004**	**0.0444**		**140.4041**	**140.4041**	**4.2400e-003**	**3.9600e-003**	**141.6889**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286		6,009.7487	6,009.7487	1.9437		6,058.3405
Total	**3.2181**	**32.3770**	**27.7228**	**0.0621**	**9.2036**	**1.3354**	**10.5390**	**3.6538**	**1.2286**	**4.8823**		**6,009.7487**	**6,009.7487**	**1.9437**		**6,058.3405**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0559	0.0344	0.4282	1.3300e-003	0.1643	8.4000e-004	0.1651	0.0436	7.8000e-004	0.0444		136.8882	136.8882	3.8600e-003	3.7000e-003	138.0862
Total	**0.0559**	**0.0344**	**0.4282**	**1.3300e-003**	**0.1643**	**8.4000e-004**	**0.1651**	**0.0436**	**7.8000e-004**	**0.0444**		**136.8882**	**136.8882**	**3.8600e-003**	**3.7000e-003**	**138.0862**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.5894	0.0000	3.5894	1.4250	0.0000	1.4250			0.0000			0.0000
Off-Road	0.7616	3.3000	32.9991	0.0621		0.1015	0.1015		0.1015	0.1015	0.0000	6,009.7487	6,009.7487	1.9437		6,058.3405
Total	**0.7616**	**3.3000**	**32.9991**	**0.0621**	**3.5894**	**0.1015**	**3.6909**	**1.4250**	**0.1015**	**1.5265**	**0.0000**	**6,009.7487**	**6,009.7487**	**1.9437**		**6,058.3405**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0559	0.0344	0.4282	1.3300e-003	0.1643	8.4000e-004	0.1651	0.0436	7.8000e-004	0.0444		136.8882	136.8882	3.8600e-003	3.7000e-003	138.0862
Total	**0.0559**	**0.0344**	**0.4282**	**1.3300e-003**	**0.1643**	**8.4000e-004**	**0.1651**	**0.0436**	**7.8000e-004**	**0.0444**		**136.8882**	**136.8882**	**3.8600e-003**	**3.7000e-003**	**138.0862**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1305	44.9920	15.7694	0.2040	6.8675	0.2673	7.1349	1.9771	0.2557	2.2328		22,055.5837	22,055.5837	0.6914	3.1960	23,025.2868
Worker	7.2098	4.4358	55.2810	0.1713	21.2105	0.1088	21.3193	5.6260	0.1001	5.7262		17,672.2613	17,672.2613	0.4988	0.4772	17,826.9293
Total	**8.3403**	**49.4278**	**71.0504**	**0.3753**	**28.0781**	**0.3761**	**28.4542**	**7.6031**	**0.3558**	**7.9589**		**39,727.8450**	**39,727.8450**	**1.1902**	**3.6732**	**40,852.2161**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0270		0.0408	0.0408		0.0408	0.0408	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**0.3278**	**2.2347**	**17.4603**	**0.0270**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1305	44.9920	15.7694	0.2040	6.8675	0.2673	7.1349	1.9771	0.2557	2.2328		22,055.5837	22,055.5837	0.6914	3.1960	23,025.2868
Worker	7.2098	4.4358	55.2810	0.1713	21.2105	0.1088	21.3193	5.6260	0.1001	5.7262		17,672.2613	17,672.2613	0.4988	0.4772	17,826.9293
Total	**8.3403**	**49.4278**	**71.0504**	**0.3753**	**28.0781**	**0.3761**	**28.4542**	**7.6031**	**0.3558**	**7.9589**		**39,727.8450**	**39,727.8450**	**1.1902**	**3.6732**	**40,852.2161**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0930	44.5551	15.5094	0.1998	6.8676	0.2665	7.1340	1.9771	0.2549	2.2319		21,635.5976	21,635.5976	0.7092	3.1334	22,587.0933
Worker	6.8083	4.0171	51.9389	0.1655	21.2105	0.1041	21.3147	5.6260	0.0959	5.7219		17,240.9203	17,240.9203	0.4552	0.4479	17,385.7600
Total	**7.9013**	**48.5721**	**67.4482**	**0.3653**	**28.0781**	**0.3706**	**28.4487**	**7.6031**	**0.3507**	**7.9538**		**38,876.5178**	**38,876.5178**	**1.1644**	**3.5813**	**39,972.8533**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0270		0.0408	0.0408		0.0408	0.0408	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**0.3278**	**2.2347**	**17.4603**	**0.0270**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0930	44.5551	15.5094	0.1998	6.8676	0.2665	7.1340	1.9771	0.2549	2.2319		21,635.5976	21,635.5976	0.7092	3.1334	22,587.0933
Worker	6.8083	4.0171	51.9389	0.1655	21.2105	0.1041	21.3147	5.6260	0.0959	5.7219		17,240.9203	17,240.9203	0.4552	0.4479	17,385.7600
Total	**7.9013**	**48.5721**	**67.4482**	**0.3653**	**28.0781**	**0.3706**	**28.4487**	**7.6031**	**0.3507**	**7.9538**		**38,876.5178**	**38,876.5178**	**1.1644**	**3.5813**	**39,972.8533**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0608	44.0825	15.3200	0.1958	6.8677	0.2642	7.1319	1.9771	0.2527	2.2298		21,222.9414	21,222.9414	0.7268	3.0723	22,156.6542
Worker	6.4509	3.6678	49.0700	0.1603	21.2105	0.0992	21.3097	5.6260	0.0913	5.7173		16,839.2074	16,839.2074	0.4170	0.4233	16,975.7813
Total	**7.5116**	**47.7503**	**64.3900**	**0.3561**	**28.0782**	**0.3634**	**28.4416**	**7.6031**	**0.3440**	**7.9472**		**38,062.1487**	**38,062.1487**	**1.1439**	**3.4956**	**39,132.4355**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0270		0.0408	0.0408		0.0408	0.0408	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**0.3278**	**2.2347**	**17.4603**	**0.0270**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0608	44.0825	15.3200	0.1958	6.8677	0.2642	7.1319	1.9771	0.2527	2.2298		21,222.9414	21,222.9414	0.7268	3.0723	22,156.6542
Worker	6.4509	3.6678	49.0700	0.1603	21.2105	0.0992	21.3097	5.6260	0.0913	5.7173		16,839.2074	16,839.2074	0.4170	0.4233	16,975.7813
Total	**7.5116**	**47.7503**	**64.3900**	**0.3561**	**28.0782**	**0.3634**	**28.4416**	**7.6031**	**0.3440**	**7.9472**		**38,062.1487**	**38,062.1487**	**1.1439**	**3.4956**	**39,132.4355**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0341	43.6187	15.1667	0.1915	6.8677	0.2620	7.1297	1.9771	0.2506	2.2277		20,784.5143	20,784.5143	0.7429	3.0082	21,699.5384
Worker	6.1134	3.3686	46.5954	0.1557	21.2105	0.0935	21.3040	5.6260	0.0860	5.7120		16,475.5203	16,475.5203	0.3836	0.4025	16,605.0409
Total	**7.1476**	**46.9873**	**61.7621**	**0.3471**	**28.0782**	**0.3554**	**28.4336**	**7.6031**	**0.3366**	**7.9397**		**37,260.0346**	**37,260.0346**	**1.1265**	**3.4107**	**38,304.5793**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0270		0.0408	0.0408		0.0408	0.0408	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**0.3278**	**2.2347**	**17.4603**	**0.0270**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0341	43.6187	15.1667	0.1915	6.8677	0.2620	7.1297	1.9771	0.2506	2.2277		20,784.5143	20,784.5143	0.7429	3.0082	21,699.5384
Worker	6.1134	3.3686	46.5954	0.1557	21.2105	0.0935	21.3040	5.6260	0.0860	5.7120		16,475.5203	16,475.5203	0.3836	0.4025	16,605.0409
Total	**7.1476**	**46.9873**	**61.7621**	**0.3471**	**28.0782**	**0.3554**	**28.4336**	**7.6031**	**0.3366**	**7.9397**		**37,260.0346**	**37,260.0346**	**1.1265**	**3.4107**	**38,304.5793**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0127	43.2388	15.0717	0.1874	6.8678	0.2598	7.1276	1.9771	0.2485	2.2257		20,368.7686	20,368.7686	0.7597	2.9467	21,265.8651
Worker	5.7935	3.1143	44.5051	0.1515	21.2105	0.0874	21.2979	5.6260	0.0804	5.7064		16,153.2934	16,153.2934	0.3544	0.3848	16,276.8197
Total	**6.8062**	**46.3532**	**59.5768**	**0.3389**	**28.0783**	**0.3472**	**28.4254**	**7.6032**	**0.3289**	**7.9321**		**36,522.0620**	**36,522.0620**	**1.1142**	**3.3314**	**37,542.6848**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2028

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0270		0.0408	0.0408		0.0408	0.0408	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**0.3278**	**2.2347**	**17.4603**	**0.0270**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0127	43.2388	15.0717	0.1874	6.8678	0.2598	7.1276	1.9771	0.2485	2.2257		20,368.7686	20,368.7686	0.7597	2.9467	21,265.8651
Worker	5.7935	3.1143	44.5051	0.1515	21.2105	0.0874	21.2979	5.6260	0.0804	5.7064		16,153.2934	16,153.2934	0.3544	0.3848	16,276.8197
Total	**6.8062**	**46.3532**	**59.5768**	**0.3389**	**28.0783**	**0.3472**	**28.4254**	**7.6032**	**0.3289**	**7.9321**		**36,522.0620**	**36,522.0620**	**1.1142**	**3.3314**	**37,542.6848**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.9931	42.7796	14.9845	0.1833	6.8678	0.2571	7.1249	1.9772	0.2459	2.2231		19,950.7075	19,950.7075	0.7759	2.8846	20,829.7268
Worker	5.4761	2.8919	42.6443	0.1477	21.2105	0.0816	21.2921	5.6260	0.0751	5.7011		15,865.2892	15,865.2892	0.3283	0.3695	15,983.6196
Total	**6.4692**	**45.6715**	**57.6288**	**0.3310**	**28.0783**	**0.3387**	**28.4170**	**7.6032**	**0.3210**	**7.9242**		**35,815.9966**	**35,815.9966**	**1.1042**	**3.2542**	**36,813.3464**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2029

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0270		0.0408	0.0408		0.0408	0.0408	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**0.3278**	**2.2347**	**17.4603**	**0.0270**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.9931	42.7796	14.9845	0.1833	6.8678	0.2571	7.1249	1.9772	0.2459	2.2231		19,950.7075	19,950.7075	0.7759	2.8846	20,829.7268
Worker	5.4761	2.8919	42.6443	0.1477	21.2105	0.0816	21.2921	5.6260	0.0751	5.7011		15,865.2892	15,865.2892	0.3283	0.3695	15,983.6196
Total	**6.4692**	**45.6715**	**57.6288**	**0.3310**	**28.0783**	**0.3387**	**28.4170**	**7.6032**	**0.3210**	**7.9242**		**35,815.9966**	**35,815.9966**	**1.1042**	**3.2542**	**36,813.3464**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.9777	42.4678	14.9337	0.1797	6.8678	0.2553	7.1231	1.9772	0.2442	2.2213		19,582.9891	19,582.9891	0.7911	2.8304	20,446.2154
Worker	5.1627	2.6944	41.0197	0.1444	21.2105	0.0762	21.2868	5.6260	0.0701	5.6962		15,612.2916	15,612.2916	0.3047	0.3563	15,726.0877
Total	**6.1404**	**45.1622**	**55.9535**	**0.3241**	**28.0784**	**0.3315**	**28.4099**	**7.6032**	**0.3143**	**7.9175**		**35,195.2808**	**35,195.2808**	**1.0959**	**3.1867**	**36,172.3031**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2030

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0310		0.0408	0.0408		0.0408	0.0408	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**0.3278**	**2.2347**	**17.4603**	**0.0310**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.9777	42.4678	14.9337	0.1797	6.8678	0.2553	7.1231	1.9772	0.2442	2.2213		19,582.9891	19,582.9891	0.7911	2.8304	20,446.2154
Worker	5.1627	2.6944	41.0197	0.1444	21.2105	0.0762	21.2868	5.6260	0.0701	5.6962		15,612.2916	15,612.2916	0.3047	0.3563	15,726.0877
Total	**6.1404**	**45.1622**	**55.9535**	**0.3241**	**28.0784**	**0.3315**	**28.4099**	**7.6032**	**0.3143**	**7.9175**		**35,195.2808**	**35,195.2808**	**1.0959**	**3.1867**	**36,172.3031**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2031

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.9657	42.2790	14.9114	0.1767	6.8679	0.2538	7.1217	1.9772	0.2428	2.2200		19,264.2392	19,264.2392	0.8029	2.7844	20,114.0621
Worker	4.8522	2.5174	39.5618	0.1414	21.2105	0.0713	21.2818	5.6260	0.0656	5.6916		15,387.7230	15,387.7230	0.2834	0.3447	15,497.5412
Total	**5.8179**	**44.7964**	**54.4731**	**0.3181**	**28.0784**	**0.3251**	**28.4035**	**7.6032**	**0.3084**	**7.9116**		**34,651.9621**	**34,651.9621**	**1.0864**	**3.1291**	**35,611.6033**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2031

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0310		0.0408	0.0408		0.0408	0.0408	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**0.3278**	**2.2347**	**17.4603**	**0.0310**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.9657	42.2790	14.9114	0.1767	6.8679	0.2538	7.1217	1.9772	0.2428	2.2200		19,264.2392	19,264.2392	0.8029	2.7844	20,114.0621
Worker	4.8522	2.5174	39.5618	0.1414	21.2105	0.0713	21.2818	5.6260	0.0656	5.6916		15,387.7230	15,387.7230	0.2834	0.3447	15,497.5412
Total	**5.8179**	**44.7964**	**54.4731**	**0.3181**	**28.0784**	**0.3251**	**28.4035**	**7.6032**	**0.3084**	**7.9116**		**34,651.9621**	**34,651.9621**	**1.0864**	**3.1291**	**35,611.6033**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2032

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.9566	42.1366	14.9164	0.1740	6.8679	0.2526	7.1205	1.9772	0.2416	2.2188		18,985.0556	18,985.0556	0.8137	2.7444	19,823.2433
Worker	4.5695	2.3688	38.2925	0.1388	21.2105	0.0667	21.2773	5.6260	0.0614	5.6874		15,191.5983	15,191.5983	0.2646	0.3351	15,298.0669
Total	**5.5261**	**44.5054**	**53.2089**	**0.3127**	**28.0785**	**0.3193**	**28.3978**	**7.6032**	**0.3030**	**7.9062**		**34,176.6538**	**34,176.6538**	**1.0783**	**3.0795**	**35,121.3102**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2032

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0310		0.0408	0.0408		0.0408	0.0408	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**0.3278**	**2.2347**	**17.4603**	**0.0310**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.9566	42.1366	14.9164	0.1740	6.8679	0.2526	7.1205	1.9772	0.2416	2.2188		18,985.0556	18,985.0556	0.8137	2.7444	19,823.2433
Worker	4.5695	2.3688	38.2925	0.1388	21.2105	0.0667	21.2773	5.6260	0.0614	5.6874		15,191.5983	15,191.5983	0.2646	0.3351	15,298.0669
Total	**5.5261**	**44.5054**	**53.2089**	**0.3127**	**28.0785**	**0.3193**	**28.3978**	**7.6032**	**0.3030**	**7.9062**		**34,176.6538**	**34,176.6538**	**1.0783**	**3.0795**	**35,121.3102**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2033

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.9503	42.0165	14.9412	0.1716	6.8680	0.2514	7.1194	1.9772	0.2405	2.2177		18,735.6511	18,735.6511	0.8237	2.7091	19,563.5677
Worker	4.3176	2.2464	37.1935	0.1365	21.2105	0.0626	21.2731	5.6260	0.0576	5.6836		15,020.5708	15,020.5708	0.2480	0.3271	15,124.2516
Total	**5.2679**	**44.2628**	**52.1347**	**0.3080**	**28.0785**	**0.3140**	**28.3925**	**7.6033**	**0.2981**	**7.9013**		**33,756.2219**	**33,756.2219**	**1.0718**	**3.0363**	**34,687.8193**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2033

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0310		0.0408	0.0408		0.0408	0.0408	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**0.3278**	**2.2347**	**17.4603**	**0.0310**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.9503	42.0165	14.9412	0.1716	6.8680	0.2514	7.1194	1.9772	0.2405	2.2177		18,735.6511	18,735.6511	0.8237	2.7091	19,563.5677
Worker	4.3176	2.2464	37.1935	0.1365	21.2105	0.0626	21.2731	5.6260	0.0576	5.6836		15,020.5708	15,020.5708	0.2480	0.3271	15,124.2516
Total	**5.2679**	**44.2628**	**52.1347**	**0.3080**	**28.0785**	**0.3140**	**28.3925**	**7.6033**	**0.2981**	**7.9013**		**33,756.2219**	**33,756.2219**	**1.0718**	**3.0363**	**34,687.8193**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2034

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.9457	41.8937	14.9704	0.1694	6.8680	0.2501	7.1181	1.9773	0.2392	2.2165		18,509.1585	18,509.1585	0.8324	2.6773	19,327.7968
Worker	4.0904	2.1442	36.1988	0.1345	21.2105	0.0588	21.2694	5.6260	0.0541	5.6802		14,871.7585	14,871.7585	0.2331	0.3205	14,973.0797
Total	**5.0360**	**44.0380**	**51.1693**	**0.3039**	**28.0786**	**0.3089**	**28.3875**	**7.6033**	**0.2933**	**7.8966**		**33,380.9169**	**33,380.9169**	**1.0655**	**2.9977**	**34,300.8765**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2034

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0310		0.0408	0.0408		0.0408	0.0408	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**0.3278**	**2.2347**	**17.4603**	**0.0310**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.9457	41.8937	14.9704	0.1694	6.8680	0.2501	7.1181	1.9773	0.2392	2.2165		18,509.1585	18,509.1585	0.8324	2.6773	19,327.7968
Worker	4.0904	2.1442	36.1988	0.1345	21.2105	0.0588	21.2694	5.6260	0.0541	5.6802		14,871.7585	14,871.7585	0.2331	0.3205	14,973.0797
Total	**5.0360**	**44.0380**	**51.1693**	**0.3039**	**28.0786**	**0.3089**	**28.3875**	**7.6033**	**0.2933**	**7.8966**		**33,380.9169**	**33,380.9169**	**1.0655**	**2.9977**	**34,300.8765**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2035

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904		2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**		**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.9414	41.7736	14.9950	0.1675	6.8681	0.2488	7.1169	1.9773	0.2380	2.2153		18,306.0830	18,306.0830	0.8390	2.6489	19,116.4215
Worker	3.8883	2.0657	35.3572	0.1327	21.2105	0.0555	21.2660	5.6260	0.0510	5.6770		14,745.7610	14,745.7610	0.2201	0.3152	14,845.2050
Total	**4.8297**	**43.8393**	**50.3522**	**0.3002**	**28.0786**	**0.3043**	**28.3829**	**7.6033**	**0.2890**	**7.8923**		**33,051.8440**	**33,051.8440**	**1.0591**	**2.9641**	**33,961.6265**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2035

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0310		0.0408	0.0408		0.0408	0.0408	0.0000	2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**0.3278**	**2.2347**	**17.4603**	**0.0310**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.9414	41.7736	14.9950	0.1675	6.8681	0.2488	7.1169	1.9773	0.2380	2.2153		18,306.0830	18,306.0830	0.8390	2.6489	19,116.4215
Worker	3.8883	2.0657	35.3572	0.1327	21.2105	0.0555	21.2660	5.6260	0.0510	5.6770		14,745.7610	14,745.7610	0.2201	0.3152	14,845.2050
Total	**4.8297**	**43.8393**	**50.3522**	**0.3002**	**28.0786**	**0.3043**	**28.3829**	**7.6033**	**0.2890**	**7.8923**		**33,051.8440**	**33,051.8440**	**1.0591**	**2.9641**	**33,961.6265**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2036

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904		2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**		**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.9414	41.7736	14.9950	0.1675	6.8681	0.2488	7.1169	1.9773	0.2380	2.2153		18,306.0830	18,306.0830	0.8390	2.6489	19,116.4215
Worker	3.8883	2.0657	35.3572	0.1327	21.2105	0.0555	21.2660	5.6260	0.0510	5.6770		14,745.7610	14,745.7610	0.2201	0.3152	14,845.2050
Total	**4.8297**	**43.8393**	**50.3522**	**0.3002**	**28.0786**	**0.3043**	**28.3829**	**7.6033**	**0.2890**	**7.8923**		**33,051.8440**	**33,051.8440**	**1.0591**	**2.9641**	**33,961.6265**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2036

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0310		0.0408	0.0408		0.0408	0.0408	0.0000	2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**0.3278**	**2.2347**	**17.4603**	**0.0310**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.9414	41.7736	14.9950	0.1675	6.8681	0.2488	7.1169	1.9773	0.2380	2.2153		18,306.0830	18,306.0830	0.8390	2.6489	19,116.4215
Worker	3.8883	2.0657	35.3572	0.1327	21.2105	0.0555	21.2660	5.6260	0.0510	5.6770		14,745.7610	14,745.7610	0.2201	0.3152	14,845.2050
Total	**4.8297**	**43.8393**	**50.3522**	**0.3002**	**28.0786**	**0.3043**	**28.3829**	**7.6033**	**0.2890**	**7.8923**		**33,051.8440**	**33,051.8440**	**1.0591**	**2.9641**	**33,961.6265**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2036

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1405	4.8761	15.8203	0.0281		0.1874	0.1874		0.1874	0.1874		2,656.5168	2,656.5168	0.1022		2,659.0727
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1405**	**4.8761**	**15.8203**	**0.0281**		**0.1874**	**0.1874**		**0.1874**	**0.1874**		**2,656.5168**	**2,656.5168**	**0.1022**		**2,659.0727**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0226	0.0120	0.2054	7.7000e-004	0.1232	3.2000e-004	0.1235	0.0327	3.0000e-004	0.0330		85.6648	85.6648	1.2800e-003	1.8300e-003	86.2425
Total	**0.0226**	**0.0120**	**0.2054**	**7.7000e-004**	**0.1232**	**3.2000e-004**	**0.1235**	**0.0327**	**3.0000e-004**	**0.0330**		**85.6648**	**85.6648**	**1.2800e-003**	**1.8300e-003**	**86.2425**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2036

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2805	1.2154	17.2957	0.0281		0.0374	0.0374		0.0374	0.0374	0.0000	2,656.5168	2,656.5168	0.1022		2,659.0726
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2805**	**1.2154**	**17.2957**	**0.0281**		**0.0374**	**0.0374**		**0.0374**	**0.0374**	**0.0000**	**2,656.5168**	**2,656.5168**	**0.1022**		**2,659.0726**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0226	0.0120	0.2054	7.7000e-004	0.1232	3.2000e-004	0.1235	0.0327	3.0000e-004	0.0330		85.6648	85.6648	1.2800e-003	1.8300e-003	86.2425
Total	**0.0226**	**0.0120**	**0.2054**	**7.7000e-004**	**0.1232**	**3.2000e-004**	**0.1235**	**0.0327**	**3.0000e-004**	**0.0330**		**85.6648**	**85.6648**	**1.2800e-003**	**1.8300e-003**	**86.2425**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2036

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	651.9886					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1179	0.7577	1.7943	2.9700e-003		9.9000e-003	9.9000e-003		9.9000e-003	9.9000e-003		281.4481	281.4481	0.0104		281.7081
Total	**652.1065**	**0.7577**	**1.7943**	**2.9700e-003**		**9.9000e-003**	**9.9000e-003**		**9.9000e-003**	**9.9000e-003**		**281.4481**	**281.4481**	**0.0104**		**281.7081**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.7771	0.4128	7.0660	0.0265	4.2388	0.0111	4.2499	1.1243	0.0102	1.1345		2,946.8678	2,946.8678	0.0440	0.0630	2,966.7412
Total	**0.7771**	**0.4128**	**7.0660**	**0.0265**	**4.2388**	**0.0111**	**4.2499**	**1.1243**	**0.0102**	**1.1345**		**2,946.8678**	**2,946.8678**	**0.0440**	**0.0630**	**2,966.7412**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2036

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	651.9886					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0104		281.7081
Total	**652.0183**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0104**		**281.7081**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.7771	0.4128	7.0660	0.0265	4.2388	0.0111	4.2499	1.1243	0.0102	1.1345		2,946.8678	2,946.8678	0.0440	0.0630	2,966.7412
Total	**0.7771**	**0.4128**	**7.0660**	**0.0265**	**4.2388**	**0.0111**	**4.2499**	**1.1243**	**0.0102**	**1.1345**		**2,946.8678**	**2,946.8678**	**0.0440**	**0.0630**	**2,966.7412**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2037

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	651.9886					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1179	0.7577	1.7943	2.9700e-003		9.9000e-003	9.9000e-003		9.9000e-003	9.9000e-003		281.4481	281.4481	0.0104		281.7081
Total	**652.1065**	**0.7577**	**1.7943**	**2.9700e-003**		**9.9000e-003**	**9.9000e-003**		**9.9000e-003**	**9.9000e-003**		**281.4481**	**281.4481**	**0.0104**		**281.7081**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.7771	0.4128	7.0660	0.0265	4.2388	0.0111	4.2499	1.1243	0.0102	1.1345		2,946.8678	2,946.8678	0.0440	0.0630	2,966.7412
Total	**0.7771**	**0.4128**	**7.0660**	**0.0265**	**4.2388**	**0.0111**	**4.2499**	**1.1243**	**0.0102**	**1.1345**		**2,946.8678**	**2,946.8678**	**0.0440**	**0.0630**	**2,966.7412**

PMPU Construction - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2037

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	651.9886					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0104		281.7081
Total	**652.0183**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0104**		**281.7081**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.7771	0.4128	7.0660	0.0265	4.2388	0.0111	4.2499	1.1243	0.0102	1.1345		2,946.8678	2,946.8678	0.0440	0.0630	2,966.7412
Total	**0.7771**	**0.4128**	**7.0660**	**0.0265**	**4.2388**	**0.0111**	**4.2499**	**1.1243**	**0.0102**	**1.1345**		**2,946.8678**	**2,946.8678**	**0.0440**	**0.0630**	**2,966.7412**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00		
Hotel	0.00	0.00	0.00		
Office Park	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
High Turnover (Sit Down	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Office Park	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High Turnover (Sit Down Restaurant)	0.584721	0.061219	0.165591	0.108994	0.022611	0.007030	0.011356	0.006685	0.000606	0.000664	0.026637	0.000823	0.003063
Hotel	0.584721	0.061219	0.165591	0.108994	0.022611	0.007030	0.011356	0.006685	0.000606	0.000664	0.026637	0.000823	0.003063
Office Park	0.584721	0.061219	0.165591	0.108994	0.022611	0.007030	0.011356	0.006685	0.000606	0.000664	0.026637	0.000823	0.003063

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	11.6235	105.6679	88.7610	0.6340		8.0308	8.0308		8.0308	8.0308		126,801.4143	126,801.4143	2.4304	2.3247	127,554.9318
NaturalGas Unmitigated	11.6235	105.6679	88.7610	0.6340		8.0308	8.0308		8.0308	8.0308		126,801.4143	126,801.4143	2.4304	2.3247	127,554.9318

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
High Turnover (Sit Down Restaurant)	162101	1.7482	15.8922	13.3495	0.0954		1.2078	1.2078		1.2078	1.2078		19,070.6849	19,070.6849	0.3655	0.3496	19,184.0125
Hotel	900594	9.7123	88.2935	74.1666	0.5298		6.7103	6.7103		6.7103	6.7103		105,952.2411	105,952.2411	2.0308	1.9425	106,581.8623
Office Park	15117.2	0.1630	1.4821	1.2449	8.8900e-003		0.1126	0.1126		0.1126	0.1126		1,778.4883	1,778.4883	0.0341	0.0326	1,789.0570
Total		**11.6235**	**105.6678**	**88.7610**	**0.6340**		**8.0308**	**8.0308**		**8.0308**	**8.0308**		**126,801.4144**	**126,801.4144**	**2.4304**	**2.3247**	**127,554.9318**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
High Turnover (Sit Down Restaurant)	162.101	1.7482	15.8922	13.3495	0.0954		1.2078	1.2078		1.2078	1.2078		19,070.6849	19,070.6849	0.3655	0.3496	19,184.0125
Hotel	900.594	9.7123	88.2935	74.1666	0.5298		6.7103	6.7103		6.7103	6.7103		105,952.2411	105,952.2411	2.0308	1.9425	106,581.8623
Office Park	15.1172	0.1630	1.4821	1.2449	8.8900e-003		0.1126	0.1126		0.1126	0.1126		1,778.4883	1,778.4883	0.0341	0.0326	1,789.0570
Total		**11.6235**	**105.6678**	**88.7610**	**0.6340**		**8.0308**	**8.0308**		**8.0308**	**8.0308**		**126,801.4144**	**126,801.4144**	**2.4304**	**2.3247**	**127,554.9318**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	144.2819	4.0300e-003	0.4486	3.0000e-005		1.5900e-003	1.5900e-003		1.5900e-003	1.5900e-003		0.9678	0.9678	2.4900e-003		1.0301
Unmitigated	171.7904	4.0300e-003	0.4486	3.0000e-005		1.5900e-003	1.5900e-003		1.5900e-003	1.5900e-003		0.9678	0.9678	2.4900e-003		1.0301

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	39.2979					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	132.4515					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0411	4.0300e-003	0.4486	3.0000e-005		1.5900e-003	1.5900e-003		1.5900e-003	1.5900e-003		0.9678	0.9678	2.4900e-003		1.0301
Total	**171.7904**	**4.0300e-003**	**0.4486**	**3.0000e-005**		**1.5900e-003**	**1.5900e-003**		**1.5900e-003**	**1.5900e-003**		**0.9678**	**0.9678**	**2.4900e-003**		**1.0301**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	11.7894					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	132.4515					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0411	4.0300e-003	0.4486	3.0000e-005		1.5900e-003	1.5900e-003		1.5900e-003	1.5900e-003		0.9678	0.9678	2.4900e-003		1.0301
Total	**144.2819**	**4.0300e-003**	**0.4486**	**3.0000e-005**		**1.5900e-003**	**1.5900e-003**		**1.5900e-003**	**1.5900e-003**		**0.9678**	**0.9678**	**2.4900e-003**		**1.0301**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

PMPU Construction

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hotel	3,910.00	Room	130.33	5,677,320.00	0
High Turnover (Sit Down Restaurant)	340.00	1000sqft	7.81	340,000.00	0
Office Park	172.00	1000sqft	3.95	172,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2050
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	539.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Grading -

Demolition - Demo SF assumed to be the same as new construction SF

Vehicle Trips - Mobile estimated in VMT

Construction Off-road Equipment Mitigation - Tier 4 Final all; 3x daily

Area Mitigation - low VOC coatings 75 g/L

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	75

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	75
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblAreaMitigation	UseLowVOCPaintParkingValue	250	75
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	75
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	75
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblVehicleTrips	ST_TR	122.40	0.00
tblVehicleTrips	ST_TR	8.19	0.00
tblVehicleTrips	ST_TR	1.64	0.00
tblVehicleTrips	SU_TR	142.64	0.00
tblVehicleTrips	SU_TR	5.95	0.00
tblVehicleTrips	SU_TR	0.76	0.00
tblVehicleTrips	WD_TR	112.18	0.00
tblVehicleTrips	WD_TR	8.36	0.00
tblVehicleTrips	WD_TR	11.07	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

PMPU Construction - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1207	1.6952	0.8114	3.7400e-003	0.9512	0.0557	1.0069	0.1529	0.0521	0.2050	0.0000	358.4029	358.4029	0.0395	0.0411	371.6484
2022	0.4249	5.4735	3.0767	0.0115	3.5470	0.1990	3.7460	0.9771	0.1846	1.1616	0.0000	1,083.5132	1,083.5132	0.1623	0.1006	1,117.5552
2023	0.4379	4.4814	3.6913	8.2100e-003	1.4103	0.1851	1.5954	0.5094	0.1703	0.6796	0.0000	722.4809	722.4809	0.2288	4.6000e-004	728.3368
2024	1.0464	7.3904	9.8262	0.0439	3.5243	0.1387	3.6631	0.9202	0.1300	1.0502	0.0000	4,169.3526	4,169.3526	0.2161	0.3474	4,278.2789
2025	1.1311	7.9184	10.8569	0.0514	3.5808	0.1171	3.6979	0.9717	0.1105	1.0822	0.0000	4,920.9440	4,920.9440	0.2081	0.4229	5,052.1643
2026	1.0833	7.8115	10.4568	0.0502	3.5808	0.1162	3.6970	0.9717	0.1096	1.0813	0.0000	4,824.0860	4,824.0860	0.2057	0.4128	4,952.2363
2027	1.0389	7.7122	10.1132	0.0490	3.5808	0.1152	3.6960	0.9717	0.1086	1.0804	0.0000	4,728.7362	4,728.7362	0.2038	0.4028	4,853.8511
2028	0.9937	7.6005	9.7899	0.0477	3.5671	0.1137	3.6807	0.9680	0.1072	1.0752	0.0000	4,623.2545	4,623.2545	0.2016	0.3919	4,745.0795
2029	0.9568	7.5409	9.5732	0.0469	3.5808	0.1130	3.6938	0.9717	0.1066	1.0783	0.0000	4,557.1610	4,557.1610	0.2012	0.3843	4,676.7090
2030	0.9097	6.8828	9.3639	0.0465	3.5808	0.0625	3.6434	0.9717	0.0603	1.0320	0.0000	4,523.8092	4,523.8092	0.1429	0.3763	4,639.5246
2031	0.8710	6.8352	9.1706	0.0457	3.5808	0.0617	3.6425	0.9718	0.0595	1.0313	0.0000	4,459.2721	4,459.2721	0.1419	0.3695	4,572.9372
2032	0.8394	6.8233	9.0400	0.0452	3.5946	0.0612	3.6557	0.9755	0.0590	1.0345	0.0000	4,419.6847	4,419.6847	0.1415	0.3651	4,532.0108
2033	0.8023	6.7396	8.8314	0.0442	3.5671	0.0600	3.6272	0.9680	0.0580	1.0260	0.0000	4,336.1994	4,336.1994	0.1397	0.3572	4,446.1331
2034	0.7747	6.7102	8.7058	0.0437	3.5671	0.0594	3.6265	0.9680	0.0573	1.0254	0.0000	4,291.7956	4,291.7956	0.1390	0.3527	4,400.3611
2035	0.7409	6.6090	8.6276	0.0433	3.5809	0.0515	3.6323	0.9718	0.0495	1.0212	0.0000	4,269.2237	4,269.2237	0.1378	0.3500	4,376.9808
2036	6.7182	1.1064	2.5784	7.1200e-003	0.3564	0.0252	0.3816	0.0964	0.0250	0.1214	0.0000	663.0993	663.0993	0.0224	0.0303	672.6743
2037	65.2805	0.1162	0.8837	2.9700e-003	0.4138	2.1000e-003	0.4159	0.1100	2.0100e-003	0.1120	0.0000	295.2276	295.2276	4.8400e-003	5.6400e-003	297.0287
Maximum	**65.2805**	**7.9184**	**10.8569**	**0.0514**	**3.5946**	**0.1990**	**3.7460**	**0.9771**	**0.1846**	**1.1616**	**0.0000**	**4,920.9440**	**4,920.9440**	**0.2288**	**0.4229**	**5,052.1643**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

Mitigated Construction

PMPU Construction - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0437	0.8562	0.8603	3.7400e-003	0.4150	0.0133	0.4282	0.0717	0.0128	0.0845	0.0000	358.4028	358.4028	0.0395	0.0411	371.6483
2022	0.1110	1.9604	3.3373	0.0115	1.4989	0.0239	1.5228	0.4127	0.0232	0.4359	0.0000	1,083.5127	1,083.5127	0.1623	0.1006	1,117.5547
2023	0.1056	0.4319	4.3310	8.2100e-003	0.5627	0.0133	0.5760	0.2020	0.0133	0.2153	0.0000	722.4800	722.4800	0.2288	4.6000e-004	728.3360
2024	0.8617	5.4485	10.1012	0.0439	3.1262	0.0462	3.1724	0.8342	0.0441	0.8783	0.0000	4,169.3521	4,169.3521	0.2161	0.3474	4,278.2784
2025	0.9955	6.5827	11.0364	0.0514	3.5808	0.0536	3.6344	0.9717	0.0510	1.0227	0.0000	4,920.9437	4,920.9437	0.2081	0.4229	5,052.1639
2026	0.9477	6.4759	10.6363	0.0502	3.5808	0.0527	3.6335	0.9717	0.0501	1.0219	0.0000	4,824.0856	4,824.0856	0.2057	0.4128	4,952.2359
2027	0.9032	6.3766	10.2927	0.0490	3.5808	0.0516	3.6324	0.9717	0.0492	1.0209	0.0000	4,728.7358	4,728.7358	0.2038	0.4028	4,853.8508
2028	0.8585	6.2699	9.9687	0.0477	3.5671	0.0504	3.6175	0.9680	0.0480	1.0160	0.0000	4,623.2541	4,623.2541	0.2016	0.3919	4,745.0792
2029	0.8211	6.2053	9.7527	0.0469	3.5808	0.0495	3.6303	0.9717	0.0472	1.0189	0.0000	4,557.1606	4,557.1606	0.2012	0.3843	4,676.7086
2030	0.7816	6.1390	9.5339	0.0465	3.5808	0.0485	3.6294	0.9717	0.0463	1.0180	0.0000	4,523.8088	4,523.8088	0.1429	0.3763	4,639.5242
2031	0.7430	6.0914	9.3406	0.0457	3.5808	0.0477	3.6285	0.9718	0.0455	1.0173	0.0000	4,459.2717	4,459.2717	0.1419	0.3695	4,572.9368
2032	0.7108	6.0767	9.2107	0.0452	3.5946	0.0471	3.6417	0.9755	0.0450	1.0205	0.0000	4,419.6843	4,419.6843	0.1415	0.3651	4,532.0104
2033	0.6747	5.9986	9.0008	0.0442	3.5671	0.0461	3.6132	0.9680	0.0440	1.0120	0.0000	4,336.1990	4,336.1990	0.1397	0.3572	4,446.1327
2034	0.6471	5.9692	8.8753	0.0437	3.5671	0.0454	3.6125	0.9680	0.0434	1.0114	0.0000	4,291.7952	4,291.7952	0.1390	0.3527	4,400.3607
2035	0.6249	5.9661	8.8028	0.0433	3.5809	0.0450	3.6258	0.9718	0.0430	1.0148	0.0000	4,269.2233	4,269.2233	0.1378	0.3500	4,376.9804
2036	6.6129	0.6432	2.7558	7.1200e-003	0.3564	8.0900e-003	0.3645	0.0964	7.9100e-003	0.1043	0.0000	663.0990	663.0990	0.0224	0.0303	672.6739
2037	65.2717	0.0533	0.8875	2.9700e-003	0.4138	1.5000e-003	0.4153	0.1100	1.4200e-003	0.1114	0.0000	295.2276	295.2276	4.8400e-003	5.6400e-003	297.0286
Maximum	**65.2717**	**6.5827**	**11.0364**	**0.0514**	**3.5946**	**0.0536**	**3.6417**	**0.9755**	**0.0510**	**1.0227**	**0.0000**	**4,920.9437**	**4,920.9437**	**0.2288**	**0.4229**	**5,052.1639**

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**2.92**	**22.02**	**-2.65**	**0.00**	**7.73**	**58.12**	**9.24**	**7.73**	**57.57**	**12.58**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**10-14-2021**	**1-13-2022**	2.0423	1.0153
2	**1-14-2022**	**4-13-2022**	1.6923	0.8600
3	**4-14-2022**	**7-13-2022**	1.6875	0.8460
4	**7-14-2022**	**10-13-2022**	1.2330	0.1431
5	**10-14-2022**	**1-13-2023**	1.1907	0.0898
6	**1-14-2023**	**4-13-2023**	1.2193	0.1336
7	**4-14-2023**	**7-13-2023**	1.2326	0.1349
8	**7-14-2023**	**10-13-2023**	1.2462	0.1364
9	**10-14-2023**	**1-13-2024**	1.2360	0.1366
10	**1-14-2024**	**4-13-2024**	1.5561	0.7437
11	**4-14-2024**	**7-13-2024**	2.2695	1.8680
12	**7-14-2024**	**10-13-2024**	2.3077	1.9018
13	**10-14-2024**	**1-13-2025**	2.3772	1.9763
14	**1-14-2025**	**4-13-2025**	2.2471	1.8847
15	**4-14-2025**	**7-13-2025**	2.1949	1.8285
16	**7-14-2025**	**10-13-2025**	2.2319	1.8615
17	**10-14-2025**	**1-13-2026**	2.3046	1.9341
18	**1-14-2026**	**4-13-2026**	2.2085	1.8461
19	**4-14-2026**	**7-13-2026**	2.1578	1.7913
20	**7-14-2026**	**10-13-2026**	2.1940	1.8236
21	**10-14-2026**	**1-13-2027**	2.2652	1.8947
22	**1-14-2027**	**4-13-2027**	2.1725	1.8101
23	**4-14-2027**	**7-13-2027**	2.1232	1.7568
24	**7-14-2027**	**10-13-2027**	2.1588	1.7884

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

25	**10-14-2027**	**1-13-2028**	2.2288	1.8584
26	**1-14-2028**	**4-13-2028**	2.1654	1.7990
27	**4-14-2028**	**7-13-2028**	2.0934	1.7270
28	**7-14-2028**	**10-13-2028**	2.1284	1.7579
29	**10-14-2028**	**1-13-2029**	2.1966	1.8261
30	**1-14-2029**	**4-13-2029**	2.1090	1.7466
31	**4-14-2029**	**7-13-2029**	2.0622	1.6958
32	**7-14-2029**	**10-13-2029**	2.0966	1.7261
33	**10-14-2029**	**1-13-2030**	2.1426	1.7935
34	**1-14-2030**	**4-13-2030**	1.9346	1.7199
35	**4-14-2030**	**7-13-2030**	1.8873	1.6702
36	**7-14-2030**	**10-13-2030**	1.9196	1.7000
37	**10-14-2030**	**1-13-2031**	1.9862	1.7667
38	**1-14-2031**	**4-13-2031**	1.9127	1.6980
39	**4-14-2031**	**7-13-2031**	1.8665	1.6493
40	**7-14-2031**	**10-13-2031**	1.8983	1.6787
41	**10-14-2031**	**1-13-2032**	1.9641	1.7445
42	**1-14-2032**	**4-13-2032**	1.9154	1.6982
43	**4-14-2032**	**7-13-2032**	1.8488	1.6317
44	**7-14-2032**	**10-13-2032**	1.8802	1.6607
45	**10-14-2032**	**1-13-2033**	1.9453	1.7258
46	**1-14-2033**	**4-13-2033**	1.8782	1.6635
47	**4-14-2033**	**7-13-2033**	1.8336	1.6164
48	**7-14-2033**	**10-13-2033**	1.8647	1.6451
49	**10-14-2033**	**1-13-2034**	1.9290	1.7095
50	**1-14-2034**	**4-13-2034**	1.8637	1.6489
51	**4-14-2034**	**7-13-2034**	1.8196	1.6024
52	**7-14-2034**	**10-13-2034**	1.8504	1.6309
53	**10-14-2034**	**1-13-2035**	1.9103	1.6947

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54	**1-14-2035**	**4-13-2035**	1.8229	1.6360
55	**4-14-2035**	**7-13-2035**	1.7790	1.5900
56	**7-14-2035**	**10-13-2035**	1.8093	1.6182
57	**10-14-2035**	**1-13-2036**	1.8744	1.6833
58	**1-14-2036**	**4-13-2036**	0.5063	0.3515
59	**4-14-2036**	**7-13-2036**	0.1965	0.0496
60	**7-14-2036**	**10-13-2036**	0.1987	0.0502
61	**10-14-2036**	**1-13-2037**	9.6874	9.5946
62	**1-14-2037**	**4-13-2037**	21.0226	20.9995
63	**4-14-2037**	**7-13-2037**	21.2528	21.2295
64	**7-14-2037**	**9-30-2037**	18.4502	18.4300
		Highest	21.2528	21.2295

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	31.3480	3.6000e-004	0.0404	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	0.0790	0.0790	2.0000e-004	0.0000	0.0841
Energy	2.1213	19.2844	16.1989	0.1157		1.4656	1.4656		1.4656	1.4656	0.0000	42,079.6024	42,079.6024	1.6910	0.5411	42,283.1194
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	1,288.3187	0.0000	1,288.3187	76.1375	0.0000	3,191.7550
Water						0.0000	0.0000		0.0000	0.0000	73.9061	841.8523	915.7584	7.6423	0.1855	1,162.0872
Total	**33.4692**	**19.2847**	**16.2393**	**0.1157**	**0.0000**	**1.4658**	**1.4658**	**0.0000**	**1.4658**	**1.4658**	**1,362.2248**	**42,921.5336**	**44,283.7584**	**85.4710**	**0.7266**	**46,637.0457**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	26.3277	3.6000e-004	0.0404	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	0.0790	0.0790	2.0000e-004	0.0000	0.0841
Energy	2.1213	19.2844	16.1989	0.1157		1.4656	1.4656		1.4656	1.4656	0.0000	42,079.6024	42,079.6024	1.6910	0.5411	42,283.1194
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	1,288.3187	0.0000	1,288.3187	76.1375	0.0000	3,191.7550
Water						0.0000	0.0000		0.0000	0.0000	73.9061	841.8523	915.7584	7.6423	0.1855	1,162.0872
Total	**28.4489**	**19.2847**	**16.2393**	**0.1157**	**0.0000**	**1.4658**	**1.4658**	**0.0000**	**1.4658**	**1.4658**	**1,362.2248**	**42,921.5336**	**44,283.7584**	**85.4710**	**0.7266**	**46,637.0457**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**15.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/14/2021	7/20/2022	5	200	
2	Site Preparation	Site Preparation	7/21/2022	1/4/2023	5	120	
3	Grading	Grading	1/5/2023	3/13/2024	5	310	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4	Building Construction	Building Construction	3/14/2024	1/30/2036	5	3100	
5	Paving	Paving	1/31/2036	12/3/2036	5	220	
6	Architectural Coating	Architectural Coating	12/4/2036	10/7/2037	5	220	

Acres of Grading (Site Preparation Phase): 180

Acres of Grading (Grading Phase): 930

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 9,283,980; Non-Residential Outdoor: 3,094,660; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	7.00	231	0.29
Demolition	Excavators	3	8.00	158	0.38
Grading	Excavators	2	8.00	158	0.38
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	28,152.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	2,582.00	1,014.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	516.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.8790	0.0000	0.8790	0.1331	0.0000	0.1331	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0902	0.8961	0.6146	1.1100e-003		0.0442	0.0442		0.0411	0.0411	0.0000	96.9022	96.9022	0.0273	0.0000	97.5841
Total	**0.0902**	**0.8961**	**0.6146**	**1.1100e-003**	**0.8790**	**0.0442**	**0.9232**	**0.1331**	**0.0411**	**0.1742**	**0.0000**	**96.9022**	**96.9022**	**0.0273**	**0.0000**	**97.5841**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0292	0.7981	0.1854	2.6000e-003	0.0687	0.0115	0.0802	0.0189	0.0110	0.0299	0.0000	258.6054	258.6054	0.0121	0.0411	271.1404
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3200e-003	1.0100e-003	0.0114	3.0000e-005	3.4300e-003	2.0000e-005	3.4500e-003	9.1000e-004	2.0000e-005	9.3000e-004	0.0000	2.8953	2.8953	1.0000e-004	9.0000e-005	2.9239
Total	**0.0305**	**0.7991**	**0.1968**	**2.6300e-003**	**0.0721**	**0.0115**	**0.0836**	**0.0198**	**0.0110**	**0.0308**	**0.0000**	**261.5007**	**261.5007**	**0.0122**	**0.0411**	**274.0643**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3428	0.0000	0.3428	0.0519	0.0000	0.0519	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0132	0.0571	0.6635	1.1100e-003		1.7600e-003	1.7600e-003		1.7600e-003	1.7600e-003	0.0000	96.9021	96.9021	0.0273	0.0000	97.5840
Total	**0.0132**	**0.0571**	**0.6635**	**1.1100e-003**	**0.3428**	**1.7600e-003**	**0.3446**	**0.0519**	**1.7600e-003**	**0.0537**	**0.0000**	**96.9021**	**96.9021**	**0.0273**	**0.0000**	**97.5840**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0292	0.7981	0.1854	2.6000e-003	0.0687	0.0115	0.0802	0.0189	0.0110	0.0299	0.0000	258.6054	258.6054	0.0121	0.0411	271.1404
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3200e-003	1.0100e-003	0.0114	3.0000e-005	3.4300e-003	2.0000e-005	3.4500e-003	9.1000e-004	2.0000e-005	9.3000e-004	0.0000	2.8953	2.8953	1.0000e-004	9.0000e-005	2.9239
Total	**0.0305**	**0.7991**	**0.1968**	**2.6300e-003**	**0.0721**	**0.0115**	**0.0836**	**0.0198**	**0.0110**	**0.0308**	**0.0000**	**261.5007**	**261.5007**	**0.0122**	**0.0411**	**274.0643**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.2052	0.0000	2.2052	0.3340	0.0000	0.3340	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1887	1.8389	1.4725	2.7800e-003		0.0889	0.0889		0.0826	0.0826	0.0000	243.0301	243.0301	0.0683	0.0000	244.7367
Total	**0.1887**	**1.8389**	**1.4725**	**2.7800e-003**	**2.2052**	**0.0889**	**2.2941**	**0.3340**	**0.0826**	**0.4166**	**0.0000**	**243.0301**	**243.0301**	**0.0683**	**0.0000**	**244.7367**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0446	1.6947	0.3997	6.3200e-003	0.1724	0.0158	0.1881	0.0474	0.0151	0.0624	0.0000	630.8450	630.8450	0.0303	0.1002	661.4671
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-003	2.2500e-003	0.0264	8.0000e-005	8.6000e-003	5.0000e-005	8.6500e-003	2.2900e-003	5.0000e-005	2.3300e-003	0.0000	7.0731	7.0731	2.2000e-004	2.0000e-004	7.1395
Total	**0.0477**	**1.6970**	**0.4260**	**6.4000e-003**	**0.1810**	**0.0158**	**0.1968**	**0.0496**	**0.0151**	**0.0648**	**0.0000**	**637.9181**	**637.9181**	**0.0305**	**0.1004**	**668.6067**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.8600	0.0000	0.8600	0.1302	0.0000	0.1302	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0331	0.1432	1.6645	2.7800e-003		4.4100e-003	4.4100e-003		4.4100e-003	4.4100e-003	0.0000	243.0298	243.0298	0.0683	0.0000	244.7365
Total	**0.0331**	**0.1432**	**1.6645**	**2.7800e-003**	**0.8600**	**4.4100e-003**	**0.8645**	**0.1302**	**4.4100e-003**	**0.1347**	**0.0000**	**243.0298**	**243.0298**	**0.0683**	**0.0000**	**244.7365**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0446	1.6947	0.3997	6.3200e-003	0.1724	0.0158	0.1881	0.0474	0.0151	0.0624	0.0000	630.8450	630.8450	0.0303	0.1002	661.4671
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-003	2.2500e-003	0.0264	8.0000e-005	8.6000e-003	5.0000e-005	8.6500e-003	2.2900e-003	5.0000e-005	2.3300e-003	0.0000	7.0731	7.0731	2.2000e-004	2.0000e-004	7.1395
Total	**0.0477**	**1.6970**	**0.4260**	**6.4000e-003**	**0.1810**	**0.0158**	**0.1968**	**0.0496**	**0.0151**	**0.0648**	**0.0000**	**637.9181**	**637.9181**	**0.0305**	**0.1004**	**668.6067**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.1523	0.0000	1.1523	0.5913	0.0000	0.5913	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1855	1.9354	1.1523	2.2300e-003		0.0943	0.0943		0.0868	0.0868	0.0000	195.6204	195.6204	0.0633	0.0000	197.2021
Total	**0.1855**	**1.9354**	**1.1523**	**2.2300e-003**	**1.1523**	**0.0943**	**1.2467**	**0.5913**	**0.0868**	**0.6780**	**0.0000**	**195.6204**	**195.6204**	**0.0633**	**0.0000**	**197.2021**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0400e-003	2.2100e-003	0.0259	8.0000e-005	8.4400e-003	5.0000e-005	8.4900e-003	2.2400e-003	5.0000e-005	2.2900e-003	0.0000	6.9445	6.9445	2.2000e-004	2.0000e-004	7.0097
Total	**3.0400e-003**	**2.2100e-003**	**0.0259**	**8.0000e-005**	**8.4400e-003**	**5.0000e-005**	**8.4900e-003**	**2.2400e-003**	**5.0000e-005**	**2.2900e-003**	**0.0000**	**6.9445**	**6.9445**	**2.2000e-004**	**2.0000e-004**	**7.0097**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4494	0.0000	0.4494	0.2306	0.0000	0.2306	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0272	0.1180	1.2208	2.2300e-003		3.6300e-003	3.6300e-003		3.6300e-003	3.6300e-003	0.0000	195.6202	195.6202	0.0633	0.0000	197.2019
Total	**0.0272**	**0.1180**	**1.2208**	**2.2300e-003**	**0.4494**	**3.6300e-003**	**0.4530**	**0.2306**	**3.6300e-003**	**0.2342**	**0.0000**	**195.6202**	**195.6202**	**0.0633**	**0.0000**	**197.2019**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0400e-003	2.2100e-003	0.0259	8.0000e-005	8.4400e-003	5.0000e-005	8.4900e-003	2.2400e-003	5.0000e-005	2.2900e-003	0.0000	6.9445	6.9445	2.2000e-004	2.0000e-004	7.0097
Total	**3.0400e-003**	**2.2100e-003**	**0.0259**	**8.0000e-005**	**8.4400e-003**	**5.0000e-005**	**8.4900e-003**	**2.2400e-003**	**5.0000e-005**	**2.2900e-003**	**0.0000**	**6.9445**	**6.9445**	**2.2000e-004**	**2.0000e-004**	**7.0097**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1225	0.0000	0.1225	0.0252	0.0000	0.0252	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.9900e-003	0.0413	0.0274	6.0000e-005		1.9000e-003	1.9000e-003		1.7500e-003	1.7500e-003	0.0000	5.0176	5.0176	1.6200e-003	0.0000	5.0582
Total	**3.9900e-003**	**0.0413**	**0.0274**	**6.0000e-005**	**0.1225**	**1.9000e-003**	**0.1244**	**0.0252**	**1.7500e-003**	**0.0270**	**0.0000**	**5.0176**	**5.0176**	**1.6200e-003**	**0.0000**	**5.0582**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	5.0000e-005	6.2000e-004	0.0000	2.2000e-004	0.0000	2.2000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1735	0.1735	1.0000e-005	0.0000	0.1750
Total	**7.0000e-005**	**5.0000e-005**	**6.2000e-004**	**0.0000**	**2.2000e-004**	**0.0000**	**2.2000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.1735**	**0.1735**	**1.0000e-005**	**0.0000**	**0.1750**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0478	0.0000	0.0478	9.8300e-003	0.0000	9.8300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.0000e-004	3.0300e-003	0.0313	6.0000e-005		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	5.0176	5.0176	1.6200e-003	0.0000	5.0582
Total	**7.0000e-004**	**3.0300e-003**	**0.0313**	**6.0000e-005**	**0.0478**	**9.0000e-005**	**0.0479**	**9.8300e-003**	**9.0000e-005**	**9.9200e-003**	**0.0000**	**5.0176**	**5.0176**	**1.6200e-003**	**0.0000**	**5.0582**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	5.0000e-005	6.2000e-004	0.0000	2.2000e-004	0.0000	2.2000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1735	0.1735	1.0000e-005	0.0000	0.1750
Total	**7.0000e-005**	**5.0000e-005**	**6.2000e-004**	**0.0000**	**2.2000e-004**	**0.0000**	**2.2000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.1735**	**0.1735**	**1.0000e-005**	**0.0000**	**0.1750**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.2670	0.0000	1.2670	0.4786	0.0000	0.4786	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4268	4.4353	3.6046	7.9800e-003		0.1831	0.1831		0.1684	0.1684	0.0000	700.7774	700.7774	0.2267	0.0000	706.4436
Total	**0.4268**	**4.4353**	**3.6046**	**7.9800e-003**	**1.2670**	**0.1831**	**1.4500**	**0.4786**	**0.1684**	**0.6470**	**0.0000**	**700.7774**	**700.7774**	**0.2267**	**0.0000**	**706.4436**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.9500e-003	4.8100e-003	0.0587	1.8000e-004	0.0206	1.1000e-004	0.0207	5.4800e-003	1.0000e-004	5.5800e-003	0.0000	16.5124	16.5124	4.8000e-004	4.5000e-004	16.6601
Total	**6.9500e-003**	**4.8100e-003**	**0.0587**	**1.8000e-004**	**0.0206**	**1.1000e-004**	**0.0207**	**5.4800e-003**	**1.0000e-004**	**5.5800e-003**	**0.0000**	**16.5124**	**16.5124**	**4.8000e-004**	**4.5000e-004**	**16.6601**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4941	0.0000	0.4941	0.1867	0.0000	0.1867	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0979	0.4241	4.2404	7.9800e-003		0.0131	0.0131		0.0131	0.0131	0.0000	700.7766	700.7766	0.2267	0.0000	706.4427
Total	**0.0979**	**0.4241**	**4.2404**	**7.9800e-003**	**0.4941**	**0.0131**	**0.5072**	**0.1867**	**0.0131**	**0.1997**	**0.0000**	**700.7766**	**700.7766**	**0.2267**	**0.0000**	**706.4427**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.9500e-003	4.8100e-003	0.0587	1.8000e-004	0.0206	1.1000e-004	0.0207	5.4800e-003	1.0000e-004	5.5800e-003	0.0000	16.5124	16.5124	4.8000e-004	4.5000e-004	16.6601
Total	**6.9500e-003**	**4.8100e-003**	**0.0587**	**1.8000e-004**	**0.0206**	**1.1000e-004**	**0.0207**	**5.4800e-003**	**1.0000e-004**	**5.5800e-003**	**0.0000**	**16.5124**	**16.5124**	**4.8000e-004**	**4.5000e-004**	**16.6601**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.6527	0.0000	0.6527	0.1410	0.0000	0.1410	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0853	0.8580	0.7347	1.6400e-003		0.0354	0.0354		0.0326	0.0326	0.0000	144.4767	144.4767	0.0467	0.0000	145.6449
Total	**0.0853**	**0.8580**	**0.7347**	**1.6400e-003**	**0.6527**	**0.0354**	**0.6881**	**0.1410**	**0.0326**	**0.1735**	**0.0000**	**144.4767**	**144.4767**	**0.0467**	**0.0000**	**145.6449**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3500e-003	8.9000e-004	0.0113	4.0000e-005	4.2500e-003	2.0000e-005	4.2700e-003	1.1300e-003	2.0000e-005	1.1500e-003	0.0000	3.3199	3.3199	9.0000e-005	9.0000e-005	3.3483
Total	**1.3500e-003**	**8.9000e-004**	**0.0113**	**4.0000e-005**	**4.2500e-003**	**2.0000e-005**	**4.2700e-003**	**1.1300e-003**	**2.0000e-005**	**1.1500e-003**	**0.0000**	**3.3199**	**3.3199**	**9.0000e-005**	**9.0000e-005**	**3.3483**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2546	0.0000	0.2546	0.0550	0.0000	0.0550	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0202	0.0875	0.8745	1.6400e-003		2.6900e-003	2.6900e-003		2.6900e-003	2.6900e-003	0.0000	144.4766	144.4766	0.0467	0.0000	145.6447
Total	**0.0202**	**0.0875**	**0.8745**	**1.6400e-003**	**0.2546**	**2.6900e-003**	**0.2573**	**0.0550**	**2.6900e-003**	**0.0577**	**0.0000**	**144.4766**	**144.4766**	**0.0467**	**0.0000**	**145.6447**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3500e-003	8.9000e-004	0.0113	4.0000e-005	4.2500e-003	2.0000e-005	4.2700e-003	1.1300e-003	2.0000e-005	1.1500e-003	0.0000	3.3199	3.3199	9.0000e-005	9.0000e-005	3.3483
Total	**1.3500e-003**	**8.9000e-004**	**0.0113**	**4.0000e-005**	**4.2500e-003**	**2.0000e-005**	**4.2700e-003**	**1.1300e-003**	**2.0000e-005**	**1.1500e-003**	**0.0000**	**3.3199**	**3.3199**	**9.0000e-005**	**9.0000e-005**	**3.3483**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1538	1.4049	1.6894	2.8200e-003		0.0641	0.0641		0.0603	0.0603	0.0000	242.2823	242.2823	0.0573	0.0000	243.7146
Total	**0.1538**	**1.4049**	**1.6894**	**2.8200e-003**		**0.0641**	**0.0641**		**0.0603**	**0.0603**	**0.0000**	**242.2823**	**242.2823**	**0.0573**	**0.0000**	**243.7146**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1197	4.6722	1.6208	0.0213	0.7037	0.0279	0.7315	0.2032	0.0267	0.2298	0.0000	2,089.1187	2,089.1187	0.0657	0.3027	2,180.9594
Worker	0.6863	0.4545	5.7700	0.0181	2.1637	0.0114	2.1751	0.5750	0.0105	0.5854	0.0000	1,690.1548	1,690.1548	0.0463	0.0446	1,704.6117
Total	**0.8060**	**5.1267**	**7.3908**	**0.0394**	**2.8674**	**0.0392**	**2.9066**	**0.7781**	**0.0371**	**0.8153**	**0.0000**	**3,779.2736**	**3,779.2736**	**0.1120**	**0.3473**	**3,885.5710**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0343	0.2335	1.8246	2.8200e-003		4.2600e-003	4.2600e-003		4.2600e-003	4.2600e-003	0.0000	242.2820	242.2820	0.0573	0.0000	243.7144
Total	**0.0343**	**0.2335**	**1.8246**	**2.8200e-003**		**4.2600e-003**	**4.2600e-003**		**4.2600e-003**	**4.2600e-003**	**0.0000**	**242.2820**	**242.2820**	**0.0573**	**0.0000**	**243.7144**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1197	4.6722	1.6208	0.0213	0.7037	0.0279	0.7315	0.2032	0.0267	0.2298	0.0000	2,089.1187	2,089.1187	0.0657	0.3027	2,180.9594
Worker	0.6863	0.4545	5.7700	0.0181	2.1637	0.0114	2.1751	0.5750	0.0105	0.5854	0.0000	1,690.1548	1,690.1548	0.0463	0.0446	1,704.6117
Total	**0.8060**	**5.1267**	**7.3908**	**0.0394**	**2.8674**	**0.0392**	**2.9066**	**0.7781**	**0.0371**	**0.8153**	**0.0000**	**3,779.2736**	**3,779.2736**	**0.1120**	**0.3473**	**3,885.5710**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1448	5.7772	1.9905	0.0261	0.8787	0.0347	0.9134	0.2537	0.0332	0.2869	0.0000	2,559.1690	2,559.1690	0.0842	0.3706	2,671.7047
Worker	0.8079	0.5139	6.7673	0.0218	2.7021	0.0136	2.7157	0.7180	0.0125	0.7305	0.0000	2,059.1202	2,059.1202	0.0527	0.0523	2,076.0261
Total	**0.9527**	**6.2911**	**8.7578**	**0.0479**	**3.5808**	**0.0483**	**3.6291**	**0.9717**	**0.0457**	**1.0174**	**0.0000**	**4,618.2891**	**4,618.2891**	**0.1369**	**0.4229**	**4,747.7307**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0428	0.2916	2.2786	3.5200e-003		5.3200e-003	5.3200e-003		5.3200e-003	5.3200e-003	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.0428**	**0.2916**	**2.2786**	**3.5200e-003**		**5.3200e-003**	**5.3200e-003**		**5.3200e-003**	**5.3200e-003**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1448	5.7772	1.9905	0.0261	0.8787	0.0347	0.9134	0.2537	0.0332	0.2869	0.0000	2,559.1690	2,559.1690	0.0842	0.3706	2,671.7047
Worker	0.8079	0.5139	6.7673	0.0218	2.7021	0.0136	2.7157	0.7180	0.0125	0.7305	0.0000	2,059.1202	2,059.1202	0.0527	0.0523	2,076.0261
Total	**0.9527**	**6.2911**	**8.7578**	**0.0479**	**3.5808**	**0.0483**	**3.6291**	**0.9717**	**0.0457**	**1.0174**	**0.0000**	**4,618.2891**	**4,618.2891**	**0.1369**	**0.4229**	**4,747.7307**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1408	5.7151	1.9662	0.0255	0.8787	0.0344	0.9131	0.2537	0.0329	0.2866	0.0000	2,510.3119	2,510.3119	0.0863	0.3633	2,620.7427
Worker	0.7641	0.4692	6.3916	0.0211	2.7021	0.0129	2.7150	0.7180	0.0119	0.7299	0.0000	2,011.1192	2,011.1192	0.0483	0.0494	2,027.0600
Total	**0.9049**	**6.1842**	**8.3578**	**0.0466**	**3.5808**	**0.0473**	**3.6282**	**0.9717**	**0.0448**	**1.0166**	**0.0000**	**4,521.4311**	**4,521.4311**	**0.1346**	**0.4128**	**4,647.8028**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0428	0.2916	2.2786	3.5200e-003		5.3200e-003	5.3200e-003		5.3200e-003	5.3200e-003	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.0428**	**0.2916**	**2.2786**	**3.5200e-003**		**5.3200e-003**	**5.3200e-003**		**5.3200e-003**	**5.3200e-003**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1408	5.7151	1.9662	0.0255	0.8787	0.0344	0.9131	0.2537	0.0329	0.2866	0.0000	2,510.3119	2,510.3119	0.0863	0.3633	2,620.7427
Worker	0.7641	0.4692	6.3916	0.0211	2.7021	0.0129	2.7150	0.7180	0.0119	0.7299	0.0000	2,011.1192	2,011.1192	0.0483	0.0494	2,027.0600
Total	**0.9049**	**6.1842**	**8.3578**	**0.0466**	**3.5808**	**0.0473**	**3.6282**	**0.9717**	**0.0448**	**1.0166**	**0.0000**	**4,521.4311**	**4,521.4311**	**0.1346**	**0.4128**	**4,647.8028**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1374	5.6541	1.9465	0.0250	0.8787	0.0341	0.9129	0.2537	0.0326	0.2864	0.0000	2,458.4115	2,458.4115	0.0882	0.3558	2,566.6305
Worker	0.7230	0.4308	6.0677	0.0205	2.7021	0.0122	2.7143	0.7180	0.0112	0.7292	0.0000	1,967.6698	1,967.6698	0.0444	0.0470	1,982.7871
Total	**0.8605**	**6.0849**	**8.0142**	**0.0455**	**3.5808**	**0.0463**	**3.6271**	**0.9717**	**0.0439**	**1.0156**	**0.0000**	**4,426.0813**	**4,426.0813**	**0.1326**	**0.4028**	**4,549.4176**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0428	0.2916	2.2786	3.5200e-003		5.3200e-003	5.3200e-003		5.3200e-003	5.3200e-003	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.0428**	**0.2916**	**2.2786**	**3.5200e-003**		**5.3200e-003**	**5.3200e-003**		**5.3200e-003**	**5.3200e-003**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1374	5.6541	1.9465	0.0250	0.8787	0.0341	0.9129	0.2537	0.0326	0.2864	0.0000	2,458.4115	2,458.4115	0.0882	0.3558	2,566.6305
Worker	0.7230	0.4308	6.0677	0.0205	2.7021	0.0122	2.7143	0.7180	0.0112	0.7292	0.0000	1,967.6698	1,967.6698	0.0444	0.0470	1,982.7871
Total	**0.8605**	**6.0849**	**8.0142**	**0.0455**	**3.5808**	**0.0463**	**3.6271**	**0.9717**	**0.0439**	**1.0156**	**0.0000**	**4,426.0813**	**4,426.0813**	**0.1326**	**0.4028**	**4,549.4176**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1778	1.6211	2.0910	3.5000e-003		0.0686	0.0686		0.0645	0.0645	0.0000	301.4953	301.4953	0.0709	0.0000	303.2671
Total	**0.1778**	**1.6211**	**2.0910**	**3.5000e-003**		**0.0686**	**0.0686**		**0.0645**	**0.0645**	**0.0000**	**301.4953**	**301.4953**	**0.0709**	**0.0000**	**303.2671**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1343	5.5827	1.9270	0.0243	0.8754	0.0337	0.9091	0.2528	0.0322	0.2850	0.0000	2,399.9714	2,399.9714	0.0899	0.3471	2,505.6624
Worker	0.6816	0.3967	5.7719	0.0199	2.6917	0.0114	2.7031	0.7153	0.0105	0.7257	0.0000	1,921.7877	1,921.7877	0.0409	0.0448	1,936.1500
Total	**0.8159**	**5.9794**	**7.6989**	**0.0442**	**3.5671**	**0.0451**	**3.6122**	**0.9680**	**0.0427**	**1.0107**	**0.0000**	**4,321.7592**	**4,321.7592**	**0.1307**	**0.3919**	**4,441.8124**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2028

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0426	0.2905	2.2698	3.5000e-003		5.3000e-003	5.3000e-003		5.3000e-003	5.3000e-003	0.0000	301.4949	301.4949	0.0709	0.0000	303.2667
Total	**0.0426**	**0.2905**	**2.2698**	**3.5000e-003**		**5.3000e-003**	**5.3000e-003**		**5.3000e-003**	**5.3000e-003**	**0.0000**	**301.4949**	**301.4949**	**0.0709**	**0.0000**	**303.2667**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1343	5.5827	1.9270	0.0243	0.8754	0.0337	0.9091	0.2528	0.0322	0.2850	0.0000	2,399.9714	2,399.9714	0.0899	0.3471	2,505.6624
Worker	0.6816	0.3967	5.7719	0.0199	2.6917	0.0114	2.7031	0.7153	0.0105	0.7257	0.0000	1,921.7877	1,921.7877	0.0409	0.0448	1,936.1500
Total	**0.8159**	**5.9794**	**7.6989**	**0.0442**	**3.5671**	**0.0451**	**3.6122**	**0.9680**	**0.0427**	**1.0107**	**0.0000**	**4,321.7592**	**4,321.7592**	**0.1307**	**0.3919**	**4,441.8124**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1323	5.5439	1.9233	0.0239	0.8788	0.0335	0.9122	0.2537	0.0320	0.2858	0.0000	2,359.7233	2,359.7233	0.0921	0.3411	2,463.6817
Worker	0.6460	0.3698	5.5508	0.0195	2.7021	0.0107	2.7127	0.7180	9.8000e-003	0.7278	0.0000	1,894.7828	1,894.7828	0.0380	0.0432	1,908.5938
Total	**0.7783**	**5.9136**	**7.4742**	**0.0434**	**3.5808**	**0.0441**	**3.6250**	**0.9717**	**0.0418**	**1.0136**	**0.0000**	**4,254.5061**	**4,254.5061**	**0.1301**	**0.3843**	**4,372.2755**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2029

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0428	0.2916	2.2786	3.5200e-003		5.3200e-003	5.3200e-003		5.3200e-003	5.3200e-003	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.0428**	**0.2916**	**2.2786**	**3.5200e-003**		**5.3200e-003**	**5.3200e-003**		**5.3200e-003**	**5.3200e-003**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1323	5.5439	1.9233	0.0239	0.8788	0.0335	0.9122	0.2537	0.0320	0.2858	0.0000	2,359.7233	2,359.7233	0.0921	0.3411	2,463.6817
Worker	0.6460	0.3698	5.5508	0.0195	2.7021	0.0107	2.7127	0.7180	9.8000e-003	0.7278	0.0000	1,894.7828	1,894.7828	0.0380	0.0432	1,908.5938
Total	**0.7783**	**5.9136**	**7.4742**	**0.0434**	**3.5808**	**0.0441**	**3.6250**	**0.9717**	**0.0418**	**1.0136**	**0.0000**	**4,254.5061**	**4,254.5061**	**0.1301**	**0.3843**	**4,372.2755**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0336	343.0336	0.0138	0.0000	343.3777
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0336**	**343.0336**	**0.0138**	**0.0000**	**343.3777**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1304	5.5029	1.9170	0.0234	0.8788	0.0333	0.9120	0.2537	0.0318	0.2855	0.0000	2,316.2038	2,316.2038	0.0939	0.3347	2,418.2934
Worker	0.6084	0.3445	5.3384	0.0190	2.7021	9.9500e-003	2.7120	0.7180	9.1500e-003	0.7272	0.0000	1,864.5718	1,864.5718	0.0353	0.0416	1,877.8536
Total	**0.7388**	**5.8474**	**7.2554**	**0.0424**	**3.5808**	**0.0432**	**3.6240**	**0.9718**	**0.0410**	**1.0127**	**0.0000**	**4,180.7756**	**4,180.7756**	**0.1292**	**0.3763**	**4,296.1469**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2030

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0428	0.2916	2.2786	4.0400e-003		5.3200e-003	5.3200e-003		5.3200e-003	5.3200e-003	0.0000	343.0332	343.0332	0.0138	0.0000	343.3773
Total	**0.0428**	**0.2916**	**2.2786**	**4.0400e-003**		**5.3200e-003**	**5.3200e-003**		**5.3200e-003**	**5.3200e-003**	**0.0000**	**343.0332**	**343.0332**	**0.0138**	**0.0000**	**343.3773**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1304	5.5029	1.9170	0.0234	0.8788	0.0333	0.9120	0.2537	0.0318	0.2855	0.0000	2,316.2038	2,316.2038	0.0939	0.3347	2,418.2934
Worker	0.6084	0.3445	5.3384	0.0190	2.7021	9.9500e-003	2.7120	0.7180	9.1500e-003	0.7272	0.0000	1,864.5718	1,864.5718	0.0353	0.0416	1,877.8536
Total	**0.7388**	**5.8474**	**7.2554**	**0.0424**	**3.5808**	**0.0432**	**3.6240**	**0.9718**	**0.0410**	**1.0127**	**0.0000**	**4,180.7756**	**4,180.7756**	**0.1292**	**0.3763**	**4,296.1469**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2031

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0336	343.0336	0.0138	0.0000	343.3777
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0336**	**343.0336**	**0.0138**	**0.0000**	**343.3777**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1289	5.4780	1.9142	0.0230	0.8788	0.0331	0.9118	0.2537	0.0316	0.2854	0.0000	2,278.4789	2,278.4789	0.0953	0.3293	2,378.9824
Worker	0.5713	0.3218	5.1478	0.0186	2.7021	9.3000e-003	2.7114	0.7180	8.5600e-003	0.7266	0.0000	1,837.7595	1,837.7595	0.0328	0.0403	1,850.5771
Total	**0.7002**	**5.7998**	**7.0621**	**0.0417**	**3.5808**	**0.0424**	**3.6232**	**0.9718**	**0.0402**	**1.0119**	**0.0000**	**4,116.2384**	**4,116.2384**	**0.1281**	**0.3695**	**4,229.5595**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2031

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0428	0.2916	2.2786	4.0400e-003		5.3200e-003	5.3200e-003		5.3200e-003	5.3200e-003	0.0000	343.0332	343.0332	0.0138	0.0000	343.3773
Total	**0.0428**	**0.2916**	**2.2786**	**4.0400e-003**		**5.3200e-003**	**5.3200e-003**		**5.3200e-003**	**5.3200e-003**	**0.0000**	**343.0332**	**343.0332**	**0.0138**	**0.0000**	**343.3773**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1289	5.4780	1.9142	0.0230	0.8788	0.0331	0.9118	0.2537	0.0316	0.2854	0.0000	2,278.4789	2,278.4789	0.0953	0.3293	2,378.9824
Worker	0.5713	0.3218	5.1478	0.0186	2.7021	9.3000e-003	2.7114	0.7180	8.5600e-003	0.7266	0.0000	1,837.7595	1,837.7595	0.0328	0.0403	1,850.5771
Total	**0.7002**	**5.7998**	**7.0621**	**0.0417**	**3.5808**	**0.0424**	**3.6232**	**0.9718**	**0.0402**	**1.0119**	**0.0000**	**4,116.2384**	**4,116.2384**	**0.1281**	**0.3695**	**4,229.5595**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2032

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1715	1.0394	2.1166	4.0600e-003		0.0194	0.0194		0.0194	0.0194	0.0000	344.3479	344.3479	0.0138	0.0000	344.6933
Total	**0.1715**	**1.0394**	**2.1166**	**4.0600e-003**		**0.0194**	**0.0194**		**0.0194**	**0.0194**	**0.0000**	**344.3479**	**344.3479**	**0.0138**	**0.0000**	**344.6933**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1283	5.4800	1.9224	0.0228	0.8821	0.0330	0.9152	0.2547	0.0316	0.2863	0.0000	2,254.0398	2,254.0398	0.0970	0.3258	2,353.5462
Worker	0.5396	0.3040	5.0011	0.0183	2.7124	8.7400e-003	2.7212	0.7208	8.0400e-003	0.7288	0.0000	1,821.2970	1,821.2970	0.0307	0.0393	1,833.7713
Total	**0.6679**	**5.7839**	**6.9235**	**0.0411**	**3.5946**	**0.0418**	**3.6363**	**0.9755**	**0.0396**	**1.0151**	**0.0000**	**4,075.3367**	**4,075.3367**	**0.1277**	**0.3651**	**4,187.3175**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2032

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0429	0.2928	2.2873	4.0600e-003		5.3400e-003	5.3400e-003		5.3400e-003	5.3400e-003	0.0000	344.3475	344.3475	0.0138	0.0000	344.6929
Total	**0.0429**	**0.2928**	**2.2873**	**4.0600e-003**		**5.3400e-003**	**5.3400e-003**		**5.3400e-003**	**5.3400e-003**	**0.0000**	**344.3475**	**344.3475**	**0.0138**	**0.0000**	**344.6929**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1283	5.4800	1.9224	0.0228	0.8821	0.0330	0.9152	0.2547	0.0316	0.2863	0.0000	2,254.0398	2,254.0398	0.0970	0.3258	2,353.5462
Worker	0.5396	0.3040	5.0011	0.0183	2.7124	8.7400e-003	2.7212	0.7208	8.0400e-003	0.7288	0.0000	1,821.2970	1,821.2970	0.0307	0.0393	1,833.7713
Total	**0.6679**	**5.7839**	**6.9235**	**0.0411**	**3.5946**	**0.0418**	**3.6363**	**0.9755**	**0.0396**	**1.0151**	**0.0000**	**4,075.3367**	**4,075.3367**	**0.1277**	**0.3651**	**4,187.3175**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2033

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.7193	341.7193	0.0137	0.0000	342.0621
Total	**0.1702**	**1.0315**	**2.1004**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.7193**	**341.7193**	**0.0137**	**0.0000**	**342.0621**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1266	5.4221	1.9110	0.0223	0.8754	0.0326	0.9080	0.2528	0.0312	0.2840	0.0000	2,207.4246	2,207.4246	0.0974	0.3191	2,304.9606
Worker	0.5055	0.2860	4.8200	0.0179	2.6917	8.1400e-003	2.6999	0.7153	7.4900e-003	0.7228	0.0000	1,787.0555	1,787.0555	0.0286	0.0381	1,799.1105
Total	**0.6321**	**5.7081**	**6.7310**	**0.0402**	**3.5671**	**0.0408**	**3.6079**	**0.9680**	**0.0387**	**1.0067**	**0.0000**	**3,994.4801**	**3,994.4801**	**0.1260**	**0.3572**	**4,104.0711**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2033

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0426	0.2905	2.2698	4.0200e-003		5.3000e-003	5.3000e-003		5.3000e-003	5.3000e-003	0.0000	341.7189	341.7189	0.0137	0.0000	342.0617
Total	**0.0426**	**0.2905**	**2.2698**	**4.0200e-003**		**5.3000e-003**	**5.3000e-003**		**5.3000e-003**	**5.3000e-003**	**0.0000**	**341.7189**	**341.7189**	**0.0137**	**0.0000**	**342.0617**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1266	5.4221	1.9110	0.0223	0.8754	0.0326	0.9080	0.2528	0.0312	0.2840	0.0000	2,207.4246	2,207.4246	0.0974	0.3191	2,304.9606
Worker	0.5055	0.2860	4.8200	0.0179	2.6917	8.1400e-003	2.6999	0.7153	7.4900e-003	0.7228	0.0000	1,787.0555	1,787.0555	0.0286	0.0381	1,799.1105
Total	**0.6321**	**5.7081**	**6.7310**	**0.0402**	**3.5671**	**0.0408**	**3.6079**	**0.9680**	**0.0387**	**1.0067**	**0.0000**	**3,994.4801**	**3,994.4801**	**0.1260**	**0.3572**	**4,104.0711**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2034

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.7193	341.7193	0.0137	0.0000	342.0621
Total	**0.1702**	**1.0315**	**2.1004**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.7193**	**341.7193**	**0.0137**	**0.0000**	**342.0621**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1260	5.4057	1.9148	0.0220	0.8754	0.0325	0.9079	0.2528	0.0311	0.2838	0.0000	2,180.7169	2,180.7169	0.0984	0.3154	2,277.1589
Worker	0.4785	0.2730	4.6906	0.0176	2.6917	7.6500e-003	2.6994	0.7153	7.0400e-003	0.7223	0.0000	1,769.3594	1,769.3594	0.0268	0.0373	1,781.1402
Total	**0.6045**	**5.6787**	**6.6054**	**0.0396**	**3.5671**	**0.0401**	**3.6072**	**0.9680**	**0.0381**	**1.0061**	**0.0000**	**3,950.0763**	**3,950.0763**	**0.1253**	**0.3527**	**4,058.2990**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2034

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0426	0.2905	2.2698	4.0200e-003		5.3000e-003	5.3000e-003		5.3000e-003	5.3000e-003	0.0000	341.7189	341.7189	0.0137	0.0000	342.0617
Total	**0.0426**	**0.2905**	**2.2698**	**4.0200e-003**		**5.3000e-003**	**5.3000e-003**		**5.3000e-003**	**5.3000e-003**	**0.0000**	**341.7189**	**341.7189**	**0.0137**	**0.0000**	**342.0617**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1260	5.4057	1.9148	0.0220	0.8754	0.0325	0.9079	0.2528	0.0311	0.2838	0.0000	2,180.7169	2,180.7169	0.0984	0.3154	2,277.1589
Worker	0.4785	0.2730	4.6906	0.0176	2.6917	7.6500e-003	2.6994	0.7153	7.0400e-003	0.7223	0.0000	1,769.3594	1,769.3594	0.0268	0.0373	1,781.1402
Total	**0.6045**	**5.6787**	**6.6054**	**0.0396**	**3.5671**	**0.0401**	**3.6072**	**0.9680**	**0.0381**	**1.0061**	**0.0000**	**3,950.0763**	**3,950.0763**	**0.1253**	**0.3527**	**4,058.2990**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2035

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118	0.0000	343.0336	343.0336	0.0128	0.0000	343.3530
Total	**0.1588**	**0.9346**	**2.1034**	**4.0400e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**343.0336**	**343.0336**	**0.0128**	**0.0000**	**343.3530**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1260	5.4105	1.9254	0.0218	0.8788	0.0324	0.9112	0.2537	0.0310	0.2848	0.0000	2,165.0657	2,165.0657	0.0996	0.3132	2,260.8963
Worker	0.4561	0.2640	4.5989	0.0175	2.7021	7.2400e-003	2.7093	0.7180	6.6600e-003	0.7247	0.0000	1,761.1244	1,761.1244	0.0254	0.0368	1,772.7314
Total	**0.5822**	**5.6744**	**6.5243**	**0.0393**	**3.5809**	**0.0397**	**3.6205**	**0.9718**	**0.0377**	**1.0094**	**0.0000**	**3,926.1901**	**3,926.1901**	**0.1250**	**0.3500**	**4,033.6277**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2035

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0428	0.2916	2.2786	4.0400e-003		5.3200e-003	5.3200e-003		5.3200e-003	5.3200e-003	0.0000	343.0332	343.0332	0.0128	0.0000	343.3526
Total	**0.0428**	**0.2916**	**2.2786**	**4.0400e-003**		**5.3200e-003**	**5.3200e-003**		**5.3200e-003**	**5.3200e-003**	**0.0000**	**343.0332**	**343.0332**	**0.0128**	**0.0000**	**343.3526**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1260	5.4105	1.9254	0.0218	0.8788	0.0324	0.9112	0.2537	0.0310	0.2848	0.0000	2,165.0657	2,165.0657	0.0996	0.3132	2,260.8963
Worker	0.4561	0.2640	4.5989	0.0175	2.7021	7.2400e-003	2.7093	0.7180	6.6600e-003	0.7247	0.0000	1,761.1244	1,761.1244	0.0254	0.0368	1,772.7314
Total	**0.5822**	**5.6744**	**6.5243**	**0.0393**	**3.5809**	**0.0397**	**3.6205**	**0.9718**	**0.0377**	**1.0094**	**0.0000**	**3,926.1901**	**3,926.1901**	**0.1250**	**0.3500**	**4,033.6277**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2036

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0134	0.0788	0.1773	3.4000e-004		9.9000e-004	9.9000e-004		9.9000e-004	9.9000e-004	0.0000	28.9147	28.9147	1.0800e-003	0.0000	28.9416
Total	**0.0134**	**0.0788**	**0.1773**	**3.4000e-004**		**9.9000e-004**	**9.9000e-004**		**9.9000e-004**	**9.9000e-004**	**0.0000**	**28.9147**	**28.9147**	**1.0800e-003**	**0.0000**	**28.9416**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0106	0.4561	0.1623	1.8400e-003	0.0741	2.7300e-003	0.0768	0.0214	2.6100e-003	0.0240	0.0000	182.4960	182.4960	8.4000e-003	0.0264	190.5736
Worker	0.0385	0.0223	0.3877	1.4700e-003	0.2278	6.1000e-004	0.2284	0.0605	5.6000e-004	0.0611	0.0000	148.4473	148.4473	2.1400e-003	3.1000e-003	149.4256
Total	**0.0491**	**0.4783**	**0.5499**	**3.3100e-003**	**0.3018**	**3.3400e-003**	**0.3052**	**0.0819**	**3.1700e-003**	**0.0851**	**0.0000**	**330.9432**	**330.9432**	**0.0105**	**0.0295**	**339.9993**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2036

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.6100e-003	0.0246	0.1921	3.4000e-004		4.5000e-004	4.5000e-004		4.5000e-004	4.5000e-004	0.0000	28.9147	28.9147	1.0800e-003	0.0000	28.9416
Total	**3.6100e-003**	**0.0246**	**0.1921**	**3.4000e-004**		**4.5000e-004**	**4.5000e-004**		**4.5000e-004**	**4.5000e-004**	**0.0000**	**28.9147**	**28.9147**	**1.0800e-003**	**0.0000**	**28.9416**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0106	0.4561	0.1623	1.8400e-003	0.0741	2.7300e-003	0.0768	0.0214	2.6100e-003	0.0240	0.0000	182.4960	182.4960	8.4000e-003	0.0264	190.5736
Worker	0.0385	0.0223	0.3877	1.4700e-003	0.2278	6.1000e-004	0.2284	0.0605	5.6000e-004	0.0611	0.0000	148.4473	148.4473	2.1400e-003	3.1000e-003	149.4256
Total	**0.0491**	**0.4783**	**0.5499**	**3.3100e-003**	**0.3018**	**3.3400e-003**	**0.3052**	**0.0819**	**3.1700e-003**	**0.0851**	**0.0000**	**330.9432**	**330.9432**	**0.0105**	**0.0295**	**339.9993**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2036

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1255	0.5364	1.7402	3.0900e-003		0.0206	0.0206		0.0206	0.0206	0.0000	265.0947	265.0947	0.0102	0.0000	265.3497
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1255**	**0.5364**	**1.7402**	**3.0900e-003**		**0.0206**	**0.0206**		**0.0206**	**0.0206**	**0.0000**	**265.0947**	**265.0947**	**0.0102**	**0.0000**	**265.3497**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2300e-003	1.2900e-003	0.0225	9.0000e-005	0.0132	4.0000e-005	0.0133	3.5200e-003	3.0000e-005	3.5500e-003	0.0000	8.6240	8.6240	1.2000e-004	1.8000e-004	8.6808
Total	**2.2300e-003**	**1.2900e-003**	**0.0225**	**9.0000e-005**	**0.0132**	**4.0000e-005**	**0.0133**	**3.5200e-003**	**3.0000e-005**	**3.5500e-003**	**0.0000**	**8.6240**	**8.6240**	**1.2000e-004**	**1.8000e-004**	**8.6808**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2036

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0309	0.1337	1.9025	3.0900e-003		4.1100e-003	4.1100e-003		4.1100e-003	4.1100e-003	0.0000	265.0944	265.0944	0.0102	0.0000	265.3494
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0309**	**0.1337**	**1.9025**	**3.0900e-003**		**4.1100e-003**	**4.1100e-003**		**4.1100e-003**	**4.1100e-003**	**0.0000**	**265.0944**	**265.0944**	**0.0102**	**0.0000**	**265.3494**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2300e-003	1.2900e-003	0.0225	9.0000e-005	0.0132	4.0000e-005	0.0133	3.5200e-003	3.0000e-005	3.5500e-003	0.0000	8.6240	8.6240	1.2000e-004	1.8000e-004	8.6808
Total	**2.2300e-003**	**1.2900e-003**	**0.0225**	**9.0000e-005**	**0.0132**	**4.0000e-005**	**0.0133**	**3.5200e-003**	**3.0000e-005**	**3.5500e-003**	**0.0000**	**8.6240**	**8.6240**	**1.2000e-004**	**1.8000e-004**	**8.6808**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2036

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	6.5199					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1800e-003	7.5800e-003	0.0179	3.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	2.5533	2.5533	9.0000e-005	0.0000	2.5556
Total	**6.5211**	**7.5800e-003**	**0.0179**	**3.0000e-005**		**1.0000e-004**	**1.0000e-004**		**1.0000e-004**	**1.0000e-004**	**0.0000**	**2.5533**	**2.5533**	**9.0000e-005**	**0.0000**	**2.5556**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.9800e-003	4.0400e-003	0.0704	2.7000e-004	0.0414	1.1000e-004	0.0415	0.0110	1.0000e-004	0.0111	0.0000	26.9695	26.9695	3.9000e-004	5.6000e-004	27.1473
Total	**6.9800e-003**	**4.0400e-003**	**0.0704**	**2.7000e-004**	**0.0414**	**1.1000e-004**	**0.0415**	**0.0110**	**1.0000e-004**	**0.0111**	**0.0000**	**26.9695**	**26.9695**	**3.9000e-004**	**5.6000e-004**	**27.1473**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2036

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	6.5199					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.0000e-004	1.2900e-003	0.0183	3.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	2.5533	2.5533	9.0000e-005	0.0000	2.5556
Total	**6.5202**	**1.2900e-003**	**0.0183**	**3.0000e-005**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**2.5533**	**2.5533**	**9.0000e-005**	**0.0000**	**2.5556**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.9800e-003	4.0400e-003	0.0704	2.7000e-004	0.0414	1.1000e-004	0.0415	0.0110	1.0000e-004	0.0111	0.0000	26.9695	26.9695	3.9000e-004	5.6000e-004	27.1473
Total	**6.9800e-003**	**4.0400e-003**	**0.0704**	**2.7000e-004**	**0.0414**	**1.1000e-004**	**0.0415**	**0.0110**	**1.0000e-004**	**0.0111**	**0.0000**	**26.9695**	**26.9695**	**3.9000e-004**	**5.6000e-004**	**27.1473**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2037

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	65.1989					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0118	0.0758	0.1794	3.0000e-004		9.9000e-004	9.9000e-004		9.9000e-004	9.9000e-004	0.0000	25.5325	25.5325	9.4000e-004	0.0000	25.5561
Total	**65.2107**	**0.0758**	**0.1794**	**3.0000e-004**		**9.9000e-004**	**9.9000e-004**		**9.9000e-004**	**9.9000e-004**	**0.0000**	**25.5325**	**25.5325**	**9.4000e-004**	**0.0000**	**25.5561**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0699	0.0404	0.7043	2.6800e-003	0.4138	1.1100e-003	0.4149	0.1100	1.0200e-003	0.1110	0.0000	269.6951	269.6951	3.8900e-003	5.6400e-003	271.4725
Total	**0.0699**	**0.0404**	**0.7043**	**2.6800e-003**	**0.4138**	**1.1100e-003**	**0.4149**	**0.1100**	**1.0200e-003**	**0.1110**	**0.0000**	**269.6951**	**269.6951**	**3.8900e-003**	**5.6400e-003**	**271.4725**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2037

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	65.1989					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9700e-003	0.0129	0.1832	3.0000e-004		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004	0.0000	25.5325	25.5325	9.4000e-004	0.0000	25.5561
Total	**65.2018**	**0.0129**	**0.1832**	**3.0000e-004**		**4.0000e-004**	**4.0000e-004**		**4.0000e-004**	**4.0000e-004**	**0.0000**	**25.5325**	**25.5325**	**9.4000e-004**	**0.0000**	**25.5561**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0699	0.0404	0.7043	2.6800e-003	0.4138	1.1100e-003	0.4149	0.1100	1.0200e-003	0.1110	0.0000	269.6951	269.6951	3.8900e-003	5.6400e-003	271.4725
Total	**0.0699**	**0.0404**	**0.7043**	**2.6800e-003**	**0.4138**	**1.1100e-003**	**0.4149**	**0.1100**	**1.0200e-003**	**0.1110**	**0.0000**	**269.6951**	**269.6951**	**3.8900e-003**	**5.6400e-003**	**271.4725**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00		
Hotel	0.00	0.00	0.00		
Office Park	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
High Turnover (Sit Down	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Office Park	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High Turnover (Sit Down Restaurant)	0.584721	0.061219	0.165591	0.108994	0.022611	0.007030	0.011356	0.006685	0.000606	0.000664	0.026637	0.000823	0.003063
Hotel	0.584721	0.061219	0.165591	0.108994	0.022611	0.007030	0.011356	0.006685	0.000606	0.000664	0.026637	0.000823	0.003063
Office Park	0.584721	0.061219	0.165591	0.108994	0.022611	0.007030	0.011356	0.006685	0.000606	0.000664	0.026637	0.000823	0.003063

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	21,086.2061	21,086.2061	1.2887	0.1562	21,164.9699
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	21,086.2061	21,086.2061	1.2887	0.1562	21,164.9699
NaturalGas Mitigated	2.1213	19.2844	16.1989	0.1157		1.4656	1.4656		1.4656	1.4656	0.0000	20,993.3962	20,993.3962	0.4024	0.3849	21,118.1495
NaturalGas Unmitigated	2.1213	19.2844	16.1989	0.1157		1.4656	1.4656		1.4656	1.4656	0.0000	20,993.3962	20,993.3962	0.4024	0.3849	21,118.1495

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
High Turnover (Sit Down Restaurant)	5.91668e+007	0.3190	2.9003	2.4363	0.0174		0.2204	0.2204		0.2204	0.2204	0.0000	3,157.3658	3,157.3658	0.0605	0.0579	3,176.1284
Hotel	3.28717e+008	1.7725	16.1136	13.5354	0.0967		1.2246	1.2246		1.2246	1.2246	0.0000	17,541.5818	17,541.5818	0.3362	0.3216	17,645.8226
Office Park	5.51776e+006	0.0298	0.2705	0.2272	1.6200e-003		0.0206	0.0206		0.0206	0.0206	0.0000	294.4487	294.4487	5.6400e-003	5.4000e-003	296.1985
Total		**2.1213**	**19.2844**	**16.1989**	**0.1157**		**1.4656**	**1.4656**		**1.4656**	**1.4656**	**0.0000**	**20,993.3962**	**20,993.3962**	**0.4024**	**0.3849**	**21,118.1495**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
High Turnover (Sit Down Restaurant)	5.91668e+007	0.3190	2.9003	2.4363	0.0174		0.2204	0.2204		0.2204	0.2204	0.0000	3,157.3658	3,157.3658	0.0605	0.0579	3,176.1284
Hotel	3.28717e+008	1.7725	16.1136	13.5354	0.0967		1.2246	1.2246		1.2246	1.2246	0.0000	17,541.5818	17,541.5818	0.3362	0.3216	17,645.8226
Office Park	5.51776e+006	0.0298	0.2705	0.2272	1.6200e-003		0.0206	0.0206		0.0206	0.0206	0.0000	294.4487	294.4487	5.6400e-003	5.4000e-003	296.1985
Total		**2.1213**	**19.2844**	**16.1989**	**0.1157**		**1.4656**	**1.4656**		**1.4656**	**1.4656**	**0.0000**	**20,993.3962**	**20,993.3962**	**0.4024**	**0.3849**	**21,118.1495**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
High Turnover (Sit Down Restaurant)	1.28588e+007	3,149.5163	0.1925	0.0233	3,161.2807
Hotel	7.06259e+007	17,298.4492	1.0572	0.1281	17,363.0645
Office Park	2.6058e+006	638.2407	0.0390	4.7300e-003	640.6247
Total		**21,086.2061**	**1.2887**	**0.1562**	**21,164.9699**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
High Turnover (Sit Down Restaurant)	1.28588e+007	3,149.5163	0.1925	0.0233	3,161.2807
Hotel	7.06259e+007	17,298.4492	1.0572	0.1281	17,363.0645
Office Park	2.6058e+006	638.2407	0.0390	4.7300e-003	640.6247
Total		**21,086.2061**	**1.2887**	**0.1562**	**21,164.9699**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	26.3277	3.6000e-004	0.0404	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	0.0790	0.0790	2.0000e-004	0.0000	0.0841
Unmitigated	31.3480	3.6000e-004	0.0404	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	0.0790	0.0790	2.0000e-004	0.0000	0.0841

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	7.1719					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	24.1724					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.6900e-003	3.6000e-004	0.0404	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	0.0790	0.0790	2.0000e-004	0.0000	0.0841
Total	**31.3480**	**3.6000e-004**	**0.0404**	**0.0000**		**1.4000e-004**	**1.4000e-004**		**1.4000e-004**	**1.4000e-004**	**0.0000**	**0.0790**	**0.0790**	**2.0000e-004**	**0.0000**	**0.0841**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.1516					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	24.1724					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.6900e-003	3.6000e-004	0.0404	0.0000		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	0.0790	0.0790	2.0000e-004	0.0000	0.0841
Total	**26.3276**	**3.6000e-004**	**0.0404**	**0.0000**		**1.4000e-004**	**1.4000e-004**		**1.4000e-004**	**1.4000e-004**	**0.0000**	**0.0790**	**0.0790**	**2.0000e-004**	**0.0000**	**0.0841**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	915.7584	7.6423	0.1855	1,162.0872
Unmitigated	915.7584	7.6423	0.1855	1,162.0872

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
High Turnover (Sit Down Restaurant)	103.201 / 6.58733	379.8010	3.3840	0.0820	488.8302
Hotel	99.1841 / 11.0205	377.7774	3.2531	0.0789	482.6100
Office Park	30.5702 / 18.7366	158.1800	1.0052	0.0246	190.6471
Total		**915.7584**	**7.6423**	**0.1855**	**1,162.0872**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
High Turnover (Sit Down Restaurant)	103.201 / 6.58733	379.8010	3.3840	0.0820	488.8302
Hotel	99.1841 / 11.0205	377.7774	3.2531	0.0789	482.6100
Office Park	30.5702 / 18.7366	158.1800	1.0052	0.0246	190.6471
Total		**915.7584**	**7.6423**	**0.1855**	**1,162.0872**

8.0 Waste Detail

8.1 Mitigation Measures Waste

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1,288.3187	76.1375	0.0000	3,191.7550
Unmitigated	1,288.3187	76.1375	0.0000	3,191.7550

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
High Turnover (Sit Down Restaurant)	4046	821.3014	48.5375	0.0000	2,034.7395
Hotel	2140.72	434.5468	25.6810	0.0000	1,076.5713
Office Park	159.96	32.4704	1.9190	0.0000	80.4441
Total		**1,288.3187**	**76.1375**	**0.0000**	**3,191.7550**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
High Turnover (Sit Down Restaurant)	4046	821.3014	48.5375	0.0000	2,034.7395
Hotel	2140.72	434.5468	25.6810	0.0000	1,076.5713
Office Park	159.96	32.4704	1.9190	0.0000	80.4441
Total		**1,288.3187**	**76.1375**	**0.0000**	**3,191.7550**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

11.0 Vegetation

PMP Slip Construction - Total

helper columns — *14* *14* *4* *4* — *marine lookups*

Component	Equipment	Master Spreadsheet Lookup	Number of Pieces Used	Total Work Days (5/week)	Distance (nm)	Time to anchor barge	Travel speed (knot)	HP		Load		Hours per day	
								Main	Aux	Main	Aux	Main	Aux
Pier and Dock Pilings	**Crane Barge**												
Pier and Dock Pilings	Crane Barge	Pier and Dock PilingsCrane Barge	1	66				n/a	275	n/a	0.42	n/a	8
Pier and Dock Pilings	Tug Drop-off	Pier and Dock PilingsTug	1	1	3	1	6	2000	176	0.40	0.45	1.4	1.4
Pier and Dock Pilings	Tug Removal	Pier and Dock PilingsTug	1	1	3	1	6	2000	176	0.40	0.45	1.4	1.4
Pier and Dock Pilings	Push Boat Drop-off	Pier and Dock PilingsPush Boat	1	1	3		6	450	10	0.40	0.45	0.4	0.4
Pier and Dock Pilings	Push Boat Removal	Pier and Dock PilingsPush Boat	1	1	3		6	450	10	0.40	0.45	0.4	0.4
Pier and Dock Pilings	Push Boat Movements	Pier and Dock PilingsPush Boat	1	66		1		450	10	0.40	0.45	1	1
Pier and Dock Pilings	**Material Barge**												
Pier and Dock Pilings	Material Barge	Pier and Dock Pilingsn/a	1	66				n/a	n/a	n/a	n/a	n/a	n/a
Pier and Dock Pilings	Material Barge Drop-off	Pier and Dock Pilingsn/a	1	1	3	1	6	n/a	n/a	n/a	n/a	n/a	n/a
Pier and Dock Pilings	Material Barge Removal	Pier and Dock Pilingsn/a	1	1	3	1	6	n/a	n/a	n/a	n/a	n/a	n/a
Pier and Dock Pilings	Push Boat Drop-off	Pier and Dock PilingsPush Boat	1	1	3		6	450	10	0.4	0.45	0.4	0.4
Pier and Dock Pilings	Push Boat Removal	Pier and Dock PilingsPush Boat	1	1	3		6	450	10	0.4	0.45	0.4	0.4
Pier and Dock Pilings	Push Boat Movements	Pier and Dock PilingsPush Boat	1	66		1		450	10	0.4	0.45	1	1
Pier and Dock Pilings	Jet Pump	Pier and Dock PilingsJet Pump	1	66				n/a	350	n/a	0.71	n/a	8
Pier and Dock Pilings	**Skiffs**												
Pier and Dock Pilings	Skiff Arrival	Pier and Dock PilingsSkiff	2	1	3		6	60	n/a	0.32	n/a	0.9	n/a
Pier and Dock Pilings	Skiff Departure	Pier and Dock PilingsSkiff	2	1	3		6	60	n/a	0.32	n/a	0.9	n/a
Pier and Dock Pilings	Skiff Dock Movements	Pier and Dock PilingsSkiff	2	66		1		60	n/a	0.32	n/a	2	n/a
Place Floating Docks	Shoreside Crane	Place Floating DocksCranes2025	1	66				n/a	231	n/a	0.29	n/a	8

PMP Slip Construction - Total

		helper columns	*8*	*5*	*9*	*6*	*7*	*10*	*11*	*12*	*13*										
		Master Spreadsheet Lookup	Pounds per day						kg/day				Tons per year						Metric tons per year			
Component	Equipment		ROG	NOX	CO	PM10	PM2.5	SO2	CO2	CH4	N2O	Days	ROG	NOX	CO	PM10	PM2.5	SO2	CO2	CH4	N2O	CO2e
Pier and Dock Pilings	**Crane Barge**																					
Pier and Dock Pilings	Crane Barge	Pier and Dock PilingsCrane Barge	1.65	11.69	9.29	0.42	0.40	0.03	449	0.01	0.02	66	0.05	0.39	0.31	0.01	0.01	0.00	29.65	0.00	0.00	30
Pier and Dock Pilings	Tug Drop-off	Pier and Dock PilingsTug	1.60	11.61	11.00	0.25	0.25	0.04	613	0.01	0.03	1	0.00	0.01	0.01	0.00	0.00	0.00	1	0.00	0.00	1
Pier and Dock Pilings	Tug Removal	Pier and Dock PilingsTug	1.60	11.61	11.00	0.25	0.25	0.04	613	0.01	0.03	1	0.00	0.01	0.01	0.00	0.00	0.00	1	0.00	0.00	1
Pier and Dock Pilings	Push Boat Drop-off	Pier and Dock PilingsPush Boat	0.10	0.90	0.70	0.03	0.03	0.00	39	0.00	0.00	1	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0
Pier and Dock Pilings	Push Boat Removal	Pier and Dock PilingsPush Boat	0.10	0.90	0.70	0.03	0.03	0.00	39	0.00	0.00	1	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0
Pier and Dock Pilings	Push Boat Movements	Pier and Dock PilingsPush Boat	0.23	2.07	1.61	0.06	0.06	0.01	90	0.00	0.00	66	0.01	0.07	0.05	0.00	0.00	0.00	6	0.00	0.00	6
Pier and Dock Pilings	**Material Barge**																		-	-	-	
Pier and Dock Pilings	Material Barge	Pier and Dock Pilingsn/a	-	-	-	-	-	-	-	-	-	66	-	-	-	-	-	-	-	-	-	-
Pier and Dock Pilings	Material Barge Drop-off	Pier and Dock Pilingsn/a	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Pier and Dock Pilings	Material Barge Removal	Pier and Dock Pilingsn/a	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Pier and Dock Pilings	Push Boat Drop-off	Pier and Dock PilingsPush Boat	0.10	0.90	0.70	0.03	0.03	0.00	39	0.00	0.00	1	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0
Pier and Dock Pilings	Push Boat Removal	Pier and Dock PilingsPush Boat	0.10	0.90	0.70	0.03	0.03	0.00	39	0.00	0.00	1	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0
Pier and Dock Pilings	Push Boat Movements	Pier and Dock PilingsPush Boat	0.23	2.07	1.61	0.06	0.06	0.01	90	0.00	0.00	66	0.01	0.07	0.05	0.00	0.00	0.00	6	0.00	0.00	6
Pier and Dock Pilings	Jet Pump	Pier and Dock PilingsJet Pump	2.98	22.89	17.90	0.70	0.68	0.06	967	0.02	0.04	66	0.10	0.76	0.59	0.02	0.02	0.00	64	0.00	0.00	65
Pier and Dock Pilings	**Skiffs**																					
Pier and Dock Pilings	Skiff Arrival	Pier and Dock PilingsSkiff	0.30	0.21	16.53	0.26	0.26	0.00	14	0.07	0.00	1	0.00	0.00	0.01	0.00	0.00	0.00	0	0.00	0.00	0
Pier and Dock Pilings	Skiff Departure	Pier and Dock PilingsSkiff	0.30	0.21	16.53	0.26	0.26	0.00	14	0.07	0.00	1	0.00	0.00	0.01	0.00	0.00	0.00	0	0.00	0.00	0
Pier and Dock Pilings	Skiff Dock Movements	Pier and Dock PilingsSkiff	0.69	0.49	38.04	0.61	0.59	0.00	33	0.16	0.00	66	0.02	0.02	1.26	0.02	0.02	0.00	2	0.01	0.00	2
Place Floating Docks	Shoreside Crane	Place Floating DocksCranes2025	0.26	2.53	2.15	0.10	0.09	0.10	554	0.18	0.01	66	0.01	0.08	0.07	0.00	0.00	0.00	37	0.01	0.00	37

PMP Slip Construction - Total

helper columns *14* *14* *4* *4* *marine lookups*

Component	Equipment	Master Spreadsheet Lookup	Number of Pieces Used	Total Work Days (5/week)	Distance (nm)	Time to anchor barge	Travel speed (knot)	HP		Load		Hours per day	
								Main	Aux	Main	Aux	Main	Aux
Place Floating Docks	**Skiffs**												
Place Floating Docks	Skiff Arrival	Place Floating DocksSkiff	2	1	4		6	60	n/a	0.32	n/a	1.2	n/a
Place Floating Docks	Skiff Departure	Place Floating DocksSkiff	2	1	4		6	60	n/a	0.32	n/a	1.2	n/a
Place Floating Docks	Skiff Dock Movements	Place Floating DocksSkiff	2	66		1		60	n/a	0.32	n/a	2	n/a
Setting Moorings	**Barge**												
Setting Moorings	Barge	Setting MooringsCrane Barge	1	44				n/a	275	n/a	0.42	n/a	8
Setting Moorings	Tug Drop-off	Setting MooringsTug	1	1	4	1	6	2000	176	0.4	0.45	1.6	1.6
Setting Moorings	Tug Removal	Setting MooringsTug	1	1	4	1	6	2000	176	0.4	0.45	1.6	1.6
Setting Moorings	Push Boat Drop-off	Setting MooringsPush Boat	1	1	4		6	450	10	0.4	0.45	0.6	0.6
Setting Moorings	Push Boat Removal	Setting MooringsPush Boat	1	1	4		6	450	10	0.4	0.45	0.6	0.6
Setting Moorings	Push Boat Movements	Setting MooringsPush Boat	1	66		1		450	10	0.4	0.45	1	1

PMP Slip Construction - Total

		helper columns	*8*	*5*	*9*	*6*	*7*	*10*	*11*	*12*	*13*										
		Master Spreadsheet Lookup	Pounds per day						kg/day				Tons per year						Metric tons per year			
Component	Equipment		ROG	NOX	CO	PM10	PM2.5	SO2	CO2	CH4	N2O	Days	ROG	NOX	CO	PM10	PM2.5	SO2	CO2	CH4	N2O	CO2e
Place Floating Docks	**Skiffs**																					
Place Floating Docks	Skiff Arrival	Place Floating DocksSkiff	0.40	0.28	22.04	0.35	0.34	0.00	19	0.09	0.00	1	0.00	0.00	0.01	0.00	0.00	0.00	0	0.00	0.00	0
Place Floating Docks	Skiff Departure	Place Floating DocksSkiff	0.40	0.28	22.04	0.35	0.34	0.00	19	0.09	0.00	1	0.00	0.00	0.01	0.00	0.00	0.00	0	0.00	0.00	0
Place Floating Docks	Skiff Dock Movements	Place Floating DocksSkiff	0.69	0.49	38.04	0.61	0.59	0.00	33	0.16	0.00	66	0.02	0.02	1.26	0.02	0.02	0.00	2	0.01	0.00	2
Setting Moorings	**Barge**																					
Setting Moorings	Barge	Setting MooringsCrane Barge	1.65	11.69	9.29	0.42	0.40	0.03	449	0.01	0.02	44	0.04	0.26	0.20	0.01	0.01	0.00	20	0.00	0.00	20
Setting Moorings	Tug Drop-off	Setting MooringsTug	1.76	12.79	12.11	0.28	0.27	0.04	675	0.01	0.03	1	0.00	0.01	0.01	0.00	0.00	0.00	1	0.00	0.00	1
Setting Moorings	Tug Removal	Setting MooringsTug	1.76	12.79	12.11	0.28	0.27	0.04	675	0.01	0.03	1	0.00	0.01	0.01	0.00	0.00	0.00	1	0.00	0.00	1
Setting Moorings	Push Boat Drop-off	Setting MooringsPush Boat	0.13	1.20	0.93	0.04	0.03	0.00	52	0.00	0.00	1	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0
Setting Moorings	Push Boat Removal	Setting MooringsPush Boat	0.13	1.20	0.93	0.04	0.03	0.00	52	0.00	0.00	1	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0
Setting Moorings	Push Boat Movements	Setting MooringsPush Boat	0.23	2.07	1.61	0.06	0.06	0.01	90	0.00	0.00	66	0.01	0.07	0.05	0.00	0.00	0.00	6	0.00	0.00	6

CHC Emission Factors etc.

Equipment	Engine	MY	Num Engines	HP Each	LF	Useful Life	Annual Hours	12000 hr Cap	kW
Tug	Prop	2012	2	1000	0.40	21	2274	5.28	746
	Aux	2012	2	88	0.45	23	2486	4.83	66
Push Boat	Prop	2012	1	450	0.40	21	2274	5.28	336
	Aux	2012	1	10	0.45	23	2486	4.83	7
Crane Barge	Aux	2012	1	275	0.42	9	290		205
Jet Pump	Aux	2012	1	350	0.71	21	390		261

Main Engine Power
2000
176
450
10
275
350

CARB

	Main Engine			Auxiliary Engine		
Vessel Type	UL	LF	Ann Hrs	UL	LF	Ann Hrs
ATB Barge				14	0.26	1723
Bunker Barge				14	0.35	720
Other Barge				14	0.34	439
Dredge	15	0.47	1348	13	0.51	1815
ATB Tug	14	0.50	867	16	0.50	880
Escort/Ship Assist Tug	14	0.15	1828	16	0.34	1773
Push Tow Tug	14	0.40	1255	16	0.45	1495
Crew Supply	13	0.27	1524	17	0.46	1717
Ferry	15	0.34	2277	13	0.44	1562
Excursion	15	0.29	706	14	0.51	641
Pilot Boat	15	0.43	1964	13	0.38	1887
Research Boat	22	0.34	918	28	0.56	1032
Work Boat	22	0.36	1723	28	0.40	1723
Others	22	0.40	225	28	0.38	720

Zero Hour Emission Factors (g/hp-hr)

Equipment	Engine	NOx	PM10	PM2.5	ROG	CO	SOx	CO2	CH4	N2O
Tug	Prop	4.085	0.080	0.078	0.680	3.730	0.127	486.196	0.013	0.023
	Aux	5.320	0.220	0.213	1.178	3.730	0.127	486.196	0.024	0.023
Push Boat	Prop	5.102	0.150	0.146	0.680	3.730	0.127	486.196	0.013	0.023
	Aux	5.320	0.220	0.213	2.142	3.730	0.127	486.196	0.043	0.023
Crane Barge	Aux	5.102	0.150	0.146	0.809	3.730	0.127	486.196	0.016	0.023
Jet Pump	Aux	5.102	0.150	0.146	0.809	3.730	0.127	486.196	0.016	0.023

Fuel Correction Factors

MY	NOx	PM10	PM2.5	ROG	CO	SOx	CO2	CH4	N2O
2011+	0.948	0.852	0.852	0.720	1.000	0.110	1.000	0.720	0.948

Deterioration Factors

HP Range	NOX	PM10	PM2.5	ROG	CO
25 -50	0.06	0.31	0.31	0.51	0.41
51-250	0.14	0.44	0.44	0.28	0.16
> 250	0.21	0.67	0.67	0.44	0.25

2020 Emission Factors (g/hp-hr)

Equipment	Engine	Lookup	No	Hp	LF	NOx	PM10	PM2.5	ROG	CO	SOx	CO2	CH4	N2O	Total HP
Tug	Main	TugMain	2	1000	0.40	4.077	0.080	0.077	0.544	3.964	0.014	486.196	0.010	0.022	2000
Tug	Aux	TugAux	2	88	0.45	5.192	0.205	0.199	0.898	3.855	0.014	486.196	0.017	0.022	176
Push Boat	Main	Push BoatMain	1	450	0.40	5.091	0.149	0.145	0.544	3.964	0.014	486.196	0.010	0.022	450
Push Boat	Aux	Push BoatAux	1	10	0.45	5.107	0.200	0.194	1.707	4.051	0.014	486.196	0.031	0.022	10
Crane Barge	Aux	Crane BargeAux	1	275	0.42	5.739	0.204	0.198	0.810	4.559	0.014	486.196	0.012	0.022	275
Jet Pump	Aux	Jet PumpAux	1	350	0.71	5.223	0.160	0.156	0.680	4.085	0.014	486.196	0.012	0.022	350

Gasoline Equip

2020 Emission Factors (g/hp-hr)

	Engine	Engine	No	Hp	LF	NOx	PM10	PM2.5	ROG	CO	SOx	CO2	CH4	N2O	Total HP
Skiff	Main	SkiffMain	1	60	0.32	2.90	3.60	3.49	4.08	224.66	0.01	429.44	2.08	0.01	60
			1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*

Table 3.3 OFFROAD Default Horsepower and Load Factors

OFFROAD Equipment Type	Horsepower	Load Factor
Aerial Lifts	63	0.31
Air Compressors	78	0.48
Bore/Drill Rigs	221	0.50
Cement and Mortar Mixers	9	0.56
Concrete/Industrial Saws	81	0.73
Cranes	231	0.29
Crawler Tractors	212	0.43
Crushing/Proc. Equipment	85	0.78
Dumpers/Tenders	16	0.38
Excavators	158	0.38
Forklifts	89	0.20
Generator Sets	84	0.74
Graders	187	0.41
Off-Highway Tractors	124	0.44
Off-Highway Trucks	402	0.38
Other Construction Equipment	172	0.42
Other General Industrial Equipment	88	0.34
Other Material Handling Equipment	168	0.40
Pavers	130	0.42
Paving Equipment	132	0.36
Plate Compactors	8	0.43
Pressure Washers	13	0.30
Pumps	84	0.74
Rollers	80	0.38
Rough Terrain Forklifts	100	0.40
Rubber Tired Dozers	247	0.40
Rubber Tired Loaders	203	0.36
Scrapers	367	0.48
Signal Boards	6	0.82
Skid Steer Loaders	65	0.37
Surfacing Equipment	263	0.30
Sweepers/Scrubbers	64	0.46
Tractors/Loaders/Backhoes	97	0.37
Trenchers	78	0.50
Welders	46	0.45

Table 3.4 OFFROAD Equipment Emission Factors (g/bhp-hr)

Equipment T	Year	Lookup	Low HP	High HP	TOG	ROG	CO	NOX	SO2	PM10	PM2.5	CO2	CH4	N2O
Cranes	2020	Cranes2020	251	500	0.3815	0.32	2.66	3.862	0	0.15	0.14	472.56	0.15	0.012044
Cranes	2021	Cranes2021	251	500	0.3515	0.3	2.448	3.443	0	0.14	0.13	472.46	0.15	0.012043
Cranes	2022	Cranes2022	251	500	0.3105	0.26	2.212	2.894	0	0.12	0.11	472.18	0.15	0.012045
Cranes	2023	Cranes2023	251	500	0.2812	0.24	2.01	2.51	0	0.1	0.09	472.29	0.15	0.012044
Cranes	2024	Cranes2024	251	500	0.2743	0.23	1.933	2.383	0	0.1	0.09	472.07	0.15	0.012044
Cranes	2025	Cranes2025	251	500	0.2599	0.22	1.834	2.154	0	0.09	0.08	471.97	0.15	0.012045
Pumps	2020	Pumps2020	251	500	20.565	0.2	1.017	1.841	0.01	0.06	0.06	568.3	0.02	0.014472
Pumps	2021	Pumps2021	251	500	19.186	0.19	1.007	1.584	0.01	0.05	0.05	568.3	0.02	0.014472
Pumps	2022	Pumps2022	251	500	18.249	0.18	1.001	1.404	0.01	0.04	0.04	568.3	0.02	0.014472
Pumps	2023	Pumps2023	251	500	17.411	0.17	0.998	1.246	0.01	0.04	0.04	568.3	0.02	0.014472
Pumps	2024	Pumps2024	251	500	16.61	0.16	0.994	1.098	0.01	0.03	0.03	568.3	0.01	0.014472
Pumps	2025	Pumps2025	251	500	15.837	0.16	0.992	0.958	0.01	0.03	0.03	568.3	0.01	0.014472
			1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*

Operational Emission Calculation Sheets

- CalEEMod
- Fishing and Boating
- Mobile Sources

PMPU Operations 2030 - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

PMPU Operations 2030

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hotel	1,604.00	Room	53.47	2,329,008.00	0
High Turnover (Sit Down Restaurant)	139.20	1000sqft	3.20	139,200.00	0
Office Park	140.30	1000sqft	3.22	140,300.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2030
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	370	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - SDG&E’s energy intensity factors for 2030 and 2050 (370 lbs/MWh CO2e) in 2030 from SANDAG’s 2016 regional inventory

Land Use -

Construction Phase - construction seperate

Off-road Equipment - construction seperate

Vehicle Trips - mobile off-model

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	70.00	1.00
tblConstructionPhase	PhaseEndDate	1/21/2022	10/18/2021
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.033	0
tblProjectCharacteristics	CO2IntensityFactor	539.98	370
tblProjectCharacteristics	N2OIntensityFactor	0.004	0
tblVehicleTrips	ST_TR	122.40	0.00
tblVehicleTrips	ST_TR	8.19	0.00
tblVehicleTrips	ST_TR	1.64	0.00
tblVehicleTrips	SU_TR	142.64	0.00
tblVehicleTrips	SU_TR	5.95	0.00
tblVehicleTrips	SU_TR	0.76	0.00
tblVehicleTrips	WD_TR	112.18	0.00
tblVehicleTrips	WD_TR	8.36	0.00
tblVehicleTrips	WD_TR	11.07	0.00

2.0 Emissions Summary

PMPU Operations 2030 - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	2.0000e-005	2.0000e-005	2.0000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0508	0.0508	0.0000	0.0000	0.0513
Maximum	**2.0000e-005**	**2.0000e-005**	**2.0000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0508**	**0.0508**	**0.0000**	**0.0000**	**0.0513**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	2.0000e-005	2.0000e-005	2.0000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0508	0.0508	0.0000	0.0000	0.0513
Maximum	**2.0000e-005**	**2.0000e-005**	**2.0000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0508**	**0.0508**	**0.0000**	**0.0000**	**0.0513**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)

PMPU Operations 2030 - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	13.2117	1.6000e-004	0.0172	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0337	0.0337	9.0000e-005	0.0000	0.0358
Energy	0.8820	8.0183	6.7354	0.0481		0.6094	0.6094		0.6094	0.6094	0.0000	14,831.6938	14,831.6938	0.1673	0.1600	14,883.5654
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	541.0014	0.0000	541.0014	31.9723	0.0000	1,340.3080
Water						0.0000	0.0000		0.0000	0.0000	34.2242	277.6977	311.9219	3.5152	0.0830	424.5347
Total	**14.0937**	**8.0185**	**6.7526**	**0.0481**	**0.0000**	**0.6095**	**0.6095**	**0.0000**	**0.6095**	**0.6095**	**575.2255**	**15,109.4252**	**15,684.6507**	**35.6548**	**0.2430**	**16,648.4439**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	13.2117	1.6000e-004	0.0172	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0337	0.0337	9.0000e-005	0.0000	0.0358
Energy	0.7553	6.8663	5.7677	0.0412		0.5218	0.5218		0.5218	0.5218	0.0000	13,085.5790	13,085.5790	0.1433	0.1370	13,129.9978
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	27.3793	222.1582	249.5375	2.8121	0.0664	339.6278
Total	**13.9670**	**6.8664**	**5.7849**	**0.0412**	**0.0000**	**0.5219**	**0.5219**	**0.0000**	**0.5219**	**0.5219**	**27.3793**	**13,307.7708**	**13,335.1502**	**2.9555**	**0.2034**	**13,469.6613**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.90**	**14.37**	**14.33**	**14.36**	**0.00**	**14.37**	**14.37**	**0.00**	**14.37**	**14.37**	**95.24**	**11.92**	**14.98**	**91.71**	**16.29**	**19.09**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/18/2021	10/18/2021	5	1	

Acres of Grading (Site Preparation Phase): 0

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Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	0.00	81	0.73
Demolition	Excavators	3	0.00	158	0.38
Demolition	Rubber Tired Dozers	2	0.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	2.0000e-005	2.0000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0508	0.0508	0.0000	0.0000	0.0513
Total	**2.0000e-005**	**2.0000e-005**	**2.0000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0508**	**0.0508**	**0.0000**	**0.0000**	**0.0513**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	2.0000e-005	2.0000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0508	0.0508	0.0000	0.0000	0.0513
Total	**2.0000e-005**	**2.0000e-005**	**2.0000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0508**	**0.0508**	**0.0000**	**0.0000**	**0.0513**

4.0 Operational Detail - Mobile

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00		
Hotel	0.00	0.00	0.00		
Office Park	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
High Turnover (Sit Down	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Office Park	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High Turnover (Sit Down Restaurant)	0.575453	0.061728	0.171227	0.112384	0.022882	0.006522	0.009800	0.006298	0.000679	0.000623	0.027611	0.000857	0.003936
Hotel	0.575453	0.061728	0.171227	0.112384	0.022882	0.006522	0.009800	0.006298	0.000679	0.000623	0.027611	0.000857	0.003936
Office Park	0.575453	0.061728	0.171227	0.112384	0.022882	0.006522	0.009800	0.006298	0.000679	0.000623	0.027611	0.000857	0.003936

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	5,610.8174	5,610.8174	0.0000	0.0000	5,610.8174
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	6,102.7637	6,102.7637	0.0000	0.0000	6,102.7637
NaturalGas Mitigated	0.7553	6.8663	5.7677	0.0412		0.5218	0.5218		0.5218	0.5218	0.0000	7,474.7616	7,474.7616	0.1433	0.1370	7,519.1804
NaturalGas Unmitigated	0.8820	8.0183	6.7354	0.0481		0.6094	0.6094		0.6094	0.6094	0.0000	8,728.9300	8,728.9300	0.1673	0.1600	8,780.8017

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
High Turnover (Sit Down Restaurant)	2.42236e+007	0.1306	1.1874	0.9974	7.1200e-003		0.0902	0.0902		0.0902	0.0902	0.0000	1,292.6627	1,292.6627	0.0248	0.0237	1,300.3443
Hotel	1.3485e+008	0.7271	6.6103	5.5526	0.0397		0.5024	0.5024		0.5024	0.5024	0.0000	7,196.0862	7,196.0862	0.1379	0.1319	7,238.8490
Office Park	4.50082e+006	0.0243	0.2206	0.1853	1.3200e-003		0.0168	0.0168		0.0168	0.0168	0.0000	240.1811	240.1811	4.6000e-003	4.4000e-003	241.6084
Total		**0.8820**	**8.0183**	**6.7354**	**0.0481**		**0.6094**	**0.6094**		**0.6094**	**0.6094**	**0.0000**	**8,728.9300**	**8,728.9300**	**0.1673**	**0.1600**	**8,780.8017**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
High Turnover (Sit Down Restaurant)	2.32336e+007	0.1253	1.1389	0.9567	6.8300e-003		0.0866	0.0866		0.0866	0.0866	0.0000	1,239.8330	1,239.8330	0.0238	0.0227	1,247.2007
Hotel	1.1305e+008	0.6096	5.5417	4.6550	0.0333		0.4212	0.4212		0.4212	0.4212	0.0000	6,032.7811	6,032.7811	0.1156	0.1106	6,068.6309
Office Park	3.7881e+006	0.0204	0.1857	0.1560	1.1100e-003		0.0141	0.0141		0.0141	0.0141	0.0000	202.1474	202.1474	3.8700e-003	3.7100e-003	203.3487
Total		**0.7553**	**6.8663**	**5.7677**	**0.0412**		**0.5218**	**0.5218**		**0.5218**	**0.5218**	**0.0000**	**7,474.7616**	**7,474.7616**	**0.1433**	**0.1370**	**7,519.1803**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
High Turnover (Sit Down Restaurant)	5.26454e+006	883.5441	0.0000	0.0000	883.5441
Hotel	2.89729e+007	4,862.4912	0.0000	0.0000	4,862.4912
Office Park	2.12555e+006	356.7285	0.0000	0.0000	356.7285
Total		**6,102.7637**	**0.0000**	**0.0000**	**6,102.7637**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
High Turnover (Sit Down Restaurant)	4.84381e+006	812.9330	0.0000	0.0000	812.9330
Hotel	2.66241e+007	4,468.2932	0.0000	0.0000	4,468.2932
Office Park	1.96385e+006	329.5912	0.0000	0.0000	329.5912
Total		**5,610.8174**	**0.0000**	**0.0000**	**5,610.8174**

6.0 Area Detail

6.1 Mitigation Measures Area

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	13.2117	1.6000e-004	0.0172	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0337	0.0337	9.0000e-005	0.0000	0.0358
Unmitigated	13.2117	1.6000e-004	0.0172	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0337	0.0337	9.0000e-005	0.0000	0.0358

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.0226					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	10.1875					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.5800e-003	1.6000e-004	0.0172	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0337	0.0337	9.0000e-005	0.0000	0.0358
Total	**13.2117**	**1.6000e-004**	**0.0172**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.0337**	**0.0337**	**9.0000e-005**	**0.0000**	**0.0358**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.0226					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	10.1875					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.5800e-003	1.6000e-004	0.0172	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0337	0.0337	9.0000e-005	0.0000	0.0358
Total	**13.2117**	**1.6000e-004**	**0.0172**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.0337**	**0.0337**	**9.0000e-005**	**0.0000**	**0.0358**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	249.5375	2.8121	0.0664	339.6278
Unmitigated	311.9219	3.5152	0.0830	424.5347

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
High Turnover (Sit Down Restaurant)	42.2519 / 2.69693	110.7664	1.3768	0.0325	154.8735
Hotel	40.6883 / 4.52092	110.2544	1.3258	0.0313	152.7293
Office Park	24.936 / 15.2834	90.9010	0.8125	0.0192	116.9319
Total		**311.9219**	**3.5152**	**0.0830**	**424.5347**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
High Turnover (Sit Down Restaurant)	33.8015 / 2.15754	88.6132	1.1014	0.0260	123.8988
Hotel	32.5506 / 3.61674	88.2036	1.0607	0.0250	122.1834
Office Park	19.9488 / 12.2267	72.7208	0.6500	0.0154	93.5456
Total		**249.5375**	**2.8121**	**0.0664**	**339.6278**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	541.0014	31.9723	0.0000	1,340.3080

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
High Turnover (Sit Down Restaurant)	1656.48	336.2505	19.8718	0.0000	833.0463
Hotel	878.19	178.2646	10.5351	0.0000	441.6431
Office Park	130.48	26.4863	1.5653	0.0000	65.6186
Total		**541.0014**	**31.9723**	**0.0000**	**1,340.3080**

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8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
High Turnover (Sit Down Restaurant)		0.0000	0.0000	0.0000	0.0000
Hotel		0.0000	0.0000	0.0000	0.0000
Office Park		0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

11.0 Vegetation

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hotel	1,255.00	Room	41.83	1,822,260.00	0
High Turnover (Sit Down Restaurant)	98.20	1000sqft	2.25	98,200.00	0
Office Park	31.60	1000sqft	0.73	31,600.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2030
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	370	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - SDG&E’s energy intensity factors for 2030 and 2050 (370 lbs/MWh CO2e) in 2030 from SANDAG’s 2016 regional inventory

Land Use -

Construction Phase - construction seperate

Off-road Equipment - construction seperate

Water And Wastewater -

Vehicle Trips - mobile off-model

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	50.00	1.00
tblConstructionPhase	PhaseEndDate	12/31/2021	10/25/2021

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.033	0
tblProjectCharacteristics	CO2IntensityFactor	539.98	370
tblProjectCharacteristics	N2OIntensityFactor	0.004	0
tblVehicleTrips	ST_TR	122.40	0.00
tblVehicleTrips	ST_TR	8.19	0.00
tblVehicleTrips	ST_TR	1.64	0.00
tblVehicleTrips	SU_TR	142.64	0.00
tblVehicleTrips	SU_TR	5.95	0.00
tblVehicleTrips	SU_TR	0.76	0.00
tblVehicleTrips	WD_TR	112.18	0.00
tblVehicleTrips	WD_TR	8.36	0.00
tblVehicleTrips	WD_TR	11.07	0.00

2.0 Emissions Summary

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	2.0000e-005	2.0000e-005	2.0000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0508	0.0508	0.0000	0.0000	0.0513
Maximum	**2.0000e-005**	**2.0000e-005**	**2.0000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0508**	**0.0508**	**0.0000**	**0.0000**	**0.0513**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	2.0000e-005	2.0000e-005	2.0000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0508	0.0508	0.0000	0.0000	0.0513
Maximum	**2.0000e-005**	**2.0000e-005**	**2.0000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0508**	**0.0508**	**0.0000**	**0.0000**	**0.0513**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	9.8869	1.1000e-004	0.0127	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0247	0.0247	6.0000e-005	0.0000	0.0263
Energy	0.6665	6.0594	5.0899	0.0364		0.4605	0.4605		0.4605	0.4605	0.0000	11,104.5288	11,104.5288	0.1264	0.1209	11,143.7277
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	382.6542	0.0000	382.6542	22.6142	0.0000	948.0096
Water						0.0000	0.0000		0.0000	0.0000	21.3381	163.5421	184.8802	2.1916	0.0518	255.0921
Total	**10.5534**	**6.0595**	**5.1025**	**0.0364**	**0.0000**	**0.4606**	**0.4606**	**0.0000**	**0.4606**	**0.4606**	**403.9923**	**11,268.0956**	**11,672.0879**	**24.9323**	**0.1727**	**12,346.8557**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	9.8869	1.1000e-004	0.0127	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0247	0.0247	6.0000e-005	0.0000	0.0263
Energy	0.6665	6.0594	5.0899	0.0364		0.4605	0.4605		0.4605	0.4605	0.0000	11,104.5288	11,104.5288	0.1264	0.1209	11,143.7277
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	382.6542	0.0000	382.6542	22.6142	0.0000	948.0096
Water						0.0000	0.0000		0.0000	0.0000	21.3381	163.5421	184.8802	2.1916	0.0518	255.0921
Total	**10.5534**	**6.0595**	**5.1025**	**0.0364**	**0.0000**	**0.4606**	**0.4606**	**0.0000**	**0.4606**	**0.4606**	**403.9923**	**11,268.0956**	**11,672.0879**	**24.9323**	**0.1727**	**12,346.8557**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/24/2021	10/25/2021	5	1	

Acres of Grading (Site Preparation Phase): 0

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	0.00	81	0.73
Demolition	Excavators	3	0.00	158	0.38
Demolition	Rubber Tired Dozers	2	0.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	2.0000e-005	2.0000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0508	0.0508	0.0000	0.0000	0.0513
Total	**2.0000e-005**	**2.0000e-005**	**2.0000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0508**	**0.0508**	**0.0000**	**0.0000**	**0.0513**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	2.0000e-005	2.0000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0508	0.0508	0.0000	0.0000	0.0513
Total	**2.0000e-005**	**2.0000e-005**	**2.0000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0508**	**0.0508**	**0.0000**	**0.0000**	**0.0513**

4.0 Operational Detail - Mobile

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00		
Hotel	0.00	0.00	0.00		
Office Park	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
High Turnover (Sit Down	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Office Park	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High Turnover (Sit Down Restaurant)	0.575453	0.061728	0.171227	0.112384	0.022882	0.006522	0.009800	0.006298	0.000679	0.000623	0.027611	0.000857	0.003936
Hotel	0.575453	0.061728	0.171227	0.112384	0.022882	0.006522	0.009800	0.006298	0.000679	0.000623	0.027611	0.000857	0.003936
Office Park	0.575453	0.061728	0.171227	0.112384	0.022882	0.006522	0.009800	0.006298	0.000679	0.000623	0.027611	0.000857	0.003936

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4,508.1566	4,508.1566	0.0000	0.0000	4,508.1566
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4,508.1566	4,508.1566	0.0000	0.0000	4,508.1566
NaturalGas Mitigated	0.6665	6.0594	5.0899	0.0364		0.4605	0.4605		0.4605	0.4605	0.0000	6,596.3722	6,596.3722	0.1264	0.1209	6,635.5711
NaturalGas Unmitigated	0.6665	6.0594	5.0899	0.0364		0.4605	0.4605		0.4605	0.4605	0.0000	6,596.3722	6,596.3722	0.1264	0.1209	6,635.5711

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
High Turnover (Sit Down Restaurant)	1.70888e+007	0.0922	0.8377	0.7037	5.0300e-003		0.0637	0.0637		0.0637	0.0637	0.0000	911.9215	911.9215	0.0175	0.0167	917.3406
Hotel	1.05509e+008	0.5689	5.1720	4.3445	0.0310		0.3931	0.3931		0.3931	0.3931	0.0000	5,630.3543	5,630.3543	0.1079	0.1032	5,663.8126
Office Park	1.01373e+006	5.4700e-003	0.0497	0.0417	3.0000e-004		3.7800e-003	3.7800e-003		3.7800e-003	3.7800e-003	0.0000	54.0964	54.0964	1.0400e-003	9.9000e-004	54.4179
Total		**0.6665**	**6.0594**	**5.0899**	**0.0364**		**0.4605**	**0.4605**		**0.4605**	**0.4605**	**0.0000**	**6,596.3722**	**6,596.3722**	**0.1264**	**0.1209**	**6,635.5711**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
High Turnover (Sit Down Restaurant)	1.70888e+007	0.0922	0.8377	0.7037	5.0300e-003		0.0637	0.0637		0.0637	0.0637	0.0000	911.9215	911.9215	0.0175	0.0167	917.3406
Hotel	1.05509e+008	0.5689	5.1720	4.3445	0.0310		0.3931	0.3931		0.3931	0.3931	0.0000	5,630.3543	5,630.3543	0.1079	0.1032	5,663.8126
Office Park	1.01373e+006	5.4700e-003	0.0497	0.0417	3.0000e-004		3.7800e-003	3.7800e-003		3.7800e-003	3.7800e-003	0.0000	54.0964	54.0964	1.0400e-003	9.9000e-004	54.4179
Total		**0.6665**	**6.0594**	**5.0899**	**0.0364**		**0.4605**	**0.4605**		**0.4605**	**0.4605**	**0.0000**	**6,596.3722**	**6,596.3722**	**0.1264**	**0.1209**	**6,635.5711**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
High Turnover (Sit Down Restaurant)	3.71392e+006	623.3048	0.0000	0.0000	623.3048
Hotel	2.26689e+007	3,804.5052	0.0000	0.0000	3,804.5052
Office Park	478740	80.3465	0.0000	0.0000	80.3465
Total		**4,508.1566**	**0.0000**	**0.0000**	**4,508.1566**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
High Turnover (Sit Down Restaurant)	3.71392e+006	623.3048	0.0000	0.0000	623.3048
Hotel	2.26689e+007	3,804.5052	0.0000	0.0000	3,804.5052
Office Park	478740	80.3465	0.0000	0.0000	80.3465
Total		**4,508.1566**	**0.0000**	**0.0000**	**4,508.1566**

6.0 Area Detail

6.1 Mitigation Measures Area

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	9.8869	1.1000e-004	0.0127	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0247	0.0247	6.0000e-005	0.0000	0.0263
Unmitigated	9.8869	1.1000e-004	0.0127	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0247	0.0247	6.0000e-005	0.0000	0.0263

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.2620					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	7.6238					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.1600e-003	1.1000e-004	0.0127	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0247	0.0247	6.0000e-005	0.0000	0.0263
Total	**9.8869**	**1.1000e-004**	**0.0127**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**0.0247**	**0.0247**	**6.0000e-005**	**0.0000**	**0.0263**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.2620					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	7.6238					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.1600e-003	1.1000e-004	0.0127	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0247	0.0247	6.0000e-005	0.0000	0.0263
Total	**9.8869**	**1.1000e-004**	**0.0127**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**0.0247**	**0.0247**	**6.0000e-005**	**0.0000**	**0.0263**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	184.8802	2.1916	0.0518	255.0921
Unmitigated	184.8802	2.1916	0.0518	255.0921

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
High Turnover (Sit Down Restaurant)	29.807 / 1.90258	78.1413	0.9713	0.0229	109.2570
Hotel	31.8353 / 3.53726	86.2652	1.0374	0.0245	119.4983
Office Park	5.61639 / 3.4423	20.4738	0.1830	4.3200e-003	26.3368
Total		**184.8802**	**2.1916**	**0.0517**	**255.0921**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
High Turnover (Sit Down Restaurant)	29.807 / 1.90258	78.1413	0.9713	0.0229	109.2570
Hotel	31.8353 / 3.53726	86.2652	1.0374	0.0245	119.4983
Office Park	5.61639 / 3.4423	20.4738	0.1830	4.3200e-003	26.3368
Total		**184.8802**	**2.1916**	**0.0517**	**255.0921**

8.0 Waste Detail

8.1 Mitigation Measures Waste

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	382.6542	22.6142	0.0000	948.0096
Unmitigated	382.6542	22.6142	0.0000	948.0096

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
High Turnover (Sit Down Restaurant)	1168.58	237.2112	14.0188	0.0000	587.6807
Hotel	687.11	139.4771	8.2429	0.0000	345.5487
Office Park	29.39	5.9659	0.3526	0.0000	14.7803
Total		**382.6542**	**22.6142**	**0.0000**	**948.0096**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
High Turnover (Sit Down Restaurant)	1168.58	237.2112	14.0188	0.0000	587.6807
Hotel	687.11	139.4771	8.2429	0.0000	345.5487
Office Park	29.39	5.9659	0.3526	0.0000	14.7803
Total		**382.6542**	**22.6142**	**0.0000**	**948.0096**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

11.0 Vegetation

PMPU Operations 2030 PD2 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

PMPU Operations 2030 PD2

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hotel	1,255.00	Room	41.83	1,822,260.00	0
High Turnover (Sit Down Restaurant)	98.20	1000sqft	2.25	98,200.00	0
Office Park	31.60	1000sqft	0.73	31,600.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2030
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	370	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - SDG&E’s energy intensity factors for 2030 and 2050 (370 lbs/MWh CO2e) in 2030 from SANDAG’s 2016 regional inventory

Land Use -

Construction Phase - construction seperate

Off-road Equipment - construction seperate

Water And Wastewater -

Vehicle Trips - mobile off-model

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	50.00	1.00
tblConstructionPhase	PhaseEndDate	12/31/2021	10/25/2021

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.033	0
tblProjectCharacteristics	CO2IntensityFactor	539.98	370
tblProjectCharacteristics	N2OIntensityFactor	0.004	0
tblVehicleTrips	ST_TR	122.40	0.00
tblVehicleTrips	ST_TR	8.19	0.00
tblVehicleTrips	ST_TR	1.64	0.00
tblVehicleTrips	SU_TR	142.64	0.00
tblVehicleTrips	SU_TR	5.95	0.00
tblVehicleTrips	SU_TR	0.76	0.00
tblVehicleTrips	WD_TR	112.18	0.00
tblVehicleTrips	WD_TR	8.36	0.00
tblVehicleTrips	WD_TR	11.07	0.00

2.0 Emissions Summary

PMPU Operations 2030 PD2 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	0.0505	0.0360	0.3984	1.1000e-003	0.1232	7.4000e-004	0.1240	0.0327	6.8000e-004	0.0334	0.0000	110.9949	110.9949	3.8400e-003	3.4400e-003	112.1170
Maximum	**0.0505**	**0.0360**	**0.3984**	**1.1000e-003**	**0.1232**	**7.4000e-004**	**0.1240**	**0.0327**	**6.8000e-004**	**0.0334**	**0.0000**	**110.9949**	**110.9949**	**3.8400e-003**	**3.4400e-003**	**112.1170**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	0.0505	0.0360	0.3984	1.1000e-003	0.1232	7.4000e-004	0.1240	0.0327	6.8000e-004	0.0334	0.0000	110.9949	110.9949	3.8400e-003	3.4400e-003	112.1170
Maximum	**0.0505**	**0.0360**	**0.3984**	**1.1000e-003**	**0.1232**	**7.4000e-004**	**0.1240**	**0.0327**	**6.8000e-004**	**0.0334**	**0.0000**	**110.9949**	**110.9949**	**3.8400e-003**	**3.4400e-003**	**112.1170**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

PMPU Operations 2030 PD2 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	54.1812	1.2700e-003	0.1407	1.0000e-005		5.0000e-004	5.0000e-004		5.0000e-004	5.0000e-004		0.3031	0.3031	7.8000e-004		0.3226
Energy	3.6522	33.2021	27.8898	0.1992		2.5234	2.5234		2.5234	2.5234		39,842.4967	39,842.4967	0.7637	0.7305	40,079.2607
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**57.8334**	**33.2034**	**28.0304**	**0.1992**	**0.0000**	**2.5239**	**2.5239**	**0.0000**	**2.5239**	**2.5239**		**39,842.7998**	**39,842.7998**	**0.7644**	**0.7305**	**40,079.5833**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	54.1812	1.2700e-003	0.1407	1.0000e-005		5.0000e-004	5.0000e-004		5.0000e-004	5.0000e-004		0.3031	0.3031	7.8000e-004		0.3226
Energy	3.6522	33.2021	27.8898	0.1992		2.5234	2.5234		2.5234	2.5234		39,842.4967	39,842.4967	0.7637	0.7305	40,079.2607
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**57.8334**	**33.2034**	**28.0304**	**0.1992**	**0.0000**	**2.5239**	**2.5239**	**0.0000**	**2.5239**	**2.5239**		**39,842.7998**	**39,842.7998**	**0.7644**	**0.7305**	**40,079.5833**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/24/2021	10/25/2021	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	0.00	81	0.73
Demolition	Excavators	3	0.00	158	0.38
Demolition	Rubber Tired Dozers	2	0.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0505	0.0360	0.3984	1.1000e-003	0.1232	7.4000e-004	0.1240	0.0327	6.8000e-004	0.0334		110.9949	110.9949	3.8400e-003	3.4400e-003	112.1170
Total	**0.0505**	**0.0360**	**0.3984**	**1.1000e-003**	**0.1232**	**7.4000e-004**	**0.1240**	**0.0327**	**6.8000e-004**	**0.0334**		**110.9949**	**110.9949**	**3.8400e-003**	**3.4400e-003**	**112.1170**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0505	0.0360	0.3984	1.1000e-003	0.1232	7.4000e-004	0.1240	0.0327	6.8000e-004	0.0334		110.9949	110.9949	3.8400e-003	3.4400e-003	112.1170
Total	**0.0505**	**0.0360**	**0.3984**	**1.1000e-003**	**0.1232**	**7.4000e-004**	**0.1240**	**0.0327**	**6.8000e-004**	**0.0334**		**110.9949**	**110.9949**	**3.8400e-003**	**3.4400e-003**	**112.1170**

4.0 Operational Detail - Mobile

PMPU Operations 2030 PD2 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00		
Hotel	0.00	0.00	0.00		
Office Park	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
High Turnover (Sit Down	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Office Park	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High Turnover (Sit Down Restaurant)	0.575453	0.061728	0.171227	0.112384	0.022882	0.006522	0.009800	0.006298	0.000679	0.000623	0.027611	0.000857	0.003936
Hotel	0.575453	0.061728	0.171227	0.112384	0.022882	0.006522	0.009800	0.006298	0.000679	0.000623	0.027611	0.000857	0.003936
Office Park	0.575453	0.061728	0.171227	0.112384	0.022882	0.006522	0.009800	0.006298	0.000679	0.000623	0.027611	0.000857	0.003936

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	3.6522	33.2021	27.8898	0.1992		2.5234	2.5234		2.5234	2.5234		39,842.4967	39,842.4967	0.7637	0.7305	40,079.2607
NaturalGas Unmitigated	3.6522	33.2021	27.8898	0.1992		2.5234	2.5234		2.5234	2.5234		39,842.4967	39,842.4967	0.7637	0.7305	40,079.2607

PMPU Operations 2030 PD2 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
High Turnover (Sit Down Restaurant)	46818.5	0.5049	4.5901	3.8556	0.0275		0.3488	0.3488		0.3488	0.3488		5,508.0625	5,508.0625	0.1056	0.1010	5,540.7942
Hotel	289065	3.1174	28.3397	23.8054	0.1700		2.1538	2.1538		2.1538	2.1538		34,007.6886	34,007.6886	0.6518	0.6235	34,209.7793
Office Park	2777.34	0.0300	0.2723	0.2287	1.6300e-003		0.0207	0.0207		0.0207	0.0207		326.7455	326.7455	6.2600e-003	5.9900e-003	328.6872
Total		**3.6522**	**33.2021**	**27.8897**	**0.1992**		**2.5234**	**2.5234**		**2.5234**	**2.5234**		**39,842.4967**	**39,842.4967**	**0.7636**	**0.7304**	**40,079.2607**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
High Turnover (Sit Down Restaurant)	46.8185	0.5049	4.5901	3.8556	0.0275		0.3488	0.3488		0.3488	0.3488		5,508.0625	5,508.0625	0.1056	0.1010	5,540.7942
Hotel	289.065	3.1174	28.3397	23.8054	0.1700		2.1538	2.1538		2.1538	2.1538		34,007.6886	34,007.6886	0.6518	0.6235	34,209.7793
Office Park	2.77734	0.0300	0.2723	0.2287	1.6300e-003		0.0207	0.0207		0.0207	0.0207		326.7455	326.7455	6.2600e-003	5.9900e-003	328.6872
Total		**3.6522**	**33.2021**	**27.8897**	**0.1992**		**2.5234**	**2.5234**		**2.5234**	**2.5234**		**39,842.4967**	**39,842.4967**	**0.7636**	**0.7304**	**40,079.2607**

6.0 Area Detail

6.1 Mitigation Measures Area

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	54.1812	1.2700e-003	0.1407	1.0000e-005		5.0000e-004	5.0000e-004		5.0000e-004	5.0000e-004		0.3031	0.3031	7.8000e-004		0.3226
Unmitigated	54.1812	1.2700e-003	0.1407	1.0000e-005		5.0000e-004	5.0000e-004		5.0000e-004	5.0000e-004		0.3031	0.3031	7.8000e-004		0.3226

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	12.3942					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	41.7741					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0129	1.2700e-003	0.1407	1.0000e-005		5.0000e-004	5.0000e-004		5.0000e-004	5.0000e-004		0.3031	0.3031	7.8000e-004		0.3226
Total	**54.1812**	**1.2700e-003**	**0.1407**	**1.0000e-005**		**5.0000e-004**	**5.0000e-004**		**5.0000e-004**	**5.0000e-004**		**0.3031**	**0.3031**	**7.8000e-004**		**0.3226**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	12.3942					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	41.7741					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0129	1.2700e-003	0.1407	1.0000e-005		5.0000e-004	5.0000e-004		5.0000e-004	5.0000e-004		0.3031	0.3031	7.8000e-004		0.3226
Total	**54.1812**	**1.2700e-003**	**0.1407**	**1.0000e-005**		**5.0000e-004**	**5.0000e-004**		**5.0000e-004**	**5.0000e-004**		**0.3031**	**0.3031**	**7.8000e-004**		**0.3226**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

PMPU Operations 2030 PD3

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hotel	349.00	Room	11.63	506,748.00	0
High Turnover (Sit Down Restaurant)	33.62	1000sqft	0.77	33,620.00	0
Office Park	108.70	1000sqft	2.50	108,700.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2030
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	370	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - SDG&E’s energy intensity factors for 2030 and 2050 (370 lbs/MWh CO2e) in 2030 from SANDAG’s 2016 regional inventory

Land Use -

Construction Phase - construction seperate

Off-road Equipment - construction seperate

Water And Wastewater -

Vehicle Trips - mobile off-model

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	1.00
tblConstructionPhase	PhaseEndDate	11/19/2021	10/25/2021

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.033	0
tblProjectCharacteristics	CO2IntensityFactor	539.98	370
tblProjectCharacteristics	N2OIntensityFactor	0.004	0
tblVehicleTrips	ST_TR	122.40	0.00
tblVehicleTrips	ST_TR	8.19	0.00
tblVehicleTrips	ST_TR	1.64	0.00
tblVehicleTrips	SU_TR	142.64	0.00
tblVehicleTrips	SU_TR	5.95	0.00
tblVehicleTrips	SU_TR	0.76	0.00
tblVehicleTrips	WD_TR	112.18	0.00
tblVehicleTrips	WD_TR	8.36	0.00
tblVehicleTrips	WD_TR	11.07	0.00

2.0 Emissions Summary

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	2.0000e-005	2.0000e-005	2.0000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0507	0.0507	0.0000	0.0000	0.0512
Maximum	**2.0000e-005**	**2.0000e-005**	**2.0000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0507**	**0.0507**	**0.0000**	**0.0000**	**0.0512**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	2.0000e-005	2.0000e-005	2.0000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0507	0.0507	0.0000	0.0000	0.0512
Maximum	**2.0000e-005**	**2.0000e-005**	**2.0000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0507**	**0.0507**	**0.0000**	**0.0000**	**0.0512**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	3.2875	4.0000e-005	4.4900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.7800e-003	8.7800e-003	2.0000e-005	0.0000	9.3500e-003
Energy	0.2086	1.8960	1.5926	0.0114		0.1441	0.1441		0.1441	0.1441	0.0000	3,611.7885	3,611.7885	0.0396	0.0378	3,624.0540
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	140.5205	0.0000	140.5205	8.3045	0.0000	348.1336
Water						0.0000	0.0000		0.0000	0.0000	12.1754	108.9938	121.1691	1.2505	0.0295	161.2317
Total	**3.4960**	**1.8960**	**1.5971**	**0.0114**	**0.0000**	**0.1441**	**0.1441**	**0.0000**	**0.1441**	**0.1441**	**152.6959**	**3,720.7910**	**3,873.4869**	**9.5946**	**0.0674**	**4,133.4286**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	3.2875	4.0000e-005	4.4900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.7800e-003	8.7800e-003	2.0000e-005	0.0000	9.3500e-003
Energy	0.2086	1.8960	1.5926	0.0114		0.1441	0.1441		0.1441	0.1441	0.0000	3,611.7885	3,611.7885	0.0396	0.0378	3,624.0540
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	140.5205	0.0000	140.5205	8.3045	0.0000	348.1336
Water						0.0000	0.0000		0.0000	0.0000	12.1754	108.9938	121.1691	1.2505	0.0295	161.2317
Total	**3.4960**	**1.8960**	**1.5971**	**0.0114**	**0.0000**	**0.1441**	**0.1441**	**0.0000**	**0.1441**	**0.1441**	**152.6959**	**3,720.7910**	**3,873.4869**	**9.5946**	**0.0674**	**4,133.4286**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/24/2021	10/25/2021	5	1	

Acres of Grading (Site Preparation Phase): 0

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	0.00	81	0.73
Demolition	Excavators	3	0.00	158	0.38
Demolition	Rubber Tired Dozers	2	0.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	2.0000e-005	2.0000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0507	0.0507	0.0000	0.0000	0.0512
Total	**2.0000e-005**	**2.0000e-005**	**2.0000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0507**	**0.0507**	**0.0000**	**0.0000**	**0.0512**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	2.0000e-005	2.0000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0507	0.0507	0.0000	0.0000	0.0512
Total	**2.0000e-005**	**2.0000e-005**	**2.0000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0507**	**0.0507**	**0.0000**	**0.0000**	**0.0512**

4.0 Operational Detail - Mobile

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00		
Hotel	0.00	0.00	0.00		
Office Park	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
High Turnover (Sit Down	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Office Park	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High Turnover (Sit Down Restaurant)	0.575453	0.061728	0.171227	0.112384	0.022882	0.006522	0.009800	0.006298	0.000679	0.000623	0.027611	0.000857	0.003936
Hotel	0.575453	0.061728	0.171227	0.112384	0.022882	0.006522	0.009800	0.006298	0.000679	0.000623	0.027611	0.000857	0.003936
Office Park	0.575453	0.061728	0.171227	0.112384	0.022882	0.006522	0.009800	0.006298	0.000679	0.000623	0.027611	0.000857	0.003936

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,547.7641	1,547.7641	0.0000	0.0000	1,547.7641
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,547.7641	1,547.7641	0.0000	0.0000	1,547.7641
NaturalGas Mitigated	0.2086	1.8960	1.5926	0.0114		0.1441	0.1441		0.1441	0.1441	0.0000	2,064.0245	2,064.0245	0.0396	0.0378	2,076.2899
NaturalGas Unmitigated	0.2086	1.8960	1.5926	0.0114		0.1441	0.1441		0.1441	0.1441	0.0000	2,064.0245	2,064.0245	0.0396	0.0378	2,076.2899

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
High Turnover (Sit Down Restaurant)	5.85055e+006	0.0316	0.2868	0.2409	1.7200e-003		0.0218	0.0218		0.0218	0.0218	0.0000	312.2078	312.2078	5.9800e-003	5.7200e-003	314.0631
Hotel	2.93407e+007	0.1582	1.4383	1.2082	8.6300e-003		0.1093	0.1093		0.1093	0.1093	0.0000	1,565.7320	1,565.7320	0.0300	0.0287	1,575.0363
Office Park	3.4871e+006	0.0188	0.1709	0.1436	1.0300e-003		0.0130	0.0130		0.0130	0.0130	0.0000	186.0847	186.0847	3.5700e-003	3.4100e-003	187.1905
Total		**0.2086**	**1.8960**	**1.5927**	**0.0114**		**0.1441**	**0.1441**		**0.1441**	**0.1441**	**0.0000**	**2,064.0245**	**2,064.0245**	**0.0396**	**0.0378**	**2,076.2899**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
High Turnover (Sit Down Restaurant)	5.85055e+006	0.0316	0.2868	0.2409	1.7200e-003		0.0218	0.0218		0.0218	0.0218	0.0000	312.2078	312.2078	5.9800e-003	5.7200e-003	314.0631
Hotel	2.93407e+007	0.1582	1.4383	1.2082	8.6300e-003		0.1093	0.1093		0.1093	0.1093	0.0000	1,565.7320	1,565.7320	0.0300	0.0287	1,575.0363
Office Park	3.4871e+006	0.0188	0.1709	0.1436	1.0300e-003		0.0130	0.0130		0.0130	0.0130	0.0000	186.0847	186.0847	3.5700e-003	3.4100e-003	187.1905
Total		**0.2086**	**1.8960**	**1.5927**	**0.0114**		**0.1441**	**0.1441**		**0.1441**	**0.1441**	**0.0000**	**2,064.0245**	**2,064.0245**	**0.0396**	**0.0378**	**2,076.2899**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
High Turnover (Sit Down Restaurant)	1.27151e+006	213.3962	0.0000	0.0000	213.3962
Hotel	6.30395e+006	1,057.9859	0.0000	0.0000	1,057.9859
Office Park	1.64681e+006	276.3819	0.0000	0.0000	276.3819
Total		**1,547.7641**	**0.0000**	**0.0000**	**1,547.7641**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
High Turnover (Sit Down Restaurant)	1.27151e+006	213.3962	0.0000	0.0000	213.3962
Hotel	6.30395e+006	1,057.9859	0.0000	0.0000	1,057.9859
Office Park	1.64681e+006	276.3819	0.0000	0.0000	276.3819
Total		**1,547.7641**	**0.0000**	**0.0000**	**1,547.7641**

6.0 Area Detail

6.1 Mitigation Measures Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.2875	4.0000e-005	4.4900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.7800e-003	8.7800e-003	2.0000e-005	0.0000	9.3500e-003
Unmitigated	3.2875	4.0000e-005	4.4900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.7800e-003	8.7800e-003	2.0000e-005	0.0000	9.3500e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.7521					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.5349					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.1000e-004	4.0000e-005	4.4900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.7800e-003	8.7800e-003	2.0000e-005	0.0000	9.3500e-003
Total	**3.2875**	**4.0000e-005**	**4.4900e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**8.7800e-003**	**8.7800e-003**	**2.0000e-005**	**0.0000**	**9.3500e-003**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.7521					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.5349					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.1000e-004	4.0000e-005	4.4900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.7800e-003	8.7800e-003	2.0000e-005	0.0000	9.3500e-003
Total	**3.2875**	**4.0000e-005**	**4.4900e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**8.7800e-003**	**8.7800e-003**	**2.0000e-005**	**0.0000**	**9.3500e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	121.1691	1.2505	0.0295	161.2317
Unmitigated	121.1691	1.2505	0.0295	161.2317

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
High Turnover (Sit Down Restaurant)	10.2048 / 0.65137	26.7526	0.3325	7.8500e-003	37.4055
Hotel	8.853 / 0.983667	23.9893	0.2885	6.8100e-003	33.2310
Office Park	19.3197 / 11.8411	70.4272	0.6295	0.0149	90.5952
Total		**121.1692**	**1.2505**	**0.0295**	**161.2317**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
High Turnover (Sit Down Restaurant)	10.2048 / 0.65137	26.7526	0.3325	7.8500e-003	37.4055
Hotel	8.853 / 0.983667	23.9893	0.2885	6.8100e-003	33.2310
Office Park	19.3197 / 11.8411	70.4272	0.6295	0.0149	90.5952
Total		**121.1692**	**1.2505**	**0.0295**	**161.2317**

8.0 Waste Detail

8.1 Mitigation Measures Waste

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	140.5205	8.3045	0.0000	348.1336
Unmitigated	140.5205	8.3045	0.0000	348.1336

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
High Turnover (Sit Down Restaurant)	400.08	81.2126	4.7995	0.0000	201.2008
Hotel	191.08	38.7875	2.2923	0.0000	96.0944
Office Park	101.09	20.5204	1.2127	0.0000	50.8383
Total		**140.5205**	**8.3045**	**0.0000**	**348.1336**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
High Turnover (Sit Down Restaurant)	400.08	81.2126	4.7995	0.0000	201.2008
Hotel	191.08	38.7875	2.2923	0.0000	96.0944
Office Park	101.09	20.5204	1.2127	0.0000	50.8383
Total		**140.5205**	**8.3045**	**0.0000**	**348.1336**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

11.0 Vegetation

PMPU Operations 2030 PD3 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

PMPU Operations 2030 PD3

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hotel	349.00	Room	11.63	506,748.00	0
High Turnover (Sit Down Restaurant)	33.62	1000sqft	0.77	33,620.00	0
Office Park	108.70	1000sqft	2.50	108,700.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2030
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	370	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - SDG&E’s energy intensity factors for 2030 and 2050 (370 lbs/MWh CO2e) in 2030 from SANDAG’s 2016 regional inventory

Land Use -

Construction Phase - construction seperate

Off-road Equipment - construction seperate

Water And Wastewater -

Vehicle Trips - mobile off-model

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	1.00
tblConstructionPhase	PhaseEndDate	11/19/2021	10/25/2021

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.033	0
tblProjectCharacteristics	CO2IntensityFactor	539.98	370
tblProjectCharacteristics	N2OIntensityFactor	0.004	0
tblVehicleTrips	ST_TR	122.40	0.00
tblVehicleTrips	ST_TR	8.19	0.00
tblVehicleTrips	ST_TR	1.64	0.00
tblVehicleTrips	SU_TR	142.64	0.00
tblVehicleTrips	SU_TR	5.95	0.00
tblVehicleTrips	SU_TR	0.76	0.00
tblVehicleTrips	WD_TR	112.18	0.00
tblVehicleTrips	WD_TR	8.36	0.00
tblVehicleTrips	WD_TR	11.07	0.00

2.0 Emissions Summary

PMPU Operations 2030 PD3 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	0.0505	0.0360	0.3982	1.1000e-003	0.1232	7.4000e-004	0.1240	0.0327	6.8000e-004	0.0334	0.0000	110.7417	110.7417	3.8400e-003	3.4400e-003	111.8638
Maximum	**0.0505**	**0.0360**	**0.3982**	**1.1000e-003**	**0.1232**	**7.4000e-004**	**0.1240**	**0.0327**	**6.8000e-004**	**0.0334**	**0.0000**	**110.7417**	**110.7417**	**3.8400e-003**	**3.4400e-003**	**111.8638**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	0.0505	0.0360	0.3982	1.1000e-003	0.1232	7.4000e-004	0.1240	0.0327	6.8000e-004	0.0334	0.0000	110.7417	110.7417	3.8400e-003	3.4400e-003	111.8638
Maximum	**0.0505**	**0.0360**	**0.3982**	**1.1000e-003**	**0.1232**	**7.4000e-004**	**0.1240**	**0.0327**	**6.8000e-004**	**0.0334**	**0.0000**	**110.7417**	**110.7417**	**3.8400e-003**	**3.4400e-003**	**111.8638**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

PMPU Operations 2030 PD3 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	18.0158	4.5000e-004	0.0499	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1075	0.1075	2.8000e-004		0.1145
Energy	1.1428	10.3890	8.7268	0.0623		0.7896	0.7896		0.7896	0.7896		12,466.8357	12,466.8357	0.2390	0.2286	12,540.9198
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**19.1586**	**10.3895**	**8.7767**	**0.0623**	**0.0000**	**0.7898**	**0.7898**	**0.0000**	**0.7898**	**0.7898**		**12,466.9432**	**12,466.9432**	**0.2392**	**0.2286**	**12,541.0343**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	18.0158	4.5000e-004	0.0499	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1075	0.1075	2.8000e-004		0.1145
Energy	1.1428	10.3890	8.7268	0.0623		0.7896	0.7896		0.7896	0.7896		12,466.8357	12,466.8357	0.2390	0.2286	12,540.9198
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**19.1586**	**10.3895**	**8.7767**	**0.0623**	**0.0000**	**0.7898**	**0.7898**	**0.0000**	**0.7898**	**0.7898**		**12,466.9432**	**12,466.9432**	**0.2392**	**0.2286**	**12,541.0343**

PMPU Operations 2030 PD3 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/24/2021	10/25/2021	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	0.00	81	0.73
Demolition	Excavators	3	0.00	158	0.38
Demolition	Rubber Tired Dozers	2	0.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

PMPU Operations 2030 PD3 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0505	0.0360	0.3982	1.1000e-003	0.1232	7.4000e-004	0.1240	0.0327	6.8000e-004	0.0334		110.7417	110.7417	3.8400e-003	3.4400e-003	111.8638
Total	**0.0505**	**0.0360**	**0.3982**	**1.1000e-003**	**0.1232**	**7.4000e-004**	**0.1240**	**0.0327**	**6.8000e-004**	**0.0334**		**110.7417**	**110.7417**	**3.8400e-003**	**3.4400e-003**	**111.8638**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0505	0.0360	0.3982	1.1000e-003	0.1232	7.4000e-004	0.1240	0.0327	6.8000e-004	0.0334		110.7417	110.7417	3.8400e-003	3.4400e-003	111.8638
Total	**0.0505**	**0.0360**	**0.3982**	**1.1000e-003**	**0.1232**	**7.4000e-004**	**0.1240**	**0.0327**	**6.8000e-004**	**0.0334**		**110.7417**	**110.7417**	**3.8400e-003**	**3.4400e-003**	**111.8638**

4.0 Operational Detail - Mobile

PMPU Operations 2030 PD3 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00		
Hotel	0.00	0.00	0.00		
Office Park	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
High Turnover (Sit Down	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Office Park	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High Turnover (Sit Down Restaurant)	0.575453	0.061728	0.171227	0.112384	0.022882	0.006522	0.009800	0.006298	0.000679	0.000623	0.027611	0.000857	0.003936
Hotel	0.575453	0.061728	0.171227	0.112384	0.022882	0.006522	0.009800	0.006298	0.000679	0.000623	0.027611	0.000857	0.003936
Office Park	0.575453	0.061728	0.171227	0.112384	0.022882	0.006522	0.009800	0.006298	0.000679	0.000623	0.027611	0.000857	0.003936

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.1428	10.3890	8.7268	0.0623		0.7896	0.7896		0.7896	0.7896		12,466.8357	12,466.8357	0.2390	0.2286	12,540.9198
NaturalGas Unmitigated	1.1428	10.3890	8.7268	0.0623		0.7896	0.7896		0.7896	0.7896		12,466.8357	12,466.8357	0.2390	0.2286	12,540.9198

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
High Turnover (Sit Down Restaurant)	16028.9	0.1729	1.5715	1.3200	9.4300e-003		0.1194	0.1194		0.1194	0.1194		1,885.7542	1,885.7542	0.0361	0.0346	1,896.9603
Hotel	80385.5	0.8669	7.8809	6.6200	0.0473		0.5990	0.5990		0.5990	0.5990		9,457.1182	9,457.1182	0.1813	0.1734	9,513.3171
Office Park	9553.69	0.1030	0.9366	0.7868	5.6200e-003		0.0712	0.0712		0.0712	0.0712		1,123.9633	1,123.9633	0.0215	0.0206	1,130.6424
Total		**1.1428**	**10.3890**	**8.7268**	**0.0623**		**0.7896**	**0.7896**		**0.7896**	**0.7896**		**12,466.8357**	**12,466.8357**	**0.2389**	**0.2286**	**12,540.9198**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
High Turnover (Sit Down Restaurant)	16.0289	0.1729	1.5715	1.3200	9.4300e-003		0.1194	0.1194		0.1194	0.1194		1,885.7542	1,885.7542	0.0361	0.0346	1,896.9603
Hotel	80.3855	0.8669	7.8809	6.6200	0.0473		0.5990	0.5990		0.5990	0.5990		9,457.1182	9,457.1182	0.1813	0.1734	9,513.3171
Office Park	9.55369	0.1030	0.9366	0.7868	5.6200e-003		0.0712	0.0712		0.0712	0.0712		1,123.9633	1,123.9633	0.0215	0.0206	1,130.6424
Total		**1.1428**	**10.3890**	**8.7268**	**0.0623**		**0.7896**	**0.7896**		**0.7896**	**0.7896**		**12,466.8357**	**12,466.8357**	**0.2389**	**0.2286**	**12,540.9198**

6.0 Area Detail

6.1 Mitigation Measures Area

PMPU Operations 2030 PD3 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	18.0158	4.5000e-004	0.0499	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1075	0.1075	2.8000e-004		0.1145
Unmitigated	18.0158	4.5000e-004	0.0499	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1075	0.1075	2.8000e-004		0.1145

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	4.1211					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	13.8901					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.5700e-003	4.5000e-004	0.0499	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1075	0.1075	2.8000e-004		0.1145
Total	**18.0158**	**4.5000e-004**	**0.0499**	**0.0000**		**1.8000e-004**	**1.8000e-004**		**1.8000e-004**	**1.8000e-004**		**0.1075**	**0.1075**	**2.8000e-004**		**0.1145**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	4.1211					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	13.8901					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.5700e-003	4.5000e-004	0.0499	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004		0.1075	0.1075	2.8000e-004		0.1145
Total	**18.0158**	**4.5000e-004**	**0.0499**	**0.0000**		**1.8000e-004**	**1.8000e-004**		**1.8000e-004**	**1.8000e-004**		**0.1075**	**0.1075**	**2.8000e-004**		**0.1145**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

PMPU Operations 2030 PD8 - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

PMPU Operations 2030 PD8

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High Turnover (Sit Down Restaurant)	7.40	1000sqft	0.17	7,400.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2030
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	370	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - SDG&E’s energy intensity factors for 2030 and 2050 (370 lbs/MWh CO2e) in 2030 from SANDAG’s 2016 regional inventory

Land Use -

Construction Phase - construction seperate

Off-road Equipment - construction seperate

Water And Wastewater -

Vehicle Trips - mobile off-model

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	1.00
tblConstructionPhase	PhaseEndDate	11/5/2021	10/25/2021
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00

PMPU Operations 2030 PD8 - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblOffRoadEquipment	UsageHours	1.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.033	0
tblProjectCharacteristics	CO2IntensityFactor	539.98	370
tblProjectCharacteristics	N2OIntensityFactor	0.004	0
tblVehicleTrips	ST_TR	122.40	0.00
tblVehicleTrips	SU_TR	142.64	0.00
tblVehicleTrips	WD_TR	112.18	0.00

2.0 Emissions Summary

PMPU Operations 2030 PD8 - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	2.0000e-005	1.0000e-005	1.3000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0339	0.0339	0.0000	0.0000	0.0342
Maximum	**2.0000e-005**	**1.0000e-005**	**1.3000e-004**	**0.0000**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0339**	**0.0339**	**0.0000**	**0.0000**	**0.0342**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	2.0000e-005	1.0000e-005	1.3000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0339	0.0339	0.0000	0.0000	0.0342
Maximum	**2.0000e-005**	**1.0000e-005**	**1.3000e-004**	**0.0000**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0339**	**0.0339**	**0.0000**	**0.0000**	**0.0342**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0375	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3000e-004	1.3000e-004	0.0000	0.0000	1.4000e-004
Energy	6.9400e-003	0.0631	0.0530	3.8000e-004		4.8000e-003	4.8000e-003		4.8000e-003	4.8000e-003	0.0000	115.6892	115.6892	1.3200e-003	1.2600e-003	116.0975
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	17.8754	0.0000	17.8754	1.0564	0.0000	44.2855
Water						0.0000	0.0000		0.0000	0.0000	0.7126	5.1759	5.8885	0.0732	1.7300e-003	8.2332
Total	**0.0444**	**0.0631**	**0.0531**	**3.8000e-004**	**0.0000**	**4.8000e-003**	**4.8000e-003**	**0.0000**	**4.8000e-003**	**4.8000e-003**	**18.5880**	**120.8651**	**139.4531**	**1.1309**	**2.9900e-003**	**168.6164**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0375	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3000e-004	1.3000e-004	0.0000	0.0000	1.4000e-004
Energy	6.9400e-003	0.0631	0.0530	3.8000e-004		4.8000e-003	4.8000e-003		4.8000e-003	4.8000e-003	0.0000	115.6892	115.6892	1.3200e-003	1.2600e-003	116.0975
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	17.8754	0.0000	17.8754	1.0564	0.0000	44.2855
Water						0.0000	0.0000		0.0000	0.0000	0.7126	5.1759	5.8885	0.0732	1.7300e-003	8.2332
Total	**0.0444**	**0.0631**	**0.0531**	**3.8000e-004**	**0.0000**	**4.8000e-003**	**4.8000e-003**	**0.0000**	**4.8000e-003**	**4.8000e-003**	**18.5880**	**120.8651**	**139.4531**	**1.1309**	**2.9900e-003**	**168.6164**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/24/2021	10/25/2021	5	1	

Acres of Grading (Site Preparation Phase): 0

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Tractors/Loaders/Backhoes	2	0.00	97	0.37
Demolition	Concrete/Industrial Saws	1	0.00	81	0.73
Demolition	Rubber Tired Dozers	1	0.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	1.0000e-005	1.3000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0339	0.0339	0.0000	0.0000	0.0342
Total	**2.0000e-005**	**1.0000e-005**	**1.3000e-004**	**0.0000**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0339**	**0.0339**	**0.0000**	**0.0000**	**0.0342**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	1.0000e-005	1.3000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0339	0.0339	0.0000	0.0000	0.0342
Total	**2.0000e-005**	**1.0000e-005**	**1.3000e-004**	**0.0000**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0339**	**0.0339**	**0.0000**	**0.0000**	**0.0342**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
High Turnover (Sit Down	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High Turnover (Sit Down Restaurant)	0.575453	0.061728	0.171227	0.112384	0.022882	0.006522	0.009800	0.006298	0.000679	0.000623	0.027611	0.000857	0.003936

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	46.9700	46.9700	0.0000	0.0000	46.9700
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	46.9700	46.9700	0.0000	0.0000	46.9700
NaturalGas Mitigated	6.9400e-003	0.0631	0.0530	3.8000e-004		4.8000e-003	4.8000e-003		4.8000e-003	4.8000e-003	0.0000	68.7191	68.7191	1.3200e-003	1.2600e-003	69.1275
NaturalGas Unmitigated	6.9400e-003	0.0631	0.0530	3.8000e-004		4.8000e-003	4.8000e-003		4.8000e-003	4.8000e-003	0.0000	68.7191	68.7191	1.3200e-003	1.2600e-003	69.1275

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
High Turnover (Sit Down Restaurant)	1.28775e+006	6.9400e-003	0.0631	0.0530	3.8000e-004		4.8000e-003	4.8000e-003		4.8000e-003	4.8000e-003	0.0000	68.7191	68.7191	1.3200e-003	1.2600e-003	69.1275
Total		**6.9400e-003**	**0.0631**	**0.0530**	**3.8000e-004**		**4.8000e-003**	**4.8000e-003**		**4.8000e-003**	**4.8000e-003**	**0.0000**	**68.7191**	**68.7191**	**1.3200e-003**	**1.2600e-003**	**69.1275**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
High Turnover (Sit Down Restaurant)	1.28775e+006	6.9400e-003	0.0631	0.0530	3.8000e-004		4.8000e-003	4.8000e-003		4.8000e-003	4.8000e-003	0.0000	68.7191	68.7191	1.3200e-003	1.2600e-003	69.1275
Total		**6.9400e-003**	**0.0631**	**0.0530**	**3.8000e-004**		**4.8000e-003**	**4.8000e-003**		**4.8000e-003**	**4.8000e-003**	**0.0000**	**68.7191**	**68.7191**	**1.3200e-003**	**1.2600e-003**	**69.1275**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
High Turnover (Sit Down Restaurant)	279868	46.9700	0.0000	0.0000	46.9700
Total		**46.9700**	**0.0000**	**0.0000**	**46.9700**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
High Turnover (Sit Down Restaurant)	279868	46.9700	0.0000	0.0000	46.9700
Total		**46.9700**	**0.0000**	**0.0000**	**46.9700**

6.0 Area Detail

6.1 Mitigation Measures Area

PMPU Operations 2030 PD8 - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0375	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3000e-004	1.3000e-004	0.0000	0.0000	1.4000e-004
Unmitigated	0.0375	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3000e-004	1.3000e-004	0.0000	0.0000	1.4000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	8.5700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0289					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3000e-004	1.3000e-004	0.0000	0.0000	1.4000e-004
Total	**0.0375**	**0.0000**	**7.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.3000e-004**	**1.3000e-004**	**0.0000**	**0.0000**	**1.4000e-004**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	8.5700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0289					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3000e-004	1.3000e-004	0.0000	0.0000	1.4000e-004
Total	**0.0375**	**0.0000**	**7.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.3000e-004**	**1.3000e-004**	**0.0000**	**0.0000**	**1.4000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	5.8885	0.0732	1.7300e-003	8.2332
Unmitigated	5.8885	0.0732	1.7300e-003	8.2332

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
High Turnover (Sit Down Restaurant)	2.24615 / 0.143371	5.8885	0.0732	1.7300e-003	8.2332
Total		**5.8885**	**0.0732**	**1.7300e-003**	**8.2332**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
High Turnover (Sit Down Restaurant)	2.24615 / 0.143371	5.8885	0.0732	1.7300e-003	8.2332
Total		**5.8885**	**0.0732**	**1.7300e-003**	**8.2332**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	17.8754	1.0564	0.0000	44.2855
Unmitigated	17.8754	1.0564	0.0000	44.2855

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
High Turnover (Sit Down Restaurant)	88.06	17.8754	1.0564	0.0000	44.2855
Total		**17.8754**	**1.0564**	**0.0000**	**44.2855**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
High Turnover (Sit Down Restaurant)	88.06	17.8754	1.0564	0.0000	44.2855
Total		**17.8754**	**1.0564**	**0.0000**	**44.2855**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

PMPU Operations 2030 PD8 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

PMPU Operations 2030 PD8

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High Turnover (Sit Down Restaurant)	7.40	1000sqft	0.17	7,400.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2030
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	370	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - SDG&E’s energy intensity factors for 2030 and 2050 (370 lbs/MWh CO2e) in 2030 from SANDAG’s 2016 regional inventory

Land Use -

Construction Phase - construction seperate

Off-road Equipment - construction seperate

Water And Wastewater -

Vehicle Trips - mobile off-model

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	1.00
tblConstructionPhase	PhaseEndDate	11/5/2021	10/25/2021
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00

PMPU Operations 2030 PD8 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblOffRoadEquipment	UsageHours	1.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.033	0
tblProjectCharacteristics	CO2IntensityFactor	539.98	370
tblProjectCharacteristics	N2OIntensityFactor	0.004	0
tblVehicleTrips	ST_TR	122.40	0.00
tblVehicleTrips	SU_TR	142.64	0.00
tblVehicleTrips	WD_TR	112.18	0.00

2.0 Emissions Summary

PMPU Operations 2030 PD8 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	0.0337	0.0240	0.2656	7.3000e-004	0.0822	4.9000e-004	0.0826	0.0218	4.5000e-004	0.0222	0.0000	73.9966	73.9966	2.5600e-003	2.3000e-003	74.7446
Maximum	**0.0337**	**0.0240**	**0.2656**	**7.3000e-004**	**0.0822**	**4.9000e-004**	**0.0826**	**0.0218**	**4.5000e-004**	**0.0222**	**0.0000**	**73.9966**	**73.9966**	**2.5600e-003**	**2.3000e-003**	**74.7446**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	0.0337	0.0240	0.2656	7.3000e-004	0.0822	4.9000e-004	0.0826	0.0218	4.5000e-004	0.0222	0.0000	73.9966	73.9966	2.5600e-003	2.3000e-003	74.7446
Maximum	**0.0337**	**0.0240**	**0.2656**	**7.3000e-004**	**0.0822**	**4.9000e-004**	**0.0826**	**0.0218**	**4.5000e-004**	**0.0222**	**0.0000**	**73.9966**	**73.9966**	**2.5600e-003**	**2.3000e-003**	**74.7446**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

PMPU Operations 2030 PD8 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2054	1.0000e-005	7.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.6200e-003	1.6200e-003	0.0000		1.7200e-003
Energy	0.0381	0.3459	0.2906	2.0800e-003		0.0263	0.0263		0.0263	0.0263		415.0679	415.0679	7.9600e-003	7.6100e-003	417.5344
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.2435**	**0.3459**	**0.2913**	**2.0800e-003**	**0.0000**	**0.0263**	**0.0263**	**0.0000**	**0.0263**	**0.0263**		**415.0695**	**415.0695**	**7.9600e-003**	**7.6100e-003**	**417.5361**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2054	1.0000e-005	7.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.6200e-003	1.6200e-003	0.0000		1.7200e-003
Energy	0.0381	0.3459	0.2906	2.0800e-003		0.0263	0.0263		0.0263	0.0263		415.0679	415.0679	7.9600e-003	7.6100e-003	417.5344
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.2435**	**0.3459**	**0.2913**	**2.0800e-003**	**0.0000**	**0.0263**	**0.0263**	**0.0000**	**0.0263**	**0.0263**		**415.0695**	**415.0695**	**7.9600e-003**	**7.6100e-003**	**417.5361**

PMPU Operations 2030 PD8 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/24/2021	10/25/2021	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Tractors/Loaders/Backhoes	2	0.00	97	0.37
Demolition	Concrete/Industrial Saws	1	0.00	81	0.73
Demolition	Rubber Tired Dozers	1	0.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

PMPU Operations 2030 PD8 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0337	0.0240	0.2656	7.3000e-004	0.0822	4.9000e-004	0.0826	0.0218	4.5000e-004	0.0222		73.9966	73.9966	2.5600e-003	2.3000e-003	74.7446
Total	**0.0337**	**0.0240**	**0.2656**	**7.3000e-004**	**0.0822**	**4.9000e-004**	**0.0826**	**0.0218**	**4.5000e-004**	**0.0222**		**73.9966**	**73.9966**	**2.5600e-003**	**2.3000e-003**	**74.7446**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0337	0.0240	0.2656	7.3000e-004	0.0822	4.9000e-004	0.0826	0.0218	4.5000e-004	0.0222		73.9966	73.9966	2.5600e-003	2.3000e-003	74.7446
Total	**0.0337**	**0.0240**	**0.2656**	**7.3000e-004**	**0.0822**	**4.9000e-004**	**0.0826**	**0.0218**	**4.5000e-004**	**0.0222**		**73.9966**	**73.9966**	**2.5600e-003**	**2.3000e-003**	**74.7446**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
High Turnover (Sit Down	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High Turnover (Sit Down Restaurant)	0.575453	0.061728	0.171227	0.112384	0.022882	0.006522	0.009800	0.006298	0.000679	0.000623	0.027611	0.000857	0.003936

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0381	0.3459	0.2906	2.0800e-003		0.0263	0.0263		0.0263	0.0263		415.0679	415.0679	7.9600e-003	7.6100e-003	417.5344
NaturalGas Unmitigated	0.0381	0.3459	0.2906	2.0800e-003		0.0263	0.0263		0.0263	0.0263		415.0679	415.0679	7.9600e-003	7.6100e-003	417.5344

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
High Turnover (Sit Down Restaurant)	3528.08	0.0381	0.3459	0.2906	2.0800e-003		0.0263	0.0263		0.0263	0.0263		415.0679	415.0679	7.9600e-003	7.6100e-003	417.5344
Total		**0.0381**	**0.3459**	**0.2906**	**2.0800e-003**		**0.0263**	**0.0263**		**0.0263**	**0.0263**		**415.0679**	**415.0679**	**7.9600e-003**	**7.6100e-003**	**417.5344**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
High Turnover (Sit Down Restaurant)	3.52808	0.0381	0.3459	0.2906	2.0800e-003		0.0263	0.0263		0.0263	0.0263		415.0679	415.0679	7.9600e-003	7.6100e-003	417.5344
Total		**0.0381**	**0.3459**	**0.2906**	**2.0800e-003**		**0.0263**	**0.0263**		**0.0263**	**0.0263**		**415.0679**	**415.0679**	**7.9600e-003**	**7.6100e-003**	**417.5344**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2054	1.0000e-005	7.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.6200e-003	1.6200e-003	0.0000		1.7200e-003
Unmitigated	0.2054	1.0000e-005	7.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.6200e-003	1.6200e-003	0.0000		1.7200e-003

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0470					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1584					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.0000e-005	1.0000e-005	7.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.6200e-003	1.6200e-003	0.0000		1.7200e-003
Total	**0.2054**	**1.0000e-005**	**7.5000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.6200e-003**	**1.6200e-003**	**0.0000**		**1.7200e-003**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0470					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1584					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.0000e-005	1.0000e-005	7.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.6200e-003	1.6200e-003	0.0000		1.7200e-003
Total	**0.2054**	**1.0000e-005**	**7.5000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.6200e-003**	**1.6200e-003**	**0.0000**		**1.7200e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hotel	3,910.00	Room	130.33	5,677,320.00	0
High Turnover (Sit Down Restaurant)	339.50	1000sqft	7.79	339,500.00	0
Office Park	342.00	1000sqft	7.85	342,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2050
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - SDG&E’s energy intensity factors for 2050 (0 lbs/MWh CO2e) in 2050 from SANDAG’s 2016 regional inventory

Land Use -

Construction Phase - construction seperate

Off-road Equipment - construction seperate

Vehicle Trips - mobile seperate

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	200.00	1.00
tblConstructionPhase	PhaseEndDate	7/25/2022	10/19/2021
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.033	0
tblProjectCharacteristics	CO2IntensityFactor	539.98	0
tblProjectCharacteristics	N2OIntensityFactor	0.004	0
tblVehicleTrips	ST_TR	122.40	0.00
tblVehicleTrips	ST_TR	8.19	0.00
tblVehicleTrips	ST_TR	1.64	0.00
tblVehicleTrips	SU_TR	142.64	0.00
tblVehicleTrips	SU_TR	5.95	0.00
tblVehicleTrips	SU_TR	0.76	0.00
tblVehicleTrips	WD_TR	112.18	0.00
tblVehicleTrips	WD_TR	8.36	0.00
tblVehicleTrips	WD_TR	11.07	0.00

2.0 Emissions Summary

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	2.0000e-005	2.0000e-005	2.0000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0507	0.0507	0.0000	0.0000	0.0512
Maximum	**2.0000e-005**	**2.0000e-005**	**2.0000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0507**	**0.0507**	**0.0000**	**0.0000**	**0.0512**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	2.0000e-005	2.0000e-005	2.0000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0507	0.0507	0.0000	0.0000	0.0512
Maximum	**2.0000e-005**	**2.0000e-005**	**2.0000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0507**	**0.0507**	**0.0000**	**0.0000**	**0.0512**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	32.2065	3.8000e-004	0.0419	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	0.0820	0.0820	2.1000e-004	0.0000	0.0873
Energy	2.1502	19.5475	16.4199	0.1173		1.4856	1.4856		1.4856	1.4856	0.0000	21,279.7779	21,279.7779	0.4079	0.3901	21,406.2330
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	1,319.2038	0.0000	1,319.2038	77.9627	0.0000	3,268.2715
Water						0.0000	0.0000		0.0000	0.0000	83.4437	0.0000	83.4437	8.5705	0.2024	358.0109
Total	**34.3567**	**19.5478**	**16.4618**	**0.1173**	**0.0000**	**1.4858**	**1.4858**	**0.0000**	**1.4858**	**1.4858**	**1,402.6475**	**21,279.8600**	**22,682.5074**	**86.9413**	**0.5925**	**25,032.6027**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	32.2065	3.8000e-004	0.0419	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	0.0820	0.0820	2.1000e-004	0.0000	0.0873
Energy	1.8413	16.7390	14.0608	0.1004		1.2722	1.2722		1.2722	1.2722	0.0000	18,222.4800	18,222.4800	0.3493	0.3341	18,330.7671
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	66.7550	0.0000	66.7550	6.8564	0.1619	286.4087
Total	**34.0478**	**16.7394**	**14.1027**	**0.1004**	**0.0000**	**1.2723**	**1.2723**	**0.0000**	**1.2723**	**1.2723**	**66.7550**	**18,222.5620**	**18,289.3170**	**7.2058**	**0.4960**	**18,617.2631**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.90**	**14.37**	**14.33**	**14.37**	**0.00**	**14.37**	**14.37**	**0.00**	**14.37**	**14.37**	**95.24**	**14.37**	**19.37**	**91.71**	**16.29**	**25.63**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/19/2021	10/19/2021	5	1	

Acres of Grading (Site Preparation Phase): 0

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	0.00	81	0.73
Demolition	Excavators	3	0.00	158	0.38
Demolition	Rubber Tired Dozers	2	0.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	2.0000e-005	2.0000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0507	0.0507	0.0000	0.0000	0.0512
Total	**2.0000e-005**	**2.0000e-005**	**2.0000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0507**	**0.0507**	**0.0000**	**0.0000**	**0.0512**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	2.0000e-005	2.0000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0507	0.0507	0.0000	0.0000	0.0512
Total	**2.0000e-005**	**2.0000e-005**	**2.0000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0507**	**0.0507**	**0.0000**	**0.0000**	**0.0512**

4.0 Operational Detail - Mobile

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00		
Hotel	0.00	0.00	0.00		
Office Park	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
High Turnover (Sit Down	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Office Park	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High Turnover (Sit Down Restaurant)	0.584721	0.061219	0.165591	0.108994	0.022611	0.007030	0.011356	0.006685	0.000606	0.000664	0.026637	0.000823	0.003063
Hotel	0.584721	0.061219	0.165591	0.108994	0.022611	0.007030	0.011356	0.006685	0.000606	0.000664	0.026637	0.000823	0.003063
Office Park	0.584721	0.061219	0.165591	0.108994	0.022611	0.007030	0.011356	0.006685	0.000606	0.000664	0.026637	0.000823	0.003063

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	1.8413	16.7390	14.0608	0.1004		1.2722	1.2722		1.2722	1.2722	0.0000	18,222.4800	18,222.4800	0.3493	0.3341	18,330.7671
NaturalGas Unmitigated	2.1502	19.5475	16.4199	0.1173		1.4856	1.4856		1.4856	1.4856	0.0000	21,279.7779	21,279.7779	0.4079	0.3901	21,406.2330

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
High Turnover (Sit Down Restaurant)	5.90798e+007	0.3186	2.8961	2.4327	0.0174		0.2201	0.2201		0.2201	0.2201	0.0000	3,152.7226	3,152.7226	0.0604	0.0578	3,171.4576
Hotel	3.28717e+008	1.7725	16.1136	13.5354	0.0967		1.2246	1.2246		1.2246	1.2246	0.0000	17,541.5818	17,541.5818	0.3362	0.3216	17,645.8226
Office Park	1.09714e+007	0.0592	0.5378	0.4518	3.2300e-003		0.0409	0.0409		0.0409	0.0409	0.0000	585.4736	585.4736	0.0112	0.0107	588.9527
Total		**2.1502**	**19.5475**	**16.4199**	**0.1173**		**1.4856**	**1.4856**		**1.4856**	**1.4856**	**0.0000**	**21,279.7779**	**21,279.7779**	**0.4079**	**0.3901**	**21,406.2330**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
High Turnover (Sit Down Restaurant)	5.66653e+007	0.3056	2.7777	2.3333	0.0167		0.2111	0.2111		0.2111	0.2111	0.0000	3,023.8744	3,023.8744	0.0580	0.0554	3,041.8438
Hotel	2.75577e+008	1.4860	13.5087	11.3473	0.0811		1.0267	1.0267		1.0267	1.0267	0.0000	14,705.8442	14,705.8442	0.2819	0.2696	14,793.2337
Office Park	9.234e+006	0.0498	0.4527	0.3802	2.7200e-003		0.0344	0.0344		0.0344	0.0344	0.0000	492.7614	492.7614	9.4400e-003	9.0300e-003	495.6896
Total		**1.8413**	**16.7390**	**14.0608**	**0.1004**		**1.2722**	**1.2722**		**1.2722**	**1.2722**	**0.0000**	**18,222.4800**	**18,222.4800**	**0.3493**	**0.3341**	**18,330.7671**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
High Turnover (Sit Down Restaurant)	1.28399e+007	0.0000	0.0000	0.0000	0.0000
Hotel	7.06259e+007	0.0000	0.0000	0.0000	0.0000
Office Park	5.1813e+006	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
High Turnover (Sit Down Restaurant)	1.18138e+007	0.0000	0.0000	0.0000	0.0000
Hotel	6.49003e+007	0.0000	0.0000	0.0000	0.0000
Office Park	4.78715e+006	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	32.2065	3.8000e-004	0.0419	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	0.0820	0.0820	2.1000e-004	0.0000	0.0873
Unmitigated	32.2065	3.8000e-004	0.0419	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	0.0820	0.0820	2.1000e-004	0.0000	0.0873

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	7.3683					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	24.8344					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.8400e-003	3.8000e-004	0.0419	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	0.0820	0.0820	2.1000e-004	0.0000	0.0873
Total	**32.2065**	**3.8000e-004**	**0.0419**	**0.0000**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**	**0.0000**	**0.0820**	**0.0820**	**2.1000e-004**	**0.0000**	**0.0873**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	7.3683					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	24.8344					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.8400e-003	3.8000e-004	0.0419	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	0.0820	0.0820	2.1000e-004	0.0000	0.0873
Total	**32.2065**	**3.8000e-004**	**0.0419**	**0.0000**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**	**0.0000**	**0.0820**	**0.0820**	**2.1000e-004**	**0.0000**	**0.0873**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	66.7550	6.8564	0.1619	286.4087
Unmitigated	83.4437	8.5705	0.2024	358.0109

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
High Turnover (Sit Down Restaurant)	103.05 / 6.57764	32.6929	3.3579	0.0793	140.2673
Hotel	99.1841 / 11.0205	31.4665	3.2319	0.0763	135.0055
Office Park	60.7849 / 37.2553	19.2843	1.9807	0.0468	82.7381
Total		**83.4437**	**8.5705**	**0.2024**	**358.0109**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
High Turnover (Sit Down Restaurant)	82.4398 / 5.26211	26.1543	2.6863	0.0634	112.2138
Hotel	79.3473 / 8.81636	25.1732	2.5855	0.0611	108.0044
Office Park	48.628 / 29.8042	15.4274	1.5845	0.0374	66.1905
Total		**66.7550**	**6.8564**	**0.1619**	**286.4087**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	1,319.2038	77.9627	0.0000	3,268.2715

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
High Turnover (Sit Down Restaurant)	4040.05	820.0936	48.4662	0.0000	2,031.7473
Hotel	2140.72	434.5468	25.6810	0.0000	1,076.5713
Office Park	318.06	64.5633	3.8156	0.0000	159.9529
Total		**1,319.2038**	**77.9627**	**0.0000**	**3,268.2715**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
High Turnover (Sit Down Restaurant)		0.0000	0.0000	0.0000	0.0000
Hotel		0.0000	0.0000	0.0000	0.0000
Office Park		0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

11.0 Vegetation

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hotel	3,060.00	Room	102.00	4,443,120.00	0
High Turnover (Sit Down Restaurant)	239.50	1000sqft	5.50	239,500.00	0
Office Park	77.00	1000sqft	1.77	77,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2050
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - SDGE EF us carbon free based on SB 100 and SANDAG GHG invnentory for 2021 Regional Plan, Table X.12

Land Use -

Construction Phase - construction in seperate runs

Off-road Equipment - construction seperate

Vehicle Trips - mobile seperate

Area Coating - SDAPCD Rule 67.01 limits VOC content to 150 g/L

Area Mitigation - SDAPCD Rule 67.01 limits VOC content to 150 g/L

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150

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tblAreaCoating	Area_EF_Nonresidential_Interior	250	150
tblConstructionPhase	NumDays	200.00	0.00
tblConstructionPhase	PhaseEndDate	7/20/2022	10/13/2021
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.033	0
tblProjectCharacteristics	CO2IntensityFactor	539.98	0
tblProjectCharacteristics	N2OIntensityFactor	0.004	0
tblVehicleTrips	ST_TR	122.40	0.00
tblVehicleTrips	ST_TR	8.19	0.00
tblVehicleTrips	ST_TR	1.64	0.00
tblVehicleTrips	SU_TR	142.64	0.00
tblVehicleTrips	SU_TR	5.95	0.00
tblVehicleTrips	SU_TR	0.76	0.00
tblVehicleTrips	WD_TR	112.18	0.00
tblVehicleTrips	WD_TR	8.36	0.00
tblVehicleTrips	WD_TR	11.07	0.00

2.0 Emissions Summary

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	21.9006	2.8000e-004	0.0308	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0603	0.0603	1.6000e-004	0.0000	0.0642
Energy	1.6252	14.7747	12.4108	0.0887		1.1229	1.1229		1.1229	1.1229	0.0000	16,084.0972	16,084.0972	0.3083	0.2949	16,179.6769
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	933.1515	0.0000	933.1515	55.1477	0.0000	2,311.8433
Water						0.0000	0.0000		0.0000	0.0000	52.0310	0.0000	52.0310	5.3441	0.1262	223.2361
Total	**23.5259**	**14.7750**	**12.4416**	**0.0887**	**0.0000**	**1.1230**	**1.1230**	**0.0000**	**1.1230**	**1.1230**	**985.1824**	**16,084.1575**	**17,069.3399**	**60.8002**	**0.4211**	**18,714.8205**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	21.9006	2.8000e-004	0.0308	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0603	0.0603	1.6000e-004	0.0000	0.0642
Energy	1.6252	14.7747	12.4108	0.0887		1.1229	1.1229		1.1229	1.1229	0.0000	16,084.0972	16,084.0972	0.3083	0.2949	16,179.6769
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	933.1515	0.0000	933.1515	55.1477	0.0000	2,311.8433
Water						0.0000	0.0000		0.0000	0.0000	52.0310	0.0000	52.0310	5.3441	0.1262	223.2361
Total	**23.5259**	**14.7750**	**12.4416**	**0.0887**	**0.0000**	**1.1230**	**1.1230**	**0.0000**	**1.1230**	**1.1230**	**985.1824**	**16,084.1575**	**17,069.3399**	**60.8002**	**0.4211**	**18,714.8205**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/14/2021	10/13/2021	5	0	

Acres of Grading (Site Preparation Phase): 0

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Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	0.00	81	0.73
Demolition	Excavators	3	0.00	158	0.38
Demolition	Rubber Tired Dozers	2	0.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

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4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00		
Hotel	0.00	0.00	0.00		
Office Park	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
High Turnover (Sit Down	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Office Park	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High Turnover (Sit Down Restaurant)	0.584721	0.061219	0.165591	0.108994	0.022611	0.007030	0.011356	0.006685	0.000606	0.000664	0.026637	0.000823	0.003063
Hotel	0.584721	0.061219	0.165591	0.108994	0.022611	0.007030	0.011356	0.006685	0.000606	0.000664	0.026637	0.000823	0.003063
Office Park	0.584721	0.061219	0.165591	0.108994	0.022611	0.007030	0.011356	0.006685	0.000606	0.000664	0.026637	0.000823	0.003063

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	1.6252	14.7747	12.4108	0.0887		1.1229	1.1229		1.1229	1.1229	0.0000	16,084.0972	16,084.0972	0.3083	0.2949	16,179.6769
NaturalGas Unmitigated	1.6252	14.7747	12.4108	0.0887		1.1229	1.1229		1.1229	1.1229	0.0000	16,084.0972	16,084.0972	0.3083	0.2949	16,179.6769

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
High Turnover (Sit Down Restaurant)	4.16778e+007	0.2247	2.0430	1.7161	0.0123		0.1553	0.1553		0.1553	0.1553	0.0000	2,224.0856	2,224.0856	0.0426	0.0408	2,237.3022
Hotel	2.57257e+008	1.3872	12.6106	10.5929	0.0757		0.9584	0.9584		0.9584	0.9584	0.0000	13,728.1944	13,728.1944	0.2631	0.2517	13,809.7742
Office Park	2.47016e+006	0.0133	0.1211	0.1017	7.3000e-004		9.2000e-003	9.2000e-003		9.2000e-003	9.2000e-003	0.0000	131.8171	131.8171	2.5300e-003	2.4200e-003	132.6005
Total		**1.6252**	**14.7747**	**12.4108**	**0.0887**		**1.1229**	**1.1229**		**1.1229**	**1.1229**	**0.0000**	**16,084.0972**	**16,084.0972**	**0.3083**	**0.2949**	**16,179.6769**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
High Turnover (Sit Down Restaurant)	4.16778e+007	0.2247	2.0430	1.7161	0.0123		0.1553	0.1553		0.1553	0.1553	0.0000	2,224.0856	2,224.0856	0.0426	0.0408	2,237.3022
Hotel	2.57257e+008	1.3872	12.6106	10.5929	0.0757		0.9584	0.9584		0.9584	0.9584	0.0000	13,728.1944	13,728.1944	0.2631	0.2517	13,809.7742
Office Park	2.47016e+006	0.0133	0.1211	0.1017	7.3000e-004		9.2000e-003	9.2000e-003		9.2000e-003	9.2000e-003	0.0000	131.8171	131.8171	2.5300e-003	2.4200e-003	132.6005
Total		**1.6252**	**14.7747**	**12.4108**	**0.0887**		**1.1229**	**1.1229**		**1.1229**	**1.1229**	**0.0000**	**16,084.0972**	**16,084.0972**	**0.3083**	**0.2949**	**16,179.6769**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
High Turnover (Sit Down Restaurant)	9.05789e+006	0.0000	0.0000	0.0000	0.0000
Hotel	5.52724e+007	0.0000	0.0000	0.0000	0.0000
Office Park	1.16655e+006	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
High Turnover (Sit Down Restaurant)	9.05789e+006	0.0000	0.0000	0.0000	0.0000
Hotel	5.52724e+007	0.0000	0.0000	0.0000	0.0000
Office Park	1.16655e+006	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	21.9006	2.8000e-004	0.0308	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0603	0.0603	1.6000e-004	0.0000	0.0642
Unmitigated	21.9006	2.8000e-004	0.0308	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0603	0.0603	1.6000e-004	0.0000	0.0642

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.3091					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	18.5887					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.8200e-003	2.8000e-004	0.0308	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0603	0.0603	1.6000e-004	0.0000	0.0642
Total	**21.9007**	**2.8000e-004**	**0.0308**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**	**0.0000**	**0.0603**	**0.0603**	**1.6000e-004**	**0.0000**	**0.0642**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.3091					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	18.5887					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.8200e-003	2.8000e-004	0.0308	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0603	0.0603	1.6000e-004	0.0000	0.0642
Total	**21.9007**	**2.8000e-004**	**0.0308**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**	**0.0000**	**0.0603**	**0.0603**	**1.6000e-004**	**0.0000**	**0.0642**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	52.0310	5.3441	0.1262	223.2361
Unmitigated	52.0310	5.3441	0.1262	223.2361

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
High Turnover (Sit Down Restaurant)	72.6963 / 4.64019	23.0632	2.3688	0.0559	98.9514
Hotel	77.6223 / 8.6247	24.6260	2.5293	0.0597	105.6565
Office Park	13.6855 / 8.38789	4.3418	0.4459	0.0105	18.6282
Total		**52.0310**	**5.3441**	**0.1262**	**223.2361**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
High Turnover (Sit Down Restaurant)	72.6963 / 4.64019	23.0632	2.3688	0.0559	98.9514
Hotel	77.6223 / 8.6247	24.6260	2.5293	0.0597	105.6565
Office Park	13.6855 / 8.38789	4.3418	0.4459	0.0105	18.6282
Total		**52.0310**	**5.3441**	**0.1262**	**223.2361**

8.0 Waste Detail

8.1 Mitigation Measures Waste

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	933.1515	55.1477	0.0000	2,311.8433
Unmitigated	933.1515	55.1477	0.0000	2,311.8433

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
High Turnover (Sit Down Restaurant)	2850.05	578.5344	34.1904	0.0000	1,433.2945
Hotel	1675.35	340.0809	20.0982	0.0000	842.5361
Office Park	71.61	14.5362	0.8591	0.0000	36.0128
Total		**933.1515**	**55.1477**	**0.0000**	**2,311.8433**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
High Turnover (Sit Down Restaurant)	2850.05	578.5344	34.1904	0.0000	1,433.2945
Hotel	1675.35	340.0809	20.0982	0.0000	842.5361
Office Park	71.61	14.5362	0.8591	0.0000	36.0128
Total		**933.1515**	**55.1477**	**0.0000**	**2,311.8433**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

11.0 Vegetation

PMPU Operations - PD 2 - 2050 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

PMPU Operations - PD 2 - 2050

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hotel	3,060.00	Room	102.00	4,443,120.00	0
High Turnover (Sit Down Restaurant)	239.50	1000sqft	5.50	239,500.00	0
Office Park	77.00	1000sqft	1.77	77,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2050
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - SDGE EF us carbon free based on SB 100 and SANDAG GHG invnentory for 2021 Regional Plan, Table X.12

Land Use -

Construction Phase - construction in seperate runs

Off-road Equipment - construction seperate

Vehicle Trips - mobile seperate

Area Coating - SDAPCD Rule 67.01 limits VOC content to 150 g/L

Area Mitigation - SDAPCD Rule 67.01 limits VOC content to 150 g/L

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150

PMPU Operations - PD 2 - 2050 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblAreaCoating	Area_EF_Nonresidential_Interior	250	150
tblConstructionPhase	NumDays	200.00	0.00
tblConstructionPhase	PhaseEndDate	7/20/2022	10/13/2021
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.033	0
tblProjectCharacteristics	CO2IntensityFactor	539.98	0
tblProjectCharacteristics	N2OIntensityFactor	0.004	0
tblVehicleTrips	ST_TR	122.40	0.00
tblVehicleTrips	ST_TR	8.19	0.00
tblVehicleTrips	ST_TR	1.64	0.00
tblVehicleTrips	SU_TR	142.64	0.00
tblVehicleTrips	SU_TR	5.95	0.00
tblVehicleTrips	SU_TR	0.76	0.00
tblVehicleTrips	WD_TR	112.18	0.00
tblVehicleTrips	WD_TR	8.36	0.00
tblVehicleTrips	WD_TR	11.07	0.00

2.0 Emissions Summary

PMPU Operations - PD 2 - 2050 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	0.0000	0.0000	0.0000	0.0000	0.0000	7.4000e-004	0.0000	0.0000	6.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**7.4000e-004**	**0.0000**	**0.0000**	**6.8000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	0.0000	0.0000	0.0000	0.0000	0.0000	7.4000e-004	0.0000	0.0000	6.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**7.4000e-004**	**0.0000**	**0.0000**	**6.8000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

PMPU Operations - PD 2 - 2050 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	120.0194	3.0800e-003	0.3425	3.0000e-005		1.2200e-003	1.2200e-003		1.2200e-003	1.2200e-003		0.7390	0.7390	1.9000e-003		0.7866
Energy	8.9053	80.9575	68.0043	0.4857		6.1528	6.1528		6.1528	6.1528		97,148.9438	97,148.9438	1.8620	1.7811	97,726.2514
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**128.9247**	**80.9605**	**68.3468**	**0.4858**	**0.0000**	**6.1540**	**6.1540**	**0.0000**	**6.1540**	**6.1540**		**97,149.6827**	**97,149.6827**	**1.8639**	**1.7811**	**97,727.0379**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	120.0194	3.0800e-003	0.3425	3.0000e-005		1.2200e-003	1.2200e-003		1.2200e-003	1.2200e-003		0.7390	0.7390	1.9000e-003		0.7866
Energy	8.9053	80.9575	68.0043	0.4857		6.1528	6.1528		6.1528	6.1528		97,148.9438	97,148.9438	1.8620	1.7811	97,726.2514
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**128.9247**	**80.9605**	**68.3468**	**0.4858**	**0.0000**	**6.1540**	**6.1540**	**0.0000**	**6.1540**	**6.1540**		**97,149.6827**	**97,149.6827**	**1.8639**	**1.7811**	**97,727.0379**

PMPU Operations - PD 2 - 2050 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/14/2021	10/13/2021	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	0.00	81	0.73
Demolition	Excavators	3	0.00	158	0.38
Demolition	Rubber Tired Dozers	2	0.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

PMPU Operations - PD 2 - 2050 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

PMPU Operations - PD 2 - 2050 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

PMPU Operations - PD 2 - 2050 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00		
Hotel	0.00	0.00	0.00		
Office Park	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
High Turnover (Sit Down	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Office Park	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3

4.4 Fleet Mix

PMPU Operations - PD 2 - 2050 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High Turnover (Sit Down Restaurant)	0.584721	0.061219	0.165591	0.108994	0.022611	0.007030	0.011356	0.006685	0.000606	0.000664	0.026637	0.000823	0.003063
Hotel	0.584721	0.061219	0.165591	0.108994	0.022611	0.007030	0.011356	0.006685	0.000606	0.000664	0.026637	0.000823	0.003063
Office Park	0.584721	0.061219	0.165591	0.108994	0.022611	0.007030	0.011356	0.006685	0.000606	0.000664	0.026637	0.000823	0.003063

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	8.9053	80.9575	68.0043	0.4857		6.1528	6.1528		6.1528	6.1528		97,148.9438	97,148.9438	1.8620	1.7811	97,726.2514
NaturalGas Unmitigated	8.9053	80.9575	68.0043	0.4857		6.1528	6.1528		6.1528	6.1528		97,148.9438	97,148.9438	1.8620	1.7811	97,726.2514

PMPU Operations - PD 2 - 2050 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
High Turnover (Sit Down Restaurant)	114186	1.2314	11.1947	9.4035	0.0672		0.8508	0.8508		0.8508	0.8508		13,433.6148	13,433.6148	0.2575	0.2463	13,513.4441
Hotel	704813	7.6009	69.0993	58.0434	0.4146		5.2516	5.2516		5.2516	5.2516		82,919.1452	82,919.1452	1.5893	1.5202	83,411.8922
Office Park	6767.56	0.0730	0.6635	0.5573	3.9800e-003		0.0504	0.0504		0.0504	0.0504		796.1837	796.1837	0.0153	0.0146	800.9150
Total		**8.9053**	**80.9575**	**68.0043**	**0.4858**		**6.1528**	**6.1528**		**6.1528**	**6.1528**		**97,148.9438**	**97,148.9438**	**1.8620**	**1.7811**	**97,726.2514**

PMPU Operations - PD 2 - 2050 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
High Turnover (Sit Down Restaurant)	114.186	1.2314	11.1947	9.4035	0.0672		0.8508	0.8508		0.8508	0.8508		13,433.6148	13,433.6148	0.2575	0.2463	13,513.4441
Hotel	704.813	7.6009	69.0993	58.0434	0.4146		5.2516	5.2516		5.2516	5.2516		82,919.1452	82,919.1452	1.5893	1.5202	83,411.8922
Office Park	6.76756	0.0730	0.6635	0.5573	3.9800e-003		0.0504	0.0504		0.0504	0.0504		796.1837	796.1837	0.0153	0.0146	800.9150
Total		**8.9053**	**80.9575**	**68.0043**	**0.4858**		**6.1528**	**6.1528**		**6.1528**	**6.1528**		**97,148.9438**	**97,148.9438**	**1.8620**	**1.7811**	**97,726.2514**

6.0 Area Detail

6.1 Mitigation Measures Area

PMPU Operations - PD 2 - 2050 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	120.0194	3.0800e-003	0.3425	3.0000e-005		1.2200e-003	1.2200e-003		1.2200e-003	1.2200e-003		0.7390	0.7390	1.9000e-003		0.7866
Unmitigated	120.0194	3.0800e-003	0.3425	3.0000e-005		1.2200e-003	1.2200e-003		1.2200e-003	1.2200e-003		0.7390	0.7390	1.9000e-003		0.7866

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	18.1322					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	101.8559					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0313	3.0800e-003	0.3425	3.0000e-005		1.2200e-003	1.2200e-003		1.2200e-003	1.2200e-003		0.7390	0.7390	1.9000e-003		0.7866
Total	**120.0194**	**3.0800e-003**	**0.3425**	**3.0000e-005**		**1.2200e-003**	**1.2200e-003**		**1.2200e-003**	**1.2200e-003**		**0.7390**	**0.7390**	**1.9000e-003**		**0.7866**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	18.1322					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	101.8559					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0313	3.0800e-003	0.3425	3.0000e-005		1.2200e-003	1.2200e-003		1.2200e-003	1.2200e-003		0.7390	0.7390	1.9000e-003		0.7866
Total	**120.0194**	**3.0800e-003**	**0.3425**	**3.0000e-005**		**1.2200e-003**	**1.2200e-003**		**1.2200e-003**	**1.2200e-003**		**0.7390**	**0.7390**	**1.9000e-003**		**0.7866**

7.0 Water Detail

7.1 Mitigation Measures Water

PMPU Operations - PD 2 - 2050 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

PMPU Operations - PD 3 - 2050 - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

PMPU Operations - PD 3 - 2050

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hotel	850.00	Room	28.33	1,234,200.00	0
High Turnover (Sit Down Restaurant)	82.00	1000sqft	1.88	82,000.00	0
Office Park	95.00	1000sqft	2.18	95,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2050
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - SDGE EF us carbon free based on SB 100 and SANDAG GHG invnentory for 2021 Regional Plan, Table X.12

Land Use -

Construction Phase - construction in seperate runs

Off-road Equipment - construction seperate

Vehicle Trips - mobile seperate

Area Coating - SDAPCD Rule 67.01 limits VOC content to 150 g/L

Area Mitigation - SDAPCD Rule 67.01 limits VOC content to 150 g/L

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150

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tblAreaCoating	Area_EF_Nonresidential_Interior	250	150
tblConstructionPhase	NumDays	30.00	0.00
tblConstructionPhase	PhaseEndDate	11/24/2021	10/13/2021
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.033	0
tblProjectCharacteristics	CO2IntensityFactor	539.98	0
tblProjectCharacteristics	N2OIntensityFactor	0.004	0
tblVehicleTrips	ST_TR	122.40	0.00
tblVehicleTrips	ST_TR	8.19	0.00
tblVehicleTrips	ST_TR	1.64	0.00
tblVehicleTrips	SU_TR	142.64	0.00
tblVehicleTrips	SU_TR	5.95	0.00
tblVehicleTrips	SU_TR	0.76	0.00
tblVehicleTrips	WD_TR	112.18	0.00
tblVehicleTrips	WD_TR	8.36	0.00
tblVehicleTrips	WD_TR	11.07	0.00

2.0 Emissions Summary

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)

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		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	6.4934	8.0000e-005	9.3800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0184	0.0184	5.0000e-005	0.0000	0.0195
Energy	0.4787	4.3518	3.6555	0.0261		0.3307	0.3307		0.3307	0.3307	0.0000	4,737.5012	4,737.5012	0.0908	0.0869	4,765.6538
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	310.4808	0.0000	310.4808	18.3489	0.0000	769.2030
Water						0.0000	0.0000		0.0000	0.0000	20.0937	0.0000	20.0937	2.0638	0.0487	86.2108
Total	**6.9721**	**4.3519**	**3.6649**	**0.0261**	**0.0000**	**0.3308**	**0.3308**	**0.0000**	**0.3308**	**0.3308**	**330.5744**	**4,737.5196**	**5,068.0940**	**20.5036**	**0.1356**	**5,621.0871**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	6.4934	8.0000e-005	9.3800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0184	0.0184	5.0000e-005	0.0000	0.0195
Energy	0.4787	4.3518	3.6555	0.0261		0.3307	0.3307		0.3307	0.3307	0.0000	4,737.5012	4,737.5012	0.0908	0.0869	4,765.6538
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	310.4808	0.0000	310.4808	18.3489	0.0000	769.2030
Water						0.0000	0.0000		0.0000	0.0000	20.0937	0.0000	20.0937	2.0638	0.0487	86.2108
Total	**6.9721**	**4.3519**	**3.6649**	**0.0261**	**0.0000**	**0.3308**	**0.3308**	**0.0000**	**0.3308**	**0.3308**	**330.5744**	**4,737.5196**	**5,068.0940**	**20.5036**	**0.1356**	**5,621.0871**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/14/2021	10/13/2021	5	0	

Acres of Grading (Site Preparation Phase): 0

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Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	0.00	81	0.73
Demolition	Excavators	3	0.00	158	0.38
Demolition	Rubber Tired Dozers	2	0.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00		
Hotel	0.00	0.00	0.00		
Office Park	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
High Turnover (Sit Down	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Office Park	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High Turnover (Sit Down Restaurant)	0.584721	0.061219	0.165591	0.108994	0.022611	0.007030	0.011356	0.006685	0.000606	0.000664	0.026637	0.000823	0.003063
Hotel	0.584721	0.061219	0.165591	0.108994	0.022611	0.007030	0.011356	0.006685	0.000606	0.000664	0.026637	0.000823	0.003063
Office Park	0.584721	0.061219	0.165591	0.108994	0.022611	0.007030	0.011356	0.006685	0.000606	0.000664	0.026637	0.000823	0.003063

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.4787	4.3518	3.6555	0.0261		0.3307	0.3307		0.3307	0.3307	0.0000	4,737.5012	4,737.5012	0.0908	0.0869	4,765.6538
NaturalGas Unmitigated	0.4787	4.3518	3.6555	0.0261		0.3307	0.3307		0.3307	0.3307	0.0000	4,737.5012	4,737.5012	0.0908	0.0869	4,765.6538

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
High Turnover (Sit Down Restaurant)	1.42696e+007	0.0769	0.6995	0.5876	4.2000e-003		0.0532	0.0532		0.0532	0.0532	0.0000	761.4823	761.4823	0.0146	0.0140	766.0074
Hotel	7.14602e+007	0.3853	3.5030	2.9425	0.0210		0.2662	0.2662		0.2662	0.2662	0.0000	3,813.3873	3,813.3873	0.0731	0.0699	3,836.0484
Office Park	3.0476e+006	0.0164	0.1494	0.1255	9.0000e-004		0.0114	0.0114		0.0114	0.0114	0.0000	162.6315	162.6315	3.1200e-003	2.9800e-003	163.5980
Total		**0.4787**	**4.3518**	**3.6555**	**0.0261**		**0.3307**	**0.3307**		**0.3307**	**0.3307**	**0.0000**	**4,737.5012**	**4,737.5012**	**0.0908**	**0.0869**	**4,765.6538**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
High Turnover (Sit Down Restaurant)	1.42696e+007	0.0769	0.6995	0.5876	4.2000e-003		0.0532	0.0532		0.0532	0.0532	0.0000	761.4823	761.4823	0.0146	0.0140	766.0074
Hotel	7.14602e+007	0.3853	3.5030	2.9425	0.0210		0.2662	0.2662		0.2662	0.2662	0.0000	3,813.3873	3,813.3873	0.0731	0.0699	3,836.0484
Office Park	3.0476e+006	0.0164	0.1494	0.1255	9.0000e-004		0.0114	0.0114		0.0114	0.0114	0.0000	162.6315	162.6315	3.1200e-003	2.9800e-003	163.5980
Total		**0.4787**	**4.3518**	**3.6555**	**0.0261**		**0.3307**	**0.3307**		**0.3307**	**0.3307**	**0.0000**	**4,737.5012**	**4,737.5012**	**0.0908**	**0.0869**	**4,765.6538**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
High Turnover (Sit Down Restaurant)	3.10124e+006	0.0000	0.0000	0.0000	0.0000
Hotel	1.53534e+007	0.0000	0.0000	0.0000	0.0000
Office Park	1.43925e+006	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
High Turnover (Sit Down Restaurant)	3.10124e+006	0.0000	0.0000	0.0000	0.0000
Hotel	1.53534e+007	0.0000	0.0000	0.0000	0.0000
Office Park	1.43925e+006	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	6.4934	8.0000e-005	9.3800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0184	0.0184	5.0000e-005	0.0000	0.0195
Unmitigated	6.4934	8.0000e-005	9.3800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0184	0.0184	5.0000e-005	0.0000	0.0195

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.9811					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.5114					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.6000e-004	8.0000e-005	9.3800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0184	0.0184	5.0000e-005	0.0000	0.0195
Total	**6.4934**	**8.0000e-005**	**9.3800e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0184**	**0.0184**	**5.0000e-005**	**0.0000**	**0.0195**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.9811					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.5114					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.6000e-004	8.0000e-005	9.3800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0184	0.0184	5.0000e-005	0.0000	0.0195
Total	**6.4934**	**8.0000e-005**	**9.3800e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0184**	**0.0184**	**5.0000e-005**	**0.0000**	**0.0195**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	20.0937	2.0638	0.0487	86.2108
Unmitigated	20.0937	2.0638	0.0487	86.2108

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
High Turnover (Sit Down Restaurant)	24.8898 / 1.58871	7.8964	0.8110	0.0192	33.8790
Hotel	21.5618 / 2.39575	6.8406	0.7026	0.0166	29.3490
Office Park	16.8847 / 10.3487	5.3567	0.5502	0.0130	22.9828
Total		**20.0937**	**2.0638**	**0.0487**	**86.2108**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
High Turnover (Sit Down Restaurant)	24.8898 / 1.58871	7.8964	0.8110	0.0192	33.8790
Hotel	21.5618 / 2.39575	6.8406	0.7026	0.0166	29.3490
Office Park	16.8847 / 10.3487	5.3567	0.5502	0.0130	22.9828
Total		**20.0937**	**2.0638**	**0.0487**	**86.2108**

8.0 Waste Detail

8.1 Mitigation Measures Waste

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	310.4808	18.3489	0.0000	769.2030
Unmitigated	310.4808	18.3489	0.0000	769.2030

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
High Turnover (Sit Down Restaurant)	975.8	198.0786	11.7061	0.0000	490.7313
Hotel	465.38	94.4679	5.5829	0.0000	234.0403
Office Park	88.35	17.9343	1.0599	0.0000	44.4314
Total		**310.4808**	**18.3489**	**0.0000**	**769.2030**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
High Turnover (Sit Down Restaurant)	975.8	198.0786	11.7061	0.0000	490.7313
Hotel	465.38	94.4679	5.5829	0.0000	234.0403
Office Park	88.35	17.9343	1.0599	0.0000	44.4314
Total		**310.4808**	**18.3489**	**0.0000**	**769.2030**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

11.0 Vegetation

PMPU Operations - PD 3 - 2050 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

PMPU Operations - PD 3 - 2050

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hotel	850.00	Room	28.33	1,234,200.00	0
High Turnover (Sit Down Restaurant)	82.00	1000sqft	1.88	82,000.00	0
Office Park	95.00	1000sqft	2.18	95,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2050
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - SDGE EF us carbon free based on SB 100 and SANDAG GHG invnentory for 2021 Regional Plan, Table X.12

Land Use -

Construction Phase - construction in seperate runs

Off-road Equipment - construction seperate

Vehicle Trips - mobile seperate

Area Coating - SDAPCD Rule 67.01 limits VOC content to 150 g/L

Area Mitigation - SDAPCD Rule 67.01 limits VOC content to 150 g/L

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblAreaCoating	Area_EF_Nonresidential_Interior	250	150
tblConstructionPhase	NumDays	30.00	0.00
tblConstructionPhase	PhaseEndDate	11/24/2021	10/13/2021
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.033	0
tblProjectCharacteristics	CO2IntensityFactor	539.98	0
tblProjectCharacteristics	N2OIntensityFactor	0.004	0
tblVehicleTrips	ST_TR	122.40	0.00
tblVehicleTrips	ST_TR	8.19	0.00
tblVehicleTrips	ST_TR	1.64	0.00
tblVehicleTrips	SU_TR	142.64	0.00
tblVehicleTrips	SU_TR	5.95	0.00
tblVehicleTrips	SU_TR	0.76	0.00
tblVehicleTrips	WD_TR	112.18	0.00
tblVehicleTrips	WD_TR	8.36	0.00
tblVehicleTrips	WD_TR	11.07	0.00

2.0 Emissions Summary

PMPU Operations - PD 3 - 2050 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	0.0000	0.0000	0.0000	0.0000	0.0000	7.4000e-004	0.0000	0.0000	6.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**7.4000e-004**	**0.0000**	**0.0000**	**6.8000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	0.0000	0.0000	0.0000	0.0000	0.0000	7.4000e-004	0.0000	0.0000	6.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**7.4000e-004**	**0.0000**	**0.0000**	**6.8000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

PMPU Operations - PD 3 - 2050 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	35.5853	9.4000e-004	0.1042	1.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004		0.2248	0.2248	5.8000e-004		0.2392
Energy	2.6230	23.8457	20.0304	0.1431		1.8123	1.8123		1.8123	1.8123		28,614.8010	28,614.8010	0.5485	0.5246	28,784.8444
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**38.2083**	**23.8466**	**20.1346**	**0.1431**	**0.0000**	**1.8126**	**1.8126**	**0.0000**	**1.8126**	**1.8126**		**28,615.0257**	**28,615.0257**	**0.5490**	**0.5246**	**28,785.0837**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	35.5853	9.4000e-004	0.1042	1.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004		0.2248	0.2248	5.8000e-004		0.2392
Energy	2.6230	23.8457	20.0304	0.1431		1.8123	1.8123		1.8123	1.8123		28,614.8010	28,614.8010	0.5485	0.5246	28,784.8444
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**38.2083**	**23.8466**	**20.1346**	**0.1431**	**0.0000**	**1.8126**	**1.8126**	**0.0000**	**1.8126**	**1.8126**		**28,615.0257**	**28,615.0257**	**0.5490**	**0.5246**	**28,785.0837**

PMPU Operations - PD 3 - 2050 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/14/2021	10/13/2021	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	0.00	81	0.73
Demolition	Excavators	3	0.00	158	0.38
Demolition	Rubber Tired Dozers	2	0.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

PMPU Operations - PD 3 - 2050 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

PMPU Operations - PD 3 - 2050 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

PMPU Operations - PD 3 - 2050 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00		
Hotel	0.00	0.00	0.00		
Office Park	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
High Turnover (Sit Down	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Office Park	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3

4.4 Fleet Mix

PMPU Operations - PD 3 - 2050 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High Turnover (Sit Down Restaurant)	0.584721	0.061219	0.165591	0.108994	0.022611	0.007030	0.011356	0.006685	0.000606	0.000664	0.026637	0.000823	0.003063
Hotel	0.584721	0.061219	0.165591	0.108994	0.022611	0.007030	0.011356	0.006685	0.000606	0.000664	0.026637	0.000823	0.003063
Office Park	0.584721	0.061219	0.165591	0.108994	0.022611	0.007030	0.011356	0.006685	0.000606	0.000664	0.026637	0.000823	0.003063

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	2.6230	23.8457	20.0304	0.1431		1.8123	1.8123		1.8123	1.8123		28,614.8010	28,614.8010	0.5485	0.5246	28,784.8444
NaturalGas Unmitigated	2.6230	23.8457	20.0304	0.1431		1.8123	1.8123		1.8123	1.8123		28,614.8010	28,614.8010	0.5485	0.5246	28,784.8444

PMPU Operations - PD 3 - 2050 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
High Turnover (Sit Down Restaurant)	39094.9	0.4216	3.8328	3.2196	0.0230		0.2913	0.2913		0.2913	0.2913		4,599.4005	4,599.4005	0.0882	0.0843	4,626.7324
Hotel	195781	2.1114	19.1943	16.1232	0.1152		1.4588	1.4588		1.4588	1.4588		23,033.0959	23,033.0959	0.4415	0.4223	23,169.9701
Office Park	8349.59	0.0900	0.8186	0.6876	4.9100e-003		0.0622	0.0622		0.0622	0.0622		982.3046	982.3046	0.0188	0.0180	988.1419
Total		**2.6230**	**23.8457**	**20.0304**	**0.1431**		**1.8123**	**1.8123**		**1.8123**	**1.8123**		**28,614.8010**	**28,614.8010**	**0.5485**	**0.5246**	**28,784.8444**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
High Turnover (Sit Down Restaurant)	39.0949	0.4216	3.8328	3.2196	0.0230		0.2913	0.2913		0.2913	0.2913		4,599.4005	4,599.4005	0.0882	0.0843	4,626.7324
Hotel	195.781	2.1114	19.1943	16.1232	0.1152		1.4588	1.4588		1.4588	1.4588		23,033.0959	23,033.0959	0.4415	0.4223	23,169.9701
Office Park	8.34959	0.0900	0.8186	0.6876	4.9100e-003		0.0622	0.0622		0.0622	0.0622		982.3046	982.3046	0.0188	0.0180	988.1419
Total		**2.6230**	**23.8457**	**20.0304**	**0.1431**		**1.8123**	**1.8123**		**1.8123**	**1.8123**		**28,614.8010**	**28,614.8010**	**0.5485**	**0.5246**	**28,784.8444**

6.0 Area Detail

6.1 Mitigation Measures Area

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	35.5853	9.4000e-004	0.1042	1.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004		0.2248	0.2248	5.8000e-004		0.2392
Unmitigated	35.5853	9.4000e-004	0.1042	1.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004		0.2248	0.2248	5.8000e-004		0.2392

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	5.3761					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	30.1997					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	9.5300e-003	9.4000e-004	0.1042	1.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004		0.2248	0.2248	5.8000e-004		0.2392
Total	**35.5853**	**9.4000e-004**	**0.1042**	**1.0000e-005**		**3.7000e-004**	**3.7000e-004**		**3.7000e-004**	**3.7000e-004**		**0.2248**	**0.2248**	**5.8000e-004**		**0.2392**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	5.3761					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	30.1997					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	9.5300e-003	9.4000e-004	0.1042	1.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004		0.2248	0.2248	5.8000e-004		0.2392
Total	**35.5853**	**9.4000e-004**	**0.1042**	**1.0000e-005**		**3.7000e-004**	**3.7000e-004**		**3.7000e-004**	**3.7000e-004**		**0.2248**	**0.2248**	**5.8000e-004**		**0.2392**

7.0 Water Detail

7.1 Mitigation Measures Water

PMPU Operations - PD 3 - 2050 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High Turnover (Sit Down Restaurant)	18.00	1000sqft	0.41	18,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2050
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - SDGE EF us carbon free based on SB 100 and SANDAG GHG invnentory for 2021 Regional Plan, Table X.12

Land Use -

Construction Phase - construction in seperate runs

Off-road Equipment - construction seperate

Vehicle Trips - mobile seperate

Area Coating - SDAPCD Rule 67.01 limits VOC content to 150 g/L

Area Mitigation - SDAPCD Rule 67.01 limits VOC content to 150 g/L

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150
tblAreaCoating	Area_EF_Nonresidential_Interior	250	150
tblConstructionPhase	NumDays	10.00	0.00

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstructionPhase	PhaseEndDate	10/27/2021	10/13/2021
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	1.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.033	0
tblProjectCharacteristics	CO2IntensityFactor	539.98	0
tblProjectCharacteristics	N2OIntensityFactor	0.004	0
tblVehicleTrips	ST_TR	122.40	0.00
tblVehicleTrips	SU_TR	142.64	0.00
tblVehicleTrips	WD_TR	112.18	0.00

2.0 Emissions Summary

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0828	0.0000	1.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.2000e-004	3.2000e-004	0.0000	0.0000	3.4000e-004
Energy	0.0169	0.1536	0.1290	9.2000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	167.1547	167.1547	3.2000e-003	3.0600e-003	168.1480
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	43.4807	0.0000	43.4807	2.5696	0.0000	107.7215
Water						0.0000	0.0000		0.0000	0.0000	1.7334	0.0000	1.7334	0.1780	4.2000e-003	7.4369
Total	**0.0997**	**0.1536**	**0.1291**	**9.2000e-004**	**0.0000**	**0.0117**	**0.0117**	**0.0000**	**0.0117**	**0.0117**	**45.2140**	**167.1550**	**212.3690**	**2.7509**	**7.2600e-003**	**283.3067**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0828	0.0000	1.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.2000e-004	3.2000e-004	0.0000	0.0000	3.4000e-004
Energy	0.0169	0.1536	0.1290	9.2000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	167.1547	167.1547	3.2000e-003	3.0600e-003	168.1480
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	43.4807	0.0000	43.4807	2.5696	0.0000	107.7215
Water						0.0000	0.0000		0.0000	0.0000	1.7334	0.0000	1.7334	0.1780	4.2000e-003	7.4369
Total	**0.0997**	**0.1536**	**0.1291**	**9.2000e-004**	**0.0000**	**0.0117**	**0.0117**	**0.0000**	**0.0117**	**0.0117**	**45.2140**	**167.1550**	**212.3690**	**2.7509**	**7.2600e-003**	**283.3067**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/14/2021	10/13/2021	5	0	

Acres of Grading (Site Preparation Phase): 0

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Tractors/Loaders/Backhoes	2	0.00	97	0.37
Demolition	Concrete/Industrial Saws	1	0.00	81	0.73
Demolition	Rubber Tired Dozers	1	0.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
High Turnover (Sit Down	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High Turnover (Sit Down Restaurant)	0.584721	0.061219	0.165591	0.108994	0.022611	0.007030	0.011356	0.006685	0.000606	0.000664	0.026637	0.000823	0.003063

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0169	0.1536	0.1290	9.2000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	167.1547	167.1547	3.2000e-003	3.0600e-003	168.1480
NaturalGas Unmitigated	0.0169	0.1536	0.1290	9.2000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	167.1547	167.1547	3.2000e-003	3.0600e-003	168.1480

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
High Turnover (Sit Down Restaurant)	3.13236e+006	0.0169	0.1536	0.1290	9.2000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	167.1547	167.1547	3.2000e-003	3.0600e-003	168.1480
Total		**0.0169**	**0.1536**	**0.1290**	**9.2000e-004**		**0.0117**	**0.0117**		**0.0117**	**0.0117**	**0.0000**	**167.1547**	**167.1547**	**3.2000e-003**	**3.0600e-003**	**168.1480**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
High Turnover (Sit Down Restaurant)	3.13236e+006	0.0169	0.1536	0.1290	9.2000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	167.1547	167.1547	3.2000e-003	3.0600e-003	168.1480
Total		**0.0169**	**0.1536**	**0.1290**	**9.2000e-004**		**0.0117**	**0.0117**		**0.0117**	**0.0117**	**0.0000**	**167.1547**	**167.1547**	**3.2000e-003**	**3.0600e-003**	**168.1480**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
High Turnover (Sit Down Restaurant)	680760	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
High Turnover (Sit Down Restaurant)	680760	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0828	0.0000	1.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.2000e-004	3.2000e-004	0.0000	0.0000	3.4000e-004
Unmitigated	0.0828	0.0000	1.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.2000e-004	3.2000e-004	0.0000	0.0000	3.4000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0125					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0703					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	1.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.2000e-004	3.2000e-004	0.0000	0.0000	3.4000e-004
Total	**0.0828**	**0.0000**	**1.6000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**3.2000e-004**	**3.2000e-004**	**0.0000**	**0.0000**	**3.4000e-004**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0125					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0703					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	1.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.2000e-004	3.2000e-004	0.0000	0.0000	3.4000e-004
Total	**0.0828**	**0.0000**	**1.6000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**3.2000e-004**	**3.2000e-004**	**0.0000**	**0.0000**	**3.4000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1.7334	0.1780	4.2000e-003	7.4369
Unmitigated	1.7334	0.1780	4.2000e-003	7.4369

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
High Turnover (Sit Down Restaurant)	5.46361 / 0.348741	1.7334	0.1780	4.2000e-003	7.4369
Total		**1.7334**	**0.1780**	**4.2000e-003**	**7.4369**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
High Turnover (Sit Down Restaurant)	5.46361 / 0.348741	1.7334	0.1780	4.2000e-003	7.4369
Total		**1.7334**	**0.1780**	**4.2000e-003**	**7.4369**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	43.4807	2.5696	0.0000	107.7215
Unmitigated	43.4807	2.5696	0.0000	107.7215

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
High Turnover (Sit Down Restaurant)	214.2	43.4807	2.5696	0.0000	107.7215
Total		**43.4807**	**2.5696**	**0.0000**	**107.7215**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
High Turnover (Sit Down Restaurant)	214.2	43.4807	2.5696	0.0000	107.7215
Total		**43.4807**	**2.5696**	**0.0000**	**107.7215**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High Turnover (Sit Down Restaurant)	18.00	1000sqft	0.41	18,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2050
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - SDGE EF us carbon free based on SB 100 and SANDAG GHG invnentory for 2021 Regional Plan, Table X.12

Land Use -

Construction Phase - construction in seperate runs

Off-road Equipment - construction seperate

Vehicle Trips - mobile seperate

Area Coating - SDAPCD Rule 67.01 limits VOC content to 150 g/L

Area Mitigation - SDAPCD Rule 67.01 limits VOC content to 150 g/L

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150
tblAreaCoating	Area_EF_Nonresidential_Interior	250	150
tblConstructionPhase	NumDays	10.00	0.00

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstructionPhase	PhaseEndDate	10/27/2021	10/13/2021
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	1.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.033	0
tblProjectCharacteristics	CO2IntensityFactor	539.98	0
tblProjectCharacteristics	N2OIntensityFactor	0.004	0
tblVehicleTrips	ST_TR	122.40	0.00
tblVehicleTrips	SU_TR	142.64	0.00
tblVehicleTrips	WD_TR	112.18	0.00

2.0 Emissions Summary

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	0.0000	0.0000	0.0000	0.0000	0.0000	4.9000e-004	0.0000	0.0000	4.5000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**4.9000e-004**	**0.0000**	**0.0000**	**4.5000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	0.0000	0.0000	0.0000	0.0000	0.0000	4.9000e-004	0.0000	0.0000	4.5000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**4.9000e-004**	**0.0000**	**0.0000**	**4.5000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4539	2.0000e-005	1.8300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.9400e-003	3.9400e-003	1.0000e-005		4.1900e-003
Energy	0.0926	0.8414	0.7067	5.0500e-003		0.0639	0.0639		0.0639	0.0639		1,009.6245	1,009.6245	0.0194	0.0185	1,015.6242
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.5465**	**0.8414**	**0.7086**	**5.0500e-003**	**0.0000**	**0.0640**	**0.0640**	**0.0000**	**0.0640**	**0.0640**		**1,009.6284**	**1,009.6284**	**0.0194**	**0.0185**	**1,015.6284**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4539	2.0000e-005	1.8300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.9400e-003	3.9400e-003	1.0000e-005		4.1900e-003
Energy	0.0926	0.8414	0.7067	5.0500e-003		0.0639	0.0639		0.0639	0.0639		1,009.6245	1,009.6245	0.0194	0.0185	1,015.6242
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.5465**	**0.8414**	**0.7086**	**5.0500e-003**	**0.0000**	**0.0640**	**0.0640**	**0.0000**	**0.0640**	**0.0640**		**1,009.6284**	**1,009.6284**	**0.0194**	**0.0185**	**1,015.6284**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/14/2021	10/13/2021	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Tractors/Loaders/Backhoes	2	0.00	97	0.37
Demolition	Concrete/Industrial Saws	1	0.00	81	0.73
Demolition	Rubber Tired Dozers	1	0.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

PMPU Operations - PD 8 - 2050 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

PMPU Operations - PD 8 - 2050 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

PMPU Operations - PD 8 - 2050 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
High Turnover (Sit Down	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High Turnover (Sit Down Restaurant)	0.584721	0.061219	0.165591	0.108994	0.022611	0.007030	0.011356	0.006685	0.000606	0.000664	0.026637	0.000823	0.003063

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0926	0.8414	0.7067	5.0500e-003		0.0639	0.0639		0.0639	0.0639		1,009.6245	1,009.6245	0.0194	0.0185	1,015.6242
NaturalGas Unmitigated	0.0926	0.8414	0.7067	5.0500e-003		0.0639	0.0639		0.0639	0.0639		1,009.6245	1,009.6245	0.0194	0.0185	1,015.6242

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
High Turnover (Sit Down Restaurant)	8581.81	0.0926	0.8414	0.7067	5.0500e-003		0.0639	0.0639		0.0639	0.0639		1,009.6245	1,009.6245	0.0194	0.0185	1,015.6242
Total		**0.0926**	**0.8414**	**0.7067**	**5.0500e-003**		**0.0639**	**0.0639**		**0.0639**	**0.0639**		**1,009.6245**	**1,009.6245**	**0.0194**	**0.0185**	**1,015.6242**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
High Turnover (Sit Down Restaurant)	8.58181	0.0926	0.8414	0.7067	5.0500e-003		0.0639	0.0639		0.0639	0.0639		1,009.6245	1,009.6245	0.0194	0.0185	1,015.6242
Total		**0.0926**	**0.8414**	**0.7067**	**5.0500e-003**		**0.0639**	**0.0639**		**0.0639**	**0.0639**		**1,009.6245**	**1,009.6245**	**0.0194**	**0.0185**	**1,015.6242**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4539	2.0000e-005	1.8300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.9400e-003	3.9400e-003	1.0000e-005		4.1900e-003
Unmitigated	0.4539	2.0000e-005	1.8300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.9400e-003	3.9400e-003	1.0000e-005		4.1900e-003

PMPU Operations - PD 8 - 2050 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0686					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3852					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.7000e-004	2.0000e-005	1.8300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.9400e-003	3.9400e-003	1.0000e-005		4.1900e-003
Total	**0.4539**	**2.0000e-005**	**1.8300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**3.9400e-003**	**3.9400e-003**	**1.0000e-005**		**4.1900e-003**

PMPU Operations - PD 8 - 2050 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0686					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3852					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.7000e-004	2.0000e-005	1.8300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.9400e-003	3.9400e-003	1.0000e-005		4.1900e-003
Total	**0.4539**	**2.0000e-005**	**1.8300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**3.9400e-003**	**3.9400e-003**	**1.0000e-005**		**4.1900e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

PMPU Operations - PD 8 - 2050 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Recreational Boating

5% Diesel % of fleet in both years

365 days/yr

0.9071847 t to mt

Method Overview

Daily usage for each new slip and the types of boats unknown.
However, CARB has average hrs year by boat type. Took that average for annual hours.
To get daily, divided by 365 because not all boats would be active each day.
Days of usage per year per boat/slip based on

Emission Factor

Based on CARB PC Model, all types aggregated. Tons is just that; tons per hour based on tons divided by activity hours (per year) in PC Model
Lbs per day per boat/slip based on avg tons per active hour PC Model, and average annual usage 55

	Total Tons							Tons per Hour									
	ROG	NOx	CO	PM10	PM2.5	SO2	CO2	ROG	NOx	CO	PM10	PM2.5	SO2	CO2	CH4	N2O	CO2e
2030	5.2	1.5	29.3	0.3	0.2	0.003	217.5	6E-04	2E-04	4E-03	4E-05	3E-05	3E-07	3E-02	2E-05	6E-07	3E-02
2050	3.7	1.5	35.4	0.2	0.2	0.003	283.8	4E-04	2E-04	4E-03	2E-05	2E-05	4E-07	3E-02	2E-05	8E-07	3E-02

	hrs/year/boat	Tons per Year Per Boat/Slip							hrs/day/ boat	Lbs Per Day Per Boat/Slip						
		ROG	NOx	CO	PM10	PM2.5	SO2	DPM		ROG	NOx	CO	SO2	PM10	PM2.5	DPM
2030	55	0.03	0.01	0.19	0.00	0.00	0.00	0.00	0.2	0.2	0.1	1.1	0.0	0.0	0.0	0.001
2050	55	0.02	0.01	0.21	0.00	0.00	0.00	0.00	0.2	0.1	0.0	1.1	0.0	0.0	0.0	0.000

New Boat Slips

New Slips	2050	2030
PD1	35	14
PD2	225	92
PD3	150	62
PD4		
PD7		
PD8		
PD9	20	8
PD10	55	23
	485	199
	73	*30*

2030-2016 14 years

2050-2016 34 years

41% portion of development by 2030

hrs/day/all boats

Recreational Boating

Emission Calcs

2030			Lbs Per Day for All New Boats/Slips							Tons Per Year for all new Boats/Slips						
		slips	ROG	NOx	CO	SO2	PM10	PM2.5	DPM	ROG	NOx	CO	SO2	PM10	PM2.5	DPM
AQ	PD1	14	2.6	1	14.9	0.0	0.2	0.1	0.0	0	0	3	0	0	0	0.00
	PD2	92	17.3	5	98.1	0.0	1.0	0.8	0.1	3	1	18	0	0	0	0
	PD3	62	11.7	3	66.1	0.0	0.7	0.5	0.0	2	1	12	0	0	0	0
	PD4	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0
	PD7	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0
	PD8	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0
	PD9	8	1.5	0	8.5	0.0	0.1	0.1	0.0	0	0	2	0	0	0	0
	PD10	23	4.3	1	24.5	0.0	0.3	0.2	0.0	1	0	4	0	0	0	0
		199	37.5	10.7	212.3	0.0	2.2	1.7	0.1	7	2.0	38.7	0.0	0.4	0.3	0.0

2050			Lbs Per Day for All New Boats/Slips							Tons Per Year for all new Boats/Slips						
		slips	ROG	NOx	CO	SO2	PM10	PM2.5	DPM	ROG	NOx	CO	SO2	PM10	PM2.5	DPM
AQ	PD1	35	4.1	2	39.6	0.0	0.3	0.2	0.0	1	0	7	0	0	0	0.002
	PD2	225	26.4	11	254.4	0.0	1.6	1.2	0.1	5	2	46	0	0	0	0
	PD3	150	17.6	7	169.6	0.0	1.1	0.8	0.1	3	1	31	0	0	0	0
	PD4	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0
	PD7	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0
	PD8	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0
	PD9	20	2.3	1	22.6	0.0	0.1	0.1	0.0	0	0	4	0	0	0	0
	PD10	55	6.5	3	62.2	0.0	0.4	0.3	0.0	1	0	11	0	0	0	0
		485	57.0	22.8	548.3	0.1	3.5	2.6	0.2	10	4.2	100.1	0.0	0.6	0.5	0.0

2030		slips	hrs/yr	EF in t CO2e per hr	MT/yr
GHGs	PD1	14	772	0.03	18.7
	PD2	92	5075	0.03	123.2
	PD3	62	3420	0.03	83.0
	PD4	0	0	0.03	0.0
	PD7	0	0	0.03	0.0
	PD8	0	0	0.03	0.0
	PD9	8	441	0.03	10.7
	PD10	23	1269	0.03	30.8
		199	10978		266

2050		slips	hrs/yr	EF in t CO2e per hr	MT/yr
	PD1	35	1931	0.03	53.6
	PD2	225	12413	0.03	344.6
	PD3	150	8275	0.03	229.8
	PD4	0	0	0.03	0.0
	PD7	0	0	0.03	0.0
	PD8	0	0	0.03	0.0
	PD9	20	1103	0.03	30.6
	PD10	55	3034	0.03	84.2
		485	26756		743

Commercial Fishing

Baseline boating emissions from 2016 Inventory.
Assign to Planning District by # of slips; scaled up by change in slips
Only have 2050 net new from PMPU. For 2030, assuming linear trend in new development.

2030-2016	14	years
2050-2016	34	years
	41%	portion of development by 2030
	same as rec boats	

conversions	
t to mt	0.907185
t to lb	2000
days per year	365

Activity and Slips

Baseline Emissions

	Tons per year											
Commercial Fishing from 2016 EI	**ROG**	**CO**	**NOx**	**SO2**	**PM10**	**PM2.5**	**DPM**	**CO2**	**CH4**	**N2O**	**CO2e**	
Tons per year	2.2	14.2	17.6	0.1	0.5	0.5	0.5	1,973.0	0.0	0.1	1,996	*from 2016 EI*
Metric Tons								1,790	0	0	1,811	*tpy * 0.9072*
Average Daily Pounds	12	78	96	1	3	3	3					*tpy * 2000 / 365*

Commercial Fishing Slips

	New Slips		Total Slips		
	2050	2030	2016	2050	2030
PD1	65	27	123	188	150
PD2					
PD3			105	105	105
PD4					
PD7					
PD8					
PD9					
PD10					
	65	27	228	293	255

Ratio of Emissions by PD	2016
PD1	0.54
PD2	
PD3	0.46
PD4	
PD7	
PD8	
PD9	
PD10	
	1.0

Scalar for PMP Years	2050	2030
PD1	1.528	1.220
PD2		
PD3	1.000	1.000
PD4		
PD7		
PD8		
PD9		
PD10		
	1.285	1.118

Emission Estimates

Daily Criteria Pollutant Pounds

	4	*2*						*3*							*2*						
Total	**2016**							**2030**							**2050**						
	ROG	**NOx**	**CO**	**SO2**	**PM10**	**PM2.5**	**DPM**	**ROG**	**NOx**	**CO**	**SO2**	**PM10**	**PM2.5**	**DPM**	**ROG**	**NOx**	**CO**	**SO2**	**PM10**	**PM2.5**	**DPM**
PD1	6.5	52.0	42.0	0.3	1.5	1.5	1.5	7.9	63.4	51.2	0.4	1.8	1.8	1.8	9.9	79.5	64.2	0.5	2.3	2.3	2.3
PD2																					
PD3	5.6	44.4	35.8	0.3	1.3	1.3	1.3	5.6	44.4	35.8	0.3	1.3	1.3	1.3	5.6	44.4	35.8	0.3	1.3	1.3	1.3
PD4																					
PD7																					
PD8																					
PD9																					
PD10																					
Total	12	96	78	1	3	3	3	13	108	87	1	3	3	3	15	124	100	1	4	4	4

Net New		ROG	NOx	CO	SO2	PM10	PM2.5	DPM	ROG	NOx	CO	SO2	PM10	PM2.5	DPM
	PD1	1.4	11.4	9.2	0.1	0.3	0.3	0.3	3.4	27.5	22.2	0.2	0.8	0.8	0.8
	PD2														
	PD3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0
	PD4														
	PD7														
	PD8														
	PD9														
	PD10														
	Total	1.4	11.4	9.2	0.1	0.3	0.3	0.3	3.4	27.5	22.2	0.2	0.8	0.8	0.8

Commercial Fishing

Annual Criteria Pollutant Tons

Total = daily x 365

	2016							2030							2050						
	ROG	NOx	CO	SO2	PM10	PM2.5	DPM	ROG	NOx	CO	SO2	PM10	PM2.5	DPM	ROG	NOx	CO	SO2	PM10	PM2.5	DPM
PD1	1.2	9.5	7.7	0.1	0.3	0.3	0.3	1.4	11.6	9.3	0.1	0.3	0.3	0.3	1.8	14.5	11.7	0.1	0.4	0.4	0.4
PD2																					
PD3	1.0	8.1	6.5	0.0	0.2	0.2	0.2	1.0	8.1	6.5	0.0	0.2	0.2	0.2	1.0	8.1	6.5	0.0	0.2	0.2	0.2
PD4																					
PD7																					
PD8																					
PD9																					
PD10																					
Total	2.2	17.6	14.2	0.1	0.5	0.5	0.5	2.5	19.7	15.9	0.1	0.6	0.6	0.6	2.8	22.6	18.2	0.1	0.6	0.6	0.6

		ROG	NOx	CO	SO2	PM10	PM2.5	DPM	ROG	NOx	CO	SO2	PM10	PM2.5	DPM
Net New	PD1	0.3	2.1	1.7	0.0	0.1	0.1	0.1	0.6	5.0	4.0	0.0	0.1	0.1	0.1
	PD2														
	PD3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	PD4														
	PD7														
	PD8														
	PD9														
	PD10														
	Total	0.3	2.1	1.7	0.0	0.1	0.1	0.1	0.6	5.0	4.0	0.0	0.1	0.1	0.1

Annual GHG Metric Tons

	3	2			3				2			
	2016				2030				2050			
	CO2	CH4	N2O	CO2e	CO2	CH4	N2O	CO2e	CO2	CH4	N2O	CO2e
PD1	966	0	0	977	1,178	0	0	1,191	1,476	0	0	1,493
PD2												
PD3	824	0	0	834	824	0	0	834	824	0	0	834
PD4												
PD7												
PD8												
PD9												
PD10												
Total	1,790	0	0	1,811	2,002	0	0	2,025	2,300	0	0	2,327

		2030 CO2e	2050 CO2e
Net New	PD1	214	516
	PD2	0	0
	PD3	0	0
	PD4	0	0
	PD7	0	0
	PD8	0	0
	PD9	0	0
	PD10	0	0
	Total	214	516

Mobile Sources

EMFAC2021 Emission Factors

SD County, both year, all vehicles, aggregate speeds

See below for VMT and Trip Source Data

PM dust includes paved road dust, as well as BW and TW from EMFAC

			Running (RUNEX, PMTW, PMBW) grams per mile											
Year	Air Basin	VehType	ROG	NOx	CO	SO2	PM10 D	PM10 Ex	PM2.5 D	PM2.5 Ex	DPM	CO2	CH4	N2O
2030	SDAB	All	0.02	0.09	0.69	0.00	0.31	0.00	0.05	0.00	0.00	339	0.01	0.01
2050	SDAB	All	0.01	0.06	0.47	0.00	0.31	0.00	0.05	0.00	0.00	292	0.00	0.01
			Process (IDLEX, STREX, TOTEX, DIURN, HTSK, RUNLS, RESTL) grams per trip											
Year	Air Basin	VehType	ROG	NOx	CO	SO2	PM10 D	PM10 Ex	PM2.5 D	PM2.5 Ex	DPM	CO2	CH4	N2O
2030	SDAB	All	0.83	0.41	2.44	0.00		0.00		0.00	0.00	80	0.05	0.03
2050	SDAB	All	0.52	0.36	1.65	0.00		0.00		0.00	0.00	73	0.03	0.03

Traffic Data

VMT based on info from Chen Ryan by PD from Section 4.14 of the EIR

VMT is for full build 2050

2030 estimated by interpolating between existing (2016) and PMPU buildout, assumning 2050 buildout of PMPU and linear growth in VMT through life of PMP.

Only modeling net new

VMT for slips was not provided in EIR. VMT for slips estimated based on 4 trips per slip and miles per trip from previous model runs for other POSD projects.

Trips estimated based on the same trip length data. Note that trip estimates are to account for idling, starting, and evap loss emissions to be consistent with caleemod.

Annual VMT estimated assuming 347 Days of Traffic

	Summary of VMT						**Summary of Trips**					
	2050			**2030**			**2050**			**2030**		
Daily VMT and Trip Summary Data	Land Uses (from EIR, section 4.14)	from slips (calculated here)	total VMT for AQ/GHG	Land Uses	Slips	total VMT for AQ/GHG	Land Uses (from EIR, section 4.14)	from slips (calculated here)	total VMT for AQ/GHG	Land Uses	Slips	total VMT for AQ/GHG
PD1	0	1,292	1,292	0	530	530	0	140	140	0	57	57
PD2	25,497	15,213	40,710	10,454	6,237	16,691	2,594	1,548	4,142	1,064	635	1,699
PD3	10,643	5,897	16,540	4,364	2,418	6,782	1,243	689	1,931	510	282	792
PD4	0	0	0	0	0	0	0	0	0	0	0	0
PD7	0	0	0	0	0	0	0	0	0	0	0	0
PD8	1,664	0	1,664	682	0	682	193	0	193	79	0	79
PD9	0	492	492	0	202	202	0	40	40	0	16	16
PD10	0	2,004	2,004	0	822	822	0	220	220	0	90	90
total	37,804	24,899	62,703	15,500	10,209	25,709	4,030	2,637	6,667	1,653	1,080	2,733

Mobile Sources

Emission Estimates

Daily Criteria Pollutant Pounds	2030							2050						
PD	**ROG**	**NOx**	**CO**	**SO2**	**PM10**	**PM2.5**	**DPM**	**ROG**	**NOx**	**CO**	**SO2**	**PM10**	**PM2.5**	**DPM**
PD1—Shelter Island	0	0	1	0	0	0	0	0	0	2	0	1	0	0
PD2—Harbor Island	4	5	35	0	12	2	0	5	9	57	0	28	5	0
PD3—Embarcadero	2	2	15	0	5	1	0	2	4	24	0	11	2	0
PD4—Working Waterfront	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PD7—South Bay	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PD8—Imperial Beach Oceanfront	0	0	1	0	0	0	0	0	0	2	0	1	0	0
PD9—Silver Strand	0	0	0	0	0	0	0	0	0	1	0	0	0	0
PD10—Coronado Bayfront	0	0	2	0	1	0	0	0	0	3	0	1	0	0
Baywide	6	8	54	0	18	3	0	9	14	89	0	43	7	0

Annual Criteria Pollutant Tons	2030							2050						
PD	**ROG**	**NOx**	**CO**	**SO2**	**PM10**	**PM2.5**	**DPM**	**ROG**	**NOx**	**CO**	**SO2**	**PM10**	**PM2.5**	**DPM**
PD1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PD2	1	1	6	0	2	0	0	1	2	10	0	5	1	0
PD3	0	0	3	0	1	0	0	0	1	4	0	2	0	0
PD4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PD7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PD8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PD9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PD10	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Baywide	1	1	9	0	3	1	0.01	2	2	15	0	8	1	0

Annual GHG Metric Tons	2030				2050			
PD	**CO2**	**CH4**	**N2O**	**CO2e**	**CO2**	**CH4**	**N2O**	**CO2e**
PD1	64	2.49E-03	2.85E-03	65	135	2.43E-03	6.06E-03	137
PD2	2,010	7.65E-02	8.87E-02	2,038	4,235	7.39E-02	1.89E-01	4,293
PD3	819	3.29E-02	3.71E-02	831	1,727	3.26E-02	7.88E-02	1,751
PD4	0	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0
PD7	0	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0
PD8	82	3.30E-03	3.72E-03	84	174	3.26E-03	7.91E-03	176
PD9	24	8.44E-04	1.03E-03	25	51	7.90E-04	2.19E-03	52
PD10	99	3.88E-03	4.43E-03	101	209	3.80E-03	9.42E-03	212
Baywide	3,099	1.20E-01	1.38E-01	3,143	6,530	1.17E-01	2.93E-01	6,620

Fuel ->	2030		2050	
	diesel	**gas**	**diesel**	**gas**
Baywide	14,493	341,102	30,178	718,872

metrics -->	diesel %	gas %
2030	4.7%	95.3%
2050	4.7%	95.3%

lbs CO2 per gallon of diesel	22.5	Climate Registry 2018
lbs CO2 per gallon of gas	19.4	Climate Registry 2018
mt/lbs	0.0004536	Standard

Summary of VMT

	Land Uses (from EIR, section 4.14)	from slips (calculated here)	total VMT for AQ/GHG
PD1	0	1,292	1,292
PD2	25,497	15,213	40,710
PD3	10,643	5,897	16,540
PD4	0	0	0
PD5	0	0	0
PD6	0	0	0
PD7	0	0	0
PD8	1,664	0	1,664
PD9	0	492	492
PD10	0	2,004	2,004
total	37,804	24,899	62,703

Summary of trips

	Land Uses (from EIR, section 4.14)	from slips (calculated here)	total VMT for AQ/GHG
PD1	0	140	140
PD2	2,594	1,548	4,142
PD3	1,243	689	1,931
PD4	0	0	0
PD5	0	0	0
PD6	0	0	0
PD7	0	0	0
PD8	193	0	193
PD9	0	40	40
PD10	0	220	220
total	4,030	2,637	6,667

Appendix D

Port Master Plan Update
Transportation Impact Study (TIS)
Vehicle Miles Traveled – SB 743
Analysis prepared by Chen Ryan Associates, August 2022

Transportation Impact Study
Vehicle Miles Traveled – SB 743 Analysis

Port Master Plan Update

FINAL

San Diego Unified Port District
3165 Pacific Highway
San Diego, CA 92101

Rev. August 2022

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Appendices

1.0 Introduction

The purpose of this Transportation Impact Study (TIS) is to identify and document any significant transportation related impacts associated with the implementation of the proposed Port Master Plan Update (PMPU), and to recommend mitigation measures for identified impacts, as necessary.

1.1 Project Description

The PMPU is comprised of land and water use developments, transportation infrastructure improvements, and implementation of mobility hubs. All of the proposed developments and transportation improvements are included in Planning Districts 1, 2, 3, 4, 8, 9 and 10. There are also land use developments planned for Districts 5, 6, and 7; however, these Districts were precluded in this TIS as there are separate Environmental Impact Reports (EIR's) being prepared for each of those respective projects. Those EIRs include:

- Planning District 5 – National City Bayfront: *National City Bayfront Projects EIR*
- Planning District 6 – Chula Vista Bayfront: *Chula Vista Bayfront Master Plan EIR*
- Planning District 7 – South Bay: *Wetland Mitigation Bank at Pond 20 and Port Master Plan Amendment Project EIR*

Figure 1.1 displays the study area and the boundaries of each of the Planning Districts.

Land Use

The proposed land use changes contained within the PMPU are concentrated within Planning Districts 2, 3, 4, 8, 9 and 10. Typical land use developments include new hotels, restaurants, retail, and recreational boat berthing. Only land developments were analyzed in this TIS as the water uses are not anticipated to generate new vehicular trips and would not affect the land-based transportation network. Information of these land use changes are described in greater detail in Chapter 3.

Transportation Infrastructure Improvements

To help accommodate the proposed growth among all modes of travel, the PMPU includes multimodal transportation improvements in Planning Districts 1, 2, and 3, primarily along the North Harbor Drive corridor. Those improvements include bicycle and pedestrian multi-use paths, transit only lanes, an on-airport roadway for the San Diego International Airport. Table 1.1 provides a summary of the planned improvements for all the respective Districts.

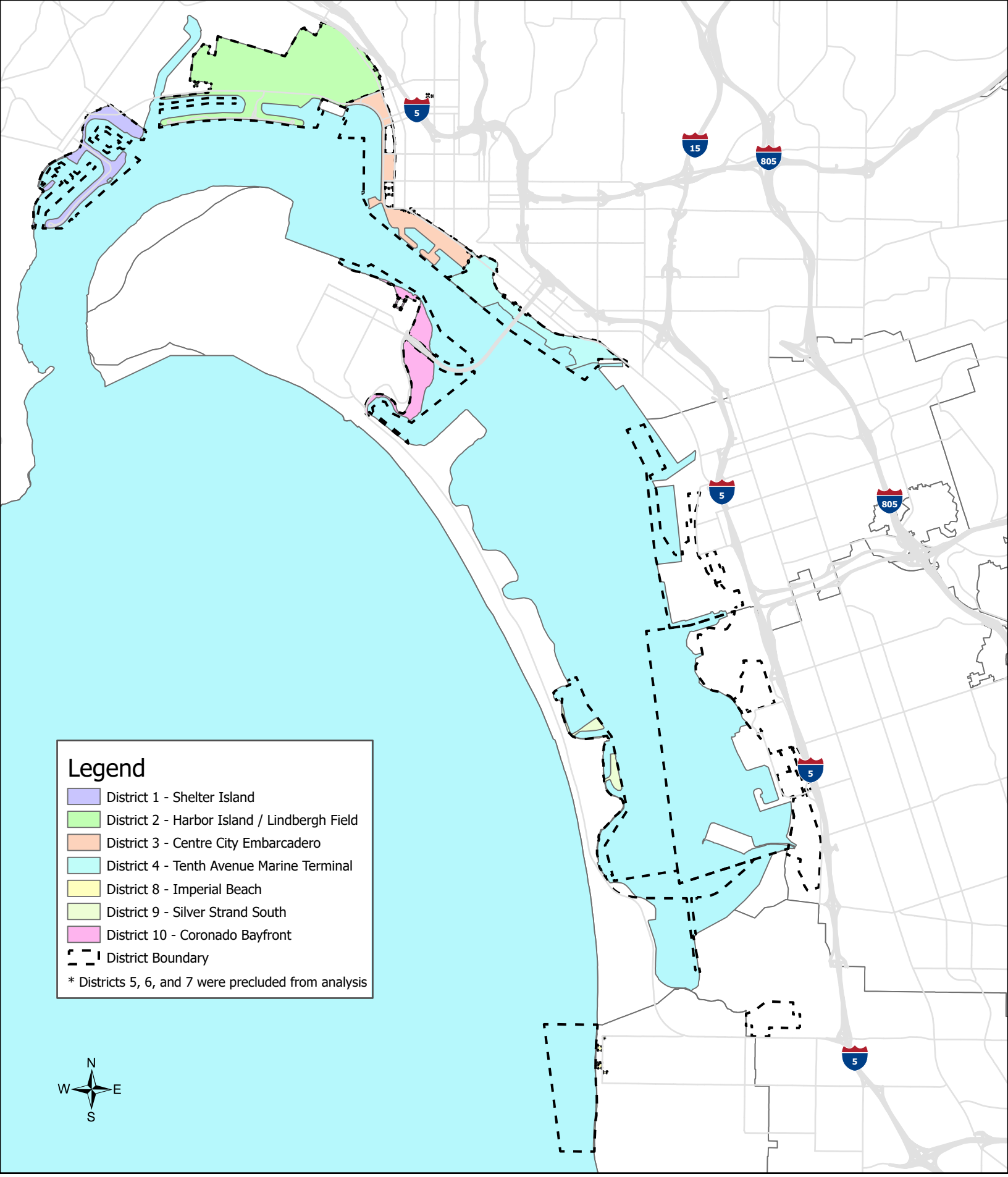

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Figure 1.1
Study Area

Table 1.1: Summary of Transportation Improvements

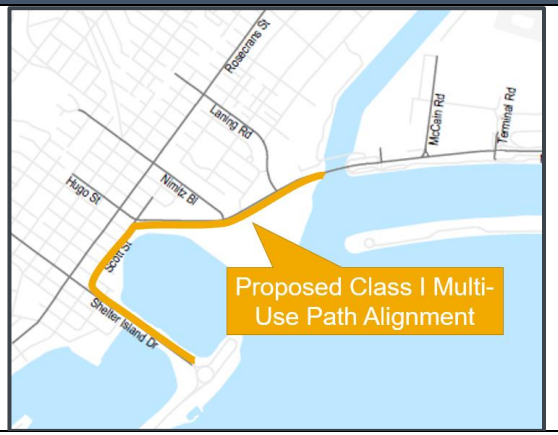
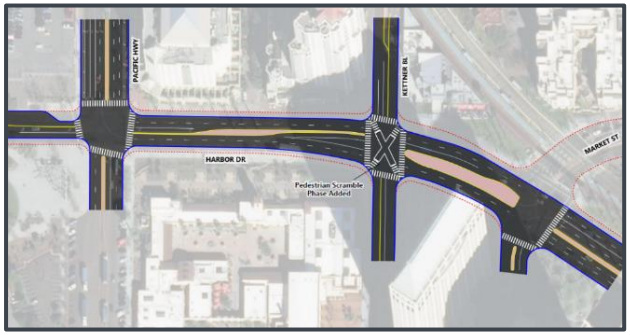
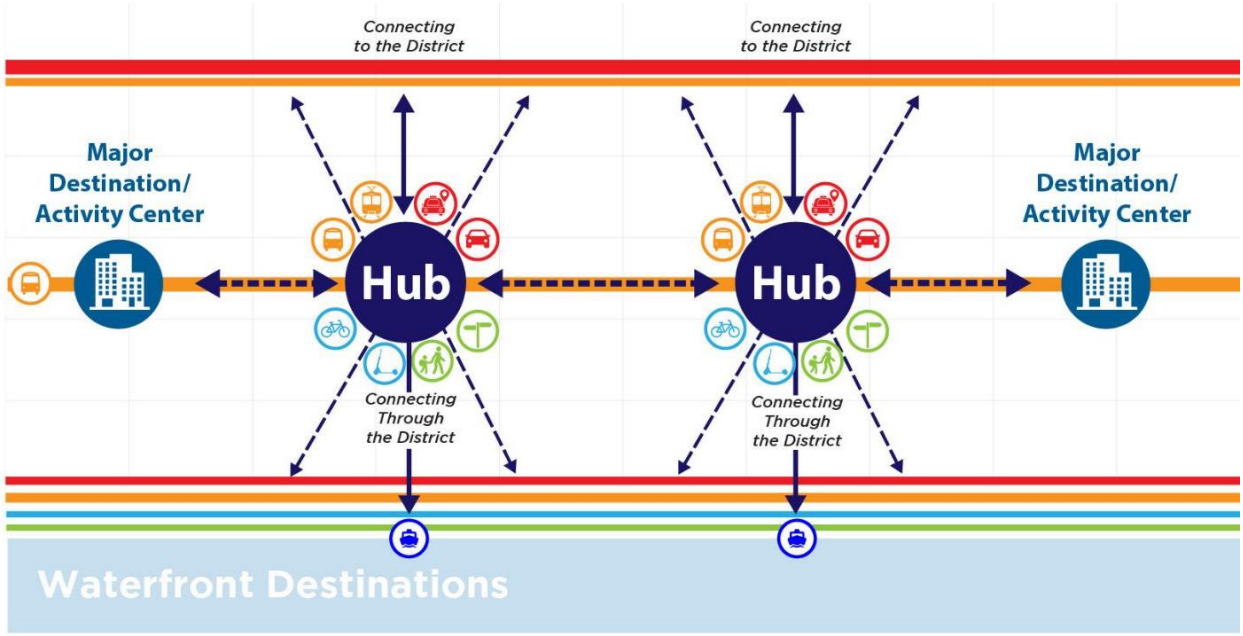
PD	Location	Type	Improvement
1	**Scott St/Harbor Dr** between Rosecrans St to McCain Rd	**Bicycle & Pedestrian**	Class I Multi-Use Path connecting between Shelter Island and Spanish Landing: • Located on the eastside of Shelter Island Drive between Scott Street and Shelter Island Drive • Located on the southside of Scott Street between Shelter Island Drive and Harbor Drive • Located on the southside of North Harbor Drive between Scott Street and Spanish Landing Entrance 
2	**North Harbor Dr** McCain Rd to Grape St	**Bicycle & Pedestrian**	• Providing a second, wider, Class I Multi-Use Path along the southside of North Harbor Drive on the northside of Spanish Landing • Widen the Class I Multi-Use Path between Harbor Island Drive and the southern Coast Guard Driveway • Extend the existing waterfront promenade between Laurel Drive and Grape Street • Implementation of a Class IV Cycle Track along Pacific Highway between Washington Street and Laurel Street (based on Midway Community Plan)
		Transit	 • Implementation of a busway along the south/west side of North Harbor Dive between the Airport (Harbor Island Drive) and Santa Fe Depot (Broadway) • Support a new express Bus Rapid Transit (BRT) route between the Airport and Santa Fe Depot • Support of a potential future streetcar line between the Airport and Santa Fe Depot (if ridership warrants), utilizing the right-of-way from the proposed busway along North Harbor Drive.

Table 1.1: Summary of Transportation Improvements

PD	Location	Type	Improvement
2	**North Harbor Dr** McCain Rd to Grape St	**Roadway**	• Removal of the Laurel Drive / North Harbor Drive Intersection • Converting North Harbor Drive from a six-lane roadway (larger in some locations) to a four-lane roadway with west/south side running busway between Harbor Island Drive and Grape Street
3	**North Harbor Dr** Grape St to Pacific Hwy	**Bicycle & Pedestrian**	• Widening and improving the existing waterfront promenade between Grape Street and Broadway • Implementation of a Class IV Cycle Track along Pacific Highway between Laurel Street and Harbor Drive (based on Midway Community Plan)
		Transit	• Implementation of a busway along the westside of North Harbor Dive between the Airport (Harbor Island Drive) and Santa Fe Depot (Broadway) • Support a new express Bus Rapid Transit (BRT) route between the Airport and Santa Fe Depot
		Roadway	• Converting Harbor Drive from a six-lane roadway (larger in some locations) to a two-lane roadway with westside running busway between Grape Street and Broadway
3	**N Harbor Dr** Pacific Hwy to Park Blvd	**Bicycle and Pedestrian**	• Implementation of a Class I Multi-Use Path along the southwest side of Harbor Drive between Pacific Highway and Market Street (Connects the Bayshore Bikeway to the MLK Prominade) • Widen the sidewalks along the northeast side of North Harbor Drive between Pacific Highway and Market Street. • Implement a pedestrian scramble phase at the Kettner Boulevard / North Harbor Drive intersection.  • Support a pedestrian bridge connecting the Convention Center and Gaslamp Quarter.
		Transit	• Close the at-grade vehicular crossing at Market Street / North Harbor Drive • Support the expansion of the COASTER to the San Diego Convention Center / Petco Park
3	**N Harbor Dr** Pacific Hwy to Park Blvd	**Roadway**	• Close the eastern leg of the Market Street / North Harbor Drive intersection to vehicular traffic • Implement a traffic signal at the Pacific Highway / G Street intersection

Mobility Hubs

There are three types of mobility hubs planned: Regional Mobility Hubs, Local Gateway Mobility Hubs, and Connector Mobility Hubs. The goal of each mobility hub is to connect to the overall system through land-based transit (the District's Bayfront Circulator[1] and other transit options) and water-based transit (ferries and water taxis). Mobility hub requirements, by type of mobility hub, are summarized in Table 1.2. The amenities associated with each type of mobility hub are based on the location the mobility hub is planned to serve, the distance from other mobility hubs, and the intensity of the development in the area. Amenities should be appropriate for each site and selected in coordination with the District. Figure 1.2 displays the proposed mobility hub locations within the applicable Planning Districts.



A Regional Mobility Hub is intended to serve visitors and employees as they access and travel throughout Tidelands. They are intended to be used to consolidate public parking in the area, which will allow for existing on-street and/or surface parking to be repurposed as Recreation Open Space, such as esplanades, promenades, and plazas, and to connect to multimodal facilities, dedicated transit lanes, bicycle facilities (Class II Bike Lanes, Class IV Cycle Tracks, or Class I Multi-use Paths), and other waterfront uses. Regional Mobility Hubs will help to reduce the amount of vehicle miles traveled throughout Tidelands and potentially in areas adjacent to Tidelands.

[1] With participation from its tenants, the District operates the Big Bay Shuttle, an on-Tidelands-only shuttle service, along Harbor Drive during the summer months. The District does not operate a year-round, land-based public transit service; rather, it collaborates with the regional transit authority to provide transit service throughout Tidelands. In the future, it is anticipated that the shuttle will be upgraded to provide year-round service (aka Bayfront Birculator) and operate along Harbor Drive, establishing connections between Shelter Island and the Convention Center. The route for the bayfront circulator may involve the use of dedicated transit lanes where feasible, and stops are intended to be coordinated with the placement of future mobility hubs.

Table 1.2: Mobility Hub Requirements

	Accessibility Requirements					Amenities					
Size	Transit	Roadway	Walking	Biking	Waterside	Amenities Required	Parking	Curbside Management	Micro-Mobility	Information	Commercial
Regional Gateway	Direct connection to a Regional Transit Stop (Trolley or MTS Bus Stop) Incorporation of a Bayfront Circulator stop (PDs 1-3)	Takes access from a major roadway that provides a direction connection to the regional highway system roadway	75% of the attractions within 0.5-mile radius are accessible through a quality walk1 Provides wayfinding signage to key destinations	Provides a direct bicycle connection (Level of Traffic Stress 2 or better) to the regional bicycle network Provides bike parking	Provides a connection to one or more waterside facilities (transient vessel docking and/or waterside transit service)	4	Consolidates parking for public destinations (open space, recreation, public art) within the catchment area (0.5 mile)2 Offsite parking for leasehold destinations (retail, restaurants, hotels) can also be consolidated in Mobility Hubs2	220 feet (10 car lengths) of dedicated linear curb length	Coordination with Micro-Mobility providers to ensure consistent service and supply Inclusion of Micro-Mobility hub with charging facilities and dedicated staging area	Signage and/or kiosks providing information on the available transportation modes, prices, near-by destinations, multi-modal trip mapping, ticket vending, and wait time information	Small scale visitor serving uses such as restaurants, coffee shops and markets.
Local Gateway	Access to a local transit stop. Incorporation of a Bayfront Circulator stop (PDs 1-3)	Takes access from a public roadway	75% of the attractions within 0.25-mile are accessible through a quality walk1 Provides wayfinding signage to key destinations	Provides a direct bicycle connection (Level of Traffic Stress 2 or better) to the regional bicycle network Provides bike parking	Provides connections to waterside facilities (transient vessel docking and/or waterside transit service), if available	3	Within 500 feet of off-street public parking. May consolidate parking for public destinations (open space, recreation, public art) within the catchment area2 Off-site parking for leasehold destinations (retail, restaurants, hotels) may also be consolidated in the Mobility Hub2	110 feet (5 car lengths) of dedicated linear curb length	Coordination with Micro-Mobility providers to ensure consistent service and supply Dedicated staging area from Micro-Mobility related vehicles	Signage and/or kiosks providing information on the available transportation modes, near-by destinations, and trip mapping3	On-site or adjacent small-scale visitor-serving uses, such as restaurants, coffee shops, and/or visitor-serving retail or kiosks
Connection Point	Access to a local transit stop Incorporation of a Bayfront Circulator stop (PDs 1-3)	Takes access from a public roadway	Provides a direct connection, through a quality walk,1 for all destinations within the immediate area Provides wayfinding signage to key destinations	Provides bike parking	Provides connections to waterside facilities (transient vessel docking and/or waterside transit service), if available	2	Parking is not required, but is allowed	66 feet (3 car lengths) of dedicated linear curb length	Coordination with Micro-Mobility Providers to ensure service and supply	Signage and/or kiosks providing information on the available transportation modes, near-by destinations, and trip mapping3	No commercial requirements

1 Quality walk: Contiguous, non-circuitous, walking route with a Pedestrian Environment Quality Evaluation (PEQE) score of fair or good. PEQE score is based on the physical characteristics of the pedestrian facility, including safety, lighting, separation from roadway, etc. Source: Active Travel Assessments Integrating Bicycle and Pedestrian Evaluation in Long Range Planning, City of San Diego, December 2015.

2 Parking demand study would be required to determine the number of spaces that need to be included in the hub.

3 Trip mapping services provide information on the various transportation modes in which a user can use to reach their destination, and locations in which they can change their modes, if desired (example: google maps).

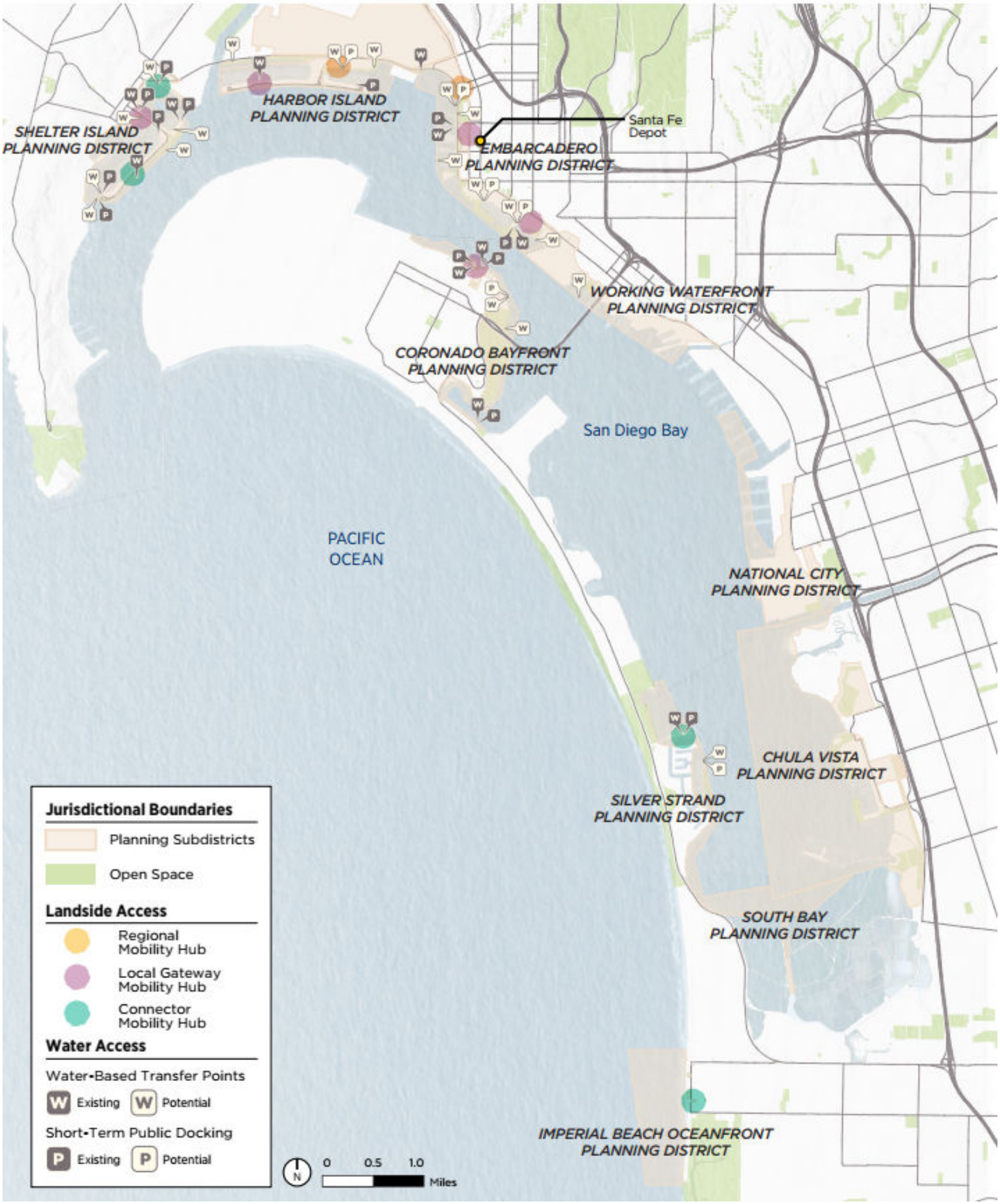


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Figure 1.2
Proposed Mobility Hub Locations

A Local Gateway Mobility Hub connects visitors to a group of attractions and other uses in a small and specific area. Local Gateway Mobility Hubs are intended to both draw visitors to Tidelands and act as a connection point for visitors who are already traversing Tidelands using non-vehicular modes of transportation.

A Connector Mobility Hub connects visitors to a specific attraction or use. Connector Mobility Hubs are generally smaller than the other types of hubs and do not typically include vehicular parking or need to be linked to any parking facilities. They should generally be designed to organize converging transportation facilities through wayfinding signage, bicycle, and pedestrian improvements and the provision of transportation amenities.

1.2 Report Organization

Following this Introduction chapter, this report is organized into the following sections:

2.0 *Analysis Methodology* – This chapter describes the methodologies and standards utilized to analyze and identify the transportation related impacts associated with the Port Master Plan Update.

3.0 *Transportation Impact Analysis* – This chapter derives and analyzes the projected Vehicle Miles Traveled (VMT) that will be generated by the PMPU. This chapter also identifies if the PMPU related VMT would create significant project related impact, as it relates to the standards outlined in the California Environmental Quality Act (CEQA).

4.0 *Mitigation* – The final chapter provides recommendations for mitigation measures to reduce the identified transportation related impacts to less than significant levels and evaluates the feasibility of the proposed mitigation measures.

2.0 Analysis Methodology and Threshold

This TIS was conducted in accordance with the California Environmental Quality Act (CEQA) Statutes and Guidelines.

2.1 Background (SB-743)

On September 27, 2013, Governor Edmund G. Brown, Jr. signed SB-743 into law, starting a process that to fundamentally change the way transportation impact analysis is conducted under CEQA. Within the State's CEQA Guidelines, these changes will include elimination of auto delay, level of service (LOS), and similar measurements of vehicular roadway capacity and traffic congestion as the basis for determining significant impacts.

On December 2018, the Resources Agency certified and adopted the CEQA Guidelines update package, which included the California Natural Resources Agency Guidelines for the Implementation of the California Environmental Quality Act. As a result, the California Governor's Office of Planning and Research (OPR) updated and released the *Technical Advisory on Evaluating Transportation Impacts in CEQA (Technical Advisory)* in December 2018. According to the updated guidelines, lead agencies will have until July 1, 2020 to comply with the updated CEQA revision.

2.2 Analysis Guidelines and Significance Thresholds

In response to the implementation of SB-743 on July 1, 2020, this Transportation Impact Study utilizes the substantial evidence and corresponding threshold recommendations, contained in OPR's Technical Advisor as a framework to analyze and identify transportation related impacts associated with the implementation of the PMPU. The SB-743 framework was developed for the Port Master Plan Update (PMPU) Environmental Impact Report (EIR) and would also be applied for other District projects.

2.2.1 Analysis Metrics

For land use development projects, OPR requires that the following two metrics be analyzed to determine if a project has a significant transportation related impact:

VMT/Capita: Includes all vehicle-based person trips grouped and summed to the home location of individuals who are drivers or passengers on each trip. It includes both home-based and non-home-based trips. The VMT for each home is then summed for all homes in a particular census tract and divided by the population of that census tract to arrive at VMT/Capita. However, because residential land uses are not permitted within the District's jurisdiction, this metric was not used to determine project-related VMT impacts.

VMT/Employee: Includes all vehicle-based person trips grouped and summed to the work location of individuals on the trip. This includes VMT associated with detours made during the work commute (e.g., additional stops at coffee shops, dry cleaners, grocery stores, etc.). The VMT for each work location is then summed for all work locations by census tract and then divided by the total number of employees of that census tract to arrive at the VMT/Employee. This metric is used for reasonably foreseeable future development that would have worker commute trips associated with it, such as hotels, restaurants, and marine terminal workers.

Total VMT: Is the sum of all vehicle trips generated in an area multiplied by their associated trip lengths. This total includes all the generated vehicle miles for Internal-to-Internal (I-I), Internal-to-External (I-E), and External-to-Internal (E-I) trips in the area. For this analysis, the Total VMT was calculated for each planning district.

2.2.2 Analysis Tool

The SANDAG Series 13 Activity Based Model (ABM) was customized for the Port District's jurisdictional area to incorporate the proposed land use and transportation network changes contained within the Port Master Plan Update. The ABM is a travel demand forecasting model that incorporates census data and travel surveys to inform the algorithms of the model's projections. It creates a simulation based on the existing population and projected demographics to match residents to employment and forecasts the 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 13 ABM has four (4) forecast scenarios: 2012, 2020, 2035, and 2050. The different components of the PMPU are projected to be implemented over a period of time, so the most appropriate year to conduct the VMT/Capita and VMT/Employee is for 2050. The PMPU land uses that were coded into the SANDAG model for VMT analysis is provided in Appendix A.

To calculate both the VMT/Employee and the total VMT generated within each planning district, the PMPU land uses were coded into their respective Transportation Analysis Zones (TAZ) and the proposed transportation network changes were also coded throughout the Tidelands. Select Zone Assignments were then conducted for the TAZs located in each planning district, to track origin and destination pairings, as well as the routes choices for vehicular trips coming to and from the Districts land uses. The total VMT generated within the planning district was calculated based on the total number of trips (all trip types) generated the by District land uses and then multiplying by the route distance between them. VMT/Employee was calculated by summing the total VMT generated specifically by employees within each planning district and then divided by the total number of jobs within the same planning district.

A detailed description of how the SANDAG Model calculates VMT is provided at the following location: https://www.sandag.org/uploads/2050RTP/F2050RTPTA15.pdf

2.3 Determination of Significance – CEQA

Section 15064.3(b)(1) of the CEQA Guidelines recommends the use of automobile VMT as the preferred evaluation metric for transportation related impacts. For land use projects, OPR's Technical Advisory reports that research has shown that automobile VMT/Employee at the project level should be fifteen percent (15%) below those of existing development. This section presents the transportation significance criteria that are based on the thresholds identified in OPR's Technical Advisory.

2.3.1 Screening Criteria

As per OPR's Technical Advisory, a project that meets at least one of the screen criteria below would be assumed to have a less than significant VMT impact, due to project characteristics and/or location.

Screening Thresholds for Small Projects

Absent substantial evidence indicating that a project would generate a potentially significant level of VMT, or inconsistency with a Sustainable Communities Strategy (SCS) or general plan, projects that generate or attract fewer than 110 trips per day[2] generally may be assumed to cause a less than significant transportation impact.

[2] CEQA provides a categorical exemption for existing facilities, including additions to existing structures of up to 10,000 square feet, so long as the project is in an area where public infrastructure is available to allow for maximum planned development and the project is not in an environmentally sensitive area. (CEQA Guidelines, § 15301, subd. (e)(2).) Typical project types for which trip generation increases relatively linearly with building footprint (i.e., general office building, single tenant office building, office park, and business park) generate or attract an additional 110 124 trips per 10,000 square feet. Therefore, absent substantial evidence otherwise, it is reasonable to conclude that the addition of 110 or fewer trips could be considered not to lead to a significant impact.

Map-Based Screening for Residential and Employment Projects

Residential and employment projects that are located in more urbanized areas and incorporate similar features (i.e., density, mix of uses, transit accessibility), will tend to exhibit similarly low VMT. As such, land development projects, of similar size and design as the surrounding uses, are anticipated to generate VMT/Capita and VMT/Employee at similar rates as their surrounding uses. Therefore, land development projects that are constructed within areas where the existing land uses generate VMT at a rate below the significance threshold are assumed to have a less than significant impact.

Transit Priority Areas – Presumption of a Less Than Significant Impact for Land Use Projects Near Major Transit Stations or High-Quality Transit Corridor

Proposed *CEQA Guidelines* 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 ½ mile of an existing major transit stop[3] or an existing stop along a high-quality transit corridor[4] (known as a transit priority area or TPA)will have a less than significant impact on 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 need further evaluation to determine if they would be associated with a transportation related impact based on their associated VMT generation. As noted in OPR's Technical Advisory, projects within a TPA should conform to the following to have a less than significant impact:

- Has a Floor Area Ratio (FAR) above 0.75
- Does not include more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking)
- Is consistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Metropolitan Planning Organization)
- Does not replace affordable residential units with a smaller number of moderate- or high-income residential units

Figure 2.1 displays the location of existing TPAs within the Port District.

Affordable Housing – Presumption of a Less Than Significant Impact Affordable Residential Development

A project consisting of a 100 percent of affordable housing would be assumed to have a less than significant impact and therefore would not require mitigation[5][6].

[3] Pub. Resources Code, § 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.").

[4] Pub. Resources Code, § 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.").

[5] Chapple et al. (2017) Developing a New Methodology for Analyzing Potential Displacement, available at https://www.arb.ca.gov/research/apr/past/13-310.pdf.

[6] CAPCOA (2010) Quantifying Greenhouse Gas Mitigation Measures, pp. 176-178, available at http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf.

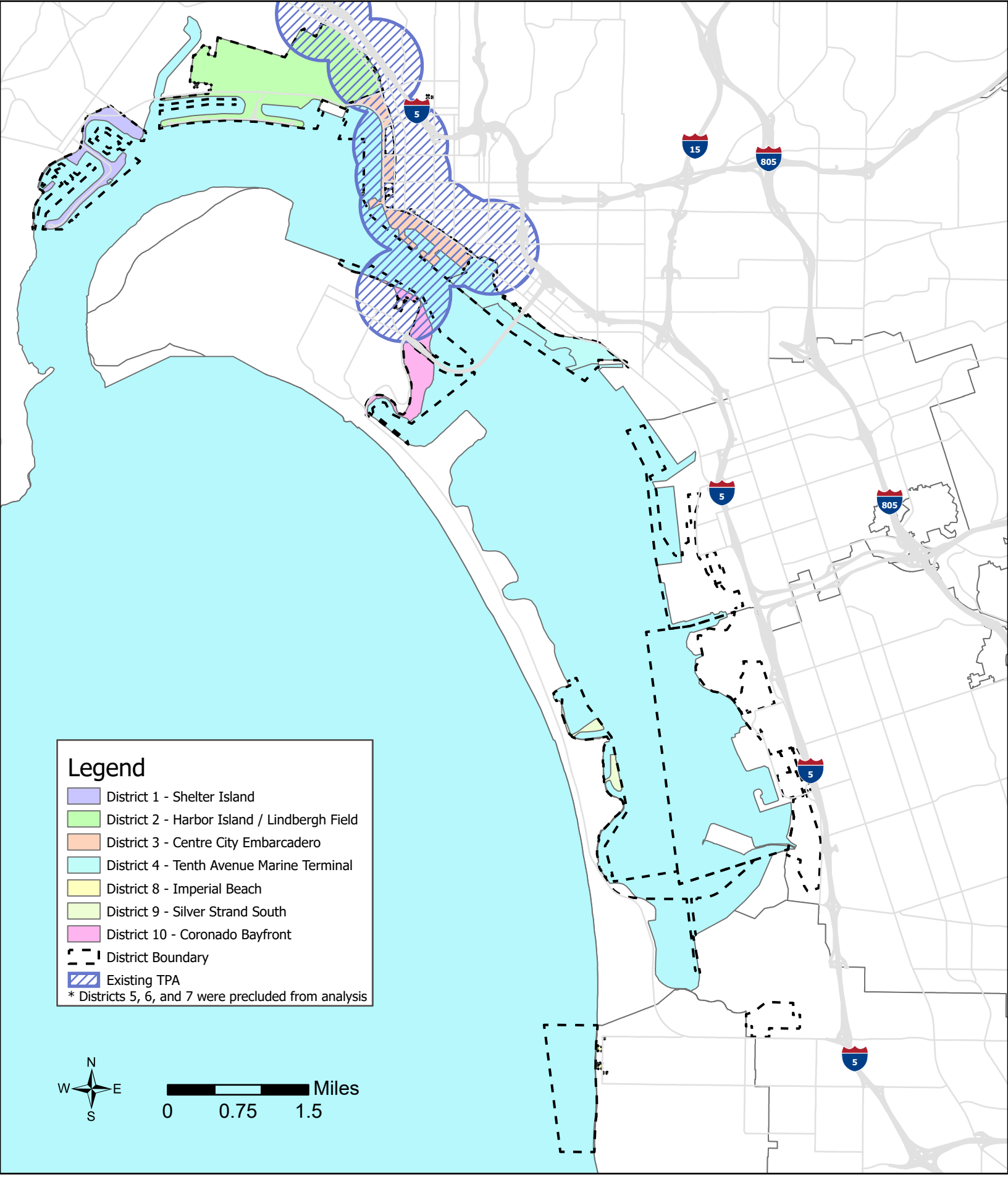

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Figure 2.1
TPAs within the Study Area

2.3.2 Significance Criteria

Section 15064.3 (4) of the *CEQA Guidelines* states:

> A lead agency has discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project's vehicle miles traveled and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project. The standard of adequacy in Section 15151 shall apply to the analysis described in this section.

To follow onto this standard, Section E.2 of the *OPR Technical Advisory* (pages 16 and 17) provides recommended thresholds for the following applicable District land uses[7]:

> Office: A office uses exceeding a level of 15 percent below existing regional VMT per employee may indicate a significant transportation impact.
>
> Retail: A net increase in total VMT may indicate a significant transportation impact. Because new retail development typically redistributes shopping trips rather than creating new trips, estimating the total change in VMT (i.e., the difference in total VMT in the area affected with and without the project) is the best way to analyze a retail project's transportation impacts.
>
> Other Land Uses: Land use projects involving residential, office, and retail uses tend to have the greatest influence on VMT. For that reason, OPR's Technical Advisory recommends the quantified thresholds described above for purposes of analysis and mitigation. Lead agencies, using more location-specific information, may develop their own more specific thresholds, which may include other land use types. In developing thresholds for other project types, or thresholds different from those recommended here, lead agencies should consider the purposes described in section 21099 of the Public Resources Code and regulations in the *CEQA Guidelines* on the development of thresholds of significance (e.g., CEQA Guidelines, § 15064.7).

There are several lands uses within the Tidelands that are not covered in the thresholds outlined above. Using the guidance provided under Other Land Uses, it is recommended that the District implement thresholds for the following user group:

> Non-Office Based Employees: This would include all employees within the Tidelands that do not work within commercial offices or retail (which are both covered by the *OPR Technical Advisory*). Since the District has a diverse employment base, it would be difficult to categorize each employment group and compare their associated VMT/Employee rate to a comparable rate at the regional level. Additionally, most of the employment groups within the District have very similar travel patterns and trip generation rates (i.e., most employment is industrial, or service based). Therefore, the average VMT/Employee for these uses were compared to the average VMT/Employee rate at the regional level. If the District's average VMT/Employee rate is less than 15 percent below existing regional VMT/Employee rate, it may indicate a significant transportation related impact. See Table 2.1 for clarification on which land use would be applicable for this category.

[7] It should be noted that the *OPR Technical Advisory* also provides threshold recommendations for residential land uses; however, the District is prohibited from allowing residential land uses; therefore, the recommendations were excluded from this section.

Table 2.1 provides a summary of the PMPU land uses, the recommended metric that would be used to evaluate their potential transportation related impact, and the recommended impact threshold.

Table 2.1: Evaluation Criteria & Impact Threshold

Development	Evaluation Criteria	Recommended Impact Threshold
Landside		
Hotel	VMT/Employee	15% below regional average
Retail (square feet)	VMT with vs. without proposed retail change	No increase in total Planning District VMT
Restaurant (square feet)[1]	VMT with vs. without proposed retail change	No increase in total Planning District VMT
Retail & Restaurant – Standalone (square feet)	VMT with vs. without proposed retail change	No increase in total Planning District VMT
Convention (square feet)	VMT/Employee	No increase in regional VMT
Institutional	Exempt	N/A
Commercial Fishing	VMT/Employee	15% below regional average
Conservation Open Space	Exempt	N/A
Waterside		
Recreational Boat Berthing	VMT with vs. without proposed slips change	No increase in total Planning District VMT

Note:
1 Retail is included in the OPR Technical Advisory, restaurants are not.

Transportation Projects: Section 15064.3(b)(2) of the CEQA Guidelines indicate that a VMT analysis should be conducted for roadway capacity projects and OPR's Technical Advisory refers to the potential for induced travel, and its associated effects. Induced travel occurs when improvements to a roadway facility enhance traffic operations and/or relieve congestion to the point at which travelers have a higher incentive to make a vehicular trip in lieu of a different mode of travel, or not taking the trip at all. Appendix 2 of the OPR's Technical Advisory identifies the following five factors that contribute to overall induced travel:

1. *Changes in Trip Length*: Roadway capacity could result in the ability to travel a longer distance in a shorter period of time, thereby making farther away destinations more attractive and resulting in longer trip lengths and more VMT.
2. *Changes in Mode Choice*: Roadway capacity could result in reduced automobile travel time, causing people to shift to automobile use from other travel modes, resulting in more auto trips and increased VMT.
3. *Route Changes*: Faster travel time may attract more drivers to a route with expanded capacity, which can increase or decrease vehicle travel depending on whether it shortens or lengthens trips.
4. *Newly Generated Trips*: Increasing travel speeds from added roadway capacity could induce additional vehicle trips, resulting in increased VMT.
5. *Land Use Changes*: Faster travel times from added roadway capacity could lead to land development farther out on the corridor, leading to a long-term incremental increase in trip lengths, resulting in increased VMT.

2.4 Potential Mitigation Measures

Based on the results of the programmatic VMT analysis, if an area of change is considered to have a significant transportation impact, mitigation measures will be evaluated to determine whether it is feasible to reduce the impact to less than significant. Mitigation measures to be considered may include, but are not limited to the following:

- Construct additional high-quality transit stop and/or ferry landing.
- Requirement of a Transportation Demand Management Plan as listed in the Regional Transportation Plan or from the *California Air Pollution Control Officers Association Quantifying Greenhouse Gas Mitigation Measures A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures (August 2010) Screening Criteria guideline*.
- Construct additional bikeway/multi-modal path to increase trips by non-vehicular mode of transportation.
- Implementation of additional transit services, new including transit routes and stops.

3.0 Transportation Impact Analysis

This chapter derives and analyzes the projected VMT that will be generated by the PMPU. This chapter also identifies if the PMPU related VMT would create significant impact, as it relates to the standards outlined in the Section 15064.3(b)(1) of the California Environmental Quality Act (CEQA).

3.1 Planning District 1 – Shelter Island

LAND USE

Table 3.1 summarizes the existing and future land uses within Planning District 1, as well as their associated growth.

Table 3.1: Planning District 1 – Shelter Island - Land Use Growth

Land Use	Existing Quantity	PMPU Quantity	Net Growth
Hotel w/ R&R (rooms)	1,119 Rooms	1,119 Rooms	0 Rooms
Retail (sq ft)	4.0 KSF	4.0 KSF	0.0 KSF
Restaurant (sq ft)	56.9 KSF	56.9 KSF	0.0 KSF
Retail & Restaurant - Standalone (sq ft)	51.3 KSF	51.3 KSF	0.0 KSF
Commercial Fishing	2.5 Acres	2.5 Acres	0.0 Acres
Recreational Boat Berthing	2,430 Slips	2,465 Slips	35 Slips

Note:
KSF = Thousand Square Feet

As shown in Table 3.1, the proposed PMPU does not propose any additional landside development in PD1, but would allow for the development of up to 35 additional recreational boat slips.

VMT

Employment

Based on the evaluation criteria outlined in Table 2.1, there are no planned increased in land uses, within Planning District 1, that uses the VMT/Employee criterion; therefore, the employment VMT of the PMPU in Planning District 1 would be *less than significant*.

Retail & Recreational VMT

As shown in Table 3.1 the proposed PMPU will allow for 35 additional recreational boat slips to be constructed. This represents a 1.5% increase of the total supply of recreational boat slips within the planning district and would not appreciably change the overall acreage of the Recreational Berthing water use. While the addition of recreational boat berthing slips would not affect employment based VMT, it would still generate additional vehicle trips resulting in additional VMT generated by marina users. Because the threshold for recreational boat berthing uses is no net increase in VMT, any additional VMT generated would be considered a significant impact. Therefore, there is the potential that the additional boat slips could result in a net increase in VMT within PD1. This would be a significant impact without mitigation.

Transportation Projects VMT

As described in Section 1.1, the PMPU includes transportation infrastructure improvements to provide facilities for non-auto travel modes to help balance all transportation modes along the North Harbor Drive corridor. The following transportation projects proposed in Planning District 1 include: converting Scott Street from an undivided four-lane roadway to a two-lane roadway with a continuous left-turn pocket and

to install a multi-use path on southside of Shelter Island Drive/Scott Street/Harbor Drive between Shelter Island Drive and McCain Road.

Since this improvement would increase the multimodal transportation network and would promote non-auto use, it could potentially result in less auto trips and reduce overall VMT. Therefore, the transportation improvements in District 1 would not induce travel and the impacts to the transportation system would be *less than significant*.

3.2 Planning District 2 – Harbor Island

LAND USE

Table 3.2 summarizes the existing and future land uses within Planning District 2, as well as the associated growth.

Table 3.2: Planning District 2 – Harbor Island - Land Use Growth

Land Use	Existing Quantity	PMPU Quantity	Net Growth
Hotel w/ R&R (rooms)	1,285 Rooms	5,285 Rooms	4,000 Rooms
Retail (sq ft)	2.1 KSF	71.5 KSF	69.4 KSF
Restaurant (sq ft)	57.2 KSF	126.6 KSF	69.4 KSF
Retail & Restaurant - Standalone (sq ft)	105.9 KSF	360.2 KSF	254.3 KSF
Recreational Boat Berthing	2,228 Slips	2,450 Slips	222 Slips

Note:
KSF = Thousand Square Feet

As shown, the PMPU proposes to increase all of the existing land uses within Planning District 2.

VMT

Employment VMT

Based on the evaluation criteria outlined in Table 2.1, and the land uses summarized in Table 3.2, the hotel land uses in District 2 would use VMT/Employee as an evaluation criterion for VMT impacts. To calculate the average VMT/Employee generated by Planning District 2, the PMPU land uses, described in Table 3.2, were incorporated into the SANDAG Series 13 Year 2050 Regional Model. The results of the Select Zone assignment for Planning District 2 are provided in Table 3.3. Model output results are presented in Appendix B.

To determine potential transportation related impacts, the PMPU's VMT is compared against the Base Year Regional Average and the 2050 Regional Average. However, the CEQA impact analysis is based on the 2050 regional average threshold, which is a more conservative threshold as it presents a lower VMT/Employee due to the planned transit and telecommuting features in the future. Therefore, the Base Regional Average comparison is provided for informational purposes only.

Table 3.3: Planning District 2 – Harbor Island
VMT Efficiency Metrics for Impact Analysis of Employment Uses

Land Use	Metric	Commercial Uses VMT/Employee
Hotel	Base Year Regional Average	25.9
	Significant Impact Threshold[1]	22.0
	PMPU	20.3
	PMPU vs Significant Impact Threshold	1.7 miles under threshold (21.6% below San Diego Regional Average)
	2050 Regional Average	21.2
	Significant Impact Threshold	18.0
	PMPU	20.3
	PMPU vs Significant Impact Threshold	2.3 miles over threshold (4.2% below 2050 Regional Average)
Significant Impact?		Yes

Source: SANDAG Regional Transportation Model, July 2019

Note:
[1]San Diego Regional Average X 85% (See Section 2.3)

The PMPU's employment uses are anticipated to generate a VMT/Employee of 20.3 miles, which is 1.7 miles over the 2050 Regional average significance threshold. Therefore, the increase in employment uses within Planning District 2 would have a *significant transportation related impact*.

Retail and Recreational VMT

Based on the evaluation criteria outlined in Table 2.1 and the land uses summarized in in Table 3.2, the retail, restaurant, and recreational boat berthing in Planning District 2 use the net change (with and without the proposed retail uses) in the Total VMT for Planning District 2 as an evaluation criterion for VMT impacts. **Table 3.4** presents the 2050 Total VMT without and with the PMPU.

Table 3.4: Planning District 2 – Harbor Island
Total Planning District VMT for Impact Analysis of Retail and Recreational Uses

Land Use	2050 Total VMT		Net Growth	Significant Impact?
	PMPU Buildout with No New Retail and Recreational Uses	PMPU Buildout		
Retail Restaurant Recreational Boat Berthing	404,347	429,844	+25,497 (+6%)	Yes

As shown, the Total VMT in District 2 is expected to increase by 25,497 with the PMPU, which would exceed the applicable significance threshold for Retail uses. Therefore, impacts related to VMT for Retail uses in District 2 *would be significant*.

Transportation Projects VMT

As described in Section 1.1, the PMPU includes transportation infrastructure improvements to provide facilities for non-auto travel modes to help balance all transportation modes along the North Harbor Drive corridor. The following transportation projects planned in District 2 include:

- Widening the Class I multi-use path south on the south side of North Harbor Drive between Harbor Island Drive and the Coast Guard Driveway.

- Implementation of a dedicated transit right-of-way along North Harbor Drive between the Airport (Harbor Island Drive) and Santa Fe Depot (Broadway) that would support enhanced bus or other fixed-guideway guidance.
- Implementation of a two-way on-airport roadway connecting to Laurel Drive.
- Removal of the Laurel Drive/North Harbor Drive intersection.

Since the Class I multi-use path and transit right-of-way improvements would increase the multimodal transportation network and would promote non-auto use, it helps reduce auto trips and overall VMT. Therefore, the transportation improvements of these two improvements in Planning District 2 would not induce travel and the impacts to the transportation system would be *less than significant*.

However, the dedication of a two-way-on airport roadway and closure of the Laurel Drive/North Harbor Drive intersection could potentially induce travel based on the following criteria:

Route Changes: Faster travel time may attract more drivers to a route with expanded capacity, which can increase or decrease vehicle travel depending on whether it shortens or lengthens trips.

Newly Generated Trips: Increasing travel speeds from added roadway capacity could induce additional vehicle trips, resulting in increased VMT.

Since some of the roadway network changes included in the PMPU for Planning District 2 would most likely induce travel; therefore, implementation of these roadway facilities would result in a *significant transported related impact*.

3.3 Planning District 3 - Embarcadero

LAND USE

Table 3.5 summarizes the existing and future land uses within Planning District 3, as well as the associated growth. The Central Embarcadero land uses were included in the Series 13 travel demand model and assumed as a cumulative project in the analysis, but were not included as part of the assumed PMPU and the growth shown in Table 3.5.

Table 3.5: Planning District 3 - Embarcadero - Land Use Growth

Land Use	Existing Quantity	PMPU Quantity	Net Growth
Hotel w/ R&R (rooms)	5,601 Rooms	8,464 Rooms	2,863 Rooms
Retail (sq ft)	19.2 KSF	69.6 KSF	50.4 KSF
Restaurant (sq ft)	237.2 KSF	287.6 KSF	50.4 KSF
Retail & Restaurant - Standalone (sq ft)	256.8 KSF	336.1 KSF	79.3 KSF
Commercial Fishing	4.0 Acres	4.6 Acres	0.6 Acres
Recreational Boat Berthing	418 Slips	513 Slips	95 Slips

Note:
KSF = Thousand Square Feet

As shown, the PMPU proposes to increase all of the existing land uses within Planning District 3.

VMT

Employment VMT

Based on the evaluation criteria outlined in Table 2.1 and the land uses summarized in in Table 3.5, the hotel and commercial fishing land uses in Planning District 3 use the VMT/Employee as an evaluation criterion for VMT impacts. To calculate the average VMT/Employee generated by Planning District 3, the PMPU land uses, described in Table 3.5, were incorporated into the SANDAG Series 13 Year 2050 Regional Model. The results of the Select Zone Assignment for Planning District 3 are provided in **Table 3.6.** Model output results are presented in Appendix B.

To determine potential transportation related impacts, the PMPU's VMT is compared against the Base Year Regional Average and the 2050 Regional Average. However, the CEQA impact analysis is based on the 2050 regional average threshold, which is a more conservative threshold as it presents a lower VMT/Employee due to the planned transit and telecommuting features in the future. Therefore, the Base Regional Average comparison is provided for informational purposes only.

Table 3.6: Planning District 3 - Embarcadero
VMT Efficiency Metrics for Impact Analysis of Employment Uses

Land Use	Metric	Commercial Uses VMT/Employee (miles/person)
Hotel & Commercial Fishing	Base Year Regional Average	25.9
	Significant Impact Threshold[1]	22.0
	PMPU	15.1
	PMPU vs Significant Impact Threshold	6.8 miles under threshold (41.7% below Base Year Regional Average)
	2050 Regional Average	21.2
	Significant Impact Threshold	18.0
	PMPU	15.1
	PMPU vs Significant Impact Threshold	2.8 miles under threshold (28.8% below 2050 Regional Average)
Significant Impact?		No

Source: SANDAG Regional Transportation Model, July 2019

Note:
[1]San Diego Regional Average X 85% (See Section 2.3)

The PMPU's employment uses are anticipated to generate a VMT/Employee of 15.1 miles, which is 2.8 miles under the significance threshold. Therefore, the increase in employment uses within Planning District 3 would have a *less than significant transportation related impact*.

Retail and Recreational VMT

Based on the evaluation criteria outlined in Table 2.1 and the land uses summarized in in Table 3.5, the retail, restaurant, and recreational boat berthing in District 3 use the net change in the total VMT in Planning District 3 (with and without the proposed retail uses) as an evaluation criterion for VMT impacts. **Table 3.7** presents the 2050 Total Regional VMT without and with the PMPU.

Table 3.7: Planning District 3 - Embarcadero
Total Planning District VMT for Impact Analysis of Retail Uses

Land Use	2050 Total VMT		Net Growth	Significant Impact?
	PMPU Buildout with No New Retail and Recreational Uses	PMPU Buildout		
Retail	597,051	607,685	+10,634 (2%)	Yes
Restaurant				
Recreational Boat Berthing				

As shown in Table 3.7, the Total VMT in Planning District 3 is expected to increase by 10,634 with the PMPU, which would exceed the applicable significance threshold for Retail uses. Therefore, impacts related to VMT for retail and recreational uses *would be significant*.

Transportation Projects VMT

As described in Section 1.1, the PMPU includes transportation infrastructure improvements to provide facilities for non-auto travel modes to help balance all travel modes along the North Harbor Drive corridor. The following transportation projects are proposed in Planning District 3:

- Widening and improving the existing waterfront promenade between Grape Street and Broadway
- Implementation of a Class I multi-use path along the southwest side of Harbor Drive between Pacific Highway and Market Street
- Implementation of a dedicated transit right-of-way along North Harbor Drive between the Airport (Harbor Island Drive) and Santa Fe Depot (Broadway) that would support enhanced bus or other fixed-guideway guidance.
- Closure of the eastern leg of the Market Street/Harbor Drive intersection
- Coordinate the proposed extension of Park Boulevard to Harbor Drive

Since the Class I multi-use path improvements and transit right-of-way would increase the multimodal transportation network and would promote non-auto use, it would help reduce auto trips and VMT. Therefore, the transportation improvements of these three improvements in Planning District 3 would not induce travel and the impacts to the transportation system would be *less than significant*.

However, the closure of the eastern leg of the Market Street/North Harbor Drive intersection and extension of Park Boulevard could potentially induce travel based on the following criteria:

Route Changes: Faster travel time may attract more drivers to a route with expanded capacity, which can increase or decrease vehicle travel depending on whether it shortens or lengthens trips.

Newly Generated Trips: Increasing travel speeds from added roadway capacity could induce additional vehicle trips, resulting in increased VMT.

Since some of the roadway network changes included in the PMPU for Planning District 3 would potentially induce travel and would therefore result in a *significant transported related impact*.

3.4 Planning District 4 – Working Waterfront

LAND USE

Table 3.8 summarizes the existing and future land uses within Planning District 4, as well as the associated growth.

Table 3.8: Planning District 4 - Working Waterfront - Land Use Growth

Land Use	Existing Quantity	PMPU Quantity	Net Growth
Marine Terminal Employees	850 Employees[1]	1,374 Employees	524 Employees[1]
Working Waterfront Employees	5,400 Employees[2]	5,400 Employees	0 Employees

Notes:
[1] Source: Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR
[2] Source: SANDAG Series 13 Model Data

As shown, the PMPU proposes to increase the number of Marine Terminal Employees within Planning District 4.

VMT

Employment VMT

Based on the evaluation criteria outlined in Table 2.1 and the land uses summarized in in Table 3.8, the employment in Planning District 4 uses VMT/Employee as an evaluation criterion for VMT impacts. To calculate the average VMT/Employee generated by Planning District 4, the PMPU land uses, described in Table 3.8, were incorporated into the SANDAG Series 13 Year 2050 Regional Model. The results of the Select Zone assignment for Planning District 4 are provided in Table 3.9. Model output results are presented in Appendix B.

Table 3.9: Planning District 4 - Working Waterfront
VMT Efficiency Metrics for Impact Analysis of Employment Uses

Land Use	Metric	Commercial Uses VMT/Employee (miles/person)
Marine Terminal	Base Year Regional Average	25.9
	Significant Impact Threshold[1]	22.0
	PMPU	17.2
	PMPU vs Significant Impact Threshold	4.8 miles under threshold (33.6% below Base Year Regional Average)
	2050 Regional Average	21.2
	Significant Impact Threshold	18.0
	PMPU	17.2
	PMPU vs Significant Impact Threshold	0.8 miles under threshold (18.9% below 2050 Regional Average)
Significant Impact?		No

Source: SANDAG Regional Transportation Model, July 2019

Note:
[1]San Diego Regional Average X 85% (See Section 2.3)

The PMPU's employment uses are anticipated to generate a VMT/Employee of 17.2 miles which is 0.8 miles under the significance threshold. Therefore, the increase in employment uses within Planning District 4 would have a *less than significant transportation related impact*.

Retail and Recreational VMT
Based on the land uses summarized in in Table 3.8, there are no planned growth for retail or recreational uses in Planning District 4, and therefore, conditions would remain the same as Existing Conditions and impacts to the transportation system would be *less than significant*.

Transportation Projects VMT
There are no planned transportation improvements in Planning District 4; therefore, the impacts associated with the transportation system would be less than significant.

3.5 Planning District 5 - National City Bayfront

This Planning District has been precluded from this analysis since a separate EIR effort is being prepared for the land use and transportation infrastructure changes proposed for this District. Transportation impacts associated with this effort will be included in the cumulative analysis.

3.6 Planning District 6 – Chula Vista Bayfront

The land use and transportation infrastructure changes proposed within this Planning District were previously analyzed in the *Chula Vista Bayfront Master Plan and Port Master Plan Amendment FEIR, April 2010*. Since the PMPU is consistent with the Chula Vista Bayfront Master Plan, no additional transportation analysis is required for this Planning District since the findings of the previous EIR are still relevant. Its impacts will be included in the cumulative analysis.

3.7 Planning District 7 – South Bay

This Planning District has been precluded from this analysis since a separate EIR effort is being prepared for the land use and transportation infrastructure changes proposed for this District. Transportation impacts associated with this effort will be included in the cumulative analysis.

3.8 Planning District 8 – Imperial Beach Oceanfront

LAND USE
Table 3.10 summarizes the existing and future land uses within Planning District 8, as well as the associated growth.

Table 3.10: Planning District 8 – Imperial Beach - Oceanfront Land Use Growth

Land Use	Existing Quantity	PMPU Quantity	Net Growth
Retail & Restaurant (sq ft)	2.0 KSF	19.2 KSF	17.2 KSF

Note:
KSF = thousand square feet

As shown, the existing retail and restaurant is planned to grow by 17,200 square feet in Planning District 8 with the implementation of the PMPU.

VMT

Employment VMT
Based on the evaluation criteria outlined in Table 2.1, there are no planned land uses in Planning District 8 that uses the VMT/Employee criterion; therefore, the employment VMT of the PMPU in Planning District 8 would be *less than significant*.

Retail and Recreation VMT
Based on the evaluation criteria outlined in Table 2.1 and the land uses summarized in in Table 3.10, the retail and restaurants in District 8 use the net change in the Total VMT (with and without the proposed retail uses) in District 8 as an evaluation criterion for VMT impacts. Table 3.11 presents the 2050 Total VMT without and with the PMPU.

Table 3.11: Planning District 8 – Imperial Beach Oceanfront
Total Regional VMT for Impact Analysis of Retail Uses

Land Use	2050 Total VMT		Net Growth	Significant Impact?
	PMPU Buildout with No New Retail and Recreational Uses	PMPU Buildout		
Retail & Restaurant	8,398	10,062	+1,664 (+20%)	Yes

As shown, the Total VMT in Planning District 8 is expected to increase by 1,664 miles with the implementation of the PMPU, which would exceed the applicable significance threshold for Retail uses. Therefore, impacts related to VMT for Retail uses *would be significant*.

Transportation Projects VMT
There are no planned transportation improvements in Planning District 8; therefore, the impacts associated with the transportation system would be less than significant.

3.9 Planning District 9 – Silver Strand South

LAND USE
Table 3.12 summarizes the existing and future land uses within the Planning District, as well as the associated growth.

Table 3.12: Planning District 9– Silver Strand South - Land Use Growth

Land Use	Existing Quantity	PMPU Quantity	Net Growth
Hotel w/ R&R (rooms)	440 Rooms	440 Rooms	0 Rooms
Retail (sq ft)	24.3 KSF	24.3 KSF	0.0 KSF
Recreational Boat Berthing	164 Slips	184 Slips	20 Slips

As shown in Table 3.12, the PMPU does not propose any additional landside development in PD9, but would allow for the development of up to 20 additional recreational boat slips.

VMT

Employment and Retail VMT
Based on the evaluation criteria outlined in Table 2.1, there are no planned land uses in Planning District 9 that uses the VMT/Employee criterion; therefore, the employment VMT of the PMPU in Planning District 9 would be *less than significant*.

Retail and Recreation VMT
As shown in Table 3.12, the proposed PMPU would allow for the development of up to 20 additional recreational boat slips. While the addition of recreational boat berthing slips would not affect employment based VMT, it would still generate additional vehicle trips as well as generate additional VMT from marina users. Because the threshold for recreational boat berthing uses is no net increase in VMT, any additional VMT generated would be considered a significant impact. Therefore, the addition of 20 recreational boat slips in PD9 would result in a significant VMT-related impact.

Transportation Projects VMT
There are no planned transportation improvements in District 9; therefore, the impacts associated with the transportation system would be less than significant.

3.10 Planning District 10 – Coronado Bayfront

LAND USE
Table 3.13 summarizes the existing and future land uses within Planning District 10, as well as the associated growth.

Table 3.13: Planning District 10 – Coronado Bayfront Land Use Growth

Land Use	Existing Quantity	PMPU Quantity	Net Growth
Hotel Only (rooms)	300 Rooms	300 Rooms	0 Rooms
Retail (sq ft)	1.6 KSF	1.6 KSF	0.0 KSF
Restaurant (sq ft)	17.3 KSF	17.3 KSF	0.0 KSF
Retail & Restaurant - Standalone (sq ft)	47.5 KSF	47.5 KSF	0.0 KSF
Recreational Boat Berthing	364 Slips	419 Slips	55 Slips

Note:
KSF = thousand square foot

As shown in Table 3.13, the PMPU does not propose any additional landside development in PD10, but would allow for the development of up to 55 additional recreational boat slips.

VMT

Employment and Retail VMT
According to the land uses summarized in Table 3.13, the PMPU does not propose any additional development in District 10, and therefore, conditions would remain the same as Existing Conditions and impacts to the transportation system would be *less than significant*.

Retail and Recreation VMT
As shown in Table 3.13, the proposed PMPU would allow for the development of up to 55 additional recreational boat slips. While the addition of recreational boat berthing slips would not affect employment based VMT, it would still generate additional vehicle trips as well as generate additional

VMT from marina users. Because the threshold for recreational boat berthing uses is no net increase in VMT, any additional VMT generated would be considered a significant impact. Therefore, the addition of 55 recreational boat slips in PD10 would result in *a significant VMT-related impact*.

Transportation Projects VMT
There are no planned transportation improvements in District 10; therefore, the impacts to the transportation system would be *less than significant*.

4.0 Significance of Impact and Mitigation

Table 4.1 summarizes the significant transportations related impacts identified within each of the Planning Districts.

Table 4.1: PMPU Transportation Impact Summary

District[1]	Employment VMT	Retail & Recreational VMT	Transportation Improvements VMT
1		✓	
2	✓	✓	✓
3		✓	✓
4			
5	N/A		
6	N/A		
7	N/A		
8		✓	
9		✓	
10		✓	

Note:
[1] Planning District 5, 6, and 7 were precluded in the analysis.

4.1 Mitigation Measures

As noted in Table 4.1, implementation of the PMPU would result in significant transportation related impacts within Planning Districts 1, 2, 3, 8, 9 and 10. The following impacts and proposed mitigation measures are described below.

MM-TRA-1: Establish a Transportation Impact Fee Program - Consistent with ECON Policy 1.2.6 of the PMPU, prior to approval of the first future development project allowed under the proposed PMPU, the District shall establish an impact fee program for the funding of transportation infrastructure improvements that would reduce VMT, including mobility hubs, pedestrian improvements, and other mobility-related infrastructure and amenities specified in the proposed PMPU. The impact fee program will identify needed improvements throughout the PMPU area consistent with the Baywide Development Standards included within the PMPU and include guidelines to determine the proportionate fair share contributions by public and private project proponents on a case-by-case basis and based on the project's contribution to VMT within the proposed PMPU area. These improvements may be implemented through a combination of private investments, public investments, and private-public partnerships based on a schedule established by the District to minimize and offset VMT-related impacts to the transportation system from future PMPU-related development. The fee program shall be in place prior to approval of the first future development project associated with the proposed PMPU.

MM-TRA-2: *Contribute Fair Share Impact Fees* - During project-specific environmental review for all future projects proposed consistent with the proposed PMPU, the project proponent(s) shall prepare project-specific studies to identify the appropriate fees that will constitute a fair share contribution based on the impacts of individual projects in accordance with the fee program established under MM-TRA-1. Once

the appropriate fees have been determined by the District, the project proponent shall pay its proportionate fair share contribution to the District prior to the issuance of a building permit. Payment into the fee program based upon pre-established formulas developed as part of MM-TRA-1 will serve as mitigation for project specific VMT-related impacts. Project proponents shall also contribute development impact fees to the applicable member cities that have jurisdiction over the issuance of building permits for future projects. This would include the City of San Diego (Municipal Code §142.0640), City of Imperial Beach (Municipal Code §15.48), and City of Coronado (Municipal Code §8.20). The project proponent shall pay the applicable development impact fee required by the local jurisdiction at the time required by the local jurisdiction.

MM-TRA-3: Implement a Transportation Demand Management Plan - Prior to the approval of future development projects proposed in PDs 2, 3 8, 9, or 10, the project proponent shall prepare and submit to the District for approval a Transportation Demand Management (TDM) Plan as listed in the most recent Regional Transportation Plan prepared by SANDAG. The TDM Plan shall include measures, such as ridesharing initiatives (e.g., carpooling), promoting alternative work schedules and telework, subsidizing employee use of public transit, and promoting bicycling, walking, and the use of public transit, to reduce VMT either to 15% below the regional average (for future employment VMT generating uses [e.g., hotels] in PD 2) or to no net increase in VMT (for future retail, restaurant, and recreational projects in PDs 2, 3, 8, 9, or 10). The project proponent shall implement the TDM Plan prior to and during project operations.

4.2 Level of Significance After Mitigation

In order to reduce potential impacts related to the increase of VMT/Employee, and Total VMT, as well as increased VMT induced by certain transportation infrastructure improvements in PDs 2 and 3, MM-TRA-1 requires the District to develop an impact fee program, consistent with PMPU ECON Policy 1.2.6, to fund transportation infrastructure improvements that would reduce VMT. MM-TRA-1 requires this fee program to be established prior to approval of the first future development project associated with the proposed PMPU. Once the impact fee program has been developed, project proponents would be required to make a proportionate fair share contribution to the District-implemented impact fee program to develop and expand VMT reducing infrastructure, including but not limited to the implementation of mobility hubs (MM-TRA-2). However, since the timing and exact location of infrastructure improvements have not been identified and the funding programs have not yet been implemented, it cannot be guaranteed that the necessary improvements will be implemented prior to the operation of any new development under the proposed PMPU.

The implementation of a TDM Plan (MM-TRA-3) would also provide incentives to use alternative modes of transportation instead of individual vehicles, which would reduce VMT induced by development projects and improvements to transportation infrastructure. However, it is not possible to quantify the effectiveness of the recommended mitigation measures because the location, timing, and design of new development allowed under the proposed PMPU is unknown at this time.

Table 4.2 summarizes the significance of the VMT impacts after implementation of the mitigation measures.

Table 4.2: Impact Significance After Mitigation

District[1]	Employment VMT	Retail & Recreational VMT	Transportation Improvements VMT
1	NI	SU	NI
2	SU	SU	SU
3	NI	SU	SU
4	NI	NI	NI
5	N/A		
6	N/A		
7	N/A		
8	NI	SU	NI
9	NI	SU	NI
10	NI	SU	NI

Notes:
[1] Planning District 5, 6, and 7 were precluded in the analysis.
NI = No Impact;
SU = Impact would remain significant and unavoidable because due to timing uncertainty of implementation.

5.0 Construction Impact Analysis

SB 743 was established to help California reduce GHG emissions associated with the transportation sector by 2030 and 2050. The goals of SB 743 in establishing VMT as the new criteria for determining transportation impacts include reducing GHG emissions and traffic-related air pollution, promoting the development of multimodal transportation systems, and providing clean, efficient access to destinations. The legislative intent of SB 743 focuses on VMT reductions through smart growth and planning, and OPR's Technical Advisory includes thresholds for residential, office, retail, and mixed-use land use projects, as well as transportation projects. Thus, the temporary generation of construction traffic was not an intended focus of SB 743 for the purposes of analyzing VMT under CEQA.

The possible construction of future developments associated with the proposed PMPU is analyzed qualitatively and future construction would result in construction-related jobs. These jobs would be temporary and intermittent throughout the Horizon Year of the proposed PMPU (i.e., 2050). The timing, location and scale of future construction are not yet known and will depend on market conditions and other factors throughout the 30-year planning period of the PMPU. However, the VMT generated from construction traffic, including trips related to employees and truck deliveries, is not expected to substantially increase VMT in the region because such trips already exist and would continue to exist with implementation of a certified PMPU. Construction-related VMT, with or without the proposed PMPU, are simply be reallocated to different construction projects throughout the region, depending on where construction occurs.

In 2020, the San Diego County labor market represented a labor force of 1,593,900 with an 8.0% unemployment rate, and construction and extraction jobs represented 4.3% of the total labor market for San Diego-Carlsbad, CA Metropolitan Statistical Area (US Bureau of Labor Statistics 2020). Given the size and geographic extent of the San Diego labor market, it is reasonable to conclude that construction workers would be drawn from the local labor market and would not require importation of outside skilled laborers. Thus, the VMT associated with construction would not be newly generated, but rather redistributed from other areas of the region as workers transition from one construction job to another. As such, construction-related VMT is redistribution of VMT that would otherwise be generated by other temporary construction sites throughout the region.

A future proponent for a site-specific development that is consistent with the PMPU, would be required to obtain a temporary encroachment and/or right-of-way permit from the appropriate jurisdiction(s) prior to commencing construction. In the City of San Diego, Municipal Code Section 129.0702 requires a Public Right-of-Way Permit for Traffic Control for all public improvement projects, construction projects, and other work which encroaches into the public right-of-way, including sidewalks, as well as an accompanying traffic control plan. Future development within PDs 1 through 4 would be subject to this requirement. For future development in PD8, the City of Imperial Beach requires a Temporary Encroachment Permit for any work performed in any public right-of-way of the city (Municipal Code Section 12.04.020). Lastly, future development in PDs 9 and 10 would be subject to City of Coronado Municipal Code Section 52.10, which requires a Right-of-Way permit for all work on public property, such as repairs to sidewalks, curbs and gutters, driveway aprons, parkways (the area between the sidewalk and the curb), etc.; or to place equipment in the public right-of-way, such as a crane placed in the street to transport materials to a second story. Section 52.10.060 includes specific requirements for traffic control around the work site. In some cases, the approval of these permits requires the preparation and implementation of a traffic control plan for the management of traffic during the period in which the construction activities encroach into the right-of-way. This would also include sidewalks or bike routes if any of these facilities are affected by the encroachment. Traffic control measures could include the use of flaggers or barriers to direct the flow of vehicular and non-motorized travel along blocked lanes, or signs to direct traffic to established detours along adjacent roadways in the area. The use of traffic control

measures may alter the routes vehicles travel but would not substantially affect the total trips or miles vehicles take, as it would not induce more travel or change the length of existing routes substantially. Nor would the use of traffic control measures as a result of an encroachment permit prevent the use of non-motorized transit options as they would be considered in the measures that are implemented. Compliance with these existing regulatory requirements would ensure that construction of future PMPU-related development would not result in an impact on transit or non-motorized travel pursuant to State CEQA Guidelines Section 15064.3. Therefore, construction-related VMT impacts *would be less than significant*.

6.0 Planning District 3 (Embarcadero) Options

The PMMPU contains three additional options within Planning District 3 in which the District's Board of Commissioners may elect to adopt in-lieu of the preferred option. Each of the three options are described separately below. The potential transportation related impact associated impacts associated with each option are also evaluated using the methodologies outlined in Section 2.0.

6.1 Option 1: Waterfront Destination Park

Under Option 1 the Commercial Recreation land uses within Planning District 3 are anticipated to increase from 93.6 acres under the PMPU to 95.1 acres. The Recreational Open Space land uses are also anticipated to increase from 52.8 acres under the PMPU to 58.8 acres. No other changes in land uses are assumed under Option 1.

Employment VMT

As noted above, the only land uses that are anticipated to change under Option 1, as compared to the PMPU land uses outlined in Table 3.5, are Commercial Recreation and Recreation Open Space. No employment based land uses are anticipated to change under this option. As such, the findings outlined in Table 3.6 will remain consistent with the land use assumptions in Option 1. It should be noted that all of Planning District 3 is located within a half mile of a major transit stop. As per CEQA Guideline Section 15064.3, subdivision (b)(1): "Projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact. Therefore, the transportation related impacts associated with the proposed employment land uses under Option 1 are considered to have *a less than significant transportation impact*.

Retail, Restaurant, and Recreational VMT

As noted previously, all of Planning District 3 is located within a half mile of a major transit stop. As per CEQA Guideline Section 15064.3, subdivision (b)(1): "Projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact. Therefore, the transportation related impacts associated with the proposed Retail, Restaurant and Recreational land uses under Option 1 are considered to have *a less than significant transportation impact*.

Transportation Projects VMT

As described in Section 3.3 the proposed PMPU includes transportation infrastructure improvements to provide facilities for non-auto travel modes to help balance all travel modes along the North Harbor Drive corridor. The transportation-related Planned Improvements that are proposed in PD3 include the reconfiguration of existing roadways for more efficient accommodation of all modes of travel, the extension of facilities for pedestrian, bicycle and vehicle use on A Street to North Harbor Drive, the closure of North Harbor Drive between G Street and Broadway, and the closure of Market Street between West Harbor Drive and Columbia Street.

Because the multi-use pedestrian and bicycle facilities and transit right-of-way improvements would provide additional multimodal transportation options and would promote alternatives to auto use, they would be expected to result in fewer auto trips and reduce VMT. Therefore, transportation improvements in PD3 would not induce travel, and the effect on the transportation system would be beneficial, helping to reduce transportation-related impacts.

However, the closure of Market Street between West Harbor Drive and Columbia Street and the extension of A Street to North Harbor Drive could potentially induce travel based on route changes and

newly generated trips, as described previously in Section 3.3. Because some of the roadway network changes included in the PMPU for PD3 would potentially induce travel, there would be a potentially significant impact.

6.2 Option 2: 205' Eastside Setback

Under Option 2 the Commercial Recreation land uses within Planning District 3 are anticipated to be reduced from 93.6 acres under the PMPU to 90.3 acres. The Recreational Open Space Land uses are anticipated to increase from 52.8 acres under the PMPU to 60.2 acres. No other changes in land uses are assumed under Option 2.

Employment VMT

As noted above, the only land uses that are anticipated to change, as compared to the PMPU, under Option 2 are Commercial Recreation and Recreation Open Space. No employment based land uses are anticipated to change under this option. As such, the findings outlined in Table 3.6 would remain consistent with the land use assumptions in Option 2. It should be noted that all of Planning District 3 is located within a half mile of a major transit stop. As per CEQA Guideline Section 15064.3, subdivision (b)(1): "Projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact. Therefore, the transportation related impacts associated with the proposed employment land uses under Option 2 are considered to have a *less than significant transportation impact*.

Retail, Restaurant, and Recreational VMT

As noted previously, all of Planning District 3 is located within a half mile of a major transit stop. As such, the findings outlined in Table 3.6 would remain consistent with the land use assumptions in Option 2. It should be noted that all of Planning District 3 is located within a half mile of a major transit stop. As per CEQA Guideline Section 15064.3, subdivision (b)(1): "Projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact. Therefore, the transportation related impacts associated with the proposed retail land uses under Option 2 are considered to have *a less than significant transportation impact*.

Transportation Projects VMT

As described in Section 3.3 the proposed PMPU includes transportation infrastructure improvements to provide facilities for non-auto travel modes to help balance all travel modes along the North Harbor Drive corridor. The transportation-related Planned Improvements that are proposed in PD3 include the reconfiguration of existing roadways for more efficient accommodation of all modes of travel, the extension of facilities for pedestrian, bicycle and vehicle use on A Street to North Harbor Drive, and the closure of Market Street between West Harbor Drive and Columbia Street.

Because the multi-use pedestrian and bicycle facilities and transit right-of-way improvements would provide additional multimodal transportation options and would promote alternatives to auto use, they would be expected to result in fewer auto trips and reduce VMT. Therefore, transportation improvements in PD3 would not induce travel, and the effect on the transportation system would be beneficial, helping to reduce transportation-related impacts.

However, the closure of Market Street between West Harbor Drive and Columbia Street and the extension of A Street to North Harbor Drive could potentially induce travel based on route changes and newly generated trips, as described in Section 33. Because some of the roadway network changes included in the PMPU for PD3 would potentially induce travel, there would be a potentially significant impact.

6.3 Option 3: 205' Westside Setback

Under Option 3 the Commercial Recreation land uses within Planning District 3 are anticipated to be reduced from 93.6 acres under the PMPU to 92.8 acres. The Recreational Open Space Land uses are anticipated to increase from 52.8 acres under the PMPU to 60.9 acres. No other changes in land uses are assumed under Option 3.

Employment VMT

As noted above, the only land uses anticipated to change, as compared to the PMPU, under Option 3 is Commercial Recreation and Recreation Open Space. No employment based land uses are anticipated to change under this option. As such, the findings outlined in Table 3.6 would remain consistent with the land use assumptions in Option 3. It should be noted that all of Planning District 3 is located within a half mile of a major transit stop. As such, the findings outlined in Table 3.6 would remain consistent with the land use assumptions in Option 2. It should be noted that all of Planning District 3 is located within a half mile of a major transit stop. As per CEQA Guideline Section 15064.3, subdivision (b)(1): "Projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact. Therefore, the transportation related impacts associated with the proposed employment land uses under Option 3: 205' Westside Setback are considered to have a less than significant transportation impact.

Retail, Restaurant, and Recreational VMT

As noted previously, all of Planning District 3 is located within a half mile of a major transit stop. As such, the findings outlined in Table 3.6 would remain consistent with the land use assumptions in Option 2. It should be noted that all of Planning District 3 is located within a half mile of a major transit stop. As per CEQA Guideline Section 15064.3, subdivision (b)(1): "Projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact. Therefore, the transportation related impacts associated with the proposed retail land uses under Option 3 are considered to have a less than significant transportation impact.

Transportation Projects VMT

As described in Chapter 3.3 the proposed PMPU includes transportation infrastructure improvements to provide facilities for non-auto travel modes to help balance all travel modes along the North Harbor Drive corridor. The transportation-related Planned Improvements that are proposed in PD3 include the reconfiguration of existing roadways for more efficient accommodation of all modes of travel, the extension of facilities for pedestrian, bicycle and vehicle use on A Street to North Harbor Drive, the realignment of Harbor Drive from Hawthorne Street to B Street, and the closure of Market Street between West Harbor Drive and Columbia Street.

Because the multi-use pedestrian and bicycle facilities and transit right-of-way improvements would provide additional multimodal transportation options and would promote alternatives to auto use, they would be expected to result in fewer auto trips and reduce VMT. Therefore, transportation improvements in PD3 would not induce travel, and the effect on the transportation system would be beneficial, helping to reduce transportation-related impacts.

However, the closure of Market Street between West Harbor Drive and Columbia Street and the extension of A Street to North Harbor Drive could potentially induce travel based on route changes and newly generated trips, as described in Section 3.3. Because some of the roadway network changes included in the PMPU for PD3 would potentially induce travel, there would be a potentially significant impact.

Appendix A
PMPU Land Use Overrides for SANDAG Model

mgra	lu_type_id	lu_code	amount
1	1	101	18
1	1	102	2
1	3	7609	0
2	1	101	34
2	1	102	13
2	3	7609	0
3	1	101	54
3	1	102	22
3	3	7606	0
3	3	7609	0
4	1	101	29
4	1	102	10
4	3	7609	0
5	1	101	28
5	3	7609	0
6	1	101	77
6	1	102	16
6	3	5011	4
6	3	6011	10
6	3	7609	0
19	1	102	36
19	3	1501	62.7
19	7	1501	92
19	6	5005	9.4
19	6	5007	27.3
19	6	5011	0.7
19	6	5012	2.2
20	1	102	41
20	3	1501	71.6
20	7	1501	105
20	6	5005	5.8
20	6	5007	16.9
20	6	5011	0.4
20	6	5012	1.3
20	6	6011	2.7
20	3	6101	0.2
20	6	6109	22.2
21	1	101	22
21	1	102	2
21	3	7609	0
22	1	101	8
23	1	101	39
23	1	102	3
23	3	7601	0.2
23	3	7603	0
23	3	7609	0

24	1	101	14
25	1	101	25
26	1	101	26
27	3	7601	0.1
27	3	7603	0
28	1	101	14
29	1	101	27
64	1	101	103
64	1	102	16
64	3	7609	0
65	1	101	32
65	1	102	12
65	3	6806	49
65	8	6806	434
65	3	7606	0
65	3	7609	0
66	1	101	25
66	1	102	10
66	3	7609	0
67	1	101	36
67	1	102	36
67	3	7609	0
68	1	101	37
68	1	102	3
68	3	7609	0
69	1	101	47
69	1	102	11
69	3	7609	0
70	1	101	20
95	3	7609	0
96	1	101	13
96	1	102	4
96	3	7609	0
193	3	6502	123
193	3	6510	121
193	3	7609	0
202	1	101	4
202	1	102	46
202	3	4115	0
202	3	6501	0
218	3	7609	0
219	1	102	800
219	3	5004	40
219	3	6502	2700
221	1	102	200
221	3	2106	300
221	3	4113	40

221	3	6007	650
221	3	6081	800
221	3	7214	50
232	1	101	61
232	1	102	24
232	3	7601	0
232	3	7609	0
233	1	101	24
233	1	102	29
233	3	7609	0
234	1	101	44
234	3	7609	0
237	1	101	42
237	1	102	3
237	3	7609	0
238	1	101	76
238	1	102	55
238	3	7609	0
239	1	101	91
239	1	102	33
239	3	7609	0
241	1	101	29
241	1	102	140
242	1	101	11
242	1	102	122
348	1	101	84
348	1	102	29
348	3	7601	0
348	3	7609	0
349	1	101	19
349	1	102	183
349	3	4113	11
349	3	5003	16
349	3	5011	19
349	3	6011	6
349	3	6102	1
350	1	101	19
350	1	102	157
350	3	5003	10
350	3	5011	10
351	1	101	6
351	1	102	122
351	3	5025	5
351	3	6509	4
352	1	101	14
352	1	102	145
352	3	5003	36

352	3	5007	1
352	3	5011	8
352	3	5012	24
352	3	5034	7
353	1	101	33
353	1	102	161
354	1	101	77
354	1	102	49
354	3	4114	0
354	3	5014	3
354	3	5035	12
355	1	101	20
355	1	102	226
355	3	5003	14
355	3	5014	2
355	3	6007	21
356	1	101	11
356	1	102	109
367	1	101	57
367	1	102	18
367	3	4114	0
367	3	6804	49
367	8	6804	370
367	3	7609	0
368	1	101	9
368	1	102	123
368	3	6804	51
368	8	6804	371
368	3	7609	0
370	1	101	71
372	1	101	26
372	1	102	116
372	3	4114	0
372	3	5007	9
372	3	6011	14
372	3	6021	35
372	3	6031	54
374	1	101	8
374	1	102	116
374	3	5007	14
377	1	101	13
377	1	102	27
377	3	5007	5
378	1	101	38
378	1	102	71
378	3	5007	8
378	3	5011	7

378	3	5014	6
378	3	6031	59
379	1	101	11
379	1	102	177
379	3	6011	19
380	1	101	3
380	1	102	84
380	3	5007	3
380	3	6102	9
381	1	101	31
381	1	102	53
381	3	5007	10
382	1	101	3
382	1	102	53
382	3	5007	8
566	1	101	77
566	1	102	8
566	3	4113	0
566	3	6102	9
566	3	7607	0
566	3	7609	0
566	3	9101	0
567	1	101	81
567	1	102	3
567	3	7609	0
568	1	101	56
568	1	102	3
569	1	101	84
569	1	102	6
570	1	101	34
570	1	102	82
570	3	7601	0
571	1	101	50
571	1	102	3
572	1	101	96
572	3	7609	0
572	3	9101	0
573	1	101	20
573	1	102	4
573	3	9101	0
574	1	101	112
574	1	102	10
575	1	101	70
575	3	7609	0
576	1	101	70
577	1	101	37
578	1	101	93

578	1	102	3
578	3	7609	0
579	1	101	58
579	3	7609	0
580	1	101	3
580	1	102	27
580	3	5007	18
580	3	7609	0
581	1	101	6
581	1	102	54
581	3	5007	43
582	1	101	66
582	1	102	90
583	1	101	110
583	1	102	3
584	1	101	82
584	1	102	7
585	1	101	48
586	1	102	31
586	3	5007	5
590	1	101	106
591	1	101	22
591	3	9101	0
592	1	101	71
593	1	101	23
594	3	5033	34
594	3	6041	60
594	3	6051	60
594	3	6102	11
594	3	6510	41
594	3	7609	0
595	3	6011	134
595	3	6021	14
595	3	6051	170
595	3	6802	89
595	8	6802	527
595	3	6809	8
595	8	6809	45
595	3	7609	0
596	1	101	145
596	3	7606	0
596	3	7607	0
596	3	7609	0
597	1	101	48
597	3	7609	0
597	3	9101	0
598	1	101	62

598	3	7606	0
598	3	7609	0
599	1	101	118
599	3	7609	0
599	3	9101	0
601	1	101	145
601	1	102	1
601	3	7609	0
601	3	9101	0
602	1	101	64
607	1	102	9
701	1	102	2000
701	6	5003	100
701	6	6002	500
701	3	6806	97
701	8	6806	1220
701	3	7601	0.9
2972	6	2101	160.6
2972	6	2103	101.1
2974	6	5009	123.3
2975	6	4115	53.7
2975	6	5009	18.3
2975	6	6003	56.4
2975	6	6005	126
2975	6	6021	6.4
2976	6	5009	116.6
2978	3	4113	0.7
2978	6	4119	4.5
2978	6	5009	13.9
2979	6	2103	4.3
2979	6	5009	35.5
2981	6	2103	113.5
2981	3	4113	0.7
2981	6	4115	121.2
2982	6	2103	130.7
2994	3	4101	8.3
2994	3	4119	6500
3018	6	6002	279.8
3018	6	6011	20.3
3018	6	6021	9.2
3018	6	6031	11.2
3018	6	6041	32.7
3018	6	6061	70
3018	6	6081	176
3019	6	2101	382.8
3019	6	2103	34.8
3022	1	102	270

3022	3	1501	49.8
3022	7	1501	73
3022	3	4113	0.1
3022	6	5007	11
3022	6	5009	3.3
3022	6	6011	34.1
3022	6	6021	9.3
3022	3	6510	44.4
3023	6	2105	242
3027	1	102	190
3027	6	5007	22.7
3029	6	2101	188.8
3029	6	2103	64.8
3031	1	102	184
3031	6	5007	22.1
3037	1	102	146
3037	6	5007	17.4
3037	3	5025	6
3039	1	102	72
3039	3	1501	9.5
3039	7	1501	14
3039	6	2105	22.5
3039	6	5007	9.4
3039	6	6003	497.5
3039	6	6511	238.5
3041	1	102	131
3041	6	5007	15.6
3041	3	5025	6
3045	1	102	258
3045	3	1501	33.4
3045	7	1501	49
3045	6	2105	18.8
3045	6	5007	33.6
3045	6	6511	81.6
3050	1	102	640
3050	6	2101	44
3050	6	5007	128.8
3050	6	6011	2.9
3050	6	6031	9.3
3050	6	6061	48.3
3050	6	6071	149.1
3052	3	7603	0
3053	3	7603	0
3054	3	6005	1586
3056	3	5007	24
3056	3	6011	26
3057	3	1501	18

3057	7	1501	187
3058	3	7204	1.7
3058	3	7601	0.8
3058	3	7603	0
3059	3	7204	0
3060	3	4114	0
3060	3	5005	59
3060	3	5007	18
3060	3	5012	38
3061	3	4111	9
3062	1	101	6
3062	3	7603	0
3064	3	5005	27
3065	3	7601	6.3
3067	1	102	13
3067	3	4111	0
3067	3	5005	10
3067	3	5007	5
3067	3	6031	60
3067	3	6041	102
3069	1	102	107
3069	6	5005	34.9
3069	6	5007	141.1
3069	6	5011	16.5
3069	6	6021	9.6
3069	3	6802	17
3069	8	6802	180
3071	1	102	237
3071	3	1501	2
3071	7	1501	3
3071	6	5004	3.2
3071	6	5005	35.7
3071	6	5007	78.5
3071	6	6002	15.1
3071	6	6011	0.6
3071	6	6021	1.2
3071	6	6102	18.8
3075	1	102	25
3075	3	1501	69.6
3075	7	1501	102
3075	6	6011	1.1
3075	6	6031	4.9
3076	6	6002	125.5
3076	6	6021	9.6
3076	6	6071	60.9
3077	1	102	27
3077	3	1501	75

3077	7	1501	110
3077	6	6002	14.4
3077	6	6011	0.4
3077	6	6031	1.6
3079	1	101	9
3079	1	102	4
3079	3	1501	52.5
3079	7	1501	77
3079	6	5007	8.8
3079	3	5025	6
3081	1	102	16
3081	6	6002	41.1
3081	6	6021	3.2
3081	6	6071	20
3082	1	101	6
3082	1	102	3
3082	3	1501	33.4
3082	7	1501	49
3082	6	5008	17.8
3082	3	5025	6
3082	6	6002	40.9
3082	6	6011	0.6
3082	6	6021	1.7
3082	6	6031	3
3082	6	6041	4.8
3082	6	6051	10
3082	6	6061	15.5
3083	6	5008	21.6
3083	3	5025	6
3083	6	6002	80
3083	6	6011	1.2
3083	6	6021	3.2
3083	6	6031	5.8
3083	6	6041	9.4
3083	6	6051	19.6
3083	6	6061	30.2
3086	1	101	6
3086	1	102	23
3086	6	5007	4.7
3086	6	6011	5
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3086	6	6031	5.7
3086	3	6802	30
3086	8	6802	310
3086	3	6806	23
3086	8	6806	260
3089	6	5007	63.1

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3091	6	2103	99.5
3093	3	2103	435
3095	1	102	192
3095	3	1409	11
3095	6	2103	9.2
3095	6	2105	78
3096	6	2103	105.6
3096	6	2104	2.9
3096	6	2105	98.8
3097	1	102	403
3097	3	1409	232.2
3097	6	5007	45.8
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3099	6	2103	55.5
3102	6	2103	103.4
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3102	6	5007	18.8
3102	6	5009	17.7
3104	3	4111	52.7
3111	6	6081	244.9
3111	6	6102	0.7
3111	6	6104	1181.2
3111	3	6806	1
3111	8	6806	10
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3112	6	5003	100.5
3112	6	5007	120.1
3112	3	5025	6
3113	6	6102	10.6
3113	3	6806	60
3113	8	6806	390
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3117	1	102	257
3117	6	5007	11.2
3117	6	6102	42.6
3117	3	6806	20
3117	8	6806	138
3125	6	5007	143.3
3125	6	6007	15.8
3125	3	6803	29
3125	8	6803	3336
3126	6	5004	43.8
3126	6	5007	26.5
3126	6	5008	32.9
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3126	6	6021	2
3126	3	6802	29
3126	8	6802	304
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3127	3	1501	6.1
3127	7	1501	9
3127	6	6007	65.4
3127	6	6021	6.8
3127	6	6109	57.4
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3129	1	102	128
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3133	3	1501	25.9
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3138	1	102	33
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3140	1	102	37
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3766	3	5029	9
3766	3	6041	111
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3767	3	5007	10
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3768	3	4114	0
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3771	1	102	22
3771	3	5007	13
3772	1	102	14
3772	3	1501	23
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3772	3	5007	16
3774	1	101	5
3774	1	102	147
3775	1	102	36
3775	3	5007	6
3776	1	101	3
3776	1	102	137
3776	3	9202	0
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3777	1	102	73
3777	3	5007	18
3778	1	102	108
3778	3	5007	22
3779	1	102	26
3779	3	1501	7
3779	7	1501	44
3779	3	5007	13
3781	1	102	172
3781	3	5007	22
3783	1	102	15
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3787	3	6102	7
3788	1	101	2
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4173	3	6801	2490
4173	8	6801	644
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4177	3	6502	0
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4178	8	6801	14685
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4183	8	6804	824
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4188	1	101	17
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4195	1	101	80
4195	3	7609	0
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4196	3	5012	24

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4198	1	101	8
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4199	3	7601	0
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4202	1	101	32
4203	3	6806	0
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4207	1	101	146
4207	1	102	8
4208	1	101	32
4209	1	101	27
4209	3	7609	0
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4210	3	7609	0
4211	1	101	110
4211	3	7603	0
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4212	1	101	110
4213	1	102	60
4214	1	101	154
4215	1	101	45
4216	1	101	129
4216	3	5008	5
4217	1	101	67
4218	1	101	106
4219	3	5004	192
4219	3	6112	16
4220	1	102	132
4220	3	5027	14
4220	3	6102	3
4220	3	6809	8
4220	8	6809	65
4220	3	9101	0
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4221	8	6805	1257
4221	3	7601	24
4222	1	101	6
4222	1	102	86
4223	3	6806	90
4223	8	6806	813
4224	3	7609	0
4225	1	101	127
4226	1	102	50
4227	1	101	49
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4306	3	7204	59
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4310	3	6801	535
4310	8	6801	45
4311	3	2106	526
4311	3	7609	0
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4658	3	2106	517
4659	3	2106	589
4660	3	2106	52
4660	3	7609	0
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4664	3	2106	555
4665	3	2106	330
4665	3	7609	0
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4667	3	2106	205
4668	3	2106	140
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4673	3	2106	252
4674	3	2106	682
4675	3	2106	298
4675	3	6081	1807
4675	3	7606	0
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4701	1	102	338
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4709	3	7215	150
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4710	3	6007	110
4711	3	6081	2267
4712	3	1502	369
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4714	3	7606	0
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4716	1	102	577
4716	3	1410	499

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4717	3	7601	8
4718	1	102	240
4718	3	6806	94
4718	8	6806	1000
4718	3	7607	0
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4720	1	102	213
4721	1	102	339
4721	3	7609	0
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4724	1	101	257
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4741	3	6071	509

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4742	3	6112	74
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4745	1	102	827
4746	1	101	164
4747	1	101	10
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4749	1	102	72
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4753	1	102	76
4754	1	102	52
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4755	3	5025	8
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4759	1	101	131
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22804	3	2104	1.1
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22823	3	4120	285
22828	3	7207	10
22828	3	7603	0
22828	3	1502	463
22828	6	5007	68
22828	7	1502	463
22830	6	6002	10
22828	3	1501	130
22828	7	1501	30
22830	3	2103	32
22832	3	2104	64.6
22833	3	2104	18
22834	3	4120	74
22835	3	7207	253
22835	3	4114	43.9
22835	3	7601	5.3
22835	3	7606	0
22835	3	9201	0
7991	3	7603	0
7991	3	9201	0.1
7991	3	7601	40.6
7992	3	7603	0
7992	3	9201	0.1
8011	3	7603	0
8011	3	2103	261.2
8011	3	7601	4.8
8015	3	7207	25.2
8017	3	2001	53.2
8017	3	7601	0.8
8019	3	2101	287
8021	3	1502	2850
8021	3	2001	1050
8021	6	5005	345
8021	7	1502	2850
8022	3	7601	1
8024	3	7207	42.3
8024	3	7601	0.3
8024	3	9201	0.3
8027	3	2001	0
8027	3	2103	475.6
8027	3	7601	0.9
8028	3	7603	0
8029	3	4113	10
8029	3	7603	0
8029	3	9201	0.1
8029	3	2103	985
22760	3	9201	1.6

22836	3	9201	0.1
22837	3	4120	13.8
22837	3	9201	0.4
7137	3	7603	1
7141	3	4114	3.8
7141	3	7603	0
7142	3	7603	0
7361	3	7603	0
7246	3	7604	0
7246	6	5007	19.2
7246	3	7605	0
7356	1	7207	9
7356	3	7601	17.1
7356	3	7605	0
7356	3	1502	440
7356	7	1502	440
7356	6	5007	24.3
7359	3	9201	0
7359	3	7207	2
7364	3	7603	0
7363	3	7207	42.6
7363	3	9201	20.5
8012	3	9201	25.2
7407	3	7205	22.1
7407	3	7207	0
7407	3	7204	80
7438	3	4113	0.7
7438	3	7606	0
7438	3	7607	0.7
7438	3	7210	2.1
7438	3	7601	2
7438	6	5005	47.5
7438	6	6002	23
7442	3	4113	0.2
18	1	101	9
18	1	102	28
18	6	6102	4.6
18	3	7601	4.666765565
3020	1	102	835
3020	6	2101	55.4
3020	6	2103	68.6
3020	6	6011	40.5
3020	6	6021	60.9
3020	6	6031	140.1
3021	1	102	190
3021	6	6031	20
3024	1	102	279

3024	6	2103	77.3
3024	6	6011	20.3
3024	6	6021	9.2
3024	6	6031	11.2
3024	6	6041	32.7
3024	6	6061	70
3024	6	6081	176
3025	1	102	850
3025	7	1501	180
3025	3	1501	180
3025	6	5007	126.1
3025	6	5010	1.7
3025	6	5030	4.5
3025	6	6011	4.9
3025	6	6021	10
3025	6	6031	28.7
3026	1	102	703
3026	7	1501	189
3026	3	1501	189
3026	6	5007	11
3026	6	6011	34.1
3026	6	6021	9.3
3026	6	6031	27
3026	3	6510	50.4
3028	1	102	360
3028	6	6061	70
3030	7	1501	347
3030	3	1501	347
3030	6	2105	145
3030	6	6011	2.3
3030	6	6021	25.7
3030	6	6031	13
3032	1	102	142
3032	6	6031	17.6
3032	6	6041	24.9
3033	1	102	523
3033	1	102	74
3033	3	4111	35.37454966
3033	6	5005	3.2
3033	6	5007	62.8
3033	6	5007	8.9
3033	6	6004	73.9
3033	6	6031	13.6
3034	1	102	77
3034	6	2101	64.4
3034	6	2103	119.8
3034	6	6011	16.1

3034	6	6021	6.9
3034	6	6031	11
3035	6	5007	20
3035	6	6021	8
3035	6	6041	53
3035	6	6051	40
3036	7	1501	100
3036	3	1501	100
3036	6	2101	33.1
3036	6	2103	31.9
3036	6	5007	6.9
3036	6	5035	9.1
3036	6	6041	25.3
3038	1	102	158
3038	7	1501	136
3038	3	1501	136
3038	6	5007	31.2
3040	6	5007	65
3042	1	102	479
3042	6	5007	57.1
3042	3	5025	8
3043	1	102	287
3043	6	5007	56.7
3044	6	5003	404.3
3044	6	5007	22
3044	6	5010	3.7
3044	6	5035	8.4
3044	6	6007	26.5
3044	6	6105	8
3046	1	102	84
3046	6	5003	101.7
3046	6	5007	115.7
3047	1	102	499
3047	6	5007	44.7
3047	6	6011	1.5
3047	6	6021	13.6
3047	6	6031	33.1
3047	6	6041	16.9
3048	1	102	389
3048	7	1501	73
3048	3	1501	73
3048	6	2105	30
3048	6	5007	50.8
3048	6	6511	339.1
3049	6	5007	125.6
3051	1	102	741
3051	6	2101	51

3051	6	5007	67.9
3051	6	6011	3.4
3051	6	6031	10.8
3051	6	6061	55.9
3051	6	6071	172.7
3055	1	102	380
3055	7	1501	314
3055	3	1501	314
3055	3	4113	1.573968435
3055	6	5007	11.3
3055	6	6005	244.6
3055	3	9101	0.868297729
3063	1	101	24
3063	1	102	30
3063	3	4114	11.44142882
3063	6	5005	29.4
3063	6	5007	29.2
3063	6	5012	9.5
3063	6	6011	5.2
3063	3	7204	2.537934246
3063	3	7601	2.986729962
3063	3	9101	0.496170131
3066	3	4114	32.41738165
3066	6	5007	2.2
3066	6	5011	2.8
3066	6	6007	1.9
3066	6	6102	17.8
3068	6	5005	58.7
3070	1	102	17
3070	3	4114	5.720714409
3070	6	5005	31.4
3070	6	5011	9.1
3072	1	102	48
3072	6	5005	10.9
3072	6	5007	2.5
3072	6	6007	2.5
3072	6	6011	5
3073	1	101	10
3073	1	102	85
3073	7	1501	223
3073	3	1501	223
3073	6	5005	26.1
3073	6	5011	1.8
3073	6	5012	6
3073	6	6011	4.5
3073	3	6101	0.385252958
3074	1	102	237

3074	6	5005	35.7
3074	6	5007	23.6
3074	6	6011	3.9
3074	6	6021	7.9
3074	6	6102	5.4
3078	1	101	22
3078	1	102	245
3078	6	5007	20.1
3078	6	6021	12.8
3078	6	6071	80.9
3080	1	102	70
3080	7	1501	290
3080	3	1501	290
3080	6	6011	3
3080	6	6031	12.7
3084	1	101	14
3084	1	102	6
3084	7	1501	125
3084	3	1501	125
3084	3	5025	8
3084	6	6011	2.7
3084	6	6021	6.9
3084	6	6031	12.5
3084	6	6041	20.3
3084	6	6051	42
3084	6	6061	64.8
3090	1	102	451
3090	6	6031	16.7
3092	6	2103	144
3092	6	5007	0.8
3094	1	102	3
3094	6	2103	12
3094	3	4113	0.874426909
3094	3	4114	11.44142882
3094	6	5007	0.5
3094	3	6701	4400
3098	1	102	415
3098	6	2103	45.6
3098	6	2104	7
3098	6	2105	238
3098	6	5007	23.4
3098	6	6011	3.8
3098	6	6021	25.8
3098	6	6041	24.9
3100	1	102	403
3100	6	1409	54.2
3100	6	5007	48

3101	1	102	209
3101	6	5007	11.7
3101	6	6051	85.5
3103	1	102	305
3103	6	2105	79.9
3103	6	5007	39.3
3110	7	1501	36
3110	3	1501	36
3110	6	5003	214.9
3110	6	5007	6.8
3110	3	5025	8
3115	1	102	968
3115	6	5007	27
3115	6	6081	255
3116	1	102	382
3116	6	5007	41.3
3116	3	5025	8
3116	6	6021	5.1
3116	6	6031	28.1
3130	1	101	231
3130	1	102	520
3131	1	102	447
3131	7	1501	86
3131	3	1501	86
3131	6	5007	82.1
3131	6	5016	14.4
3139	1	102	33
3139	7	1501	64
3139	3	1501	64
3139	6	5003	213.5
3139	6	5007	4.6
3139	6	5010	6.8
3139	3	6510	216
5870	6	2105	85
5870	3	9101	57.30765011
2977	7	1504	1000
2977	3	1504	1000
2977	6	5007	15
2980	3	4119	9.6
2652	3	4119	9
2652	6	5007	5.2
2653	3	4120	1.1
2653	6	5007	5.1
2653	3	7207	0.3
2653	3	7601	14.9
2654	6	5007	10.1
2654	3	7201	288

2655	3	7207	20.7
2655	6	5005	1.3
2655	6	2103	22
2656	6	5005	30.4
2656	3	7601	36
2658	3	1501	350
2658	7	1501	350
2658	6	7206	50
2658	6	5005	25
2658	6	7201	280
2658	6	6001	250
2658	3	7606	0
2662	6	7201	51
2662	6	7206	122
2662	3	1502	1486
2662	7	1502	1486
2662	3	1501	150
2662	7	1501	150
2662	6	5005	169
2663	6	7206	120
2663	6	5005	75
6778	3	7601	8.2
6778	6	5005	29
6778	3	1502	150
6778	7	1502	150
6789	3	7207	1

Appendix B
SANDAG SB-743 VMT Analysis Results

Vehicle Miles of Travel Report

Scenario ID **1156**

Port Master Plan Update - PMPU1 - District 2 - Harbor Island

VMT per Resident

		Scenario ID	Residents	Total Trips	Person Miles of Travel	Vehicle Miles of Travel	VMT per Resident
Regionwide		1156	4,243,618	15,168,868	88,739,376	61,033,942	14.4
Jurisdiction	SAN DIEGO	1156	1,917,354	6,880,317	35,596,371	23,598,863	12.3
CPA	Lindbergh Field	1156	3,466	11,887	33,347	26,595	7.7
Site	District 2 - Harbor Island	1156	36	119	524	407	**11.3**

VMT per Employee

		Scenario ID	Employees	Total Trips	Person Miles of Travel	Vehicle Miles of Travel	VMT per Employee
Regionwide		1156	1,797,656	5,778,893	44,533,639	38,068,205	21.2
Jurisdiction	SAN DIEGO	1156	950,209	2,898,736	21,586,988	18,628,173	19.6
CPA	Lindbergh Field	1156	16,452	45,447	341,425	300,758	18.3
Site	District 2 - Harbor Island	1156	6,877	19,111	160,075	139,502	**20.3**

Report Generated: 11/27/19

SANDAG

Vehicle Miles of Travel Report

Scenario ID **1156**

Port Master Plan Update - PMPU1 - District 3 - Centre City

VMT per Resident

		Scenario ID	Residents	Total Trips	Person Miles of Travel	Vehicle Miles of Travel	VMT per Resident
Regionwide		1156	4,243,618	15,168,868	88,739,376	61,033,942	14.4
Jurisdiction	SAN DIEGO	1156	1,917,354	6,880,317	35,596,371	23,598,863	12.3
CPA	Centre City	1156	61,607	203,692	590,815	364,845	5.9
Site	District 3 - Centre City	1156	-	-	-	-	**0.0**

VMT per Employee

		Scenario ID	Employees	Total Trips	Person Miles of Travel	Vehicle Miles of Travel	VMT per Employee
Regionwide		1156	1,797,656	5,778,893	44,533,639	38,068,205	21.2
Jurisdiction	SAN DIEGO	1156	950,209	2,898,736	21,586,988	18,628,173	19.6
CPA	Centre City	1156	90,460	188,646	1,350,991	1,162,995	12.9
Site	District 3 - Centre City	1156	11,685	28,527	203,679	176,990	**15.1**

Report Generated: 11/27/19

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Vehicle Miles of Travel Report

Scenario ID **1156**

Port Master Plan Update - PMPU1 - District 4 - Barrio Logan

VMT per Resident

		Scenario ID	Residents	Total Trips	Person Miles of Travel	Vehicle Miles of Travel	VMT per Resident
Regionwide		1156	4,243,618	15,168,868	88,739,376	61,033,942	14.4
Jurisdiction	SAN DIEGO	1156	1,917,354	6,880,317	35,596,371	23,598,863	12.3
CPA	Barrio Logan	1156	12,317	42,073	178,511	89,167	7.2
Site	District 4 - Barrio Logan	1156	-	-	-	-	**0.0**

VMT per Employee

		Scenario ID	Employees	Total Trips	Person Miles of Travel	Vehicle Miles of Travel	VMT per Employee
Regionwide		1156	1,797,656	5,778,893	44,533,639	38,068,205	21.2
Jurisdiction	SAN DIEGO	1156	950,209	2,898,736	21,586,988	18,628,173	19.6
CPA	Barrio Logan	1156	13,591	37,395	251,439	214,499	15.8
Site	District 4 - Barrio Logan	1156	6,429	18,288	126,003	110,430	**17.2**

Report Generated: 11/27/19

PMPU VMT Growth
By Planning District

PD#	Use	Net Growth	Units	Trip Rate	Net ADT from Base	Net Total ADT from Base	Ave Trip Length (Miles)	Net VMT from Base	PMPU Total VMT
PD 2	Hotel	4,000	Rooms	7	28,000	34,437	9.83	338,439	429,844
	Retial	69,426	SF	18	1,250				
	Resturant	69,426	SF	32	2,222				
	Stand alone Retail	115,441	SF	18	2,078				
	Slips	222	Slips	4	888				
PD 3	Hotel	2,863	Rooms	7	20,041	22,858	8.56	195,755	608,838
	Retial	50,445	SF	18	908				
	Resturant	50,445	SF	32	1,614				
	Stand alone Retail	16,373	SF	18	295				
PD 8	Regional	17,204	SF	40	688	688	8.62	5,933	10,062
PD 9	No Change					0	12.31	0	93,185
PD 10	No Change					0	9.11	0	182,249

Appendix E

Cultural (NAHC Correspondence)

Sacred Lands File & Native American Contacts List Request

NATIVE AMERICAN HERITAGE COMMISSION
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95501
(916) 373-3710
(916) 373-5471 – Fax
nahc@nahc.ca.gov

Information Below is Required for a Sacred Lands File Search

Project: Port of San Diego Master Plan

County: San Diego

USGS Quadrangle

Name: Point Loma, National City, Imperial Beach

Township: _____ Range: _____ Section(s): see below for full list

Company/Firm/Agency:

ICF

Contact Person: Karolina Chmiel

Street Address: 525 B St Suite 1700

City: San Diego Zip: 92101

Phone: (858) 444-3936 Extension: _____

Fax: _____

Email: karolina.chmiel@icf.com

Project Description:

ICF is updating the Port of San Diego's Master Plan which will serve as a blueprint to implement a 50-year vision that will address land use compatibility, public access, mobility, and preservation of environmental resources issues.
List of Townships/Ranges and Sections for the Project area include:
Township 16 S Range 3 West, Sections: 34
Township 17 South, Range 2 West, Sections: 18, 19, 30, 31, 32
Township 17 South Range 3 West, Sections: 3, 4, 5, 6, 7, 10, 11, 13, 14, 15, 22, 23
Township 18 South, Range 2 West, Sections: 5, 8, 9, 16, 18, 20, 21, 29

☑ Project Location Map is attached

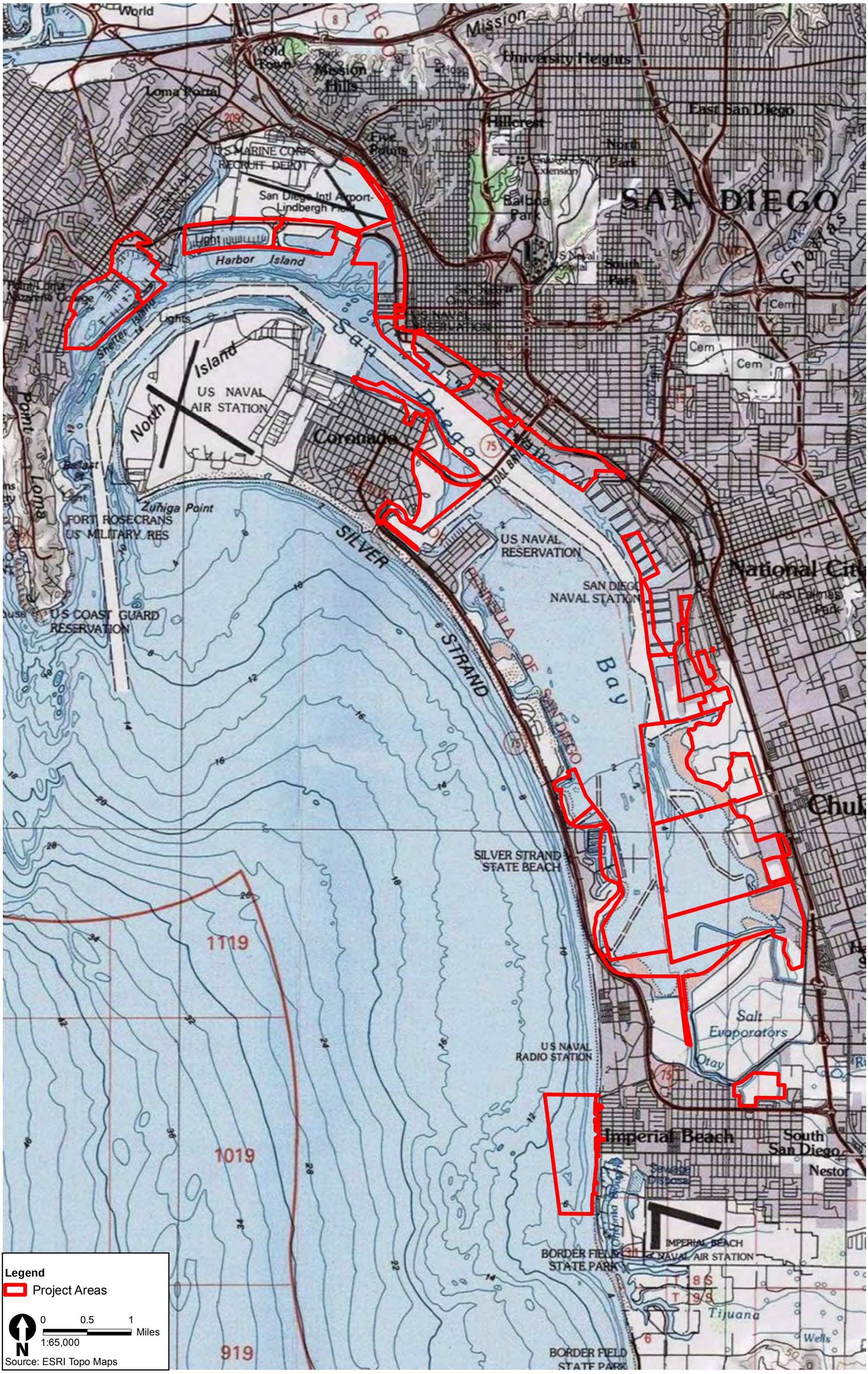

Figure 1
Project Location
Port of San Diego Master Plan

NATIVE AMERICAN HERITAGE COMMISSION
Environmental and Cultural Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
(916) 373-3710

April 27, 2017

Karolina Chmiel
ICF

Sent by E-mail: Karolina.chmiel@icf.com

RE: Proposed Port of San Diego Master Plan Project, City of San Diego; Point Loma, National City, and Imperial Beach USGS Quadrangles, San Diego County, California

Dear Ms. Chmiel:

A record search of the Native American Heritage Commission (NAHC) *Sacred Lands File* was completed for the area of potential project effect (APE) referenced above with negative results however the area is sensitive for cultural resources. Please note that the absence of specific site information in the *Sacred Lands File* does not indicate the absence of Native American cultural resources in any APE.

Attached is a list of tribes culturally affiliated to the project area. I suggest you contact all of the listed Tribes. If they cannot supply information, they might recommend others with specific knowledge. The list should provide a starting place to locate areas of potential adverse impact within the APE. By contacting all those on the list, your organization will be better able to respond to claims of failure to consult. If a response has not been received within two weeks of notification, the NAHC requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact via email: gayle.totton@nahc.ca.gov.

Sincerely,

Gayle Totton, M.A., PhD.
Associate Governmental Program Analyst

Native American Heritage Commission
Native American Contact List
San Diego County
4/27/2017

Barona Group of the Capitan Grande
Clifford LaChappa, Chairperson
1095 Barona Road — Kumeyaay
Lakeside, CA, 92040
Phone: (619) 443 - 6612
Fax: (619) 443-0681
cloyd@barona-nsn.gov

Iipay Nation of Santa Ysabel
Clint Linton, Director of Cultural Resources
P.O. Box 507 — Kumeyaay
Santa Ysabel, CA, 92070
Phone: (760) 803 - 5694
cjlinton73@aol.com

Iipay Nation of Santa Ysabel
Virgil Perez, Chairperson
P.O. Box 130 — Kumeyaay
Santa Ysabel, CA, 92070
Phone: (760)765-0845
Fax: (760)765-0320

Inaja Band of Mission Indians
Rebecca Osuna, Chairperson
2005 S. Escondido Blvd. — Kumeyaay
Escondido, CA, 92025
Phone: (760)737-7628
Fax: (760)747-8568

Kwaaymii Laguna Band of Mission Indians
Carmen Lucas,
P.O. Box 775 — Kumeyaay
Pine Valley, CA, 91962
Phone: (619)709-4207

Mesa Grande Band of Mission Indians
Virgil Oyos, Chairperson
P.O Box 270 — Kumeyaay
Santa Ysabel, CA, 92070
Phone: (760)782-3818
Fax: (760)782-9092
mesagrandeband@msn.com

San Pasqual Band of Mission Indians
Allen E. Lawson, Chairperson
P.O. Box 365 — Kumeyaay
Valley Center, CA, 92082
Phone: (760)749-3200
Fax: (760)749-3876
allenl@sanpasqualtribe.org

San Pasqual Band of Mission Indians
John Flores, Environmental Coordinator
P. O. Box 365 — Kumeyaay
Valley Center, CA, 92082
Phone: (760) 749 - 3200
Fax: (760) 749-3876
johnf@sanpasqualtribe.org

Sycuan Band of the Kumeyaay Nation
Lisa Haws, Cultural Resources Manager
1 Kwaaypaay Court — Kumeyaay
El Cajon, CA, 92019
Phone: (619) 312 - 1935

Sycuan Band of the Kumeyaay Nation
Cody J. Martinez, Chairperson
1 Kwaaypaay Court — Kumeyaay
El Cajon, CA, 92019
Phone: (619)445-2613
Fax: (619)445-1927
ssilva@sycuan-nsn.gov

Viejas Band of Kumeyaay Indians
Robert Welch, Chairperson
1 Viejas Grade Road — Kumeyaay
Alpine, CA, 91901
Phone: (619) 445 - 3810
Fax: (619) 445-5337
jhagen@viejas-nsn.gov

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Port of San Diego Master Plan, San Diego County.

Native American Heritage Commission
Native American Contact List
San Diego County
4/27/2017

Viejas Band of Kumeyaay Indians
Julie Hagen,
1 Viejas Grade Road
Alpine, CA, 91901
Phone: (619) 445 - 3810
Fax: (619) 445-5337
jhagen@viejas-nsn.gov

Kumeyaay

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Port of San Diego Master Plan, San Diego County.

May 10, 2017

San Pasqual Band of Mission Indians
John Flores, Environmental Coordinator
P.O. Box 365
Valley Center, CA 92082

Subject: Port of San Diego Master Plan, San Diego County

Dear Mr. Flores:

I'm writing to inform you that ICF is updating the Port of San Diego's Master Plan which will serve as a blueprint to implement a 50-year vision that will address land use compatibility, public access, mobility, and preservation of environmental resources. The project will take place on the *Point Loma, National City,* and *Imperial Beach, California*, U.S. Geological Survey (USGS) 7.5-minute topographic map quadrangles. The Project area is shown on the attached map.

The list of Townships/Ranges and Sections for the Project area include:
Township 16 S Range 3 West, Sections: 34
Township 17 South, Range 2 West, Sections: 18, 19, 30, 31, 32
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If you have any recommendations regarding the Project, please address them to me so that I can incorporate them into our report. As required by State law, all site data and other culturally

sensitive information will not be released to the general public and will be kept strictly confidential. I can be reached at 858-444-3936, or by email at Karolina.chmiel@icf.com.

Sincerely,

Karolina Chmiel, MA
Archaeologist

Encl. Figure 1 –Project Location

May 10, 2017

Viejas Band of Kumeyaay Indians
Julie Hagen,
1 Viejas Grade Road
Alpine, CA 91901

Subject: Port of San Diego Master Plan, San Diego County

Dear Ms. Hagen:

I'm writing to inform you that ICF is updating the Port of San Diego's Master Plan which will serve as a blueprint to implement a 50-year vision that will address land use compatibility, public access, mobility, and preservation of environmental resources. The project will take place on the *Point Loma, National City,* and *Imperial Beach, California*, U.S. Geological Survey (USGS) 7.5-minute topographic map quadrangles. The Project area is shown on the attached map.

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Sincerely,

Karolina Chmiel, MA
Archaeologist

Encl. Figure 1 –Project Location

May 10, 2017

Sycuan Band of the Kumeyaay Nation
Lisa Haws, Cultural Resources Manager
1 Kwaaypaay Court
El Cajon, CA 92019

Subject: Port of San Diego Master Plan, San Diego County

Dear Ms. Haws:

I'm writing to inform you that ICF is updating the Port of San Diego's Master Plan which will serve as a blueprint to implement a 50-year vision that will address land use compatibility, public access, mobility, and preservation of environmental resources. The project will take place on the *Point Loma, National City,* and *Imperial Beach, California*, U.S. Geological Survey (USGS) 7.5-minute topographic map quadrangles. The Project area is shown on the attached map.

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Sincerely,

Karolina Chmiel, MA
Archaeologist

Encl. Figure 1 –Project Location

May 10, 2017

Barona Group of the Capitan Grande
Clifford LaChappa, Chairperson
1095 Barona Road
Lakeside, CA 92040

Subject: Port of San Diego Master Plan, San Diego County

Dear Mr. LaChappa:

I'm writing to inform you that ICF is updating the Port of San Diego's Master Plan which will serve as a blueprint to implement a 50-year vision that will address land use compatibility, public access, mobility, and preservation of environmental resources. The project will take place on the *Point Loma, National City,* and *Imperial Beach, California*, U.S. Geological Survey (USGS) 7.5-minute topographic map quadrangles. The Project area is shown on the attached map.

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Sincerely,

Karolina Chmiel, MA
Archaeologist

Encl. Figure 1 –Project Location

May 10, 2017

San Pasqual Band of Mission Indians
Allen E. Lawson, Chairperson
P.O. Box 365
Valley Center, CA 92082

Subject: Port of San Diego Master Plan, San Diego County

Dear Mr. Lawson:

I'm writing to inform you that ICF is updating the Port of San Diego's Master Plan which will serve as a blueprint to implement a 50-year vision that will address land use compatibility, public access, mobility, and preservation of environmental resources. The project will take place on the *Point Loma, National City,* and *Imperial Beach, California*, U.S. Geological Survey (USGS) 7.5-minute topographic map quadrangles. The Project area is shown on the attached map.

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Sincerely,

Karolina Chmiel, MA
Archaeologist

Encl. Figure 1 –Project Location

May 10, 2017

Iipay Nation of Santa Ysabel
Clint Linton, Director of Cultural Resources
P.O. Box 507
Santa Ysabel, CA 92070

Subject: Port of San Diego Master Plan, San Diego County

Dear Mr. Linton:

I'm writing to inform you that ICF is updating the Port of San Diego's Master Plan which will serve as a blueprint to implement a 50-year vision that will address land use compatibility, public access, mobility, and preservation of environmental resources. The project will take place on the *Point Loma, National City,* and *Imperial Beach, California*, U.S. Geological Survey (USGS) 7.5-minute topographic map quadrangles. The Project area is shown on the attached map.

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Sincerely,

Karolina Chmiel, MA
Archaeologist

Encl. Figure 1 –Project Location

May 10, 2017

Kwaaymii Laguna Band of Mission Indians
Carmen Lucas
P.O. Box 775
Pine Valley, CA 91962

Subject: Port of San Diego Master Plan, San Diego County

Dear Ms. Lucas:

I'm writing to inform you that ICF is updating the Port of San Diego's Master Plan which will serve as a blueprint to implement a 50-year vision that will address land use compatibility, public access, mobility, and preservation of environmental resources. The project will take place on the *Point Loma, National City,* and *Imperial Beach, California*, U.S. Geological Survey (USGS) 7.5-minute topographic map quadrangles. The Project area is shown on the attached map.

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Sincerely,

Karolina Chmiel, MA
Archaeologist

Encl. Figure 1 –Project Location

May 10, 2017

Sycuan Band of the Kumeyaay Nation
Cody J. Martinez, Chairperson
1 Kwaaypaay Court
El Cajon, CA 92019

Subject: Port of San Diego Master Plan, San Diego County

Dear Mr. Martinez:

I'm writing to inform you that ICF is updating the Port of San Diego's Master Plan which will serve as a blueprint to implement a 50-year vision that will address land use compatibility, public access, mobility, and preservation of environmental resources. The project will take place on the *Point Loma, National City,* and *Imperial Beach, California*, U.S. Geological Survey (USGS) 7.5-minute topographic map quadrangles. The Project area is shown on the attached map.

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Sincerely,

Karolina Chmiel, MA
Archaeologist

Encl. Figure 1 –Project Location

May 10, 2017

Inaja Band of Mission Indians
Rebecca Osuna, Chairperson
2005 S. Escondido Blvd.
Escondido, CA 92025

Subject: Port of San Diego Master Plan, San Diego County

Dear Ms. Osuna:

I'm writing to inform you that ICF is updating the Port of San Diego's Master Plan which will serve as a blueprint to implement a 50-year vision that will address land use compatibility, public access, mobility, and preservation of environmental resources. The project will take place on the *Point Loma, National City,* and *Imperial Beach, California*, U.S. Geological Survey (USGS) 7.5-minute topographic map quadrangles. The Project area is shown on the attached map.

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Sincerely,

Karolina Chmiel, MA
Archaeologist

Encl. Figure 1 –Project Location

May 10, 2017

Mesa Grande Band of Mission Indians
Virgil Oyos, Chairperson
P.O. Box 270
Santa Ysabel, CA 92070

Subject: Port of San Diego Master Plan, San Diego County

Dear Mr. Oyos:

I'm writing to inform you that ICF is updating the Port of San Diego's Master Plan which will serve as a blueprint to implement a 50-year vision that will address land use compatibility, public access, mobility, and preservation of environmental resources. The project will take place on the *Point Loma, National City,* and *Imperial Beach, California*, U.S. Geological Survey (USGS) 7.5-minute topographic map quadrangles. The Project area is shown on the attached map.

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Karolina Chmiel, MA
Archaeologist

Encl. Figure 1 –Project Location

May 10, 2017

Iipay Nation of Santa Ysabel
Virgil Perez, Chairperson
P.O. Box 130
Santa Ysabel, CA 92070

Subject: Port of San Diego Master Plan, San Diego County

Dear Mr. Perez:

I'm writing to inform you that ICF is updating the Port of San Diego's Master Plan which will serve as a blueprint to implement a 50-year vision that will address land use compatibility, public access, mobility, and preservation of environmental resources. The project will take place on the *Point Loma, National City,* and *Imperial Beach, California*, U.S. Geological Survey (USGS) 7.5-minute topographic map quadrangles. The Project area is shown on the attached map.

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Archaeologist

Encl. Figure 1 –Project Location

Port Master Plan Update EIR - Native American Tribes Consultation Contact Log													
Contact	Title	Tribe	Date of Original Contact	Method of Contact	Address	2nd Contact	Method of Contact	Time	Status	3rd Contact	Email	Phone #	Comments Received Y/N
Clifford LaChappa	Chairperson	Barona Group of the Capitan Grande	5/10/2017	Letter (Consultation Letter)	1095 Barona Road Lakeside, CA 92040						cloyd@barona-nsn.gov	619-443-6612	
Carmen Lucas		Kwaaymii Laguna Band of Mission Indians	5/10/2017	Letter (Consultation Letter)	P.O. Box 775 Pine Valley, CA 91962							619-709-4207	
Virgil Perez	Chairperson	Iipay Nation of Sana Ysabel	5/10/2017	Letter (Consultation Letter)	P.O. Box 130 Santa Ysabel, CA 92070							760-765-0845	
Rebecca Osuna	Chairperson	Inaja Band of Mission Indians	5/10/2017	Letter (Consultation Letter)	2005 S. Escondido Blvd. Escondido, CA 92025							760-737-7628	
Virgil Oyos	Chairperson	Mesa Grande Band of Mission Indians	5/10/2017	Letter (Consultation Letter)	P.O. Box 270 Santa Ysabel, CA 92070						mesagrandeband@msn.com	760-782-3818	
Allen E. Lawson	Chairperson	San Pasqual Band of Mission Indians	5/10/2017	Letter (Consultation Letter)	P.O. Box 365 Valley Center, CA 92082						allenl@sanpasqualtribe.org	760-749-3200	
Cody J. Martinez	Chairperson	Sycuan Band of the Kumeyaay Nation	5/10/2017	Letter (Consultation Letter)	1 Kwaaypaay Court El Cajon, CA 92019						ssilva@sycuan-nsn.gov	619-445-2613	
Robert J. Welch	Chairperson	Viejas Band of Kumeyaay Indians	5/10/2017	Letter (Consultation Letter)	1 Viejas Grade Road Alpine, CA 91901						jhagen@viejas-nsn.gov	619-445-3810	
Julie Hagen		Viejas Band of Kumeyaay Indians	5/10/2017	Letter (Consultation Letter)	1 Viejas Grade Road Alpine, CA 91901						jhagen@viejas-nsn.gov	619-445-3810	
John Flores	Environmental Coordinator	San Pasqual Band of Mission Indians	5/10/2017	Letter (Consultation Letter)	P.O. Box 365 Valley Center, CA 92082						johnf@sanpasqualtribe.org	760-749-3200	
Lisa Haws	Cultural Resources Manager	Sycuan Band of the Kumeyaay Nation	5/10/2017	Letter (Consultation Letter)	1 Kwaaypaay Court El Cajon, CA 92019							619 312-1935	
Clint Linton	Director of Cultural Resources	Iipay Nation of Santa Ysabel	5/10/2017	Letter (Consultation Letter)	P.O. Box 507 Santa Ysabel, CA 92070						cjlinton73@aol.com	760-803-5694	

VIEJAS
TRIBAL GOVERNMENT

P.O Box 908
Alpine, CA 91903
#1 Viejas Grade Road
Alpine, CA 91901

Phone: 6194453810
Fax: 6194455337
viejas.com

May 16, 2017

Karolina Chmiel
Archaeologist
ICF
525 B Street, Suite 1700
San Diego, CA 92101

RE: Port of San Diego Master Plan Update Project

Dear Ms. Chmiel,

The Viejas Band of Kumeyaay Indians ("Viejas") has reviewed the proposed project and at this time we have determined that the project site is has cultural significance or ties to Viejas.

Viejas Band request that a Kumeyaay Cultural Monitor be on site for ground disturbing activities to inform us of any new developments such as inadvertent discovery of cultural artifacts, cremation sites, or human remains.

Please call me at 619-659-2312 or Ernest Pingleton at 619-659-2314, for scheduling or email, rteran@viejas-sns.gov or epingleton@Viejas-nsn.gov. Thank you.

Sincerely,

Ray Teran, Resource Management
VIEJAS BAND OF KUMEYAAY INDIANS

May 10, 2017

Viejas Band of Kumeyaay Indians
Robert J. Welch, Chairperson
1 Viejas Grade Road
Alpine, CA 91901

Subject: Port of San Diego Master Plan, San Diego County

Dear Mr. Welch:

I'm writing to inform you that ICF is updating the Port of San Diego's Master Plan which will serve as a blueprint to implement a 50-year vision that will address land use compatibility, public access, mobility, and preservation of environmental resources. The project will take place on the *Point Loma, National City,* and *Imperial Beach, California*, U.S. Geological Survey (USGS) 7.5-minute topographic map quadrangles. The Project area is shown on the attached map.

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Township 18 South, Range 2 West, Sections: 5, 8, 9, 16, 18, 20, 21, 30
Township 18 South, Range 3 West, Sections: 1, 12

A records search completed at the South Coastal Information Center (SCIC) in April 2017 indicated that ten (10) prehistoric archaeological sites have been previously recorded within the project areas. These sites include three pottery and lithic scatters, five shell middens, and two ground and flaked stone tool scatters. The Native American Heritage Commission completed a search of the Sacred Lands File which failed to indicate the presence of Native American Sacred Lands in the area. The NAHC also identify you as a person who may have concerns or knowledge of cultural resources in the project area. Any information you might be able to share about the Project Area would greatly enhance the study and would be most appreciated. No pedestrian survey is planned at this juncture as this is a program level study with no specific projects planned at this time. This consultation is part of ICF's due diligence and not part of AB52 consultation process.

If you have any recommendations regarding the Project, please address them to me so that I can incorporate them into our report. As required by State law, all site data and other culturally

sensitive information will not be released to the general public and will be kept strictly confidential. I can be reached at 858-444-3936, or by email at Karolina.chmiel@icf.com.

Sincerely,

Karolina Chmiel, MA
Archaeologist

Encl. Figure 1 –Project Location

Appendix F

Geology (EIR Level Geology and Soils Evaluation for the Integrated Planning Port Master Plan Update prepared by Ninyo & Moore)

Ninyo & Moore
Geotechnical and Environmental Sciences Consultants

GEOLOGY AND SOILS EVALUATION
INTEGRATED PLANNING PORT MASTER PLAN UPDATE
SAN DIEGO UNIFIED PORT DISTRICT
SAN DIEGO, CALIFORNIA

PREPARED FOR:
ICF
525 B Street, Suite 1700
San Diego, California 92101

PREPARED BY:
Ninyo & Moore
Geotechnical and Environmental Sciences Consultants
5710 Ruffin Road
San Diego, California 92123

December 11, 2020
Project No. 108331002

December 11, 2020
Project No. 108331002

Mr. Charlie Richmond
ICF
525 B Street, Suite 1700
San Diego, California 92101

Subject: Geology and Soils Evaluation
Integrated Planning Port Master Plan Update
San Diego Unified Port District
San Diego, California

Dear Mr. Richmond:

In accordance with your request and authorization, we have performed a geology and soils evaluation for the Integrated Planning Port Master Plan Update project for the San Diego Unified Port District in San Diego, California. The attached report presents our methodology, findings, opinions, and recommendations regarding the geology and soils conditions at the site.

We appreciate the opportunity to be of service on this project.

Respectfully submitted,
NINYO & MOORE

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Senior Project Geologist

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Distribution: (1) Addressee

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EXECUTIVE SUMMARY

The Port of San Diego's jurisdiction is separated into the following eight planning districts within the Cities of San Diego, Imperial Beach, and Coronado, California: Planning District 1 – Shelter Island, Planning District 2 – Harbor Island, Planning District 3 - Embarcadero, Planning District 4 – The Working Waterfront, Planning District 7 – South Bay, Planning District 8 – Imperial Beach Oceanfront, Planning District 9 – Silver Strand, Planning District 10 – Coronado Bayfront. The proposed Integrated Planning Port Master Plan Update would provide goals and policies, as well as land and water uses, consistent with the Port Act and Public Trust Doctrine, for the physical development and conservation of District Tidelands throughout the eight planning districts.

Geologic and geotechnical constraints evaluated for the project include:

- Surface and near-surface soils at the project are artificial fill, marine beach deposits, undivided marine deposits in offshore region, young alluvial flood plain deposits, old paralic deposits, and materials of the Cabrillo Formation. Geotechnical constraints related to soils at the project are:
    - *Fill Soils* - Fill soils placed without engineering supervision may be loosely or inadequately compacted, may contain oversize materials unsuitable for reuse in engineered fills, and may contain unsuitable organic or expansive materials and debris that may preclude their use in engineered fills. The extent and nature of existing fill soils and recommended mitigation measures should be evaluated by subsurface investigation and laboratory testing.
    - *Expansive soils* - Clayey fill soils, alluvium, marine deposits, or old paralic deposits may be moderately expansive, the extent of expansive soils and recommended mitigation measures should be evaluated by subsurface investigation and laboratory testing.
    - *Corrosive soils* - Due to the coastal location of the project area and laboratory testing performed during previous Ninyo & Moore projects in the area, consideration should be given to classifying the site as corrosive. The nature and extent of corrosive soils and recommended mitigation measures should be further evaluated by subsurface investigation and laboratory testing.
- The Rose Canyon fault zone is the closest major fault system to the project. Active fault segments associated with the Rose Canyon fault zone are mapped within Planning Districts 2, 4, and 8. The active, Alquist-Priolo fault zone is mapped within Planning Districts 2, 3, and 4. Planning Districts 3 and 4 are located within the mapped Downtown special fault zone. The City of San Diego requires a fault study for new developments within the Downtown special fault zone. Additionally, the potentially active Point Loma fault is mapped within Planning District 1. Geotechnical constraints related to faulting and seismic events at the project are:

- *Ground Shaking* - The project has a moderate potential for strong ground motions due to earthquakes on nearby active faults.

- *Ground Surface Rupture* – The project is located within the Alquist-Priolo Fault Zone and the Downtown Special Fault Zone. Accordingly, the potential for ground rupture due to faulting is possible.

- *Liquefaction* - The granular soils below the water table may be subject to liquefaction and dynamic settlement during a nearby seismic event. The extent of liquefiable earth materials underlying the site and recommended mitigation measures should be evaluated by subsurface investigation and laboratory testing.

- Based on the coastal location of the project and proximity to the San Diego Bay and Pacific Ocean, groundwater should be anticipated within the upper 15 feet for each of the planning districts, and should be anticipated at shallower depths as ground surface elevation decreases. Dewatering may be needed for excavations that extend into groundwater. Materials excavated from below the groundwater table will be in a wet condition and will need to be moisture-conditioned and/or mixed before reuse for structural backfill.

1. INTRODUCTION

In accordance with your request, Ninyo & Moore has completed a geology and soils evaluation for the proposed Integrated Planning Port Master Plan Update (PMPU) project (the project), located in San Diego, California (Figure 1). The San Diego Unified Port District (SDUPD or District) property is separated into eight planning districts (PDs) within the cites of Coronado, Imperial Beach, and San Diego, and extends from Shelter Island in the north to the Imperial Beach Oceanfront in the south (Figure 2). The District's planning areas cover approximately 2,403 acres of land and 3,535 acres of water. The existing Port Master Plan (PMP) was prepared in 1980.

Our evaluation is based on published and non-published reports, aerial photographs, in-house data, and the assessment of the potential geologic hazards in the project area. The purpose of this survey was to estimate the potential for existing environmental impacts to the area from geologic or soils conditions on or in proximity to the project, and to discuss measures that can be implemented to reduce or mitigate the potential impacts with respect to the proposed project.

2. SCOPE OF SERVICES

Ninyo & Moore's scope of services for this geology and soils evaluation included the activities listed below:

- Review of readily available regional, local, and site-specific geologic and geotechnical reports.
- Review of readily available background information including topographic, soils, mineral resources, geologic, and seismic and geologic hazard maps, and stereoscopic and historic aerial photographs.
- Compilation and analysis of the data obtained from our background reviews.
- Preparation of this report documenting findings and providing opinions and recommendations regarding possible geologic and soil impacts at the site. The findings were evaluated with respect to questions A through H listed in Section 6, "Geology and Soils" within Appendix G, "Environmental Checklist Form" of the "Guidelines for Implementation of the California Environmental Quality Act (CEQA)."

3. REGULATORY FRAMEWORK

Geologic resources and geotechnical hazards within the proposed project area are governed by the City of San Diego. The City's Building Division plans contain conservation and safety elements for the protection of geologic features and avoidance of geologic hazards. The procedures for construction related earthwork and excavation are established by these local grading ordinances developed by the City of San Diego Engineering Department. The site is also governed by the regulations of the California Code of Regulations (CCR), 2019 California Building Code (CBC).

The CBC is promulgated under CCR, Title 24, Parts 1 through 12, also known as the California Building Standards Code, and is administered by the California Building Standards Commission (CBSC). The CBSC is responsible for administering California's building codes.

4. PROJECT AND SITE DESCRIPTION

The proposed project involves a comprehensive update to the existing PMP to provide goals and policies, as well as land and water uses, consistent with the Port Act and Public Trust Doctrine, for the physical development and conservation of District Tidelands. The PMPU will implement the 30-year planning vision by addressing allowable land and water uses, coastal access, mobility, economic development, safety, and natural resources, among other topics.

The Port of San Diego property generally encompasses the San Diego Bay coastline in San Diego, California (Figure 1). The property has approximate land area of 2,500 acres and a water area of 3,400 acres. The property is separated into eight districts that extend from Shelter Island in the north to the Imperial Beach Oceanfront in the south (Figure 2). Descriptions of each planning district are presented below.

Previous EIR reports within the project were reviewed as part of our background review. In 2001, P&D Environmental Consultants prepared an EIR for the South Embarcadero (P&D, 2001). In 2016, ICF prepared an EIR for the Tenth Avenue Marine Terminal Redevelopment Plan (ICF, 2016). The Tenth Avenue Marine Terminal is within Planning District 4 – Working Waterfront. Several previous geotechnical evaluations have been performed at the site by Ninyo & Moore and are listed in the References section of this report.

4.1. Planning District 1 - Shelter Island

Shelter Island is located in the City of San Diego at the north end of San Diego Bay with an approximate land area of 121.2 acres and a water area of 348.3 acres (Figure 3). The district is generally bounded by Nimitz Boulevard to the north, the San Diego Bay to the east and south, and San Antonio Avenue to the west. The district is currently occupied by several hotels, restaurants, harbor police, marinas, and fishing and recreational areas. Shelter Island is a man-made peninsula created in 1934 from harbor dredging. Elevations across Shelter Island range from sea level at the coastal portions of the district to approximately 15 feet above mean sea level (MSL) near the center of the island and in areas farther from the coast.

4.2. Planning District 2 – Harbor Island

Harbor Island is located in the City of San Diego at the north end of San Diego Bay with an approximate land area of 831.5 acres and a water area of 204.6 acres (Figure 4). The district is generally bounded by the perimeter of the airport property to the north, Pacific Highway to the east, Harbor Island Drive to the south, and McCain Road to the west. The district is currently occupied by the San Diego International Airport, hotels, restaurants, harbor police, and park areas. Harbor Island is a man-made peninsula created in 1961 from harbor dredging. Elevations across Harbor Island range from sea level at the coastal portions of the district to approximately 15 feet above MSL near the center of the island and in areas farther from the coast. Elevations at the San Diego International Airport range from approximately 15 to 40 feet above MSL.

4.3. Planning District 3 – Embarcadero

The Embarcadero is located in the City of San Diego at the northeast end of San Diego Bay with an approximate land area of 256.0 acres and a water area of 226.2 acres (Figure 5). The district is generally bounded by Laurel Street to the north, Pacific Highway to the east, the Tenth Avenue Marine Terminal to the south, and the San Diego Bay to the west. The district is currently occupied by the convention center, marine terminals, hotels, restaurants, marinas, and fishing and recreational areas. Embarcadero Marina Park North and South are man-

made peninsulas created between 1975 and 1980 from harbor dredging. Elevations across the Embarcadero district range from sea level at the coastal portions of the district to approximately 15 feet above MSL in areas farther from the coast.

4.4. Planning District 4 – Working Waterfront

The Working Waterfront is located in the City of San Diego on the east side of San Diego Bay with an approximate land area of 253.1 acres and a water area of 114.9 acres (Figure 6). The district is generally bounded by the Embarcadero to the north, Harbor Drive and Crosby Street to the east, the Chollas Creek Channel to the south, and the San Diego Bay to the west. The district is currently a marine industrial area developed with various buildings and warehouses, railroad tracks, and piers for deep water berthing. Elevations across the Working Waterfront range from sea level at the coastal portions of the district to approximately 15 feet above MSL in areas farther from the coast.

4.5. Planning District 7 – South Bay

The South Bay is located in the City of San Diego at the southerly end of San Diego Bay with an approximate land area of 110.4 acres and a water area of 196.7 acres (Figure 9). The district consists of two separate areas, the southernmost land area of the San Diego Bay and a land area located between the Bayshore Bikeway and Palm Avenue. The district is currently occupied by open water, wetlands, estuaries, and salt ponds. Elevations across the South Bay range from sea level at the coastal portions of the district to approximately 12 feet above MSL in areas farther from the coast.

4.6. Planning District 8 – Imperial Beach Oceanfront

The Imperial Beach Oceanfront is located in the western portion of the City of Imperial Beach along the Pacific Ocean with an approximate land area of 5.1 acres and a water area of 402.0 acres (Figure 10). The district is generally bounded by Carnation Avenue to the north, and the Pacific Ocean to the south and west, and Seacoast Drive to the east. The district is currently occupied by parks, a public fishing pier, and recreational areas. Elevations

across the South Bay Salt Lands range from sea level at the coastal portions of the district to approximately 15 feet above MSL in areas farther from the coast.

4.7. Planning District 9 – Silver Strand

The Silver Strand is located in the City of Coronado in the southwest corner of San Diego Bay with an approximate land area of 39.5 acres and a water area of 195.9 acres (Figure 11). The district is generally bounded by Crown Cove to the north, the San Diego Bay to the east, Silver Strand Boulevard to the south, and the Coronado Cays residential marina development to the west. The district is currently occupied by the Coronado Cays residential marina development and undeveloped tidelands. The Silver Strand contains man-made peninsulas created between 1966 and 1972 from harbor dredging. Elevations across the Silver Strand range from sea level at the coastal portions of the district to approximately 15 feet above MSL in areas farther from the coast.

4.8. Planning District 10 – Coronado Bayfront

The Coronado Bayfront is located in the City of Coronado on the west side of San Diego Bay with an approximate land area of 187.4 acres and a water area of 219.4 acres (Figure 12). The district is generally bounded by San Diego Bay to the north and east, the Glorietta Bay Promenade Park to the south, and Glorietta Boulevard to the west. The district is currently occupied by hotels, restaurants, retail buildings, sewer pump station, marina, yacht club, golf course, fishing pier, and parks. Elevations across the Coronado Bayfront range from sea level at the coastal portions of the district to approximately 20 feet above MSL in areas farther from the coast.

5. GEOLOGY AND GEOLOGIC HAZARDS

The following sections present our findings relative to regional and site geology, geologic hazards (e.g., landslides or expansive soils), groundwater, faulting and seismicity, and agricultural soils.

5.1. Regional Geologic Setting

The planning area is situated in the coastal foothill section of the Peninsular Ranges Geomorphic Province. The province encompasses an area that extends approximately 900 miles from the Transverse Ranges and the Los Angeles Basin south to the southern tip of Baja California (Norris and Webb, 1990; Harden, 1998). The province varies in width from approximately 30 to 100 miles. In general, the province consists of rugged mountains underlain by Jurassic metavolcanic and metasedimentary rocks, and Cretaceous igneous rocks of the southern California batholith.

The Peninsular Ranges Province is traversed by a group of sub-parallel faults and fault zones trending roughly northwest (Jennings, 2010). Several of these faults are considered active. The Rose Canyon, Elsinore, San Jacinto, and San Andreas faults are active fault systems located northeast of the project area and the Coronado Bank, San Diego Trough, and San Clemente faults are active faults located west of the planning area. Major tectonic activity associated with these and other faults within the regional tectonic framework consists primarily of right-lateral, strike-slip movement. Specifics of faulting are discussed in following sections of this report.

5.2. Site Geology

Recently published geologic maps for this area include the San Diego 30’ x 60’ Quadrangle (Kennedy and Tan, 2008). As shown on Figures 13 through 22, geologic mapping indicates that the near-surface geology at the planning area includes artificial fill, marine beach deposits, undivided marine deposits in offshore region, young alluvial flood plain deposits, old paralic deposits, and materials of the Cabrillo Formation (Kennedy and Tan, 2008). Descriptions of the geologic units underlying each of the planning districts are presented below.

5.2.1. Planning District 1 - Shelter Island

Geologic mapping as well as review of other background materials indicates that the near-surface geology at Planning District 1 includes artificial fill, marine beach deposits, undivided marine deposits in offshore region, old paralic deposits, and materials of the Cabrillo Formation (Kennedy and Tan, 2008). Descriptions of the geologic units underlying Planning District 1 are presented below and the geologic map is presented on Figure 13.

- Qaf: Artificial fill (late Holocene) may range in depth from a few feet to on the order of 20 feet in depth. Fills are anticipated to have been derived from the on-site material and generally consist of silty sand, clayey sand, and sandy clay.
- Qmb: Marine beach deposits (late Holocene) generally consist of loose to medium dense sand and silt.
- Qmo: Undivided marine deposits in offshore region (late Holocene) generally consist of loose to medium dense sand and silt deposited below the water table.
- Qop: Old paralic deposits (late to middle Pleistocene) generally consist of stiff to hard, silt and clay, and medium dense to very dense clay, silt, and sand.
- Kcs: Cabrillo Formation, sandstone member (Upper Cretaceous) generally consist of weakly to strongly cemented, interbedded sandstone, siltstone, and gravel and cobble conglomerate.

5.2.2. Planning District 2 - Harbor Island

Geologic mapping as well as review of other background materials indicates that the near-surface geology at Planning District 2 includes artificial fill, marine beach deposits, and undivided marine deposits in offshore region. The geologic units underlying Planning District 2 are presented below and the geologic map is presented on Figure 14.

- Qaf: Artificial fill
- Qmb: Marine beach deposits
- Qmo: Undivided marine deposits

5.2.3. Planning District 3 – Embarcadero

Geologic mapping as well as review of other background materials indicates that the near-surface geology at Planning District 3 includes artificial fill, marine beach deposits, undivided marine deposits in offshore region, and old paralic deposits. The geologic units underlying Planning District 3 are presented below and the geologic map is presented on Figure 15.

- Qaf: Artificial fill
- Qmb: Marine beach deposits
- Qmo: Undivided marine deposits
- Qop: Old paralic deposits

5.2.4. Planning District 4 – Working Waterfront

Geologic mapping as well as review of other background materials indicates that the near-surface geology at Planning District 4 includes artificial fill, undivided marine deposits in offshore region, and old paralic deposits. The geologic units underlying Planning District 4 are presented below and the geologic map is presented on Figure 16.

- Qaf: Artificial fill.
- Qmo: Undivided marine deposits
- Qop: Old paralic deposits

5.2.5. Planning District 7 – South Bay

Geologic mapping as well as review of other background materials indicates that the near-surface geology at Planning District 7 includes artificial fill, marine beach deposits, undivided marine deposits in offshore region, young alluvial flood plain deposits, and old paralic deposits. The geologic units underlying Planning District 7 are presented below and the geologic map is presented on Figure 19.

- Qaf: Artificial fill
- Qmb: Marine beach deposits
- Qmo: Undivided marine deposits
- Qya: Young alluvial flood plain deposits
- Qop: Old paralic deposits

5.2.6. Planning District 8 – Imperial Beach Oceanfront

Geologic mapping as well as review of other background materials indicates that the near-surface geology at Planning District 8 includes marine beach deposits, undivided marine deposits in offshore region, young alluvial flood plain deposits, and old paralic deposits. The geologic units underlying Planning District 8 are presented below and the geologic map is presented on Figure 20.

- Qmb: Marine beach deposits
- Qmo: Undivided marine deposits
- Qya: Young alluvial flood plain deposits
- Qop: Old paralic deposits

5.2.7. Planning District 9 – Silver Strand

Geologic mapping as well as review of other background materials indicates that the near-surface geology at Planning District 9 includes artificial fill, marine beach deposits, undivided marine deposits in offshore region, young alluvial flood plain deposits, and old paralic deposits. The geologic units underlying Planning District 9 are presented below and the geologic map is presented on Figure 21.

- Qaf: Artificial fill
- Qmb: Marine beach deposits
- Qmo: Undivided marine deposits
- Qya: Young alluvial flood plain deposits
- Qop: Old paralic deposits

5.2.8. Planning District 10 – Coronado Bayfront

Geologic mapping as well as review of other background materials indicates that the near-surface geology at Planning District 10 includes artificial fill, marine beach deposits, undivided marine deposits in offshore region, and old paralic deposits. The geologic units underlying Planning District 10 are presented below and the geologic map is presented on Figure 22.

- Qaf: Artificial fill
- Qmb: Marine beach deposits

- Qmo: Undivided marine deposits
- Qop: Old paralic deposits

5.3. Groundwater

Based on the coastal location of the project, typical ground surface elevations between approximately 15 to 25 feet MSL, and close proximity to the San Diego Bay and Pacific Ocean, groundwater should generally be anticipated within the upper 15 feet for each of the planning districts, and should be anticipated at shallower depths as ground surface elevation decreases. Generally, groundwater depth can be expected to increase with increases in both ground surface elevation and lateral distance from bodies of water. Fluctuations in the groundwater level and perched conditions may occur due to variations in ground surface topography, subsurface geologic conditions and structure, rainfall, irrigation, tidal fluctuations, and other factors.

According to the Water Board Basin Plan, the project is located within the Pueblo San Diego, Sweetwater, and Otay Hydrologic Units. Existing and potential beneficial uses of groundwater within these hydrologic units may include municipal and domestic supply (MUN), agricultural supply (AGR), and industrial service supply (IND). Beneficial uses of groundwater within the hydrologic units and their subareas are discussed in the following sections.

5.3.1. Pueblo San Diego Hydrologic Unit – Beneficial Uses of Groundwater

The Pueblo San Diego Hydrologic Unit consists of three subareas including Point Loma and San Diego Mesa. The Point Loma and San Diego Mesa subareas are exempt from beneficial uses of groundwater.

5.3.2. Sweetwater Hydrologic Unit – Beneficial Uses of Groundwater

The Sweetwater Hydrologic Unit consists of three subareas including Lower Sweetwater, Middle Sweetwater, and Upper Sweetwater. Existing and potential beneficial uses of groundwater in these subareas generally include municipal and domestic supply, agricultural supply, and industrial service supply.

5.3.3. Otay Hydrologic Unit – Beneficial Uses of Groundwater

The Otay Hydrologic Unit consists of three subareas including Coronado, Otay Valley, and Dulzura. The Coronado subarea is exempt from beneficial uses of groundwater. Existing beneficial uses of groundwater for the Otay Valley and Dulzura subareas include municipal and domestic supply, agricultural supply, and industrial service supply.

5.4. Faulting and Seismicity

The Rose Canyon fault zone is the closest major fault system to the site. Strands of the Rose Canyon fault zone have been mapped within San Diego Bay, downtown San Diego, Harbor Island, and through the San Diego International Airport (Treiman, 1993, Figures 28 through 31). Portions of this fault zone have been designated by the State of California (California Geological Survey [CGS], 1991 and 2003) as being Earthquake Fault (Alquist-Priolo) Zones. The Rose Canyon fault zone is the onshore portion of a more extensive fault zone that includes the Offshore Zone of Deformation and the Newport-Inglewood fault to the north, and several possible extensions southward, both onshore and offshore. The Rose Canyon fault zone consists of predominantly right-lateral strike-slip faults that extend south-southeast through the San Diego metropolitan area. Various fault strands display strike-slip, normal, oblique, or reverse components of displacement. The fault zone extends offshore at La Jolla and continues north-northwest subparallel to the coastline. South of downtown San Diego, the fault zone splits into several splays that underlie San Diego Bay west of the project, Coronado, and the ocean floor south of Coronado (Treiman, 1993; Kennedy and Clarke, 1999). According to the California Geological Survey Earthquake Fault Zone Map for the Point Loma Quadrangle (2003), active fault segments associated with the Rose Canyon fault zone are mapped within Planning Districts 2, 4, and 10 (Figures 28 through 31).

As shown on Figure 23, a strand of the northwest to southeast-trending Point Loma Fault Zone has been mapped in the western portion of the project and an unnamed segment intersects Planning District 1 - Shelter Island. The Point Loma Fault Zone is mapped as being buried and is considered to be potentially active (i.e., a fault that exhibits evidence of ground displacement in the last 2,000,000 years). Based on inferred, buried nature of this fault and that the

fault is not mapped as crossing the site, we consider the seismic parameters associated with the closest known active fault, the Rose Canyon fault, more appropriate for design purposes.

The La Nacion Fault Zone has been mapped approximately 2 miles to the east of the project. The La Nacion Fault Zone consists of a series of parallel to subparallel, west dipping normal faults. As defined by the City of San Diego (2008), the La Nacion Fault Zone is considered "Potentially active, Inactive, Presumed Inactive, or Activity Unknown".

In general, hazards associated with seismic activity include ground surface rupture, strong ground motion, liquefaction, and tsunamis. These hazards are discussed in the following sections.

5.4.1. Ground Surface Rupture

The project is located within the Alquist-Priolo Fault Zone and the Downtown Special Fault Zone. Accordingly, the potential for ground rupture due to faulting at the project is considered possible.

5.4.2. Strong Ground Motion

Strong ground motion is the degree of shaking the ground experiences during an earthquake. Each of the Planning Districts are susceptible to strong ground motion. The 2016 CBC specifies that the potential for liquefaction and soil strength loss be evaluated, where applicable, for the Maximum Considered Earthquake Geometric Mean (MCE_G) peak ground acceleration with adjustment for site class effects in accordance with the American Society of Civil Engineers (ASCE) 7-10 Standard. The MCE_G peak ground acceleration is based on the geometric mean peak ground acceleration with a 2 percent probability of exceedance in 50 years. The MCE_G peak ground acceleration with adjustment for site class effects (PGA_M) calculated using the USGS (2017) seismic design tool, the mapped MCE_G peak ground acceleration, and the site coefficient (F_{PGA}) for Site Class D for each of the Planning Districts are presented in Table 1 below.

Table 1 – Peak Ground Acceleration

Planning District	PGA_M	MCE_G	MCE_G[1]	F_{PGA}[2]
Planning District 1 – Shelter Island	0.48	0.51	0.51	1.000
Planning District 2 – Harbor Island	0.50	0.56	0.56	1.000
Planning District 3 - Embarcadero	0.49	0.55	0.55	1.000
Planning District 4 – Working Waterfront	0.50	0.56	0.56	1.000
Planning District 7 – South Bay	0.45	0.45	0.47	1.053
Planning District 8 – Imperial Beach Oceanfront	0.48	0.52	0.52	1.000
Planning District 9 – Silver Strand	0.46	0.45	0.48	1.046
Planning District 10 – Coronado Bayfront	0.49	0.53	0.53	1.000

Notes:
[1] – With adjustment
[2] – For Site Class D

5.4.3. Liquefaction and Seismically Induced Settlement

Liquefaction is the phenomenon in which loosely deposited, saturated granular soils (located below the water table) with clay contents (particles less than 0.005 mm) of less than 15 percent, liquid limit of less than 35 percent, and natural moisture content greater than 90 percent of the liquid limit undergo rapid loss of shear strength due to development of excess pore pressure during strong earthquake-induced ground shaking. 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.

Based on our review of background materials including the City of San Diego Seismic Safety Study maps (City of San Diego, 2008), the granular nature of the subsurface materials, the shallow depth to groundwater and proximity to the San Diego Bay and Pacific Ocean, the entire planning area has a high potential for liquefaction and seismically induced settlement. The potential for liquefaction should be further evaluated through site-specific subsurface and laboratory evaluation during the design phase of the project. Liquefaction may be mitigated by selective grading, densification of the subsurface soils, and/or deep foundations.

5.4.4. Lateral Spreading

Lateral spread of the ground surface during an earthquake usually takes place along weak shear zones that have formed within a liquefiable soil layer. Lateral spread has generally been observed to take place in the direction of a free-face (i.e., retaining wall, slope, channel, etc.) but has also been observed to a lesser extent on ground surfaces with very gentle slopes. An empirical model developed by Youd et al. (2002) is typically used to predict the amount of horizontal ground displacement within a site. 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 fines content and particle sizes of the liquefiable layers also influence the amount of lateral ground displacement. The potential for lateral spreading should be further evaluated through site-specific subsurface and laboratory evaluation during the design phase of the project. Lateral spreading may be mitigated by structural means, or ground improvement methods such as stone columns, rammed aggregate piers, and compaction grouting. Further discussion on mitigation of settlements and displacements can be found in Special Publication 117A (CGS, 2008).

5.4.5. Tsunamis and Seiches

Tsunamis are long wavelength seismic sea waves (long compared to the ocean depth) generated by sudden movements of the ocean bottom during submarine earthquakes, landslides, or volcanic activity. Based on the Tsunami Inundation Maps for the Point Loma, National City, and Imperial Beach Quadrangles (CGS, 2009), coastal portions of the project at low elevations are within mapped tsunami inundation areas (Figures 33 through 42).

Seiches are oscillations of enclosed or partially enclosed bodies of water often generated by seismic activity. The potential for seiches to impact the project is not a design consideration.

5.5. Geologic Hazard Map

Per the City of San Diego Safety Study, Geologic Hazards and Faults (2008), Planning Districts 1 through 4 are mapped within the geologic hazard categories 11, 12, 13, 31, 52, and 53 (Figures 23 through 27). Planning Districts 8, 9, and 10 are not within the City of San Diego and are not included in the hazards mapping. Descriptions of the mapped hazard categories for each of the planning districts are presented below.

5.5.1. Planning District 1 - Shelter Island

Per the City of San Diego Safety Study, Geologic Hazards and Faults (2008), Shelter Island is mapped within hazard categories 12, 31, 52, and 53 (Figure 23). Hazard Category 12, which is defined as potentially active, inactive, presumed inactive, or activity unknown fault zone, is mapped in the southwest portion of Shelter Island and the northern portion of the district near Harbor Drive. Most of the district is mapped as Hazard Category 31, which is defined as having a high potential for liquefaction, with shallow groundwater, major drainages, and hydraulic fills. Hazard category 52, mapped near the northwestern district boundary near Scott Street, is defined as other level areas, gently sloping to steep terrain with favorable geologic structure, low risk. Hazard category 52, mapped near the southwestern district boundary near Bessemer Path, is defined as level or sloping terrain with unfavorable geologic structure, and low to moderate risk.

5.5.2. Planning District 2 - Harbor Island

Per the City of San Diego Safety Study, Geologic Hazards and Faults (2008), Shelter Island is mapped within hazard categories 11, 12, and 31 (Figure 24). Hazard Category 11, which is defined as an active, Alquist-Priolo fault zone, is mapped in the eastern portion of Harbor Island and extends north to Harbor Drive. Hazard Category 12, which is defined as potentially active, inactive, presumed inactive, or activity unknown fault zone, is mapped in the eastern portion of Harbor Island and the eastern portion of the airport. The entirety of the district is mapped as Hazard Category 31, which is defined as having a high potential for liquefaction, with shallow groundwater, major drainages, and hydraulic fills.

5.5.3. Planning District 3 – Embarcadero

Per the City of San Diego Safety Study, Geologic Hazards and Faults (2008), the Embarcadero is mapped within hazard categories 12, 13, and 31 (Figure 25). Hazard Category 11, which is defined as an active, Alquist-Priolo fault zone, is mapped in the eastern portion of Harbor Island and extends north to Harbor Drive. Hazard Category 12, which is defined as potentially active, inactive, presumed inactive, or activity unknown fault zone, is mapped in the southern portion of the district and extends towards Embarcadero Park north. Hazard Category 13, which is defined as the Downtown special fault zone, is mapped in the eastern and northern portions of the district that abut Pacific Highway and Harbor Drive. The City requires a fault study for new developments within the Downtown special fault zone. The majority of the district is mapped as Hazard Category 31, which is defined as having a high potential for liquefaction, with shallow groundwater, major drainages, and hydraulic fills.

5.5.4. Planning District 4 – Working Waterfront

Per the City of San Diego Safety Study, Geologic Hazards and Faults (2008), the Working Waterfront is mapped within hazard categories 11, 13, and 31 (Figure 26). Hazard Category 11, which is defined as an active, Alquist-Priolo fault zone, is mapped in the eastern portion of the 10th Avenue Marine Terminal and extends nearly to the Coronado Bridge. Hazard Category 13, which is defined as the Downtown special fault zone, is mapped in the northern portions of the district that abut Harbor Drive. The City requires a fault study for new developments within the Downtown special fault zone. The majority of the district is mapped as Hazard Category 31, which is defined as having a high potential for liquefaction, with shallow groundwater, major drainages, and hydraulic fills.

5.5.5. Planning District 7 – South Bay

Per the City of San Diego Safety Study, Geologic Hazards and Faults (2008), the South Bay Salt Lands is mapped within hazard categories 31 and 52 (Figure 27). The majority of the district is mapped as Hazard Category 31, which is defined as having a high potential for liquefaction, with shallow groundwater, major drainages, and hydraulic fills. Hazard category 52, mapped near the southeastern district boundary, is defined as level

or sloping terrain with unfavorable geologic structure, and low to moderate risk.

5.5.6. Planning District 8 – Imperial Beach Oceanfront

The Imperial Beach Oceanfront is not a part of the City of San Diego Safety Study, Geologic Hazards and Faults (2008). However, according to the City of Imperial Beach General Plan & Local Coastal Plan (2019), areas expected to have a high potential for liquefaction in the event of strong ground shaking include those areas underlain by loose, unconsolidated sediments and shallow groundwater. The La Nacion Fault is located approximately 2 miles east of Imperial Beach. It is not likely, therefore, that extensive fault displacement will occur in Imperial Beach. Landslides are not anticipated throughout the relatively flat planning district.

5.5.7. Planning District 9 – Silver Strand

The Silver Strand is not a part of the City of San Diego Safety Study, Geologic Hazards and Faults (2008). According to the Draft Liquefaction map for the County of San Diego (2009), the Silver Strand is located within an area mapped as having a liquefaction risk. The Silver Strand sections of the Rose Canyon Fault are located less than 1 mile west and east of the planning district (California Geological Survey, 1999). Therefore, it is not likely, that extensive fault displacement will occur in the district. Landslides are not anticipated throughout the relatively flat planning district.

5.5.8. Planning District 10 – Coronado Bayfront

The Coronado Bayfront is not a part of the City of San Diego Safety Study, Geologic Hazards and Faults (2008). Additionally, active fault segments associated with the Rose Canyon fault zone are mapped within the district. According to the Draft Liquefaction map for the County of San Diego (2009), the Coronado Bayfront is located within an area mapped as having a liquefaction risk. According to the Coronado General Plan (2003), areas underlain by hydraulic fill along the margins of the San Diego Bay can be expected to be susceptible to earthquake-triggered differential settlement or lateral spreading caused by liquefaction. Additionally, active Silver Strand segments associated

with the Rose Canyon fault zone are mapped within the planning district (California Geological Survey, 1999). Therefore, it is possible that fault displacement will occur in the district.

5.6. Landsliding

Based on our review of referenced geologic maps, literature, topographic maps, and stereoscopic aerial photographs, no landslides or indications of deep-seated landsliding were noted underlying the planning area. According to the Landslide Hazards maps for the Point Loma, National City, and Imperial Beach Quadrangles (Tan, 1995), the project is within area mapped as being least susceptible to landslides. Additionally, based on the relatively flat topography of the project, landslides are not anticipated to impact the project.

5.7. Flood Hazards

Based on review of Federal Emergency Management Agency (FEMA) Mapping Information Platform website (2017), coastal portions of the project at low elevations are within mapped flood hazard areas. Bays, harbors, inlets, and adjacent areas at low elevations are mapped as being within special flood hazard areas subject to inundation by the 1% annual chance flood. Other low elevation areas are within areas with a 0.2% annual chance flood. Based on this review, the potential for flooding at the site is a design consideration.

5.8. Expansive Soils

Expansive soils generally result from specific clay minerals that have the capacity to shrink or swell in response to changes in moisture content. Shrinking or swelling of foundation soils can lead to damage to foundations and engineered structures, including tilting and cracking. Clayey fill soils, alluvium, marine deposits, or old paralic deposits may also be moderately expansive. It is anticipated that expansive soils may present throughout the planning area where clayey soils are present. The nature and extent of expansive soils at the project should be further evaluated by subsurface investigation and laboratory testing.

5.9. Corrosive Soils

Based on the Caltrans (2018) corrosion criteria, a project site is classified as corrosive if one or more of the following conditions exist for the representative soil samples retrieved from the site: chloride concentration of 500 ppm or greater, soluble sulfate concentration of 1,500 ppm or greater, electrical resistivity of 1,100 ohm-centimeters or less, and a pH of 5.5 or less. Based on the coastal location of the project area, laboratory testing performed on soil samples during previous Ninyo & Moore projects in the project area, and Caltrans corrosion (2018) criteria, the soils may be classified as corrosive. It is anticipated that corrosive soils are present throughout the planning area. The nature and extent of corrosive soils should be further evaluated by subsurface investigation and laboratory testing.

5.10. Agricultural Soils

Based on the United States Department of Agriculture (USDA) website (USDA, 2017), the mapped soil types and their characteristics in each of the planning districts are summarized in Table 2. The distribution of the mapped soil types are depicted on Figures 37 through 44. The potential for loss of agricultural soils due to further development of the project is considered low in areas already developed and moderate to high in undeveloped areas.

Table 2 – Soil Series Characteristics

Soil Series and Map Symbol	Use	Erosion Potential
Planning District 1 - Shelter Island		
Made land (Md)	No agricultural use	Low to moderate
Marina loamy coarse sand (MIC)	Agricultural use for avocados, citrus, and flowers	Moderate
Reiff fine sandy loam, 0 to 2% slopes (RkA)	Agricultural use for avocados, citrus, truck crops, and flowers	Moderate
Reiff fine sandy loam, 2 to 5% slopes (RkB)	Agricultural use for avocados, citrus, truck crops, and flowers	Moderate
Urban land (Ur)	No agricultural use	Low to moderate
Planning District 2 - Harbor Island		
Made land (Md)	No agricultural use	Low to moderate
Urban land (Ur)	No agricultural use	Low to moderate
Planning District 3 - Embarcadero		
Urban land (Ur)	No agricultural use	Low to moderate
Planning District 4 – Working Waterfront		
Urban land (Ur)	No agricultural use	Low to moderate

Table 2 – Soil Series Characteristics

Soil Series and Map Symbol	Use	Erosion Potential
Planning District 7 – South Bay		
Grangeville fine sandy loam (GoA)	Agricultural use for truck crops	Moderate
Lagoon Water (LG-W)	Watershed	Moderate to high
Huerhuero loam, 2 to 9 percent slopes (HrC)	Agricultural use for tomatoes	Moderate
Huerhuero -Urban land complex, 2 to 9 percent slopes (HuC)	Agricultural use for tomatoes	Moderate
Planning District 8 – Imperial Beach Oceanfront		
Coastal beaches (Cr)		Moderate to high
Marina loamy coarse sand (MIC)	Agricultural use for avocados, citrus, and flowers	Moderate to high
Tidal flats (Tf)		Moderate to high
Planning District 9 – Silver Strand		
Carlsbad gravelly loamy sand (CbB)	Agricultural use for truck crops	Moderate
Coastal beaches (Cr)	Watershed	Moderate to high
Marina loamy coarse sand (MIC)	Agricultural use for avocados, citrus, and flowers	Moderate
Tidal flats (Tf)	Watershed	Moderate to high
Planning District 10 – Coronado Bayfront		
Coastal beaches (Cr)	Watershed	Moderate to high
Made land (Md)	No agricultural use	Low to moderate
Marina loamy coarse sand (MIC)	Agricultural use for avocados, citrus, and flowers	Moderate

5.11. Mineral Resources

According to the California Geological Survey Open File Report 96-04 the project is located within Mineral Resource Zones 1 and 3 (MRZ-1 and MRZ-3). MRZ-1 areas are locations in San Diego County that have been identified as having no known mineral deposits that may qualify as a mineral resource. Planning Districts 1, 2, 3, 4, 7, 9, and 10 are located within MRZ-1 areas. MRZ-3 areas are locations in San Diego County that have been identified as areas containing mineral deposits that have not been evaluated. Planning Districts 1, 7, 8, and 10 are located within MRZ-3 areas.

6. CONCLUSIONS

Based on our review of the referenced background data, is our opinion that geologic and geotechnical considerations at the planning area include the following:

- Surface and near-surface soils at the project are artificial fill, marine beach deposits, undivided marine deposits in offshore region, young alluvial flood plain deposits, old paralic deposits, and materials of the Cabrillo Formation. Geotechnical constraints related to soils at the project are:
    - Fill Soils - Fill soils placed without engineering supervision may be loosely or inadequately compacted, may contain oversize materials unsuitable for reuse in engineered fills, and may contain unsuitable organic or expansive materials and debris that may preclude their use in engineered fills. The extent and nature of existing fill soils and recommended mitigation measures should be evaluated by subsurface investigation and laboratory testing.
    - Expansive soils - Clayey fill soils, alluvium, marine deposits, or old paralic deposits may be moderately expansive, the extent of expansive soils and recommended mitigation measures should be evaluated by subsurface investigation and laboratory testing.
    - Corrosive soils - Due to the coastal location of the project and laboratory testing performed during previous Ninyo & Moore projects in the area, consideration should be given to classifying the site as corrosive. The nature and extent of corrosive soils and recommended mitigation measures should be further evaluated by subsurface investigation and laboratory testing.
- Portions of the project are located within a State of California Earthquake Fault Zone (Alquist-Priolo Special Studies Zone). The closest known major active fault system is the Rose Canyon Fault, which extends through San Diego Bay, downtown San Diego, Harbor Island, and through the San Diego International Airport. Additionally, the potentially active Point Loma Fault Zone is mapped in the western portion of the project area. Geotechnical constraints related to faulting and seismic events at the project are:
    - Ground Shaking - The project has a strong potential for strong ground motions due to earthquakes on nearby active faults. As previously discussed, according to the City of San Diego Seismic Safety Study, Geologic Hazards and Faults, Planning Districts 2, 3, and 4 are mapped as being within Hazard Category 11, which is defined as the active, Alquist-Priolo Earthquake Fault Zone. According to the California Geological Survey Earthquake Fault Zone Map for the Point Loma Quadrangle, active fault segments are mapped within Planning Districts 2, 4, and 10, and there is a potential for ground shaking associated with these fault segments.

- Ground Surface Rupture – Portions of the project are located within the active, Alquist-Priolo Fault Zone and the Downtown Special Fault Zone. Accordingly, the potential for ground rupture due to faulting is possible.

- Liquefaction - The project is underlain by relatively loose, unconsolidated fill materials, alluvium, marine beach deposits, marine deposits and old paralic deposits. The potential for liquefaction and seismically induced settlement in the planning area is high due to the shallow groundwater table, proximity to the San Diego Bay and Pacific Ocean, and the low density of the underlying sandy subsurface materials. The project is mapped as being in areas with a high potential for liquefaction.

- Based on the coastal location of the project, typical ground surface elevations between approximately 15 to 25 feet MSL, and close proximity to the San Diego Bay and Pacific Ocean, groundwater should generally be anticipated within the upper 15 feet for each of the planning districts, and should be anticipated at shallower depths as ground surface elevation decreases. Generally, groundwater depth can be expected to increase with increases in both ground surface elevation and lateral distance from bodies of water. In addition, significant fluctuations in the groundwater level and perched conditions may occur due to variations in subsurface stratification, rainfall, irrigation practices, and other factors that may not have been evident at the time of our fieldwork. Dewatering may be needed for excavations that extend into groundwater. Materials excavated from below the groundwater table will be in a wet condition and will need to be moisture-conditioned and/or mixed before reuse for structural backfill.

The conditions described above would increase the cost and duration of grading and construction for the project, but would not preclude development for the project.

7. RECOMMENDATIONS

Based on the geologic and geotechnical considerations at the project presented in the previous section, our general recommendations are presented below. These recommendations assume that a complete geotechnical evaluation will be conducted during project-specific environmental review and specific geotechnical recommendations for design and construction will be provided at that time.

- Ground Shaking – Although the Planning Districts are subject to strong ground motion during a seismic event, this would not preclude the development of the project. Proposed structures should be designed appropriately to mitigate strong ground shaking in the event of an earthquake on a nearby fault. The following recommendations may be implemented during construction to mitigate this condition: deep and/or mat foundations; or ground improvement.

- Liquefaction - Although granular soils located below the groundwater table may be subject to liquefaction and dynamic settlement during a nearby seismic event, this would not preclude the development of the project. The following recommendations may be implemented during construction to mitigate this condition: removal and replacement of soils susceptible to static settlement or liquefaction; densification of these soils; or lowering of the groundwater table.

- Expansive soils - Although the site soils are expected to be relatively granular and thus non-expansive, the extent of expansive soils and recommended mitigation measures should be evaluated by subsurface investigation and laboratory testing. If expansive soils are present on the project site, the following mitigative measures may be implemented during construction: the soils may be removed from distress sensitive areas and placed in deeper fill areas; the soils may be excavated and removed from the site; or the expansive soils may be treated (i.e., lime treatment) to mitigate their potential for expansion.

- Corrosive Soils - Site soils are expected to be corrosive, recommended mitigation measures should be evaluated by subsurface investigation and laboratory testing. If corrosive soils exist on the site, a corrosion engineer may be required to assist in the design of improvements in contact with the soil. The following mitigative measures may be implemented during construction: Type V concrete can be used; and cathodic protection can be used.

8. LIMITATIONS

The evaluation and geotechnical analyses presented in this report have been conducted in accordance with current engineering practice and the standard of care exercised by reputable geotechnical consultants performing similar tasks in this area. No warranty, implied or expressed, is made regarding the conclusions, recommendations, and professional opinions expressed in this report. Variations may exist and conditions not observed or described in this report may be encountered. Our preliminary conclusions and recommendations are based on an analysis of the referenced background information.

The purpose of this study was to evaluate geologic and geotechnical conditions within the planning area and to provide a preliminary geology and soils evaluation to assist in the preparation of environmental impact documents for the project. A comprehensive geotechnical evaluation, including subsurface exploration and laboratory testing, should be performed prior to design and construction of structural improvements.

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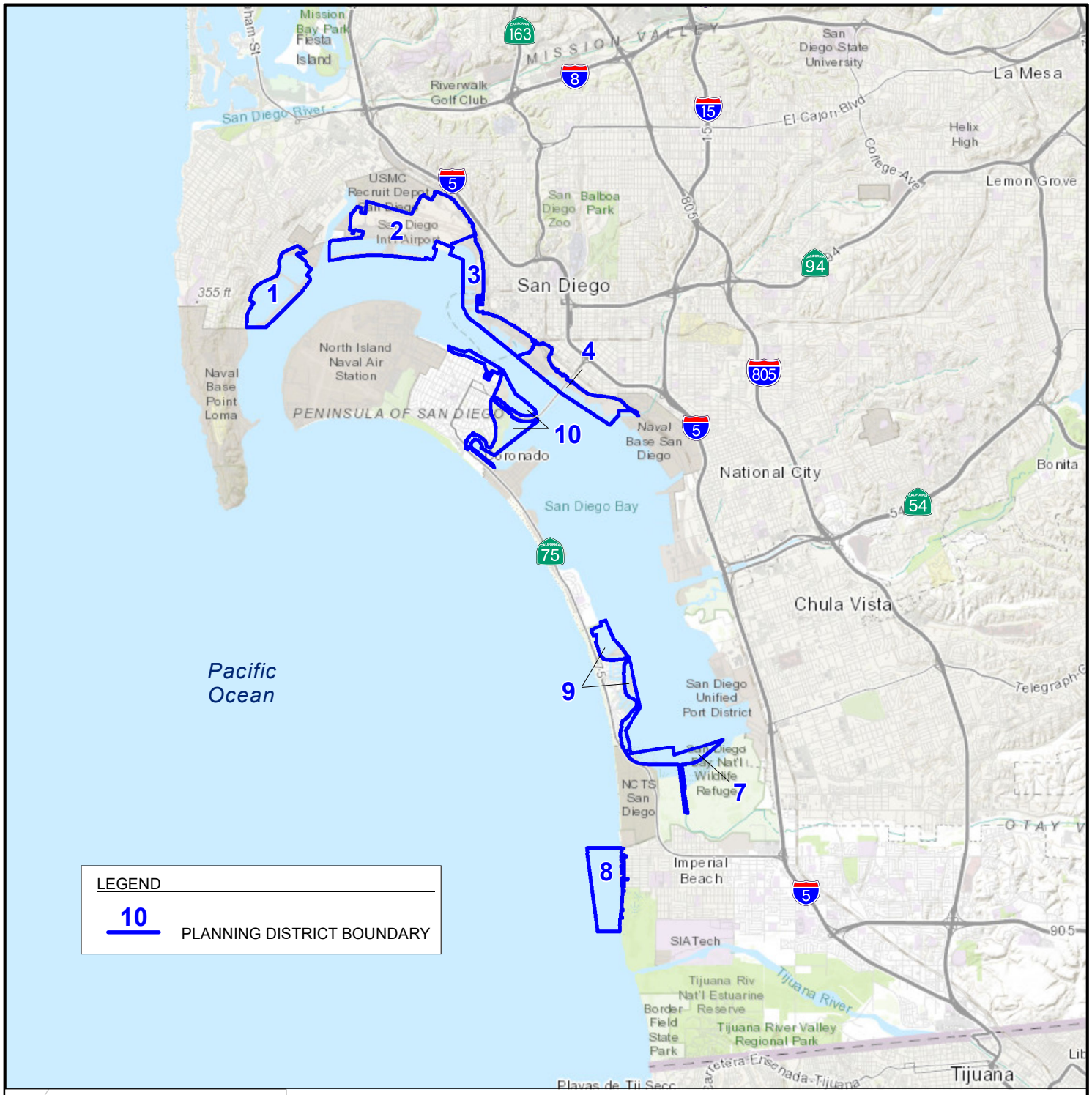
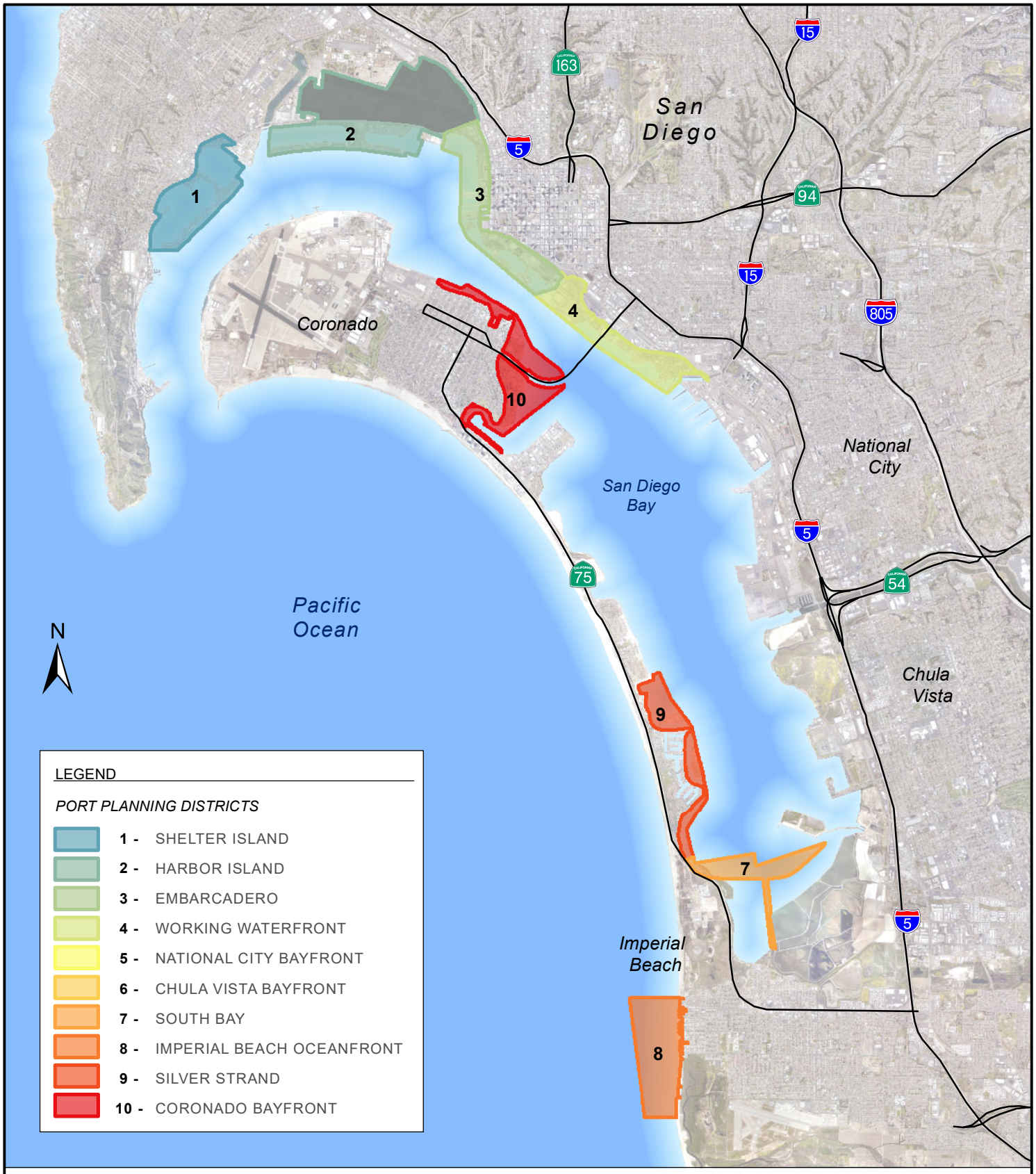
AERIAL PHOTOGRAPHS

Source	Date	Flight	Numbers	Scale
USDA	March 31, 1953	AXN-3M	40, 41, 42, 86, 87, 88, 89, 90, 91, 92, 196, 197, 198, 214, 215, 216, 217, 218	1:24,000
		AXN-4M	94, 95, 96	



Ninyo & Moore	PROJECT LOCATION	FIGURE
PROJECT NO. 108331002 / DATE 12/20	PORT MASTER PLAN UPDATE EIR PROJECT SAN DIEGO, CALIFORNIA	1

1_108153001_SL.mxd JDL



SOURCES: Port Districts - Port of San Diego, 2017; Imagery - SANDAG & SanGIS

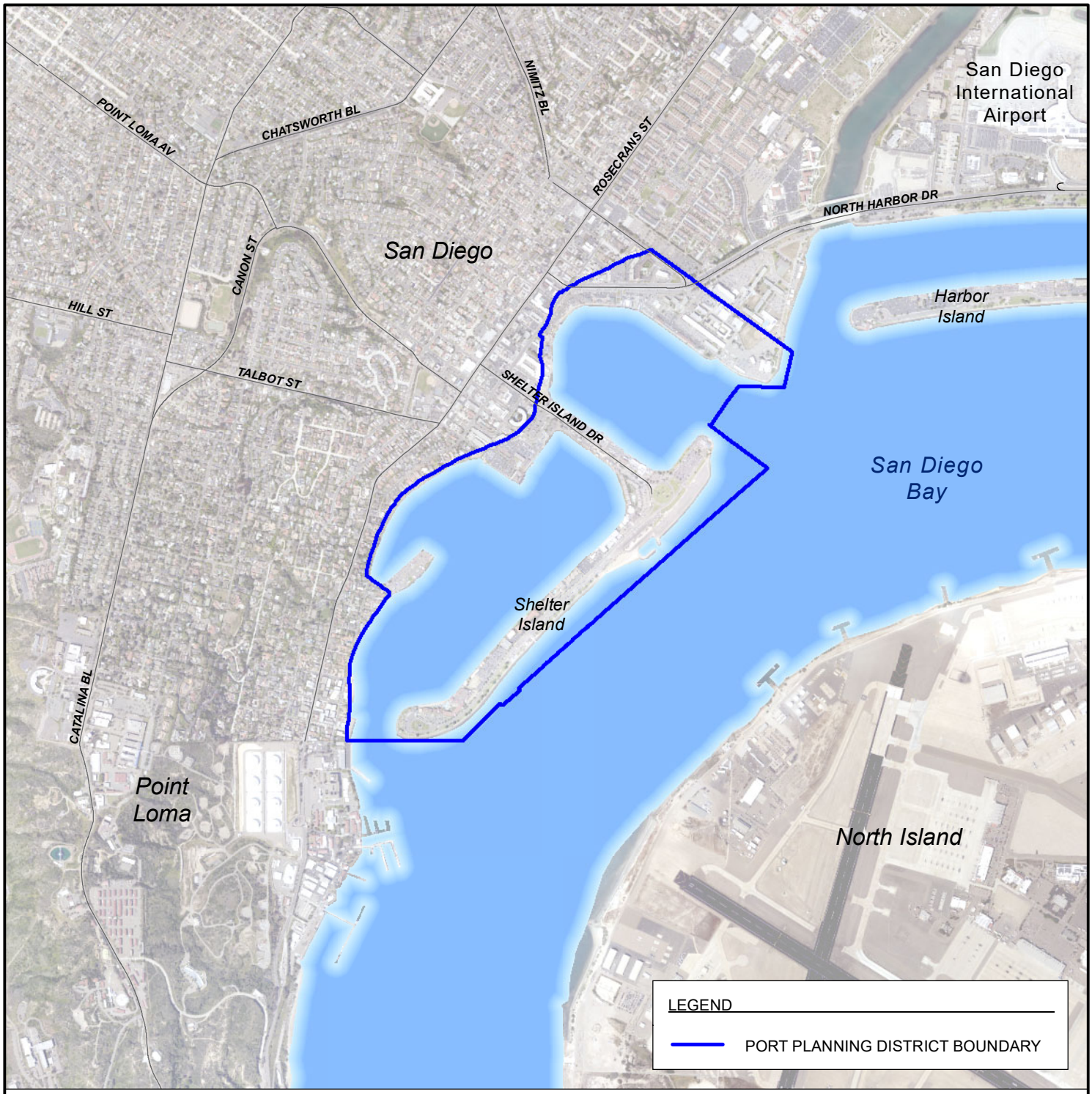
SCALE IN FEET

0 8,000 16,000

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE.

Ninyo & Moore	AERIAL SITE PLAN	FIGURE
PROJECT NO. 108331002 / DATE 12/20	PORT MASTER PLAN UPDATE EIR PROJECT SAN DIEGO, CALIFORNIA	2

2_108331002_SP.mxd 12/11/2020 JDL



SOURCE: PORT DISTRICT BOUNDARIES - ICF/PORT OF SAN DIEGO, 2017; IMAGERY - SANDAG AND SANGIS

N

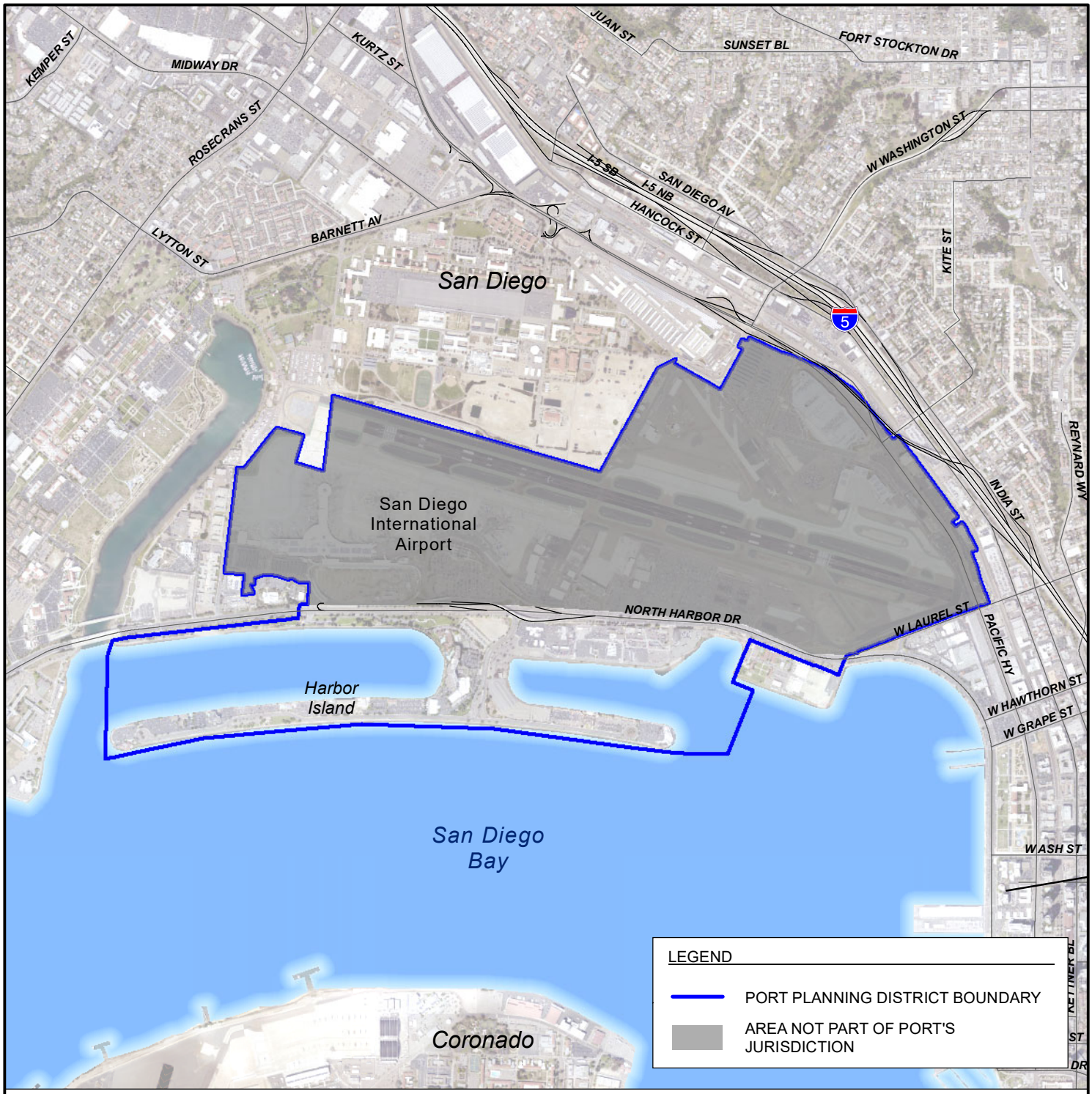
SCALE IN FEET

0 2,000 4,000

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore	SITE PLAN PLANNING DISTRICT 1 - SHELTER ISLAND	FIGURE
PROJECT NO. / DATE	PORT MASTER PLAN UPDATE EIR PROJECT SAN DIEGO, CALIFORNIA	3
108331002 / 12/20		

1_108153001_SL.mxd JDL



SOURCE: PORT DISTRICT BOUNDARIES - ICF/PORT OF SAN DIEGO, 2017; IMAGERY - SANDAG AND SANGIS

N

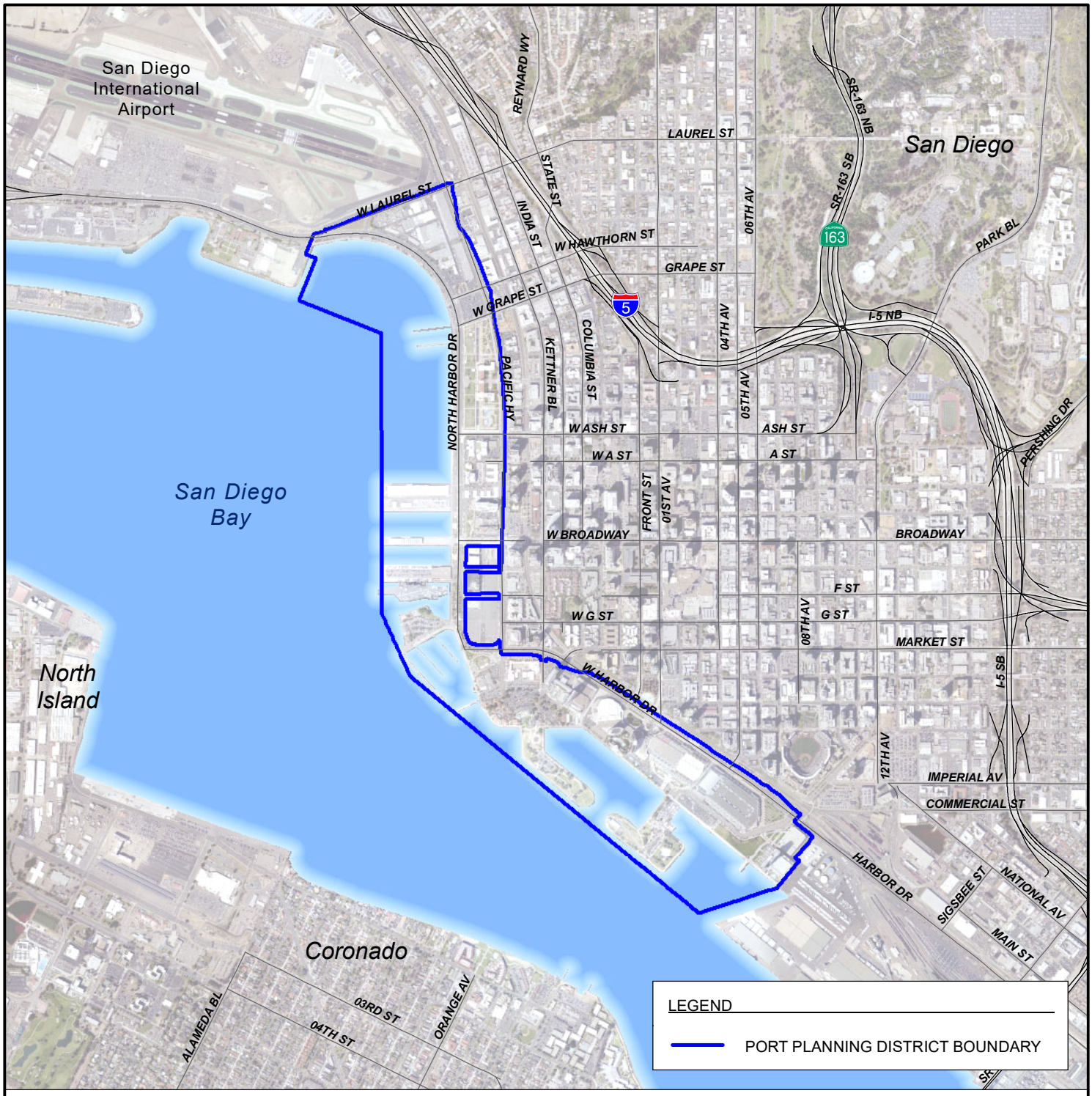
SCALE IN FEET

0 2,000 4,000

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore	SITE PLAN PLANNING DISTRICT 2 - HARBOR ISLAND	FIGURE
PROJECT NO. 108331002 / DATE 12/20	PORT MASTER PLAN UPDATE EIR PROJECT SAN DIEGO, CALIFORNIA	4

1_108153001_SL.mxd JDL



SOURCE: PORT DISTRICT BOUNDARIES - ICF/PORT OF SAN DIEGO, 2017; IMAGERY - SANDAG AND SANGIS

N

SCALE IN FEET

0 2,000 4,000

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore	SITE PLAN PLANNING DISTRICT 3 - EMBARCADERO	FIGURE
PROJECT NO. 108331002 / DATE 12/20	PORT MASTER PLAN UPDATE EIR PROJECT SAN DIEGO, CALIFORNIA	5

1_108153001_SL.mxd JDL

SOURCE: PORT DISTRICT BOUNDARIES - ICF/PORT OF SAN DIEGO, 2017; IMAGERY - SANDAG AND SANGIS

N

SCALE IN FEET

0 2,000 4,000

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore	SITE PLAN PLANNING DISTRICT 4 - WORKING WATERFRONT	FIGURE
PROJECT NO. / DATE	PORT MASTER PLAN UPDATE EIR PROJECT SAN DIEGO, CALIFORNIA	6
108331002 / 12/20		

1_108153001_SL.mxd JDL

SOURCE: PORT DISTRICT BOUNDARIES - ICF/PORT OF SAN DIEGO, 2017; IMAGERY - SANDAG AND SANGIS

N

SCALE IN FEET

0 2,000 4,000

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore	SITE PLAN PLANNING DISTRICT 7 - SOUTH BAY	FIGURE
PROJECT NO. 108331002 / DATE 12/20	PORT MASTER PLAN UPDATE EIR PROJECT SAN DIEGO, CALIFORNIA	7

1_108153001_SL.mxd JDL

SOURCE: PORT DISTRICT BOUNDARIES - ICF/PORT OF SAN DIEGO, 2017; IMAGERY - SANDAG AND SANGIS

N

SCALE IN FEET

0 2,000 4,000

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore	SITE PLAN PLANNING DISTRICT 8 - IMPERIAL BEACH OCEANFRONT	FIGURE
PROJECT NO. / DATE 108331002 / 12/20	PORT MASTER PLAN UPDATE EIR PROJECT SAN DIEGO, CALIFORNIA	8

1_108153001_SL.mxd JDL

SOURCE: PORT DISTRICT BOUNDARIES - ICF/PORT OF SAN DIEGO, 2017; IMAGERY - SANDAG AND SANGIS

N

SCALE IN FEET

0 2,000 4,000

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore	SITE PLAN PLANNING DISTRICT 9 - SILVER STRAND	FIGURE
PROJECT NO. / DATE	PORT MASTER PLAN UPDATE EIR PROJECT SAN DIEGO, CALIFORNIA	9
108331002 / 12/20		

1_108153001_SL.mxd JDL

SOURCE: PORT DISTRICT BOUNDARIES - ICF/PORT OF SAN DIEGO, 2017; IMAGERY - SANDAG AND SANGIS

N

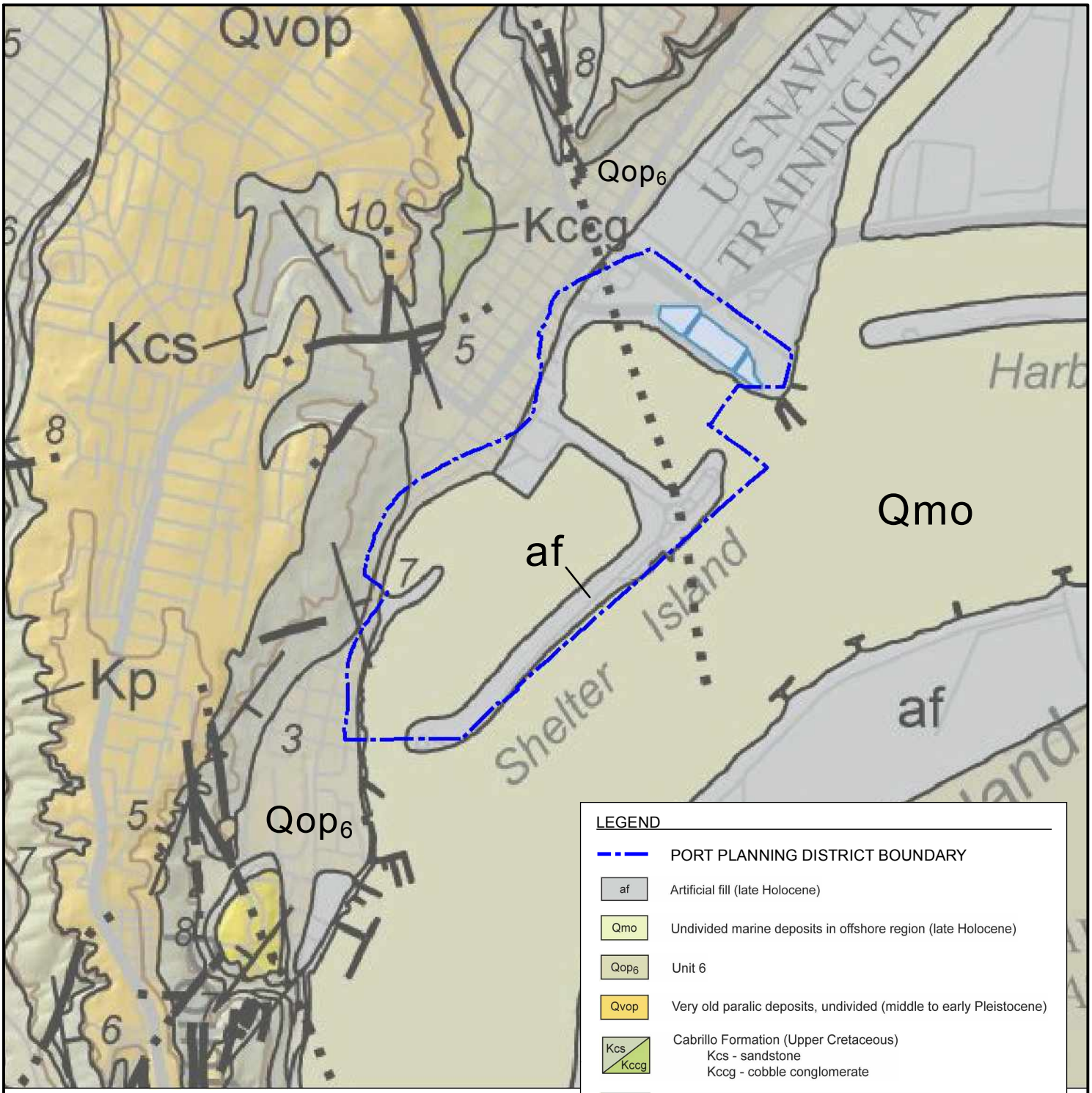
SCALE IN FEET

0 2,000 4,000

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore	SITE PLAN PLANNING DISTRICT 10 - CORONADO BAYFRONT	FIGURE
PROJECT NO. / DATE	PORT MASTER PLAN UPDATE EIR PROJECT SAN DIEGO, CALIFORNIA	10
108331002 / 12/20		

1_108153001_SL.mxd JDL



SOURCE: KENNEDY, M.P., AND TAN, S.S., 2008, GEOLOGIC MAP OF THE SAN DIEGO 30' X 60' QUADRANGLE, CALIFORNIA, CALIFORNIA GEOLOGICAL SURVEY

LEGEND

- PORT PLANNING DISTRICT BOUNDARY
- af — Artificial fill (late Holocene)
- Qmo — Undivided marine deposits in offshore region (late Holocene)
- Qop_6 — Unit 6
- Qvop — Very old paralic deposits, undivided (middle to early Pleistocene)
- Kcs / Kccg — Cabrillo Formation (Upper Cretaceous)
  - Kcs - sandstone
  - Kccg - cobble conglomerate
- Kp — Point Loma Formation (Upper Cretaceous)
- Contact - Contact between geologic units; dotted where concealed.
- Fault - Solid where accurately located; dashed where approximately located; dotted where concealed. U = upthrown block, D = downthrown block. Arrow and number indicate direction and angle of dip of fault plane.
- Strike and dip of beds
- Inclined
- Landslide - Arrows indicate principal direction of movement. Queried where existence is questionable.

SCALE IN FEET

0 2,000 4,000

N

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore	GEOLOGY DISTRICT 1 - SHELTER ISLAND	FIGURE
PROJECT NO. / DATE	PORT MASTER PLAN UPDATE EIR PROJECT SAN DIEGO, CALIFORNIA	11
108331002 / 12/20		

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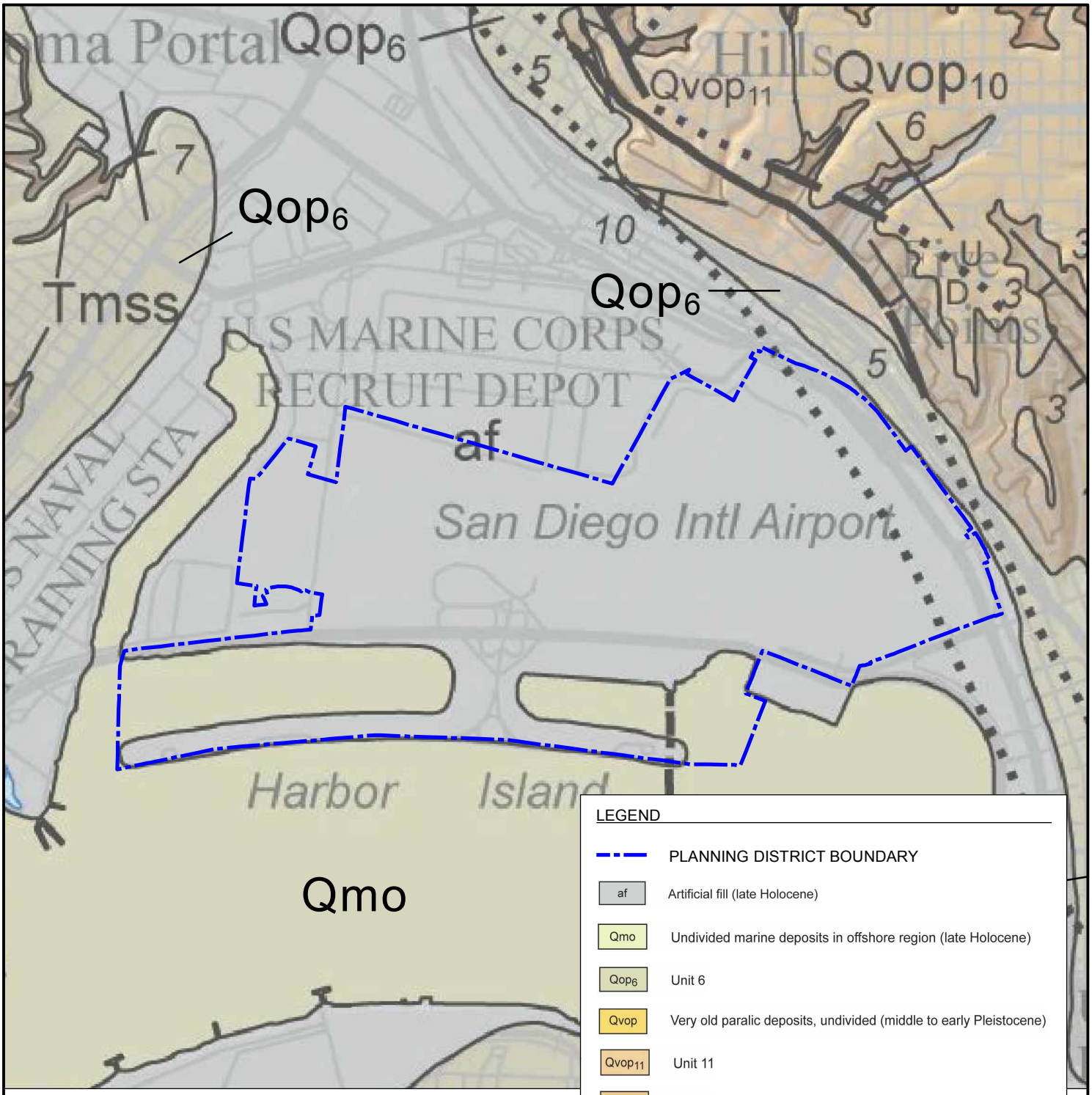


SOURCE: KENNEDY, M.P., AND TAN, S.S., 2008, GEOLOGIC MAP OF THE SAN DIEGO 30' X 60' QUADRANGLE, CALIFORNIA, CALIFORNIA GEOLOGICAL SURVEY

LEGEND

- PLANNING DISTRICT BOUNDARY
- af — Artificial fill (late Holocene)
- Qmo — Undivided marine deposits in offshore region (late Holocene)
- Qop_6 — Unit 6
- Qvop — Very old paralic deposits, undivided (middle to early Pleistocene)
- $Qvop_{11}$ — Unit 11
- $Qvop_{10}$ — Unit 10
- Contact - Contact between geologic units; dotted where concealed.
- Fault - Solid where accurately located; dashed where approximately located; dotted where concealed. U = upthrown block, D = downthrown block. Arrow and number indicate direction and angle of dip of fault plane.
- Strike and dip of beds
- Inclined
- Landslide - Arrows indicate principal direction of movement. Queried where existence is questionable.

SCALE IN FEET

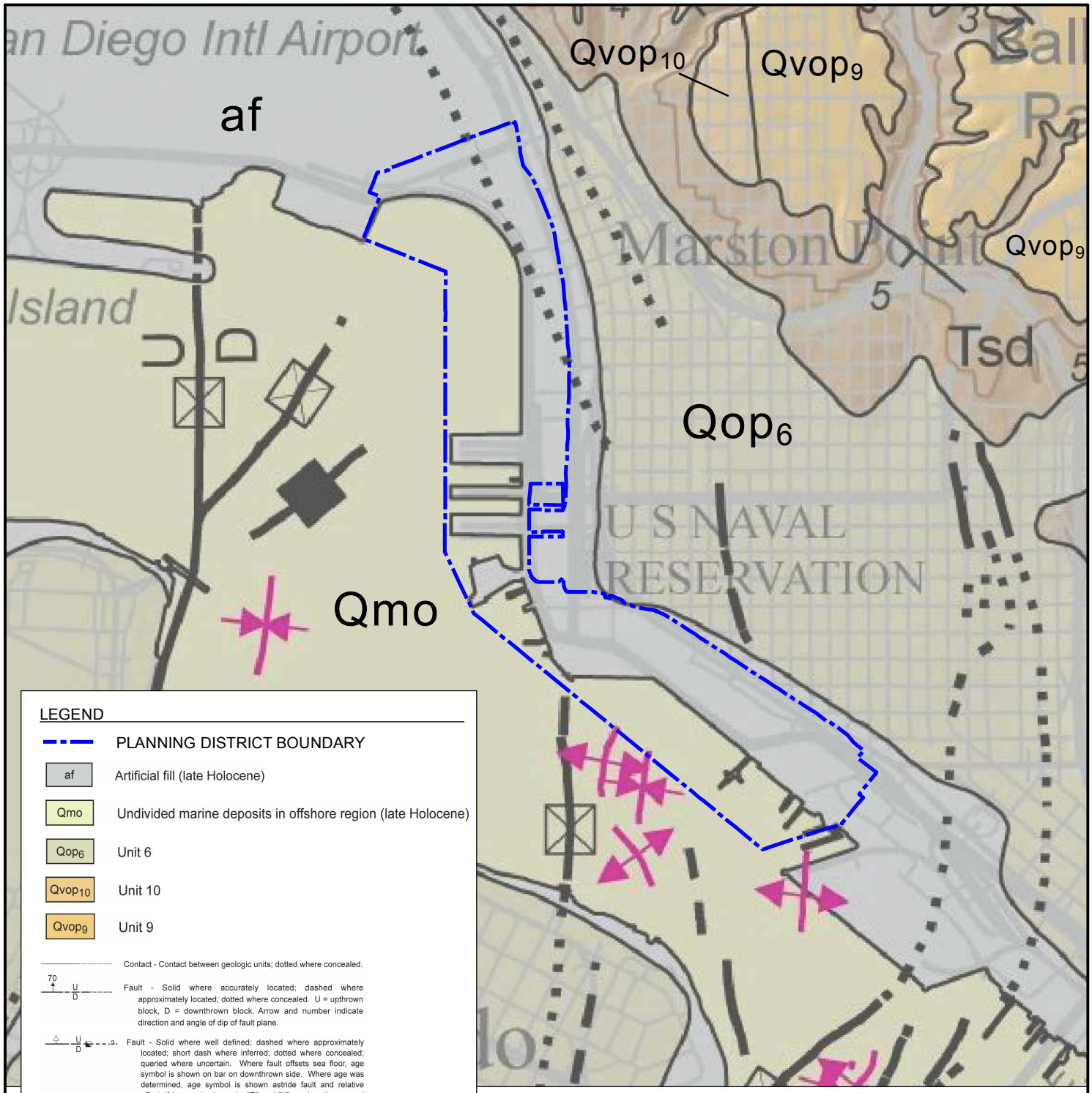
0 2,000 4,000

N

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore	GEOLOGY DISTRICT 2 - HARBOR ISLAND	FIGURE
PROJECT NO. / DATE	PORT MASTER PLAN UPDATE EIR PROJECT SAN DIEGO, CALIFORNIA	12
108331002 / 12/20		

1_108153001_SL.mxd JDL



LEGEND

- PLANNING DISTRICT BOUNDARY
- af — Artificial fill (late Holocene)
- Qmo — Undivided marine deposits in offshore region (late Holocene)
- Qop_6 — Unit 6
- $Qvop_{10}$ — Unit 10
- $Qvop_9$ — Unit 9

Contact - Contact between geologic units; dotted where concealed.

Fault - Solid where accurately located; dashed where approximately located; dotted where concealed. U = upthrown block, D = downthrown block. Arrow and number indicate direction and angle of dip of fault plane.

Fault - Solid where well defined; dashed where approximately located; short dash where inferred; dotted where concealed; queried where uncertain. Where fault offsets sea floor, age symbol is shown on bar on downthrown side. Where age was determined, age symbol is shown astride fault and relative offset, if known, is shown by "D" and "U" on downthrown and upthrown sides. Ages of faults are indicated as follows:

- ⊠ cuts strata of Holocene age
- ■ cuts strata of late Quaternary age
- ◩ cuts strata of Quaternary age
- △ cuts Miocene or older strata

Fault zone - Area of extensively sheared rock within a zone defined by multiple faults.

Folds

Anticline - Solid where well defined; short dash where inferred.

Syncline - Solid where well defined; short dash where inferred.

Strike and dip of beds

Inclined

SOURCE: KENNEDY, M.P., AND TAN, S.S., 2008, GEOLOGIC MAP OF THE SAN DIEGO 30' X 60' QUADRANGLE, CALIFORNIA, CALIFORNIA GEOLOGICAL SURVEY

N

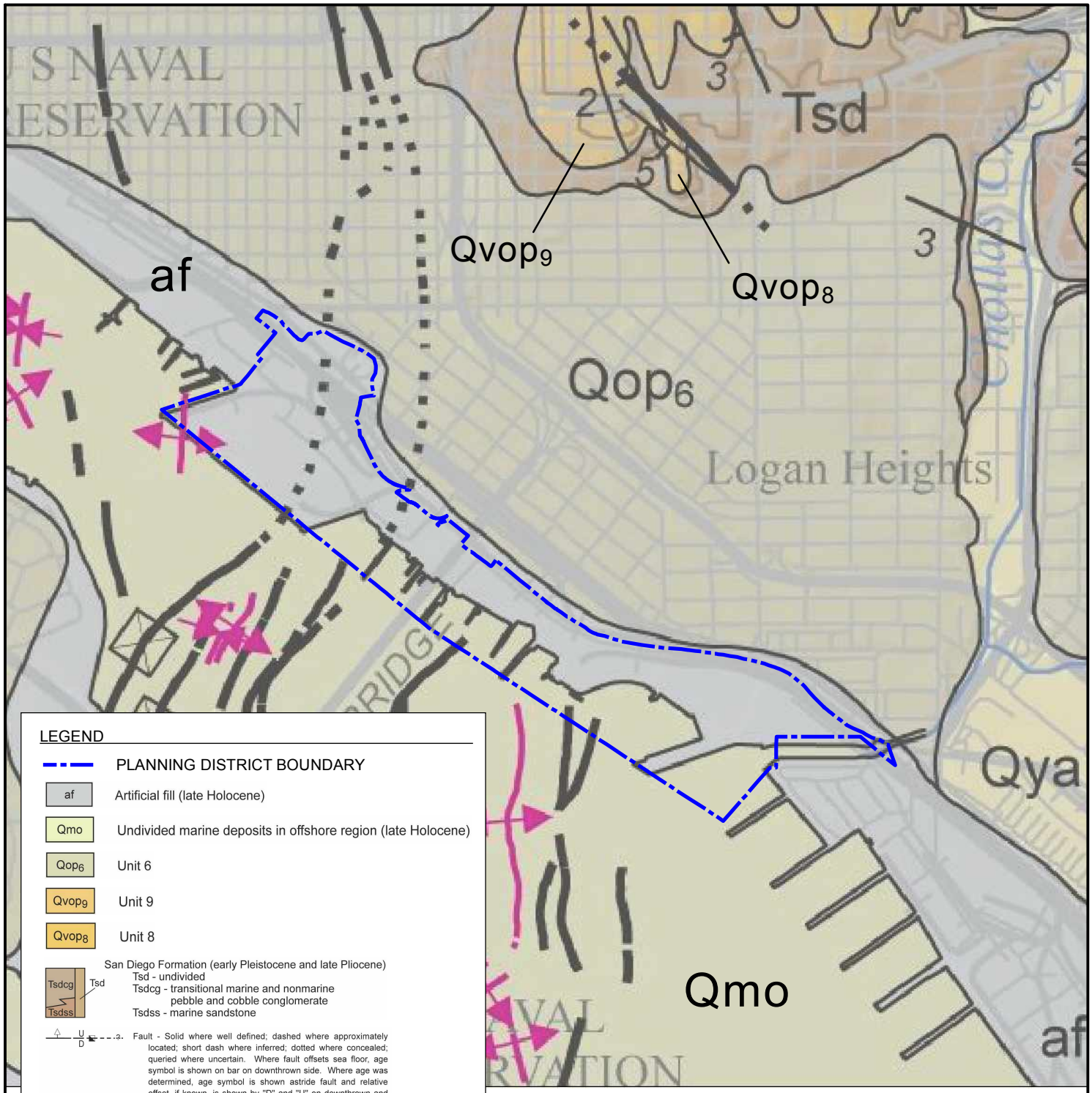
SCALE IN FEET

0 2,000 4,000

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore	GEOLOGY DISTRICT 3 - EMBARCADERO	FIGURE
PROJECT NO. / DATE	PORT MASTER PLAN UPDATE EIR PROJECT SAN DIEGO, CALIFORNIA	13
108331002 / 12/20		

1_108153001_SL.mxd JDL



LEGEND

- PLANNING DISTRICT BOUNDARY
- af — Artificial fill (late Holocene)
- Qmo — Undivided marine deposits in offshore region (late Holocene)
- Qop6 — Unit 6
- Qvop9 — Unit 9
- Qvop8 — Unit 8
- San Diego Formation (early Pleistocene and late Pliocene)
  - Tsd - undivided
  - Tsdcg - transitional marine and nonmarine pebble and cobble conglomerate
  - Tsdss - marine sandstone
- Fault - Solid where well defined; dashed where approximately located; short dash where inferred; dotted where concealed; queried where uncertain. Where fault offsets sea floor, age symbol is shown on bar on downthrown side. Where age was determined, age symbol is shown astride fault and relative offset, if known, is shown by "D" and "U" on downthrown and upthrown sides. Ages of faults are indicated as follows:
  - cuts strata of Holocene age
  - cuts strata of late Quaternary age
  - cuts strata of Quaternary age
  - cuts Miocene or older strata
- Fault zone - Area of extensively sheared rock within a zone defined by multiple faults.

Folds

- Anticline - Solid where well defined; short dash where inferred.
- Syncline - Solid where well defined; short dash where inferred.

Strike and dip of beds

- 70 — Inclined

SOURCE: KENNEDY, M.P., AND TAN, S.S., 2008, GEOLOGIC MAP OF THE SAN DIEGO 30' X 60' QUADRANGLE, CALIFORNIA, CALIFORNIA GEOLOGICAL SURVEY

N

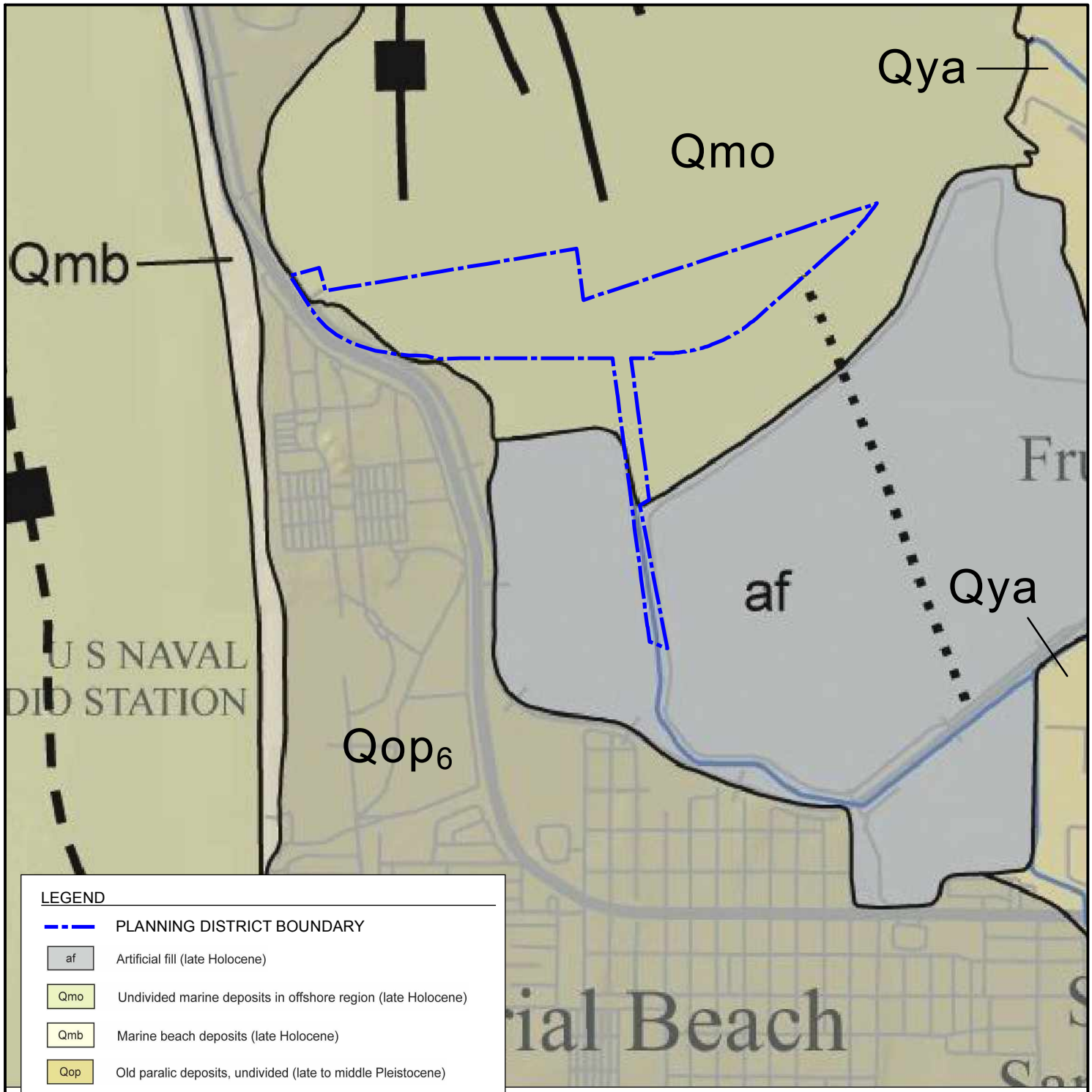
SCALE IN FEET

0 2,000 4,000

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore	GEOLOGY DISTRICT 4 - WORKING WATERFRONT	FIGURE
PROJECT NO. / DATE	PORT MASTER PLAN UPDATE EIR PROJECT SAN DIEGO, CALIFORNIA	14
108331002 / 12/20		

1_108153001_SL.mxd JDL



LEGEND

- PLANNING DISTRICT BOUNDARY
- af — Artificial fill (late Holocene)
- Qmo — Undivided marine deposits in offshore region (late Holocene)
- Qmb — Marine beach deposits (late Holocene)
- Qop — Old paralic deposits, undivided (late to middle Pleistocene)
- Qop_6 — Unit 6
- Qya — Young alluvial flood-plain deposits (Holocene and late Pleistocene)
- Fault - Solid where well defined; dashed where approximately located; short dash where inferred; dotted where concealed; queried where uncertain. Where fault offsets sea floor, age symbol is shown on bar on downthrown side. Where age was determined, age symbol is shown astride fault and relative offset, if known, is shown by "D" and "U" on downthrown and upthrown sides. Ages of faults are indicated as follows:
  - ⊠ cuts strata of Holocene age
  - ■ cuts strata of late Quaternary age
- Anticline - Solid where well defined; short dash where inferred.

SOURCE: KENNEDY, M.P., AND TAN, S.S., 2008, GEOLOGIC MAP OF THE SAN DIEGO 30' X 60' QUADRANGLE, CALIFORNIA, CALIFORNIA GEOLOGICAL SURVEY

N

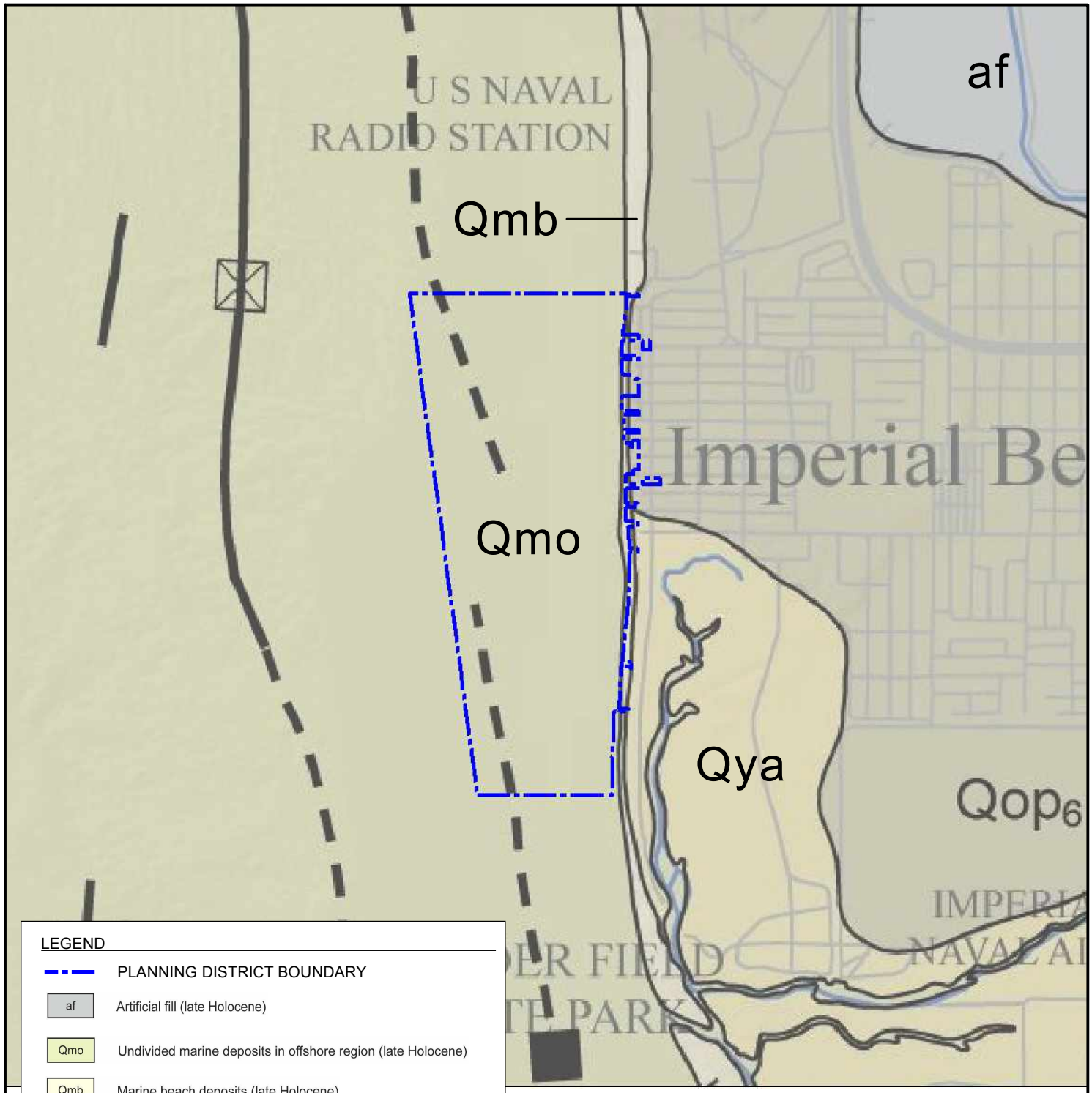
SCALE IN FEET

0 2,000 4,000

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore	GEOLOGY DISTRICT 7 - SOUTH BAY	FIGURE
PROJECT NO. / DATE	PORT MASTER PLAN UPDATE EIR PROJECT SAN DIEGO, CALIFORNIA	15
108331002 / 12/20		

1_108153001_SL.mxd JDL



LEGEND

- PLANNING DISTRICT BOUNDARY
- af — Artificial fill (late Holocene)
- Qmo — Undivided marine deposits in offshore region (late Holocene)
- Qmb — Marine beach deposits (late Holocene)
- Qop_6 — Unit 6
- Qya — Young alluvial flood-plain deposits (Holocene and late Pleistocene)
- Fault - Solid where well defined; dashed where approximately located; short dash where inferred; dotted where concealed; queried where uncertain. Where fault offsets sea floor, age symbol is shown on bar on downthrown side. Where age was determined, age symbol is shown astride fault and relative offset, if known, is shown by "D" and "U" on downthrown and upthrown sides. Ages of faults are indicated as follows:
  - ⊠ cuts strata of Holocene age
  - ■ cuts strata of late Quaternary age

SOURCE: KENNEDY, M.P., AND TAN, S.S., 2008, GEOLOGIC MAP OF THE SAN DIEGO 30' X 60' QUADRANGLE, CALIFORNIA, CALIFORNIA GEOLOGICAL SURVEY

N

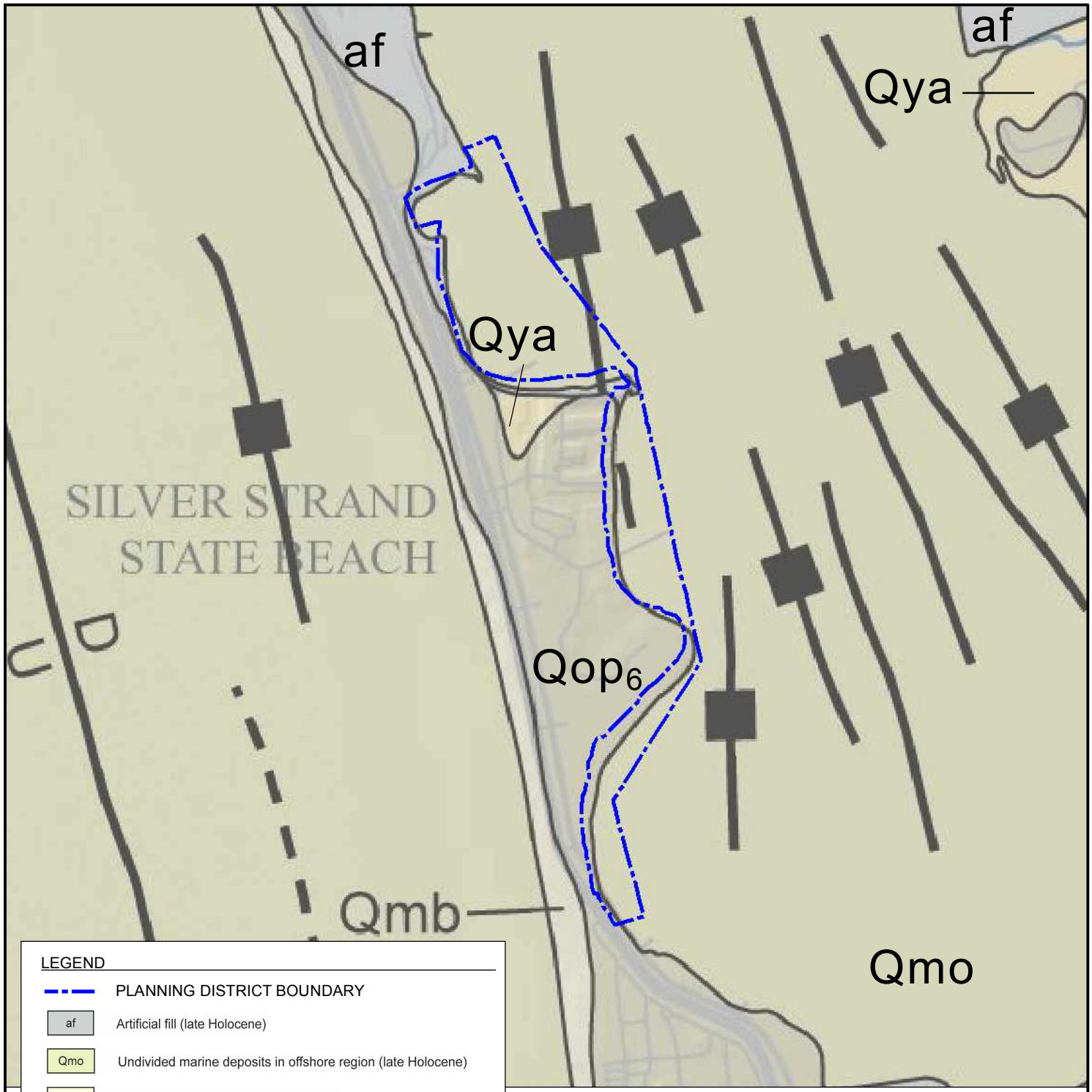
SCALE IN FEET

0 2,000 4,000

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore	GEOLOGY DISTRICT 8 - IMPERIAL BEACH OCEANFRONT	FIGURE
PROJECT NO. / DATE	PORT MASTER PLAN UPDATE EIR PROJECT SAN DIEGO, CALIFORNIA	16
108331002 / 12/20		

1_108153001_SL.mxd JDL



LEGEND

- PLANNING DISTRICT BOUNDARY
- af — Artificial fill (late Holocene)
- Qmo — Undivided marine deposits in offshore region (late Holocene)
- Qmb — Marine beach deposits (late Holocene)
- Qop_6 — Unit 6
- Qya — Young alluvial flood-plain deposits (Holocene and late Pleistocene)
- Fault - Solid where well defined; dashed where approximately located; short dash where inferred; dotted where concealed; queried where uncertain. Where fault offsets sea floor, age symbol is shown on bar on downthrown side. Where age was determined, age symbol is shown astride fault and relative offset, if known, is shown by "D" and "U" on downthrown and upthrown sides. Ages of faults are indicated as follows:
  - ⊠ cuts strata of Holocene age
  - ■ cuts strata of late Quaternary age

SOURCE: KENNEDY, M.P., AND TAN, S.S., 2008, GEOLOGIC MAP OF THE SAN DIEGO 30' X 60' QUADRANGLE, CALIFORNIA, CALIFORNIA GEOLOGICAL SURVEY

N

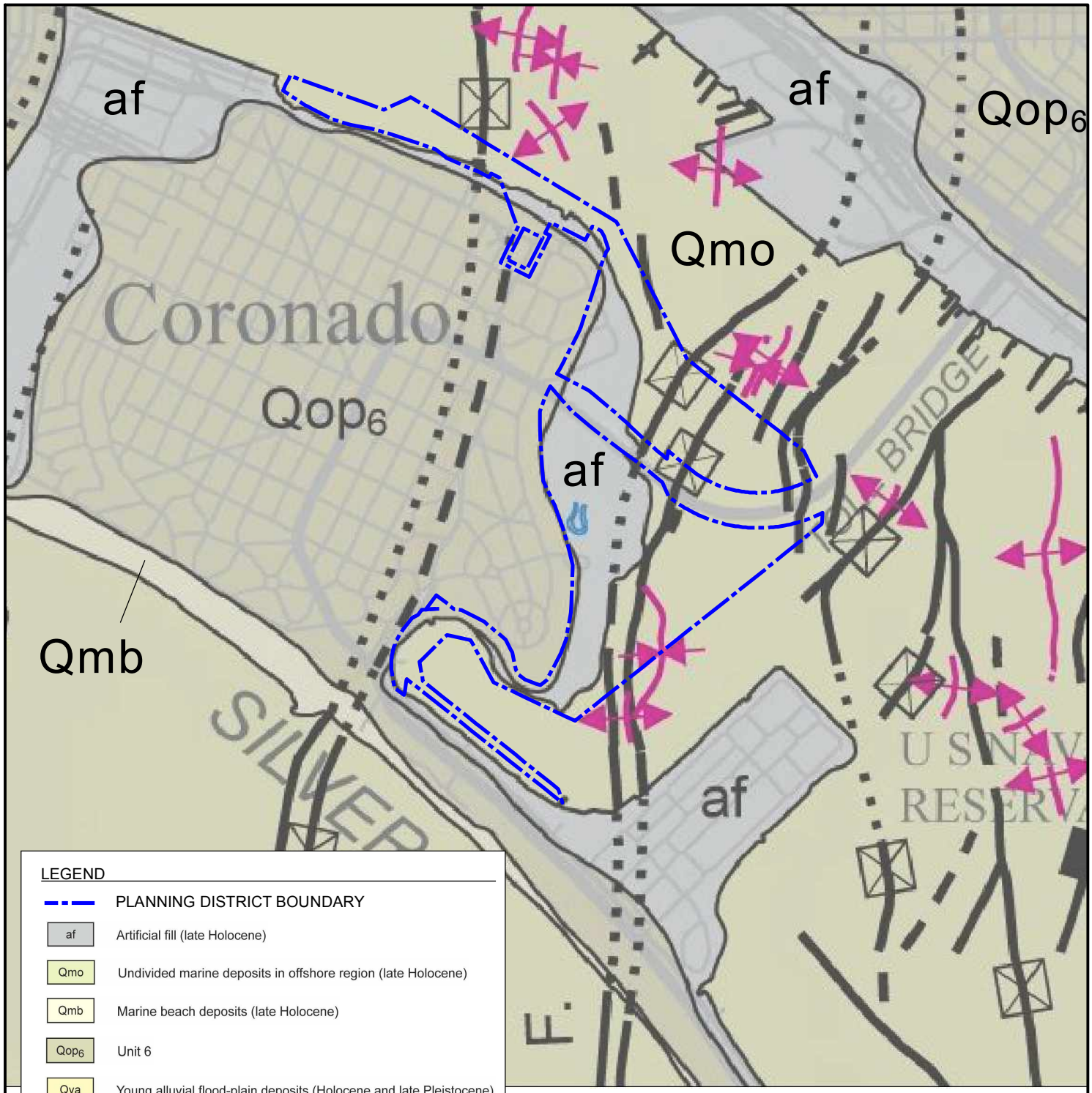
SCALE IN FEET

0 2,000 4,000

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore	GEOLOGY DISTRICT 9 - SILVER STRAND	FIGURE
PROJECT NO. 108331002 / DATE 12/20	PORT MASTER PLAN UPDATE EIR PROJECT SAN DIEGO, CALIFORNIA	17

1_108153001_SL.mxd JDL



LEGEND

- PLANNING DISTRICT BOUNDARY
- af — Artificial fill (late Holocene)
- Qmo — Undivided marine deposits in offshore region (late Holocene)
- Qmb — Marine beach deposits (late Holocene)
- Qop_6 — Unit 6
- Qya — Young alluvial flood-plain deposits (Holocene and late Pleistocene)
- Fault - Solid where well defined; dashed where approximately located; short dash where inferred; dotted where concealed; queried where uncertain. Where fault offsets sea floor, age symbol is shown on bar on downthrown side. Where age was determined, age symbol is shown astride fault and relative offset, if known, is shown by "D" and "U" on downthrown and upthrown sides. Ages of faults are indicated as follows:
  - ⊠ cuts strata of Holocene age
  - ■ cuts strata of late Quaternary age
- Anticline - Solid where well defined; short dash where inferred.
- Syncline - Solid where well defined; short dash where inferred.

SOURCE: KENNEDY, M.P., AND TAN, S.S., 2008, GEOLOGIC MAP OF THE SAN DIEGO 30' X 60' QUADRANGLE, CALIFORNIA, CALIFORNIA GEOLOGICAL SURVEY

N

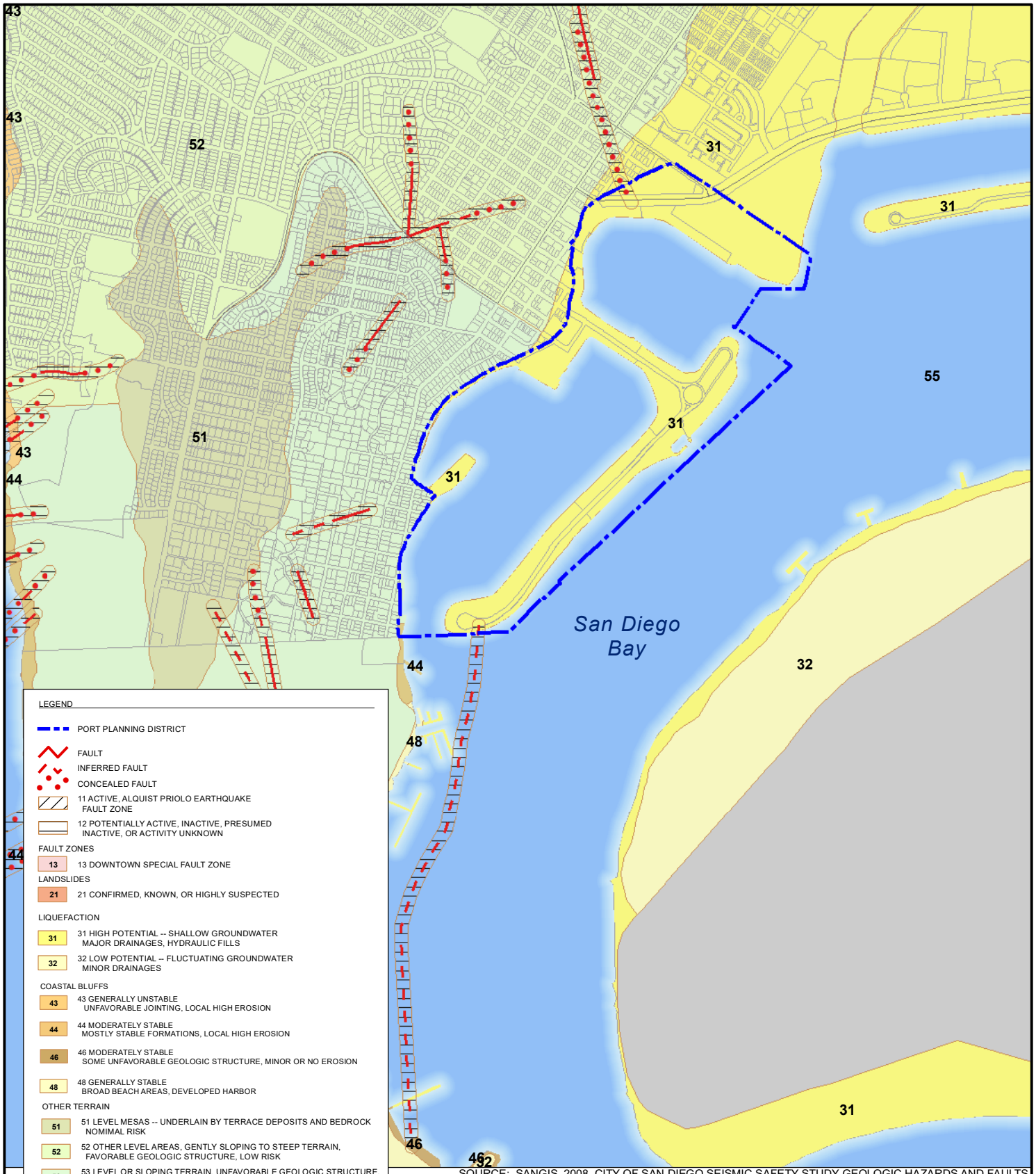
SCALE IN FEET

0 2,000 4,000

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore	GEOLOGY DISTRICT 10 - CORONADO BAYFRONT	FIGURE
PROJECT NO. / DATE	PORT MASTER PLAN UPDATE EIR PROJECT SAN DIEGO, CALIFORNIA	18
108331002 / 12/20		

1_108153001_SL.mxd JDL



SOURCE: SANGIS, 2008, CITY OF SAN DIEGO SEISMIC SAFETY STUDY GEOLOGIC HAZARDS AND FAULTS.

N

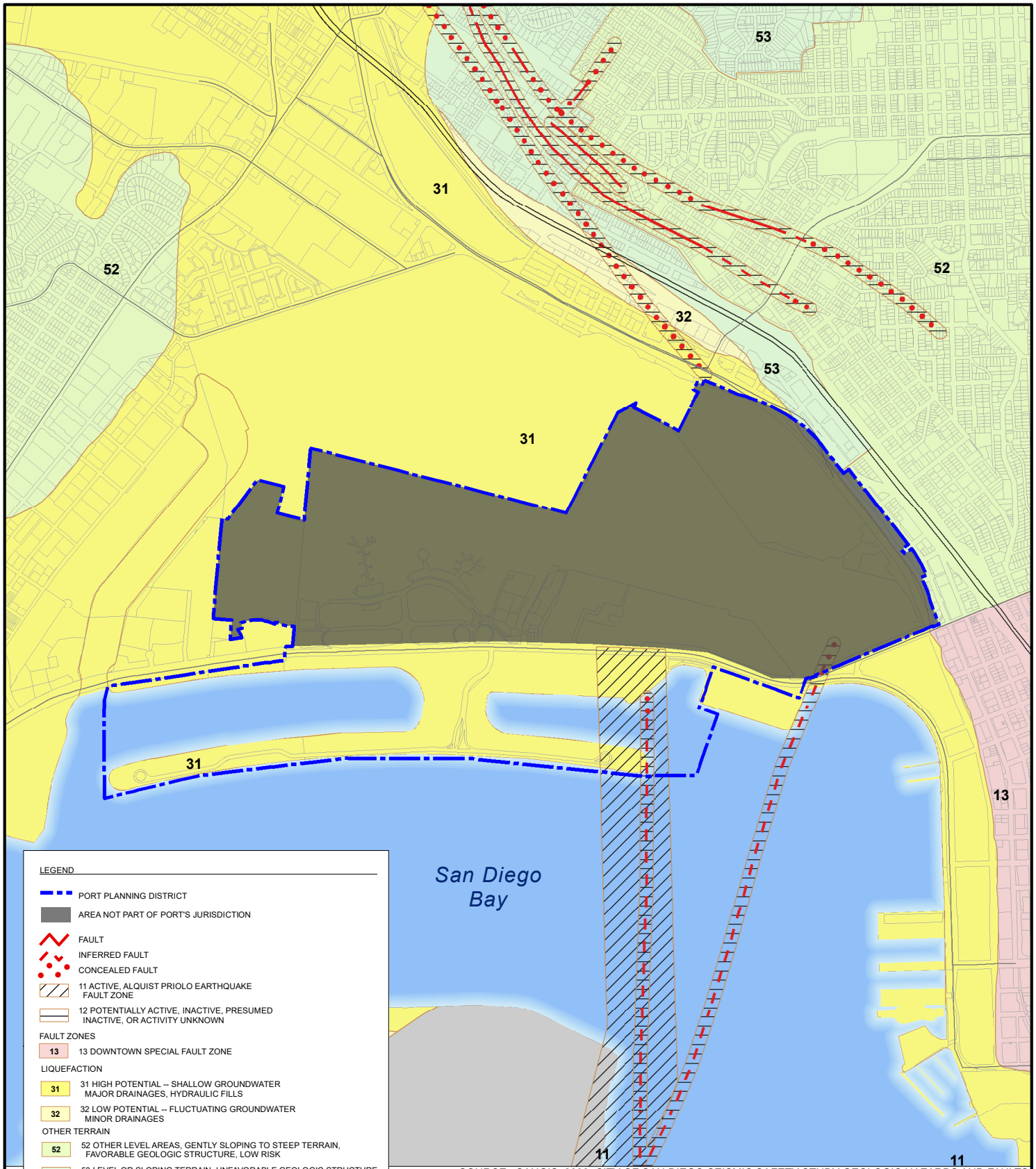
SCALE IN FEET

0 2,000 4,000

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE.

Ninyo & Moore	GEOLOGIC HAZARDS PLANNING DISTRICT 1 - SHELTER ISLAND	FIGURE
PROJECT NO. 108331002 / DATE 12/20	PORT MASTER PLAN UPDATE EIR PROJECT SAN DIEGO, CALIFORNIA	19

19_108331002_GH_D1.mxd 12/11/2020 JDL



SOURCE: SANGIS, 2008, CITY OF SAN DIEGO SEISMIC SAFETY STUDY GEOLOGIC HAZARDS AND FAULTS.

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE.

Ninyo & Moore

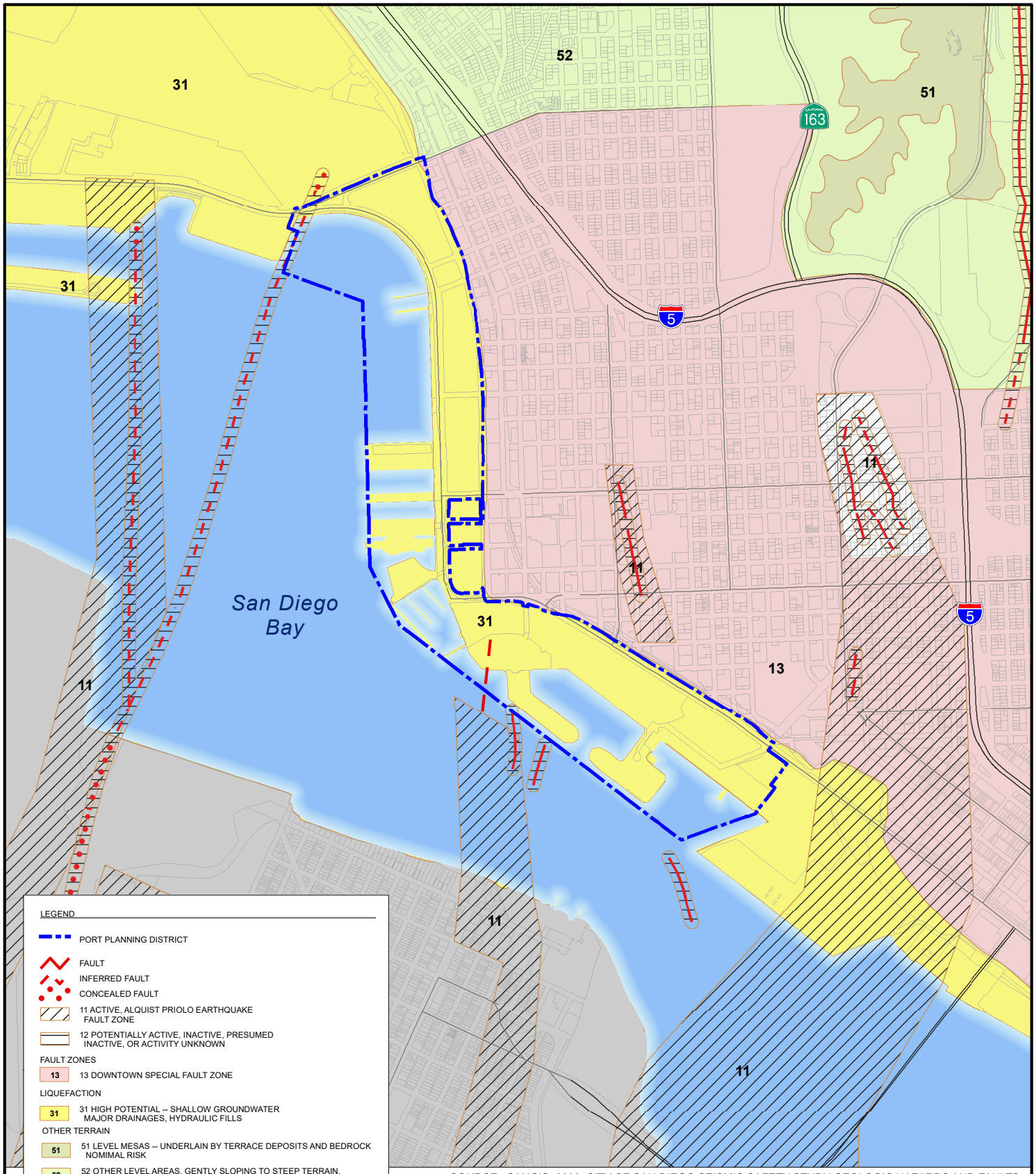
GEOLOGIC HAZARDS
PLANNING DISTRICT 2 - HARBOR ISLAND

PROJECT NO.	DATE
108331002	12/20

PORT MASTER PLAN UPDATE EIR PROJECT
SAN DIEGO, CALIFORNIA

FIGURE
20

20_108331002_GH_D2.mxd 12/11/2020 JDL



SOURCE: SANGIS, 2008, CITY OF SAN DIEGO SEISMIC SAFETY STUDY GEOLOGIC HAZARDS AND FAULTS.; NINYO & MOORE, 2018.

N

SCALE IN FEET

0 2,000 4,000

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE.

Ninyo & Moore

GEOLOGIC HAZARDS
PLANNING DISTRICT 3 - EMBARCADERO

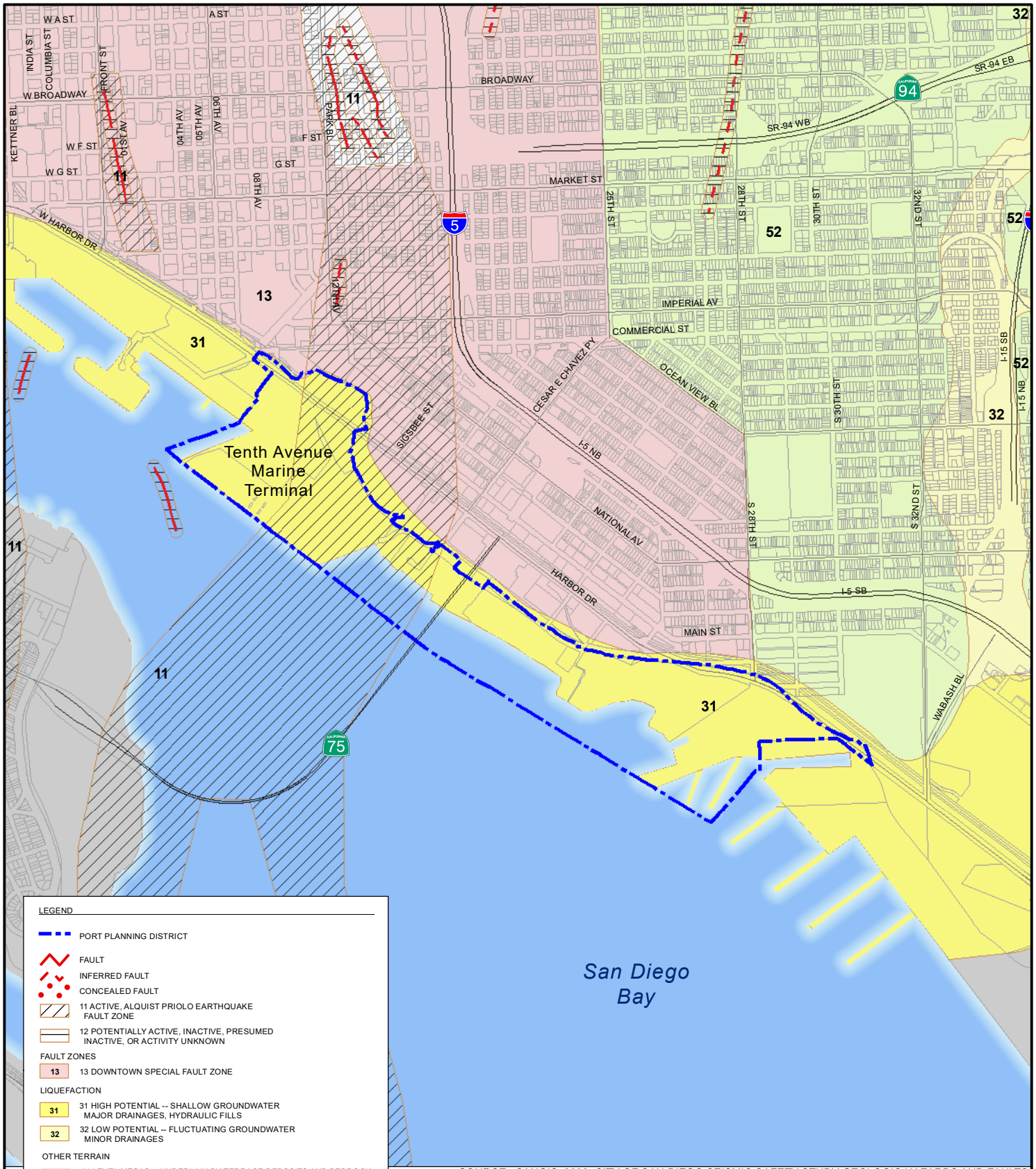
FIGURE

21

PROJECT NO.	DATE
108331002	12/20

PORT MASTER PLAN UPDATE EIR PROJECT
SAN DIEGO, CALIFORNIA

21_108331002_GH_D3.mxd 12/11/2020 JDL



LEGEND

- PORT PLANNING DISTRICT
- FAULT
- INFERRED FAULT
- CONCEALED FAULT
- 11 ACTIVE, ALQUIST PRIOLO EARTHQUAKE FAULT ZONE
- 12 POTENTIALLY ACTIVE, INACTIVE, PRESUMED INACTIVE, OR ACTIVITY UNKNOWN

FAULT ZONES

- 13 — 13 DOWNTOWN SPECIAL FAULT ZONE

LIQUEFACTION

- 31 — 31 HIGH POTENTIAL -- SHALLOW GROUNDWATER MAJOR DRAINAGES, HYDRAULIC FILLS
- 32 — 32 LOW POTENTIAL -- FLUCTUATING GROUNDWATER MINOR DRAINAGES

OTHER TERRAIN

- 51 — 51 LEVEL MESAS -- UNDERLAIN BY TERRACE DEPOSITS AND BEDROCK NOMIMAL RISK
- 52 — 52 OTHER LEVEL AREAS, GENTLY SLOPING TO STEEP TERRAIN, FAVORABLE GEOLOGIC STRUCTURE, LOW RISK
- AREA NOT MAPPED

SOURCE: SANGIS, 2008, CITY OF SAN DIEGO SEISMIC SAFETY STUDY GEOLOGIC HAZARDS AND FAULTS.

N

SCALE IN FEET

0 2,000 4,000

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE.

Ninyo & Moore

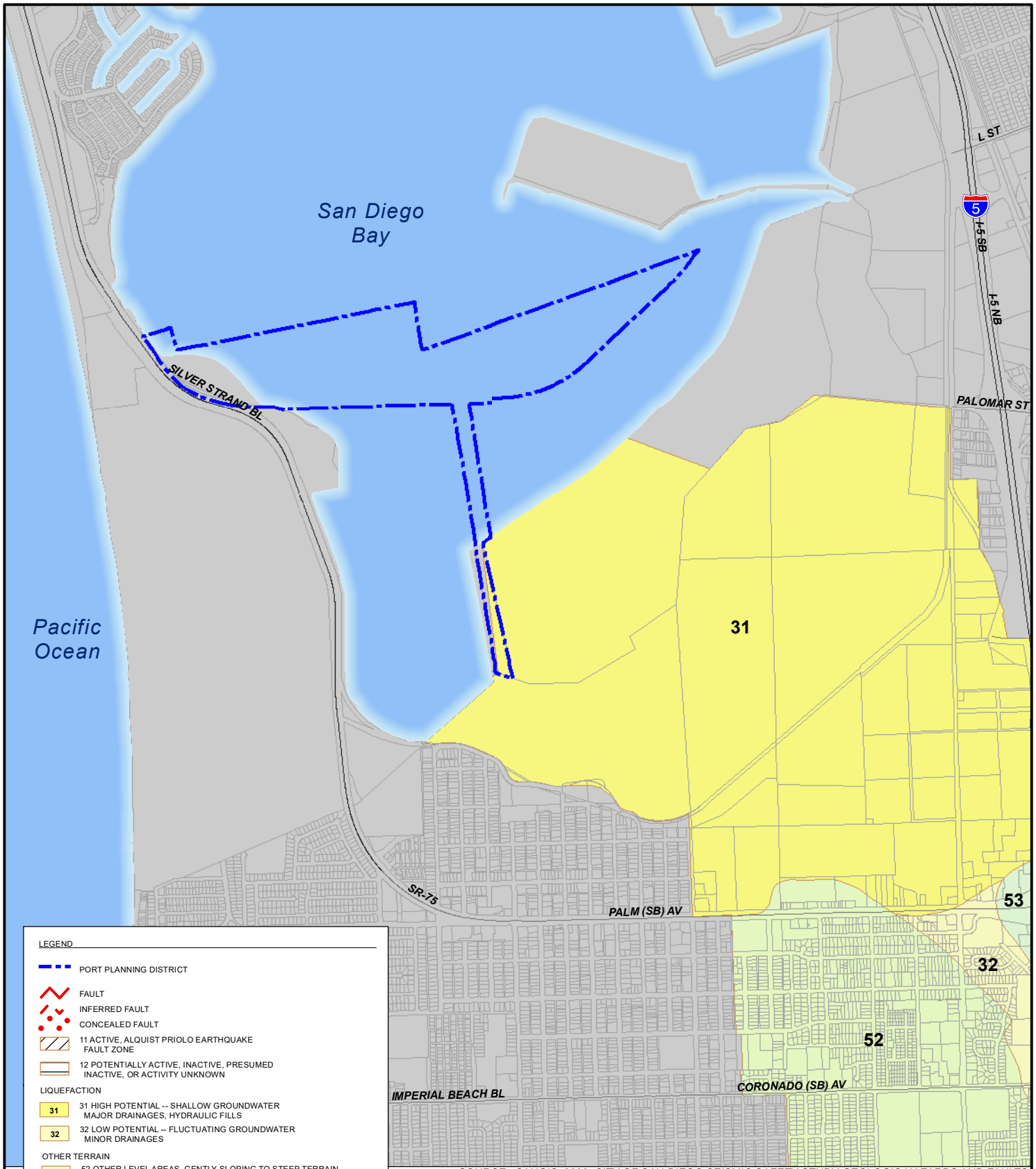
GEOLOGIC HAZARDS
PLANNING DISTRICT 4 - WORKING WATERFRONT

FIGURE 22

PROJECT NO.	DATE
108331002	12/20

PORT MASTER PLAN UPDATE EIR PROJECT
SAN DIEGO, CALIFORNIA

22_108331002_GH_D4.mxd 12/11/2020 JDL



SOURCE: SANGIS, 2008, CITY OF SAN DIEGO SEISMIC SAFETY STUDY GEOLOGIC HAZARDS AND FAULTS.

N

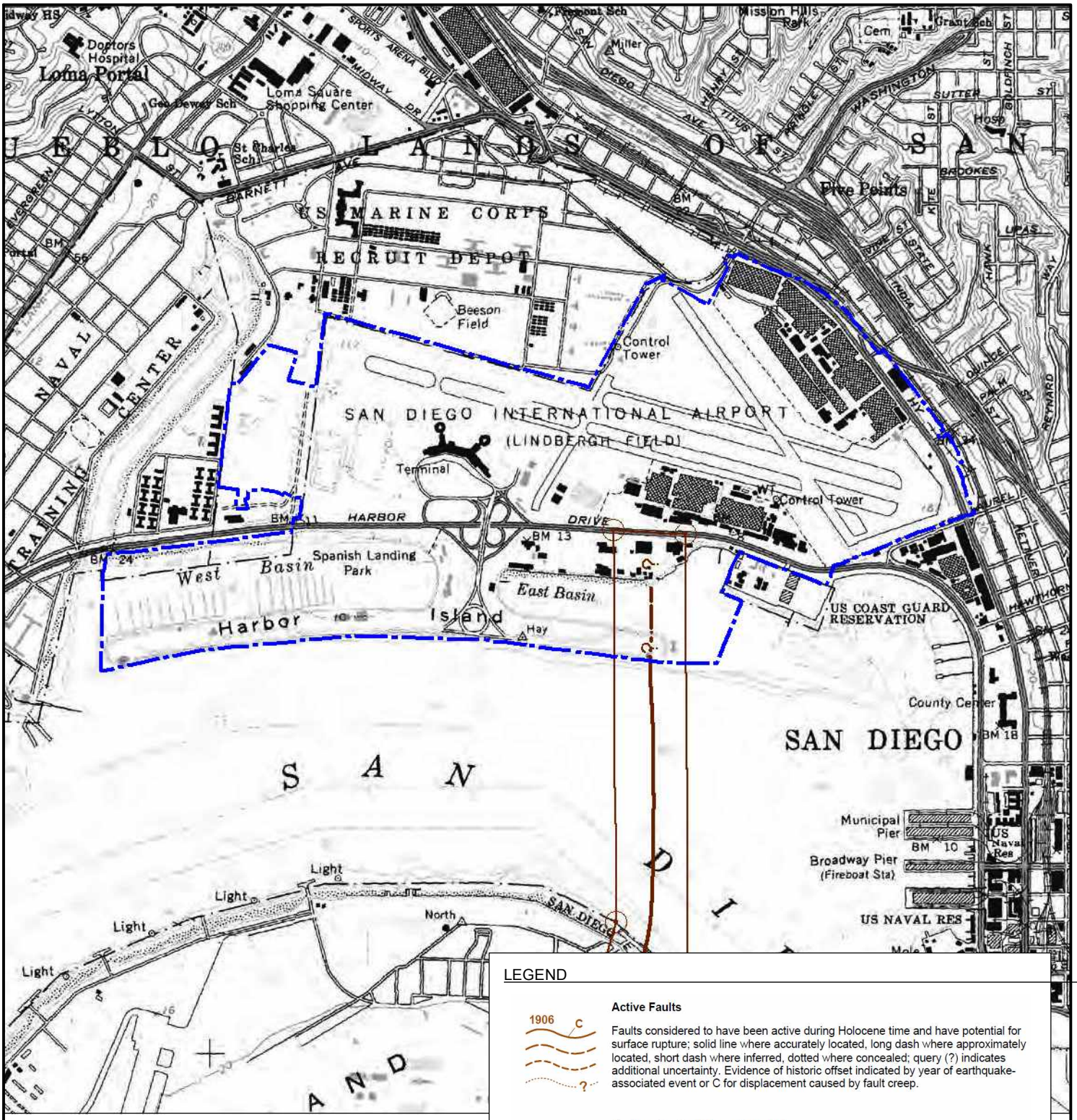
SCALE IN FEET

0 2,000 4,000

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE.

Ninyo & Moore	GEOLOGIC HAZARDS PLANNING DISTRICT 7 - SOUTH BAY	FIGURE
PROJECT NO. 108331002 / DATE 12/20	PORT MASTER PLAN UPDATE EIR PROJECT SAN DIEGO, CALIFORNIA	23

23_108331002_GH_D7.mxd 12/11/2020 JDL



LEGEND

Active Faults

Faults considered to have been active during Holocene time and have potential for surface rupture; solid line where accurately located, long dash where approximately located, short dash where inferred, dotted where concealed; query (?) indicates additional uncertainty. Evidence of historic offset indicated by year of earthquake-associated event or C for displacement caused by fault creep.

Earthquake Fault Zone Boundaries

These are delineated as straight-line segments that connect encircled turning points so as to define Earthquake Fault Zone segments.

Turning point located in water and delineated by geographic coordinates.

Seaward projection of zone boundary.

SOURCE: STATE OF CALIFORNIA, 2003, EARTHQUAE FAULT ZONES MAP, POINT LOMA QUADRANGLE; SANGIS, 2008, CITY OF SAN DIEGO SEISMIC SAFETY STUDY GEOLOGIC HAZARDS AND FAULTS.

SCALE IN FEET

0 2,000 4,000

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE.

Ninyo & Moore	EARTHQUAKE FAULT ZONES PLANNING DISTRICT 2 - HARBOR ISLAND	FIGURE
PROJECT NO. / DATE	PORT MASTER PLAN UPDATE EIR PROJECT SAN DIEGO, CALIFORNIA	24
108331002 / 12/20		

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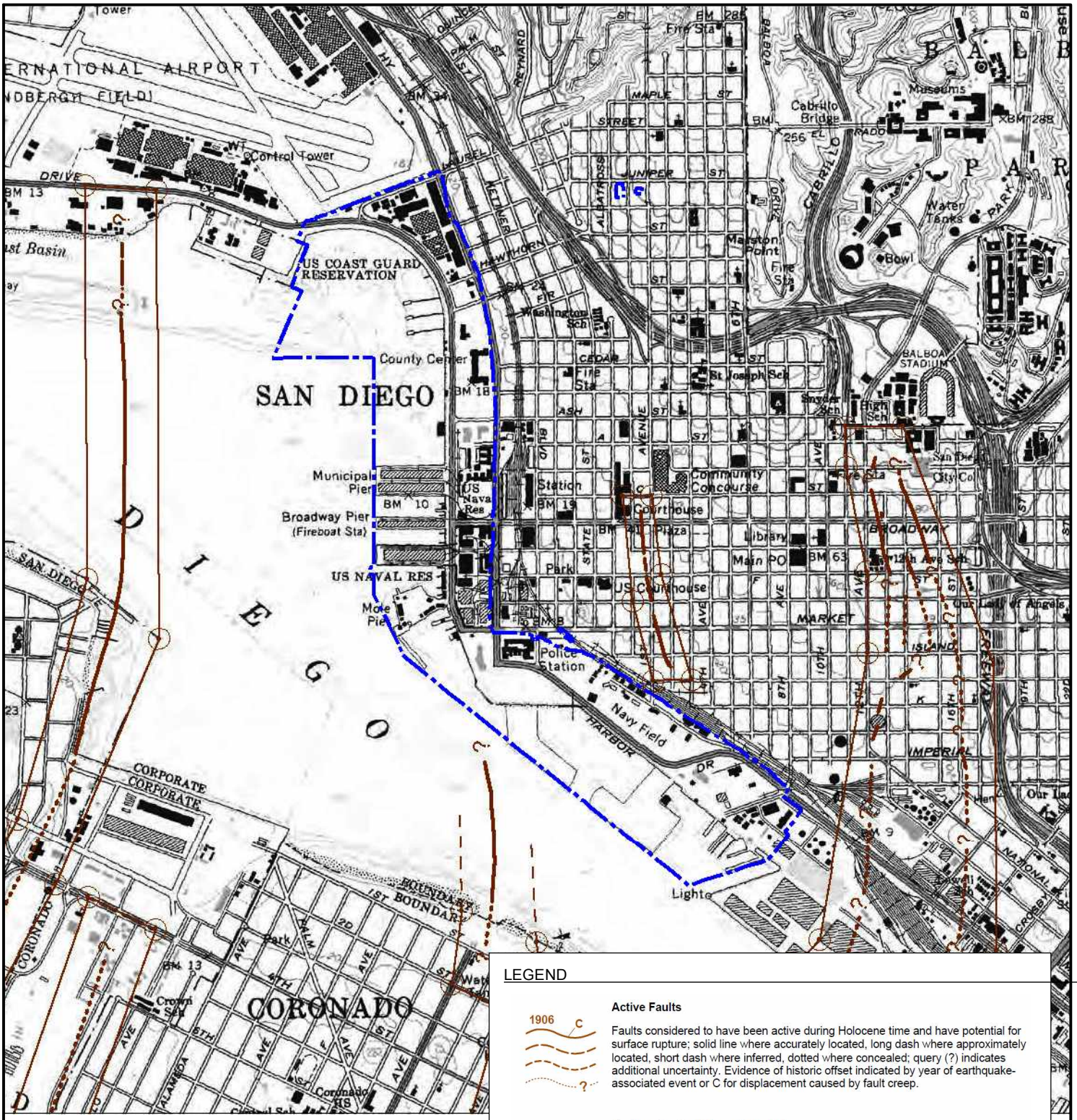

SOURCE: STATE OF CALIFORNIA, 2003, EARTHQUAE FAULT ZONES MAP, POINT LOMA QUADRANGLE; SANGIS, 2008, CITY OF SAN DIEGO SEISMIC SAFETY STUDY GEOLOGIC HAZARDS AND FAULTS.

LEGEND

Active Faults

1906 C

Faults considered to have been active during Holocene time and have potential for surface rupture; solid line where accurately located, long dash where approximately located, short dash where inferred, dotted where concealed; query (?) indicates additional uncertainty. Evidence of historic offset indicated by year of earthquake-associated event or C for displacement caused by fault creep.

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These are delineated as straight-line segments that connect encircled turning points so as to define Earthquake Fault Zone segments.

Turning point located in water and delineated by geographic coordinates.

Seaward projection of zone boundary.

SCALE IN FEET

0 2,000 4,000

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE.

Ninyo & Moore

EARTHQUAKE FAULT ZONES
PLANNING DISTRICT 3 - EMBARCADERO

FIGURE 25

PROJECT NO.	DATE
108331002	12/20

PORT MASTER PLAN UPDATE EIR PROJECT
SAN DIEGO, CALIFORNIA

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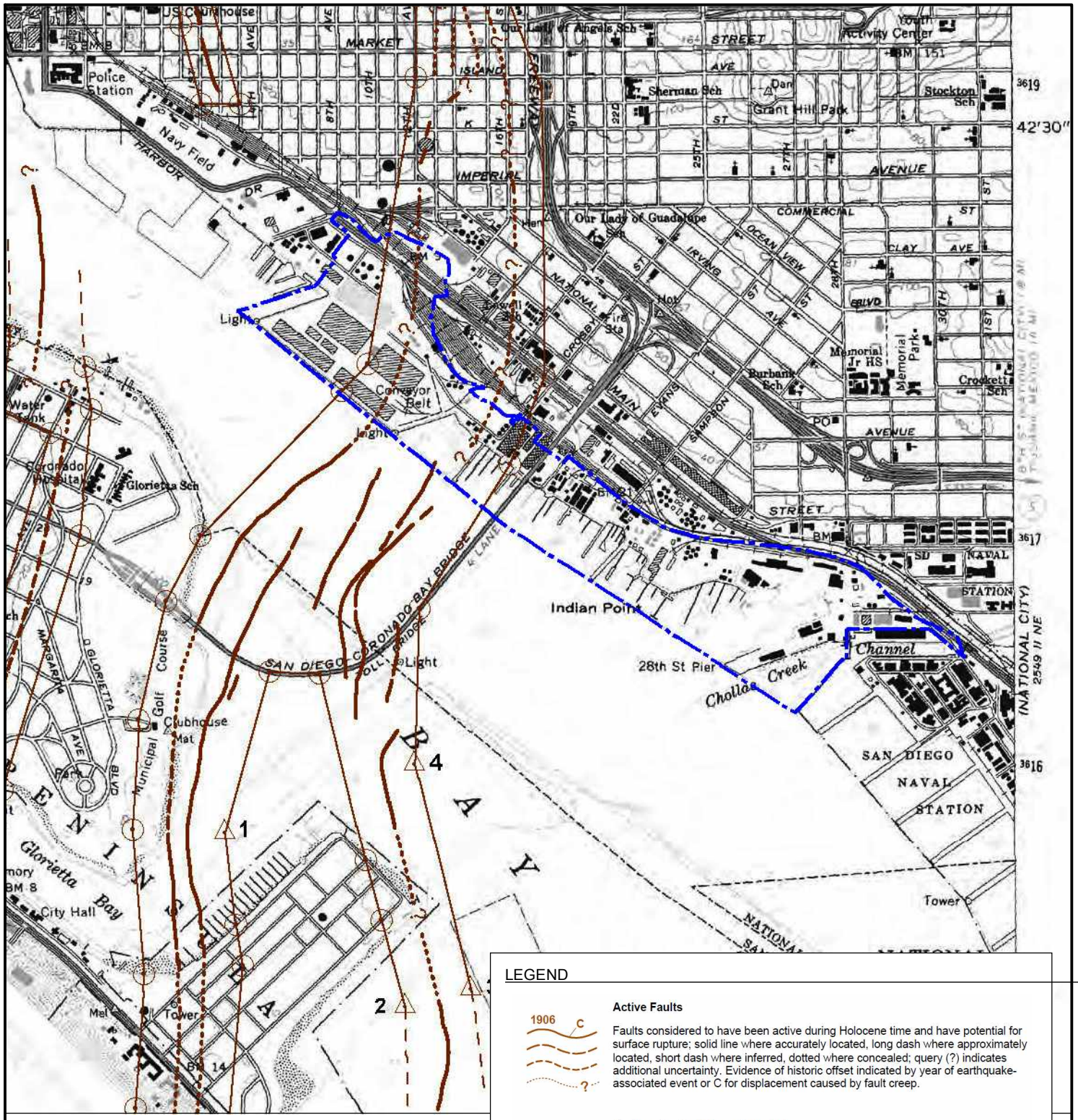

LEGEND

Active Faults

1906 C

Faults considered to have been active during Holocene time and have potential for surface rupture; solid line where accurately located, long dash where approximately located, short dash where inferred, dotted where concealed; query (?) indicates additional uncertainty. Evidence of historic offset indicated by year of earthquake-associated event or C for displacement caused by fault creep.

Earthquake Fault Zone Boundaries

These are delineated as straight-line segments that connect encircled turning points so as to define Earthquake Fault Zone segments.

Turning point located in water and delineated by geographic coordinates.

Seaward projection of zone boundary.

SOURCE: STATE OF CALIFORNIA, 2003, EARTHQUAE FAULT ZONES MAP, POINT LOMA QUADRANGLE; SANGIS, 2008, CITY OF SAN DIEGO SEISMIC SAFETY STUDY GEOLOGIC HAZARDS AND FAULTS.

SCALE IN FEET

0 2,000 4,000

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE.

Ninyo & Moore

EARTHQUAKE FAULT ZONES
PLANNING DISTRICT 4 - WORKING WATERFRONT

FIGURE **26**

PROJECT NO.	DATE
108331002	12/20

PORT MASTER PLAN UPDATE EIR PROJECT
SAN DIEGO, CALIFORNIA

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LEGEND

Active Faults

1906 C ?

Faults considered to have been active during Holocene time and have potential for surface rupture; solid line where accurately located, long dash where approximately located, short dash where inferred, dotted where concealed; query (?) indicates additional uncertainty. Evidence of historic offset indicated by year of earthquake-associated event or C for displacement caused by fault creep.

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These are delineated as straight-line segments that connect encircled turning points so as to define Earthquake Fault Zone segments.

Turning point located in water and delineated by geographic coordinates.

Seaward projection of zone boundary.

SOURCE: STATE OF CALIFORNIA, 2003, EARTHQUAE FAULT ZONES MAP, POINT LOMA QUADRANGLE; SANGIS, 2008, CITY OF SAN DIEGO SEISMIC SAFETY STUDY GEOLOGIC HAZARDS AND FAULTS.

SCALE IN FEET

0 2,000 4,000

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE.

Ninyo & Moore	EARTHQUAKE FAULT ZONES PLANNING DISTRICT 10 - CORONADO BAYFRONT	FIGURE
PROJECT NO. / DATE	PORT MASTER PLAN UPDATE EIR PROJECT SAN DIEGO, CALIFORNIA	27
108331002 / 12/20		

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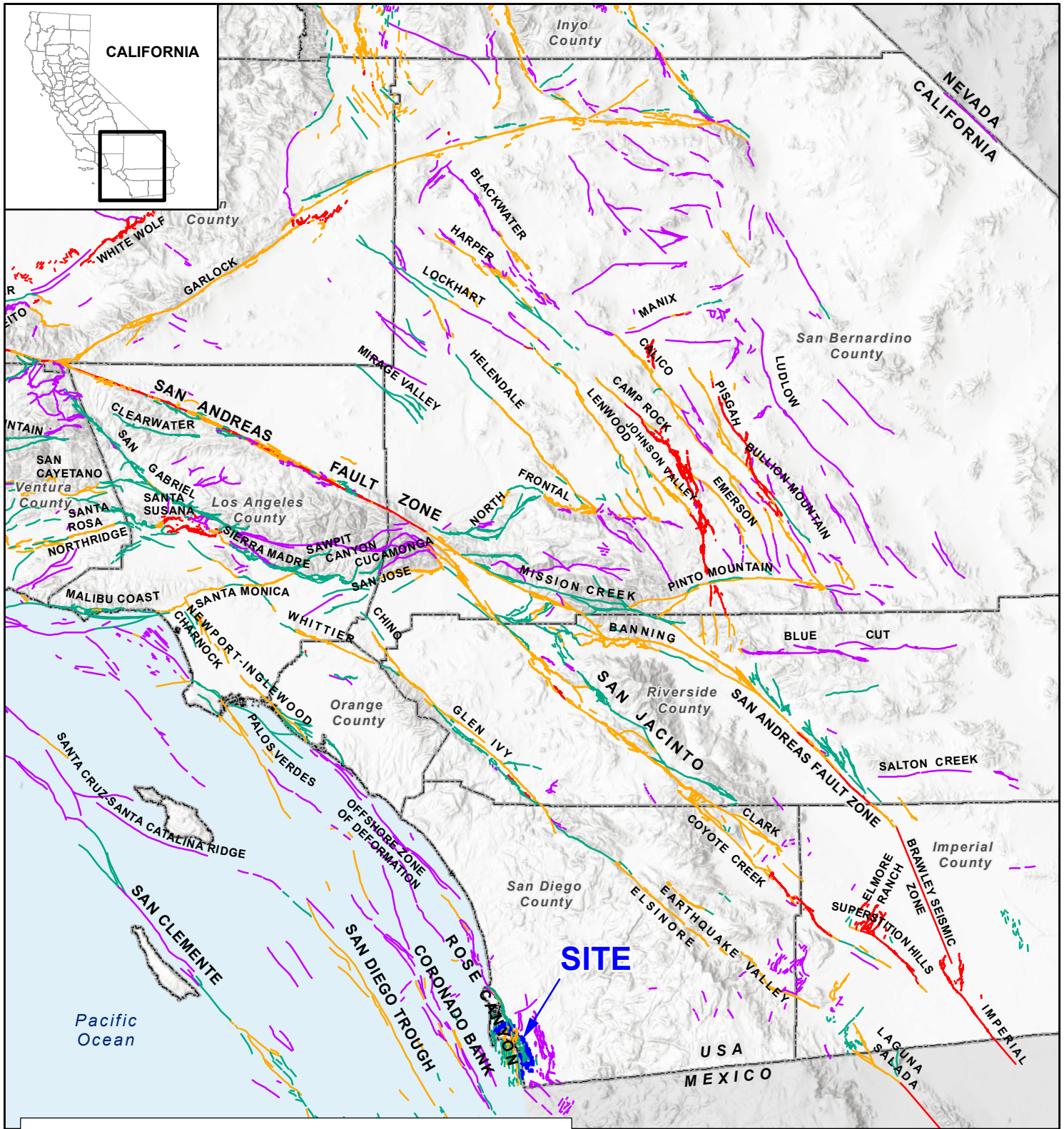


LEGEND

CALIFORNIA FAULT ACTIVITY

- HISTORICALLY ACTIVE
- HOLOCENE ACTIVE
- LATE QUATERNARY (POTENTIALLY ACTIVE)
- QUATERNARY (POTENTIALLY ACTIVE)
- STATE/COUNTY BOUNDARY

SOURCE: U.S. GEOLOGICAL SURVEY AND CALIFORNIA GEOLOGICAL SURVEY, 2006, QUATERNARY FAULT AND FOLD DATABASE FOR THE UNITED STATES.

N

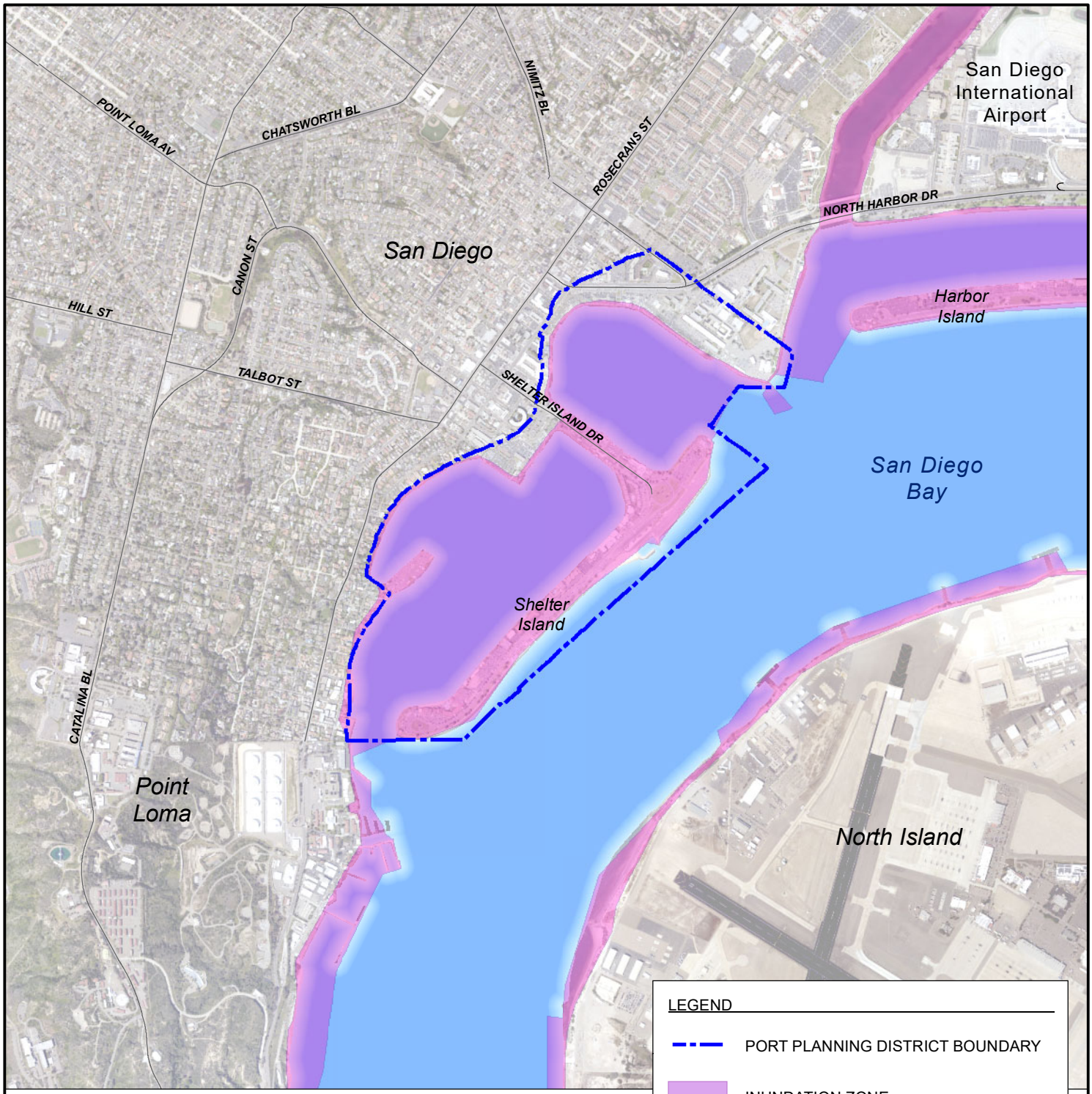
SCALE IN MILES

0 30 60

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE.

Ninyo & Moore	FAULT LOCATIONS	FIGURE
PROJECT NO. 108331002	DATE 12/20	PORT MASTER PLAN UPDATE EIR PROJECT SAN DIEGO, CALIFORNIA	28

28_108331002_FL_R.mxd 12/11/2020 1:22:15 PM JDL



SOURCES: PORT DISTRICT BOUNDARIES - ICF/PORT OF SAN DIEGO, 2017; IMAGERY - SANDAG AND SANGIS; CALIFORNIA GEOLOGICAL SURVEY, CALEMA, TSUNAMI RESEARCH CENER-UNIVERSITY OF SOUTHERN CALIFORNIA, 2017

N

SCALE IN FEET

0 2,000 4,000

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore	TSUNAMI INUNDATION PLANNING DISTRICT 1 - SHELTER ISLAND	FIGURE
PROJECT NO. / DATE	PORT MASTER PLAN UPDATE EIR PROJECT SAN DIEGO, CALIFORNIA	29
108331002 / 12/20		

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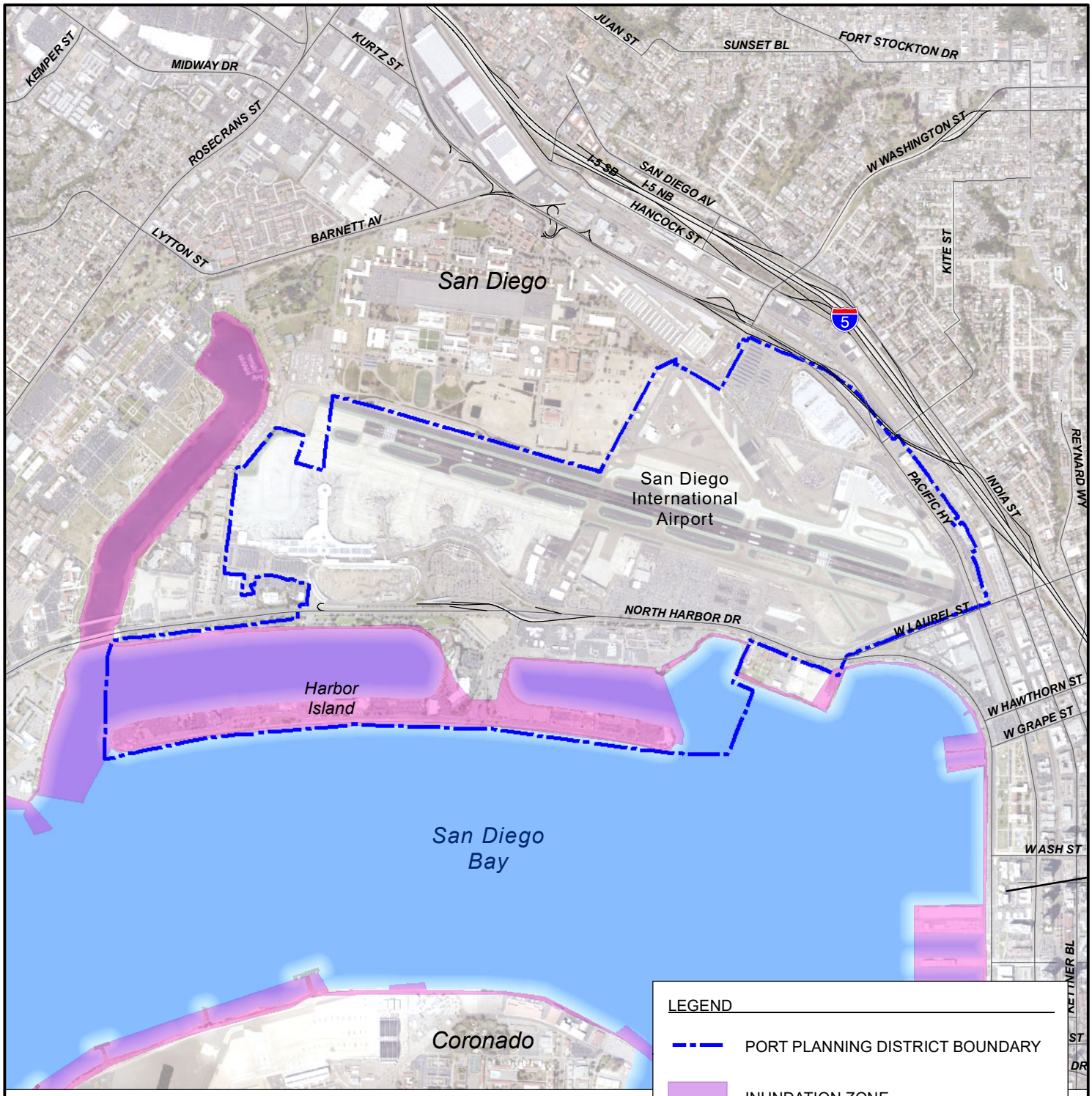

SOURCES: PORT DISTRICT BOUNDARIES - ICF/PORT OF SAN DIEGO, 2017; IMAGERY - SANDAG AND SANGIS; CALIFORNIA GEOLOGICAL SURVEY, CALEMA, TSUNAMI RESEARCH CENER-UNIVERSITY OF SOUTHERN CALIFORNIA, 2017

N

SCALE IN FEET

0 2,000 4,000

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

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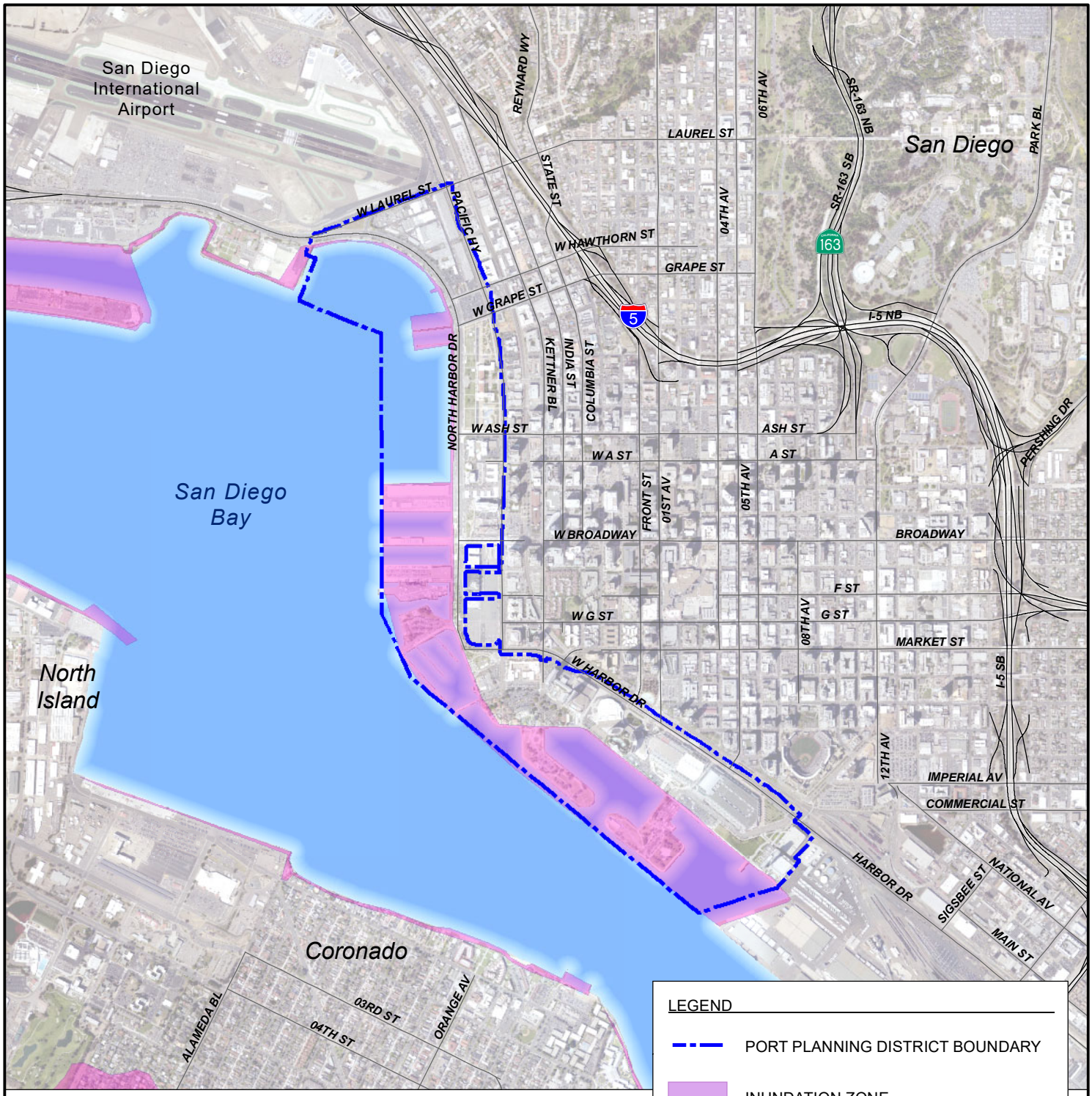
Ninyo & Moore	TSUNAMI INUNDATION PLANNING DISTRICT 2 - HARBOR ISLAND	FIGURE
PROJECT NO. 108331002 / DATE 12/20	PORT MASTER PLAN UPDATE EIR PROJECT SAN DIEGO, CALIFORNIA	30

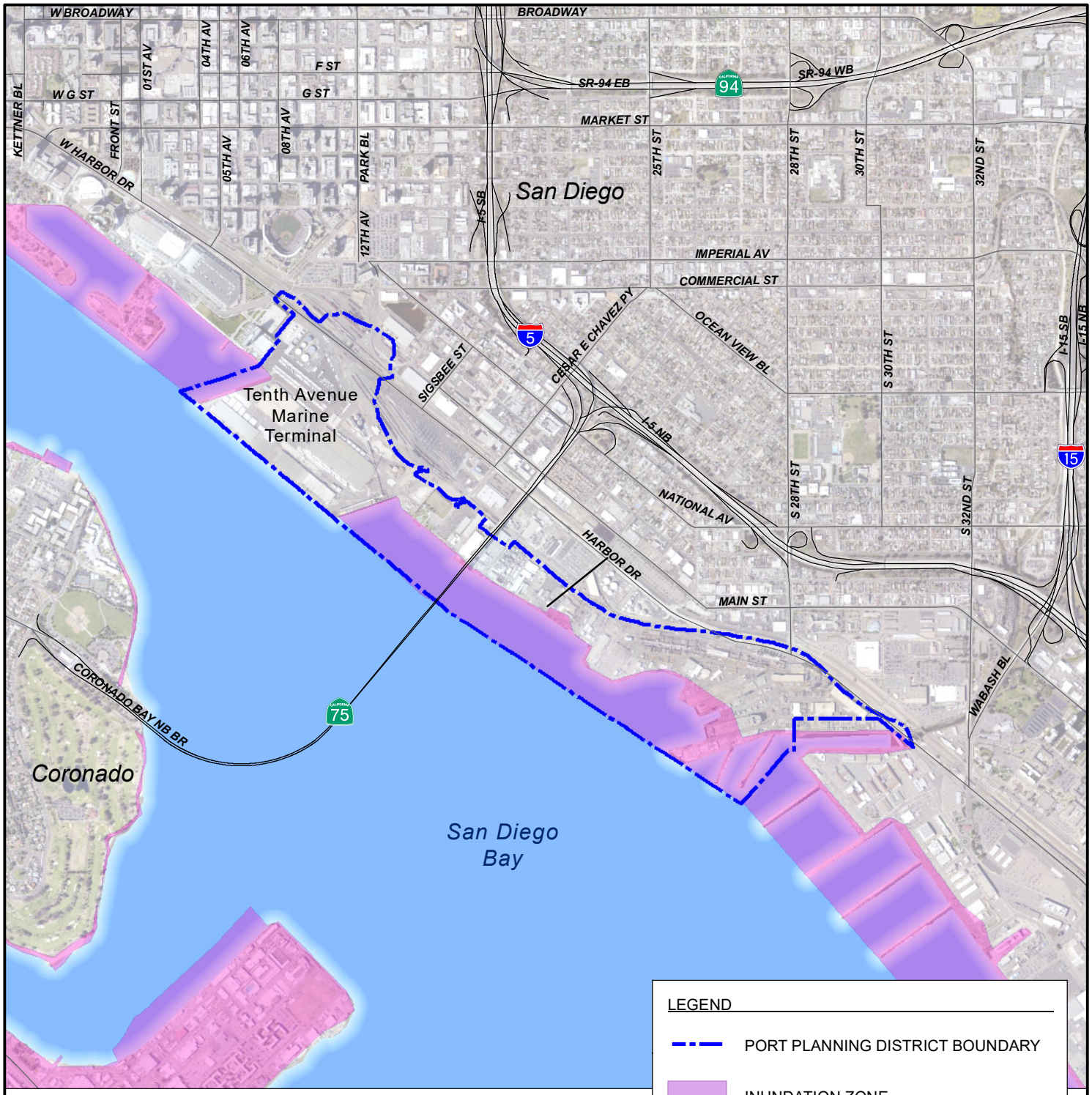


SOURCES: PORT DISTRICT BOUNDARIES - ICF/PORT OF SAN DIEGO, 2017; IMAGERY - SANDAG AND SANGIS; CALIFORNIA GEOLOGICAL SURVEY, CALEMA, TSUNAMI RESEARCH CENER-UNIVERSITY OF SOUTHERN CALIFORNIA, 2017

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore	TSUNAMI INUNDATION PLANNING DISTRICT 3 - EMBARCADERO	FIGURE
PROJECT NO. / DATE	PORT MASTER PLAN UPDATE EIR PROJECT SAN DIEGO, CALIFORNIA	31
108331002 / 12/20		

1_108153001_SL.mxd JDL



SOURCES: PORT DISTRICT BOUNDARIES - ICF/PORT OF SAN DIEGO, 2017; IMAGERY - SANDAG AND SANGIS; CALIFORNIA GEOLOGICAL SURVEY, CALEMA, TSUNAMI RESEARCH CENER-UNIVERSITY OF SOUTHERN CALIFORNIA, 2017

N

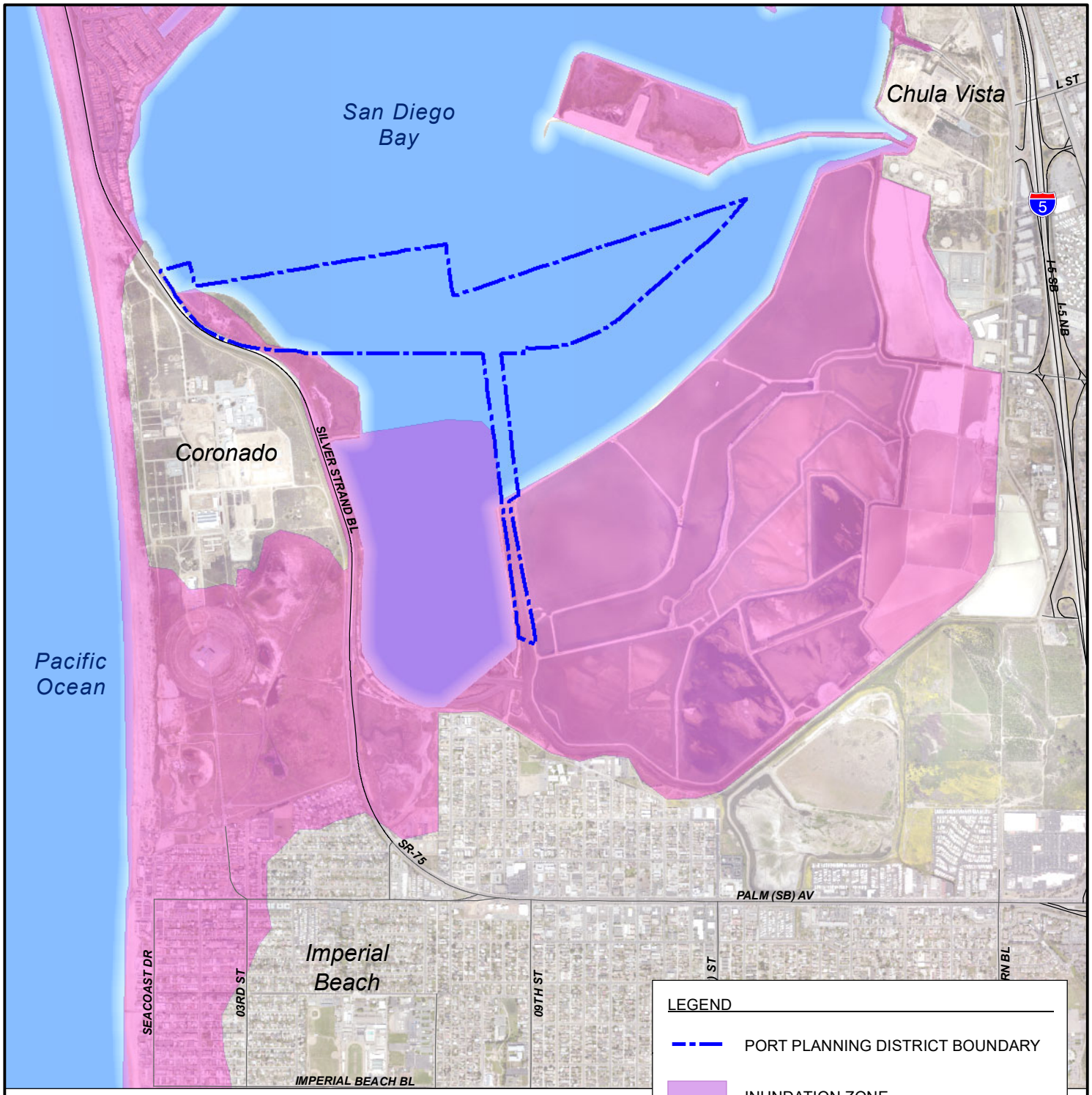
SCALE IN FEET

0 2,000 4,000

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore	TSUNAMI INUNDATION PLANNING DISTRICT 4 - WORKING WATERFRONT	FIGURE
PROJECT NO. 108331002 / DATE 12/20	PORT MASTER PLAN UPDATE EIR PROJECT SAN DIEGO, CALIFORNIA	32

1_108153001_SL.mxd JDL



SOURCES: PORT DISTRICT BOUNDARIES - ICF/PORT OF SAN DIEGO, 2017; IMAGERY - SANDAG AND SANGIS; CALIFORNIA GEOLOGICAL SURVEY, CALEMA, TSUNAMI RESEARCH CENER-UNIVERSITY OF SOUTHERN CALIFORNIA, 2017

N

SCALE IN FEET

0 2,000 4,000

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore	TSUNAMI INUNDATION PLANNING DISTRICT 7 - SOUTH BAY	FIGURE
PROJECT NO. 108331002 / DATE 12/20	PORT MASTER PLAN UPDATE EIR PROJECT SAN DIEGO, CALIFORNIA	33

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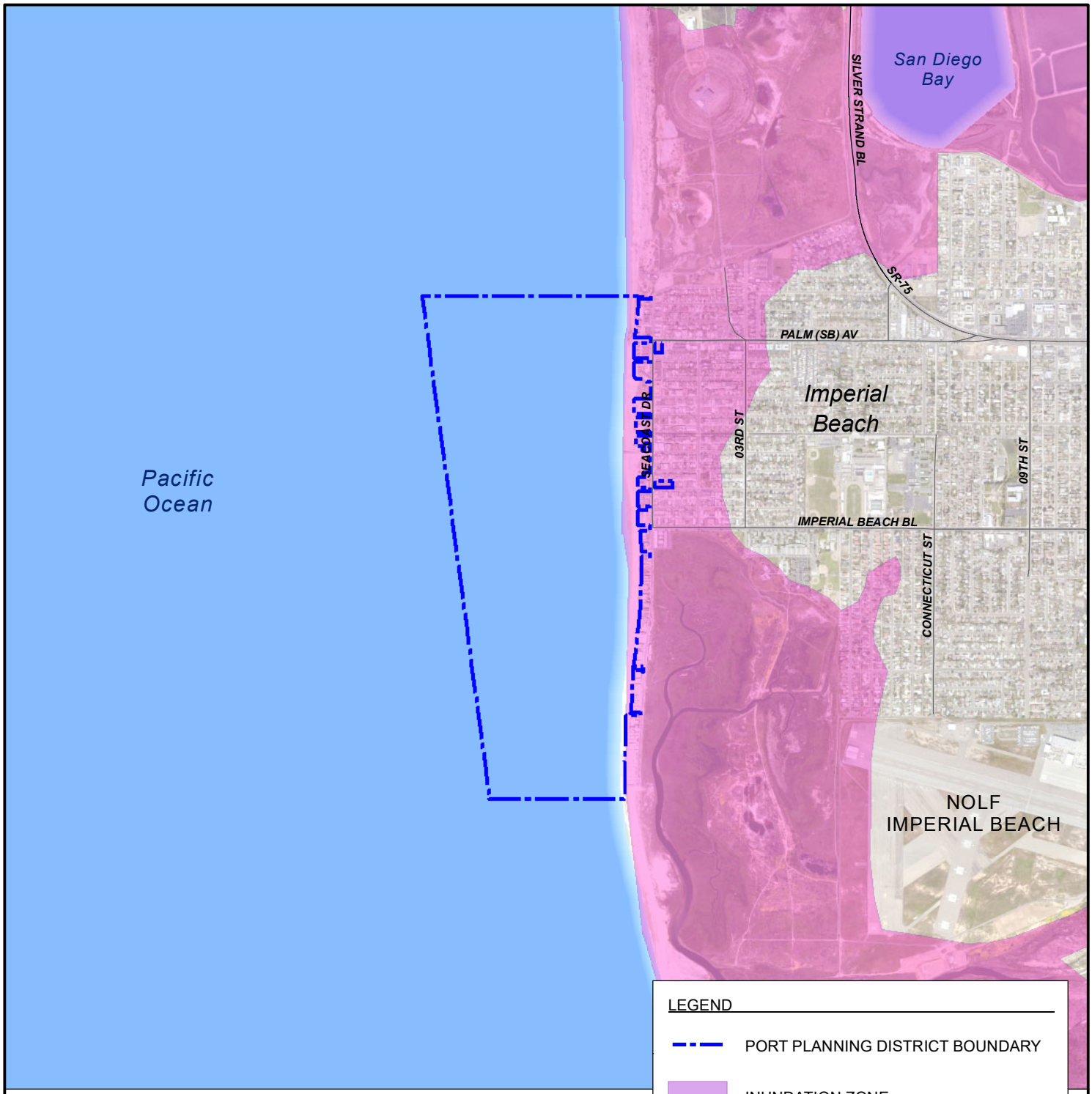

SOURCES: PORT DISTRICT BOUNDARIES - ICF/PORT OF SAN DIEGO, 2017; IMAGERY - SANDAG AND SANGIS; CALIFORNIA GEOLOGICAL SURVEY, CALEMA, TSUNAMI RESEARCH CENER-UNIVERSITY OF SOUTHERN CALIFORNIA, 2017

N

SCALE IN FEET

0 2,000 4,000

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

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Ninyo & Moore	TSUNAMI INUNDATION PLANNING DISTRICT 8 - IMPERIAL BEACH OCEANFRONT	FIGURE
PROJECT NO. / DATE	PORT MASTER PLAN UPDATE EIR PROJECT SAN DIEGO, CALIFORNIA	34
108331002 / 12/20		

SOURCES: PORT DISTRICT BOUNDARIES - ICF/PORT OF SAN DIEGO, 2017; IMAGERY - SANDAG AND SANGIS; CALIFORNIA GEOLOGICAL SURVEY, CALEMA, TSUNAMI RESEARCH CENER- UNIVERSITY OF SOUTHERN CALIFORNIA, 2017

N

SCALE IN FEET

0 2,000 4,000

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

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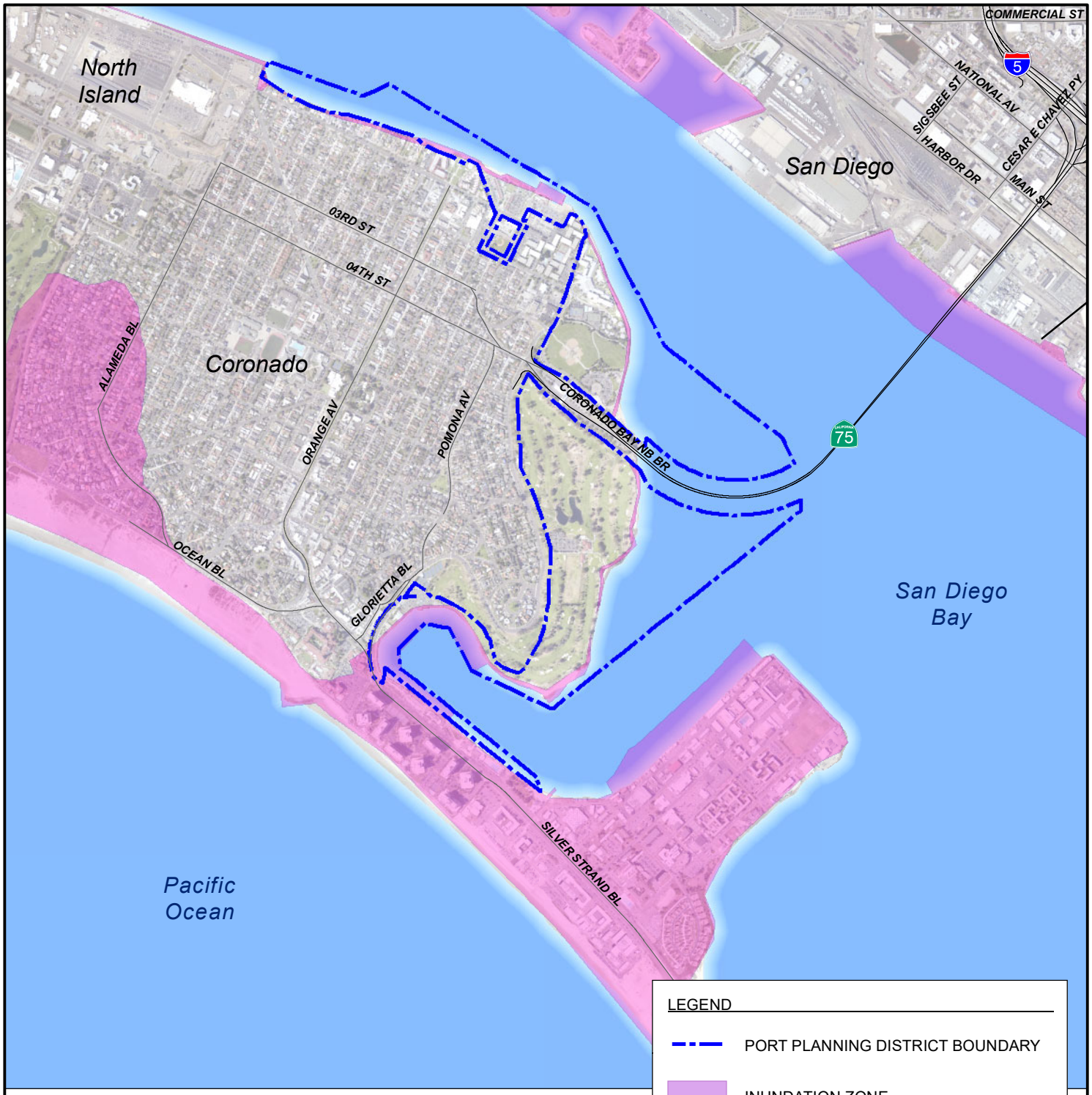
Ninyo & Moore	TSUNAMI INUNDATION PLANNING DISTRICT 9 - SILVER STRAND	FIGURE
PROJECT NO. / DATE	PORT MASTER PLAN UPDATE EIR PROJECT SAN DIEGO, CALIFORNIA	35
108331002 / 12/20		



LEGEND

PORT PLANNING DISTRICT BOUNDARY

INUNDATION ZONE

SOURCES: PORT DISTRICT BOUNDARIES - ICF/PORT OF SAN DIEGO, 2017; IMAGERY - SANDAG AND SANGIS; CALIFORNIA GEOLOGICAL SURVEY, CALEMA, TSUNAMI RESEARCH CENER- UNIVERSITY OF SOUTHERN CALIFORNIA, 2017

N

SCALE IN FEET

0 2,000 4,000

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore	TSUNAMI INUNDATION PLANNING DISTRICT 10 - CORONADO BAYFRONT	FIGURE
PROJECT NO. 108331002 / DATE 12/20	PORT MASTER PLAN UPDATE EIR PROJECT SAN DIEGO, CALIFORNIA	36

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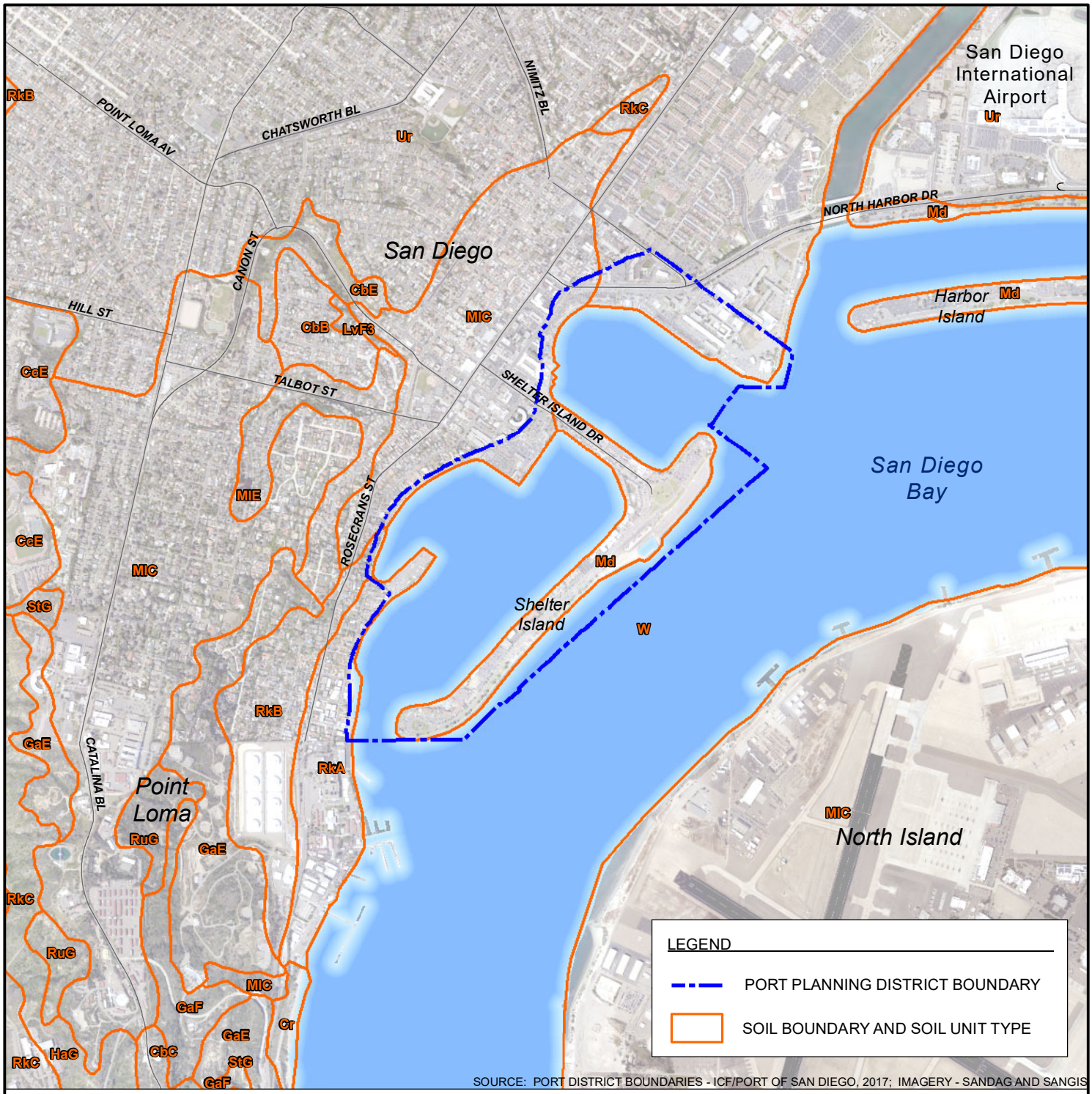

SOURCE: PORT DISTRICT BOUNDARIES - ICF/PORT OF SAN DIEGO, 2017; IMAGERY - SANDAG AND SANGIS

SOIL DESCRIPTIONS

CbB	CARLSBAD GRAVELLY LOAMY SAND 15 TO 30 PERCENT SLOPES	MIC	MARINA LOAMY COARSE SAND 2 TO 9 PERCENT SLOPES
CbC	CARLSBAD GRAVELLY LOAMY SAND 2 TO 5 PERCENT SLOPES	MIE	MARINA LOAMY COARSE SAND 9 TO 30 PERCENT SLOPES
CbE	CARLSBAD GRAVELLY LOAMY SAND 5 TO 9 PERCENT SLOPES	RkA	REIFF FINE SANDY LOAM 0 TO 2 PERCENT SLOPES
CcE	CARLSBAD-URBAN LAND COMPLEX 9 TO 30 PERCENT SLOPES	RkB	REIFF FINE SANDY LOAM 2 TO 5 PERCENT SLOPES
Cr	COASTAL BEACHES	RkC	REIFF FINE SANDY LOAM 5 TO 9 PERCENT SLOPES
GaE	GAVIOTA FINE SANDY LOAM 30 TO 50 PERCENT SLOPES	RuG	ROUGH BROKEN LAND
GaF	GAVIOTA FINE SANDY LOAM 9 TO 30 PERCENT SLOPES	StG	STEEP GULLIED LAND
HaG	HAMBRIGHT GRAVELLY CLAY LOAM 30 TO 75 PERCENT SLOPES	Ur	URBAN LAND
LvF3	LOAMY ALLUVIAL LAND-HUERHUERO COMPLEX 9 TO 50 PERCENT SLOPES SEVERELY ERODED	W	WATER
Md	MADE LAND		

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

N

SCALE IN FEET

0 2,000 4,000

Ninyo & Moore		USDA (SSURGO) SOIL SURVEY PLANNING DISTRICT 1 - SHELTER ISLAND	FIGURE
PROJECT NO.	DATE	PORT MASTER PLAN UPDATE EIR PROJECT SAN DIEGO, CALIFORNIA	37
108331002	12/20		

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SOURCE: PORT DISTRICT BOUNDARIES - ICF/PORT OF SAN DIEGO, 2017; IMAGERY - SANDAG AND SANGIS

SOIL DESCRIPTIONS

GaE	GAVIOTA FINE SANDY LOAM 30 TO 50 PERCENT SLOPES
GaF	GAVIOTA FINE SANDY LOAM 9 TO 30 PERCENT SLOPES
HuC	HUERHUERO-URBAN LAND COMPLEX 2 TO 9 PERCENT SLOPES
Md	MADE LAND
MIC	MARINA LOAMY COARSE SAND 2 TO 9 PERCENT SLOPES
TeF	TERRACE ESCARPMENTS
Ur	URBAN LAND
W	WATER

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

N

SCALE IN FEET

0 2,000 4,000

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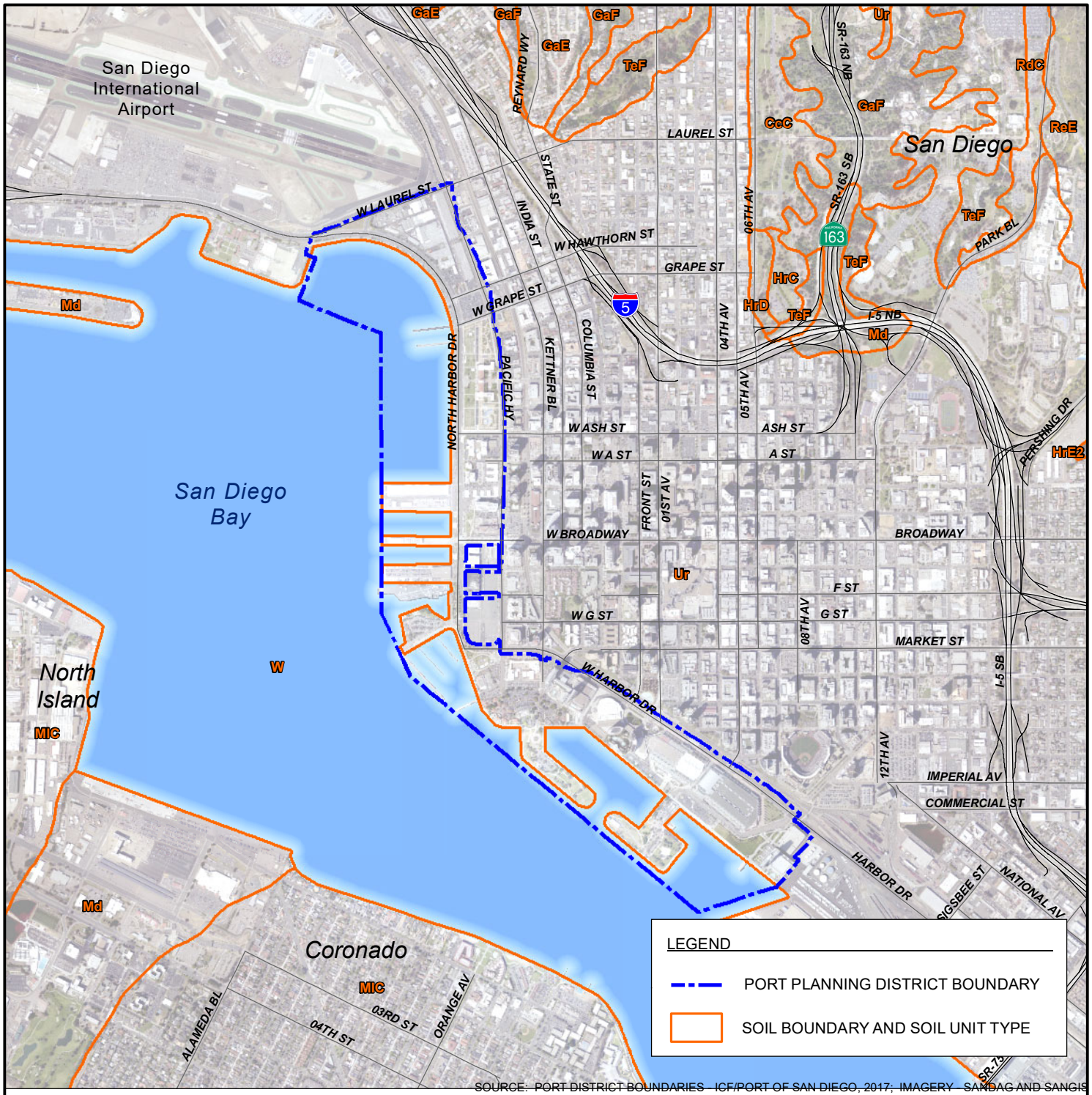
Ninyo & Moore

USDA (SSURGO) SOIL SURVEY
PLANNING DISTRICT 2 - HARBOR ISLAND

FIGURE 38

PROJECT NO.	DATE
108331002	12/20

PORT MASTER PLAN UPDATE EIR PROJECT
SAN DIEGO, CALIFORNIA



SOURCE: PORT DISTRICT BOUNDARIES - ICF/PORT OF SAN DIEGO, 2017; IMAGERY - SANDAG AND SANGIS

SOIL DESCRIPTIONS

CcC	CARLSBAD-URBAN LAND COMPLEX 2 TO 9 PERCENT SLOPES	MIC	MARINA LOAMY COARSE SAND 2 TO 9 PERCENT SLOPES
GaE	GAVIOTA FINE SANDY LOAM 30 TO 50 PERCENT SLOPES	RdC	REDDING COBBLY LOAM 9 TO 30 PERCENT SLOPES
GaF	GAVIOTA FINE SANDY LOAM 9 TO 30 PERCENT SLOPES	ReE	REDDING GRAVELLY LOAM 2 TO 9 PERCENT SLOPES
HrC	HUERHUERO LOAM 15 TO 30 PERCENT SLOPES ERODED	TeF	TERRACE ESCARPMENTS
HrD	HUERHUERO LOAM 2 TO 9 PERCENT SLOPES	Ur	URBAN LAND
HrE2	HUERHUERO LOAM 9 TO 15 PERCENT SLOPES	W	WATER
Md	MADE LAND		

N

SCALE IN FEET

0 2,000 4,000

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore		USDA (SSURGO) SOIL SURVEY PLANNING DISTRICT 3 - EMBARCADERO	FIGURE
PROJECT NO.	DATE	PORT MASTER PLAN UPDATE EIR PROJECT SAN DIEGO, CALIFORNIA	39
108331002	12/20		

1_108153001_SL.mxd JDL

SOURCE: PORT DISTRICT BOUNDARIES - ICF/PORT OF SAN DIEGO, 2017; IMAGERY - SANDAG AND SANGIS

SOIL DESCRIPTIONS

Cr	COASTAL BEACHES
Md	MADE LAND
MIC	MARINA LOAMY COARSE SAND 2 TO 9 PERCENT SLOPES
OhF	OLIVENHAIN COBBLY LOAM 30 TO 50 PERCENT SLOPES
RhC	REDDING-URBAN LAND COMPLEX 2 TO 9 PERCENT SLOPES
Ur	URBAN LAND
W	WATER

N

SCALE IN FEET

0 2,000 4,000

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore	USDA (SSURGO) SOIL SURVEY PLANNING DISTRICT 4 - WORKING WATERFRONT	FIGURE
PROJECT NO. 108331002 / DATE 12/20	PORT MASTER PLAN UPDATE EIR PROJECT SAN DIEGO, CALIFORNIA	40

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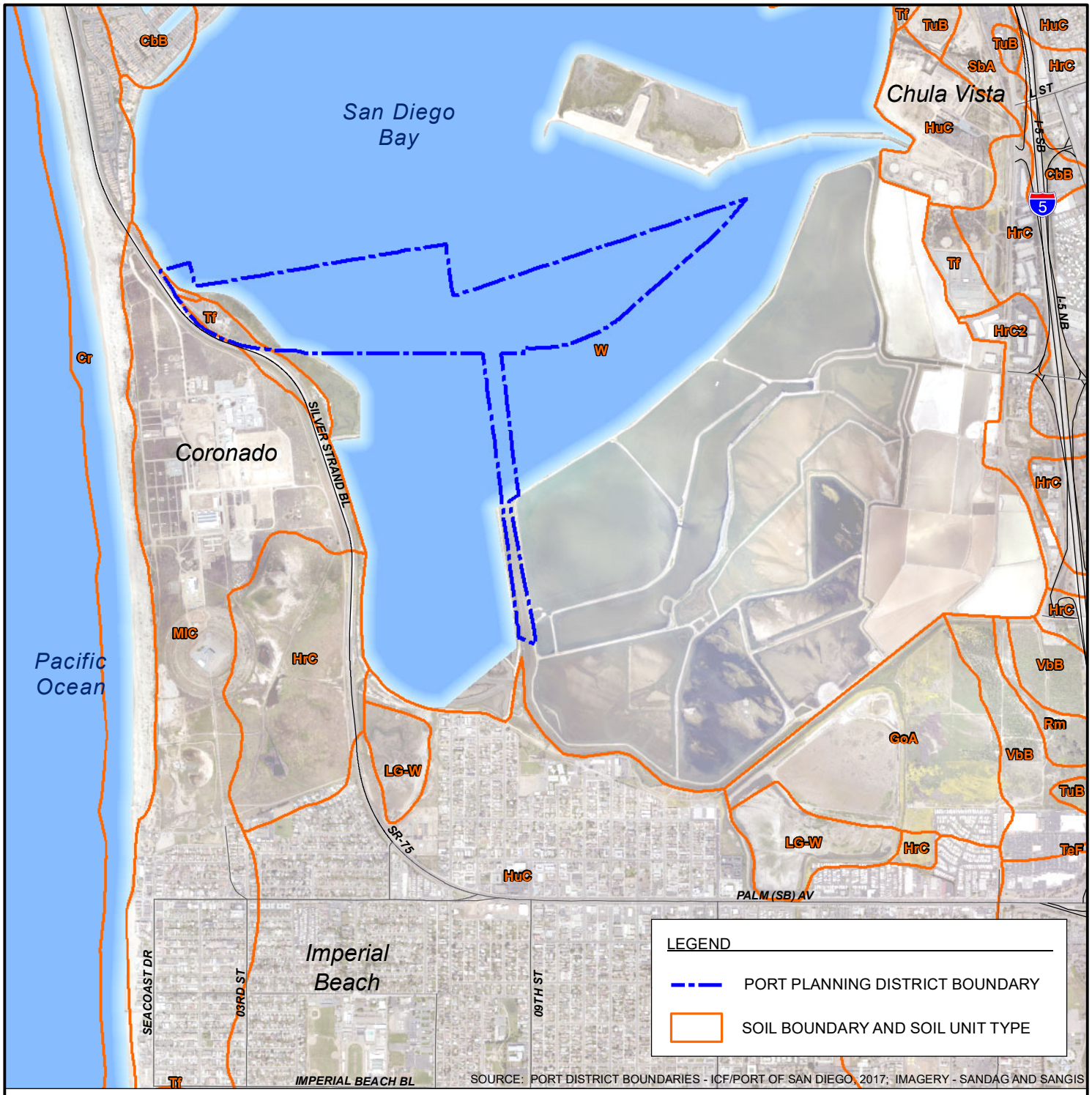

SOIL DESCRIPTIONS

CBB	Carlsbad gravelly loamy sand 2 to 5 percent slopes	MLC	Marina loamy coarse sand 2 to 9 percent slopes
CR	Coastal beaches	RM	Riverwash
GOA	Grangeville fine sandy loam 0 to 2 percent slopes	SBA	Salinas clay loam 0 to 2 percent slopes warm MAAT MLRA 19
HRC	Huerhuero loam 2 to 9 percent slopes	TEF	Terrace escarpments
HRC2	Huerhuero loam 5 to 9 percent slopes eroded	TF	Tidal flats
HUC	Huerhuero-Urban land complex 2 to 9 percent slopes	TUB	Tujunga sand 0 to 5 percent slopes
LG-W	Lagoon water	VBB	Visalia gravelly sandy loam 2 to 5 percent slopes
MD	Made land	W	Water

N

SCALE IN FEET

0 2,000 4,000

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore	USDA (SSURGO) SOIL SURVEY PLANNING DISTRICT 7 - SOUTH BAY	FIGURE
PROJECT NO. 108331002 / DATE 12/20	PORT MASTER PLAN UPDATE EIR PROJECT SAN DIEGO, CALIFORNIA	41

1_108153001_SL.mxd JDL

SOURCE: PORT DISTRICT BOUNDARIES - ICF/PORT OF SAN DIEGO, 2017; IMAGERY - SANDAG AND SANGIS

SOIL DESCRIPTIONS

CkA	CHINO SILT LOAM SALINE 0 TO 2 PERCENT SLOPES	LG-W	LAGOON WATER
Cr	COASTAL BEACHES	MIC	MARINA LOAMY COARSE SAND 2 TO 9 PERCENT SLOPES
HrC	HUERHUERO LOAM 2 TO 9 PERCENT SLOPES	Tf	TIDAL FLATS
HuC	HUERHUERO-URBAN LAND COMPLEX 2 TO 9 PERCENT SLOPES	W	WATER

N

SCALE IN FEET

0 2,000 4,000

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore		USDA (SSURGO) SOIL SURVEY PLANNING DISTRICT 8 - IMPERIAL BEACH OCEANFRONT	FIGURE
PROJECT NO.	DATE	PORT MASTER PLAN UPDATE EIR PROJECT SAN DIEGO, CALIFORNIA	42
108331002	12/20		

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SOURCE: PORT DISTRICT BOUNDARIES - ICF/PORT OF SAN DIEGO, 2017; IMAGERY - SANDAG AND SANGIS

SOIL DESCRIPTIONS

CbB	CARLSBAD GRAVELLY LOAMY SAND 2 TO 5 PERCENT SLOPES
Cr	COASTAL BEACHES
HrC	HUERHUERO LOAM 2 TO 9 PERCENT SLOPES
Md	MADE LAND
MIC	MARINA LOAMY COARSE SAND 2 TO 9 PERCENT SLOPES
Tf	TIDAL FLATS
W	WATER

N

SCALE IN FEET

0 2,000 4,000

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

1_108153001_SL.mxd JDL

Ninyo & Moore	USDA (SSURGO) SOIL SURVEY PLANNING DISTRICT 9 - SILVER STRAND	FIGURE
PROJECT NO. 108331002 / DATE 12/20	PORT MASTER PLAN UPDATE EIR PROJECT SAN DIEGO, CALIFORNIA	43

SOURCE: PORT DISTRICT BOUNDARIES - ICF/PORT OF SAN DIEGO, 2017; IMAGERY - SANDAG AND SANGIS

SOIL DESCRIPTIONS

Cr	COASTAL BEACHES
Md	MADE LAND
MIC	MARINA LOAMY COARSE SAND 2 TO 9 PERCENT SLOPES
Ur	URBAN LAND
W	WATER

N

SCALE IN FEET

0 2,000 4,000

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore		USDA (SSURGO) SOIL SURVEY PLANNING DISTRICT 10 - CORONADO BAYFRONT	FIGURE
PROJECT NO.	DATE	PORT MASTER PLAN UPDATE EIR PROJECT SAN DIEGO, CALIFORNIA	44
108331002	12/20		

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Appendix G

Hazardous Materials Technical Study (Integrated Planning Port Master Plan Update, San Diego Unified Port District, San Diego, California prepared by Ninyo & Moore)

HAZARDOUS MATERIALS TECHNICAL STUDY
INTEGRATED PLANNING PORT MASTER PLAN UPDATE
SAN DIEGO UNIFIED PORT DISTRICT
SAN DIEGO, CALIFORNIA

DRAFT

PREPARED FOR:
ICF
525 B Street, Suite 1700
San Diego, California 92101

PREPARED BY:
Ninyo & Moore
Geotechnical and Environmental Sciences Consultants
5710 Ruffin Road
San Diego, California 92123

May 31, 2018
Project No. 108331001

May 31, 2018
Project No. 108331001

Mr. Charlie Richmond
ICF
525 B Street, Suite 1700
San Diego, California 92101

Subject: Hazardous Materials Technical Study
Integrated Planning Port Master Plan Update
San Diego Unified Port District
San Diego, California

Dear Mr. Richmond:

In accordance with your request and authorization, we have performed a Hazardous Materials Technical Study for the Integrated Planning Port Master Plan Update project for the San Diego Unified Port District in San Diego, California. The attached report presents our methodology, findings, opinions, and recommendations regarding the environmental conditions at the project area.

We appreciate the opportunity to be of service to you on this project.

Sincerely,
NINYO & MOORE

Draft

Draft

Stephan A. Beck, PG 4375
Manager, Environmental Sciences Division

Draft

Adrian Olivares
Senior Project Environmental Scientist

BMC/AO/SB/gg

Distribution: (1) Addressee

TABLE OF CONTENTS

Tables

Figures

Appendix

1. INTRODUCTION

Ninyo & Moore has performed a hazardous materials technical study (HMTS) for the proposed Integrated Planning Port Master Plan Update (PMPU) Project (Project). The San Diego Unified Port District (SDUPD or District) property is separated into 10 planning districts (PDs) within the cities of Chula Vista, Coronado, Imperial Beach, National City, and San Diego, and extends from Shelter Island in the north to the Imperial Beach oceanfront in the south (Figure 1) (collectively referred to as the project area). The District's planning area covers approximately 2,403 acres of land and 3,535 acres of water.

The purpose of the HMTS is to provide a general overview of potential impacts related to hazardous materials and wastes for the PMPU. The HMTS is intended to summarize, for California Environmental Quality Act (CEQA) purposes, known property contamination within the project area to assist the planning process with future land use changes that may affect hazardous materials or wastes.

2. SCOPE OF WORK

Ninyo & Moore's scope of work for this HMTS included the activities listed below.

- Reviewed readily available maps (e.g., topographic, geologic, etc.) pertaining to the project area.
- Conducted an environmental database search for the project area and properties within a 1/16-mile radius of the project area and reviewed federal, state, and local regulatory agency databases. The purpose of this review was to document properties with unauthorized releases (UARs) to soil and/or groundwater within and adjacent to the project area.
- Reviewed the State Water Resources Control Board (SWRCB) GeoTracker website and the California Department of Toxic Substances Control (DTSC) Envirostor website to supplement information in the database report.
- Prepared an HMTS report documenting findings and providing opinions and recommendations regarding portions of the project area that may have a higher likelihood of being associated with soil and/or groundwater contamination.

The following, which is not intended to be all inclusive, represents out-of-scope items with respect to this HMTS, and, therefore, were not addressed: human health risk assessment, underground pipelines, radon, lead in drinking water, wetlands, regulatory compliance, cultural

and historic risk, industrial hygiene, health and safety, ecological resources, endangered species, mold, indoor air quality (including vapor intrusion), and high-voltage power lines. In addition, this HMTS does of zoning regulations, building code requirements, or property title issues.

3. PROJECT DESCRIPTION AND LOCATION

The proposed project involves a comprehensive update to the existing Port Master Plan to provide goals and policies, as well as land and water uses, consistent with the Port Act and Public Trust Doctrine, for the physical development and conservation of District Tidelands. The PMPU will implement the 30-year planning vision by addressing allowable land and water uses, coastal access, mobility, economic development, safety, and natural resources, among other topics.

The area of San Diego Bay (Bay), encompassed by the historic mean high-tide line, comprises approximately 14,951 acres of filled and submerged lands and an existing shoreline stretching approximately 54 miles. These historic tideland areas are owned, controlled, or held in trust by the federal government, the State of California, the County of San Diego, the cities of San Diego and Coronado, and the District. The planning area for the PMPU is the entirety of the District's jurisdiction, including acquired upland parcels, which amounts to approximately 2,403 acres of land and 3,535 acres of water in and around the Bay and along the Imperial Beach oceanfront (Figure 2). The District's 10 PDs are discussed in more detail below.

3.1. Planning District 1 – Shelter Island

The Shelter Island PD is located at the north end of San Diego Bay with an approximate land area of 121.2 acres and a water area of 348.3 acres (Figure 3). The Shelter Island PD is a narrow strip of land, approximately 1 mile long and less than 0.1 mile wide, that extends off the Point Loma peninsula via Shelter Island Drive. Proposed uses along Shelter Island include hotels, restaurants, and yacht- or marine-related businesses. Fishing piers and boat launches are also located at various points along Shelter Island. The proposed sub-districts are West Shelter Island and East Shelter Island.

3.2. Planning District 2 – Harbor Island

The Harbor Island PD is located at the north end of San Diego Bay with an approximate land area of 831.5 acres and a water area of 204.6 acres (Figure 4). Harbor Island is a narrow strip of land, approximately 1.5 miles long and 317 feet wide, that extends off the San Diego mainland via Harbor Island Drive. Harbor Island includes hotels, restaurants, and marinas in the inlets between Harbor Island and the mainland of San Diego. Other uses include yacht- and sailing-oriented retail shops (e.g., charter companies, sport fishing outlets) and publicly accessible shoreline parks. The Harbor Island PD includes San Diego International Airport, although this area is not under the land use authority of the District while the current lease is in effect. The proposed subdistricts are West Harbor Island, East Harbor Island, and Airport.

3.3. Planning District 3 – Embarcadero

The Embarcadero PD is located at the northeast end of San Diego Bay with an approximate land area of 256 acres and a water area of 226.2 acres (Figure 5). Spanning the length of the bayfront within the downtown San Diego area, the Embarcadero PD begins at Laurel Street to the north (just south of San Diego International Airport) and ends roughly at Park Boulevard, southeast of the Convention Center and north of the Tenth Avenue Marine Terminal (TAMT). The Embarcadero is an active waterfront area. Harbor Drive, which runs the length of the Embarcadero, provides vehicular access and on-street parking for uses along the Embarcadero. The proposed sub-districts within this PD are North Embarcadero, Central Embarcadero, and South Embarcadero. The proposed North Embarcadero subdistrict along North Harbor Drive includes large parcels of land that have been dedicated to the Solar Turbines facility, just south of the airport, as well as hotels, restaurants, and public parks. Waterside uses in the proposed North Embarcadero sub-district include maritime museums, merchant ships, cruise ship terminals, commercial fishing boats, and pleasure craft. The proposed Central Embarcadero sub-district consists primarily of Seaport Village, a waterfront shopping and dining complex, and Embarcadero Marina Park North. Uses within the proposed South Embarcadero sub-district include restaurants, the San Diego Convention Center, and public parks. Marinas occupy the inlet created by the two L-shaped segments that form

Embarcadero Marina Parks North and South. Three high-rise hotels are also located along the waterfront in the South Embarcadero area.

3.4. Planning District 4 – Working Waterfront

The Working Waterfront PD is located on the east side of San Diego Bay with an approximate land area of 253.1 acres and a water area of 114.9 acres (Figure 6). The Working Waterfront PD extends along Harbor Drive from the Tenth Avenue Marine Terminal (TAMT) south to the city of San Diego's border with National City (Division Street). Formerly referred to as the TAMT PD, it is proposed to be renamed to address the regional significance of the terminal land and water facilities. This PD is proposed to be divided into three sub-districts: TAMT, Cesar Chavez Park, and Harbor Drive Industrial. The TAMT is a maritime cargo facility that is managed with multiple tenant leaseholds and open/covered terminal spaces for handling diverse cargos. Cesar Chavez Park was developed in cooperation with San Diego's Barrio Logan community; this park offers a recreational pier, picnic and playground areas, a soccer field, and open space for active play. BAE Systems, Continental Maritime of San Diego, CP Kelco, and General Dynamics National Steel and Shipbuilding Company (NASSCO) compose the Harbor Drive Industrial sub-district. This PD is anticipated to include uses and policies that support its continuation as a water-dependent marine industrial area with supporting recreational uses.

In December 2016, the Tenth Avenue Marine Terminal Redevelopment Plan and Demolition and Initial Rail Component EIR, prepared by ICF, which includes a variety of infrastructure investments that may be undertaken over the long-term to accommodate an increase of the terminal's capabilities and capacity, was certified by the Board of Port Commissioners (SDUPD, 2016). Due to possible onsite soil contamination, mitigation measures (MM-HAZ-1 and MM-HAZ-2) were developed.

3.5. Planning District 5 – National City Bayfront

The National City Bayfront PD is located on the east side of San Diego Bay with an approximate land area of 298.7 acres and a water area of 173 acres (Figure 7). The National City Marine Terminal (NCMT), related industrial uses, areas located within the National City Balanced Land Use Plan area, and Navy berthing space compose the National City Bayfront PD. Pepper Park is sited at the southernmost extent of Tidelands Avenue, approximately 0.45 mile from the edge of the Bay. The National City Aquatic Center, operated by the District, is also located in this PD. Pier 32 Marina, east of the aquatic center, is adjacent to the Sweetwater Marsh National Wildlife Refuge, which is farther to its east. The proposed sub-districts include Navy Berthing, North Corridor, Marina, and NCMT.

3.6. Planning District 6 – Chula Vista Bayfront

The Chula Vista Bayfront PD is located at the southeast end of San Diego Bay with an approximate land area of 744 acres and a water area of 1,154.5 acres (Figure 8). The Chula Vista Bayfront PD includes the adopted Chula Vista Bayfront Master Plan area, which allows a variety of uses, such as hotel, retail, restaurant, and other uses that lie outside the District's jurisdiction. Currently, large portions of the Chula Vista Bayfront are dedicated to wildlife reserves and marshes. Other uses include public parks, marinas, a recreational vehicle campground, a salt works operation, and a boat repair facility. The proposed subdistricts include Sweetwater District, Harbor District, and Otay District.

The Chula Vista Bayfront Master Plan EIR, prepared by Dudek, which included the redevelopment of approximately 497 acres of land and 59 acres of water was certified in 2010 (SDUPD, 2010). Several areas of concern were identified in the EIR and Mitigation Monitoring and Reporting Program contained mitigation measures (MM 4.12-1 to 4.12-11) to be performed to address remediation of contaminated soil and groundwater.

3.7. Planning District 7 - South Bay

The South Bay PD is located at the southerly end of San Diego Bay with an approximate land area of 110.4 acres and a water area of 196.7 acres (Figure 9). The South Bay PD includes the southernmost portion of the Bay and land adjacent to Imperial Beach. The area is characterized primarily by open water and large expanses of land that are planned for conservation purposes. The proposed sub-districts include Habitat Conservation and Pond 20.

3.8. Planning District 8 – Imperial Beach Oceanfront

The Imperial Beach Oceanfront Planning District is located at the south end of San Diego along the Pacific Ocean with an approximate land area of 5.1 acres and a water area of 402 acres (Figure 10). Characterized by a substantial length of ocean shoreline and open ocean, the Imperial Beach Oceanfront PD includes the approximately 1,300-foot-long Imperial Beach Pier, a publicly accessible pier that provides a promenade and fishing opportunities. A restaurant is located at the end of the pier. There are no proposed sub-districts within this PD.

3.9. Planning District 9 – Silver Strand

The Silver Strand PD is located in the southwest corner of San Diego Bay with an approximate land area of 39.5 acres and a water area of 195.9 acres (Figure 11). Similar to the Imperial Beach Oceanfront PD, the Silver Strand PD is characterized by a length of shoreline, although its shoreline is bayside. This PD includes existing private-use marinas east of Silver Strand Boulevard/State Route 75. This PD, which is adjacent to Silver Strand State Beach, also includes a hotel resort off Coronado Bay Road. The proposed subdistricts include State Park Basin, Park Basin Crowne Isle, and Grand Caribe Isle/South Cays.

3.10. Planning District 10 – Coronado Bayfront

The Coronado Bayfront PD is located on the west side of San Diego Bay with an approximate land area of 187.4 acres and a water area of 219.4 acres (Figure 12). The Coronado Bayfront PD is characterized by shorelines, parks, and water-oriented uses adjacent to Coronado. Uses along the north coast of the Coronado Bayfront include Naval Air Station North Island and single- and multi-family residential uses that front the Bay along 1st Street between Alameda Boulevard and A Avenue. Commercial uses are concentrated toward the eastern end of the north bayfront, including the Ferry Landing Marketplace, which offers a number of restaurants and small boutique or tourist-oriented shops. Public open spaces along the north bayfront include Bayview Park at I Avenue and 1st Street, Centennial Park at Orange Avenue and 1st Street, and Coronado Ferry Landing Park at B Avenue and 1st Street. Land uses along the east shore of the Coronado Bayfront include a marina, boat rentals, yacht clubs, hotels, Coronado Municipal Golf Course, high-rise condominiums, a community center and public parks, and Naval Amphibious Base Coronado. The proposed sub-districts of this PD include North Coronado and South Coronado.

4. ENVIRONMENTAL SETTING

The following sections include discussions of the general topographic, geologic, and hydrogeologic conditions within the project area.

Table 1 – Physical Setting

Physical Setting	Reference	Summary
Topography	A	The elevations at the project area generally range from sea level to 10 to 15 feet above mean sea level (MSL) along the majority of the planning district. Elevations at the San Diego International Airport (Harbor Island PD) range from approximately 15 to 40 feet above MSL. The topography generally slopes toward the San Diego Bay and Pacific Ocean.
Site Geology	B	The near-surface geology at the project area includes artificial fill, marine beach deposits, undivided marine deposits in offshore region, young alluvial flood plain deposits, old paralic deposits, and materials of the Cabrillo Formation (Kennedy and Tan, 2008).

Table 1 – Physical Setting

Physical Setting	Reference	Summary
Groundwater	C	Based on the coastal location of the project and proximity to the San Diego Bay and Pacific Ocean, groundwater is present near sea level. Fluctuations in the groundwater level and perched conditions may occur due to variations in ground surface topography, subsurface geologic conditions and structure, rainfall, irrigation, tidal fluctuations, and other factors. The project area is located within the Pueblo San Diego, Sweetwater, Otay, and Tijuana Hydrologic Units (HUs). Areas on the northern portion of the project area, within the Pueblo San Diego HU and Coronado Hydrologic Area (HA), are exempt from beneficial uses. Beneficial uses within the Otay Valley and Lower Sweetwater HAs include municipal, agricultural, industrial process supply. The southern portion of the project area is located within the Tijuana HA and San Ysidro Hydrologic Sub Area and is exempt from beneficial uses.

References:
A = United States Geological Survey (USGS), Imperial Beach, Imperial Beach OE W, National City, and Point Loma, California, 7.5-minute quadrangle maps (USGS, 2012a to 2012d)
B = USGS, Geologic Map of the San Diego 30' x 60' Quadrangle, California (Kennedy and Tan, 2008)
C = RWQCB Water Quality Control Plan for the San Diego Basin (RWQCB, 2016)

5. ENVIRONMENTAL DATABASE SEARCH

In order to assess the significance of properties within the project area and adjacent properties with documented hazardous waste impacts, a search and review of federal, state, and local environmental regulatory agency databases was conducted. A computerized, environmental information database search was performed by Environmental Data Resources, Inc. (EDR). The associated database report is provided in Appendix A. The standard databases searched and summarized were consistent with those described in the ASTM International (ASTM) Standard for Phase I Environmental Site Assessments (ESAs). A search radius of 1/16-mile was used to identify properties within and adjacent to the project area. The following table lists the Federal Standard ASTM databases, a brief summary of the database, and the number of listings.

Table 2 – Summary of Federal ASTM Standard Environmental Databases

Database Name	Database Summary	Number of listings within search radius
National Priority List (NPL)	The NPL is the United States Environmental Protection Agency (EPA) database of uncontrolled or abandoned hazardous waste properties listed for priority remedial actions under the Superfund program.	0
Delisted NPL	The Delisted NPL database contains properties which have been removed from the NPL.	0

Table 2 – Summary of Federal ASTM Standard Environmental Databases

Database Name	Database Summary	Number of listings within search radius
Superfund Enterprise Management System (SEMS)	The SEMS database tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list contains data on potentially hazardous waste sites that have been reported to the USEPA, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).	4
SEMS-ARCHIVE	The SEMS-ARCHIVE database tracks sites that have no further interest under the Federal Superfund Program, based on available information.	17
Resource Conservation and Recovery Act (RCRA), Corrective Action (CORRACTS) Facilities	The EPA maintains this database of RCRA facilities that are undergoing corrective action. A corrective action order is issued when a release of hazardous waste or constituents into the environment from a RCRA facility has occurred.	2
RCRA-Treatment, Storage and Disposal Facilities (TSDF)	The RCRA TSDF database is a compilation by the EPA of facilities that report generation, storage, transportation, treatment, or disposal of hazardous waste.	3
RCRA-large quantity generator (LQG)	The database includes selective information on sites that generate, transport, store, treat, and/or dispose of hazardous waste in quantities greater than 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.	48
RCRA-small quantity generator (SQG)	The database includes selective information on sites that generate, transport, store, treat, and/or dispose of hazardous waste in quantities between 100 kg and 1,000 kg of hazardous waste per month.	86
RCRA-CESQG (conditionally exempt SQG)	The database includes RCRA-CESQGs, which are facilities that generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.	1
US ENGINEERING CONTROL (EC)	This is an EPA listing of sites with engineering controls in place, such as various forms of caps, building foundations, liners, and treatment methods intended to eliminate pathways for regulated substances to enter environmental media or affect human health.	0
US INSTITUTIONAL CONTROL (IC)	This is an EPA listing of sites with institutional controls in place, such as administrative measures, groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements, intended to prevent exposure to contaminants remaining on site.	1
ERNS (Emergency Notification System)	The ERNS database records and stores information on reported releases of oil and hazardous substances. Generally, these listings are minor in nature.	1,569

Properties listed on the SEMS, CORRACTS, and IC databases indicate a higher likelihood of encountering contamination. Properties listed on other federal databases indicate that hazardous materials is/was used at a property, or a spill was reported; however, it may not necessarily be an indication that a release has occurred, unless also listed on State and Local environmental databases indicative of an UAR. A summary of the State and Local ASTM Standard Environmental databases is provided in the table below.

Table 3 – Summary of State and Local ASTM Standard Environmental Databases

Database Name	Database Summary	Number of listings within search radius
RESPONSE	Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.	1
ENVIROSTOR	The DTSC's Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifies sites that have known contamination or sites for which there may be reasons to investigate further.	41
Military Cleanup Sites (MCS)	MCS listings consists of Military UST sites, Military Privatized sites, and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker.	36
Solid Waste Information System (SWIS)	Records contain an inventory of solid waste disposal facilities or landfills (SWF/LF).	1
Land Disposal Sites (LDS)	The database includes LDS (landfills) included in GeoTracker	7
Leaking Underground Storage Tank (LUST)	Geotracker's LUST Case Listings.	151
Spills, Leaks, Investigation and Cleanup (SLIC)	SLIC sites included in GeoTracker are sites that impact, or have the potential to impact, water quality.	145
UST (registered USTs)	UST records are provided by the SWRCB.	32
AST (registered ASTs)	AST records are provided by the SWRCB.	63

Properties listed in the State and Local ASTM Standard Environmental databases above, typically indicate that a release or a release investigation has occurred. These cases were reviewed and are discussed by PD in Section 6.

6. SUMMARY OF PROPERTIES WITH CONTAMINATION

The environmental databases discussed in Section 5 were reviewed to evaluate whether properties within or adjacent to the project area have been identified as having experienced UARs of hazardous substances and/or petroleum, or other events with potentially adverse environmental effects. Multiple releases at the same property are denoted by sequential numbers (i.e., H21148-001, -002, -003, etc.) or multiple UAR case numbers. Facilities with documented releases are briefly summarized in Tables 4 through 12, along with the release status (i.e., closed or open).

To supplement the environmental database report, the GeoTracker and EnviroStor online databases were searched for additional information, as available. Facilities and/or properties are identified in the database report by their business name, address and an EDR Map ID number. For sites in close proximity to each other with the same Map ID, Ninyo & Moore assigned an "a" or "b." If a property has multiple Map IDs assigned to it, the Map IDs are listed in the following tables and the lowest Map ID number is depicted on the associated figure.

6.1. Planning District 1 – Shelter Island

Properties with documented contamination within and adjacent to the Shelter Island PD are summarized in Table 4 and Figure 3.

Table 4 – Planning District 1 Documented Release Summary

Site /Address	Map ID	Database	Case No.	Status	Notes
Former Bay City Marine 4960 N Harbor Dr	71	LUST	H16749-001	Closed	A gasoline release was discovered in March 1994 during a UST closure. The case was closed in July 2000.
Chevron Products Co #92194 4823 N Harbor Dr	79	LUST SLIC	H05684-001 to -005	Closed	The five cases are related to gasoline releases affecting soil, soil vapor, and groundwater. The cases were opened between March 1993 and February 2007 and closed between May 1993 and March 2008. The cases were closed with residual petroleum-impacted soil and groundwater remaining.
San Diego Fleet Antisubmarine Warfare Training Center N Harbor Dr and McDonough Rd	72,75, 92, 94 103, 109, 111	ENVIROSTOR MCS	H80003-001 to -013 and H02451-001	Closed	The facility has multiple closed cases relating to releases of metals (arsenic, chromium, and lead), diesel, and/or oil into soil.
Point Loma Naval Complex – SWMU 27 Buildings 33000 Nixie Way	99	MCS	H02451-001, -002, H80024-001 to -003, 16535-, 16538-, and 16539-SWMU	**Open**	The facility has multiple open cases associated with UARs. The contaminants of concern (COCs) include petroleum, volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PAHs) and metals, and reportedly affected soil only.
Kettenburg Marine (Driscoll Boatworks West) 2810 Carleton St	107	RCRA-SQG LUST SLIC ENVIROSTOR	H09675-001, -002, and -003	Closed	The three cases are related to gasoline releases affecting soil, soil vapor, and groundwater and were opened between 1990 and 2004 and were closed between 1998 and 2014.

Table 4 – Planning District 1 Documented Release Summary

Site /Address	Map ID	Database	Case No.	Status	Notes
STD Oil Marina (Chevron 88704) 2510 Shelter Island Dr	113a	LUST	H03413-001	**Open**	The case was opened in 1984 and is associated with a diesel release affecting soil and groundwater. The case is open and the facility is under additional investigation and quarterly groundwater monitoring.
Driscoll Custom Boats 2500 Shelter Island Dr	113b	LUST SLIC	H09719-001 and -002	Closed	The UAR cases are associated with releases of gasoline and metals that impacted soil, groundwater, and surface water. The cases were closed in 1998 and 2010.
Pearson Marine Fuels Inc. 2435 Shelter Island Dr	116a	LUST SLIC	H10548-001 and -002	Closed	Two UARs were opened in 1987 and 2002 that impacted soil and groundwater. The cases were closed in December 2001 and March 2005.
Shelter Island Fuel Dock 2385 Shelter Island Dr	116b	LUST	H03035-001	Closed	An UAR case was opened in August 1987 when corrosion was observed in a gasoline UST. The case was closed in August 1987.
Nielsen Beaumont Marine 2420 Shelter Island Dr	116c	SLIC	18901	Closed	The facility is listed on the SLIC database for a release of tributyltin (TBT) and metals to sediments in the commercial basin. The sediments were dredged and cleanup levels were met. The case was closed in December 1999.
San Diego Yacht Club (San Diego Unified Port District) 1011 Anchorage Ln	120a	LUST	H2116-001	Closed	The case was opened in 1988 when a waste oil release impacted soil and groundwater at the property. The case was closed due to low risk in July 1998 and residual contamination remains in soil and groundwater.
FISC / Miramar Fuel Pipeline – Talbot Street Release Talbot St	120b 146 165	SLIC	2091800, 2090011, 2090012	Closed	The cases are associated with releases along the Miramar fuel pipeline and reportedly affected groundwater and surface water. The cases were closed in September 2002.
Koehler Kraft 2302 Shelter Island Dr	124	SLIC	T10000005130	Closed	The case is associated with metals in surface water and sediments. The case was closed by the RWQCB in September 1994.
Shelter Island Firing Range Unaddressed	128	ENVIROSTOR	J09CA7481	**Open**	The facility is a Formerly Uses Defense Sites (FUDS) facility and the case is listed as inactive. According to the database, evaluation is needed. No other information related to the suspected contaminant or release is provided.
Bartell Garden Inn 1901 Shelter Island Dr	151	SLIC	H39683-001	Closed	The case was closed in November 2006 and additional details are not available.

6.2. Planning District 2 – Harbor Island

Properties with documented contamination within and adjacent to the Harbor Island PD are summarized in Table 5 and Figure 4.

Table 5 – Planning District 2 Documented Release Summary

Site /Address	Map ID	Database	Case No.	Status	Notes
Lindbergh Field 3698 Pacific Hwy	7a	LUST	H21052-001	Closed	A gasoline release was discovered in October 1985 and was closed in August 1988.
Consolidated Aircraft Main Plant Unaddressed	7b	ENVIROSTOR	8000900	**Open**	The facility is a FUDS facility and the case is listed as inactive. According to the database, evaluation is needed. No other information related to the suspected contaminant or release is provided.
Hertz Corporation Kettner 3420 Kettner Blvd	8	SLIC	H21044-001	Closed	The offsite SLIC case is related to a gasoline release and was closed in November 2004. The media affected was not listed.
Northside San Diego International Airport Redevelopment 3302 Pacific Hwy	12a	SLIC	409007	**Open**	The case is under the oversight of the RWQCB and was opened in September 2010. The case is related to a release of PCBs and chromium affecting soil, indoor air, soil vapor, groundwater, and surface water. The property is under ongoing investigation as part of redevelopment efforts by the San Diego Regional Airport Authority.
General Dynamics Convair Division 3302 Pacific Hwy	12b	SEMS-ARCHIVE LUST	H04497-001 to -015, and DEH2013-LSAM000213	Closed	The cases are related to boiler fuel, waste oil, and gasoline releases affecting soil, soil vapor, and groundwater. The cases were closed between 1987 and 2014 with residual TPH and VOCs remaining in soil and groundwater.
Alamo Rent a Car 2942 Kettner Blvd	23a	LUST	H04878-001 to -003	Closed	The UAR cases are related to transmission fluid, diesel, and gasoline that impacted soil and groundwater. The earliest case was opened in 1986 and the closure date was not provided. The second case was closed in 1993 (date opened not provided). The most recent case was opened in 2004 and closed in 2008.
Southwest Car Rental 2975 Pacific Hwy South	23b	LUST	H04041-001	Closed	A release of waste oil impacted soil at the facility. The case was opened in March 1990 and closed in May 1991.
Jones Family Trust 1411 Palm Avenue	23c	LUST SLIC	H30204-001	Closed	The UAR case opened in June 1995 for a gasoline release that impacted soil. The case was closed in September 1996.
Jimsair Aviation Services, Inc. Lindbergh Field	23d	LUST	H30614-001	Closed	A gasoline release was detected during a tank closure in February 1995. The release affected soil and groundwater and was closed in June 1995.
Execair Maintenance Inc. 2904 Pacific Hwy	23e	LUST SLIC	H30614-001	Closed	The UAR case is related to a gasoline release that impacted soil only. The case was opened in February 1995 and closed in June 1995.

Table 5 – Planning District 2 Documented Release Summary

Site /Address	Map ID	Database	Case No.	Status	Notes
Ryan Aircraft Unaddressed	23f	ENVIROSTOR	80000903	**Open**	The facility is a FUDS facility and the case is listed as inactive. According to the database, evaluation is needed. No other information related to the suspected contaminant or release is provided.
San Diego Naval Training Center 2000 Decatur Road	24	ENVIROSTOR	H80021-005	Closed	The facility is a former military base and was closed in 1993. The UAR case was closed in August 2000.
Camp Consair Unaddressed	25a	ENVIROSTOR	80000906	**Open**	The facility is a FUDS facility and the case is listed as listed as inactive. According to the database, evaluation is needed. No other information related to the suspected contaminant or release is provided.
San Diego Municipal Airport Unaddressed	25b	ENVIROSTOR	80000458	**Open**	The facility is a FUDS facility and the case is listed as inactive. According to the database, evaluation is needed No other information related to the suspected contaminant or release is provided.
Neyenesch Printers Inc 2750 Kettner Blvd	28	ENVIROSTOR	37370015	Closed	The facility is a historical cleanup site. Initial screening was conducted in June 1987. In November 1994, the DTSC found that no further action was required.
Searchlight Battery #35 Unaddressed	31	ENVIROSTOR	80000474	**Open**	The facility is a FUDS facility and the case is listed as inactive. According to the database, evaluation is needed. No other information related to the suspected contaminant or release is provided.
Jesse Plating 2680 Kettner Blvd	32	SLIC	H00486-001	Closed	The case was related to a release of metals, TPH, and VOCs affecting soil and groundwater. The case was opened in December 2010 and closed in January 2013.
Budget Rent a Car 2535 Pacific Hwy	33a	LUST	H03610-001	Closed	The UAR case opened in August 1997 for a gasoline release that impacted soil and groundwater. The case was closed in August 2000.
Thrifty Car Rental 1120 Laurel St	33b	LUST	H12035-001	Closed	The case was opened in 1992 and closed in 1996. The medium affected and COCs are not available.
Shell Service Station 2521 Pacific Hwy	33c	LUST SQG	H21054-001	Closed	The UAR case was opened in June 2003 and is related to a gasoline release that affected soil and groundwater. The case was closed in October 2005.
Dollar Rent a Car 2499 Pacific Hwy	33d	LUST	H12130-001	Closed	The UAR case is related to a gasoline release that affected soil, soil vapor, and groundwater. The case was opened in March 1998 and closed in September 2004. The cases were closed with COCs remaining in soil, soil vapor, and groundwater.
Get Away Rent a Car 2263 Pacific Hwy	33e	LUST	H15552-001 to -003	Closed	The UAR cases are related to gasoline releases that affected soil and groundwater. The most recent case was opened in March 1998 and closed in September 2008. The earlier cases were closed in 1988 and 1989.

Table 5 – Planning District 2 Documented Release Summary

Site /Address	Map ID	Database	Case No.	Status	Notes
Aircraft Service International Inc. 2340 Stillwater Rd	35a	LUST SLIC WDS	H3605-001 and -002	Closed	The cases are related to aviation fuel and oil releases affecting soil and groundwater. The cases were opened in 1987 and 1996 and were both closed in October 2002.
Lindbergh Field Shell UST 2435 Shelter Island Dr	35b	SLIC	H17186-001 & -002, H21366-001 to -003, H21033-001	**Open**	The facility is listed on the SLIC database for a release of aviation fuel and gasoline that affected soil and groundwater. The cases were closed between 1987 and 2002. The facility is an active, class C, industrial waste site.
San Diego City Sewer Pump Station 4077 N Harbor Dr	38	ENVIROSTOR	71003629	**Open**	The facility is listed as a tiered permit and as of September 2000 was applying to CUPA for a permit to treat corrosive wastewaters. The facility is listed as Inactive – Needs Evaluation by the DTSC. No other information is provided.
Frontier (Lindbergh Field) 3663 and 3665 N Harbor Dr	40	LUST SLIC	H21035-001 and H21034-001, through -004	Closed	The facility has five closed cases relating to releases of diesel into soil. Impacted soil was removed and treated. The cases were opened between 1995 and 1992 and closed between 1989 and 1998.
Avis Rent-A-Car 3875 N Harbor Dr	42a	LUST	H05991-001 to -004	**Open**	The three closed UAR cases are related to gasoline releases affecting soil and groundwater. Residual petroleum related contamination remains in soil and groundwater. One open case is for a release of petroleum hydrocarbons that impacted soil and groundwater. Impacted soil and groundwater remain at the facility and mitigation measures are recommended by the consultant during any disturbance of soil or dewatering activities during construction.
Hertz Rent-A-Car 3871 N Harbor Dr	42b	LUST	H12057-001 to -003	Closed	The three UAR cases are related to gasoline releases that impacted soil and groundwater. Two cases were opened and closed in the same years (1986 and 1995). The other case was opened in 1987 and closed in April2000.
National Car Rental Systems Inc 3865 N Harbor Dr	42c	LUST	H12084-001	Closed	The UAR case was opened in August 1995 after gasoline was detected in soil and groundwater during drilling activities. Impacted soil and groundwater remains at the facility. The case was closed in August 2009.
San Diego Regional Airport Authority (FBO and Bypass Taxiway) 3225 N Harbor Dr	44	LUST MCS SLIC	H02431-001 and 09010	Closed	The UAR was related to gasoline release impacting soil only. The case was opened in August 1990 and closed in July 1991. The SLIC case was related to a petroleum release that affected soil only and was closed in 1989.

Table 5 – Planning District 2 Documented Release Summary

Site /Address	Map ID	Database	Case No.	Status	Notes
Tow Basin Site (Lockheed) 3380 N Harbor Dr	47 64	SLIC ENVIROSTOR	2090016 and 3787001	**Open**	Multiple SLIC cases were closed between 1999 and 2005. All land-side assessment and remediation activities are complete. One case remains open and is associated with a release of PCBs into sediments and surface water. The facility is currently undergoing assessment and remediation. A Cleanup and Abatement Order was issued in 2017.
Division Gas Turbine 3200 N Harbor Dr	51	SLIC	H21032-001	Closed	The SLIC case was opened in October 1999 and is related to a diesel release affecting soil only. The case was closed in November 2004.
UOP Inc – Fluid Division 2980 North Harbor Dr	54	ENVIROSTOR	80001350	**Open**	The case is under corrective action with a status of Inactive – needs evaluation, as of December 2010. A preliminary assessment was conducted in September 1991.
TDY Industries LLC 2701 N Harbor Dr	60 219	LUST SWF/LF SLIC	H00419-001, through -007	Closed	The facility is a 44-acare property and has multiple UAR cases related to releases affecting soil, soil vapor, groundwater, and surface water. COCs include VOCs, TPH, and PCBs and remain at the facility. The UAR cases were closed between 1992 and 2015. In February 2015, a no further action letter for waste discharged to land was issued. The water side investigation is listed as a separate case (see next listing).
TDY Convair Lagoon *West of US Coast Guard Station*	62	LDS	2090500	**Open**	In 1986 an investigation of PCBs was performed in the Convair Lagoon portion of the San Diego Bay. Several Cleanup and Abatement Orders were issued for bay sediments. The case status is Open – Closed with Monitoring. The site was capped in 1998 and the cap is currently maintained and monitored in compliance with waste discharge requirements.
Lockheed Martin Systems **(East Harbor Basin Sediment Assessment / Cleanup)** 1160 Harbor Island Dr	66	SLIC	2090046	**Open**	The case is related to the presence of mercury in bay sediments. An Investigative Order was issued in June 2011.The facility is under ongoing investigation / remediation.
Coast Guard Base Unaddressed	73	ENVIROSTOR	80000899	**Open**	The facility is a FUDS facility and the case is listed as inactive. According to the database, evaluation is needed. No other information related to the suspected contaminant or release is provided.
Harbor Island – East Basin Sediment Assessment (Sunroad Resort Marina) 955 Harbor Island Dr	74	SLIC	2090050	**Open**	The case is related to a copper and zinc discharge to bay sediments. The case was opened in March 2011. The facility is under ongoing investigation.

Table 5 – Planning District 2 Documented Release Summary

Site /Address	Map ID	Database	Case No.	Status	Notes
Metropolitan Transit Property 1st and N Harbor Dr	76	SLIC	H39698-001	Closed	The case was related to a copper release affecting soil only. The case was opened in October 2006 and was closed in March January 2008.
Cabrillo Isle Marina 1450 W Harbor Island Dr	82	SLIC	H21037-001	Closed	The case was closed in January 1989 and additional details are not available.
Cortez Fuel Dock 2510 Shelter Island Dr	83	LUST UST	H04670-001	Closed	The case was opened in 1989 and is associated with a diesel release affecting soil and groundwater. The case was closed in March 1993.
Harbor Island Fuel Dock 2040 Harbor Island Drive/2310 Stilwater Road	96	LUST UST	H10538-001, and -002	Closed	The UAR cases are related to releases of diesel and oil that impacted soil and groundwater. The initial case was opened in December 1988 after the removal of a waste oil UST. The second case was opened in 1993 after the removal of additional USTs. Both cases were closed in 2004.

6.3. Planning District 3 – Embarcadero

Properties with documented contamination within and adjacent to the Embarcadero PD are summarized in Table 6 and Figure 5.

Table 6 – Planning District 3 Documented Release Summary

Site /Address	Map ID	Database	Case No.	Status	Notes
Solar Turbines 2200 Pacific Hwy	58a	LUST AST ENVIROSTOR LUST SLIC	2091700 and 80001550	**Open**	The cases were opened in September 1986 and June 1998. COCs include metals, VOCs, PCBs, PAHs, and TPH, which have impacted soil, soil vapor, groundwater, and bay sediments. The facility is currently undergoing remediation and further evaluation.
Fogerty Petroleum Transport 946 W Hawthorne St	58b	LUST SLIC	H03575-001 and -002	Closed	The offsite UAR cases are related to petroleum related contaminants that impacted soil and groundwater. The cases were closed in December 2010 and October 2014 with concentrations of benzene remaining in groundwater.
City of San Diego – Water Utilities Pacific Hwy	58c	SLIC	H29877-001	Closed	The SLIC case was opened for regulatory oversight during excavation of soil. The case was closed in January 2012.

Table 6 – Planning District 3 Documented Release Summary

Site /Address	Map ID	Database	Case No.	Status	Notes
West Juniper Property 1001 W Juniper	58d	SLIC	H39665-001	Closed	The SLIC case is related to a release of metals, TPH, and VOCs that affected soil, soil vapor, and groundwater. The case was opened in November 2003 and closed in December 2008 with COCs remaining in soil, soil vapor, and groundwater.
MFW Family Partners 2233 Pacific Hwy	58e	SLIC	H39634-001 and -002	Closed	The SLIC cases are related to gasoline release affecting soil and groundwater and were closed in 2004 and 2009.
Harbor View Hotels 2137 Pacific Hwy	58f	SLIC	DEH2013-LSAM-000218	Closed	The SLIC case was associated with TPH and VOCs that impacted soil and groundwater. The case was closed in march 2015 with COCs remaining in soil and groundwater.
Vacant Lot 1002 W Juniper St	58g	SLIC	H39742-001	Closed	The SLIC case is related to a release of TPH, and VOCs affecting soil only and was closed in February 2010.
Solar Aircraft Group Unaddressed	59	ENVIROSTOR	80000904	**Open**	The facility is a FUDS facility and the case is listed as inactive. According to the database, evaluation is needed. No other information related to the suspected contaminant or release is provided.
Laurel to Hawthorne Street Bay Sediment San Diego Bay	70	SLIC	2090066	**Open**	The case is related to a release of PCBs, metals, waste oil, and PAHs affecting sediments and surface water and was opened in January 2012. The facility is under ongoing investigation.
San Diego Barracks Unaddressed	77	ENVIROSTOR	J09CA0596	**Open**	The facility is a FUDS facility and the case is listed as inactive. According to the database, evaluation is needed. No other information related to the suspected contaminant or release is provided.
Body Beautiful Car Wash 2045 Pacific Hwy	81a	LUST UST	H00678-001 and -002	Closed	The cases are related to gasoline releases affecting soil and groundwater from UST removals. The cases were opened between 1986 and 1987 and were closed in 2008 and 2014.
Shell 2008 Pacific Hwy	81b	LUST	13216-001	Closed	The UAR case is related to a gasoline release that impacted soil only. The case was closed in November 2007.
Paul Hansen Equipment (County Administration Building) 1600 Pacific Hwy	81c	LUST SLIC	H21047-001	Closed	The case was opened November 1997 for a diesel release that impacted soil and groundwater. The case closed in January 2002.
Marriott Residence Inn 1747 Pacific Hwy	81d	LUST SLIC	H05476-001	Closed	The UAR is related to a waste oil release from a tank closure, affecting soil and groundwater. The case was closed in 1997.
Unocal Service Station 2070 Pacific Hwy	81e	SLIC	H04650-001	Closed	The case is related to a gasoline release and was closed in 1989.

Table 6 – Planning District 3 Documented Release Summary

Site /Address	Map ID	Database	Case No.	Status	Notes
Wood Atla Pacific LLC 1919 Pacific Hwy	81f	SLIC	DEH2016-LSAM-000398	**Open**	The case was opened in September 2016 for regulatory oversight during redevelopment activities at the facility.
Chevron USA Embarcadero Marine 1820 N Harbor Dr	102a	LUST	H03414-001 and -002	Closed	The COCs and medium affected are not available for the cases. The -002 case was closed in September 1995.
San Diego Sewer Pump Station 5 1795 E Harbor Dr	102b	SLIC	H34124-001	Closed	The SLIC case closed in 1998 and additional details are not available.
Allied Tank Cleaning Corporation 1883 E Harbor Dr	102c	ENVIROSTOR	37420015	Closed	The facility was transferred to an unknown local agency and additional assessment was not recommended.
Jack in the Box 1619 Pacific Hwy	110a	LUST ENVIROSTOR	H39749-001	Closed	The UAR case was opened in May 2010 after a subsurface investigation indicated petroleum related contaminants were present in soil, soil vapor, and groundwater. The case was closed in July 2011 with COCs remaining in soil, soil vapor, and groundwater.
Davis (Garrad / Car Rental, Bayside Fire Station) 1595 Pacific Hwy	110b	LUST SLIC	H23307-001 to -003	Closed	The first case was opened in 1990 and closed in 2010.The other two cases were opened in 2010 and 2011, and associated with petroleum releases from a former gasoline station that impacted soil and soil vapor. In November 2016 the DEH approved a request to destroy the groundwater monitoring wells at the facility based on absence of VOCs in 4 of 5 groundwater monitoring wells. The cases were closed in March 2018.
AST Flooring Company 808 W Cedar St	110c	SLIC SEMS-ARCHIVE	0904765	**Open**	Details are not available for the facility.
Cedar-Cal. 1560 California St	110d	SLIC	DEH2014-LSAM000259	**Open**	The case has been open since August 2014 for regulatory oversight during redevelopment activities at the facility. The case is open; however, there has been no activity since 2014.
Lennar-Intergulf (Pacific) 1405 Pacific Hwy	110e	LUST SLIC	H12946-001 to -003	Closed	The UAR cases are related to gasoline and diesel releases affecting soil only. The cases were closed between 1996 and 2009 with residual TPH-impacted soil remaining in place.
Sugarman (Travelodge) 1541 Pacific Hwy	110f	SLIC	H23589-001	Closed	The case is related to a gasoline release that impacted soil only. The case was closed in December 1998.
Bayside Owners Association 1325 Pacific Hwy	119	LUST SLIC	H32329-001 and -002	Closed	The UAR was opened during redevelopment due to TPH impacted soil at the property. The cases were closed in November 2014.
Navfac Building 127 1220 Pacific Hwy	127	LUST	H80424-001	Closed	The UAR case was opened in 1991 for a diesel release that impacted soil only. The case was closed in May 2007.

Table 6 – Planning District 3 Documented Release Summary

Site /Address	Map ID	Database	Case No.	Status	Notes
Point Loma Naval Complex / Manchester North Gateway Project 937 N Harbor Dr	134a	ENVIROSTOR SLIC	37970006 DEH2016-L/SAM-00351	**Open**	The facility is an open military base. Potential COCs include metals, waste oil, solvents, and hydrocarbons. The VAP case was opened in January 2016 and is under investigation.
11th Naval District Headquarters Unaddressed	134b	ENVIROSTOR	80001076	**Open**	The facility is a FUDS facility and the case is listed as inactive. According to the database, evaluation is needed. No other information related to the suspected contaminant or release is provided.
North Embarcadero Visionary Plan North Harbor Drive	134c	SLIC	H39775-001	**Open**	The case is a VAP case opened in September 2011 for regulatory oversight during redevelopment. No other information related to the suspected contaminant or release is provided.
Santa Fe Depot Project 1045 Pacific Hwy	136	SLIC	H39615-001	Closed	The case is related to a diesel release that impacted soil only and was closed in April 2003.
Naval Ocean Surveillance (Building 550) Unaddressed	150	LUST	H80024-001 to -010	Closed	The cases are related to diesel and gasoline releases affecting soil and groundwater. The cases were closed between 1988 and 1997.
Embassy Suites Hotel 601 Pacific Hwy	155	SLIC	DEH2012-LSAM-000150	Closed	The case was opened in December 2012 for a release of hydraulic oil that impacted soil and groundwater. The case was closed in March 2013.
Park Place Residents 700 W Harbor Dr	156	SLIC	H39360-001	Closed	The case was related to a diesel release that impacted soil only and was closed in January 2001.
City of San Diego Children's Museum 490 Front St	163	SLIC	H39696-001	Closed	The case was related to a petroleum hydrocarbon release that impacted soil only and was closed in November 2008.
Hyatt Regency Hotel 527 Harbor Dr	166	SLIC	H32110-001	Closed	The case is related to a gasoline release that impacted soil and groundwater. The case was closed in January 2001.
Crown Bay (Hard Rock Hotel) 4th and K	167a	ENVIROSTOR	3715007 3770001	Closed	The site type is listed as "evaluation" and was referred to a local agency as of February 2000. No information was provided related to type of contaminant / media or whether there was a release.
San Diego Convention Center (Tidelands Dump) 100 Harbor Drive	167b	SLIC	209100	**Open**	The case has been open since June 2000 and is related to a release of metals, dioxins, and PAHs that impacted soil and groundwater.
Campbell Industries 501 E Harbor Dr	167c	LUST ENVIROSTOR	H00417-003 9UT4109	Closed	The Envirostor case was opened in 1995 and was transferred to the RWQCB in April 2000 and is related to releases of gasoline and halogenated solvents that impacted soil and groundwater. The case was closed in September 2006.

Table 6 – Planning District 3 Documented Release Summary

Site /Address	Map ID	Database	Case No.	Status	Notes
San Diego Marriot Hotel and Marina 333 W Harbor Dr	171	LUST SLIC	H11034-001 to -003	**Open**	The case was opened in 1997 after damage to a UST resulted in a release of TPHg and TPHd that impacted soil only and was closed in October 1999. The open UAR case was opened in May 2016 and is related to a release of metals that impacted sediments and surface water. The facility is under investigation.
San Diego Unified Port District 501 Harbor Dr	177	LUST	H23165-001	Closed	The UAR case was opened in 1990 for a diesel release that impacted soil and groundwater. The case was closed in November 2003.
Catellus Development 702 Harbor Dr	180	SLIC	H32809-001	Closed	The case is related to a gasoline release that impacted soil and groundwater. The case was closed in January 1994.
Tosco Idle Pipeline 8th St and Harbor Dr	185	ENVIROSTOR	37130001 H39539-001	Closed	The VAP case was opened in May 2001 for regulatory oversight for the abandonment and removal of idle pipeline segments. The case was closed in September 2010.
Campbell Shipyard Bay Sediment San Diego Bay	193	LDS	2093400	**Open**	The LDS case was opened in November 2006 and the status is open- closed with monitoring and is related to a release of solvents, PCBs, and metals that impacted sediments and surface water.

6.4. Planning District 4 – Working Waterfront

Properties with documented contamination within and adjacent to the Working Waterfront PD are summarized in Table 7 and Figure 6.

Table 7 – Planning District 4 Documented Release Summary

Site /Address	Map ID	Database	Case No.	Status	Notes
Port of San Diego District Maintenance Facility 825 E Harbor Dr	182a	LUST	H11530-001 and -002	Closed	The two UAR case are related to waste oil releases that impacted soil and groundwater. The cases were closed in February 1997.
MTS – Old Town Light Rail Extension Between Grape and Hawthorne St	182b	SLIC	H86430-001	Closed	The SLIC case is related to a gasoline release that impacted soil only. The case was closed in August 2016.
Bulkhead Extension and Yard Improvement Unaddressed	183	LDS	900543N04	Closed	The case was closed in October 2005 and additional details are not available.

Table 7 – Planning District 4 Documented Release Summary

Site /Address	Map ID	Database	Case No.	Status	Notes
The Jankovich Company 961 Harbor Dr	186a	SLIC	H02810-001	Closed	The SLIC case is related to a crude oil release that affected soil and groundwater. The case was closed in March 2013 with detectable concentrations of petroleum hydrocarbons remaining in soil and groundwater.
Van Camp Seafood Division 1025 E Harbor Dr	186b	SLIC	H04622-001	Closed	The SLIC case was closed in August 1987 and additional details are not available.
Ralston Purina Company 1025 E Harbor Dr	186c	LUST SLIC	H104662-001	Closed	The case was opened in 1986 and closed in 1987. Details of the medium affected or COCs are not available.
G&S Engineering 1200 Harbor Dr	186d	LUST	H39643-001	Closed	The case was opened in 2003 after a gasoline release was discovered during the removal of multiple USTs. The release affected soil and groundwater and was closed in May of 2013 with TPH remaining in soil and groundwater.
Mouth of Switzer Creek Water Street	192	SLIC	Unknown	**Open**	The SLIC case was opened in May 2016 for a release of PCBs, metals, and PAHs that impacted sediments and surface water. The facility is under investigation.
Tenth Avenue Marine Terminal Berths 10-1 and 10-2	198	LDS	9000000537	Closed	The case was opened in January 1995 and closed in October 2002.
San Diego City Fire Station #07 944 Crosby St	203a	LUST SLIC	H21195-001 and -002	Closed	The UAR cases are related to diesel that impacted soil and groundwater. The cases were closed in 1989 and 1991.
Santa Fe Railway (Burlington N Santa Fe Rail) 1342 Crosby St	203b 204	LUST	H00076-003	**Open**	A release of gasoline impacted soil and groundwater at the facility. The cases were closed in June 2008 and January 2015.
Tuna Clipper 1444 Crosby St	203c	LUST SLIC	H05633-002	Closed	The UAR case was opened in August 1992 for a gasoline release that impacted soil and groundwater. The case was closed in March 1997.
Port of San Diego. 1875 Water St	203d	LUST SLIC	H24706-001	**Open**	The UAR case was opened in January 1994 for a diesel release that impacted soil and groundwater and was closed in December 1996. The SLIC case was opened in July 2015 and is related to a release of gasoline and oil that impacted soil. The facility is under investigation.
Freight Handlers Inc. 1790 Water St	203e	SLIC	H25935-002	Closed	The SLIC case was closed in December 1996 and additional details are not available.
Restaurant Depot 1335 E Cesar Chavez Way	204a	LUST	213206-001	Closed	The UAR case is related to a gasoline release that impacted soil only. The case was closed in January 2013.

Table 7 – Planning District 4 Documented Release Summary

Site /Address	Map ID	Database	Case No.	Status	Notes
Pacific Maritime Freight Inc. and Tenth Avenue Marine Terminal	204b	SLIC	3100109	**Open**	The SLIC case is related to a release of PCBs and metals that impacted soil and surface water. The case was opened in May 2016 and is under investigation.
Southwest Marine Inc. Foot of Sampson St	210	LUST	H09689-002	Closed	The UAR case was opened in December 1996 and is related to a minor release of diesel that impacted soil only. The case was closed in 1998.
Continental Maritime San Diego City of San Diego Pipeline 1995 Bayfront St	212a	LUST SEMS-ARCHIVE SLIC ENVIROSTOR	H00120-001 to -003 and H02857-001	**Open**	The UAR cases are related to releases of diesel and gasoline that impacted soil and groundwater. The cases were closed between 1989 and 2013. The SLIC case was opened in January 1995 and is related to oil and metals releases that impacted soil only. The facility is currently under further evaluation.
CP Kelco (Harbor Boat and Tug) 2145 Belt St	212b	LUST SLIC ENVIROSTOR	H02377-001 to -009	**Open**	The UAR cases are related to releases of alcohol, diesel, hydraulic fluid, and oil that impacted soil only. The cases were closed between 1988 and 2004. The SLIC case was opened in March 2004 and is related to a diesel release that impacted soil only. The facility is under investigation.
Shipyard Sediment Site – North Shipyard – BAE Systems 2205 E Belt St	213a 223	LUST SLIC	H09689-002 and 2090005	**Open**	The closed UAR case was opened in 1997 and is related to a diesel release that impacted soil only. The case was closed in July 1998. The SLIC cases were opened in 1995 and 2009 and are related to releases of PCBs, metals, and PAHs that impacted soil and groundwater. The facility is under a Cleanup and Abatement Order.
Chevron USA Inc 2351 E Harbor Dr	213b 215	LUST	H03791-001 and -002	**Open**	The offsite UAR cases were opened in 1987 during a UST removal and are related to releases of petroleum that impacted soil and groundwater. The facility is currently under remediation.
Joe Yeager (Boat) 2710 N Harbor Dr	219a	LUST	H05335-003	Closed	The UAR case was opened in October 1996 and closed in April 2001. Medium affected and COCs are not listed.
USCG Group Air Station 2710 N Harbor Dr	219b	LUST SLIC	H05335-001 and -002	Closed	The UAR cases are related to releases of aviation and jet fuel that impacted soil and groundwater. The cases were closed in 1987 and 2001.
NASSCO 2800 N Harbor Dr #6	222	LUST SLIC	H02417-001 to -005	Closed	The UAR cases are related to diesel, waste oil, and chlorinated hydrocarbon releases impacting soil and groundwater. The cases were closed in between 1986 and May 2008.

Table 7 – Planning District 4 Documented Release Summary

Site /Address	Map ID	Database	Case No.	Status	Notes
General Dynamics 2980 N Harbor Dr	225	LUST	H14919-001	Closed	The UAR case was opened in October 1986 after a release of jet fuel was discovered during a tank removal. The release impacted soil and groundwater and was closed in August 1996.
Naval Base San Diego – UST Former Building 209 Waterfront St	228	MCS	9UT3899	Closed	The facility is approximately 2.2-acres the release is associated with diesel and gasoline releases that impacted soil and groundwater. The case was closed in July 2014 with COCs remaining in soil and groundwater.

6.5. Planning District 5 – National City Bayfront

Properties with documented contamination within and adjacent to the National City Bayfront PD are summarized in Table 8 and Figure 7.

Table 8 – Planning District 5 Documented Release Summary

Site /Address	Map ID	Database	Case No.	Status	Notes
Maritime Shipyard National City, CA	244	ENVIROSTOR	S107736688	**Open**	The property is a FUDS property and is listed as inactive. According to the database, evaluation is needed. No other information related to the suspected contaminant or release is provided.
Sithe Energies (San Diego Port District) 1400 Tidelands Ave	245a	LUST SLIC ENVIROSTOR	H34132-001 and -002, H01984-002, and H32808-001	Closed	The UAR cases are related to gasoline releases that impacted soil and groundwater. The cases were closed in between 1996 and 2012.
Cole Industries 1640 Tidelands Ave	245b	LUST SLIC	H04936-001	Closed	The UAR case was opened after the removal of gasoline and diesel USTs in February 1987. The case was closed the following month.
Whitaker Investment Corp 1465 Tidelands Ave	245c	SLIC	H24675-001	Closed	The SLIC case is related to a bunker oil release that impacted soil only. The case was closed in December 1992.
Tidelands Industrial Park 2975 Pacific Hwy S	245d	LUST	H39776-002	Closed	In February 2012, a release of waste oil impacted soil and groundwater at the facility. The case was closed in July 2012 with COCs remaining in soil and groundwater.

Table 8 – Planning District 5 Documented Release Summary

Site /Address	Map ID	Database	Case No.	Status	Notes
Port District (Nelco) 1420 Tidelands Ave	245e	SLIC	H32808-001 / SLT90010	Closed	A VAP case was opened after a contractor encountered stained soil (180 yards^2) and hydrocarbon odors in 1994. Elevated metals (lead, copper, and zinc) were also encountered. The case was transferred to the Water Board and was closed in 2011.
A&E Industries (Port of SD) 1440 Tidelands Ave	245f	ENVIROSTOR LUST SEMS-ARCHIVE SLIC	H01984-001 & -002	Closed	The first case (-001) was opened in 1992 to investigate copper slag sand blast on surficial soil. The case was transferred to the DTSC and administratively closed. The second case (-002) was opened after the removal of a diesel UST and gasoline UST in 1995. The UAR impacted soil and groundwater. It was estimated that 160 cubic yards of impacted soil remains and the case was closed in 2012.
Zellerbach 1010 W 19th St	248a	LUST SLIC	H02030-001 & -002	Closed	The first case (-001) was opened after a failed tank integrity test in 1989. The second (-002) was associated with an UAR release of gasoline that impacted soil and groundwater, and was closed in 2001.
NASSCO – Old Site (Vacant Lot) Tidelands & 19th	248b	SLIC	H28742-001	Closed	The case reported impacted soil only and was closed in 1993. No other information was provided.
Monson Trucks Co (Tidelands 1 Storage) 1902 Tidelands Ave	249a	LUST	H18070-001	Closed	A diesel release impacted soil in 1986 and was closed in 1988.
So Cal Truck Stop 2250 Tidelands Ave	249b	LUST SLIC	H13310-001 to -004 / 9UT2856	**Open**	The facility was located on the former Pepper Oil property (H03078-001). Combined assessments have been performed for the adjacent properties under the Pepper Oil Closure Plan and overseen by the DTSC. The UAR case was opened in 1994 after the removal of a 12,000 gallon UST. The case was transferred from the DEH to RWQCB in 2013 and the status is listed as remedial action underway.
Pepper Oil Company 2300 Tidelands Ave	249c	ENVIROSTOR LUST SEMS-ARCHIVE	H03078-002 / 9UT3753	**Open**	DTSC is overseeing the closure of Hazardous Waste Management Units at the Pepper Oil property. The Water Board is overseeing site assessment activities associated with diesel and waste oil USTs. Soil and groundwater are impacted.
C***&M Meat Packing*** 830 W 23st St	250a	SLIC	H23772-006	**Open**	The property has six unauthorized release cases. The case status is listed as open verification monitoring as of November 2007. No other information is provided.
Electro Mold & Casting 835 W 24th St (Bay Marina Dr)	250b	SLIC	H08326-001	**Open**	The VAP case was administratively closed in 2013. Work is continuing under H23772-005.

Table 8 – Planning District 5 Documented Release Summary

Site /Address	Map ID	Database	Case No.	Status	Notes
Santa Fe Railroad 2400 Harrison Ave	250c	SLIC	H26516-001	Closed	The offsite property had an UAR of waste, motor, or hydraulic oil that impacted soil. The case was closed in 1995.
Georgia Pacific Distribution 901 W 24th St	252a	LUST	H05599-001	Closed	A petroleum UAR impacted soil and groundwater in 1993. The case was closed in 1998 with residual contamination left in place.
National Distribution Center (WDP National City Associates & Harvest Meat Company) 1022 W 24th St	252b	LUST	H20211-001 to -003	Closed	The facility has three closed petroleum UAR cases that impacted soil and groundwater.
Pacific Coast Cement Corp. 1030 W 24th St	252c	LUST	H22774-001	Closed	A gasoline release impacted soil in 1990. The case was closed in 1996.
Former National City Dump (Davies Dump) (C&M Meat Packing) 2501-2510 Cleveland Ave	254a	LUST SLIC	H23772-001 to -005	**Open**	From the 1920s to 1950s the property operated as a solid waste dump that was sorted, burned, and dispersed into the marsh. The property also has petroleum and chlorinated hydrocarbon releases. Case -005 is listed as open – remediation.
Cuyamaca Meats 2510 Cleveland Ave	254b	ENVIROSTOR LUST	H09153-001	Closed	A UAR case was opened in 1995 after the removal of a gasoline UST. The release was soil only and was closed in 1999.
A***&E Industries*** 1313 West 24th St	255a	ENVIROSTOR	37170003	Closed	The occupant, a ship building repair company, was required to perform a PEA in 1995. Contaminants were not found and the DTSC issued a closure approval letter.
National City Marine Terminal (Paco 24th Street Terminal) 1400 W 24 St	255b	SLIC	H18333-001 & -002	**Open**	The first case (-001) involved heavy metals in soil that was opened and closed in 1990. The second case is listed as remedial action underway.
Dixieline Lumber Co 1400 W 28th St	261	LUST SLIC	H02044-001	Closed	The facility has a closed UAR associated with a gasoline UST that impacted soil and groundwater. The case was opened in 1989 and closed in 1990.
National City Marine Terminal, SDG&E 2600 Terminal Ave	262	SLIC	H31988-001 & -002	Closed	The UAR involved two ASTs that stored diesel and waste oil. Petroleum and chlorinated VOCs were encountered in soil and groundwater.
Western Lumber Co 2745 Tidelands Ave	263	SLIC	H03837-001 & -002	Closed	The first case was opened and closed in 1988 due to a failed tank integrity test. The second case opened after a petroleum release impacted soil. It was closed in 2000.

Table 8 – Planning District 5 Documented Release Summary

Site /Address	Map ID	Database	Case No.	Status	Notes
Paco Terminal Inc (24th St Marine Terminal Landfill) 2720 Terminal Ave	264	LDS	9 000000570	Closed	The listing was for a cleanup of contaminants from shipping operations at the 24th Street Marine Terminal (Board Order 94-37). The site is listed as closed with monitoring.
San Diego Unified Port Dist 3040 Tidelands Ave	268	LUST SLIC	H04735-001 & -002	Closed	A gasoline release impacted soil and groundwater. The case was opened in 1988 and closed in 1998. The second case was opened to investigate the source of dissolved-phase chlorinated hydrocarbons in the area and was closed in 2003.
Mariners Park 3040 Terminal Ave	270	SLIC	H32791-001 / H13673-001 & -002	**Open**	Several releases were listed for the property. A cleanup and abatement order was issued for the property and is listed as active. The COC is chlorinated hydrocarbons in soil and groundwater. The other two cases (H13673) were related to petroleum UARs and are closed in July 2013.
Goesno Place Re-pository Goesno Place	271	LDS	S117624691 / 9000000696	Closed	Dredged sediment from the maintenance dredging for the Tenth Street Terminal (GeoTracker ID No. L10004918383) in San Diego was temporarily stored at the property for dewatering and was removed. The case was closed in January 2014.

6.6. Planning District 6 – Chula Vista Bayfront

Properties with documented contamination within and adjacent to the Chula Vista Bayfront PD are summarized in Table 9 and Figure 8.

Table 9 – Planning District 6 Documented Release Summary

Site /Address	Map ID	Database	Case No.	Status	Notes
US Fish and Wild-life Service Unaddressed	275a	SLIC	H26542-001	Closed	The case was closed in 1991. No other information was provided.
Chula Vista Bay-front Master Plan – Sweetwater Par-cels 215 Bay Boulevard	275b	SLIC	4090005	Closed	The approximately 97-acre site has been impacted by historical agricultural use (pesticides in surface and near-surface soil), illegal dumping, petroleum from historical USTs, lead in shallow soil (potential secondary deposits of burn ash from other sources and aerially deposited lead), migration of VOC-contaminated groundwater from off-site industrial sources, metals in shallow soil from former industrial operations and possibly waste disposal. The case was closed in May 2016.

Table 9 – Planning District 6 Documented Release Summary

Site /Address	Map ID	Database	Case No.	Status	Notes
Gunpowder Point Gunpowder Point Dr	276	SLIC	T10000008877	**Open**	Groundwater impacted with perchlorate. Need to determine if there is an ecological risk and possible sediment impacts. The status is listed as inactive as of May 2016.
Rados, Chula Vista City, Redevelop 798 F Street	278	SLIC	H39651-001 & -002	Closed	Two UAR cases were opened in investigate waste oil / motor oil and PCBs in soil. The cases were closed in 2004 and 2006.
Goodrich Aerostructures / Rohr – Goodrich Aerostructures (Rohr Ind) 850 Lagoon Drive	279	SEMS-ARCHIVE SLIC	2090086 and 2092900	**Open**	COCs at the property include heavy metals, petroleum, PCBs, PAHs, and VOCs. A revised soil remedial action plan was submitted to the Water Board and DTSC in May 2018. The case status is open, remediation as of October 2014.
Fluid Systems 965 F Street	281	ENVIROSTOR LUST	9UT2120	Closed	A petroleum UAR impacted soil and groundwater at the property. Bioremediation was performed and the case was closed with residual contamination left in place in 1995.
Sediment Off Former Shagrila Site 980 Lagoon Dr	282	SLIC	T10000008878 /H37165-001	**Open**	Two cases were opened for possible land- and water-side contamination from sand-blasting operations. The COCs are copper, lead, other metals, petroleum, and PCBs. The landside operations case (H37165-001) was opened in October 1998 and closed in August 2000. The water-side case (T10000008878) is listed as open - inactive as of May 2016.
The Marine Group, LLC 997 G St	287	SLIC	T10000008876	**Open**	The case is related to facility and offshore sediments. The case is listed as inactive. COCs include metals, PCBs, diesel, and PAHs.
Bay Blvd Projects Bay Blvd	290a	SLIC	H26520-001	Closed	The case was closed in 2001. No other information is provided.
Rohr Aircraft Corp Foot of H St	290b 292 300	ENVIROSTOR LUST	H02457-011 / S107737165	**Open**	The case was related to a waste oil release that impacted soil only and was closed in June 2012. Envirostor lists the property as a FUDS facility and the case is listed as inactive – needs evaluation as of July 2005. No other information related to the suspected contaminant or release is provided
Vacant Property Owned by SDUPD Marina Parkway	306	SLIC	T10000004581	**Open**	This was Port owned property adjacent to the former BF Goodrich/Rohr South Campus property. It is part of the "Exchange Parcels" for redevelopment in the Chula Vista Marina District.

Table 9 – Planning District 6 Documented Release Summary

Site /Address	Map ID	Database	Case No.	Status	Notes
South Bay Power Plant (Dynegy South Bay LLC) 990 Bay Blvd	314	ENVIROSTOR LUST SLIC	H13939-001 to -004 / 71003502 & 4090006	**Open**	The 158-acre property used as an electric power generation facility. The UAR case involved a gasoline release that impacted soil. The case was closed in 1988. In 1993, DTSC authorized SDG&E to treat hazardous wastes at the facility under Tiered Permit Conditional Authorization. Five areas of concern needed further investigation due to elevated levels of metals, VOCs, and petroleum hydrocarbons. On November 20, 2007, DTSC signed a Corrective Action Consent Agreement with SDG&E to review documents generated from the investigations, and oversight of additional investigation and remediations required. The DTSC is the oversight agency for landside investigations and the Water Board is the oversight agency for investigations on the water side.
SDG&E – South Bay Plant 990 Bay Blvd	316a	LUST	15-0005.03	Closed	The case was opened as part of a toxic pits cleanup. COCs include hexavalent chromium, copper, and other metals. The case was closed in 1989.
Bay RV & Boat Service 995 Bay Blvd	316b	ENVIROSTOR SLIC	H39543-001	Closed	A VAP case was opened in 2001 for a planned development; however, the applicant did not move forward and the case was administratively closed in November 2012.

6.7. Planning District 7 – South Bay

Properties with documented contamination within and adjacent to the South Bay PD are summarized in Table 10 and Figure 9.

Table 10 – Planning District 7 Documented Release Summary

Site /Address	Map ID	Database	Case No.	Status	Notes
RESCO 1714 Palm Ave	331	SLIC	H11745-001	Closed	The commercial property was occupied by automotive shops and vehicle storage since the 1980s. A VAP case was opened to investigate petroleum-impacted soil and groundwater at the site. The case was closed in March 2004.
7-Eleven Food Store #24344 1311 Palm Ave	332	SLIC	H20489-001	Closed	The UAR case was opened to investigate a gasoline release. The case was closed in 1992.

6.8. Planning District 8 – Imperial Beach Oceanfront

The Imperial Beach Oceanfront PD is depicted on Figure 10. Properties with documented contamination within and adjacent to the Imperial Beach PD were not found during the environmental review.

6.9. Planning District 9 – Silver Strand

Properties with documented contamination within and adjacent to the Imperial Beach PD are summarized in Table 11 and Figure 11.

Table 11 – Planning District 9 Documented Release Summary

Site /Address	Map ID	Database	Case No.	Status	Notes
Loews Coronado Resort 4000 Coronado Bay Rd	283	SLIC	H25888-001	Closed	The UAR case involved a release of chlorinated hydrocarbons to soil The case was closed in 1999.
Rancho Carrillo, Grand Cribe Coronado Soil Stockpile Coronado Cays	299	LDS	9000001N90	Closed	The property is a land disposal site that was closed in 1995. No other information is provided.

6.10. Planning District 10 – Coronado Bayfront

Properties with documented contamination within and adjacent to the Coronado Bayfront PD are summarized in Table 12 and Figure 12.

Table 12 – Planning District 10 Documented Release Summary

Site /Address	Map ID	Database	Case No.	Status	Notes
Coronado City Maintenance Yard 1300 1st Street (101 B Avenue)	201a	LUST SLIC	H21251-001 and -002	Closed	A release of diesel impacted soil at the facility. The case was closed in January 2000.
Coronado Center Dry Cleaner 110 B Avenue	201b	ENVIROSTOR SLIC	37720027 and H14583-001	Closed	The case is related to chlorinated hydrocarbons, and gasoline that impacted soil only. The case was closed in October 2005.
Coronado Boat Yard 1511 Marine Way	202	SLIC	H29785-001-001	Closed	The SLIC case is related to release of lead that impacted soil and groundwater. The case was closed in June 1997.

Table 12 – Planning District 10 Documented Release Summary

Site /Address	Map ID	Database	Case No.	Status	Notes
Coronado Golf Course 635 Glorietta Boulevard	232	LUST SLIC	H21243-001 and -002	Closed	The UAR cases were opened in April 1987 and May 2003 and are related to gasoline releases that impacted soil and groundwater. The cases were closed in April 1988 and December 2007.
Hotel Del Coronado. 1500 Orange Avenue	238	LUST SLIC CORTESE ENVIROSTOR	H10469-001 through -006	Closed	The UAR cases are related to releases of diesel and gasoline that impacted soil and groundwater. The cases were closed between August 1996 and March 1998.
Glorietta Bay Park 1715 Strand Way	240	LUST	202770-001	Closed	The UAR case was opened in December 2003 for an oil release that impacted soil only. The case was closed in June 2004.

7. FINDINGS

Based on the results of this HMTS, the following findings are provided:

- A breakdown of the number of properties with UAR cases is provided in the table below.

Table 13 – Summary of Properties with UARs

Planning District	Open Cases	Closed Cases	Total Cases
PD 1 - Shelter Island	3	12	15
PD 2 - Harbor Island	15	27	42
PD 3 - Embarcadero	13	31	44
PD 4 – Working Waterfront	8	18	26
PD 5 – National City Bayfront	8	21	29
PD 6 – Chula Vista Bayfront	7	7	14
PD 7 – South Bay	0	2	2
PD 8 – Imperial Beach Oceanfront	0	0	0
PD 9 – Silver Strand	0	2	2
PD 10 – Coronado Bayfront	0	6	6

- The number of properties with documented releases indicates a higher likelihood of off-site releases from hazardous materials and/or petroleum products potentially impacting soil and groundwater within each PD. Soil and/or groundwater that has been impacted by releases of hazardous materials/petroleum products, such as from surficial spills, subsurface releases from underground storage tanks, or other sources, may be considered a waste. If the concentrations of constituents of concern in the affected media are found to exceed state and/or federal screening criteria, the waste may be considered hazardous.

- PDs that may have a higher likelihood of being associated with soil and/or groundwater contamination include Shelter and Harbor Islands, Embarcadero, Working Waterfront, and the National City and Chula Vista Bayfronts.

8. RECOMMENDATIONS

The following recommendations relating to hazardous materials/wastes are provided. These general recommendations, if implemented, can assist in the land use planning process of the PMPU to identify where further assessment and remediation may be needed and what type of land uses may be appropriate and feasible at various locations. For purposes of the assessment and remediation described below, a qualified environmental professional shall have knowledge of, and professional experience in the: observation and documentation of contaminated and potentially contaminated soil; sampling, soil, groundwater, soil vapor, and sediment analyses, and characterization protocols in the San Diego County Department of Environmental Health Site Assessment and Mitigation Manual; and environmental and geologic conditions in the project area. The standard of care is that the experienced environmental professional is a state-licensed geologist or engineer with adequate knowledge of local conditions and environmental regulations, or a person working under the direct supervision of such a geologist or engineer.

- If a planned project is located within an area with a master plan or redevelopment plan (i.e., TAMT and Chula Vista Bayfront), the project will be reviewed for conformance with the applicable EIR for that plan area and applicable mitigation measures will be implemented (SDUPD, 2010 & 2016).

- Property-specific due diligence processes (i.e., Phase I ESA) will be conducted by a qualified environmental professional, in accordance with applicable guidelines and regulations, on specific properties within the project area prior to redevelopment. Phase I ESAs shall be conducted by a qualified environmental professionals in accordance with the standard of care at that time (currently the ASTM Standard Practice E1527-13) and applicable regulations (currently the EPA 40 Code of Federal Regulations §312 titled “Standards and Practices for All Appropriate Inquiries”).

- For properties within the project area with suspected or documented soil and/or groundwater contamination or other potential environmental concerns, further evaluation through a Phase II ESA, which may lead to remediation activities, will be conducted prior to or during development activities by a qualified environmental professional. Properties with cases under regulatory oversight require an approved work plan prior to commencement of the Phase II ESA. Results of previous assessment activities for a property (e.g., previous Phase II ESAs, UST removal sampling data), if any, will be evaluated by a qualified environmental professional prior to development activities.

- The "case closure" regulatory status shall be reevaluated prior to development activities by a qualified environmental professional in conjunction with the regulatory agency having oversight of the activities for unauthorized release properties when a potential project results in a land use change (e.g., from industrial to commercial recreation use).

- For properties with documented or suspected impacts to soil and/or groundwater, appropriate worker and community health and safety measures will be implemented by the contractor, under the oversight of a qualified environmental professional, during soil/groundwater disturbance activities (e.g., dust control, air monitoring, stockpile management).

- It is possible that contaminated soil and/or groundwater, not identified during this technical study, may be present within the project area (e.g., lead in shallow soil, burn pits). For this reason, the following precautions should be observed during excavation activities associated with the improvements conducted during development:

    - Pre-project activities (e.g., planning or early design) will include site-specific environmental evaluation (e.g., review of potential contaminants of concern and exposure pathways) to address hazardous materials concerns related to worker and community health and safety, waste generation and disposal, and regulatory requirements.

    - Caution must be taken during excavation activities near the facilities associated with unauthorized releases, because of the potential for encountering documented and undocumented releases of contaminants and hazardous materials or wastes that have occurred within or adjacent to these sites. Excavation and/or soil monitoring will be conducted by professionals trained in the identification and management of hazardous materials or wastes, such as contaminated soil or groundwater.

    - At properties with known or suspected contamination, appropriate references related to the potential to encounter contaminated soil or groundwater shall be included in construction specifications and plans.

    - A Site Health and Safety Plan should be prepared and implemented prior to initiation of construction activities within the boundaries of the project area to reduce potential health and safety hazards to workers and the public.

- Soil generated during construction activities for development (e.g., subsurface excavation, grading) at contaminated properties will require chemical characterization (e.g., analytical testing) by a qualified environmental professional prior to reuse, export, or disposal.

- Further assessment is recommended to be performed by a qualified environmental professional if discolored soil or other potential environmental issues (i.e., chemical odors, previously unknown tanks, or undocumented soil contamination) are encountered in the project area during construction/development activities. If contamination is discovered, regulatory agencies may require additional environmental investigation and/or mitigation to be conducted by the property owner, particularly if there is the potential to affect public health, safety, and/or the environment.

- Future redevelopment of impacted or potentially impacted properties involving soil excavation, grading, or other subsurface disturbance should include implementation of a soil and groundwater management plan to address the possibility of encountering localized areas of potential environmental concern. The plan shall be prepared by a qualified environmental consultant and should be implemented during soil/groundwater disturbance activities under the oversight of a qualified environmental professional on behalf of the property owner/developer. The plan must address monitoring of excavated soil, community and worker health and safety, and soil and groundwater handling, stockpiling, characterization, on-site reuse, export, and disposal protocols. Appropriate references to the potential to encounter contaminated soils and/or groundwater shall be included in construction specifications and bid documents so that environmental factors (e.g., groundwater pumping rates, soil disposal) are appropriately and cost-effectively managed by the contractor.

- Groundwater at certain locations within the project area has been documented as being impacted. Based on evidence of shallow groundwater depths, if dewatering activities are planned for construction or other proposed improvements, they may be subject to increased disposal costs or other environmental surcharges (e.g., permitting) as a result of the presence of contaminated groundwater. A discharge permit will likely be required for dewatering, and water may need to be characterized by a qualified environmental professional and/or treated prior to discharge. The RWQCB and/or agency providing oversight of wastewater discharge must be contacted by a qualified environmental professional in conjunction with the contractor and/or property owner for guidance on the requirements for discharge of dewatering effluent, prior to initiation of construction activities. The groundwater management plan mentioned in the previous bullet must be implemented by a contractor during construction activities if groundwater is expected to be encountered.

- Prior to renovation or demolition of structures, surveys shall be conducted for the presence of hazardous building materials such as asbestos-containing materials, lead-containing surfaces, and other materials falling under UWR requirements. The surveys must be conducted by California Department of Public Health Certified Lead Inspector/Assessors and California Division of Occupational Safety and Health Certified Asbestos Consultants in accordance with applicable local, state, and federal guidelines and regulations. Prior to renovation or demolition of buildings, appropriate abatement measures must be implemented by a licensed abatement contractor using trained and certified workers and supervisors.

- For sites where structures are to be demolished, especially structures built in the 1970s or earlier, analyzing surface and shallow soils for lead and termiticides prior to demolition or soil disturbance (e.g., grading) may be warranted. If there are unpaved areas around the dripline of a structure built in the 1970s or earlier, it is recommended that soil sampling be performed to characterize shallow soil for organochlorine pesticides and lead prior to demolition or soil disturbance activities.

- Illegal dumping of potentially hazardous wastes may have occurred on project areas currently consisting of vacant land. Potentially hazardous wastes should be appropriately disposed prior to initiating redevelopment activities.

9. LIMITATIONS

The environmental services described in this report have been conducted in general accordance with current regulatory guidelines and the standard-of-care exercised by environmental consultants performing similar work in the project area. No warranty, expressed or implied, is made regarding the professional opinions presented in this report. Please note that this study did not include an evaluation of geotechnical conditions or potential geologic hazards.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Ninyo & Moore should be contacted if the reader requires any additional information or has questions regarding the content, interpretations presented, or completeness of this document.

Our conclusions, recommendations, and opinions are based on an analysis of the observed project area conditions and the referenced literature. It should be understood that the conditions within the project area could change with time as a result of natural processes or the activities of man at a particular property. In addition, changes to the applicable laws, regulations, codes, and standards

of practice may occur due to government action or the broadening of knowledge. The findings of this report may, therefore, be invalidated over time, in part or in whole, by changes over which Ninyo & Moore has no control.

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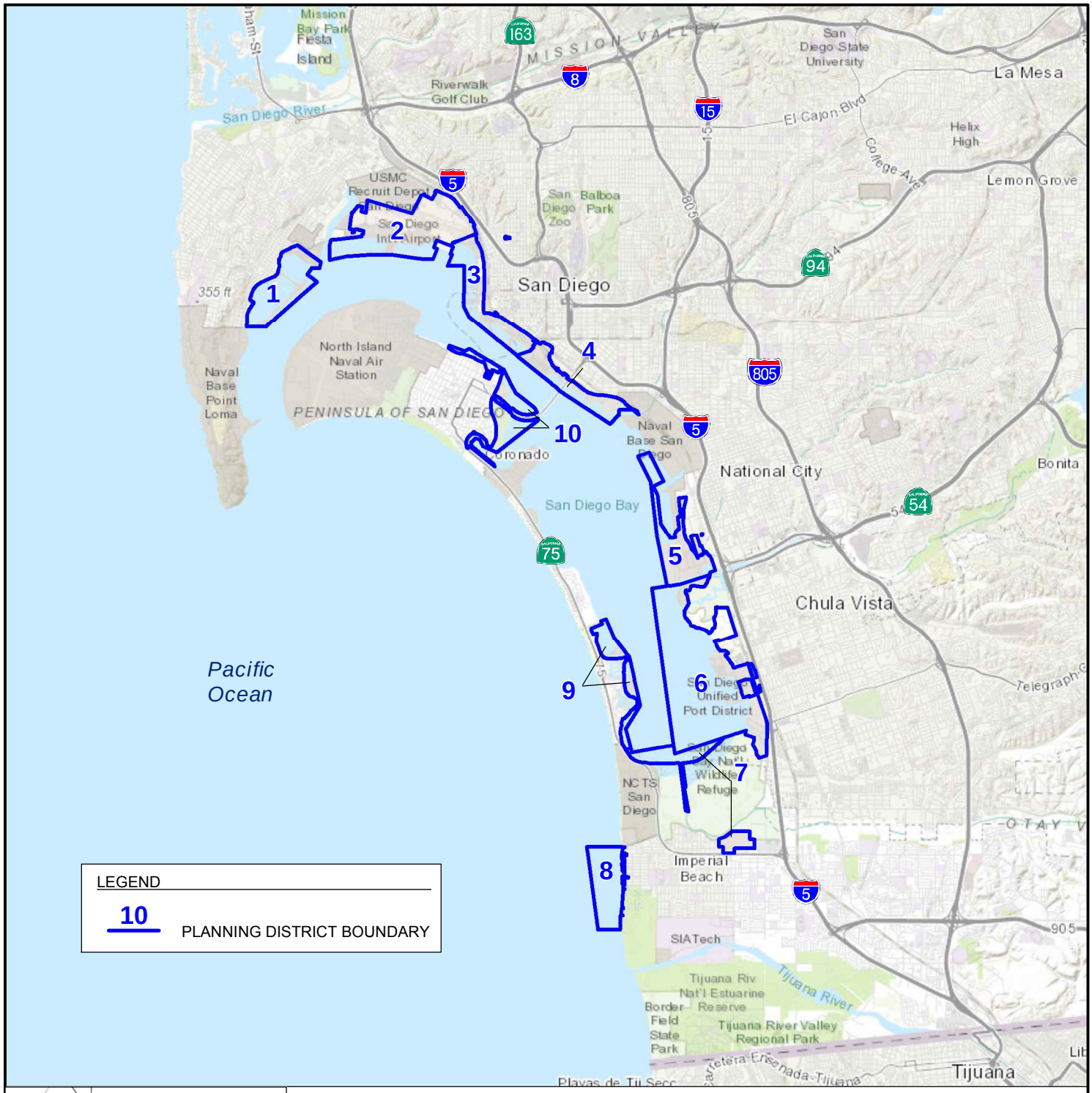

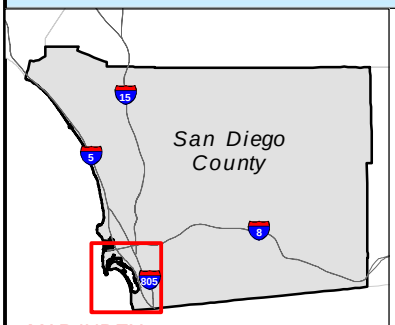

SOURCE: ESRI WORLD TOPO, 2016

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NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

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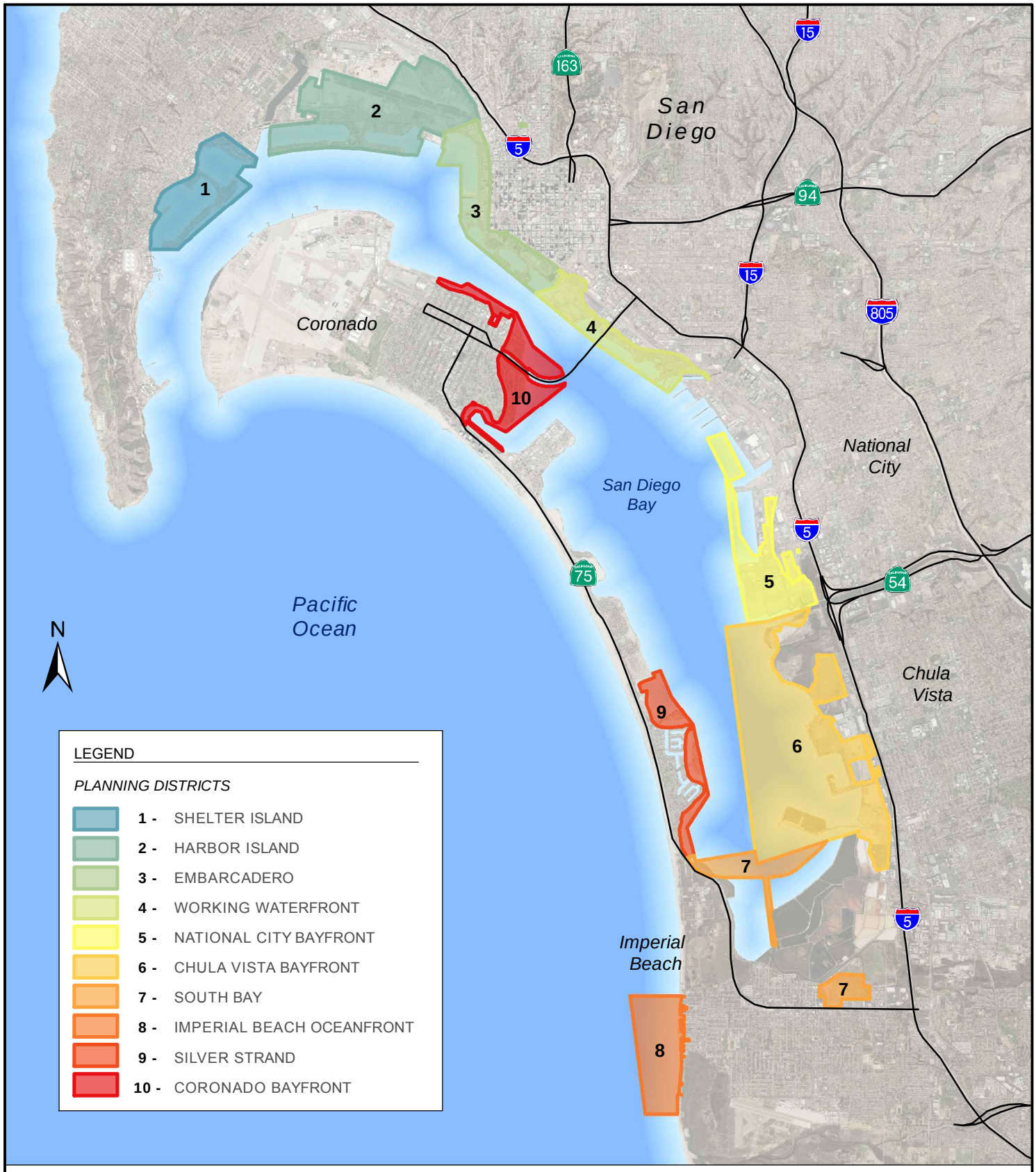

SOURCES: Port Districts - Port of San Diego, 2017; Imagery - SANDAG and SanGIS

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NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE.

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SOURCE: PORT DISTRICT BOUNDARIES - ICF/PORT OF SAN DIEGO, 2017; IMAGERY - SANDAG AND SANGIS

NOTES: SITES WITH MULTIPLE OPEN AND CLOSED RELEASE CASES ARE DEPICTED AS OPEN AND LOCATED BY THE LOWEST MAP ID NUMBER.

A SUMMARY OF EACH LISTING IS PROVIDED ON TABLE 4.

N

SCALE IN FEET

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NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore	PLANNING DISTRICT 1 - SHELTER ISLAND	FIGURE
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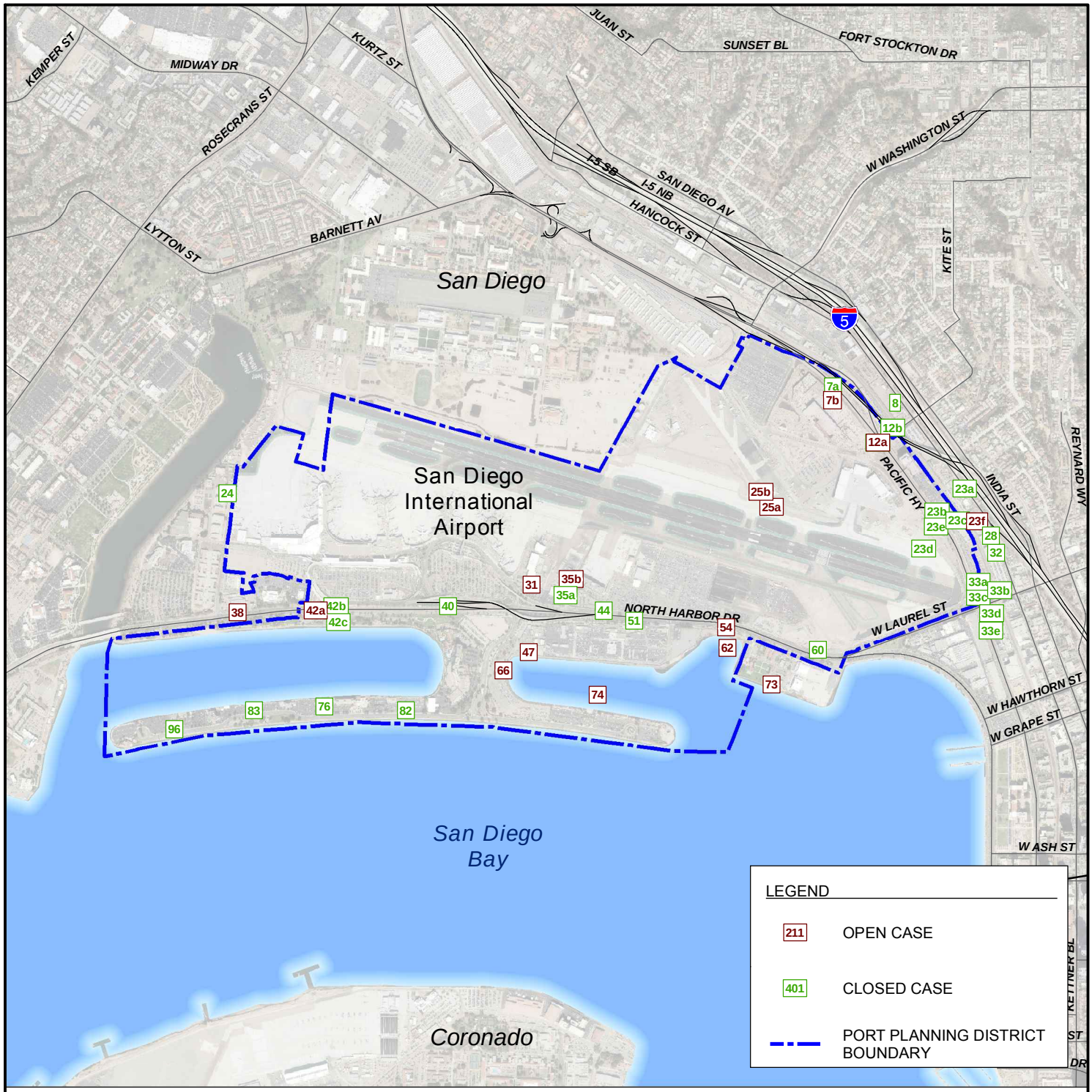

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NOTES: SITES WITH MULTIPLE OPEN AND CLOSED RELEASE CASES ARE DEPICTED AS OPEN AND LOCATED BY THE LOWEST MAP ID NUMBER.

A SUMMARY OF EACH LISTING IS PROVIDED ON TABLE 5.

N

SCALE IN FEET

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NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore	PLANNING DISTRICT 2 - HARBOR ISLAND	FIGURE
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SOURCE: PORT DISTRICT BOUNDARIES - ICF/PORT OF SAN DIEGO, 2017; IMAGERY - SANDAG AND SANGIS

NOTES: SITES WITH MULTIPLE OPEN AND CLOSED RELEASE CASES ARE DEPICTED AS OPEN AND LOCATED BY THE LOWEST MAP ID NUMBER.

A SUMMARY OF EACH LISTING IS PROVIDED ON TABLE 6.

N

SCALE IN FEET

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NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore	PLANNING DISTRICT 3 - EMBARCADERO	FIGURE
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SOURCE: PORT DISTRICT BOUNDARIES - ICF/PORT OF SAN DIEGO, 2017; IMAGERY - SANDAG AND SANGIS

NOTES: SITES WITH MULTIPLE OPEN AND CLOSED RELEASE CASES ARE DEPICTED AS OPEN AND LOCATED BY THE LOWEST MAP ID NUMBER.

A SUMMARY OF EACH LISTING IS PROVIDED ON TABLE 7.

N

SCALE IN FEET

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NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore	PLANNING DISTRICT 4 - WORKING WATERFRONT	FIGURE
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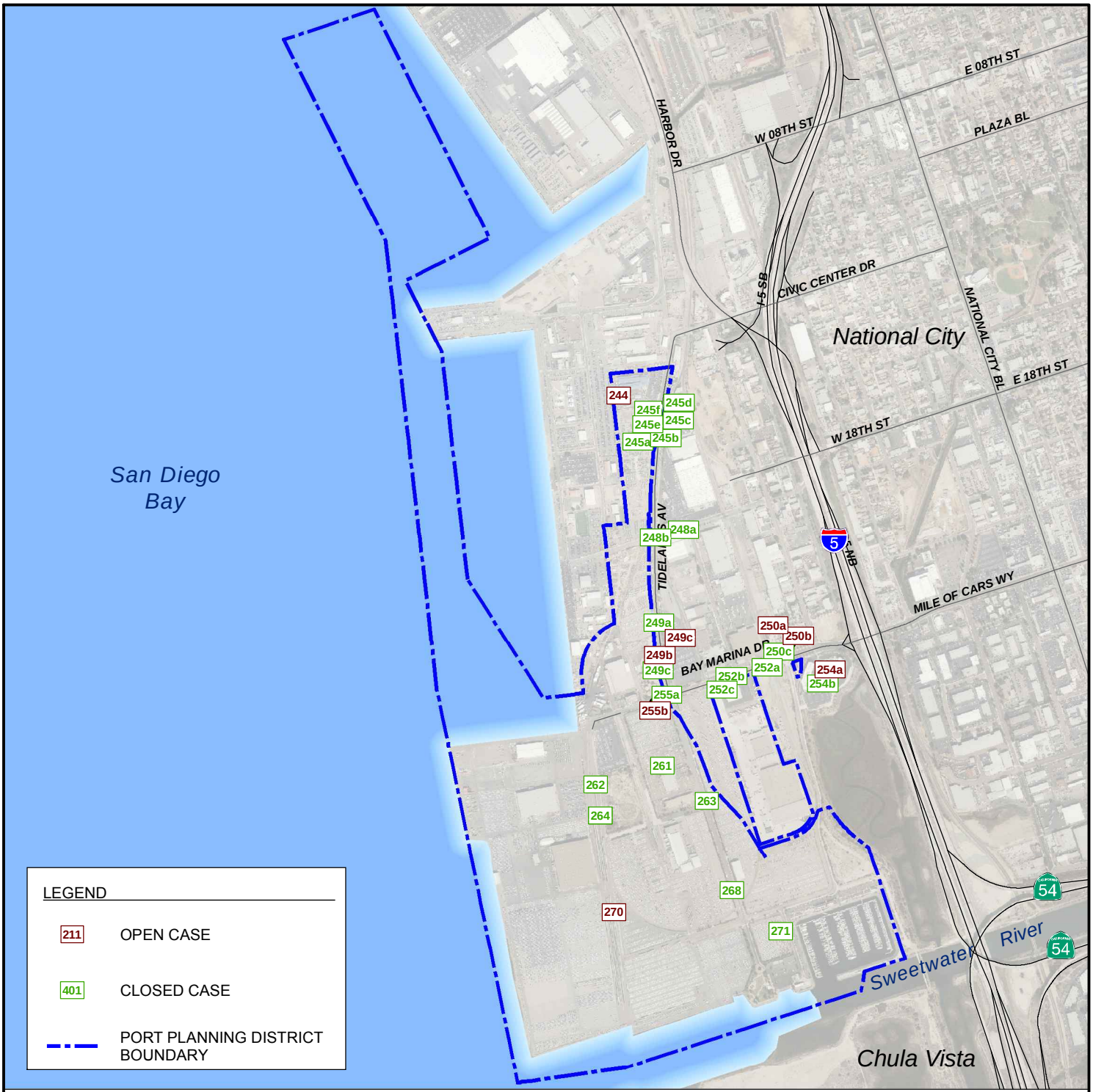

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NOTES: SITES WITH MULTIPLE OPEN AND CLOSED RELEASE CASES ARE DEPICTED AS OPEN AND LOCATED BY THE LOWEST MAP ID NUMBER.

A SUMMARY OF EACH LISTING IS PROVIDED ON TABLE 8.

N

SCALE IN FEET

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NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore	PLANNING DISTRICT 5 - NATIONAL CITY BAYFRONT	FIGURE
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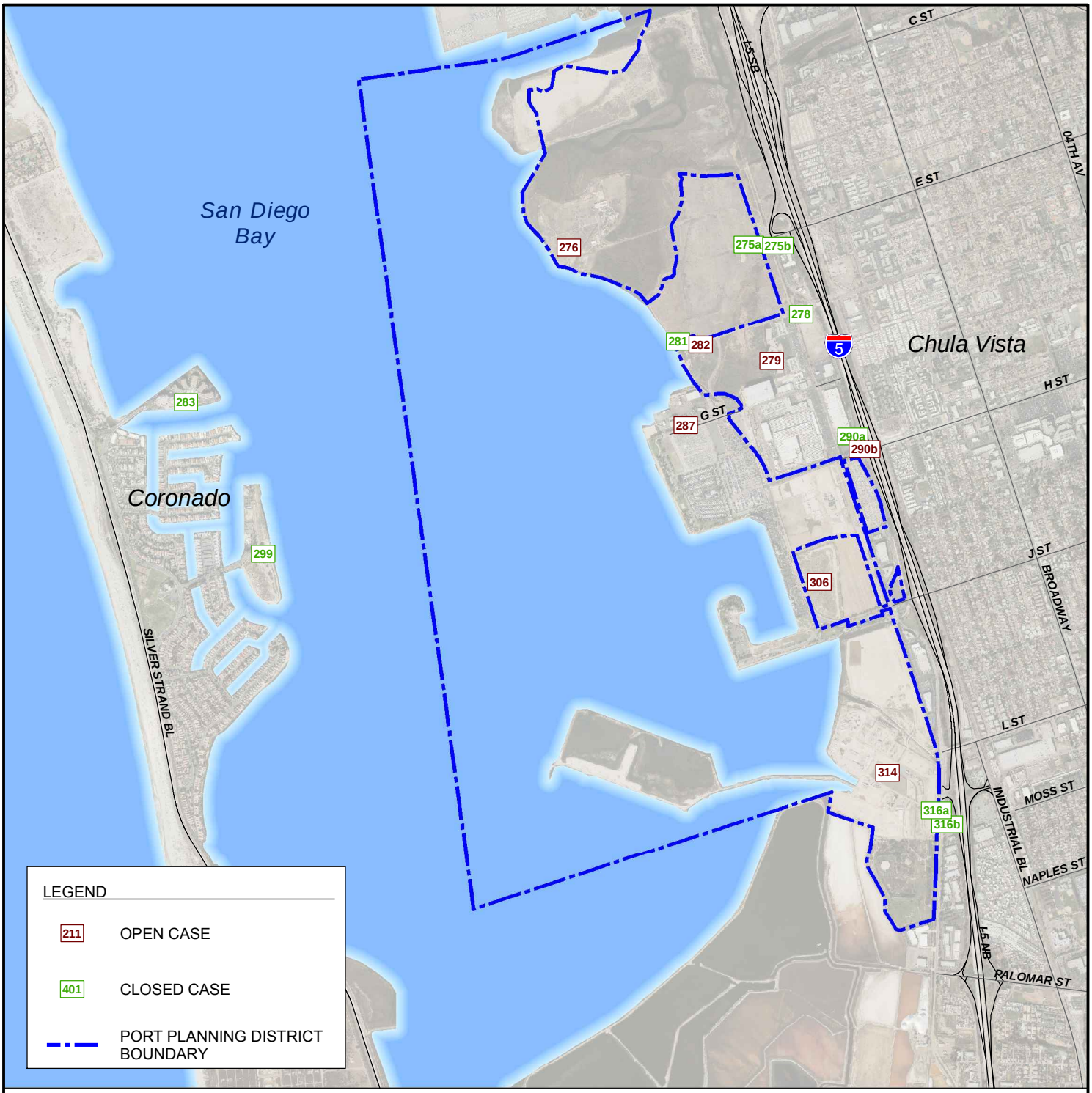

SOURCE: PORT DISTRICT BOUNDARIES - ICF/PORT OF SAN DIEGO, 2017; IMAGERY - SANDAG AND SANGIS

NOTES: SITES WITH MULTIPLE OPEN AND CLOSED RELEASE CASES ARE DEPICTED AS OPEN AND LOCATED BY THE LOWEST MAP ID NUMBER.

A SUMMARY OF EACH LISTING IS PROVIDED ON TABLE 9.

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SCALE IN FEET

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NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore	PLANNING DISTRICT 6 - CHULA VISTA BAYFRONT	FIGURE
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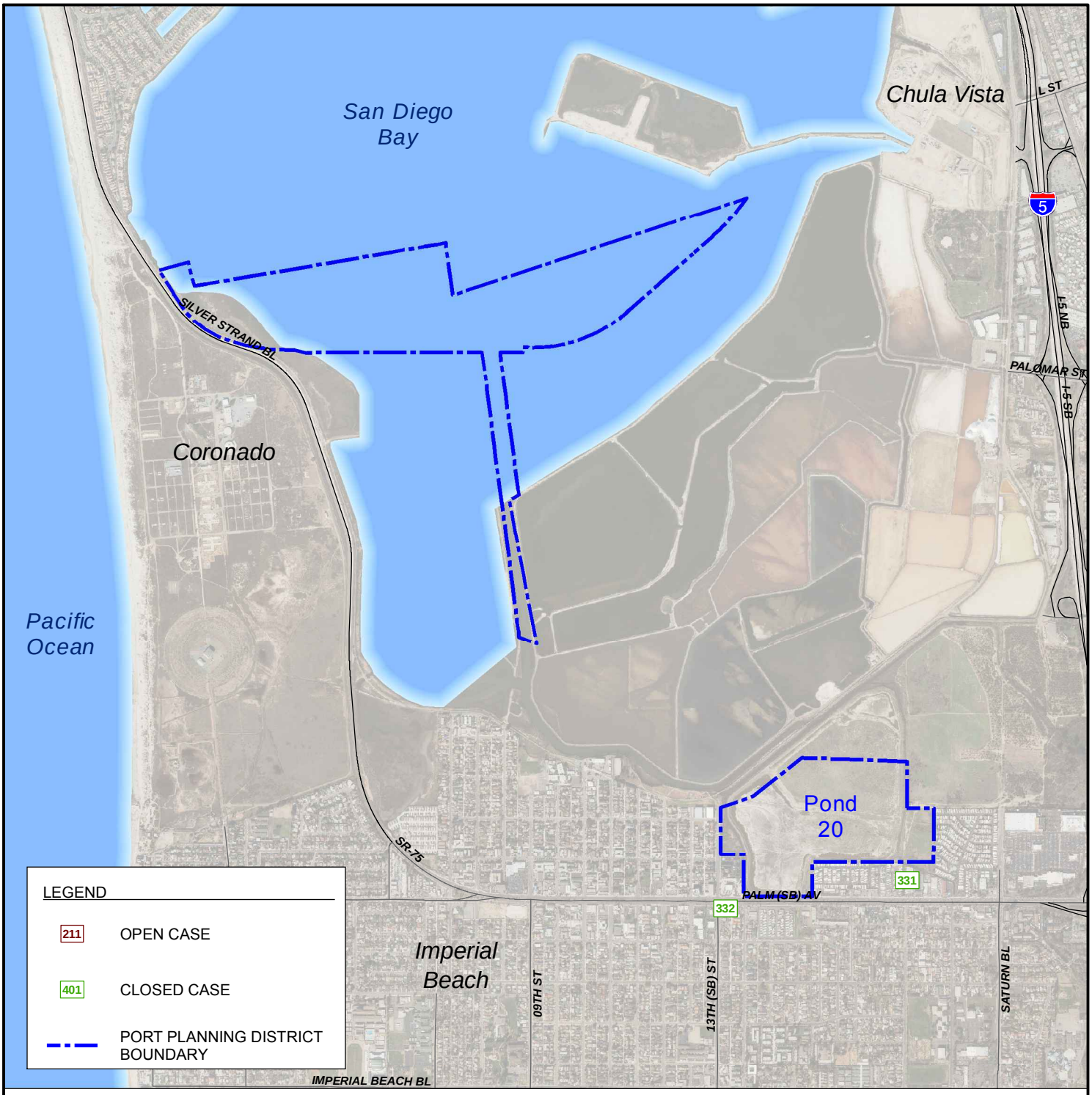

SOURCE: PORT DISTRICT BOUNDARIES - ICF/PORT OF SAN DIEGO, 2017; IMAGERY - SANDAG AND SANGIS

NOTES: SITES WITH MULTIPLE OPEN AND CLOSED RELEASE CASES ARE DEPICTED AS OPEN AND LOCATED BY THE LOWEST MAP ID NUMBER.

A SUMMARY OF EACH LISTING IS PROVIDED ON TABLE 10.

N

SCALE IN FEET

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NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore	PLANNING DISTRICT 7 - SOUTH BAY	FIGURE
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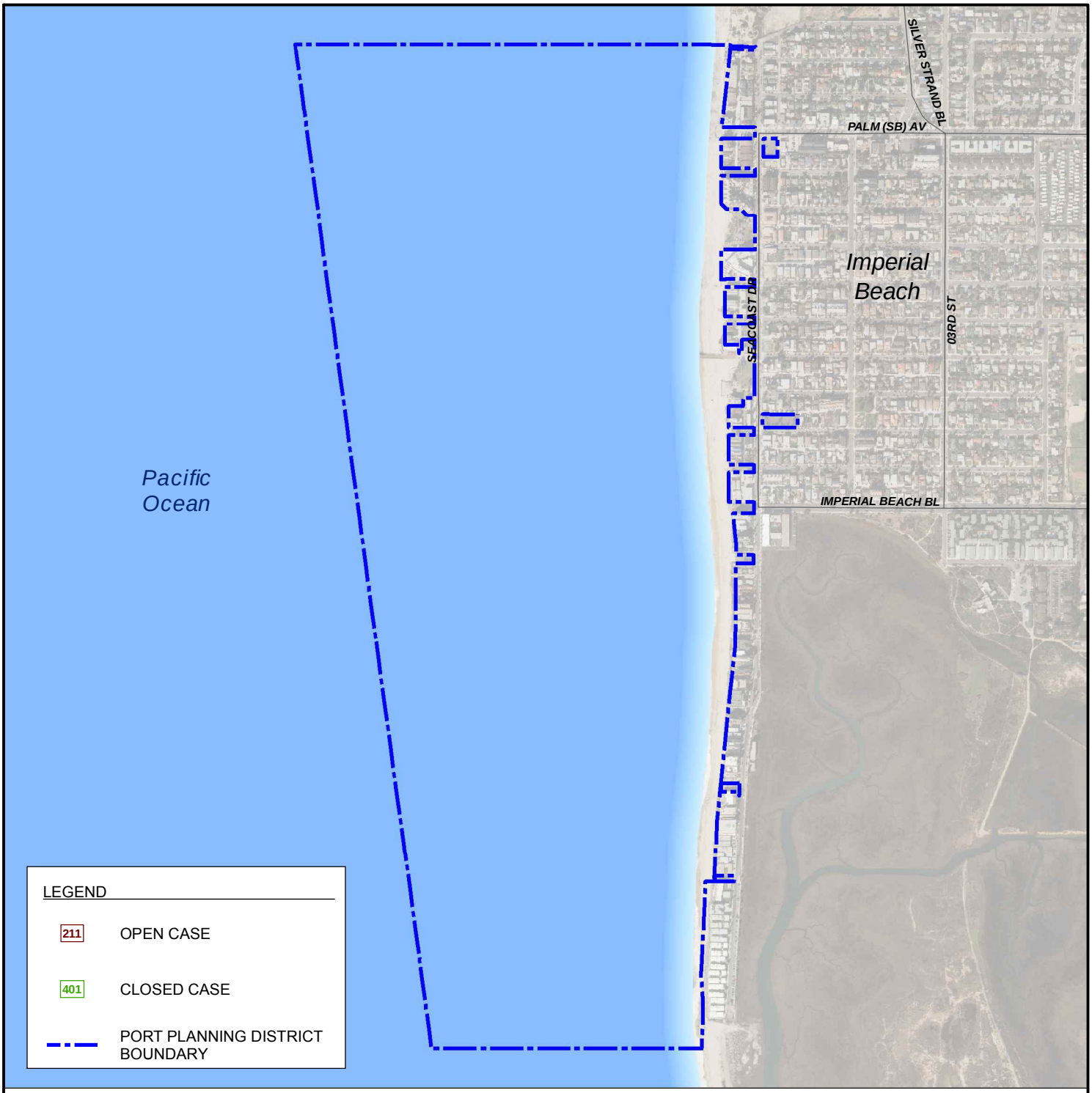
108331001 / 5/18		

1_108153001_SL.mxd JDL



SOURCE: PORT DISTRICT BOUNDARIES - ICF/PORT OF SAN DIEGO, 2017; IMAGERY - SANDAG AND SANGIS

NOTES: SITES WITH MULTIPLE OPEN AND CLOSED RELEASE CASES ARE DEPICTED AS OPEN AND LOCATED BY THE LOWEST MAP ID NUMBER.

N

SCALE IN FEET

0 1,000 2,000

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore	PLANNING DISTRICT 8 - IMPERIAL BEACH OCEANFRONT	FIGURE
PROJECT NO. / DATE	PORT MASTER PLAN UPDATE EIR PROJECT SAN DIEGO, CALIFORNIA	10
108331001 / 5/18		

1_108153001_SL.mxd JDL

SOURCE: PORT DISTRICT BOUNDARIES - ICF/PORT OF SAN DIEGO, 2017; IMAGERY - SANDAG AND SANGIS

NOTES: SITES WITH MULTIPLE OPEN AND CLOSED RELEASE CASES ARE DEPICTED AS OPEN AND LOCATED BY THE LOWEST MAP ID NUMBER.

A SUMMARY OF EACH LISTING IS PROVIDED ON TABLE 11.

N

SCALE IN FEET

0 2,000 4,000

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore	PLANNING DISTRICT 9 - SILVER STRAND	FIGURE
PROJECT NO. 108331001 / DATE 5/18	PORT MASTER PLAN UPDATE EIR PROJECT SAN DIEGO, CALIFORNIA	11

1_108153001_SL.mxd JDL

SOURCE: PORT DISTRICT BOUNDARIES - ICF/PORT OF SAN DIEGO, 2017; IMAGERY - SANDAG AND SANGIS

NOTES: SITES WITH MULTIPLE OPEN AND CLOSED RELEASE CASES ARE DEPICTED AS OPEN AND LOCATED BY THE LOWEST MAP ID NUMBER.

A SUMMARY OF EACH LISTING IS PROVIDED ON TABLE 12.

N

SCALE IN FEET

0 1,500 3,000

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore	PLANNING DISTRICT 10 - CORONADO BAYFRONT	FIGURE
PROJECT NO. 108331001 / DATE 5/18	PORT MASTER PLAN UPDATE EIR PROJECT SAN DIEGO, CALIFORNIA	12

1_108153001_SL.mxd JDL

Appendices for Appendix G, *Hazardous Materials Technical Study*

The entire Appendix G, *Hazardous Materials Technical Study*, including its appendices, can be found on the included thumb drive inside the front cover of this document.

Appendix H

Noise Field Measurements
Datasheets

PMPU LT01-1

FIELD NOISE MEASUREMENT DATA

PROJECT: SD Fireworks PROJ. # 216.16

SITE IDENTIFICATION: Police Station LT-#1 OBSERVER(S): JGM
ADDRESS: 1401 Shelter Island Drive
START DATE / TIME: 10:30am 7/3/16 END DATE / TIME: 12:30pm 7/6/16

METEROLOGICAL CONDITIONS:
TEMP: 69 °F HUMIDITY: 45 %R.H. towards WIND: CALM LIGHT MODERATE VARIABLE
WINDSPEED: 5 MPH DIR: N NE E SE S SW W NW STEADY GUSTY
SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:
INSTRUMENT: Rion NL-21 TYPE: 1 (2) SERIAL #: ~~[illegible]~~ 676771
CALIBRATOR: LD200 SERIAL #: 2916
CALIBRATION CHECK, BEFORE: 113.8 AFTER 113.8 WINDSCREEN ✓
SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER:

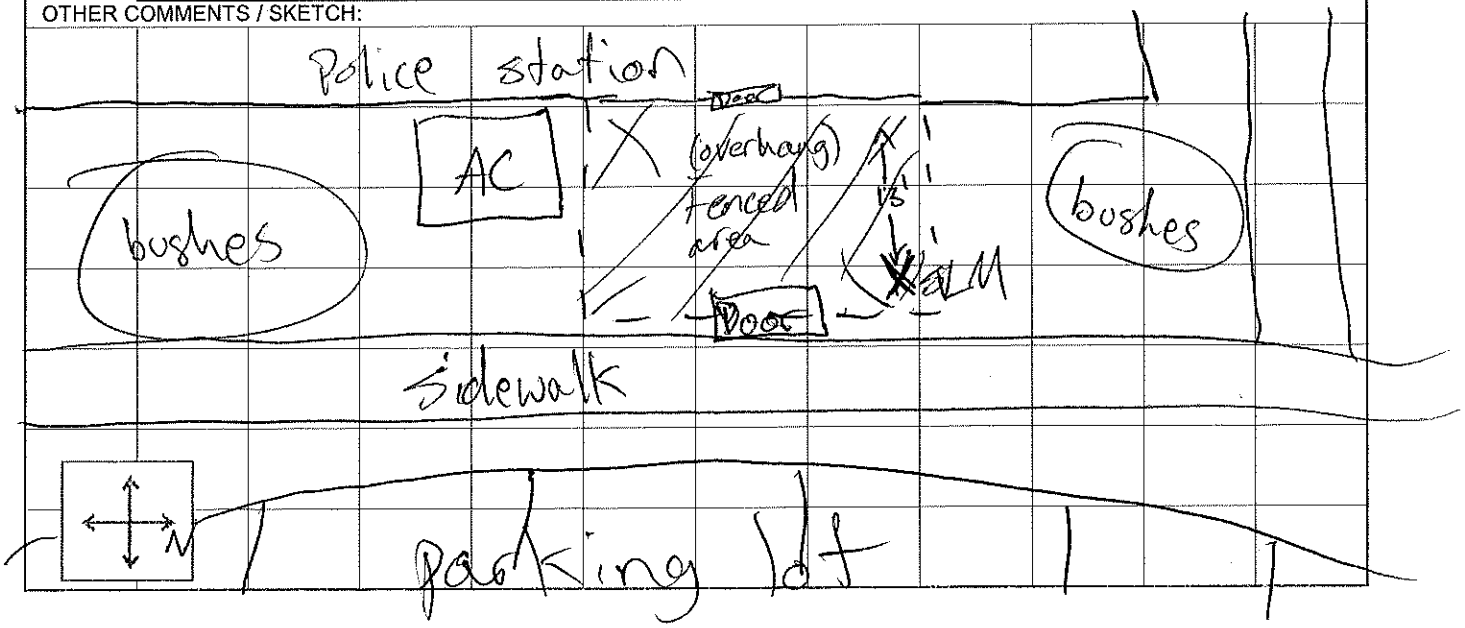
FILE / MEAS #	START TIME	END TIME	L_{eq}	max	1.67	8.33	10	25	50	90	min

L

COMMENTS: Loud / very high pitched Radar or bird deterent

NOISE SOURCE INFO:
PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER: boats/jetskis/military
ROADWAY TYPE:
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:
Ocean traffic / boats / police cars / beach goer traffic

DESCRIPTION / SKETCH:
TERRAIN: HARD SOFT MIXED FLAT OTHER:
PHOTOS:
OTHER COMMENTS / SKETCH:



PMPU LT01-2

FIELD NOISE MEASUREMENT DATA

PROJECT: Port Master Plan Update PROJ. # 00517.16

SITE IDENTIFICATION: LT1 - PD1 OBSERVER(S): JcR

ADDRESS:

START DATE / TIME: 2/18/20 / 2:35 pm END DATE / TIME: 2/20/20 / 3:20 pm

METEROLOGICAL CONDITIONS:

TEMP: ____ °F HUMIDITY: ____ %R.H. WIND: CALM LIGHT MODERATE VARIABLE

WINDSPEED: ____ MPH DIR: N NE E SE S SW W NW STEADY GUSTY

SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:

INSTRUMENT: D.L. B TYPE: 1 (2) SERIAL #: 1204

CALIBRATOR: CAL 200 SERIAL #: 6645

CALIBRATION CHECK, BEFORE: 94.0 AFTER 94.3 WINDSCREEN X

SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER: ____

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	1.67	8.33	25	50	90	99	min
							L				

COMMENTS: Mounted @ 2:35 pm
Stopped @ 3:20 pm

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER: ____

ROADWAY TYPE: ____

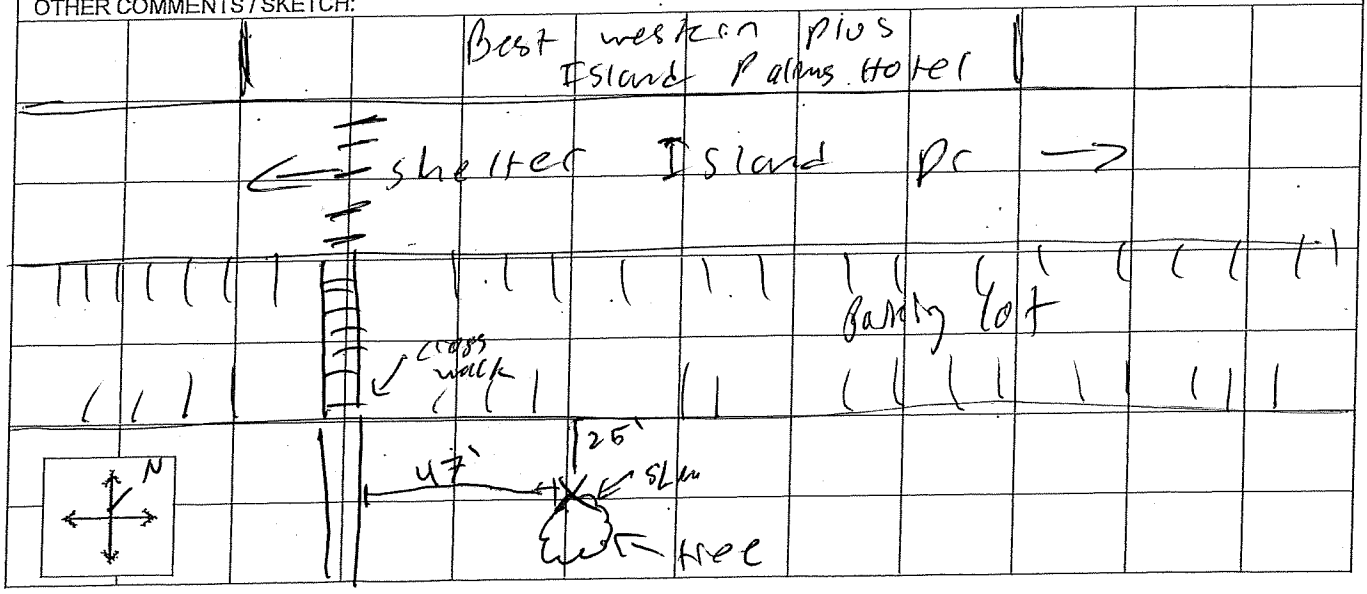
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:

TERRAIN: HARD SOFT MIXED FLAT OTHER: ____

PHOTOS:

OTHER COMMENTS / SKETCH:



PMPU ST01-1

FIELD NOISE MEASUREMENT DATA

PROJECT: Port Master Plan Update PROJ. # 00517.16

SITE IDENTIFICATION: ST 1 OBSERVER(S): JCK
ADDRESS: Holiday Inn
START DATE / TIME: 2/20/20 / 3:45 pm END DATE / TIME: 2/20/20 / 4:05

METEROLOGICAL CONDITIONS:

TEMP: 67 °F HUMIDITY: 58 %R.H. WIND: CALM LIGHT MODERATE VARIABLE
WINDSPEED: 7-8 MPH DIR: N NE E SE S SW W (NW) STEADY GUSTY
SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:

INSTRUMENT: LD 831 TYPE: (1) 2 SERIAL #: 3786
CALIBRATOR: CAL 200 SERIAL #: 6645
CALIBRATION CHECK, BEFORE: 114.0 AFTER 113.98 WINDSCREEN X

SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM (ANSI) OTHER:

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	L 1.67	L 8.33	L 25	L 50	L 90	L 99	min
1032	3:45p	4:05p	61.4	71.7	68.3	64.5	62.6	60.3	55.3	53.7	53.1

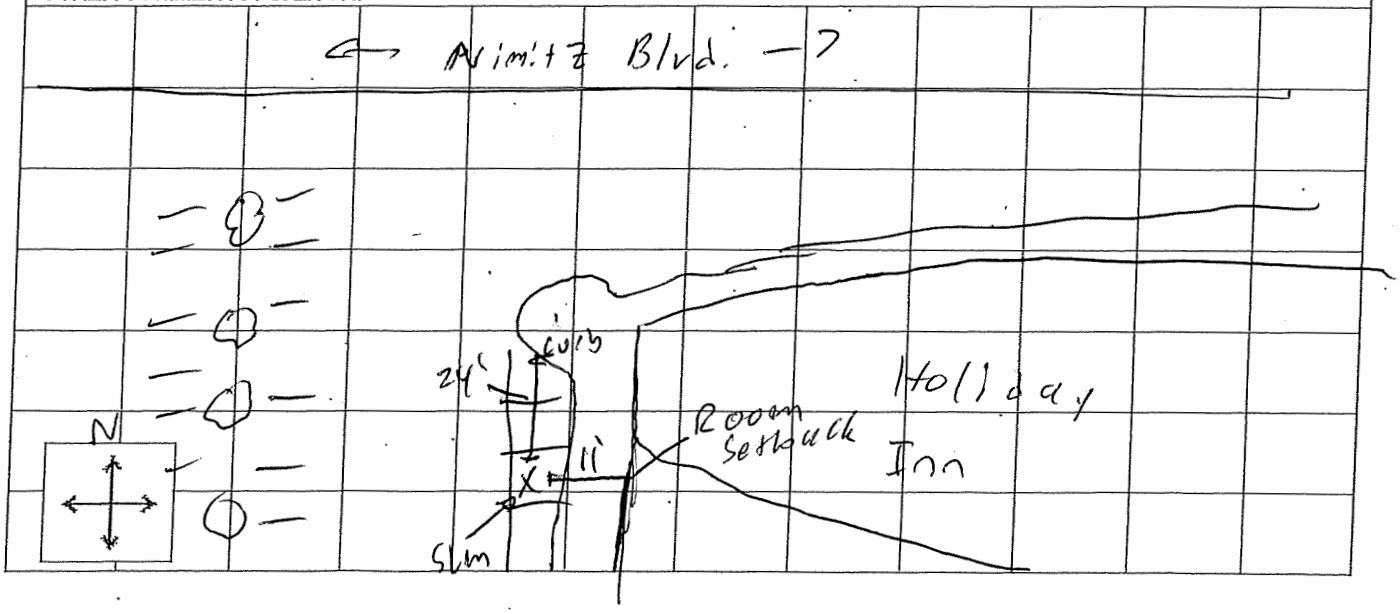
COMMENTS: paused out passing maintenance crew

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER:
ROADWAY TYPE:
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:

TERRAIN: HARD SOFT MIXED FLAT OTHER:
PHOTOS:
OTHER COMMENTS / SKETCH:



PMPU LT02-1

FIELD NOISE MEASUREMENT DATA

PROJECT: Port Master Plan Update PROJ. # ~~00~~ 00517.16

SITE IDENTIFICATION: LT2 - PP2 OBSERVER(S): JCR

ADDRESS:

START DATE / TIME: 2/18/20 / 8:00 Am END DATE / TIME: 2/20/20 / 1:15 pm

METEROLOGICAL CONDITIONS:

TEMP: ____ °F HUMIDITY: ____ %R.H. WIND: CALM LIGHT MODERATE VARIABLE

WINDSPEED: ____ MPH DIR: N NE E SE S SW W NW STEADY GUSTY

SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:

INSTRUMENT: pic #2 TYPE: 1 (2) SERIAL #: 3015

CALIBRATOR: CAL 200 SERIAL #: 6645

CALIBRATION CHECK, BEFORE: 94.0 AFTER 94.3 WINDSCREEN X

SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER: ____

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	1.67	8.33	25	L 50	90	99	min

COMMENTS: mounted @ 10:20 Am
Stopped @ 1:51

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER: ____

ROADWAY TYPE: ____

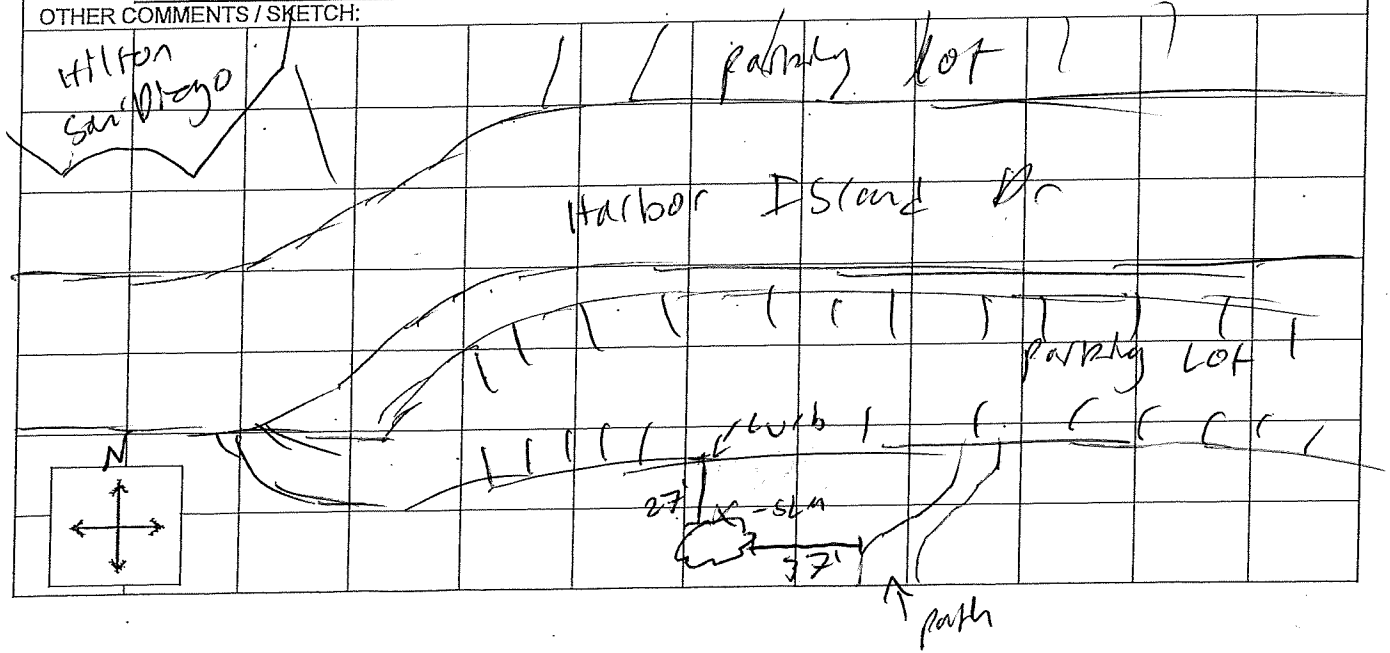
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:

TERRAIN: HARD SOFT MIXED FLAT OTHER: ____

PHOTOS:

OTHER COMMENTS / SKETCH:



PMPU ST02-1

FIELD NOISE MEASUREMENT DATA

PROJECT: Port Master Plan Update PROJ. # 00517.16

SITE IDENTIFICATION: 872 OBSERVER(S): JCR

ADDRESS: 1380 Harbor Island Dr.

START DATE / TIME: 2/20/20 / 2:27 END DATE / TIME: 2/20/20 / 2:47

METEROLOGICAL CONDITIONS:

TEMP: 68 °F HUMIDITY: 64 %R.H. WIND: CALM LIGHT MODERATE VARIABLE

WINDSPEED: 4-5 MPH DIR: N NE E SE S SW W NW STEADY GUSTY

SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:

INSTRUMENT: LD 831 TYPE: 1 2 SERIAL #: 3786

CALIBRATOR: CAL 200 SERIAL #: 6645

CALIBRATION CHECK, BEFORE: 114.0 AFTER 113.98 WINDSCREEN X

SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER:

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	1.67	8.33	L 25	50	90	99	min
031	2:27	2:47	54.2	66.6	61.3	56.9	54.3	52.4	49.8	48.3	47.5

COMMENTS: - paused out helicopter //
- paused out loud vehicle
- paused out noise from meeting room

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER:

ROADWAY TYPE:

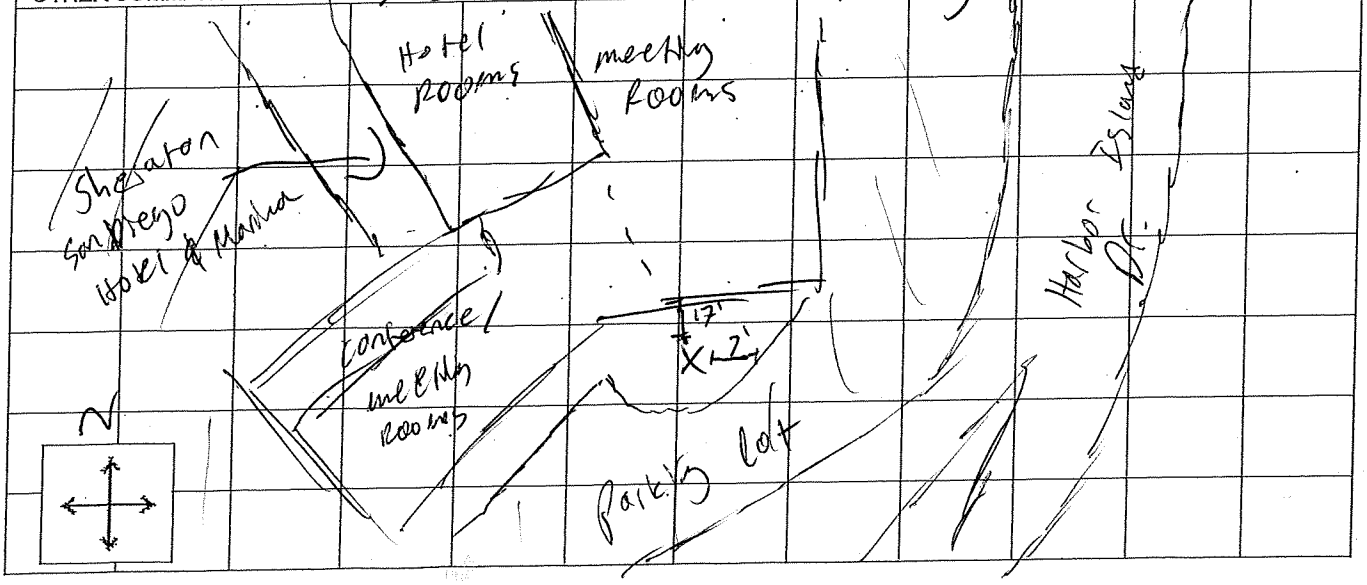
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:

TERRAIN: HARD SOFT MIXED FLAT OTHER:

PHOTOS:

OTHER COMMENTS / SKETCH: 5' off curb . 17' off building @ room set back



PMPU LT03-1

FIELD NOISE MEASUREMENT DATA

PROJECT: Port Masters Plan update PROJ. # 00517.16

SITE IDENTIFICATION: LT3-PP3 OBSERVER(S): SCR

ADDRESS: ~~LT3-PP3~~ Wyndham San Diego Bayside

START DATE / TIME: 2/18/20 / 1:05 END DATE / TIME: 2/20/20 / 1:25 pm

METEROLOGICAL CONDITIONS:

TEMP: ____ °F HUMIDITY: ____ %R.H. WIND: CALM LIGHT MODERATE VARIABLE

WINDSPEED: ~~____~~ MPH DIR: N NE E SE S SW W NW STEADY GUSTY

SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:

INSTRUMENT: B&K SLM TYPE: 1 (2) SERIAL #: 2602

CALIBRATOR: CAL 200 SERIAL #: 6645

CALIBRATION CHECK, BEFORE: 94.0 AFTER 93.3 WINDSCREEN X

SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER: ____

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	1.67	8.33	25	L 50	90	99	min

COMMENTS: mounted @ 1:05 pm

stopped @ 1:25 pm

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER: ____

ROADWAY TYPE: ____

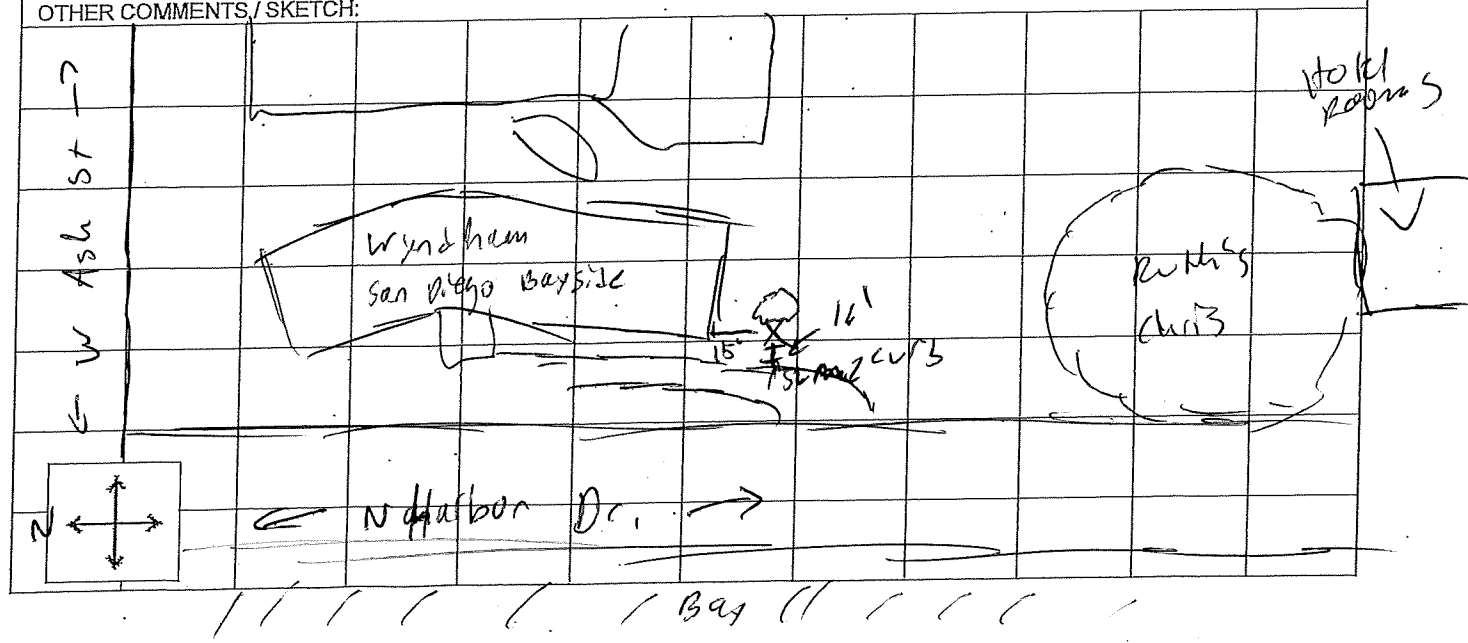
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:

TERRAIN: HARD SOFT MIXED FLAT OTHER: ____

PHOTOS: ____

OTHER COMMENTS / SKETCH:



PMPU LT03-2

FIELD NOISE MEASUREMENT DATA

PROJECT: SD Fireworks PROJ. # 216.16

SITE IDENTIFICATION: B Street Pier LT-2 OBSERVER(S): JGM
ADDRESS: 1140 N. Harbor Drive
START DATE / TIME: 11:34am 7/3/16 END DATE / TIME: 11:55am 7/6/13

METEROLOGICAL CONDITIONS:
TEMP: 72 °F HUMIDITY: 45 %R.H. towards WIND: CALM LIGHT MODERATE VARIABLE
WINDSPEED: 6 MPH DIR: N NE E SE S SW W NW STEADY GUSTY
SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

@ start

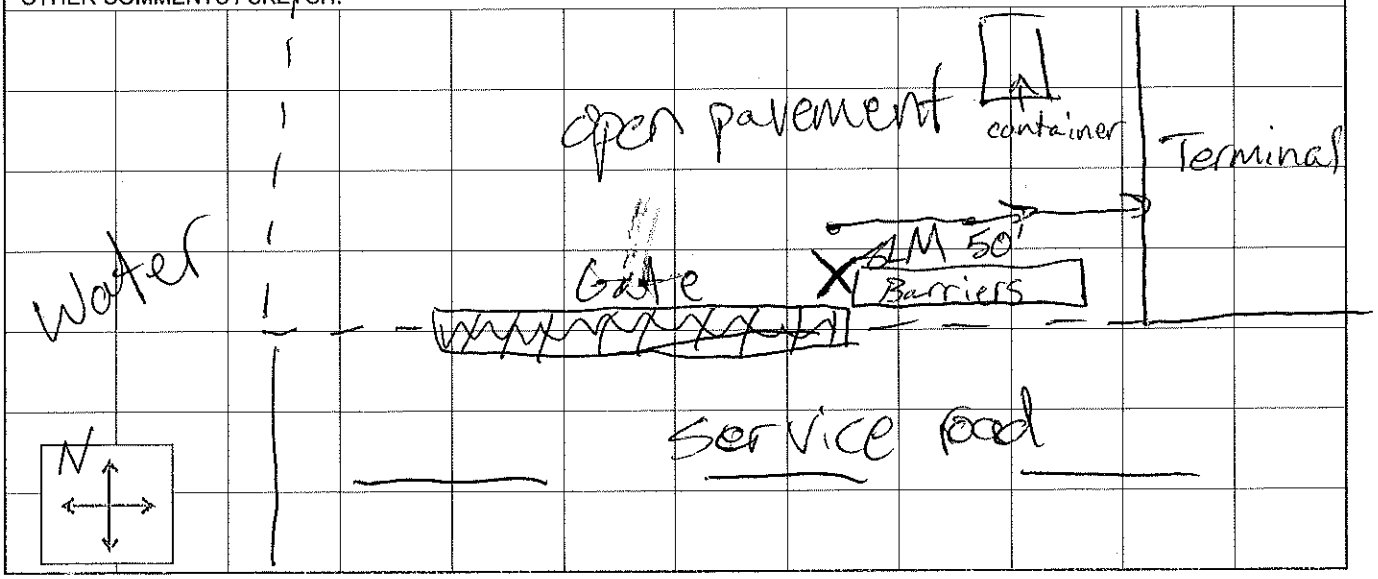
ACOUSTIC MEASUREMENTS:
INSTRUMENT: Rion NL-[redacted]21 TYPE: 1 2 SERIAL #: [redacted]176887
CALIBRATOR: ID200 SERIAL #: 7916
CALIBRATION CHECK, BEFORE: 113.8 AFTER 113.8 WINDSCREEN ✓
SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER:

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	1.67	8.33	L10	L25	L50	L90	min

COMMENTS: Fog horn on pier. Didn't hear it but it may go off.

NOISE SOURCE INFO:
PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER:
ROADWAY TYPE:
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:
jet skis, boats, military activity

DESCRIPTION / SKETCH:
TERRAIN: HARD SOFT MIXED FLAT OTHER:
PHOTOS:
OTHER COMMENTS / SKETCH:



PMPU LT03-3

FIELD NOISE MEASUREMENT DATA

PROJECT: Fifth Avenue Landing PROJ. # 518.16

SITE IDENTIFICATION: Marriott Marquis San Diego Hotel + Marina OBSERVER(S): JGM
ADDRESS: LTI
START DATE / TIME: 9:00 am 10/20/2016 END DATE / TIME: 12:17 pm 10/24/2016

METEROLOGICAL CONDITIONS:

TEMP: ____ °F HUMIDITY: ____ %R.H. WIND: CALM LIGHT MODERATE VARIABLE
WINDSPEED: ____ MPH DIR: N NE E SE S SW W NW STEADY GUSTY
SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:

INSTRUMENT: Piccolo #6 TYPE: 1 (2) SERIAL #: 1503200018
CALIBRATOR: SERIAL #: 6645
CALIBRATION CHECK, BEFORE: 93.9 AFTER 94.0 WINDSCREEN ✓

SETTINGS: A-WEIGHTED (SLOW) FAST FRONTAL RANDOM (ANSI) OTHER:

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	L 1.67	L 8.33	L 10	L 25	L 50	L 90	min

COMMENTS:

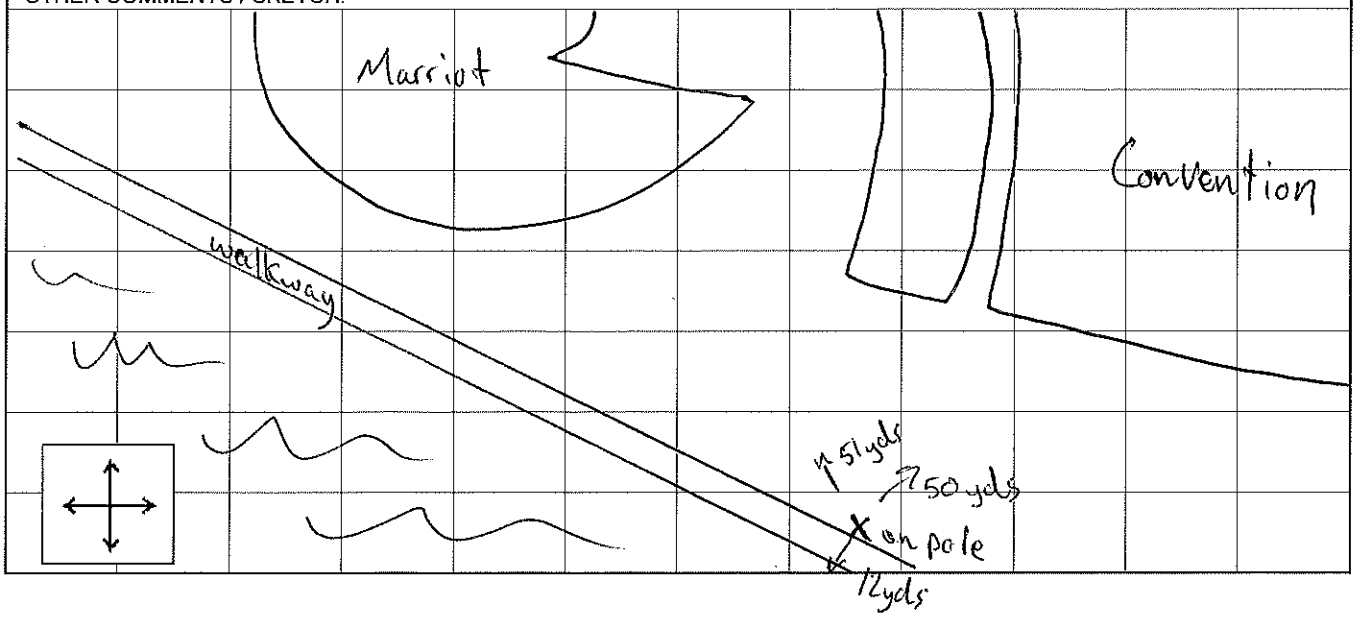
Depart: 10:55 am

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER:
ROADWAY TYPE:
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:

TERRAIN: HARD SOFT MIXED FLAT OTHER: 9ft high
PHOTOS:
OTHER COMMENTS / SKETCH:



PMPU LT03-4

FIELD NOISE MEASUREMENT DATA

PROJECT: Fifth Avenue Landing PROJ. # 518.16

SITE IDENTIFICATION: Harbor Club San Diego LT2 OBSERVER(S): JGM
ADDRESS:
START DATE / TIME: 9:00 am 10/20/2016 END DATE / TIME: 12:55 pm 10/24/2016

METEROLOGICAL CONDITIONS:

TEMP: ____ °F HUMIDITY: ____ %R.H. WIND: CALM LIGHT MODERATE VARIABLE
WINDSPEED: ____ MPH DIR: N NE E SE S SW W NW STEADY GUSTY
SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:

INSTRUMENT: Piccolo #3 TYPE: 1 (2) SERIAL #: 14051 3018
CALIBRATOR: 1D Cal 200 SERIAL #: 6645
CALIBRATION CHECK, BEFORE: 94.0 AFTER 93.9 WINDSCREEN ✓

SETTINGS: A-WEIGHTED (SLOW) FAST FRONTAL RANDOM (ANSI) OTHER: ____

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	L 1.67	8.33	10	25	50	90	min

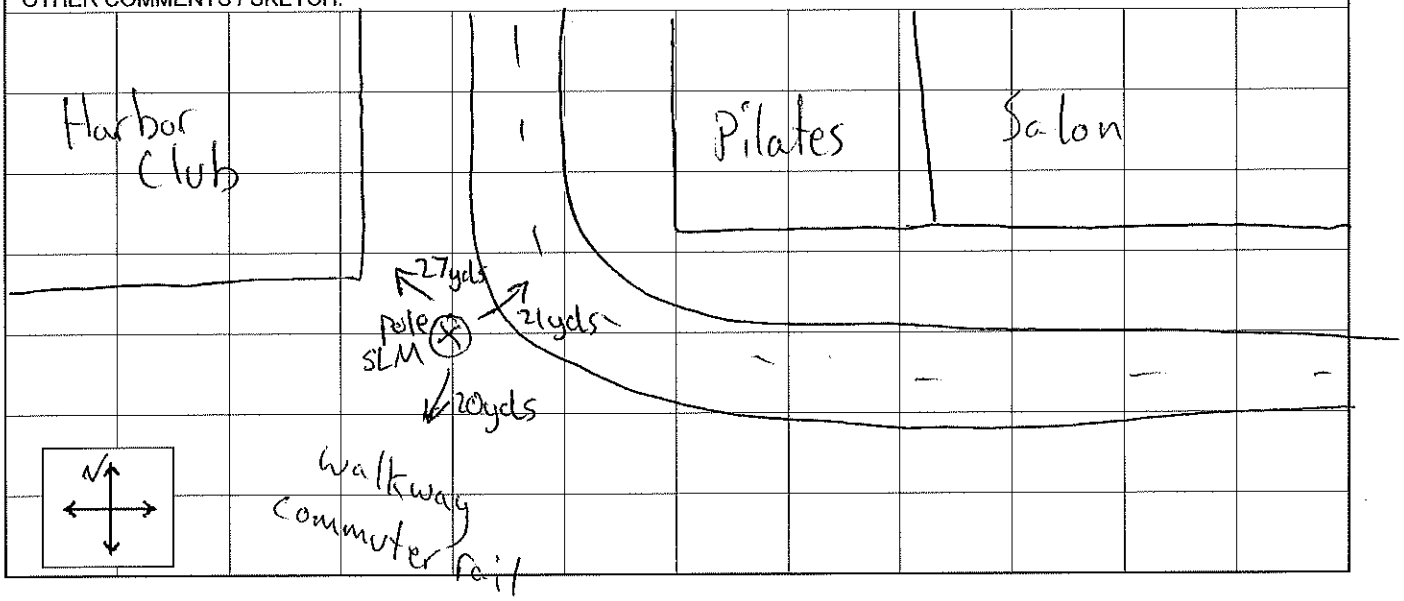
COMMENTS:

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: (TRAFFIC) AIRCRAFT (RAIL) INDUSTRIAL AMBIENT OTHER: ____
ROADWAY TYPE:
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:
Depart: 10:15am

DESCRIPTION / SKETCH:

TERRAIN: HARD SOFT MIXED FLAT OTHER: 9ft high
PHOTOS:
OTHER COMMENTS / SKETCH:



PMPU LT03-5

FIELD NOISE MEASUREMENT DATA

PROJECT: Fifth Avenue Landing PROJ. # 518.16

SITE IDENTIFICATION: Embarcadero Marina Park South OBSERVER(S): JGM
ADDRESS: LT3
START DATE / TIME: 9:00am 10/20/2016 END DATE / TIME: 12:02pm 10/24/2016

METEROLOGICAL CONDITIONS:

TEMP: _____ °F HUMIDITY: _____ %R.H. WIND: CALM LIGHT MODERATE VARIABLE
WINDSPEED: _____ MPH DIR: N NE E SE S SW W NW STEADY GUSTY
SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:

INSTRUMENT: Piccolo #5 TYPE: 1 (2) SERIAL #: 150320016
CALIBRATOR: LD Cal 200 SERIAL #: 6645
CALIBRATION CHECK, BEFORE: 94.0 AFTER 94.1 WINDSCREEN ✓

SETTINGS: A-WEIGHTED (SLOW) FAST FRONTAL (RANDOM) (ANSI) OTHER: _____

FILE / MEAS #	START TIME	END TIME	L_{eq}	L max	1.67	8.33	10	25	50	90	min

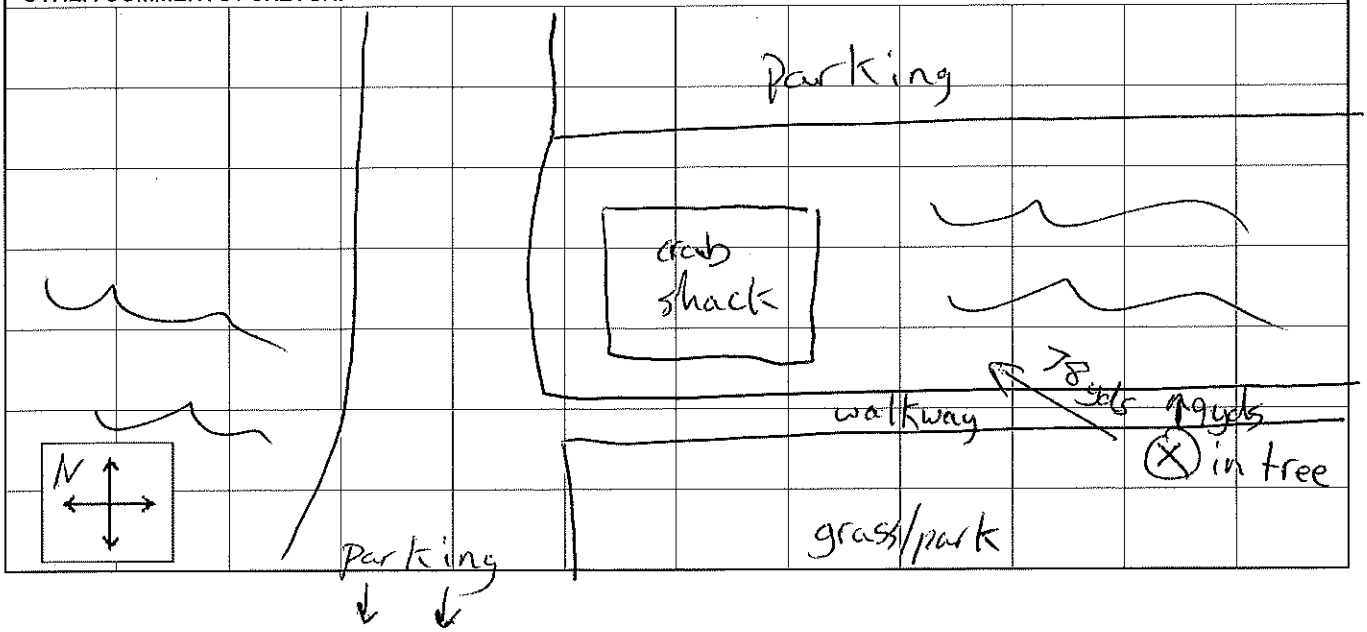
COMMENTS:
Depart: 10:35am

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER: possible watercraft
ROADWAY TYPE: convention loading
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:

TERRAIN: HARD SOFT MIXED FLAT OTHER: 7ft high
PHOTOS:
OTHER COMMENTS / SKETCH:



PMPU ST03-1

FIELD NOISE MEASUREMENT DATA

PROJECT: Port Master plan update PROJ. # 00617.16

SITE IDENTIFICATION: ST 3 OBSERVER(S): SLR

ADDRESS: New Manchester Ground | Hyatt Hotel

START DATE / TIME: 2/21/20 / 11:55 AM END DATE / TIME: 2/21/20 / 12:15 PM

METEROLOGICAL CONDITIONS:

TEMP: 64 °F HUMIDITY: 76 %R.H. WIND: CALM LIGHT (MODERATE) VARIABLE

WINDSPEED: 8-9 MPH DIR: N NE E SE S (SW) W NW STEADY GUSTY

SKY: SUNNY (CLEAR) OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:

INSTRUMENT: LD 831 TYPE: (1) 2 SERIAL #: 3786

CALIBRATOR: CAL 200 SERIAL #: 6645

CALIBRATION CHECK, BEFORE: 114.0 AFTER 113.94 WINDSCREEN X

SETTINGS: A-WEIGHTED (SLOW) FAST FRONTAL (RANDOM) (ANSI) OTHER:

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	1.67	8.33	25	L 50	90	99	min
037	11:55 AM	12:15	60.9	70.2	67.4	64.8	61.5	59.0	55.6	53.4	52.7

COMMENTS: paused out helicopter //

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: (TRAFFIC) AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER:

ROADWAY TYPE:

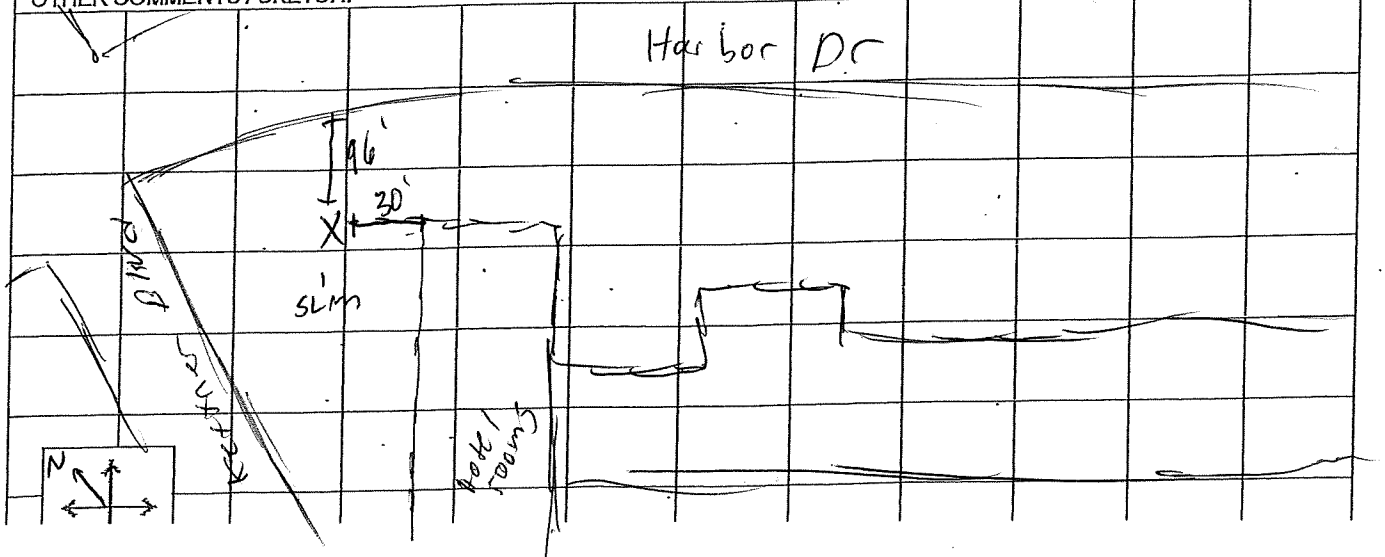
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:

TERRAIN: (HARD) SOFT MIXED FLAT OTHER:

PHOTOS:

OTHER COMMENTS / SKETCH:



PMPU ST03-2

FIELD NOISE MEASUREMENT DATA

PROJECT: Port Master Plan Update PROJ. # 00517.16

SITE IDENTIFICATION: ST 4 OBSERVER(S): _____

ADDRESS: Embarcadero Marina park South

START DATE / TIME: 2/21/20 / 12:35 pm END DATE / TIME: 2/21/20 / 12:55 pm

METEROLOGICAL CONDITIONS:

TEMP: 64 °F HUMIDITY: 77 %R.H. WIND: CALM (LIGHT) MODERATE VARIABLE

WINDSPEED: 4-5 MPH DIR: N NE E SE S (SW) W NW STEADY GUSTY

SKY: (SUNNY) (CLEAR) OVRCST PRTLY CLOUDY FOG (RAIN) OTHER:

ACOUSTIC MEASUREMENTS:

INSTRUMENT: LD 831 TYPE: (1) 2 SERIAL #: 3786

CALIBRATOR: CAL 200 SERIAL #: 6645

CALIBRATION CHECK, BEFORE: 114.0 AFTER 113.92 WINDSCREEN X

SETTINGS: (A-WEIGHTED) (SLOW) FAST FRONTAL (RANDOM) (ANSI) OTHER: _____

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	1.67	8.33	25	L 50	90	99	min
1038	12:35	12:55	52.5	58.0	55.6	54.1	53.2	52.2	50.3	49.5	49.1

COMMENTS: Paused out helicopters fly over //

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL (AMBIENT) OTHER: _____

ROADWAY TYPE: _____

OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / (BIRDS) / DIST. INDUSTRIAL

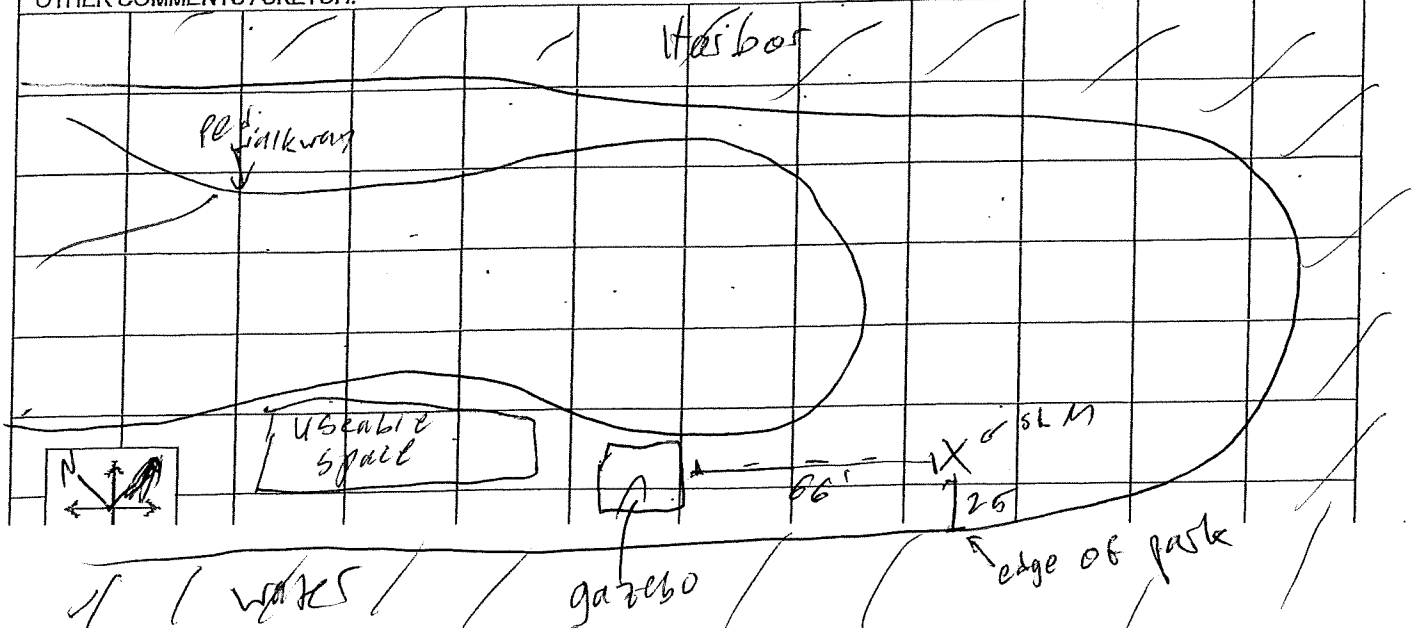
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:

TERRAIN: HARD SOFT MIXED FLAT OTHER: _____

PHOTOS: _____

OTHER COMMENTS / SKETCH:



PMPU ST03-3

FIELD NOISE MEASUREMENT DATA

PROJECT: Fifth Avenue Landing PROJ. # 518.16

SITE IDENTIFICATION: Fifth Avenue Landing Park ST2 OBSERVER(S): JGM
ADDRESS: Beside Convention center
START DATE / TIME: 11:35 am 10/20/2016 END DATE / TIME: 12:01pm 10/20/2016

METEROLOGICAL CONDITIONS:
TEMP: 86 °F HUMIDITY: 29 %R.H. towards WIND: (CALM) LIGHT MODERATE VARIABLE
WINDSPEED: 2 MPH DIR: N NE (E) SE S SW W NW STEADY GUSTY
SKY: (SUNNY) CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:
INSTRUMENT: LD 831 TYPE: (1) 2 SERIAL #: 3786
CALIBRATOR: LDCal 200 SERIAL #: 6645
CALIBRATION CHECK, BEFORE: 114.0 AFTER 114.06 WINDSCREEN ✓

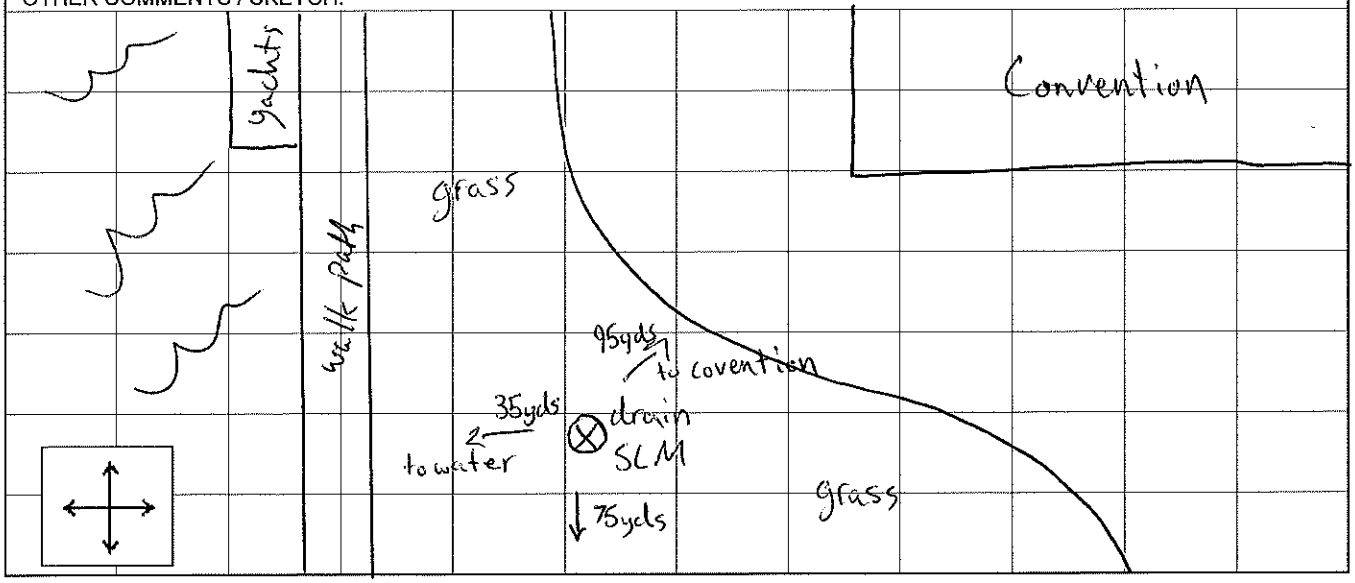
SETTINGS: (A-WEIGHTED) (SLOW) FAST FRONTAL (RANDOM) (ANSI) OTHER:

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	L 1.67	8.33	10	25	50	90	min
230	11:35	12:01	54.4	72.1	58.3	55.9	55.6	53.8	52.5	51.0	49.4

COMMENTS: Aircraft circling overhead, measurement paused when aligned with aircraft. Several military aircraft/ships making noise.

NOISE SOURCE INFO:
PRIMARY NOISE SOURCE: TRAFFIC (AIRCRAFT) RAIL INDUSTRIAL AMBIENT OTHER:
ROADWAY TYPE:
OTHER SOURCES: (DIST. AIRCRAFT) / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. (LANDSCAPING) ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:
TERRAIN: HARD (SOFT) MIXED FLAT OTHER: 5ft high
PHOTOS:
OTHER COMMENTS / SKETCH:



PMPU ST03-4

FIELD NOISE MEASUREMENT DATA

PROJECT: Fifth Avenue Landing PROJ. # 518.16

SITE IDENTIFICATION: Hilton Bayfront Hotel ST3 OBSERVER(S): JGM
ADDRESS: 1 Park Blvd. San Diego
START DATE / TIME: 12:10pm 10/20/2016 END DATE / TIME: 12:26pm 10/20/2016

METEROLOGICAL CONDITIONS:

TEMP: 87 °F HUMIDITY: 15 %R.H. WIND: CALM LIGHT (MODERATE) VARIABLE
WINDSPEED: (6-10) MPH DIR: N NE E (SE) S SW W NW STEADY GUSTY
SKY: (SUNNY) CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:

INSTRUMENT: LD 831 TYPE: (1) 2 SERIAL #: 3786
CALIBRATOR: LD Cal 200 SERIAL #: 6645
CALIBRATION CHECK, BEFORE: 114.0 AFTER 113.90 WINDSCREEN ✓

SETTINGS: (A-WEIGHTED) (SLOW) FAST FRONTAL (RANDOM) (ANSI) OTHER:

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	L 1.67	8.33	10	25	50	90	min
231	12:10	12:26	59.9	71.2	67.3	61.8	61.0	59.1	58.5	57.6	56.6

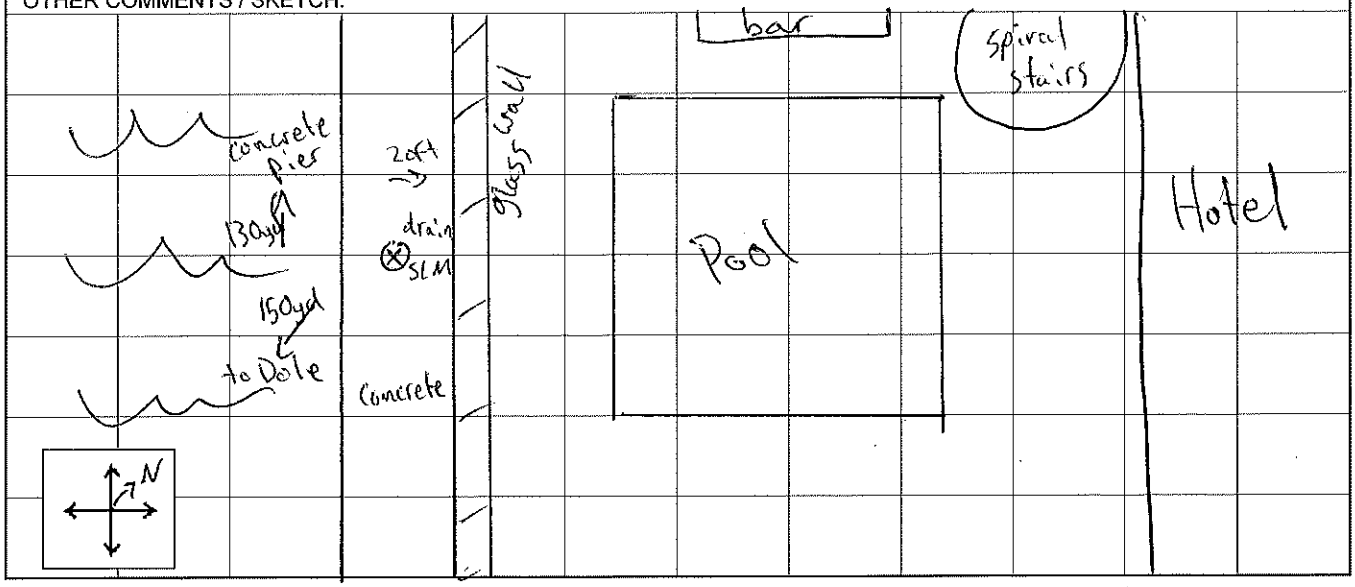
COMMENTS: Hotel building probably sheilds noise from pool. Dole plant is constant noise source.

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL (INDUSTRIAL) AMBIENT OTHER: Dole plant
ROADWAY TYPE:
OTHER SOURCES: (DIST. AIRCRAFT) / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:
Distant music from hotel bar/restaurant/lounge
wind gusts ~12 mph may exaggerate measurements 3 min in.

DESCRIPTION / SKETCH:

TERRAIN: (HARD) SOFT MIXED FLAT OTHER:
PHOTOS:
OTHER COMMENTS / SKETCH:



PMPU LT04-1

FIELD NOISE MEASUREMENT DATA

PROJECT: Port Masters Plan update PROJ. # 06517.16

SITE IDENTIFICATION: LT 4 - PD 4 OBSERVER(S): _____

ADDRESS: cesar chavez park

START DATE / TIME: 2/18/20 / END DATE / TIME: 2/20/20 - 1:06pm

METEROLOGICAL CONDITIONS:

TEMP: _____ °F HUMIDITY: _____ %R.H. WIND: CALM LIGHT MODERATE VARIABLE

WINDSPEED: _____ MPH DIR: N NE E SE S SW W NW STEADY GUSTY

SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:

INSTRUMENT: Pk S-E TYPE: 1 (2) SERIAL #: 2502

CALIBRATOR: CAL 200 SERIAL #: 6645

CALIBRATION CHECK, BEFORE: 94.0 AFTER 94.0 WINDSCREEN X

SETTINGS: A-WEIGHTED (SLOW) FAST FRONTAL RANDOM (ANSI) OTHER: _____

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	L 1.67	8.33	25	50	90	99	min

COMMENTS: mounted @ 12:05pm

stopped @ 1:06pm

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER: _____

ROADWAY TYPE: _____

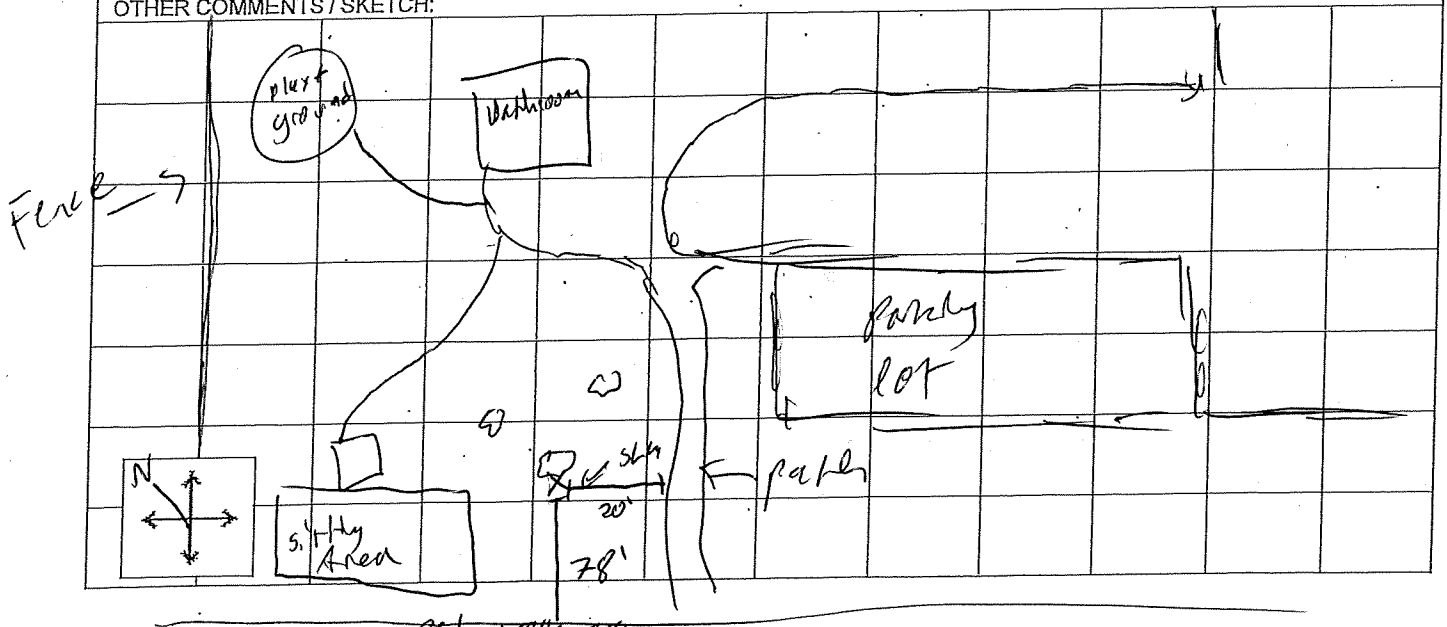
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:

TERRAIN: HARD SOFT MIXED FLAT OTHER: _____

PHOTOS: _____

OTHER COMMENTS / SKETCH:



PMPU LT04-2

FIELD NOISE MEASUREMENT DATA

PROJECT: BAE PROJ. # 216.18

SITE IDENTIFICATION: LT2 OBSERVER(S): Jonathan H. Jakob R.

ADDRESS: Mercado Apartments, 2001 Newton Ave

START DATE / TIME: Installed time 1:30 pm 1/7/19 END DATE / TIME: 11:20 1/9/19

METEROLOGICAL CONDITIONS:

TEMP: ____ °F HUMIDITY: ____ %R.H. WIND: CALM LIGHT MODERATE VARIABLE

WINDSPEED: ____ MPH DIR: N NE E SE S SW W NW STEADY GUSTY

SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:

INSTRUMENT: Piccolo # 5 TYPE: 1 (2) SERIAL #: 150320016

CALIBRATOR: LD CAL200 SERIAL #: 2916

CALIBRATION CHECK, BEFORE: 94.0 AFTER 93.8 WINDSCREEN ✓

SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER: ____

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	1.67	8.33	L 25	50	90	99	min

COMMENTS: SLM started 10:00 AM, clear at 1:40 pm
arrives 11:05 AM

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER: ____

ROADWAY TYPE: ____

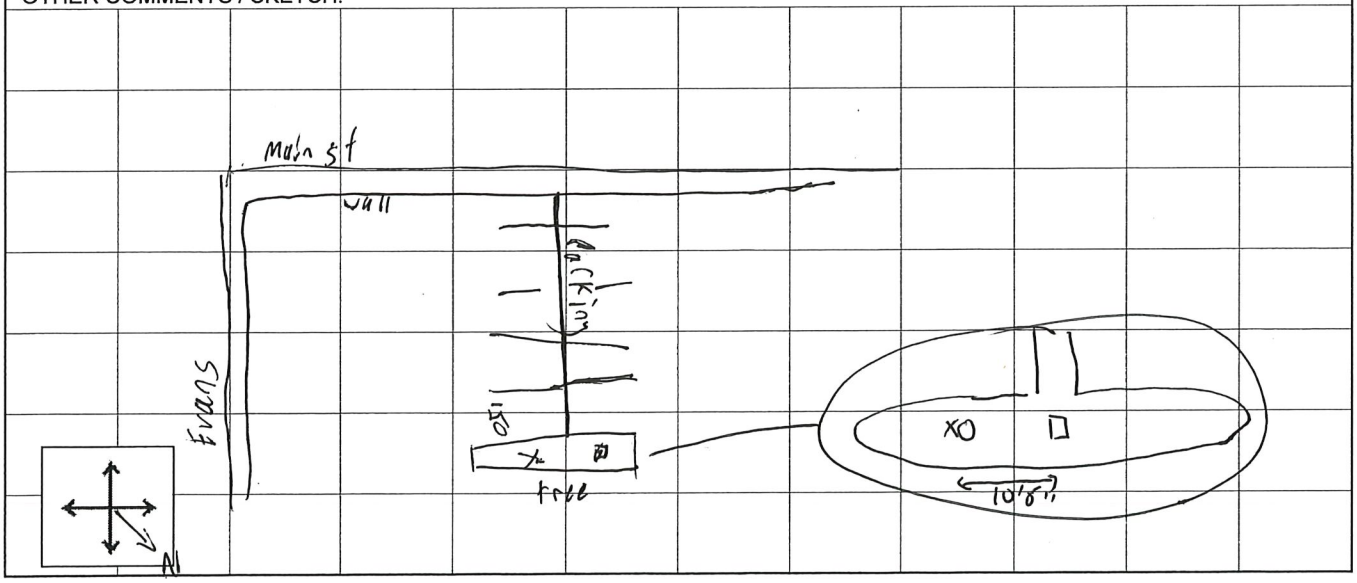
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:

TERRAIN: HARD SOFT MIXED FLAT OTHER: ____

PHOTOS: ✓

OTHER COMMENTS / SKETCH:



PMPU LT04-3

FIELD NOISE MEASUREMENT DATA

PROJECT: BAE PROJ. # 216.18

SITE IDENTIFICATION: LT 3 OBSERVER(S): Jonathan H. Jakob R.
ADDRESS: 2644 Boston ave.
START DATE / TIME: Installed 2:10 pm 1/7/19 END DATE / TIME:

METEROLOGICAL CONDITIONS:
TEMP: ____ °F HUMIDITY: ____ %R.H. WIND: CALM LIGHT MODERATE VARIABLE
WINDSPEED: ____ MPH DIR: N NE E SE S SW W NW STEADY GUSTY
SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

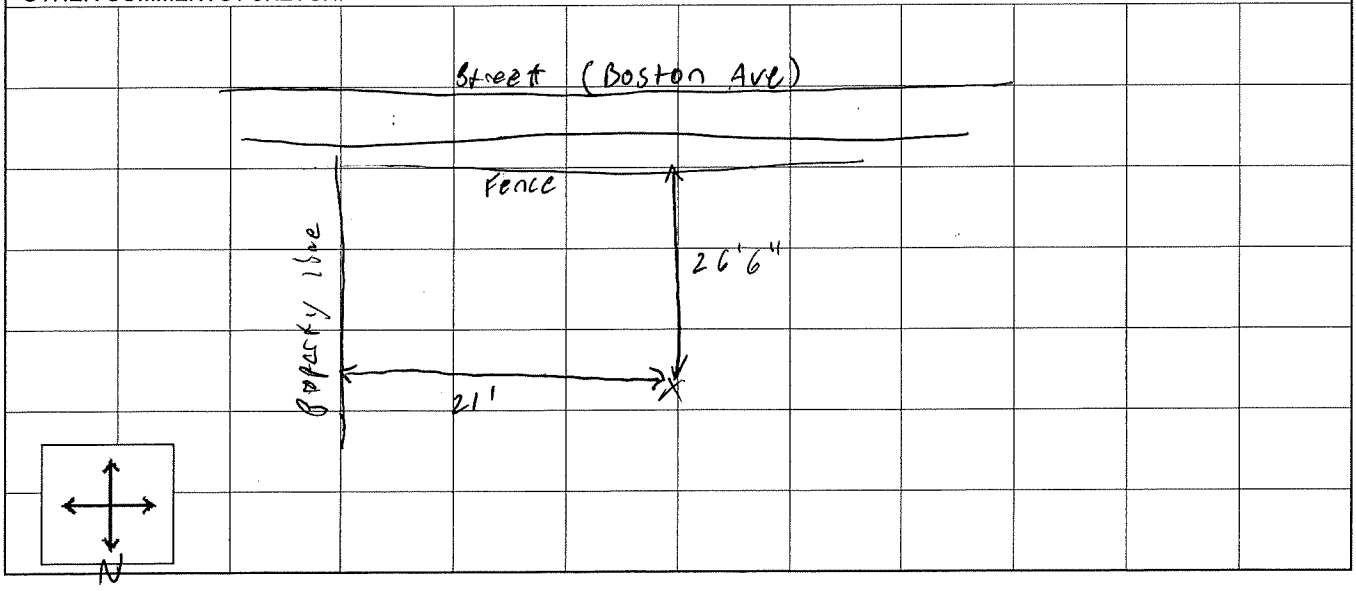
ACOUSTIC MEASUREMENTS:
INSTRUMENT: RION NL21 TYPE: 1 (2) SERIAL #: 6887
CALIBRATOR: LP CAL 200 SERIAL #: 2916
CALIBRATION CHECK, BEFORE: 94.0 AFTER 94.1 WINDSCREEN X
SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER:

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	1.67	8.33	L_{25}	L_{50}	L_{90}	L_{99}	min
	24hr LM										

COMMENTS: SLM started 10:00 AM, clear at 2:20 pm
arrived 8:45 AM

NOISE SOURCE INFO:
PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER:
ROADWAY TYPE:
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:
TERRAIN: HARD SOFT MIXED FLAT OTHER:
PHOTOS: ✓
OTHER COMMENTS / SKETCH:



PMPU ST04-1

FIELD NOISE MEASUREMENT DATA

PROJECT: Pool Master plan update PROJ. # 00617.16

SITE IDENTIFICATION: ST 5 OBSERVER(S): JCR
ADDRESS: parking lot behind Monarch School
START DATE / TIME: 2/21/20 / 11:05 AM END DATE / TIME: 2/21/20 /

METEROLOGICAL CONDITIONS:

TEMP: 65 °F HUMIDITY: 61 %R.H. WIND: CALM LIGHT MODERATE VARIABLE
WINDSPEED: 2-3 MPH DIR: N NE E SE S SW W NW STEADY GUSTY
SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:

INSTRUMENT: LD 831 TYPE: 1 2 SERIAL #: 3786
CALIBRATOR: CAL 200 SERIAL #: 6645
CALIBRATION CHECK, BEFORE: 114.0 AFTER 113.92 WINDSCREEN X
SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER:

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	1.67	8.33	25	L 50	90	99	min
0036	11:05 AM	11:21	52.8	66.8	59.4	57.0	52.2	49.4	48.0	47.2	46.8

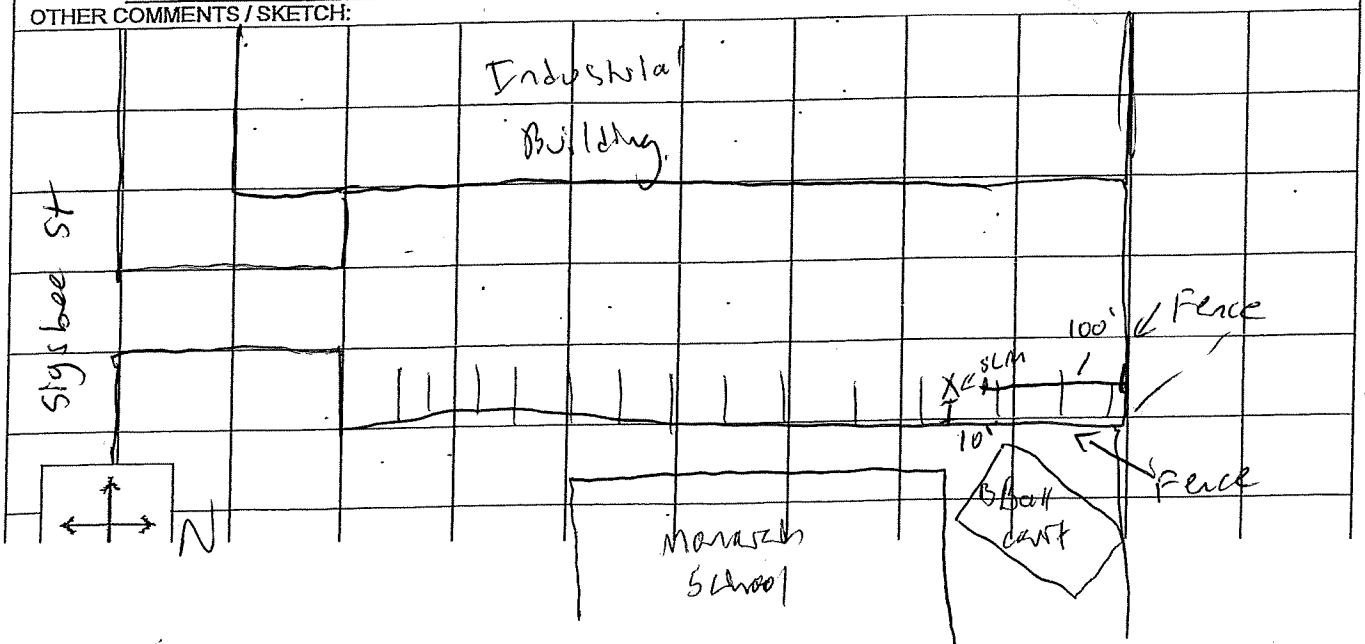
COMMENTS: - paused out car starting in parking lot
- paused out car horn
- kids were let out on recess, ended measurement @ 16 min

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER:
ROADWAY TYPE:
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:

TERRAIN: HARD SOFT MIXED FLAT OTHER:
PHOTOS:
OTHER COMMENTS / SKETCH:



PMPU ST04-2

FIELD NOISE MEASUREMENT DATA

PROJECT: BAE PROJ. # 216.18

SITE IDENTIFICATION: ST2 OBSERVER(S): Jakob R.
ADDRESS: Perkins K-8 1770 Main St
START DATE / TIME: 1/9/19 9:47 Am END DATE / TIME: 1/9/19 10:07 AM

METEROLOGICAL CONDITIONS:
TEMP: ~~59~~ °F HUMIDITY: 70 %R.H. WIND: CALM (LIGHT) MODERATE VARIABLE
WINDSPEED: 0-2 MPH DIR: N NE E SE S SW (W) NW STEADY GUSTY
SKY: (SUNNY) CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

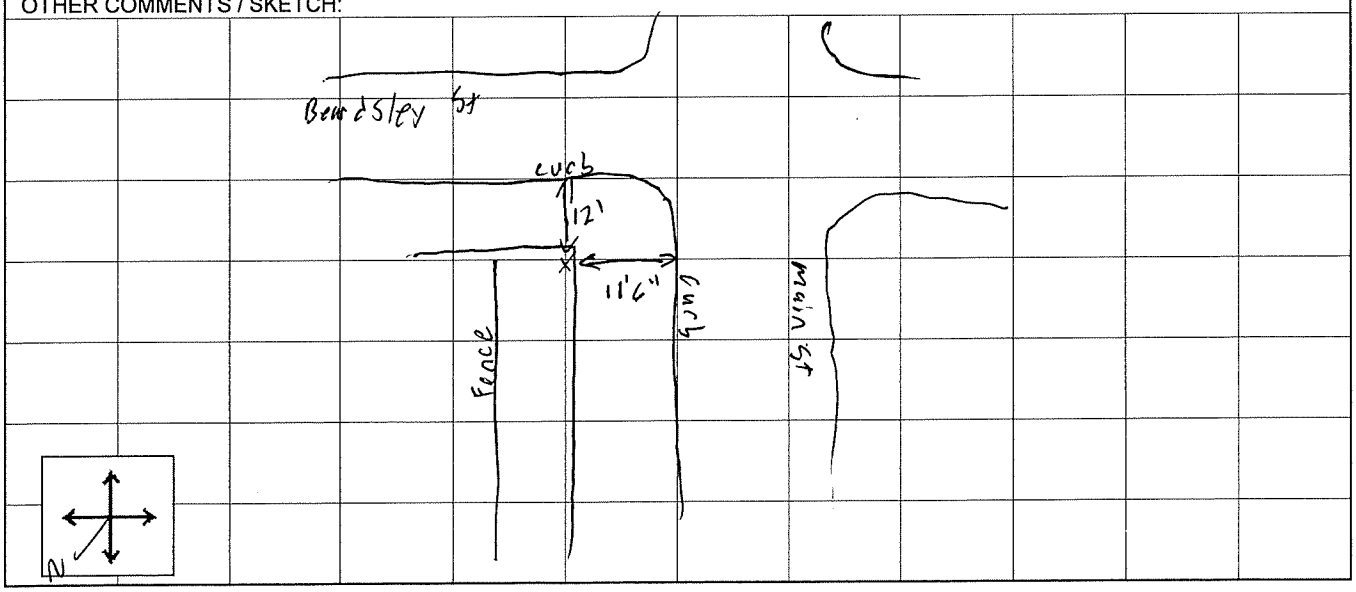
ACOUSTIC MEASUREMENTS:
INSTRUMENT: LD LXT1 TYPE: (1) 2 SERIAL #: 4005
CALIBRATOR: LD CAL 200 SERIAL #: 2916
CALIBRATION CHECK, BEFORE: 114. AFTER 113.97 WINDSCREEN ✓
SETTINGS: (A-WEIGHTED) (SLOW) FAST FRONTAL (RANDOM) (ANSI) OTHER:

FILE / MEAS #	START TIME	END TIME	L_{eq}	L max	1.67	8.33	25	50	90	99	min
.074	9:47 Am	10:07 Am	61.2	73.3	68.9	64.7	61.7	59.0	55.0	53.1	52.5

COMMENTS:

NOISE SOURCE INFO:
PRIMARY NOISE SOURCE: (TRAFFIC) AIRCRAFT (RAIL) INDUSTRIAL AMBIENT OTHER:
ROADWAY TYPE:
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:
Pedestrian Conversation

DESCRIPTION / SKETCH:
TERRAIN: (HARD) SOFT MIXED FLAT OTHER:
PHOTOS:
OTHER COMMENTS / SKETCH:



PMPU ST04-3

FIELD NOISE MEASUREMENT DATA

PROJECT: Port Master Plan Update PROJ. # 00517.16

SITE IDENTIFICATION: ST 6 OBSERVER(S): SCR

ADDRESS: near 1843 Norton Ave

START DATE / TIME: 2/21/20 / 10:30 Am END DATE / TIME: 2/21/20 /

METEROLOGICAL CONDITIONS:

TEMP: 63 °F HUMIDITY: 72 %R.H. WIND: CALM LIGHT MODERATE VARIABLE

WINDSPEED: 2-3 MPH DIR: N NE E SE S SW W NW STEADY GUSTY

SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:

INSTRUMENT: LD 831 TYPE: 1 2 SERIAL #: 3786

CALIBRATOR: CAL 200 SERIAL #: 6645

CALIBRATION CHECK, BEFORE: 114.0 AFTER 114.07 WINDSCREEN X

SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER:

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	1.67	8.33	25	L 50	90	99	min
.035	10:30	10:50	54.4	71.0	61.9	56.1	53.7	51.4	50.6	49.9	49.4

COMMENTS: - paused out talking pedestrians

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER:

ROADWAY TYPE:

OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL

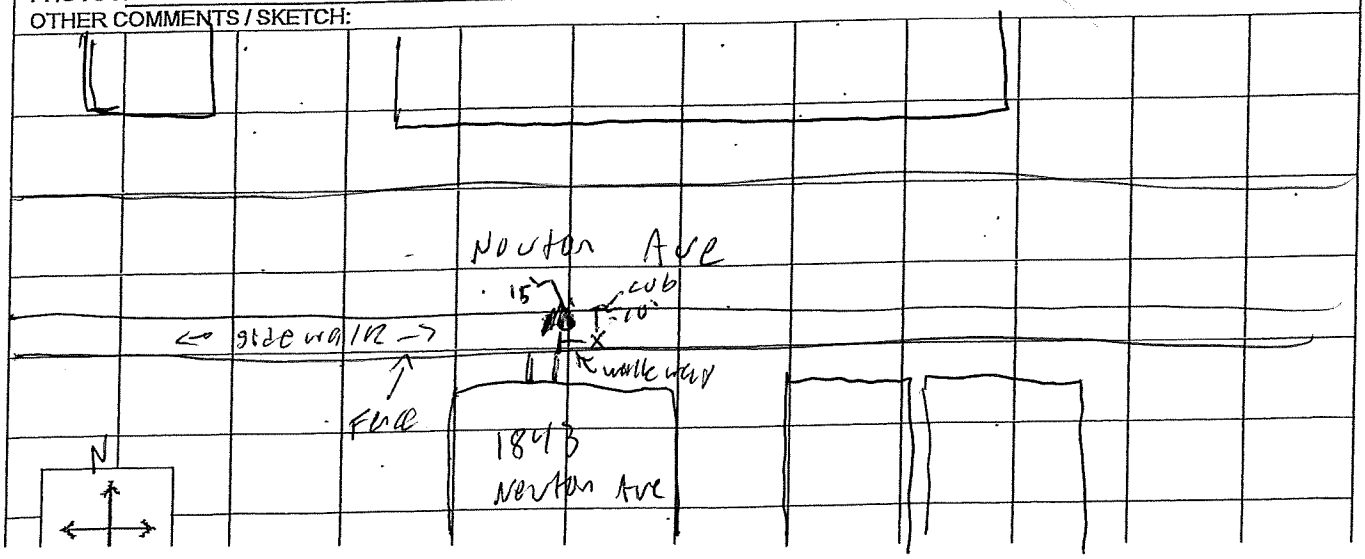
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:

TERRAIN: HARD SOFT MIXED FLAT OTHER:

PHOTOS:

OTHER COMMENTS / SKETCH:



PMPU ST07-1

FIELD NOISE MEASUREMENT DATA

PROJECT: Port Master Plan Update PROJ. #0517.16

SITE IDENTIFICATION: ST 7 OBSERVER(S): SCR

ADDRESS: Bayside Palms Mobile Home Village

START DATE / TIME: 2/20/20 / 11:08 am END DATE / TIME: 2/20/20 / 11:28 am

METEROLOGICAL CONDITIONS:

TEMP: 63 °F HUMIDITY: 72 %R.H. WIND: CALM LIGHT MODERATE VARIABLE

WINDSPEED: 2-3 MPH DIR: N NE E SE S SW W NW STEADY GUSTY

SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:

INSTRUMENT: LD 831 TYPE: 1 2 SERIAL #: 3786

CALIBRATOR: CAL 200 SERIAL #: 6645

CALIBRATION CHECK, BEFORE: 114.0 AFTER 113.97 WINDSCREEN X

SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER:

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	1.67	8.33	25	L 50	90	99	min
029	11:08	11:28	48.6	64.1	55.2	50.3	47.8	46.0	43.3	42.0	41.6

COMMENTS: - paused out helicopter
- paused out nearby cars starting & idling

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER:

ROADWAY TYPE:

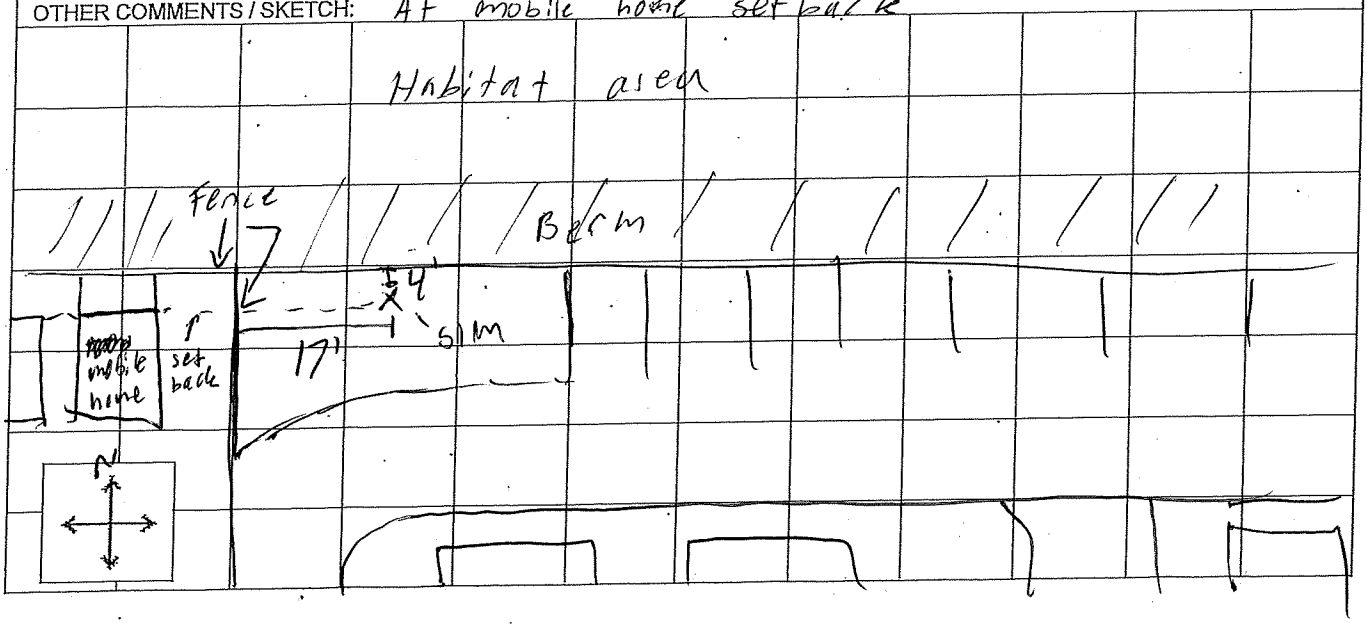
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:

TERRAIN: HARD SOFT MIXED FLAT OTHER:

PHOTOS:

OTHER COMMENTS / SKETCH: At mobile home setback



PMPU LT08-1

FIELD NOISE MEASUREMENT DATA

PROJECT: SD Fireworks PROJ. # 216.16

SITE IDENTIFICATION: Lifeguard Tower LT-6 OBSERVER(S): JGM
ADDRESS: 950 Ocean Lane
START DATE / TIME: 9:35am 7/3/16 END DATE / TIME: 10:10am 7/6/16

METEROLOGICAL CONDITIONS:
At Start
TEMP: 71 °F HUMIDITY: 45 %R.H. toward WIND: CALM LIGHT MODERATE VARIABLE
WINDSPEED: 4-6 MPH DIR: N NE (E) SE S SW W NW STEADY GUSTY
SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

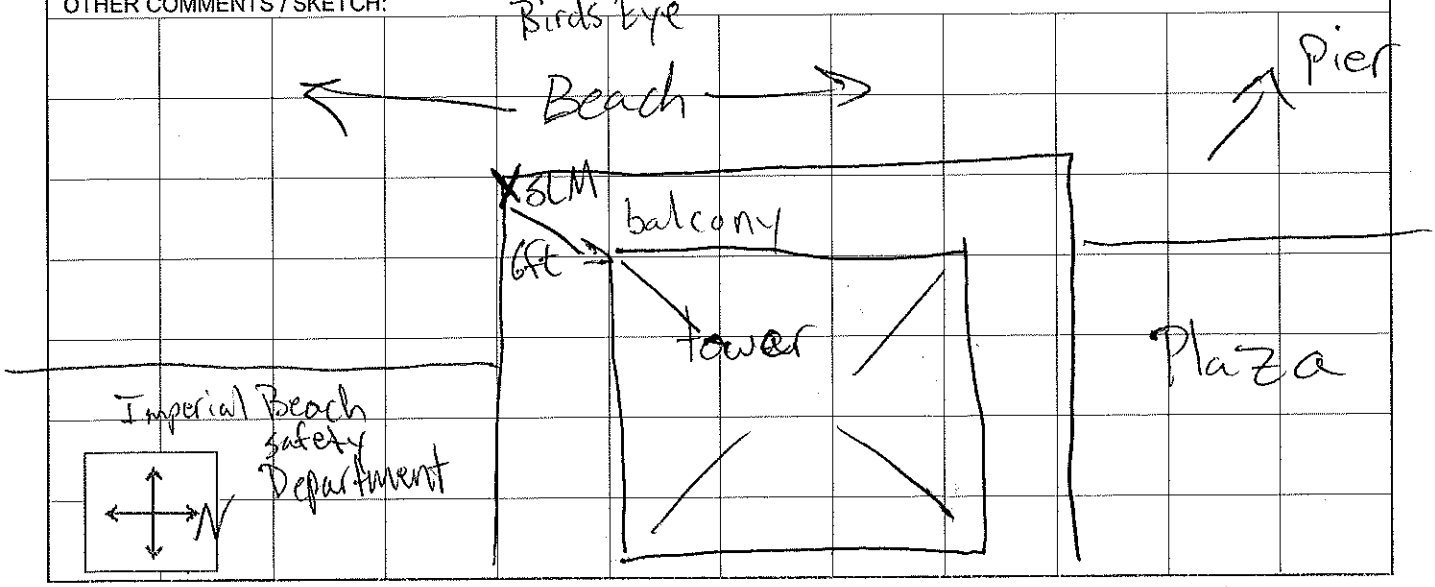
ACOUSTIC MEASUREMENTS:
INSTRUMENT: LD LXT2 TYPE: 1 (2) SERIAL #: 4264
CALIBRATOR: LD200 SERIAL #: ~~6645~~ 2916
CALIBRATION CHECK, BEFORE: 113.95 AFTER 113.97 WINDSCREEN ✓
SETTINGS: A-WEIGHTED SLOW (FAST) FRONTAL (RANDOM) (ANSI) OTHER:

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	L 1.67	8.33	10	25	50	90	min

COMMENTS: Military activity out beyond the pier in the ocean

NOISE SOURCE INFO:
PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER: Beach/waves/humans
ROADWAY TYPE:
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:
Party w/ DJ on the 4th

DESCRIPTION / SKETCH:
TERRAIN: (HARD) SOFT MIXED FLAT OTHER:
PHOTOS:
OTHER COMMENTS / SKETCH:



PMPU ST08-1

FIELD NOISE MEASUREMENT DATA

PROJECT: Port Master Plan Update PROJ. # 00 517.16

SITE IDENTIFICATION: ST 8 OBSERVER(S): JCK

ADDRESS: 777 Seacoast

START DATE / TIME: 2/26/20 / 10:05 Am END DATE / TIME: 2/20/20

METEROLOGICAL CONDITIONS:

TEMP: 58 °F HUMIDITY: 88 %R.H. WIND: CALM LIGHT MODERATE VARIABLE

WINDSPEED: 3-4 MPH DIR: N NE E SE S SW W NW STEADY GUSTY

SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:

INSTRUMENT: LD 831 TYPE: 1 2 SERIAL #: 3786

CALIBRATOR: CAL 200 SERIAL #: 6645

CALIBRATION CHECK, BEFORE: 114.0 AFTER 113.98 WINDSCREEN X

SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER:

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	1.67	8.33	25	L 50	90	99	min
.028	10:05 am	10:25	59.0	76.0	66.5	62.8	59.2	55.7	51.7	50.3	49.5

COMMENTS: Passes out idling bus.

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER:

ROADWAY TYPE:

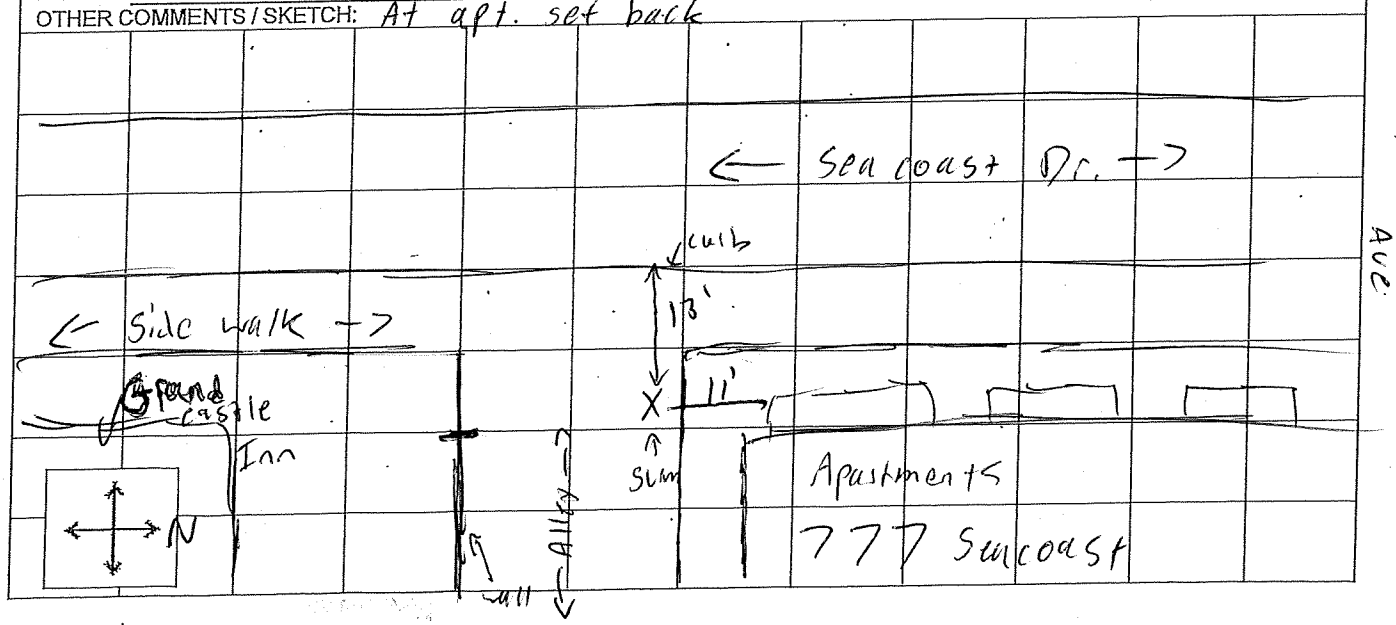
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:

TERRAIN: HARD SOFT MIXED FLAT OTHER:

PHOTOS:

OTHER COMMENTS / SKETCH: At apt. set back



PMPU LT09-1

FIELD NOISE MEASUREMENT DATA

PROJECT: Port Master Plan Update PROJ. # 00517.16

SITE IDENTIFICATION: LT5 - PD9 OBSERVER(S): JCR

ADDRESS:

START DATE / TIME: 2/18/20 / 8:01 Am END DATE / TIME: 2/20/20 - 11:50 Am

METEROLOGICAL CONDITIONS:

TEMP: ____ °F HUMIDITY: ____ %R.H. WIND: CALM LIGHT MODERATE VARIABLE

WINDSPEED: ____ MPH DIR: N NE E SE S SW W NW STEADY GUSTY

SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:

INSTRUMENT: DL #3 TYPE: 1 (2) SERIAL #: 3018

CALIBRATOR: CAL 200 SERIAL #: 6644

CALIBRATION CHECK, BEFORE: 94.0 AFTER 93.9 WINDSCREEN X

SETTINGS: A-WEIGHTED (SLOW) FAST FRONTAL RANDOM (ANSI) OTHER: ____

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	L 1.67	8.33	25	50	90	99	min

COMMENTS: mounted @ 11:20 Am
stopped @ 11:50 Am

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER: ____

ROADWAY TYPE: ____

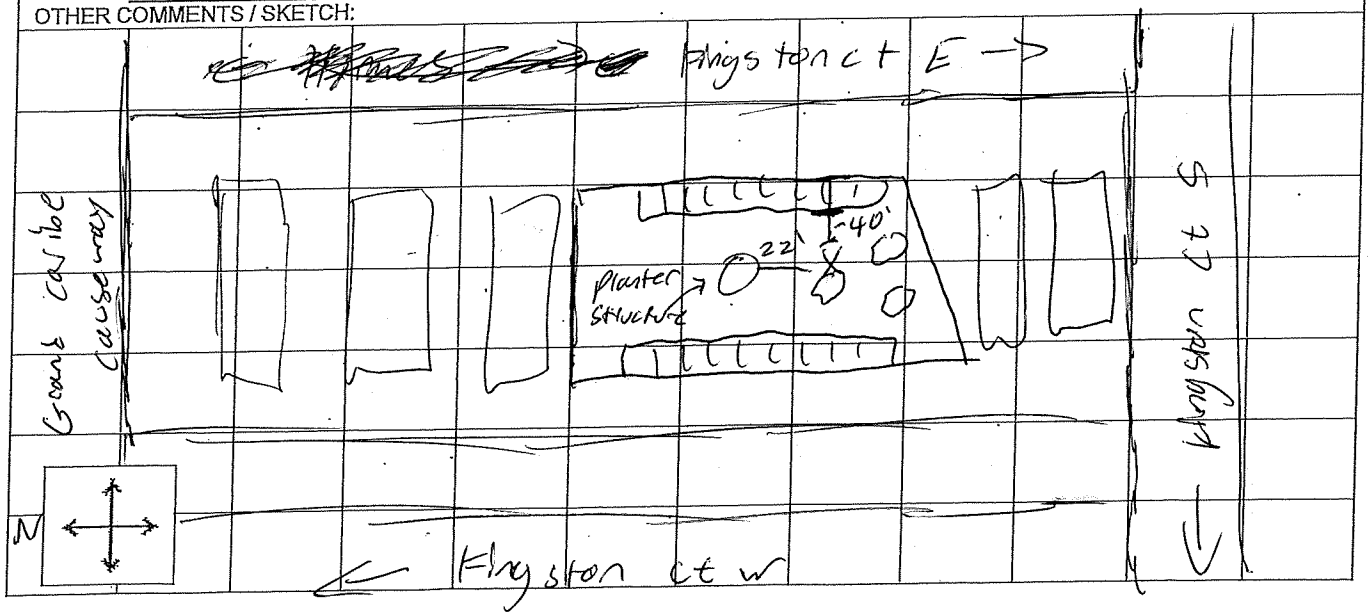
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:

TERRAIN: HARD SOFT MIXED FLAT OTHER: ____

PHOTOS:

OTHER COMMENTS / SKETCH:



PMPU ST09-1

FIELD NOISE MEASUREMENT DATA

PROJECT: Port Master Plan Update PROJ. # 00 517.16

SITE IDENTIFICATION: ST 9 OBSERVER(S): SCR
ADDRESS: Coronado Cays Dog park
START DATE / TIME: 2/20/20 / 12:07 END DATE / TIME: 2/20/20

METEROLOGICAL CONDITIONS:

TEMP: 63 °F HUMIDITY: 74 %R.H. WIND: CALM LIGHT MODERATE VARIABLE
WINDSPEED: 6-7 MPH DIR: N NE E SE S SW W NW STEADY GUSTY
SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:

INSTRUMENT: LD 831 TYPE: G 2 SERIAL #: 3786
CALIBRATOR: CAL 200 SERIAL #: 6645
CALIBRATION CHECK, BEFORE: 114 AFTER 113.9 WINDSCREEN X
SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER:

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	L 1.67	8.33	25	50	90	99	min
.030	12:07	12:27	61.1	71.1	67.2	64.2	61.7	60.1	56.4	53.3	51.6

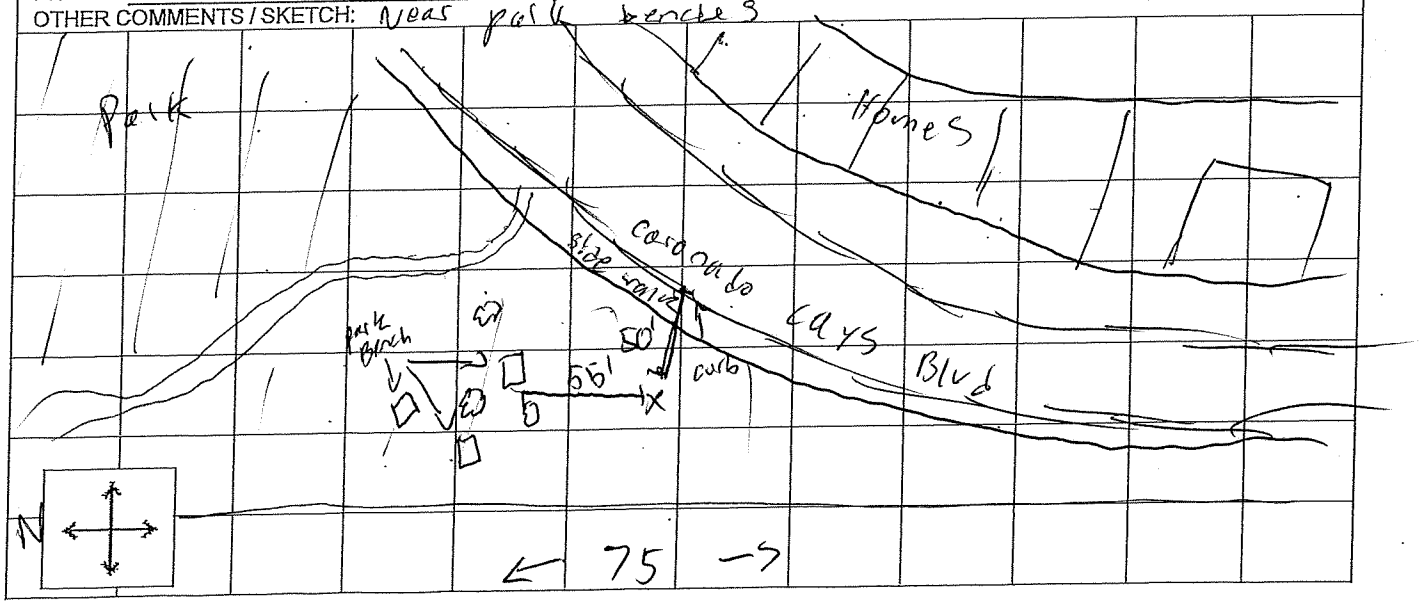
COMMENTS:

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER:
ROADWAY TYPE:
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:

TERRAIN: HARD SOFT MIXED FLAT OTHER:
PHOTOS:
OTHER COMMENTS / SKETCH:



PMPU LT10-1

FIELD NOISE MEASUREMENT DATA

PROJECT: SD Fireworks PROJ. # 216.16

SITE IDENTIFICATION: Golf Course LT-3 OBSERVER(S): JGM
ADDRESS: 2000 Visalia Row
START DATE / TIME: 12:45pm 7/3/16 END DATE / TIME: 11:50am 7/6/16

METEROLOGICAL CONDITIONS:
TEMP: 76 °F HUMIDITY: 45 %R.H. towards WIND: CALM (LIGHT) MODERATE VARIABLE
WINDSPEED: 3 MPH DIR: (N) NE E SE S SW W NW STEADY GUSTY
SKY: SUNNY CLEAR OVRCST (PRTLY CLOUDY) FOG RAIN OTHER:

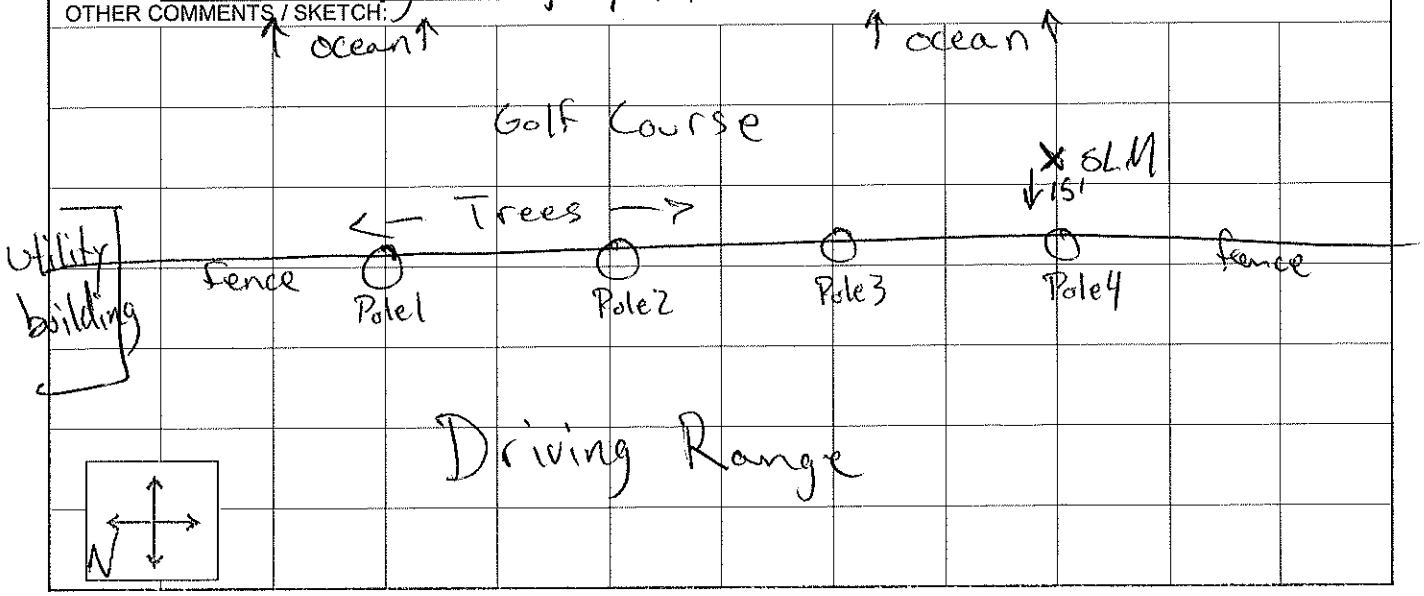
ACOUSTIC MEASUREMENTS:
INSTRUMENT: Piccolo #5 TYPE: 1 (2) SERIAL #: E0320016
CALIBRATOR: LD200 SERIAL #: 6645 2916
CALIBRATION CHECK, BEFORE: 94.0 AFTER ~~94.0~~ ? WINDSCREEN
SETTINGS: A-WEIGHTED (SLOW) (FAST) FRONTAL (RANDOM) (ANSI) OTHER:

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	L 1.67	8.33	10	25	50	90	min

COMMENTS:

NOISE SOURCE INFO:
PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL (AMBIENT) OTHER:
ROADWAY TYPE:
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:
Ocean activity, boats, very close to military base. Golfers

DESCRIPTION / SKETCH:
TERRAIN: HARD SOFT MIXED FLAT OTHER: mic height: 9'
PHOTOS: 4 driving range poles in.
OTHER COMMENTS / SKETCH:



PMPU LT10-2

FIELD NOISE MEASUREMENT DATA

PROJECT: BAE PROJ. # 216,18

SITE IDENTIFICATION: LT 1 OBSERVER(S): Jonathan H. Jakob, K.
ADDRESS: Coronado tidelands park
START DATE / TIME: installed 12:35 pm / 01/07/19 END DATE / TIME: 11:40 Am 1/9/19

METEROLOGICAL CONDITIONS:

TEMP: ____ °F HUMIDITY: ____ %R.H. WIND: CALM LIGHT MODERATE VARIABLE
WINDSPEED: ____ MPH DIR: N NE E SE S SW W NW STEADY GUSTY
SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:

INSTRUMENT: Piccolo #4 TYPE: 1 (2) SERIAL #: 150320014
CALIBRATOR: LD CAL200 SERIAL #: 2916
CALIBRATION CHECK, BEFORE: 94.0 AFTER 94.2 WINDSCREEN ✓
SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER: ____

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	L 1.67	8.33	25	50	90	99	min

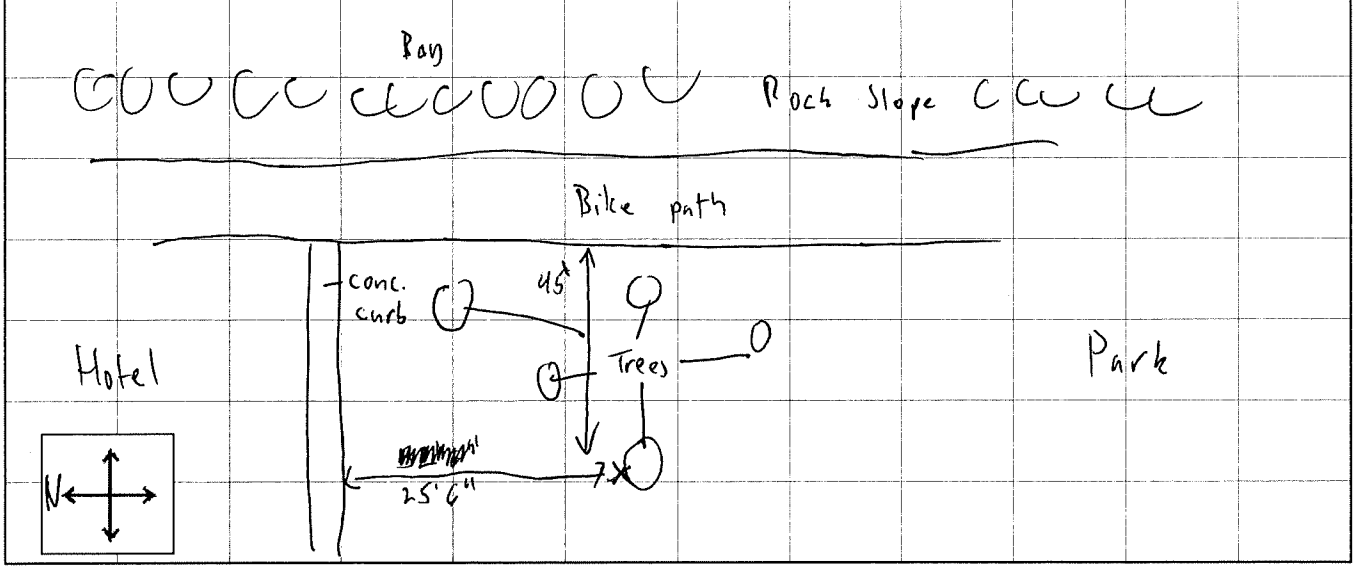
COMMENTS: SLM Started 10:00 AM, clear at 12:50 pm
Arrived 11:40 AM, left 11:50 AM

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER: ____
ROADWAY TYPE: ____
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:

TERRAIN: HARD SOFT MIXED FLAT OTHER: ____
PHOTOS: ____
OTHER COMMENTS / SKETCH:



PMPU ST10-1

FIELD NOISE MEASUREMENT DATA

PROJECT: Port Master Plan update PROJ. # 00517.16

SITE IDENTIFICATION: ST 10 OBSERVER(S): SCK

ADDRESS: Alley near 1532 Gloriette Blvd

START DATE / TIME: 2/21/20 / 8:39 END DATE / TIME: 2/21/20 /

METEROLOGICAL CONDITIONS:

TEMP: 61 °F HUMIDITY: 64 %R.H. WIND: CALM LIGHT MODERATE VARIABLE

WINDSPEED: 4-5 MPH DIR: N NE E SE S SW W NW STEADY GUSTY

SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:

INSTRUMENT: LD 831 TYPE: 1 2 SERIAL #: 3786

CALIBRATOR: CAL 200 SERIAL #: 6645

CALIBRATION CHECK, BEFORE: 114.0 AFTER 114.0 WINDSCREEN X

SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER:

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	1.67	8.33	25	L 50	90	99	min
033	8:39 AM	8:59 AM	54.8	72.8	59.9	56.4	54.7	53.5	52.0	51.3	50.9

COMMENTS: - paused out talking pedestrian

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER:

ROADWAY TYPE:

OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:

TERRAIN: HARD SOFT MIXED FLAT OTHER:

PHOTOS:

OTHER COMMENTS / SKETCH:

PMPU ST10-2

FIELD NOISE MEASUREMENT DATA

PROJECT: Fifth Avenue Landing PROJ. # 518.16

SITE IDENTIFICATION: Centennial Park, Coronado STI OBSERVER(S): JGM
ADDRESS: San Diego Skyline Viewpoint
START DATE / TIME: 1:25pm 10/24/2016 END DATE / TIME: 1:56pm 10/24/2016

METEROLOGICAL CONDITIONS:

TEMP: 74 °F HUMIDITY: 64 %R.H. towards WIND: (CALM) LIGHT MODERATE VARIABLE
WINDSPEED: 0-2 MPH DIR: N NE (E) SE S SW W NW STEADY GUSTY
SKY: SUNNY CLEAR (OVRCST) PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:

INSTRUMENT: Piccolo #6 TYPE: 1 (2) SERIAL #: 150320018
CALIBRATOR: LD cal 200 SERIAL #: 6645
CALIBRATION CHECK, BEFORE: 94.0 AFTER 94.0 WINDSCREEN ✓

SETTINGS: (A-WEIGHTED) (SLOW) FAST FRONTAL (RANDOM) (ANSI) OTHER:

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	2% 1.67	8% 8.33	L 10	25	50	90	min
Rec 3	1:25	1:56	59.9	77.8	68.0	62.5	62.0	58.5	54.5	49.0	46.9

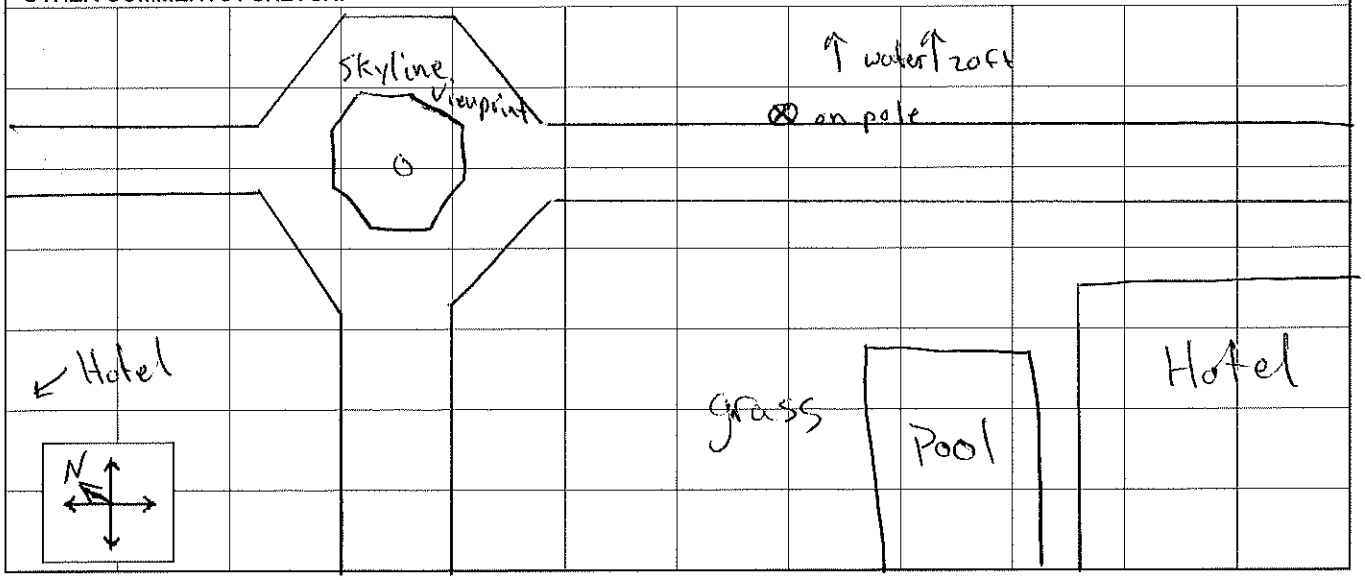
COMMENTS: 1:40 -> Helicopter
Moderate foot-traffic around park during measurement

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: TRAFFIC (AIRCRAFT) RAIL INDUSTRIAL AMBIENT OTHER: watercraft
ROADWAY TYPE:
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / (BIRDS) Distant / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:

TERRAIN: HARD SOFT MIXED FLAT OTHER: 5ft high, 25 yards to pool
PHOTOS:
OTHER COMMENTS / SKETCH:



PMPU ST10-3

FIELD NOISE MEASUREMENT DATA

PROJECT: Park Master Plan update PROJ. # 00517.16

SITE IDENTIFICATION: ST 11 OBSERVER(S): JCK
ADDRESS: park near 817 First St
START DATE / TIME: 2/21/20 / 9:22 Am END DATE / TIME:

METEROLOGICAL CONDITIONS:
TEMP: 63 °F HUMIDITY: 63 %R.H. WIND: CALM LIGHT MODERATE VARIABLE
WINDSPEED: 4-5 MPH DIR: N NE E SE S SW W NW STEADY GUSTY
SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

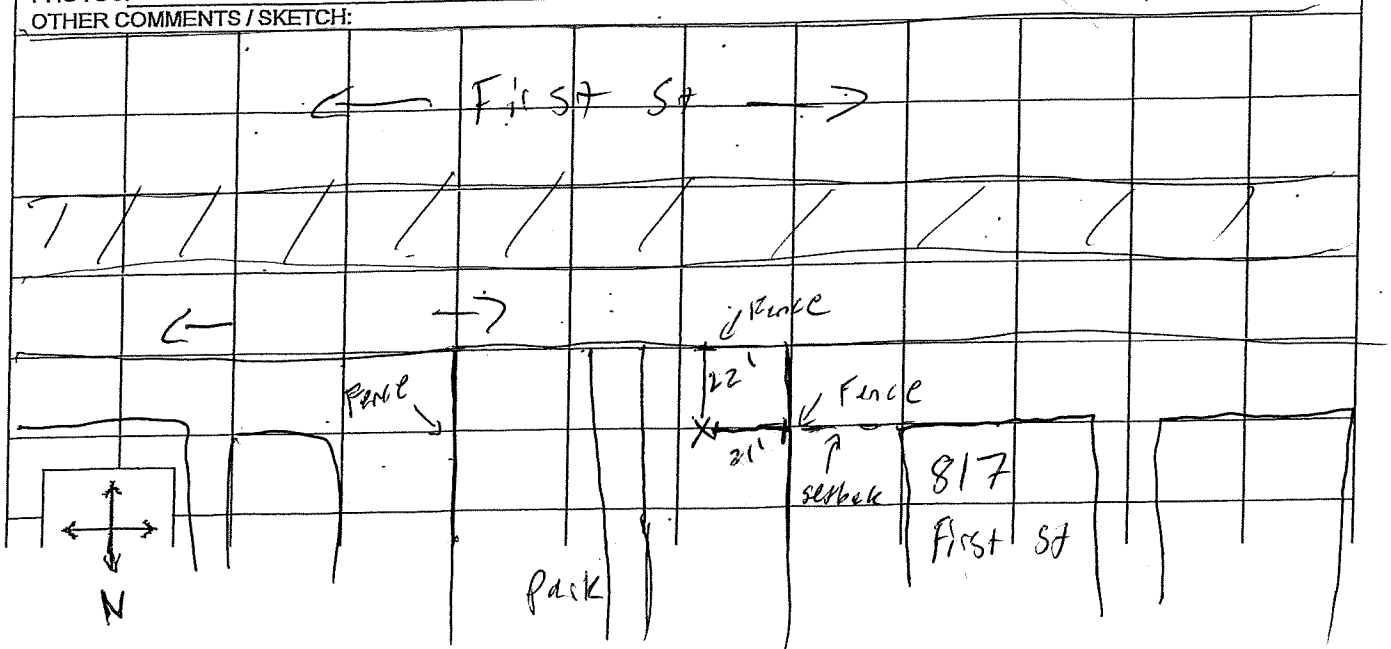
ACOUSTIC MEASUREMENTS:
INSTRUMENT: LD 831 TYPE: 1 2 SERIAL #: 3786
CALIBRATOR: CAL 200 SERIAL #: 6645
CALIBRATION CHECK, BEFORE: 114.0 AFTER 113.9 WINDSCREEN X
SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER:

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	1.67	8.33	25	L 50	90	99	min
034	9:22 Am	9:42	55.6	71.5	67.0	57.2	52.9	50.5	47.1	45.1	44.1

COMMENTS:- paused out loud truck.
- paused out pedestrian w/ dog.
- Jet noise from near by naval air station is loud and frequent

NOISE SOURCE INFO:
PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER:
ROADWAY TYPE:
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:
TERRAIN: HARD SOFT MIXED FLAT OTHER:
PHOTOS:
OTHER COMMENTS / SKETCH:



Title:	Table 1. Port Master Plan Update - Long-Term Noise Measurement Analysis.
Site ID:	LT01-1
Location:	Harbor Police Department, Shelter Island Station
Start Date:	7/5/2016
End Date:	7/6/2016

Noise Data Calculations, dBA

Time of Day	Value	Leq	Lmax	Lmin
Day (7 A.M. - 7 P.M.)	**Min**	53.5	63.3	45.1
	Max	57.6	71.1	54.2
	Avg.	55.8	-	-
Eve (7 P.M. - 10 P.M.)	**Min**	43.9	57.6	37.9
	Max	49.4	60.4	40.3
	Avg.	47.1	-	-
Night (10 P.M. - 7 A.M.)	**Min**	34.9	42.1	31.1
	Max	55.6	68.9	51.1
	Avg.	51.9	-	-
Day (7 A.M. - 10 P.M.)	**Min**	43.9	57.6	37.9
	Max	57.6	71.1	54.2
	Avg.	55.1	-	-
Night (10 P.M. - 7 A.M.)	**Min**	34.9	42.1	31.1
	Max	55.6	68.9	51.1
	Avg.	51.9	-	-

Time of Week	Value	CNEL, dBA	Ldn, dBA
Weekday Only	**Min**	58.4	58.4
	Max	59.4	59.3
	Avg.	59.0	58.9
Weekend Only	**Min**	N/A	N/A
	Max	N/A	N/A
	Avg.	N/A	N/A
Full Week	**Min**	58.4	58.4
	Max	59.4	59.3
	Avg.	59.0	58.9

Noise Measurement Data, dBA - LT01-1, Harbor Police Department, Shelter Island Station

Date	Time	Leq	Lmax	Lmin
Tue-07/05/16	12:00:00 AM	55.6	65.1	32.5
Tue-07/05/16	1:00:00 AM	37.1	48.3	33.0
Tue-07/05/16	2:00:00 AM	34.9	42.1	31.1
Tue-07/05/16	3:00:00 AM	47.8	53.0	46.5
Tue-07/05/16	4:00:00 AM	52.1	58.4	51.1
Tue-07/05/16	5:00:00 AM	52.7	64.2	50.7
Tue-07/05/16	6:00:00 AM	55.3	68.9	50.9
Tue-07/05/16	7:00:00 AM	55.9	64.6	50.7
Tue-07/05/16	8:00:00 AM	54.1	68.9	49.3
Tue-07/05/16	9:00:00 AM	54.2	64.5	48.8
Tue-07/05/16	10:00:00 AM	55.9	70.7	51.0
Tue-07/05/16	11:00:00 AM	56.8	68.9	49.8
Tue-07/05/16	12:00:00 PM	54.6	69.3	50.8
Tue-07/05/16	1:00:00 PM	54.7	67.4	51.4
Tue-07/05/16	2:00:00 PM	56.1	68.0	52.6
Tue-07/05/16	3:00:00 PM	57.1	65.8	54.2
Tue-07/05/16	4:00:00 PM	54.9	63.3	52.1
Tue-07/05/16	5:00:00 PM	57.6	68.8	51.9
Tue-07/05/16	6:00:00 PM	57.4	69.2	45.1
Tue-07/05/16	7:00:00 PM	49.4	60.4	40.3
Tue-07/05/16	8:00:00 PM	46.4	58.3	39.3
Tue-07/05/16	9:00:00 PM	43.9	57.6	37.9
Tue-07/05/16	10:00:00 PM	49.2	53.2	48.0
Tue-07/05/16	11:00:00 PM	52.1	55.3	51.0
Wed-07/06/16	12:00:00 AM	51.9	54.7	51.0
Wed-07/06/16	1:00:00 AM	51.5	53.0	50.7
Wed-07/06/16	2:00:00 AM	51.3	53.3	50.2
Wed-07/06/16	3:00:00 AM	51.0	53.5	49.5
Wed-07/06/16	4:00:00 AM	52.4	66.6	50.3
Wed-07/06/16	5:00:00 AM	54.0	66.8	50.9
Wed-07/06/16	6:00:00 AM	51.6	61.8	46.4
Wed-07/06/16	7:00:00 AM	53.5	71.1	49.3
Wed-07/06/16	8:00:00 AM	56.3	67.7	51.1

Title: Table 2. Port Master Plan Update - Long-Term Noise Measurement Analysis.
Site ID: LT01-2
Location: Shelter Island Shoreline Park
Start Date: 2/18/2020
End Date: 2/20/2020

Noise Data Calculations, dBA

Time of Day	Value	Leq	Lmax	L02	L08	L25	L50	L90	L99	Lmin
Day (7 A.M. - 7 P.M.)	**Min**	58.8	71.8	65.3	61.0	57.5	54.7	51.4	50.1	49.4
	Max	65.6	91.0	74.6	67.4	62.9	61.0	58.2	56.7	55.7
	Avg.	62.4	-	-	-	-	-	-	-	-
Eve (7 P.M. - 10 P.M.)	**Min**	56.6	70.2	64.5	60.6	56.5	52.8	48.6	47.5	47.0
	Max	64.2	87.0	71.2	62.9	58.5	55.8	52.7	51.6	50.9
	Avg.	60.4	-	-	-	-	-	-	-	-
Night (10 P.M. - 7 A.M.)	**Min**	45.1	59.5	51.1	47.0	43.7	41.8	40.8	40.4	40.2
	Max	59.5	78.6	70.8	62.1	58.3	55.4	52.5	51.5	50.9
	Avg.	53.7	-	-	-	-	-	-	-	-
Day (7 A.M. - 10 P.M.)	**Min**	56.6	70.2	64.5	60.6	56.5	52.8	48.6	47.5	47.0
	Max	65.6	91.0	74.6	67.4	62.9	61.0	58.2	56.7	55.7
	Avg.	62.0	-	-	-	-	-	-	-	-
Night (10 P.M. - 7 A.M.)	**Min**	45.1	59.5	51.1	47.0	43.7	41.8	40.8	40.4	40.2
	Max	59.5	78.6	70.8	62.1	58.3	55.4	52.5	51.5	50.9
	Avg.	53.7	-	-	-	-	-	-	-	-

Time of Week	Value	CNEL, dBA	Ldn, dBA
Weekday Only	**Min**	62.6	62.2
	Max	64.2	63.4
	Avg.	63.7	63.0
Weekend Only	**Min**	N/A	N/A
	Max	N/A	N/A
	Avg.	N/A	N/A
Full Week	**Min**	62.6	62.2
	Max	64.2	63.4
	Avg.	63.7	63.0

Noise Measurement Data, dBA - LT01-2, Shelter Island Shoreline Park

Date	Time	Leq	Lmax	L02	L08	L25	L50	L90	L99	Lmin
Tue-02/18/20	3:00:00 PM	65.6	89.2	74.6	66.3	61.2	58.1	54.3	52.8	51.9
Tue-02/18/20	4:00:00 PM	61.8	85.2	69.8	63.2	59.0	56.8	52.9	50.8	49.5
Tue-02/18/20	5:00:00 PM	59.9	71.8	68.1	64.3	59.7	56.6	53.0	51.1	50.1
Tue-02/18/20	6:00:00 PM	58.8	75.8	66.7	61.0	57.5	54.7	51.4	50.1	49.5
Tue-02/18/20	7:00:00 PM	57.5	70.3	65.5	61.4	57.7	54.8	49.9	48.7	47.8
Tue-02/18/20	8:00:00 PM	58.0	72.2	66.3	61.5	57.5	54.7	50.5	48.7	48.3
Tue-02/18/20	9:00:00 PM	56.6	70.2	64.5	60.6	56.5	52.8	48.6	47.5	47.0
Tue-02/18/20	10:00:00 PM	55.9	72.5	64.5	58.9	54.7	51.1	47.6	46.6	45.9
Tue-02/18/20	11:00:00 PM	53.8	78.6	60.4	55.9	51.3	47.3	42.1	41.3	41.2
Wed-02/19/20	12:00:00 AM	47.2	63.4	56.0	50.0	46.1	43.4	41.6	41.1	41.0
Wed-02/19/20	1:00:00 AM	45.2	63.6	52.4	47.4	43.7	41.9	41.2	40.9	40.8
Wed-02/19/20	2:00:00 AM	46.0	63.9	53.7	50.0	44.2	41.8	41.1	40.7	40.5
Wed-02/19/20	3:00:00 AM	45.1	61.7	53.3	47.0	43.7	42.2	40.8	40.4	40.2
Wed-02/19/20	4:00:00 AM	48.9	70.0	57.8	52.1	45.9	43.7	42.2	41.8	41.4
Wed-02/19/20	5:00:00 AM	52.2	70.1	59.3	55.7	51.7	49.6	45.3	43.2	42.7
Wed-02/19/20	6:00:00 AM	58.9	72.5	70.8	61.3	56.7	53.0	49.8	48.7	48.3
Wed-02/19/20	7:00:00 AM	59.6	76.0	68.4	62.1	58.6	56.0	52.3	50.2	49.4
Wed-02/19/20	8:00:00 AM	60.8	79.9	69.3	63.9	59.6	56.9	53.4	51.2	49.5
Wed-02/19/20	9:00:00 AM	63.6	84.1	73.2	65.5	61.1	57.8	53.2	51.3	50.5
Wed-02/19/20	10:00:00 AM	62.1	82.8	69.9	64.2	59.5	56.4	53.3	51.9	50.8
Wed-02/19/20	11:00:00 AM	61.1	78.3	70.4	64.4	59.6	57.1	53.4	51.5	50.0
Wed-02/19/20	12:00:00 PM	62.9	85.9	70.9	66.3	61.6	58.7	55.7	54.1	52.9
Wed-02/19/20	1:00:00 PM	65.3	85.7	73.6	65.3	60.9	57.8	54.8	53.4	52.5
Wed-02/19/20	2:00:00 PM	64.7	91.0	72.1	66.6	62.4	59.9	56.7	55.2	54.2
Wed-02/19/20	3:00:00 PM	62.6	79.5	70.7	65.9	62.0	60.1	54.3	52.1	50.4
Wed-02/19/20	4:00:00 PM	59.7	78.5	68.5	62.5	58.6	56.4	52.9	51.5	50.3
Wed-02/19/20	5:00:00 PM	58.9	72.4	65.3	62.2	59.2	57.2	53.8	52.1	50.9
Wed-02/19/20	6:00:00 PM	61.4	88.0	67.2	62.8	58.6	55.9	52.9	51.6	51.0
Wed-02/19/20	7:00:00 PM	64.2	87.0	71.2	62.9	58.5	55.8	52.7	51.6	50.9
Wed-02/19/20	8:00:00 PM	62.0	81.0	69.4	61.8	57.9	55.1	52.4	51.2	50.2
Wed-02/19/20	9:00:00 PM	58.1	72.8	65.0	61.5	58.0	55.4	52.3	51.3	50.8
Wed-02/19/20	10:00:00 PM	59.5	77.0	67.8	62.1	58.3	55.4	49.2	46.9	46.5
Wed-02/19/20	11:00:00 PM	54.2	72.8	61.8	57.5	53.6	50.1	46.0	45.2	44.7

Noise Measurement Data, dBA - LT01-2, Shelter Island Shoreline Park

Date	Time	Leq	Lmax	L02	L08	L25	L50	L90	L99	Lmin
Thu-02/20/20	12:00:00 AM	52.0	70.7	60.0	56.1	51.0	46.9	45.0	44.5	44.4
Thu-02/20/20	1:00:00 AM	52.0	61.3	59.0	56.1	53.4	48.7	44.9	44.3	43.8
Thu-02/20/20	2:00:00 AM	46.2	59.5	51.7	49.2	45.8	44.4	43.6	43.1	42.9
Thu-02/20/20	3:00:00 AM	46.0	60.7	51.1	48.5	45.9	44.9	43.4	43.0	42.9
Thu-02/20/20	4:00:00 AM	50.4	64.4	58.3	54.1	49.9	47.5	45.5	44.8	44.5
Thu-02/20/20	5:00:00 AM	53.8	69.8	59.8	57.1	54.3	52.1	49.3	48.1	47.3
Thu-02/20/20	6:00:00 AM	56.8	70.0	62.6	60.0	57.5	55.2	52.5	51.5	50.9
Thu-02/20/20	7:00:00 AM	62.9	82.1	71.4	64.8	61.4	59.1	56.0	54.6	53.7
Thu-02/20/20	8:00:00 AM	61.5	79.9	68.2	64.2	61.8	59.5	56.5	54.6	53.7
Thu-02/20/20	9:00:00 AM	62.3	81.1	70.1	65.0	61.4	59.0	55.8	54.3	53.3
Thu-02/20/20	10:00:00 AM	63.4	82.6	70.8	66.7	62.5	60.3	57.2	55.9	54.7
Thu-02/20/20	11:00:00 AM	61.9	78.5	69.8	65.3	61.4	58.8	55.9	54.5	52.8
Thu-02/20/20	12:00:00 PM	61.0	75.2	67.2	63.8	61.3	59.4	56.8	55.2	54.3
Thu-02/20/20	1:00:00 PM	64.4	78.7	74.1	67.4	62.9	61.0	58.2	56.7	55.7
Thu-02/20/20	2:00:00 PM	60.7	82.0	67.3	62.8	59.7	58.0	55.6	54.3	53.5

Title: Table 3. Port Master Plan Update - Long-Term Noise Measurement Analysis.
Site ID: LT02-1
Location: Harbor Island Park
Start Date: 2/18/2020
End Date: 2/20/2020

Noise Data Calculations, dBA

Time of Day	Value	Leq	Lmax	L02	L08	L25	L50	L90	L99	Lmin
Day (7 A.M. - 7 P.M.)	**Min**	59.4	73.4	67.0	63.0	58.0	53.0	48.0	46.0	45.0
	Max	63.7	87.9	71.0	68.0	63.0	60.0	57.0	54.0	53.8
	Avg.	61.3	-	-	-	-	-	-	-	-
Eve (7 P.M. - 10 P.M.)	**Min**	58.2	73.6	68.0	62.0	56.0	51.0	47.0	45.0	45.0
	Max	61.3	78.9	70.0	66.0	59.0	55.0	52.0	50.0	49.5
	Avg.	60.4	-	-	-	-	-	-	-	-
Night (10 P.M. - 7 A.M.)	**Min**	45.2	59.3	50.0	46.0	45.0	44.0	43.0	42.0	41.5
	Max	61.7	81.3	71.0	67.0	59.0	56.0	52.0	51.0	50.6
	Avg.	55.9	-	-	-	-	-	-	-	-
Day (7 A.M. - 10 P.M.)	**Min**	58.2	73.4	67.0	62.0	56.0	51.0	47.0	45.0	45.0
	Max	63.7	87.9	71.0	68.0	63.0	60.0	57.0	54.0	53.8
	Avg.	61.1	-	-	-	-	-	-	-	-
Night (10 P.M. - 7 A.M.)	**Min**	45.2	59.3	50.0	46.0	45.0	44.0	43.0	42.0	41.5
	Max	61.7	81.3	71.0	67.0	59.0	56.0	52.0	51.0	50.6
	Avg.	55.9	-	-	-	-	-	-	-	-

Time of Week	Value	CNEL, dBA	Ldn, dBA
Weekday Only	**Min**	63.4	62.9
	Max	64.5	63.9
	Avg.	64.0	63.4
Weekend Only	**Min**	N/A	N/A
	Max	N/A	N/A
	Avg.	N/A	N/A
Full Week	**Min**	63.4	62.9
	Max	64.5	63.9
	Avg.	64.0	63.4

Noise Measurement Data, dBA - LT02-1, Harbor Island Park

Date	Time	Leq	Lmax	L02	L08	L25	L50	L90	L99	Lmin
Tue-02/18/20	11:00:00 AM	61.9	79.5	70.0	65.0	60.0	58.0	54.0	52.0	51.1
Tue-02/18/20	12:00:00 PM	62.0	77.5	70.0	64.0	61.0	59.0	57.0	54.0	53.8
Tue-02/18/20	1:00:00 PM	62.7	81.8	70.0	66.0	60.0	58.0	55.0	53.0	52.3
Tue-02/18/20	2:00:00 PM	63.3	80.1	70.0	67.0	62.0	60.0	56.0	53.0	52.1
Tue-02/18/20	3:00:00 PM	63.3	86.4	70.0	66.0	61.0	59.0	56.0	54.0	52.3
Tue-02/18/20	4:00:00 PM	60.1	77.5	67.0	63.0	59.0	56.0	52.0	50.0	49.1
Tue-02/18/20	5:00:00 PM	61.1	74.3	68.0	65.0	61.0	58.0	54.0	51.0	49.8
Tue-02/18/20	6:00:00 PM	62.5	78.0	70.0	65.0	63.0	60.0	51.0	48.0	46.6
Tue-02/18/20	7:00:00 PM	60.5	73.6	69.0	66.0	59.0	55.0	50.0	47.0	46.3
Tue-02/18/20	8:00:00 PM	60.2	75.3	69.0	65.0	58.0	55.0	51.0	49.0	48.8
Tue-02/18/20	9:00:00 PM	58.2	74.4	68.0	62.0	56.0	51.0	47.0	45.0	45.0
Tue-02/18/20	10:00:00 PM	58.6	76.9	68.0	59.0	55.0	52.0	46.0	45.0	44.5
Tue-02/18/20	11:00:00 PM	54.0	72.7	61.0	57.0	53.0	50.0	45.0	44.0	43.8
Wed-02/19/20	12:00:00 AM	47.8	61.7	55.0	50.0	47.0	45.0	44.0	42.0	41.7
Wed-02/19/20	1:00:00 AM	45.2	59.3	50.0	46.0	45.0	44.0	43.0	42.0	41.5
Wed-02/19/20	2:00:00 AM	45.9	64.5	51.0	46.0	45.0	44.0	43.0	42.0	41.9
Wed-02/19/20	3:00:00 AM	48.1	68.5	55.0	50.0	45.0	44.0	43.0	42.0	42.1
Wed-02/19/20	4:00:00 AM	49.1	70.4	57.0	50.0	47.0	45.0	44.0	43.0	42.4
Wed-02/19/20	5:00:00 AM	53.8	77.2	61.0	55.0	49.0	47.0	45.0	44.0	44.3
Wed-02/19/20	6:00:00 AM	61.7	76.1	71.0	67.0	59.0	52.0	47.0	46.0	45.2
Wed-02/19/20	7:00:00 AM	61.2	77.6	71.0	66.0	58.0	53.0	48.0	46.0	46.0
Wed-02/19/20	8:00:00 AM	59.9	74.8	69.0	64.0	58.0	55.0	50.0	47.0	46.6
Wed-02/19/20	9:00:00 AM	60.4	78.9	69.0	65.0	58.0	54.0	49.0	46.0	45.0
Wed-02/19/20	10:00:00 AM	60.1	77.8	68.0	64.0	59.0	55.0	51.0	48.0	46.0
Wed-02/19/20	11:00:00 AM	60.3	75.8	69.0	65.0	58.0	55.0	51.0	49.0	48.8
Wed-02/19/20	12:00:00 PM	61.2	78.4	70.0	66.0	60.0	56.0	52.0	50.0	49.8
Wed-02/19/20	1:00:00 PM	60.7	77.2	69.0	65.0	59.0	56.0	52.0	51.0	50.2
Wed-02/19/20	2:00:00 PM	62.9	87.9	71.0	66.0	61.0	57.0	52.0	51.0	50.4
Wed-02/19/20	3:00:00 PM	59.4	74.1	68.0	63.0	58.0	55.0	51.0	49.0	48.6
Wed-02/19/20	4:00:00 PM	59.7	79.1	68.0	63.0	58.0	55.0	51.0	49.0	48.3
Wed-02/19/20	5:00:00 PM	59.7	73.4	68.0	64.0	59.0	56.0	52.0	51.0	50.2
Wed-02/19/20	6:00:00 PM	60.3	78.3	69.0	64.0	58.0	55.0	51.0	50.0	49.6
Wed-02/19/20	7:00:00 PM	61.3	78.9	70.0	65.1	59.0	55.0	52.0	50.0	49.4

Noise Measurement Data, dBA - LT02-1, Harbor Island Park

Date	Time	Leq	Lmax	L02	L08	L25	L50	L90	L99	Lmin
Wed-02/19/20	8:00:00 PM	60.7	75.0	69.0	65.0	59.0	55.0	51.0	50.0	49.4
Wed-02/19/20	9:00:00 PM	60.7	76.5	70.0	65.0	58.0	54.0	52.0	50.0	49.5
Wed-02/19/20	10:00:00 PM	60.6	78.1	70.0	64.0	57.0	54.0	52.0	49.0	48.0
Wed-02/19/20	11:00:00 PM	56.6	73.8	66.0	59.0	54.0	51.0	47.0	46.0	46.4
Thu-02/20/20	12:00:00 AM	50.6	61.5	57.0	54.0	50.0	48.0	47.0	46.0	45.4
Thu-02/20/20	1:00:00 AM	50.6	64.5	54.0	52.0	51.0	50.0	47.0	46.0	46.3
Thu-02/20/20	2:00:00 AM	48.3	60.2	53.0	49.0	48.0	47.0	46.0	45.0	44.5
Thu-02/20/20	3:00:00 AM	48.9	66.3	55.0	50.0	49.0	46.0	45.0	44.0	43.9
Thu-02/20/20	4:00:00 AM	50.4	66.5	55.0	51.0	50.0	49.0	47.0	47.0	46.5
Thu-02/20/20	5:00:00 AM	57.9	81.3	61.0	58.0	54.0	53.0	49.0	48.0	48.3
Thu-02/20/20	6:00:00 AM	61.3	77.8	70.0	66.0	59.0	56.0	52.0	51.0	50.6
Thu-02/20/20	7:00:00 AM	63.7	78.8	71.0	68.0	63.0	59.0	56.0	54.0	53.4
Thu-02/20/20	8:00:00 AM	61.2	76.6	69.0	65.0	60.0	57.0	54.0	53.0	52.6
Thu-02/20/20	9:00:00 AM	60.2	75.3	68.0	64.0	59.0	56.0	53.0	51.0	51.4
Thu-02/20/20	10:00:00 AM	59.9	77.0	68.0	64.0	59.0	56.0	52.0	51.0	50.1
Thu-02/20/20	11:00:00 AM	60.0	76.8	68.0	64.0	59.0	56.0	53.0	51.0	50.4
Thu-02/20/20	12:00:00 PM	61.0	75.0	68.0	65.0	60.0	58.0	54.0	53.0	51.6

Title: Table 4. Port Master Plan Update - Long-Term Noise Measurement Analysis.
Site ID: LT03-1
Location: Wyndham San Diego Bayside Hotel
Start Date: 2/18/2020
End Date: 2/20/2020

Noise Data Calculations, dBA

Time of Day	Value	Leq	Lmax	L02	L08	L25	L50	L90	L99	Lmin
Day (7 A.M. - 7 P.M.)	**Min**	61.9	75.3	67.3	64.0	61.2	58.6	52.9	50.9	49.7
	Max	72.1	102.3	73.6	69.5	65.1	62.7	58.7	56.4	54.7
	Avg.	64.7	-	-	-	-	-	-	-	-
Eve (7 P.M. - 10 P.M.)	**Min**	59.0	72.6	65.6	62.0	59.6	57.2	51.4	48.7	47.7
	Max	62.5	81.3	70.0	65.3	62.5	60.2	56.2	54.2	52.0
	Avg.	61.4	-	-	-	-	-	-	-	-
Night (10 P.M. - 7 A.M.)	**Min**	49.2	61.4	56.8	52.3	47.4	46.3	45.7	45.5	45.0
	Max	63.1	84.8	70.0	66.0	63.6	61.5	57.4	54.5	53.6
	Avg.	58.5	-	-	-	-	-	-	-	-
Day (7 A.M. - 10 P.M.)	**Min**	59.0	72.6	65.6	62.0	59.6	57.2	51.4	48.7	47.7
	Max	72.1	102.3	73.6	69.5	65.1	62.7	58.7	56.4	54.7
	Avg.	64.2	-	-	-	-	-	-	-	-
Night (10 P.M. - 7 A.M.)	**Min**	49.2	61.4	56.8	52.3	47.4	46.3	45.7	45.5	45.0
	Max	63.1	84.8	70.0	66.0	63.6	61.5	57.4	54.5	53.6
	Avg.	58.5	-	-	-	-	-	-	-	-

Time of Week	Value	CNEL, dBA	Ldn, dBA
Weekday Only	**Min**	66.5	66.0
	Max	67.1	66.7
	Avg.	66.8	66.4
Weekend Only	**Min**	N/A	N/A
	Max	N/A	N/A
	Avg.	N/A	N/A
Full Week	**Min**	66.5	66.0
	Max	67.1	66.7
	Avg.	66.8	66.4

Noise Measurement Data, dBA - LT03-1, Wyndham San Diego Bayside Hotel

Date	Time	Leq	Lmax	L02	L08	L25	L50	L90	L99	Lmin
Tue-02/18/20	2:00:00 PM	62.4	81.0	69.9	65.4	62.2	59.8	55.3	53.1	51.9
Tue-02/18/20	3:00:00 PM	62.9	77.4	71.2	65.8	63.2	60.5	54.9	52.0	50.3
Tue-02/18/20	4:00:00 PM	62.6	83.1	69.8	65.3	62.8	60.1	53.3	51.1	50.3
Tue-02/18/20	5:00:00 PM	63.4	81.6	71.4	65.7	62.6	60.1	54.9	51.9	50.6
Tue-02/18/20	6:00:00 PM	62.3	88.6	67.8	64.0	61.2	58.6	52.9	50.9	49.7
Tue-02/18/20	7:00:00 PM	61.6	77.4	69.5	64.6	61.6	59.1	54.6	52.2	50.8
Tue-02/18/20	8:00:00 PM	60.5	72.6	66.8	63.7	61.4	58.9	54.2	51.1	49.8
Tue-02/18/20	9:00:00 PM	59.0	75.2	65.6	62.0	59.6	57.2	51.4	48.7	47.7
Tue-02/18/20	10:00:00 PM	61.9	83.9	70.0	63.2	59.4	55.9	49.3	47.7	47.1
Tue-02/18/20	11:00:00 PM	60.9	84.8	65.9	60.8	56.7	52.6	48.0	47.2	46.6
Wed-02/19/20	12:00:00 AM	54.8	76.5	62.2	58.4	53.4	49.0	46.6	45.9	45.5
Wed-02/19/20	1:00:00 AM	50.7	71.4	58.5	53.4	48.7	47.4	46.2	45.5	45.0
Wed-02/19/20	2:00:00 AM	49.2	61.4	56.8	52.3	48.4	47.1	46.1	45.8	45.5
Wed-02/19/20	3:00:00 AM	50.2	65.3	59.0	53.5	47.4	46.3	45.7	45.5	45.2
Wed-02/19/20	4:00:00 AM	56.7	73.9	63.8	61.0	56.8	51.9	47.3	46.4	46.0
Wed-02/19/20	5:00:00 AM	60.2	74.0	66.9	63.8	61.1	58.2	51.9	50.4	49.2
Wed-02/19/20	6:00:00 AM	61.5	77.0	67.7	65.2	62.3	59.9	53.6	50.9	50.3
Wed-02/19/20	7:00:00 AM	63.0	81.1	68.9	66.0	63.3	60.8	56.1	53.5	52.1
Wed-02/19/20	8:00:00 AM	62.1	78.8	67.3	65.2	63.0	60.9	56.5	53.5	51.6
Wed-02/19/20	9:00:00 AM	62.8	81.4	69.6	66.0	62.9	60.6	56.1	53.3	50.9
Wed-02/19/20	10:00:00 AM	72.1	102.3	71.5	67.1	63.9	61.3	57.1	54.1	52.9
Wed-02/19/20	11:00:00 AM	63.4	81.2	69.7	66.6	62.9	60.5	56.4	53.6	52.2
Wed-02/19/20	12:00:00 PM	65.9	90.0	72.1	67.9	64.3	61.9	57.8	55.5	54.3
Wed-02/19/20	1:00:00 PM	64.0	83.3	71.1	66.5	63.4	61.0	57.1	55.0	53.4
Wed-02/19/20	2:00:00 PM	64.1	83.2	71.7	67.3	63.8	61.1	56.9	54.6	53.5
Wed-02/19/20	3:00:00 PM	63.3	77.9	69.8	66.7	63.8	61.5	56.7	53.8	52.4
Wed-02/19/20	4:00:00 PM	63.2	82.1	70.8	66.3	63.2	60.7	55.6	53.0	51.4
Wed-02/19/20	5:00:00 PM	64.9	86.9	72.4	66.0	63.1	61.1	57.0	53.4	51.7
Wed-02/19/20	6:00:00 PM	61.9	78.4	68.0	64.5	62.4	60.3	55.8	52.4	51.0
Wed-02/19/20	7:00:00 PM	62.5	81.3	70.0	65.3	62.5	60.0	55.2	52.8	51.7
Wed-02/19/20	8:00:00 PM	61.8	78.1	67.9	65.1	62.4	60.2	56.2	54.2	52.0
Wed-02/19/20	9:00:00 PM	62.1	79.7	69.4	64.9	62.4	60.0	54.1	51.6	50.5
Wed-02/19/20	10:00:00 PM	59.1	70.3	66.7	62.7	59.6	56.7	51.8	50.2	49.4

Noise Measurement Data, dBA - LT03-1, Wyndham San Diego Bayside Hotel

Date	Time	Leq	Lmax	L02	L08	L25	L50	L90	L99	Lmin
Wed-02/19/20	11:00:00 PM	58.1	74.0	65.8	61.7	58.2	54.9	50.3	49.2	48.8
Thu-02/20/20	12:00:00 AM	54.5	77.9	60.9	58.1	54.3	50.9	49.1	48.3	47.7
Thu-02/20/20	1:00:00 AM	51.9	69.3	58.8	54.8	50.4	49.1	47.8	47.2	46.8
Thu-02/20/20	2:00:00 AM	50.6	64.2	56.8	52.5	50.2	49.4	48.0	47.4	47.0
Thu-02/20/20	3:00:00 AM	52.9	69.4	60.1	55.5	51.9	50.4	49.2	48.4	47.5
Thu-02/20/20	4:00:00 AM	57.2	73.8	63.6	61.1	58.1	54.3	51.0	50.0	49.3
Thu-02/20/20	5:00:00 AM	61.8	81.5	67.4	64.5	61.9	59.2	55.2	53.6	52.8
Thu-02/20/20	6:00:00 AM	63.1	79.5	68.4	66.0	63.6	61.5	57.4	54.5	53.6
Thu-02/20/20	7:00:00 AM	65.0	78.9	72.0	68.9	65.1	62.7	58.7	56.4	54.7
Thu-02/20/20	8:00:00 AM	63.6	75.5	69.7	66.7	64.4	62.3	58.1	55.9	53.8
Thu-02/20/20	9:00:00 AM	65.5	84.8	70.7	69.1	64.8	62.5	58.3	54.9	52.2
Thu-02/20/20	10:00:00 AM	64.3	84.5	70.5	66.9	63.3	61.1	57.2	54.3	53.0
Thu-02/20/20	11:00:00 AM	65.0	83.8	73.6	69.5	64.5	61.9	57.5	55.1	52.9
Thu-02/20/20	12:00:00 PM	62.8	75.3	69.0	66.5	63.3	61.1	57.7	54.6	52.9

Title:	Table 5. Port Master Plan Update - Long-Term Noise Measurement Analysis.
Site ID:	LT03-2
Location:	B Street Pier
Start Date:	7/5/2016
End Date:	7/6/2016

Noise Data Calculations, dBA

Time of Day	Value	Leq	Lmax	Lmin
Day (7 A.M. - 7 P.M.)	**Min**	55.8	63.7	48.7
	Max	62.3	76.5	53.6
	Avg.	58.6	-	-
Eve (7 P.M. - 10 P.M.)	**Min**	59.2	69.4	49.2
	Max	61.5	70.2	52.1
	Avg.	60.5	-	-
Night (10 P.M. - 7 A.M.)	**Min**	45.6	49.2	43.3
	Max	59.5	68.9	52.4
	Avg.	53.9	-	-
Day (7 A.M. - 10 P.M.)	**Min**	55.8	63.7	48.7
	Max	62.3	76.5	53.6
	Avg.	59.0	-	-
Night (10 P.M. - 7 A.M.)	**Min**	45.6	49.2	43.3
	Max	59.5	68.9	52.4
	Avg.	53.9	-	-

Time of Week	Value	CNEL, dBA	Ldn, dBA
Weekday Only	**Min**	62.1	61.2
	Max	62.3	61.5
	Avg.	62.2	61.4
Weekend Only	**Min**	N/A	N/A
	Max	N/A	N/A
	Avg.	N/A	N/A
Full Week	**Min**	62.1	61.2
	Max	62.3	61.5
	Avg.	62.2	61.4

Noise Measurement Data, dBA - LT03-2, B Street Pier

Date	Time	Leq	Lmax	Lmin
Tue-07/05/16	12:00:00 AM	47.0	54.1	44.0
Tue-07/05/16	1:00:00 AM	49.3	56.2	43.3
Tue-07/05/16	2:00:00 AM	46.2	49.2	43.9
Tue-07/05/16	3:00:00 AM	47.2	54.3	44.4
Tue-07/05/16	4:00:00 AM	47.2	52.7	45.0
Tue-07/05/16	5:00:00 AM	58.8	67.6	50.2
Tue-07/05/16	6:00:00 AM	59.5	68.9	49.6
Tue-07/05/16	7:00:00 AM	58.1	67.2	51.8
Tue-07/05/16	8:00:00 AM	55.8	63.9	50.9
Tue-07/05/16	9:00:00 AM	58.8	66.2	53.6
Tue-07/05/16	10:00:00 AM	60.2	67.2	53.5
Tue-07/05/16	11:00:00 AM	57.8	65.8	52.0
Tue-07/05/16	12:00:00 PM	56.2	64.1	51.4
Tue-07/05/16	1:00:00 PM	59.4	67.4	52.3
Tue-07/05/16	2:00:00 PM	56.9	63.7	51.7
Tue-07/05/16	3:00:00 PM	56.9	64.5	51.8
Tue-07/05/16	4:00:00 PM	57.1	66.0	50.6
Tue-07/05/16	5:00:00 PM	57.9	66.2	51.6
Tue-07/05/16	6:00:00 PM	60.5	68.3	53.5
Tue-07/05/16	7:00:00 PM	60.5	69.7	49.7
Tue-07/05/16	8:00:00 PM	61.5	70.2	52.1
Tue-07/05/16	9:00:00 PM	59.2	69.4	49.2
Tue-07/05/16	10:00:00 PM	52.8	61.2	46.8
Tue-07/05/16	11:00:00 PM	49.9	59.6	45.1
Wed-07/06/16	12:00:00 AM	46.6	51.2	44.1
Wed-07/06/16	1:00:00 AM	45.6	49.8	43.4
Wed-07/06/16	2:00:00 AM	47.0	49.4	45.1
Wed-07/06/16	3:00:00 AM	48.3	53.1	45.8
Wed-07/06/16	4:00:00 AM	49.0	55.3	46.2
Wed-07/06/16	5:00:00 AM	58.5	66.9	52.4
Wed-07/06/16	6:00:00 AM	58.7	68.2	49.1
Wed-07/06/16	7:00:00 AM	56.6	69.9	48.7
Wed-07/06/16	8:00:00 AM	62.3	76.5	52.6

Title: Table 6. Port Master Plan Update - Long-Term Noise Measurement Analysis.
Site ID: LT03-3
Location: Marriott Marquis San Diego Hotel and Marina
Start Date: 10/20/2016
End Date: 10/24/2016

		Noise Data Calculations, dBA								
Time of Day	**Value**	**Leq**	**Lmax**	**L02**	**L08**	**L25**	**L50**	**L90**	**L99**	**Lmin**
Day (7 A.M. - 7 P.M.)	**Min**	52.5	66.8	57.0	54.0	51.0	50.0	49.0	48.0	47.9
	Max	64.4	89.0	74.0	71.0	62.0	60.0	55.0	54.0	53.8
	Avg.	58.3	-	-	-	-	-	-	-	-
Eve (7 P.M. - 10 P.M.)	**Min**	53.8	71.2	60.0	55.0	52.0	51.0	50.0	49.0	49.5
	Max	58.9	85.2	67.0	61.0	56.0	54.0	52.0	52.0	51.6
	Avg.	56.7	-	-	-	-	-	-	-	-
Night (10 P.M. - 7 A.M.)	**Min**	49.7	55.2	51.0	50.0	49.0	49.0	49.0	48.0	48.5
	Max	57.6	81.3	67.0	60.0	56.0	54.0	53.0	52.0	52.3
	Avg.	53.7	-	-	-	-	-	-	-	-
Day (7 A.M. - 10 P.M.)	**Min**	52.5	66.8	57.0	54.0	51.0	50.0	49.0	48.0	47.9
	Max	64.4	89.0	74.0	71.0	62.0	60.0	55.0	54.0	53.8
	Avg.	58.0	-	-	-	-	-	-	-	-
Night (10 P.M. - 7 A.M.)	**Min**	49.7	55.2	51.0	50.0	49.0	49.0	49.0	48.0	48.5
	Max	57.6	81.3	67.0	60.0	56.0	54.0	53.0	52.0	52.3
	Avg.	53.7	-	-	-	-	-	-	-	-

Time of Week	**Value**	**CNEL, dBA**	**Ldn, dBA**
Weekday Only	**Min**	61.6	61.2
	Max	62.3	61.9
	Avg.	62.0	61.6
Weekend Only	**Min**	59.8	59.3
	Max	61.4	61.0
	Avg.	60.8	60.3
Full Week	**Min**	59.2	58.7
	Max	62.3	61.9
	Avg.	61.2	60.8

Noise Measurement Data, dBA - LT03-3, Marriott Marquis San Diego Hotel and Marina

Date	Time	Leq	Lmax	L02	L08	L25	L50	L90	L99	Lmin
Thu-10/20/16	11:00:00 AM	58.3	76.3	65.0	60.0	57.0	55.0	51.0	49.0	48.8
Thu-10/20/16	12:00:00 PM	64.4	78.7	74.0	71.0	56.0	51.0	49.0	49.0	48.4
Thu-10/20/16	1:00:00 PM	61.0	78.9	71.0	65.0	57.0	53.0	50.0	49.0	49.2
Thu-10/20/16	2:00:00 PM	58.5	78.5	66.0	61.0	56.0	53.0	51.0	50.0	49.7
Thu-10/20/16	3:00:00 PM	60.1	78.3	70.0	62.0	56.0	53.0	51.0	50.0	49.6
Thu-10/20/16	4:00:00 PM	58.0	78.4	67.0	58.0	53.0	51.0	50.0	49.0	49.0
Thu-10/20/16	5:00:00 PM	61.0	78.4	71.0	61.0	57.0	53.0	49.0	49.0	48.7
Thu-10/20/16	6:00:00 PM	55.9	79.1	62.0	56.0	53.0	51.0	50.0	50.0	49.6
Thu-10/20/16	7:00:00 PM	56.4	73.3	66.0	58.0	53.0	52.0	50.0	50.0	49.9
Thu-10/20/16	8:00:00 PM	58.9	81.4	67.0	61.0	56.0	54.0	52.0	52.0	51.1
Thu-10/20/16	9:00:00 PM	58.2	85.2	60.0	57.0	54.0	53.0	52.0	52.0	51.6
Thu-10/20/16	10:00:00 PM	56.7	77.3	61.0	56.0	54.0	52.0	51.0	51.0	50.5
Thu-10/20/16	11:00:00 PM	55.3	77.2	57.0	53.0	51.0	50.0	50.0	49.0	49.3
Fri-10/21/16	12:00:00 AM	51.0	61.1	54.0	52.0	50.0	50.0	49.0	49.0	49.3
Fri-10/21/16	1:00:00 AM	51.5	63.7	55.0	52.0	51.0	51.0	50.0	50.0	49.9
Fri-10/21/16	2:00:00 AM	53.7	77.1	58.0	54.0	53.0	52.0	51.0	51.0	50.6
Fri-10/21/16	3:00:00 AM	52.5	67.8	53.0	53.0	52.0	52.0	51.0	51.0	50.9
Fri-10/21/16	4:00:00 AM	53.2	58.6	54.0	54.0	53.0	53.0	52.0	51.0	51.3
Fri-10/21/16	5:00:00 AM	53.8	63.1	55.0	54.0	54.0	53.0	52.0	52.0	51.6
Fri-10/21/16	6:00:00 AM	56.4	73.3	61.0	58.0	56.0	54.0	53.0	52.0	51.8
Fri-10/21/16	7:00:00 AM	57.6	83.4	60.0	58.0	57.0	56.0	55.0	54.0	53.8
Fri-10/21/16	8:00:00 AM	57.2	69.9	62.0	59.0	57.0	56.0	54.0	53.0	53.1
Fri-10/21/16	9:00:00 AM	61.1	82.0	71.0	64.0	56.0	53.0	51.0	50.0	49.7
Fri-10/21/16	10:00:00 AM	54.7	73.0	63.0	55.0	52.0	51.0	49.0	49.0	49.0
Fri-10/21/16	11:00:00 AM	58.7	78.4	67.0	57.0	53.0	52.0	50.0	49.0	48.7
Fri-10/21/16	12:00:00 PM	59.3	80.9	68.0	58.0	55.0	53.0	51.0	50.0	49.4
Fri-10/21/16	1:00:00 PM	59.1	79.4	67.0	57.0	53.0	51.0	50.0	49.0	49.1
Fri-10/21/16	2:00:00 PM	59.8	80.0	68.0	58.0	54.0	52.0	50.0	49.0	48.8
Fri-10/21/16	3:00:00 PM	56.3	78.1	63.0	56.0	51.0	50.0	49.0	48.0	48.2
Fri-10/21/16	4:00:00 PM	58.0	79.5	68.0	56.0	52.0	50.0	49.0	49.0	48.6
Fri-10/21/16	5:00:00 PM	58.4	78.5	68.0	58.0	53.0	51.0	50.0	49.0	49.5
Fri-10/21/16	6:00:00 PM	58.2	83.1	65.0	59.0	55.0	53.0	52.0	51.0	50.6
Fri-10/21/16	7:00:00 PM	56.7	74.9	64.0	58.0	55.0	53.0	52.0	51.0	50.9

Noise Measurement Data, dBA - LT03-3, Marriott Marquis San Diego Hotel and Marina

Date	Time	Leq	Lmax	L02	L08	L25	L50	L90	L99	Lmin
Fri-10/21/16	8:00:00 PM	56.8	76.9	65.0	59.0	55.0	53.0	51.0	50.0	50.4
Fri-10/21/16	9:00:00 PM	56.2	79.4	61.0	57.0	55.0	53.0	52.0	51.0	51.0
Fri-10/21/16	10:00:00 PM	54.8	71.5	60.0	56.0	54.0	53.0	51.0	50.0	50.2
Fri-10/21/16	11:00:00 PM	55.5	75.8	60.0	56.0	55.0	54.0	53.0	52.0	52.3
Sat-10/22/16	12:00:00 AM	55.1	79.1	56.0	54.0	53.0	52.0	51.0	50.0	50.3
Sat-10/22/16	1:00:00 AM	52.6	67.5	55.0	53.0	52.0	52.0	51.0	50.0	50.4
Sat-10/22/16	2:00:00 AM	52.8	68.9	55.0	53.0	52.0	52.0	51.0	50.0	50.1
Sat-10/22/16	3:00:00 AM	51.8	63.2	55.0	52.0	51.0	51.0	50.0	50.0	49.9
Sat-10/22/16	4:00:00 AM	53.0	62.6	55.0	54.0	53.0	52.0	51.0	51.0	50.5
Sat-10/22/16	5:00:00 AM	54.3	68.8	57.0	56.0	54.0	53.0	52.0	51.0	51.2
Sat-10/22/16	6:00:00 AM	55.2	68.7	59.0	56.0	55.0	54.0	53.0	52.0	52.2
Sat-10/22/16	7:00:00 AM	62.0	80.6	69.0	65.0	61.0	59.0	55.0	53.0	52.8
Sat-10/22/16	8:00:00 AM	60.4	80.4	67.0	63.0	59.0	57.0	55.0	53.0	52.4
Sat-10/22/16	9:00:00 AM	55.0	71.4	62.0	57.0	54.0	52.0	50.0	49.0	49.2
Sat-10/22/16	10:00:00 AM	53.4	66.8	59.0	56.0	53.0	51.0	50.0	49.0	49.0
Sat-10/22/16	11:00:00 AM	53.7	70.5	61.0	56.0	53.0	50.0	49.0	48.0	48.0
Sat-10/22/16	12:00:00 PM	55.0	77.9	62.0	56.0	53.0	51.0	50.0	49.0	48.5
Sat-10/22/16	1:00:00 PM	55.1	78.0	61.0	56.0	53.0	52.0	50.0	49.0	49.3
Sat-10/22/16	2:00:00 PM	55.4	71.0	63.0	58.0	54.0	52.0	50.0	49.0	49.0
Sat-10/22/16	3:00:00 PM	57.8	79.4	65.0	58.0	53.0	52.0	50.0	49.0	49.0
Sat-10/22/16	4:00:00 PM	54.5	72.3	63.0	57.0	53.0	51.0	49.0	49.0	48.8
Sat-10/22/16	5:00:00 PM	56.1	75.2	64.0	58.0	54.0	52.0	50.0	49.0	49.5
Sat-10/22/16	6:00:00 PM	56.3	71.4	63.0	59.0	56.0	54.0	52.0	51.0	50.8
Sat-10/22/16	7:00:00 PM	56.4	76.6	63.0	58.0	55.0	53.0	51.0	51.0	50.5
Sat-10/22/16	8:00:00 PM	56.9	81.5	63.0	57.0	54.0	52.0	51.0	50.0	50.3
Sat-10/22/16	9:00:00 PM	56.0	75.0	62.0	58.0	54.0	52.0	51.0	51.0	50.7
Sat-10/22/16	10:00:00 PM	54.8	73.1	61.0	57.0	54.0	52.0	51.0	50.0	50.5
Sat-10/22/16	11:00:00 PM	55.4	81.3	61.0	54.0	52.0	51.0	51.0	50.0	50.1
Sun-10/23/16	12:00:00 AM	51.1	59.3	53.0	51.0	51.0	50.0	50.0	50.0	49.9
Sun-10/23/16	1:00:00 AM	51.5	65.8	54.0	52.0	51.0	51.0	50.0	50.0	49.9
Sun-10/23/16	2:00:00 AM	56.2	80.4	57.0	53.0	51.0	51.0	49.0	49.0	49.1
Sun-10/23/16	3:00:00 AM	50.7	65.9	55.0	51.0	50.0	50.0	49.0	49.0	49.2
Sun-10/23/16	4:00:00 AM	50.2	67.6	51.0	50.0	50.0	49.0	49.0	49.0	49.2

Noise Measurement Data, dBA - LT03-3, Marriott Marquis San Diego Hotel and Marina

Date	Time	Leq	Lmax	L02	L08	L25	L50	L90	L99	Lmin
Sun-10/23/16	5:00:00 AM	51.1	60.3	52.0	52.0	51.0	50.0	50.0	49.0	49.4
Sun-10/23/16	6:00:00 AM	53.4	65.6	57.0	54.0	53.0	52.0	51.0	51.0	50.7
Sun-10/23/16	7:00:00 AM	53.7	67.1	57.0	55.0	53.0	53.0	52.0	51.0	50.8
Sun-10/23/16	8:00:00 AM	58.5	89.0	62.0	57.0	55.0	53.0	52.0	50.0	50.0
Sun-10/23/16	9:00:00 AM	54.8	67.4	61.0	57.0	54.0	53.0	51.0	51.0	50.3
Sun-10/23/16	10:00:00 AM	54.9	80.1	61.0	56.0	53.0	51.0	50.0	50.0	49.4
Sun-10/23/16	11:00:00 AM	54.3	73.2	62.0	56.0	53.0	51.0	49.0	48.0	47.9
Sun-10/23/16	12:00:00 PM	54.3	74.7	61.0	55.0	52.0	51.0	49.0	49.0	48.6
Sun-10/23/16	1:00:00 PM	52.5	69.5	57.0	54.0	52.0	51.0	49.0	49.0	48.8
Sun-10/23/16	2:00:00 PM	56.6	75.6	64.0	60.0	55.0	53.0	51.0	50.0	49.6
Sun-10/23/16	3:00:00 PM	56.2	77.6	63.0	58.0	55.0	53.0	51.0	50.0	49.7
Sun-10/23/16	4:00:00 PM	52.7	71.3	58.0	55.0	52.0	51.0	49.0	49.0	48.4
Sun-10/23/16	5:00:00 PM	57.7	83.3	62.0	57.0	53.0	51.0	49.0	48.0	48.3
Sun-10/23/16	6:00:00 PM	53.8	67.4	60.0	56.0	53.0	52.0	51.0	51.0	50.5
Sun-10/23/16	7:00:00 PM	57.2	79.8	63.0	56.0	53.0	52.0	51.0	51.0	51.0
Sun-10/23/16	8:00:00 PM	54.6	76.8	61.0	55.0	52.0	51.0	50.0	50.0	49.7
Sun-10/23/16	9:00:00 PM	53.8	71.2	60.0	56.0	52.0	51.0	50.0	49.0	49.5
Sun-10/23/16	10:00:00 PM	52.2	70.7	57.0	53.0	51.0	50.0	49.0	49.0	48.9
Sun-10/23/16	11:00:00 PM	50.2	59.5	54.0	51.0	49.0	49.0	49.0	48.0	48.7
Mon-10/24/16	12:00:00 AM	50.2	60.1	53.0	52.0	50.0	49.0	49.0	48.0	48.5
Mon-10/24/16	1:00:00 AM	49.7	59.0	51.0	50.0	49.0	49.0	49.0	48.0	48.6
Mon-10/24/16	2:00:00 AM	53.1	67.2	60.0	59.0	51.0	50.0	49.0	49.0	48.8
Mon-10/24/16	3:00:00 AM	54.7	66.8	60.0	60.0	50.0	49.0	49.0	48.0	48.7
Mon-10/24/16	4:00:00 AM	50.3	55.2	52.0	51.0	50.0	50.0	49.0	49.0	49.0
Mon-10/24/16	5:00:00 AM	50.7	60.7	52.0	51.0	50.0	50.0	50.0	50.0	49.7
Mon-10/24/16	6:00:00 AM	57.6	79.0	67.0	55.0	52.0	50.0	49.0	49.0	49.3
Mon-10/24/16	7:00:00 AM	59.9	79.9	69.0	60.0	57.0	55.0	52.0	50.0	50.0
Mon-10/24/16	8:00:00 AM	61.1	76.8	66.0	64.0	62.0	60.0	52.0	51.0	50.9
Mon-10/24/16	9:00:00 AM	61.5	80.3	69.0	62.0	59.0	56.0	50.0	49.0	48.9
Mon-10/24/16	10:00:00 AM	60.6	80.0	68.0	62.0	60.0	58.0	53.0	51.0	50.0
Mon-10/24/16	11:00:00 AM	59.6	72.6	64.0	62.0	60.0	58.0	54.0	52.0	50.2

Title: Table 7. Port Master Plan Update - Long-Term Noise Measurement Analysis.
Site ID: LT03-4
Location: Harbor Club San Diego
Start Date: 10/20/2016
End Date: 10/24/2016

Noise Data Calculations, dBA

Time of Day	Value	Leq	Lmax	L02	L08	L25	L50	L90	L99	Lmin
Day (7 A.M. - 7 P.M.)	**Min**	57.2	74.0	63.0	59.0	56.0	54.0	50.0	48.0	47.5
	Max	68.4	93.6	79.0	71.0	66.0	66.0	58.0	53.0	52.9
	Avg.	61.8	-	-	-	-	-	-	-	-
Eve (7 P.M. - 10 P.M.)	**Min**	57.2	72.0	63.0	59.0	56.0	54.0	50.0	49.0	48.3
	Max	63.1	88.0	72.0	66.0	62.0	58.0	54.0	52.0	51.7
	Avg.	61.1	-	-	-	-	-	-	-	-
Night (10 P.M. - 7 A.M.)	**Min**	51.7	67.8	58.0	53.0	50.0	48.0	47.0	46.0	46.0
	Max	66.2	93.7	72.0	71.0	62.0	57.0	54.0	52.0	51.7
	Avg.	59.3	-	-	-	-	-	-	-	-
Day (7 A.M. - 10 P.M.)	**Min**	57.2	72.0	63.0	59.0	56.0	54.0	50.0	48.0	47.5
	Max	68.4	93.6	79.0	71.0	66.0	66.0	58.0	53.0	52.9
	Avg.	61.6	-	-	-	-	-	-	-	-
Night (10 P.M. - 7 A.M.)	**Min**	51.7	67.8	58.0	53.0	50.0	48.0	47.0	46.0	46.0
	Max	66.2	93.7	72.0	71.0	62.0	57.0	54.0	52.0	51.7
	Avg.	59.3	-	-	-	-	-	-	-	-

Time of Week	Value	CNEL, dBA	Ldn, dBA
Weekday Only	**Min**	68.4	68.3
	Max	68.9	68.6
	Avg.	68.6	68.4
Weekend Only	**Min**	63.5	63.1
	Max	66.4	65.9
	Avg.	65.0	64.4
Full Week	**Min**	63.1	62.6
	Max	68.9	68.6
	Avg.	66.5	66.1

Noise Measurement Data, dBA - LT03-4, Harbor Club San Diego

Date	Time	Leq	Lmax	L02	L08	L25	L50	L90	L99	Lmin
Thu-10/20/16	11:00:00 AM	62.7	87.1	71.0	65.0	60.0	58.0	54.0	51.0	48.6
Thu-10/20/16	12:00:00 PM	63.5	78.5	73.0	68.0	60.0	56.0	51.0	49.0	48.4
Thu-10/20/16	1:00:00 PM	66.9	83.4	73.0	69.0	66.0	66.0	58.0	52.0	51.0
Thu-10/20/16	2:00:00 PM	59.5	76.8	67.0	62.0	58.0	56.0	53.0	51.0	50.6
Thu-10/20/16	3:00:00 PM	62.2	88.8	67.0	62.0	58.0	56.0	53.0	51.0	50.1
Thu-10/20/16	4:00:00 PM	64.1	87.4	71.0	68.0	62.0	58.0	54.0	51.0	49.5
Thu-10/20/16	5:00:00 PM	63.8	84.7	72.0	65.0	61.0	58.0	54.0	51.0	50.1
Thu-10/20/16	6:00:00 PM	61.8	81.4	70.0	66.0	59.0	56.0	53.0	50.0	49.3
Thu-10/20/16	7:00:00 PM	60.8	79.2	70.0	64.0	59.0	56.0	53.0	51.0	50.6
Thu-10/20/16	8:00:00 PM	58.1	72.0	66.0	60.0	57.0	55.0	52.0	50.0	49.5
Thu-10/20/16	9:00:00 PM	60.2	82.0	68.0	63.0	59.0	56.0	53.0	52.0	51.2
Thu-10/20/16	10:00:00 PM	61.1	79.3	71.0	63.0	58.0	55.0	52.0	50.0	49.4
Thu-10/20/16	11:00:00 PM	55.7	72.3	62.0	58.0	55.0	53.0	50.0	48.0	47.7
Fri-10/21/16	12:00:00 AM	62.1	86.5	70.0	63.0	57.0	53.0	49.0	48.0	47.7
Fri-10/21/16	1:00:00 AM	60.9	79.8	71.0	66.0	57.0	52.0	49.0	48.0	48.1
Fri-10/21/16	2:00:00 AM	60.6	80.9	69.0	62.0	54.0	52.0	50.0	49.0	48.9
Fri-10/21/16	3:00:00 AM	62.9	93.7	58.0	54.0	51.0	50.0	49.0	48.0	48.2
Fri-10/21/16	4:00:00 AM	62.2	88.7	67.0	60.0	56.0	53.0	51.0	50.0	49.6
Fri-10/21/16	5:00:00 AM	58.9	73.0	66.0	61.0	58.0	56.0	53.0	52.0	51.7
Fri-10/21/16	6:00:00 AM	66.2	83.3	72.0	71.0	62.0	57.0	53.0	51.0	51.1
Fri-10/21/16	7:00:00 AM	62.1	84.9	70.0	64.0	60.0	58.0	55.0	53.0	52.9
Fri-10/21/16	8:00:00 AM	62.1	84.3	70.0	65.0	60.0	58.0	54.0	51.0	50.0
Fri-10/21/16	9:00:00 AM	59.3	80.2	66.0	60.0	58.0	56.0	52.0	49.0	47.8
Fri-10/21/16	10:00:00 AM	62.8	77.8	74.0	66.0	60.0	56.0	50.0	49.0	48.2
Fri-10/21/16	11:00:00 AM	64.1	89.5	70.0	64.0	59.0	56.0	52.0	50.0	48.5
Fri-10/21/16	12:00:00 PM	60.3	79.6	69.0	63.0	58.0	56.0	52.0	50.0	49.8
Fri-10/21/16	1:00:00 PM	59.1	74.0	66.0	62.0	58.0	56.0	52.0	50.0	49.5
Fri-10/21/16	2:00:00 PM	60.7	80.6	69.0	63.0	60.0	57.0	53.0	51.0	49.9
Fri-10/21/16	3:00:00 PM	59.6	76.4	66.0	62.0	59.0	57.0	53.0	51.0	50.3
Fri-10/21/16	4:00:00 PM	61.1	78.0	69.0	64.0	60.0	58.0	53.0	51.0	50.3
Fri-10/21/16	5:00:00 PM	60.4	74.5	67.0	63.0	60.0	58.0	54.0	52.0	51.4
Fri-10/21/16	6:00:00 PM	59.8	77.4	68.0	62.0	59.0	57.0	53.0	51.0	51.1
Fri-10/21/16	7:00:00 PM	61.8	81.8	69.0	65.0	60.0	57.0	54.0	52.0	51.3

Noise Measurement Data, dBA - LT03-4, Harbor Club San Diego

Date	Time	Leq	Lmax	L02	L08	L25	L50	L90	L99	Lmin
Fri-10/21/16	8:00:00 PM	61.0	83.0	69.0	63.0	60.0	57.0	54.0	52.0	51.7
Fri-10/21/16	9:00:00 PM	63.1	81.3	71.0	66.0	62.0	58.0	54.0	52.0	51.6
Fri-10/21/16	10:00:00 PM	61.3	90.5	65.0	61.0	59.0	56.0	53.0	51.0	50.4
Fri-10/21/16	11:00:00 PM	61.9	82.6	70.0	64.0	59.0	56.0	52.0	50.0	49.5
Sat-10/22/16	12:00:00 AM	57.1	74.0	65.0	59.0	56.0	53.0	51.0	50.0	49.5
Sat-10/22/16	1:00:00 AM	63.3	81.2	71.0	66.0	60.0	55.0	52.0	50.0	50.4
Sat-10/22/16	2:00:00 AM	58.9	87.4	62.0	58.0	55.0	52.0	50.0	49.0	49.3
Sat-10/22/16	3:00:00 AM	56.1	75.5	66.0	57.0	52.0	50.0	49.0	48.0	48.1
Sat-10/22/16	4:00:00 AM	54.4	72.2	60.0	56.0	54.0	52.0	51.0	50.0	49.5
Sat-10/22/16	5:00:00 AM	56.7	73.0	63.0	59.0	55.0	54.0	51.0	50.0	50.4
Sat-10/22/16	6:00:00 AM	58.7	86.0	64.0	61.0	57.0	55.0	53.0	52.0	51.4
Sat-10/22/16	7:00:00 AM	61.8	87.0	68.0	62.0	59.0	58.0	54.0	52.0	51.4
Sat-10/22/16	8:00:00 AM	58.8	79.4	65.0	61.0	58.0	56.0	52.0	49.0	48.1
Sat-10/22/16	9:00:00 AM	60.2	81.5	69.0	62.0	58.0	55.0	51.0	49.0	48.5
Sat-10/22/16	10:00:00 AM	57.2	75.3	64.0	59.0	56.0	54.0	51.0	49.0	47.5
Sat-10/22/16	11:00:00 AM	58.2	76.3	65.0	61.0	57.0	55.0	51.0	49.0	47.9
Sat-10/22/16	12:00:00 PM	59.0	77.5	66.0	61.0	58.0	55.0	51.0	49.0	48.3
Sat-10/22/16	1:00:00 PM	60.3	83.2	67.0	62.0	58.0	56.0	52.0	50.0	50.0
Sat-10/22/16	2:00:00 PM	59.1	78.1	66.0	61.0	58.0	56.0	52.0	50.0	49.9
Sat-10/22/16	3:00:00 PM	59.1	77.1	67.0	62.0	58.0	56.0	52.0	51.0	49.7
Sat-10/22/16	4:00:00 PM	59.9	84.4	66.0	61.0	58.0	56.0	52.0	50.0	49.3
Sat-10/22/16	5:00:00 PM	59.6	79.8	66.0	62.0	59.0	57.0	53.0	51.0	50.1
Sat-10/22/16	6:00:00 PM	60.2	81.3	67.0	63.0	59.0	57.0	53.0	51.0	50.1
Sat-10/22/16	7:00:00 PM	62.5	85.6	72.0	64.0	59.0	57.0	53.0	51.0	50.2
Sat-10/22/16	8:00:00 PM	62.7	85.2	71.0	63.0	58.0	56.0	53.0	51.0	50.5
Sat-10/22/16	9:00:00 PM	62.4	88.0	70.0	63.0	59.0	57.0	54.0	52.0	51.5
Sat-10/22/16	10:00:00 PM	60.5	86.8	65.0	62.0	59.0	57.0	54.0	52.0	51.1
Sat-10/22/16	11:00:00 PM	59.1	77.8	66.0	61.0	58.0	56.0	53.0	51.0	50.4
Sun-10/23/16	12:00:00 AM	60.0	88.3	66.0	60.0	56.0	54.0	52.0	50.0	49.8
Sun-10/23/16	1:00:00 AM	56.4	73.2	63.0	59.0	56.0	53.0	50.0	49.0	48.2
Sun-10/23/16	2:00:00 AM	54.6	75.8	61.0	57.0	54.0	51.0	49.0	48.0	47.5
Sun-10/23/16	3:00:00 AM	52.1	72.0	59.0	54.0	51.0	49.0	47.0	47.0	47.1
Sun-10/23/16	4:00:00 AM	52.6	71.2	59.0	55.0	52.0	50.0	48.0	47.0	47.3

Noise Measurement Data, dBA - LT03-4, Harbor Club San Diego

Date	Time	Leq	Lmax	L02	L08	L25	L50	L90	L99	Lmin
Sun-10/23/16	5:00:00 AM	53.9	72.7	59.0	55.0	53.0	51.0	49.0	49.0	48.3
Sun-10/23/16	6:00:00 AM	55.6	72.8	62.0	57.0	54.0	53.0	51.0	50.0	49.4
Sun-10/23/16	7:00:00 AM	57.7	79.3	63.0	59.0	56.0	54.0	52.0	50.0	49.9
Sun-10/23/16	8:00:00 AM	57.4	78.9	63.0	59.0	56.0	54.0	51.0	49.0	48.3
Sun-10/23/16	9:00:00 AM	62.2	93.6	64.0	60.0	57.0	54.0	50.0	48.0	47.8
Sun-10/23/16	10:00:00 AM	60.8	86.1	67.0	62.0	58.0	56.0	52.0	49.0	48.5
Sun-10/23/16	11:00:00 AM	58.4	75.0	65.0	61.0	58.0	55.0	51.0	49.0	48.5
Sun-10/23/16	12:00:00 PM	59.7	80.8	66.0	61.0	58.0	56.0	52.0	50.0	48.7
Sun-10/23/16	1:00:00 PM	59.4	78.7	66.0	61.0	58.0	56.0	52.0	49.0	48.4
Sun-10/23/16	2:00:00 PM	64.1	92.1	68.0	62.0	58.0	56.0	53.0	51.0	48.7
Sun-10/23/16	3:00:00 PM	58.9	80.8	66.0	61.0	58.0	56.0	53.0	51.0	50.7
Sun-10/23/16	4:00:00 PM	62.6	92.0	67.0	61.0	58.0	56.0	52.0	50.0	49.6
Sun-10/23/16	5:00:00 PM	58.1	75.1	65.0	60.0	57.0	55.0	52.0	50.0	49.5
Sun-10/23/16	6:00:00 PM	58.7	75.1	67.0	61.0	57.0	55.0	52.0	51.0	50.5
Sun-10/23/16	7:00:00 PM	57.8	79.0	65.0	60.0	57.0	55.0	52.0	51.0	49.8
Sun-10/23/16	8:00:00 PM	57.2	81.4	63.0	59.0	56.0	54.0	50.0	49.0	48.9
Sun-10/23/16	9:00:00 PM	60.3	81.0	70.0	64.0	58.0	54.0	51.0	49.0	48.3
Sun-10/23/16	10:00:00 PM	56.1	73.8	62.0	58.0	55.0	53.0	49.0	48.0	47.5
Sun-10/23/16	11:00:00 PM	55.2	72.2	63.0	58.0	54.0	52.0	48.0	47.0	47.1
Mon-10/24/16	12:00:00 AM	58.6	81.2	69.0	59.0	53.0	51.0	48.0	47.0	46.7
Mon-10/24/16	1:00:00 AM	51.7	68.4	59.0	53.0	50.0	48.0	47.0	46.0	46.0
Mon-10/24/16	2:00:00 AM	54.9	68.8	59.0	58.0	57.0	51.0	47.0	47.0	46.6
Mon-10/24/16	3:00:00 AM	55.0	68.5	59.0	58.0	57.0	51.0	48.0	47.0	46.5
Mon-10/24/16	4:00:00 AM	54.0	67.8	62.0	57.0	53.0	50.0	48.0	46.0	46.3
Mon-10/24/16	5:00:00 AM	56.2	73.3	64.0	59.0	55.0	53.0	49.0	47.0	47.1
Mon-10/24/16	6:00:00 AM	58.3	73.6	65.0	61.0	58.0	55.0	50.0	48.0	47.9
Mon-10/24/16	7:00:00 AM	68.4	85.6	79.0	71.0	63.0	59.0	53.0	51.0	50.3
Mon-10/24/16	8:00:00 AM	65.6	83.6	73.0	69.0	66.0	61.0	55.0	51.0	50.0
Mon-10/24/16	9:00:00 AM	64.0	80.3	71.0	68.0	64.0	60.0	54.0	50.0	49.5
Mon-10/24/16	10:00:00 AM	61.3	80.6	70.0	63.0	58.0	56.0	52.0	50.0	49.3
Mon-10/24/16	11:00:00 AM	62.0	80.3	70.0	66.0	61.0	57.0	53.0	51.0	49.9

Title: Table 8. Port Master Plan Update - Long-Term Noise Measurement Analysis.
Site ID: LT03-5
Location: Embarcadero Marina Park South
Start Date: 10/20/2016
End Date: 10/24/2016

		Noise Data Calculations, dBA								
Time of Day	**Value**	**Leq**	**Lmax**	**L02**	**L08**	**L25**	**L50**	**L90**	**L99**	**Lmin**
Day (7 A.M. - 7 P.M.)	**Min**	53.2	60.9	56.0	55.0	52.0	51.0	49.0	48.0	47.4
	Max	72.0	88.0	78.0	76.0	73.0	68.0	62.0	59.0	57.5
	Avg.	60.7	-	-	-	-	-	-	-	-
Eve (7 P.M. - 10 P.M.)	**Min**	52.9	63.2	57.0	54.0	52.0	51.0	49.0	48.0	48.4
	Max	57.9	76.6	66.0	61.0	57.0	55.0	53.0	53.0	52.8
	Avg.	55.7	-	-	-	-	-	-	-	-
Night (10 P.M. - 7 A.M.)	**Min**	49.0	55.5	51.0	50.0	49.0	48.0	47.0	46.0	46.1
	Max	62.9	80.8	70.0	67.0	63.0	58.0	56.0	55.0	55.1
	Avg.	55.5	-	-	-	-	-	-	-	-
Day (7 A.M. - 10 P.M.)	**Min**	52.9	60.9	56.0	54.0	52.0	51.0	49.0	48.0	47.4
	Max	72.0	88.0	78.0	76.0	73.0	68.0	62.0	59.0	57.5
	Avg.	60.1	-	-	-	-	-	-	-	-
Night (10 P.M. - 7 A.M.)	**Min**	49.0	55.5	51.0	50.0	49.0	48.0	47.0	46.0	46.1
	Max	62.9	80.8	70.0	67.0	63.0	58.0	56.0	55.0	55.1
	Avg.	55.5	-	-	-	-	-	-	-	-

Time of Week	**Value**	**CNEL, dBA**	**Ldn, dBA**
Weekday Only	**Min**	63.2	62.9
	Max	63.5	63.2
	Avg.	63.4	63.1
Weekend Only	**Min**	60.0	59.7
	Max	65.9	65.9
	Avg.	62.7	62.6
Full Week	**Min**	59.6	59.3
	Max	66.2	66.0
	Avg.	63.6	63.4

Noise Measurement Data, dBA - LT03-5, Embarcadero Marina Park South

Date	Time	Leq	Lmax	L02	L08	L25	L50	L90	L99	Lmin
Thu-10/20/16	11:00:00 AM	57.0	74.7	62.0	59.0	56.0	54.0	51.0	49.0	48.6
Thu-10/20/16	12:00:00 PM	56.1	77.9	60.0	57.0	54.0	52.0	50.0	49.0	47.9
Thu-10/20/16	1:00:00 PM	57.1	77.2	64.0	58.0	55.0	53.0	51.0	50.0	49.9
Thu-10/20/16	2:00:00 PM	58.5	79.6	65.0	60.0	56.0	54.0	52.0	50.0	50.0
Thu-10/20/16	3:00:00 PM	59.9	77.9	69.0	60.0	56.0	54.0	52.0	51.0	50.4
Thu-10/20/16	4:00:00 PM	57.2	77.0	65.0	58.0	54.0	52.0	50.0	49.0	48.8
Thu-10/20/16	5:00:00 PM	61.1	78.9	72.0	61.0	56.0	53.0	50.0	49.0	48.7
Thu-10/20/16	6:00:00 PM	55.0	73.7	60.0	57.0	53.0	52.0	50.0	49.0	48.4
Thu-10/20/16	7:00:00 PM	57.6	75.1	65.0	60.0	57.0	55.0	53.0	52.0	51.4
Thu-10/20/16	8:00:00 PM	56.9	72.4	62.0	58.0	56.0	55.0	53.0	52.0	51.8
Thu-10/20/16	9:00:00 PM	57.4	76.6	61.0	58.0	56.0	55.0	53.0	52.0	51.7
Thu-10/20/16	10:00:00 PM	57.1	75.5	62.0	58.0	55.0	54.0	52.0	52.0	51.7
Thu-10/20/16	11:00:00 PM	55.3	75.5	59.0	54.0	53.0	52.0	51.0	50.0	49.4
Fri-10/21/16	12:00:00 AM	52.1	62.5	54.0	53.0	52.0	51.0	51.0	50.0	50.1
Fri-10/21/16	1:00:00 AM	53.5	69.1	57.0	54.0	53.0	52.0	50.0	50.0	49.8
Fri-10/21/16	2:00:00 AM	56.7	75.9	62.0	57.0	55.0	54.0	52.0	51.0	51.3
Fri-10/21/16	3:00:00 AM	54.6	65.4	57.0	56.0	55.0	54.0	53.0	51.0	51.4
Fri-10/21/16	4:00:00 AM	56.5	63.8	58.0	57.0	56.0	56.0	55.0	54.0	53.8
Fri-10/21/16	5:00:00 AM	57.5	65.3	60.0	59.0	58.0	57.0	56.0	55.0	55.0
Fri-10/21/16	6:00:00 AM	59.5	76.6	63.0	60.0	59.0	58.0	56.0	55.0	55.1
Fri-10/21/16	7:00:00 AM	59.8	73.3	63.0	61.0	60.0	59.0	57.0	56.0	55.6
Fri-10/21/16	8:00:00 AM	60.0	88.0	63.0	59.0	58.0	57.0	55.0	54.0	53.3
Fri-10/21/16	9:00:00 AM	58.2	69.2	62.0	60.0	58.0	57.0	55.0	54.0	53.4
Fri-10/21/16	10:00:00 AM	55.9	72.3	63.0	57.0	54.0	53.0	52.0	51.0	50.3
Fri-10/21/16	11:00:00 AM	56.5	75.7	65.0	56.0	53.0	52.0	50.0	49.0	49.2
Fri-10/21/16	12:00:00 PM	58.6	80.7	65.0	57.0	54.0	53.0	50.0	49.0	48.6
Fri-10/21/16	1:00:00 PM	60.1	79.9	67.0	59.0	56.0	54.0	52.0	51.0	51.0
Fri-10/21/16	2:00:00 PM	60.6	82.3	68.0	58.0	54.0	52.0	51.0	49.0	49.0
Fri-10/21/16	3:00:00 PM	55.8	78.0	60.0	56.0	52.0	51.0	49.0	49.0	48.6
Fri-10/21/16	4:00:00 PM	57.7	80.1	65.0	57.0	53.0	51.0	49.0	48.0	48.5
Fri-10/21/16	5:00:00 PM	58.3	79.6	66.0	58.0	55.0	53.0	50.0	50.0	49.6
Fri-10/21/16	6:00:00 PM	55.9	70.7	62.0	59.0	56.0	54.0	51.0	50.0	50.3
Fri-10/21/16	7:00:00 PM	55.6	67.3	60.0	57.0	55.0	54.0	53.0	52.0	51.4

Noise Measurement Data, dBA - LT03-5, Embarcadero Marina Park South

Date	Time	Leq	Lmax	L02	L08	L25	L50	L90	L99	Lmin
Fri-10/21/16	8:00:00 PM	57.9	70.6	66.0	61.0	56.0	54.0	53.0	52.0	51.9
Fri-10/21/16	9:00:00 PM	57.1	72.9	63.0	60.0	56.0	54.0	53.0	52.0	52.2
Fri-10/21/16	10:00:00 PM	55.0	68.1	61.0	57.0	55.0	53.0	52.0	51.0	51.2
Fri-10/21/16	11:00:00 PM	54.6	67.7	58.0	55.0	54.0	53.0	52.0	51.0	51.2
Sat-10/22/16	12:00:00 AM	54.0	72.3	56.0	55.0	54.0	53.0	52.0	51.0	51.4
Sat-10/22/16	1:00:00 AM	57.9	74.7	63.0	59.0	57.0	56.0	53.0	52.0	52.0
Sat-10/22/16	2:00:00 AM	55.1	65.9	59.0	57.0	55.0	53.0	52.0	51.0	50.9
Sat-10/22/16	3:00:00 AM	56.1	80.8	57.0	54.0	53.0	53.0	52.0	51.0	50.6
Sat-10/22/16	4:00:00 AM	58.3	76.5	62.0	60.0	58.0	57.0	55.0	54.0	53.5
Sat-10/22/16	5:00:00 AM	57.8	77.0	60.0	58.0	57.0	56.0	55.0	54.0	53.8
Sat-10/22/16	6:00:00 AM	62.9	79.5	70.0	67.0	63.0	58.0	56.0	55.0	54.7
Sat-10/22/16	7:00:00 AM	72.0	86.2	78.0	76.0	73.0	68.0	62.0	59.0	57.5
Sat-10/22/16	8:00:00 AM	70.1	84.0	77.0	74.0	71.0	66.0	61.0	58.0	56.7
Sat-10/22/16	9:00:00 AM	67.2	80.5	74.0	72.0	66.0	63.0	57.0	56.0	55.1
Sat-10/22/16	10:00:00 AM	66.1	79.1	75.0	72.0	66.0	58.0	53.0	51.0	50.4
Sat-10/22/16	11:00:00 AM	54.3	72.5	60.0	57.0	54.0	52.0	49.0	48.0	47.4
Sat-10/22/16	12:00:00 PM	55.5	75.7	63.0	59.0	54.0	52.0	50.0	48.0	48.0
Sat-10/22/16	1:00:00 PM	56.5	75.8	63.0	59.0	56.0	53.0	51.0	50.0	49.4
Sat-10/22/16	2:00:00 PM	56.9	80.6	64.0	59.0	55.0	53.0	50.0	49.0	49.0
Sat-10/22/16	3:00:00 PM	59.0	79.8	64.0	60.0	56.0	54.0	50.0	49.0	48.9
Sat-10/22/16	4:00:00 PM	55.8	70.4	64.0	59.0	55.0	52.0	50.0	49.0	49.3
Sat-10/22/16	5:00:00 PM	54.3	67.5	60.0	57.0	54.0	52.0	50.0	50.0	49.2
Sat-10/22/16	6:00:00 PM	53.6	66.7	60.0	56.0	53.0	51.0	50.0	49.0	49.3
Sat-10/22/16	7:00:00 PM	53.4	70.6	57.0	55.0	53.0	52.0	50.0	49.0	49.0
Sat-10/22/16	8:00:00 PM	52.9	63.2	57.0	54.0	53.0	52.0	50.0	49.0	49.3
Sat-10/22/16	9:00:00 PM	53.4	63.3	57.0	54.0	53.0	52.0	51.0	50.0	50.1
Sat-10/22/16	10:00:00 PM	54.6	67.3	59.0	56.0	54.0	53.0	52.0	51.0	51.2
Sat-10/22/16	11:00:00 PM	54.0	62.3	56.0	55.0	54.0	53.0	52.0	51.0	50.6
Sun-10/23/16	12:00:00 AM	51.8	68.4	56.0	53.0	51.0	51.0	50.0	49.0	48.9
Sun-10/23/16	1:00:00 AM	50.8	58.4	54.0	52.0	51.0	49.0	48.0	47.0	47.0
Sun-10/23/16	2:00:00 AM	50.6	55.5	53.0	52.0	51.0	50.0	48.0	47.0	46.1
Sun-10/23/16	3:00:00 AM	51.4	57.8	53.0	52.0	51.0	51.0	50.0	49.0	48.6
Sun-10/23/16	4:00:00 AM	51.3	57.6	53.0	52.0	51.0	51.0	50.0	49.0	48.9

Noise Measurement Data, dBA - LT03-5, Embarcadero Marina Park South

Date	Time	Leq	Lmax	L02	L08	L25	L50	L90	L99	Lmin
Sun-10/23/16	5:00:00 AM	55.7	63.6	59.0	58.0	56.0	54.0	52.0	51.0	51.2
Sun-10/23/16	6:00:00 AM	55.7	68.7	59.0	58.0	56.0	54.0	53.0	52.0	51.8
Sun-10/23/16	7:00:00 AM	54.7	65.4	58.0	56.0	55.0	54.0	53.0	52.0	51.6
Sun-10/23/16	8:00:00 AM	55.6	64.5	59.0	57.0	56.0	55.0	52.0	51.0	50.5
Sun-10/23/16	9:00:00 AM	53.9	63.5	60.0	56.0	53.0	52.0	50.0	50.0	49.7
Sun-10/23/16	10:00:00 AM	54.6	69.7	62.0	58.0	53.0	51.0	49.0	48.0	47.6
Sun-10/23/16	11:00:00 AM	53.8	66.9	60.0	56.0	53.0	52.0	50.0	49.0	48.5
Sun-10/23/16	12:00:00 PM	56.2	74.4	62.0	58.0	55.0	53.0	51.0	50.0	50.2
Sun-10/23/16	1:00:00 PM	54.1	66.5	60.0	56.0	53.0	52.0	50.0	50.0	49.3
Sun-10/23/16	2:00:00 PM	54.2	68.8	60.0	57.0	54.0	52.0	50.0	50.0	49.4
Sun-10/23/16	3:00:00 PM	55.2	65.8	60.0	58.0	55.0	54.0	51.0	50.0	49.7
Sun-10/23/16	4:00:00 PM	55.7	68.3	62.0	58.0	55.0	54.0	51.0	51.0	50.4
Sun-10/23/16	5:00:00 PM	54.8	66.1	59.0	57.0	55.0	53.0	51.0	50.0	49.4
Sun-10/23/16	6:00:00 PM	56.8	68.3	60.0	58.0	57.0	56.0	54.0	54.0	53.5
Sun-10/23/16	7:00:00 PM	55.4	68.2	59.0	57.0	55.0	54.0	53.0	53.0	52.8
Sun-10/23/16	8:00:00 PM	53.1	66.4	57.0	55.0	53.0	52.0	51.0	50.0	49.3
Sun-10/23/16	9:00:00 PM	53.0	66.0	59.0	56.0	52.0	51.0	49.0	48.0	48.4
Sun-10/23/16	10:00:00 PM	53.7	65.6	58.0	56.0	54.0	52.0	50.0	48.0	47.8
Sun-10/23/16	11:00:00 PM	52.1	68.8	57.0	54.0	52.0	50.0	48.0	47.0	47.0
Mon-10/24/16	12:00:00 AM	49.4	59.6	54.0	51.0	49.0	48.0	47.0	46.0	46.1
Mon-10/24/16	1:00:00 AM	49.0	59.2	51.0	50.0	49.0	48.0	47.0	46.0	46.4
Mon-10/24/16	2:00:00 AM	51.0	60.7	54.0	52.0	51.0	50.0	48.0	46.0	46.3
Mon-10/24/16	3:00:00 AM	54.1	75.7	62.0	55.0	52.0	50.0	48.0	47.0	47.1
Mon-10/24/16	4:00:00 AM	52.6	63.3	57.0	54.0	52.0	51.0	50.0	49.0	48.9
Mon-10/24/16	5:00:00 AM	52.7	62.6	55.0	53.0	52.0	52.0	51.0	51.0	50.6
Mon-10/24/16	6:00:00 AM	54.3	71.2	59.0	56.0	55.0	53.0	51.0	50.0	50.4
Mon-10/24/16	7:00:00 AM	55.9	68.8	62.0	58.0	55.0	54.0	53.0	52.0	51.5
Mon-10/24/16	8:00:00 AM	56.7	69.2	62.0	58.0	56.0	55.0	53.0	52.0	51.8
Mon-10/24/16	9:00:00 AM	58.3	79.6	59.0	57.0	55.0	54.0	53.0	52.0	52.1
Mon-10/24/16	10:00:00 AM	55.1	63.6	57.0	56.0	55.0	54.0	53.0	52.0	51.7
Mon-10/24/16	11:00:00 AM	53.2	60.9	56.0	55.0	54.0	52.0	50.0	49.0	49.0

Title: Table 9. Port Master Plan Update - Long-Term Noise Measurement Analysis.
Site ID: LT04-1
Location: Cesar Chavez Park
Start Date: 2/18/2020
End Date: 2/20/2020

Noise Data Calculations, dBA

Time of Day	Value	Leq	Lmax	L02	L08	L25	L50	L90	L99	Lmin
Day (7 A.M. - 7 P.M.)	**Min**	61.5	73.3	64.8	62.9	61.1	60.2	59.0	58.3	57.6
	Max	78.0	95.1	88.7	82.3	73.9	69.2	64.4	63.4	62.6
	Avg.	68.3	-	-	-	-	-	-	-	-
Eve (7 P.M. - 10 P.M.)	**Min**	61.1	70.6	63.4	61.6	60.3	59.8	58.9	58.1	57.6
	Max	64.4	83.3	72.2	63.3	62.7	62.2	61.4	60.9	60.4
	Avg.	62.7	-	-	-	-	-	-	-	-
Night (10 P.M. - 7 A.M.)	**Min**	59.3	67.5	61.4	60.4	59.8	59.0	58.0	57.1	56.6
	Max	65.2	87.4	67.9	66.7	65.8	64.9	63.5	62.9	62.4
	Avg.	63.2	-	-	-	-	-	-	-	-
Day (7 A.M. - 10 P.M.)	**Min**	61.1	70.6	63.4	61.6	60.3	59.8	58.9	58.1	57.6
	Max	78.0	95.1	88.7	82.3	73.9	69.2	64.4	63.4	62.6
	Avg.	67.6	-	-	-	-	-	-	-	-
Night (10 P.M. - 7 A.M.)	**Min**	59.3	67.5	61.4	60.4	59.8	59.0	58.0	57.1	56.6
	Max	65.2	87.4	67.9	66.7	65.8	64.9	63.5	62.9	62.4
	Avg.	63.2	-	-	-	-	-	-	-	-

Time of Week	Value	CNEL, dBA	Ldn, dBA
Weekday Only	**Min**	70.6	70.5
	Max	71.9	71.8
	Avg.	71.1	70.9
Weekend Only	**Min**	N/A	N/A
	Max	N/A	N/A
	Avg.	N/A	N/A
Full Week	**Min**	70.6	70.5
	Max	71.9	71.8
	Avg.	71.1	70.9

Noise Measurement Data, dBA - LT04-1, Cesar Chavez Park

Date	Time	Leq	Lmax	L02	L08	L25	L50	L90	L99	Lmin
Tue-02/18/20	1:00:00 PM	64.7	84.1	68.1	64.7	63.0	62.2	61.0	60.2	59.4
Tue-02/18/20	2:00:00 PM	65.1	86.9	70.4	64.2	63.1	62.5	61.6	60.8	60.2
Tue-02/18/20	3:00:00 PM	64.8	79.7	72.6	65.4	63.4	62.7	61.5	60.7	59.7
Tue-02/18/20	4:00:00 PM	64.5	83.4	69.2	64.4	63.5	62.8	62.0	61.4	60.8
Tue-02/18/20	5:00:00 PM	66.3	85.0	71.8	67.9	64.5	63.3	62.2	61.5	60.8
Tue-02/18/20	6:00:00 PM	63.3	77.2	68.1	64.2	63.2	62.5	61.3	60.6	60.0
Tue-02/18/20	7:00:00 PM	64.4	83.3	72.2	61.7	60.9	60.0	58.9	58.1	57.6
Tue-02/18/20	8:00:00 PM	61.1	76.6	63.5	62.9	61.9	60.4	59.1	58.4	57.9
Tue-02/18/20	9:00:00 PM	62.4	70.6	64.4	63.3	62.7	62.2	61.4	60.9	60.4
Tue-02/18/20	10:00:00 PM	62.1	76.9	66.3	63.7	62.5	61.6	60.0	58.7	58.1
Tue-02/18/20	11:00:00 PM	62.7	67.5	65.1	64.3	63.4	62.6	60.7	59.4	59.0
Wed-02/19/20	12:00:00 AM	60.9	74.7	64.5	62.0	61.1	60.3	58.4	57.1	56.6
Wed-02/19/20	1:00:00 AM	59.3	70.0	61.4	60.4	59.8	59.0	58.0	57.6	57.3
Wed-02/19/20	2:00:00 AM	62.8	87.4	64.7	61.8	60.7	60.2	59.0	57.8	57.2
Wed-02/19/20	3:00:00 AM	61.7	77.4	64.7	62.7	61.8	61.2	60.1	59.2	58.5
Wed-02/19/20	4:00:00 AM	60.9	67.5	63.3	62.3	61.4	60.9	59.1	58.1	57.4
Wed-02/19/20	5:00:00 AM	61.9	69.5	63.9	63.1	62.3	61.5	60.6	60.2	59.7
Wed-02/19/20	6:00:00 AM	65.2	81.4	67.2	66.3	65.7	64.9	63.5	62.7	62.4
Wed-02/19/20	7:00:00 AM	74.8	90.9	86.2	77.9	71.1	65.4	63.6	62.6	62.0
Wed-02/19/20	8:00:00 AM	78.0	95.1	88.7	82.3	73.9	69.2	64.4	63.4	62.6
Wed-02/19/20	9:00:00 AM	65.7	79.5	73.0	69.4	65.4	63.3	60.4	59.4	58.7
Wed-02/19/20	10:00:00 AM	63.5	76.9	71.6	64.5	62.9	62.0	60.4	59.4	58.9
Wed-02/19/20	11:00:00 AM	66.8	89.0	73.4	64.3	62.0	61.1	59.9	59.3	58.8
Wed-02/19/20	12:00:00 PM	64.6	82.3	73.8	62.9	61.1	60.6	59.7	59.1	58.7
Wed-02/19/20	1:00:00 PM	65.7	86.8	73.7	64.0	61.6	60.6	59.5	58.9	58.2
Wed-02/19/20	2:00:00 PM	64.5	81.9	73.7	63.7	61.6	60.8	59.8	59.1	58.7
Wed-02/19/20	3:00:00 PM	63.2	81.5	71.5	64.6	61.8	60.7	59.3	58.7	58.1
Wed-02/19/20	4:00:00 PM	61.8	81.0	67.7	62.9	61.1	60.2	59.0	58.3	57.6
Wed-02/19/20	5:00:00 PM	63.9	80.4	72.4	64.7	61.5	60.6	59.6	59.1	58.7
Wed-02/19/20	6:00:00 PM	61.5	73.3	64.8	63.0	61.5	60.9	59.9	59.3	58.6
Wed-02/19/20	7:00:00 PM	62.6	82.4	67.8	61.6	60.3	59.8	59.1	58.5	57.9
Wed-02/19/20	8:00:00 PM	61.8	75.1	63.4	62.6	61.9	61.4	60.4	59.5	59.2
Wed-02/19/20	9:00:00 PM	63.1	81.2	64.9	62.7	62.1	61.7	61.0	60.5	60.2

Noise Measurement Data, dBA - LT04-1, Cesar Chavez Park

Date	Time	Leq	Lmax	L02	L08	L25	L50	L90	L99	Lmin
Wed-02/19/20	10:00:00 PM	64.1	86.2	64.7	63.2	62.6	62.1	61.4	60.8	60.3
Wed-02/19/20	11:00:00 PM	62.4	68.7	64.7	63.8	62.7	62.2	61.1	60.5	60.0
Thu-02/20/20	12:00:00 AM	63.9	72.4	65.2	64.6	64.1	63.7	63.1	62.7	62.3
Thu-02/20/20	1:00:00 AM	63.0	70.3	65.2	64.3	63.6	62.9	61.3	60.4	59.8
Thu-02/20/20	2:00:00 AM	64.5	75.2	67.2	66.2	65.1	64.3	62.5	61.9	61.2
Thu-02/20/20	3:00:00 AM	65.2	77.8	67.9	66.7	65.8	64.9	63.1	62.5	61.9
Thu-02/20/20	4:00:00 AM	63.9	77.8	66.3	65.2	64.1	63.5	62.4	61.7	61.3
Thu-02/20/20	5:00:00 AM	64.2	68.7	65.9	65.4	64.8	64.1	62.6	61.7	61.3
Thu-02/20/20	6:00:00 AM	64.7	80.6	67.1	66.0	64.8	64.2	63.5	62.9	62.3
Thu-02/20/20	7:00:00 AM	64.6	76.6	68.9	66.4	65.0	63.7	62.1	61.6	61.0
Thu-02/20/20	8:00:00 AM	64.4	77.7	72.2	68.0	62.9	62.0	61.0	60.5	59.9
Thu-02/20/20	9:00:00 AM	67.4	81.0	74.5	70.9	68.2	64.6	60.6	59.7	58.9
Thu-02/20/20	10:00:00 AM	62.6	80.4	70.6	63.0	61.6	60.8	59.7	59.1	58.6
Thu-02/20/20	11:00:00 AM	64.1	81.6	72.5	65.3	62.2	61.2	60.2	59.6	58.7

Title: Table 10. Port Master Plan Update - Long-Term Noise Measurement Analysis.
Site ID: LT04-2
Location: Mercado Apartments
Start Date: 1/7/2019
End Date: 1/9/2019

Noise Data Calculations, dBA

Time of Day	Value	Leq	Lmax	L02	L08	L25	L50	L90	L99	Lmin
Day (7 A.M. - 7 P.M.)	**Min**	59.1	69.3	62.5	60.5	59.5	58.5	56.5	55.5	55.0
	Max	65.7	82.9	74.0	68.5	66.0	64.5	62.0	61.0	60.5
	Avg.	62.7	-	-	-	-	-	-	-	-
Eve (7 P.M. - 10 P.M.)	**Min**	59.0	70.5	63.0	60.5	58.5	57.5	56.5	55.5	54.5
	Max	62.9	78.9	71.0	64.0	63.0	62.5	61.0	60.5	60.1
	Avg.	61.7	-	-	-	-	-	-	-	-
Night (10 P.M. - 7 A.M.)	**Min**	56.6	65.1	60.0	57.5	56.5	56.0	55.0	54.0	53.7
	Max	66.1	81.2	72.0	67.5	66.5	65.5	64.0	63.5	62.9
	Avg.	61.9	-	-	-	-	-	-	-	-
Day (7 A.M. - 10 P.M.)	**Min**	59.0	69.3	62.5	60.5	58.5	57.5	56.5	55.5	54.5
	Max	65.7	82.9	74.0	68.5	66.0	64.5	62.0	61.0	60.5
	Avg.	62.5	-	-	-	-	-	-	-	-
Night (10 P.M. - 7 A.M.)	**Min**	56.6	65.1	60.0	57.5	56.5	56.0	55.0	54.0	53.7
	Max	66.1	81.2	72.0	67.5	66.5	65.5	64.0	63.5	62.9
	Avg.	61.9	-	-	-	-	-	-	-	-

Time of Week	Value	CNEL, dBA	Ldn, dBA
Weekday Only	**Min**	68.5	68.2
	Max	69.4	69.2
	Avg.	69.0	68.7
Weekend Only	**Min**	N/A	N/A
	Max	N/A	N/A
	Avg.	N/A	N/A
Full Week	**Min**	68.5	68.2
	Max	69.4	69.2
	Avg.	69.0	68.7

Noise Measurement Data, dBA - LT04-2, Mercado Apartments

Date	Time	Leq	Lmax	L02	L08	L25	L50	L90	L99	Lmin
Mon-01/07/19	2:00:00 PM	63.4	77.5	67.5	65.5	63.0	62.0	61.0	59.5	58.2
Mon-01/07/19	3:00:00 PM	61.2	76.1	65.0	62.5	61.0	60.5	59.0	58.0	57.5
Mon-01/07/19	4:00:00 PM	63.2	72.0	66.5	65.5	64.0	62.5	59.5	58.5	58.0
Mon-01/07/19	5:00:00 PM	64.2	74.3	66.5	65.5	64.5	64.0	62.0	61.0	60.5
Mon-01/07/19	6:00:00 PM	61.8	75.8	67.0	63.5	62.0	61.0	58.5	56.5	56.1
Mon-01/07/19	7:00:00 PM	59.9	74.4	68.0	61.0	58.5	57.5	56.5	55.5	54.5
Mon-01/07/19	8:00:00 PM	59.0	72.3	63.0	60.5	59.5	58.0	56.5	56.0	55.2
Mon-01/07/19	9:00:00 PM	61.9	70.5	64.5	63.5	62.0	61.5	60.0	58.0	57.2
Mon-01/07/19	10:00:00 PM	63.2	74.2	68.0	64.5	63.0	62.5	61.0	58.0	57.1
Mon-01/07/19	11:00:00 PM	57.7	65.1	60.5	59.0	58.0	57.0	56.0	54.5	54.3
Tue-01/08/19	12:00:00 AM	56.6	67.2	60.5	57.5	56.5	56.0	55.0	54.0	53.7
Tue-01/08/19	1:00:00 AM	59.2	80.0	66.0	59.5	57.5	56.5	55.0	54.5	54.1
Tue-01/08/19	2:00:00 AM	57.8	70.5	60.0	59.0	58.0	57.5	55.5	55.0	54.7
Tue-01/08/19	3:00:00 AM	61.2	80.3	66.0	61.5	60.0	59.0	58.0	57.0	56.6
Tue-01/08/19	4:00:00 AM	62.0	72.1	64.5	63.5	62.5	61.5	60.0	58.5	58.2
Tue-01/08/19	5:00:00 AM	65.5	81.2	71.5	66.5	65.0	64.0	62.5	61.5	60.9
Tue-01/08/19	6:00:00 AM	66.1	77.6	69.0	67.5	66.5	65.5	64.0	63.5	62.9
Tue-01/08/19	7:00:00 AM	65.7	81.1	70.5	67.5	66.0	64.5	61.5	60.0	59.1
Tue-01/08/19	8:00:00 AM	60.8	72.0	63.5	62.5	61.0	60.0	58.5	57.5	56.7
Tue-01/08/19	9:00:00 AM	61.4	75.2	64.0	62.5	61.0	60.5	59.0	58.0	57.5
Tue-01/08/19	10:00:00 AM	62.2	78.5	65.5	63.5	62.0	61.0	59.5	59.0	58.2
Tue-01/08/19	11:00:00 AM	62.4	72.6	66.5	64.0	62.5	61.5	60.0	59.0	58.2
Tue-01/08/19	12:00:00 PM	62.4	71.9	65.5	64.0	62.5	61.5	60.5	59.5	59.1
Tue-01/08/19	1:00:00 PM	62.6	72.4	67.0	64.5	62.5	61.5	60.5	59.5	58.8
Tue-01/08/19	2:00:00 PM	61.9	69.6	65.5	63.5	62.0	61.5	60.0	59.5	58.7
Tue-01/08/19	3:00:00 PM	65.1	78.4	74.0	68.5	63.0	61.5	60.0	59.0	57.9
Tue-01/08/19	4:00:00 PM	62.5	77.5	67.5	64.0	62.5	61.0	59.0	58.0	57.2
Tue-01/08/19	5:00:00 PM	63.2	77.9	68.0	64.5	63.5	62.5	60.5	59.5	59.0
Tue-01/08/19	6:00:00 PM	62.8	79.4	66.5	64.5	63.0	62.0	59.0	57.5	57.4
Tue-01/08/19	7:00:00 PM	62.6	77.4	71.0	63.0	61.5	60.5	59.0	58.5	57.9
Tue-01/08/19	8:00:00 PM	62.7	78.9	65.5	63.5	63.0	62.0	61.0	60.0	59.3
Tue-01/08/19	9:00:00 PM	62.9	77.2	65.5	64.0	63.0	62.5	61.0	60.5	60.1
Tue-01/08/19	10:00:00 PM	64.9	76.4	68.5	67.5	66.0	64.0	61.5	61.0	60.3

Noise Measurement Data, dBA - LT04-2, Mercado Apartments

Date	Time	Leq	Lmax	L02	L08	L25	L50	L90	L99	Lmin
Tue-01/08/19	11:00:00 PM	60.0	70.5	63.0	61.5	60.5	59.5	58.0	56.5	55.8
Wed-01/09/19	12:00:00 AM	59.2	67.8	61.0	60.5	59.5	59.0	56.5	56.0	55.7
Wed-01/09/19	1:00:00 AM	58.7	66.1	61.0	60.0	59.0	58.0	57.0	56.5	56.3
Wed-01/09/19	2:00:00 AM	57.0	70.2	60.0	58.0	57.5	56.5	55.0	54.0	53.9
Wed-01/09/19	3:00:00 AM	58.3	66.5	61.0	60.0	59.0	58.0	55.5	54.5	54.2
Wed-01/09/19	4:00:00 AM	59.6	74.6	62.5	61.0	59.5	59.0	58.0	57.5	57.1
Wed-01/09/19	5:00:00 AM	64.5	80.2	72.0	64.5	63.0	62.0	60.5	58.5	57.3
Wed-01/09/19	6:00:00 AM	63.9	71.9	67.5	66.5	65.0	62.5	61.0	60.0	59.1
Wed-01/09/19	7:00:00 AM	61.0	73.4	65.0	63.5	61.5	60.0	57.0	56.0	55.3
Wed-01/09/19	8:00:00 AM	59.1	69.3	62.5	60.5	59.5	58.5	56.5	55.5	55.0
Wed-01/09/19	9:00:00 AM	61.6	82.9	67.0	63.0	61.0	60.0	58.5	57.5	56.9
Wed-01/09/19	10:00:00 AM	63.0	75.2	68.5	66.0	63.0	61.5	59.5	58.5	57.5

Title: Table 11. Port Master Plan Update - Long-Term Noise Measurement Analysis.
Site ID: LT04-3
Location: SFR at 2655 Boston Avenue
Start Date: 1/7/2019
End Date: 1/9/2019

Noise Data Calculations, dBA

Time of Day	Value	Leq	Lmax	L02	L08	L25	L50	L90	Lmin
Day (7 A.M. - 7 P.M.)	**Min**	53.2	67.6	59.5	56.1	52.4	51.0	49.1	47.6
	Max	60.9	88.9	65.5	61.8	59.3	58.0	54.2	52.5
	Avg.	56.5	-	-	-	-	-	-	-
Eve (7 P.M. - 10 P.M.)	**Min**	52.4	65.1	58.3	54.9	51.9	50.9	49.6	48.4
	Max	56.2	76.8	64.2	58.8	55.8	54.6	53.2	51.8
	Avg.	54.4	-	-	-	-	-	-	-
Night (10 P.M. - 7 A.M.)	**Min**	50.4	63.5	54.2	51.7	49.9	48.9	47.4	45.5
	Max	58.6	73.5	63.9	60.4	58.6	57.6	56.3	55.1
	Avg.	54.5	-	-	-	-	-	-	-
Day (7 A.M. - 10 P.M.)	**Min**	52.4	65.1	58.3	54.9	51.9	50.9	49.1	47.6
	Max	60.9	88.9	65.5	61.8	59.3	58.0	54.2	52.5
	Avg.	56.0	-	-	-	-	-	-	-
Night (10 P.M. - 7 A.M.)	**Min**	50.4	63.5	54.2	51.7	49.9	48.9	47.4	45.5
	Max	58.6	73.5	63.9	60.4	58.6	57.6	56.3	55.1
	Avg.	54.5	-	-	-	-	-	-	-

Time of Week	Value	CNEL, dBA	Ldn, dBA
Weekday Only	**Min**	61.0	60.7
	Max	62.0	61.7
	Avg.	61.8	61.5
Weekend Only	**Min**	N/A	N/A
	Max	N/A	N/A
	Avg.	N/A	N/A
Full Week	**Min**	61.0	60.7
	Max	62.0	61.7
	Avg.	61.8	61.5

Noise Measurement Data, dBA - LT04-3, SFR at 2655 Boston Avenue

Date	Time	Leq	Lmax	L02	L08	L25	L50	L90	Lmin
Mon-01/07/19	3:00:00 PM	58.2	83.1	64.0	59.4	56.7	54.7	51.9	49.3
Mon-01/07/19	4:00:00 PM	55.8	70.7	61.8	58.7	55.9	54.2	51.9	50.2
Mon-01/07/19	5:00:00 PM	56.1	67.6	61.8	58.7	56.2	54.9	52.9	51.2
Mon-01/07/19	6:00:00 PM	54.4	71.7	62.1	57.8	53.1	51.6	49.6	47.9
Mon-01/07/19	7:00:00 PM	53.6	70.5	60.6	56.1	52.1	50.9	49.6	48.4
Mon-01/07/19	8:00:00 PM	52.4	66.5	58.3	54.9	51.9	50.9	49.9	48.7
Mon-01/07/19	9:00:00 PM	53.0	65.1	58.3	55.3	53.5	51.8	50.0	48.9
Mon-01/07/19	10:00:00 PM	57.0	73.5	63.4	59.2	56.3	55.3	53.8	51.1
Mon-01/07/19	11:00:00 PM	52.7	64.5	58.4	54.7	52.6	51.5	50.1	48.2
Tue-01/08/19	12:00:00 AM	51.6	71.8	58.0	53.1	50.6	49.5	48.0	46.7
Tue-01/08/19	1:00:00 AM	50.7	70.3	56.4	51.7	49.9	48.9	47.4	45.7
Tue-01/08/19	2:00:00 AM	51.3	67.2	55.3	52.7	51.5	50.4	49.0	47.8
Tue-01/08/19	3:00:00 AM	53.4	72.8	57.9	53.9	52.7	51.9	50.5	49.1
Tue-01/08/19	4:00:00 AM	54.9	66.9	58.8	56.6	55.3	54.2	52.5	50.8
Tue-01/08/19	5:00:00 AM	57.3	70.8	61.1	58.9	57.6	56.8	55.1	53.3
Tue-01/08/19	6:00:00 AM	58.6	72.9	63.9	60.4	58.6	57.6	56.3	55.1
Tue-01/08/19	7:00:00 AM	58.5	74.4	62.3	60.2	58.9	58.0	54.2	52.5
Tue-01/08/19	8:00:00 AM	54.1	67.8	59.5	56.8	54.3	52.8	51.2	49.8
Tue-01/08/19	9:00:00 AM	55.4	73.3	61.6	58.3	55.7	53.4	51.5	49.8
Tue-01/08/19	10:00:00 AM	55.0	68.8	59.9	57.4	55.6	54.0	51.6	49.7
Tue-01/08/19	11:00:00 AM	55.1	74.2	61.5	56.8	54.0	52.2	50.8	48.8
Tue-01/08/19	12:00:00 PM	54.8	75.9	60.7	57.2	54.1	52.3	50.2	48.3
Tue-01/08/19	1:00:00 PM	58.0	80.7	65.5	61.5	56.9	54.4	51.5	49.2
Tue-01/08/19	2:00:00 PM	60.9	88.9	64.1	61.8	59.3	55.8	50.9	48.7
Tue-01/08/19	3:00:00 PM	57.4	77.6	64.8	60.4	57.0	53.9	50.5	47.9
Tue-01/08/19	4:00:00 PM	56.2	77.4	63.9	59.0	54.9	51.7	49.1	47.6
Tue-01/08/19	5:00:00 PM	54.7	69.4	63.0	57.8	54.2	51.9	49.8	47.9
Tue-01/08/19	6:00:00 PM	53.2	70.5	59.7	56.1	52.4	51.0	49.6	48.3
Tue-01/08/19	7:00:00 PM	56.2	76.8	64.2	58.8	54.2	53.0	51.8	50.3
Tue-01/08/19	8:00:00 PM	54.2	72.8	58.8	56.0	54.2	53.2	51.4	49.8
Tue-01/08/19	9:00:00 PM	55.6	70.2	60.2	57.5	55.8	54.6	53.2	51.8
Tue-01/08/19	10:00:00 PM	56.0	66.6	60.3	57.8	56.6	55.5	53.1	51.2
Tue-01/08/19	11:00:00 PM	53.1	70.5	59.2	55.2	52.6	51.3	48.2	46.4

Noise Measurement Data, dBA - LT04-3, SFR at 2655 Boston Avenue

Date	Time	Leq	Lmax	L02	L08	L25	L50	L90	Lmin
Wed-01/09/19	12:00:00 AM	54.0	71.0	58.7	55.3	54.0	52.6	49.4	46.4
Wed-01/09/19	1:00:00 AM	51.0	65.1	56.1	52.6	51.2	49.9	48.2	46.5
Wed-01/09/19	2:00:00 AM	50.4	63.5	56.1	52.2	50.2	49.1	47.6	45.5
Wed-01/09/19	3:00:00 AM	50.5	68.1	54.2	51.8	50.6	49.8	48.0	46.8
Wed-01/09/19	4:00:00 AM	52.7	67.6	58.8	54.3	53.0	51.4	49.5	48.1
Wed-01/09/19	5:00:00 AM	55.9	71.0	61.0	57.9	55.8	54.7	53.2	51.9
Wed-01/09/19	6:00:00 AM	56.2	69.7	61.3	58.2	56.3	55.1	53.8	52.0
Wed-01/09/19	7:00:00 AM	54.5	68.9	59.6	56.7	54.7	53.5	52.0	50.5

Title:	Table 12. Port Master Plan Update - Long-Term Noise Measurement Analysis.
Site ID:	LT08-1
Location:	Imperial Beach Lifeguard Tower
Start Date:	7/5/2016
End Date:	7/6/2016

Noise Data Calculations, dBA

Time of Day	Value	Leq	Lmax	Lmin
Day (7 A.M. - 7 P.M.)	**Min**	64.7	68.5	61.8
	Max	69.1	83.1	64.0
	Avg.	66.5	-	-
Eve (7 P.M. - 10 P.M.)	**Min**	66.1	71.7	58.0
	Max	66.2	71.9	60.2
	Avg.	66.1	-	-
Night (10 P.M. - 7 A.M.)	**Min**	61.5	64.0	58.8
	Max	66.2	72.0	62.2
	Avg.	64.0	-	-
Day (7 A.M. - 10 P.M.)	**Min**	64.7	68.5	58.0
	Max	69.1	83.1	64.0
	Avg.	66.5	-	-
Night (10 P.M. - 7 A.M.)	**Min**	61.5	64.0	58.8
	Max	66.2	72.0	62.2
	Avg.	64.0	-	-

Time of Week	Value	CNEL, dBA	Ldn, dBA
Weekday Only	**Min**	71.3	71.0
	Max	71.5	71.2
	Avg.	71.5	71.1
Weekend Only	**Min**	N/A	N/A
	Max	N/A	N/A
	Avg.	N/A	N/A
Full Week	**Min**	71.3	71.0
	Max	71.5	71.2
	Avg.	71.5	71.1

Noise Measurement Data, dBA - LT08-1, Imperial Beach Lifeguard Tower

Date	Time	Leq	Lmax	Lmin
Tue-07/05/16	12:00:00 AM	66.0	70.7	61.7
Tue-07/05/16	1:00:00 AM	64.9	69.0	61.9
Tue-07/05/16	2:00:00 AM	61.9	64.5	59.8
Tue-07/05/16	3:00:00 AM	61.5	64.0	59.2
Tue-07/05/16	4:00:00 AM	61.6	64.1	59.5
Tue-07/05/16	5:00:00 AM	62.8	66.2	60.5
Tue-07/05/16	6:00:00 AM	64.9	69.7	62.2
Tue-07/05/16	7:00:00 AM	66.8	72.5	64.0
Tue-07/05/16	8:00:00 AM	69.1	83.1	62.5
Tue-07/05/16	9:00:00 AM	66.6	72.1	62.5
Tue-07/05/16	10:00:00 AM	66.7	71.7	62.3
Tue-07/05/16	11:00:00 AM	66.8	72.6	62.7
Tue-07/05/16	12:00:00 PM	66.3	72.3	62.5
Tue-07/05/16	1:00:00 PM	65.9	71.4	62.7
Tue-07/05/16	2:00:00 PM	65.8	72.5	62.8
Tue-07/05/16	3:00:00 PM	65.8	72.3	63.1
Tue-07/05/16	4:00:00 PM	65.6	71.5	62.7
Tue-07/05/16	5:00:00 PM	67.0	78.3	62.5
Tue-07/05/16	6:00:00 PM	66.6	73.1	61.8
Tue-07/05/16	7:00:00 PM	66.2	71.7	60.2
Tue-07/05/16	8:00:00 PM	66.1	71.9	58.9
Tue-07/05/16	9:00:00 PM	66.1	71.8	58.0
Tue-07/05/16	10:00:00 PM	66.2	72.0	58.8
Tue-07/05/16	11:00:00 PM	66.1	71.1	60.7
Wed-07/06/16	12:00:00 AM	65.4	70.8	61.6
Wed-07/06/16	1:00:00 AM	64.4	67.5	61.9
Wed-07/06/16	2:00:00 AM	63.1	65.6	61.0
Wed-07/06/16	3:00:00 AM	62.2	64.9	60.0
Wed-07/06/16	4:00:00 AM	61.9	64.6	59.9
Wed-07/06/16	5:00:00 AM	62.4	65.0	60.4
Wed-07/06/16	6:00:00 AM	63.4	66.0	61.5
Wed-07/06/16	7:00:00 AM	64.7	68.5	62.4
Wed-07/06/16	8:00:00 AM	66.2	78.3	62.2

Title: Table 13. Port Master Plan Update - Long-Term Noise Measurement Analysis.
Site ID: LT09-1
Location: Residential Park on Kingston Court
Start Date: 2/18/2020
End Date: 2/20/2020

Noise Data Calculations, dBA

Time of Day	Value	Leq	Lmax	L02	L08	L25	L50	L90	L99	Lmin
Day (7 A.M. - 7 P.M.)	**Min**	49.1	60.1	55.0	52.0	49.0	45.0	40.0	39.0	37.9
	Max	59.1	82.4	65.0	62.0	58.0	57.0	55.0	53.0	52.9
	Avg.	54.9	-	-	-	-	-	-	-	-
Eve (7 P.M. - 10 P.M.)	**Min**	51.0	64.8	60.0	56.0	47.0	42.0	37.0	36.0	36.0
	Max	56.4	73.7	64.0	61.0	56.0	50.0	45.0	44.0	43.2
	Avg.	53.7	-	-	-	-	-	-	-	-
Night (10 P.M. - 7 A.M.)	**Min**	37.6	47.5	41.0	37.0	36.0	36.0	36.0	36.0	35.9
	Max	51.3	70.8	58.0	57.0	51.0	50.0	48.0	47.0	46.9
	Avg.	46.1	-	-	-	-	-	-	-	-
Day (7 A.M. - 10 P.M.)	**Min**	49.1	60.1	55.0	52.0	47.0	42.0	37.0	36.0	36.0
	Max	59.1	82.4	65.0	62.0	58.0	57.0	55.0	53.0	52.9
	Avg.	54.7	-	-	-	-	-	-	-	-
Night (10 P.M. - 7 A.M.)	**Min**	37.6	47.5	41.0	37.0	36.0	36.0	36.0	36.0	35.9
	Max	51.3	70.8	58.0	57.0	51.0	50.0	48.0	47.0	46.9
	Avg.	46.1	-	-	-	-	-	-	-	-

Time of Week	Value	CNEL, dBA	Ldn, dBA
Weekday Only	**Min**	55.1	54.4
	Max	56.7	55.9
	Avg.	55.9	55.1
Weekend Only	**Min**	N/A	N/A
	Max	N/A	N/A
	Avg.	N/A	N/A
Full Week	**Min**	55.1	54.4
	Max	56.7	55.9
	Avg.	55.9	55.1

Noise Measurement Data, dBA - LT09-1, Residential Park on Kingston Court

Date	Time	Leq	Lmax	L02	L08	L25	L50	L90	L99	Lmin
Tue-02/18/20	12:00:00 PM	54.1	72.6	60.0	56.0	53.0	50.0	48.0	46.0	44.7
Tue-02/18/20	1:00:00 PM	53.7	78.3	59.0	55.0	52.0	50.0	47.0	45.0	44.4
Tue-02/18/20	2:00:00 PM	54.7	74.1	62.0	58.0	54.0	52.0	46.0	43.0	41.9
Tue-02/18/20	3:00:00 PM	55.8	81.1	62.0	58.0	54.0	50.0	45.0	43.0	43.2
Tue-02/18/20	4:00:00 PM	52.3	66.8	62.0	56.0	50.0	46.0	43.0	42.0	42.0
Tue-02/18/20	5:00:00 PM	55.7	69.1	64.0	61.0	54.0	49.0	45.0	43.0	42.5
Tue-02/18/20	6:00:00 PM	52.1	68.4	62.0	56.0	49.0	45.0	43.0	42.0	41.8
Tue-02/18/20	7:00:00 PM	53.2	66.5	61.0	58.0	52.0	47.0	42.0	40.0	39.5
Tue-02/18/20	8:00:00 PM	52.1	67.3	61.0	57.0	51.0	42.0	39.0	37.0	36.0
Tue-02/18/20	9:00:00 PM	51.0	64.8	60.0	56.0	50.0	44.0	37.0	36.0	36.0
Tue-02/18/20	10:00:00 PM	49.2	70.8	58.0	50.0	40.0	37.0	36.0	36.0	35.9
Tue-02/18/20	11:00:00 PM	37.6	53.4	42.0	37.0	36.0	36.0	36.0	36.0	35.9
Wed-02/19/20	12:00:00 AM	50.2	67.4	57.0	57.0	51.0	39.0	36.0	36.0	35.9
Wed-02/19/20	1:00:00 AM	45.1	67.2	57.0	42.0	37.0	36.0	36.0	36.0	35.9
Wed-02/19/20	2:00:00 AM	40.4	50.3	44.0	43.0	41.0	40.0	36.0	36.0	35.9
Wed-02/19/20	3:00:00 AM	41.1	47.5	45.0	43.0	42.0	40.0	37.0	36.0	35.9
Wed-02/19/20	4:00:00 AM	37.7	55.3	41.0	39.0	37.0	37.0	36.0	36.0	35.9
Wed-02/19/20	5:00:00 AM	38.5	49.8	42.0	40.0	39.0	37.0	36.0	36.0	35.9
Wed-02/19/20	6:00:00 AM	46.0	67.3	54.0	51.0	45.0	41.0	38.0	37.0	37.5
Wed-02/19/20	7:00:00 AM	50.9	72.9	58.0	54.0	50.0	46.0	40.0	39.0	37.9
Wed-02/19/20	8:00:00 AM	56.2	72.6	61.0	57.0	56.0	54.0	52.0	47.0	41.9
Wed-02/19/20	9:00:00 AM	55.2	82.4	60.0	57.0	55.0	53.0	44.0	41.0	40.7
Wed-02/19/20	10:00:00 AM	52.2	68.2	59.0	56.0	52.0	49.0	44.0	42.0	41.2
Wed-02/19/20	11:00:00 AM	53.8	70.6	60.0	56.0	54.0	52.0	48.0	45.0	44.0
Wed-02/19/20	12:00:00 PM	54.2	66.3	60.0	56.0	54.0	53.0	51.0	48.0	47.5
Wed-02/19/20	1:00:00 PM	58.0	73.9	64.0	60.0	57.0	56.0	53.0	50.0	48.8
Wed-02/19/20	2:00:00 PM	59.1	78.8	65.0	62.0	58.0	57.0	55.0	53.0	52.9
Wed-02/19/20	3:00:00 PM	56.4	71.4	63.0	59.0	56.0	54.0	51.0	49.0	47.3
Wed-02/19/20	4:00:00 PM	54.3	73.2	63.0	57.0	52.0	49.0	46.0	45.0	44.2
Wed-02/19/20	5:00:00 PM	53.4	67.9	61.0	57.0	53.0	50.0	47.0	46.0	44.8
Wed-02/19/20	6:00:00 PM	49.1	60.1	55.0	52.0	49.0	47.0	45.0	43.0	42.8
Wed-02/19/20	7:00:00 PM	56.4	73.7	64.0	61.0	56.0	50.0	45.0	44.0	43.2
Wed-02/19/20	8:00:00 PM	51.2	65.1	61.0	56.0	47.0	45.0	42.0	41.0	40.0

Noise Measurement Data, dBA - LT09-1, Residential Park on Kingston Court

Date	Time	Leq	Lmax	L02	L08	L25	L50	L90	L99	Lmin
Wed-02/19/20	9:00:00 PM	55.3	68.3	63.0	60.0	55.0	49.0	44.0	42.0	41.7
Wed-02/19/20	10:00:00 PM	48.3	68.7	56.0	49.0	44.0	42.0	40.0	39.0	38.7
Wed-02/19/20	11:00:00 PM	41.2	51.4	45.0	42.0	41.0	40.0	39.0	38.0	38.2
Thu-02/20/20	12:00:00 AM	41.5	57.6	44.0	42.1	41.0	41.0	40.0	39.0	38.8
Thu-02/20/20	1:00:00 AM	41.2	51.5	43.0	42.0	41.0	40.0	40.0	39.0	38.9
Thu-02/20/20	2:00:00 AM	40.9	48.1	43.0	42.0	41.0	40.0	39.0	38.0	38.7
Thu-02/20/20	3:00:00 AM	45.6	57.8	51.0	50.0	45.0	43.0	42.0	41.0	40.5
Thu-02/20/20	4:00:00 AM	47.5	57.9	51.0	50.0	47.0	46.0	45.0	44.0	42.7
Thu-02/20/20	5:00:00 AM	48.8	60.5	52.0	50.0	49.0	48.0	46.0	45.0	44.9
Thu-02/20/20	6:00:00 AM	51.3	59.7	56.0	53.0	51.0	50.0	48.0	47.0	46.9
Thu-02/20/20	7:00:00 AM	53.6	70.2	62.0	55.0	52.0	50.0	48.0	47.0	47.0
Thu-02/20/20	8:00:00 AM	56.3	71.9	64.0	58.0	55.0	53.0	50.0	48.0	47.8
Thu-02/20/20	9:00:00 AM	52.9	68.8	59.0	56.0	53.0	50.0	46.0	45.0	44.7
Thu-02/20/20	10:00:00 AM	56.1	73.0	62.0	59.0	56.0	53.0	51.0	47.0	45.7

Title:	Table 14. Port Master Plan Update - Long-Term Noise Measurement Analysis.
Site ID:	LT10-1
Location:	Coronado Municipal Golf Course
Start Date:	7/5/2016
End Date:	7/6/2016

Noise Data Calculations, dBA

Time of Day	Value	Leq	Lmax
Day (7 A.M. - 7 P.M.)	**Min**	49.2	59.0
	Max	60.9	79.7
	Avg.	55.2	-
Eve (7 P.M. - 10 P.M.)	**Min**	49.4	55.3
	Max	51.3	58.2
	Avg.	50.3	-
Night (10 P.M. - 7 A.M.)	**Min**	42.1	45.0
	Max	55.9	66.9
	Avg.	48.9	-
Day (7 A.M. - 10 P.M.)	**Min**	49.2	55.3
	Max	60.9	79.7
	Avg.	54.7	-
Night (10 P.M. - 7 A.M.)	**Min**	42.1	45.0
	Max	55.9	66.9
	Avg.	48.9	-

Time of Week	Value	CNEL, dBA	Ldn, dBA
Weekday Only	**Min**	56.4	56.1
	Max	57.5	57.2
	Avg.	56.8	56.5
Weekend Only	**Min**	N/A	N/A
	Max	N/A	N/A
	Avg.	N/A	N/A
Full Week	**Min**	56.4	56.1
	Max	57.5	57.2
	Avg.	56.8	56.5

Noise Measurement Data, dBA - LT10-1, Coronado Municipal Golf Course

Date	Time	Leq	Lmax
Tue-07/05/16	12:00:00 AM	45.1	49.3
Tue-07/05/16	1:00:00 AM	43.6	49.4
Tue-07/05/16	2:00:00 AM	42.1	45.4
Tue-07/05/16	3:00:00 AM	45.2	49.2
Tue-07/05/16	4:00:00 AM	48.5	56.9
Tue-07/05/16	5:00:00 AM	52.1	66.9
Tue-07/05/16	6:00:00 AM	50.4	57.8
Tue-07/05/16	7:00:00 AM	51.6	59.0
Tue-07/05/16	8:00:00 AM	54.6	62.8
Tue-07/05/16	9:00:00 AM	57.9	71.8
Tue-07/05/16	10:00:00 AM	60.9	79.7
Tue-07/05/16	11:00:00 AM	52.9	61.2
Tue-07/05/16	12:00:00 PM	53.1	60.9
Tue-07/05/16	1:00:00 PM	55.7	66.6
Tue-07/05/16	2:00:00 PM	53.0	59.0
Tue-07/05/16	3:00:00 PM	54.3	66.4
Tue-07/05/16	4:00:00 PM	53.4	65.2
Tue-07/05/16	5:00:00 PM	54.9	66.5
Tue-07/05/16	6:00:00 PM	55.9	66.3
Tue-07/05/16	7:00:00 PM	51.3	58.2
Tue-07/05/16	8:00:00 PM	49.9	57.2
Tue-07/05/16	9:00:00 PM	49.4	55.3
Tue-07/05/16	10:00:00 PM	44.2	49.3
Tue-07/05/16	11:00:00 PM	43.5	49.0
Wed-07/06/16	12:00:00 AM	47.4	58.0
Wed-07/06/16	1:00:00 AM	42.6	45.0
Wed-07/06/16	2:00:00 AM	42.6	46.1
Wed-07/06/16	3:00:00 AM	44.2	48.5
Wed-07/06/16	4:00:00 AM	50.4	56.7
Wed-07/06/16	5:00:00 AM	51.4	62.5
Wed-07/06/16	6:00:00 AM	55.9	61.4
Wed-07/06/16	7:00:00 AM	49.2	60.0
Wed-07/06/16	8:00:00 AM	51.7	63.2

Title: Table 15. Port Master Plan Update - Long-Term Noise Measurement Analysis.
Site ID: LT10-2
Location: Coronado Tidelands Park
Start Date: 1/7/2019
End Date: 1/9/2019

		Noise Data Calculations, dBA								
Time of Day	**Value**	**Leq**	**Lmax**	**L02**	**L08**	**L25**	**L50**	**L90**	**L99**	**Lmin**
Day (7 A.M. - 7 P.M.)	**Min**	54.7	61.7	57.5	55.5	54.0	53.0	52.0	51.0	50.3
	Max	73.3	94.7	83.0	75.5	67.5	62.5	60.0	59.5	58.9
	Avg.	62.6	-	-	-	-	-	-	-	-
Eve (7 P.M. - 10 P.M.)	**Min**	55.9	67.4	60.5	56.0	54.0	52.5	50.5	49.5	48.7
	Max	61.7	83.7	71.5	60.0	58.0	57.0	54.5	53.5	53.0
	Avg.	59.5	-	-	-	-	-	-	-	-
Night (10 P.M. - 7 A.M.)	**Min**	51.3	55.8	54.0	52.5	51.5	50.5	49.0	48.0	47.6
	Max	61.5	75.9	63.0	62.5	61.5	61.0	60.5	60.0	59.6
	Avg.	57.1	-	-	-	-	-	-	-	-
Day (7 A.M. - 10 P.M.)	**Min**	54.7	61.7	57.5	55.5	54.0	52.5	50.5	49.5	48.7
	Max	73.3	94.7	83.0	75.5	67.5	62.5	60.0	59.5	58.9
	Avg.	62.1	-	-	-	-	-	-	-	-
Night (10 P.M. - 7 A.M.)	**Min**	51.3	55.8	54.0	52.5	51.5	50.5	49.0	48.0	47.6
	Max	61.5	75.9	63.0	62.5	61.5	61.0	60.5	60.0	59.6
	Avg.	57.1	-	-	-	-	-	-	-	-

Time of Week	**Value**	**CNEL, dBA**	**Ldn, dBA**
Weekday Only	**Min**	63.0	62.3
	Max	66.5	66.2
	Avg.	65.7	65.4
Weekend Only	**Min**	N/A	N/A
	Max	N/A	N/A
	Avg.	N/A	N/A
Full Week	**Min**	63.0	62.3
	Max	66.5	66.2
	Avg.	65.7	65.4

Noise Measurement Data, dBA - LT10-2, Coronado Tidelands Park

Date	Time	Leq	Lmax	L02	L08	L25	L50	L90	L99	Lmin
Mon-01/07/19	1:00:00 PM	54.9	74.8	58.5	56.0	54.5	53.5	52.5	51.5	50.6
Mon-01/07/19	2:00:00 PM	60.8	83.0	68.5	59.0	55.0	54.0	52.5	51.5	50.5
Mon-01/07/19	3:00:00 PM	59.1	81.1	65.0	57.5	55.5	54.5	53.0	52.0	51.4
Mon-01/07/19	4:00:00 PM	62.3	87.9	66.5	60.5	57.0	55.5	54.0	53.5	53.0
Mon-01/07/19	5:00:00 PM	55.0	65.0	57.5	56.5	55.0	54.5	53.5	53.0	51.8
Mon-01/07/19	6:00:00 PM	54.7	68.4	58.5	56.5	55.0	54.0	52.5	52.0	51.6
Mon-01/07/19	7:00:00 PM	57.1	75.4	64.5	57.5	55.0	54.0	53.0	52.0	51.5
Mon-01/07/19	8:00:00 PM	60.5	82.6	64.0	58.5	56.0	54.5	53.5	52.5	52.1
Mon-01/07/19	9:00:00 PM	55.9	67.4	60.5	58.0	55.5	54.5	53.5	52.5	52.3
Mon-01/07/19	10:00:00 PM	54.2	68.7	59.0	56.0	54.0	53.0	51.5	51.0	50.5
Mon-01/07/19	11:00:00 PM	55.1	65.7	58.5	56.5	55.5	54.5	52.5	51.5	51.0
Tue-01/08/19	12:00:00 AM	58.4	72.9	60.5	59.5	58.5	58.0	56.5	56.0	55.5
Tue-01/08/19	1:00:00 AM	56.5	67.6	60.0	57.5	56.5	56.0	54.5	53.5	53.2
Tue-01/08/19	2:00:00 AM	56.0	62.3	58.0	57.0	56.5	55.5	54.5	54.0	54.0
Tue-01/08/19	3:00:00 AM	58.8	75.9	61.5	60.0	59.0	57.5	56.0	55.5	55.1
Tue-01/08/19	4:00:00 AM	59.4	62.4	61.0	60.5	60.0	59.0	57.5	56.5	55.8
Tue-01/08/19	5:00:00 AM	61.0	67.4	62.0	61.5	61.0	60.5	60.0	59.5	58.7
Tue-01/08/19	6:00:00 AM	61.5	65.0	63.0	62.5	61.5	61.0	60.5	60.0	59.6
Tue-01/08/19	7:00:00 AM	73.3	94.7	83.0	75.5	67.5	62.5	60.0	59.5	58.9
Tue-01/08/19	8:00:00 AM	62.8	81.1	66.0	63.0	62.0	61.0	59.0	57.0	56.7
Tue-01/08/19	9:00:00 AM	63.4	82.0	74.5	63.5	57.5	56.0	54.5	54.0	53.6
Tue-01/08/19	10:00:00 AM	59.5	81.1	63.0	58.5	56.5	55.0	53.5	52.5	52.1
Tue-01/08/19	11:00:00 AM	57.6	80.4	59.5	56.5	55.0	54.5	53.0	52.0	51.1
Tue-01/08/19	12:00:00 PM	59.5	78.0	69.5	60.5	55.5	54.5	52.5	51.5	50.9
Tue-01/08/19	1:00:00 PM	57.8	74.5	65.0	58.0	56.0	55.0	53.5	52.5	51.7
Tue-01/08/19	2:00:00 PM	57.7	80.1	61.0	57.5	55.5	54.5	53.0	52.0	51.7
Tue-01/08/19	3:00:00 PM	62.3	86.2	69.5	61.5	57.0	55.5	54.0	52.5	51.6
Tue-01/08/19	4:00:00 PM	57.7	77.5	64.5	57.5	56.0	54.5	53.5	52.5	52.3
Tue-01/08/19	5:00:00 PM	60.3	82.5	66.0	58.5	56.5	55.5	54.5	53.5	52.6
Tue-01/08/19	6:00:00 PM	57.3	73.7	60.0	58.5	57.0	56.0	54.5	53.5	52.7
Tue-01/08/19	7:00:00 PM	61.7	83.2	71.5	60.0	58.0	56.5	54.5	53.5	53.0
Tue-01/08/19	8:00:00 PM	61.4	83.7	65.0	59.0	58.0	57.0	52.5	50.5	49.7
Tue-01/08/19	9:00:00 PM	56.7	78.4	61.0	56.0	54.0	52.5	50.5	49.5	48.7

Noise Measurement Data, dBA - LT10-2, Coronado Tidelands Park

Date	Time	Leq	Lmax	L02	L08	L25	L50	L90	L99	Lmin
Tue-01/08/19	10:00:00 PM	52.5	62.2	56.0	55.0	53.5	51.0	49.0	48.0	47.6
Tue-01/08/19	11:00:00 PM	53.6	59.8	56.5	55.0	54.0	53.0	51.5	50.5	49.7
Wed-01/09/19	12:00:00 AM	51.3	62.7	54.0	52.5	51.5	50.5	49.5	49.0	48.7
Wed-01/09/19	1:00:00 AM	52.2	59.1	56.0	53.5	52.5	51.5	50.5	50.0	49.4
Wed-01/09/19	2:00:00 AM	52.8	63.6	56.5	54.5	53.0	52.0	50.0	49.5	48.8
Wed-01/09/19	3:00:00 AM	52.5	55.8	54.5	54.0	53.0	52.0	50.5	49.5	48.7
Wed-01/09/19	4:00:00 AM	55.4	64.2	59.5	58.5	56.0	54.0	51.0	50.0	49.4
Wed-01/09/19	5:00:00 AM	58.3	62.0	60.0	59.5	58.5	58.0	56.5	56.0	55.8
Wed-01/09/19	6:00:00 AM	58.5	63.6	60.5	60.0	59.0	58.5	56.0	55.5	55.0
Wed-01/09/19	7:00:00 AM	56.9	69.8	59.0	58.0	57.0	56.5	55.5	54.5	54.2
Wed-01/09/19	8:00:00 AM	61.1	86.2	60.5	57.0	56.0	55.0	54.0	53.0	52.7
Wed-01/09/19	9:00:00 AM	54.7	61.7	58.0	55.5	55.0	54.0	53.0	51.5	51.1
Wed-01/09/19	10:00:00 AM	57.6	79.7	64.5	57.0	54.0	53.0	52.0	51.0	50.3

This spreadsheet calculates traffic noise levels based on TNM Version 2.5 Lookup Tables.

** Type in yellow cells only.

Traffic Data:

☑ Enter ADT Traffic

☐ Enter Loudest-hour Traffic

Units:

☐ Metric

☑ English

Calculate

Link	Roadway	Segment Location	Hard or Soft Ground (H or S)	Total Daily Traffic Volumes (ADT)	Traffic Mix Number #	Traffic Mix Description	Vehicle Speed mph max. 80	Sound Levels at Receiver Locations Distance feet, min. 33 max. 1000	Sound Levels at Receiver Locations dB CNEL	Distance to CNEL Noise Contour (feet) 75 dB	70 dB	65 dB	60 dB
1	N Harbor Dr (Existing)	Scott St to Nimitz Blvd	H	14,849	10	County of Orange, Arterials	40	50	67.8			91	272
2	N Harbor Dr (Existing)	Nimitz Blvd to Terminal 2/Spanish L	H	25,716	10	County of Orange, Arterials	45	50	71.6		69	214	553
3	N Harbor Dr (Existing)	Terminal 2/Spanish Landing to Harb	H	28,826	10	County of Orange, Arterials	45	50	72.1		79	236	600
4	N Harbor Dr (Existing)	Harbor Island Dr to Winship Ln	H	49,987	10	County of Orange, Arterials	45	50	74.5	45	134	377	895
5	N Harbor Dr (Existing)	Winship Ln to Liberator Way	H	83,413	10	County of Orange, Arterials	45	50	76.7	71	219	563	
6	N Harbor Dr (Existing)	Liberator Way to W. Laurel St	H	67,149	10	County of Orange, Arterials	45	50	75.8	59	180	477	
7	N Harbor Dr (Existing)	W Laurel St to W Hawthorn St	H	53,507	10	County of Orange, Arterials	40	50	73.3		103	303	746
8	N Harbor Dr (Existing)	W Hawthorn St to W Grape St	H	32,739	10	County of Orange, Arterials	35	50	69.6		45	141	391
9	N Harbor Dr (Existing)	W Grape St to W Ash St	H	18,230	10	County of Orange, Arterials	25	50	63.7			36	118
10	N Harbor Dr (Existing)	W Ash St to W Broadway	H	14,090	10	County of Orange, Arterials	25	50	62.6				90
11	N Harbor Dr (Existing)	Broadway to W. G St	H	11,255	10	County of Orange, Arterials	25	50	61.7				71
12	N Harbor Dr (Existing)	W. G St to Pacific Hwy	H	11,255	10	County of Orange, Arterials	25	50	61.7				71
13	W Harbor Dr (Existing)	Pacific Hwy to Kettner Blvd	H	16,750	10	County of Orange, Arterials	25	50	63.4				108
14	W Harbor Dr (Existing)	Kettner Blvd to W Market St	H	18,622	10	County of Orange, Arterials	40	50	68.7		36	115	330
15	W Harbor Dr (Existing)	W Market St to Front St	H	17,779	10	County of Orange, Arterials	40	50	68.5		34	110	317
16	W Harbor Dr (Existing)	Front St to First Ave	H	19,129	10	County of Orange, Arterials	45	50	70.4		54	162	441
17	E Harbor Dr (Existing)	First Ave to Convention Center Ct	H	18,643	10	County of Orange, Arterials	45	50	70.2		53	159	432
18	E Harbor Dr (Existing)	Convention Center Ct to Fifth Ave	H	18,668	10	County of Orange, Arterials	45	50	70.2		53	159	433
19	E Harbor Dr (Existing)	Fifth Ave to Park Blvd	H	19,877	10	County of Orange, Arterials	45	50	70.5		56	169	454
20	E Harbor Dr (Existing)	Park Blvd to Cesar Chavez Pkwy	H	22,801	10	County of Orange, Arterials	45	50	71.1		62	193	504
21	E Harbor Dr (Existing)	Cesar E Chavez Pkwy to Sampson St	H	10,772	10	County of Orange, Arterials	45	50	67.9			94	277
22	E Harbor Dr (Existing)	Sampson St to Schley St	H	13,190	10	County of Orange, Arterials	40	50	67.2			82	246
23	E Harbor Dr (Existing)	Schley St to 28th St	H	12,029	10	County of Orange, Arterials	40	50	66.8			74	226
24	E Harbor Dr (Existing)	28th St to Belt St	H	17,035	10	County of Orange, Arterials	40	50	68.3			105	306
25	E Harbor Dr (Existing)	Belt St to National City Boundary	H	19,382	10	County of Orange, Arterials	40	50	68.9		38	119	341
26	Scott Street (Existing)	Shelter Island Dr to N Harbor Dr	H	13,626	10	County of Orange, Arterials	30	50	64.1			40	128
27	Shelter Island Dr (Existing)	Shelter Island Dr (NB) to Northern T	H	1,284	10	County of Orange, Arterials	20	50	51.7				
28	Shelter Island Dr (Existing)	Shelter Island Dr (SB) to Northern T	H	1,245	10	County of Orange, Arterials	20	50	51.6				
29	Shelter Island Dr (Existing)	Shelter Island Dr to Southern Termi	H	5,482	10	County of Orange, Arterials	25	50	58.6				35
30	Harbor Island Dr (Existing)	N Harbor Dr to Harbor Island Drive S	H	10,862	10	County of Orange, Arterials	35	50	64.8			48	149
31	Pacific Hwy (Existing)	W. Laurel St to W Hawthorn St	H	11,095	10	County of Orange, Arterials	35	50	64.9			49	152

32	Pacific Hwy (Existing)	W Hawthorn St to W Grape St	H	12,031	10	County of Orange, Arterials	35	50	65.2			53	163
33	Pacific Hwy (Existing)	W Grape St to W Ash St	H	14,855	10	County of Orange, Arterials	35	50	66.2			63	199
34	Pacific Hwy (Existing)	W Ash St to W Broadway	H	13,791	10	County of Orange, Arterials	35	50	65.8			59	186
35	Shelter Island Dr (Existing)	Scott St to Ped X-Walk	H	7,807	10	County of Orange, Arterials	25	50	60.1				51
36	Shelter Island Dr (Existing)	Ped X-Walk to Roundabout	H	8,560	10	County of Orange, Arterials	25	50	60.5				56
37	Nimitz Blvd (Existing)	Rosecrans St to N. Harbor Dr	H	10,696	10	County of Orange, Arterials	35	50	64.7			47	147
38	Harbor Island Dr (Existing)	Western Terminus to Harbor Island	H	5,222	10	County of Orange, Arterials	35	50	61.7				71
39	Harbor Island Dr (Existing)	Harbor Island Dr to Eastern Terminu	H	3,500	10	County of Orange, Arterials	35	50	60.0				50
40	W Laurel St (Existing)	N Harbor Dr to Pacific Hwy	H	34,712	10	County of Orange, Arterials	40	50	71.4		66	209	541
41	W Hawthorn St (Existing)	N Harbor Dr to Pacific Hwy	H	24,536	10	County of Orange, Arterials	40	50	69.9		49	150	412
42	W Grape St (Existing)	N Harbor Dr to Pacific Hwy	H	22,635	10	County of Orange, Arterials	40	50	69.6		45	139	386
43	W Ash St (Existing)	N Harbor Dr to Pacific Hwy	H	4,927	10	County of Orange, Arterials	40	50	63.0				97
44	Broadway St (Existing)	N Harbor Dr to Pacific Hwy	H	6,535	10	County of Orange, Arterials	40	50	64.2			41	128
45	Orange Ave (Existing)	Pomona Ave to Avenida Del Sol	H	32,851	10	County of Orange, Arterials	35	50	69.6		45	141	392
46	Seacoast Drive (Existing)	Palm Ave to Imperial Beach Blvd	H	4,427	10	County of Orange, Arterials	25	50	57.7				
47	N Harbor Dr (Horizon Year)	Scott St to Nimitz Blvd	H	19,900	10	County of Orange, Arterials	40	50	69.0		39	122	349
48	N Harbor Dr (Horizon Year)	Nimitz Blvd to Terminal 2/Spanish L	H	33,600	10	County of Orange, Arterials	45	50	72.8		92	272	674
49	N Harbor Dr (Horizon Year)	Terminal 2/Spanish Landing to Harb	H	41,900	10	County of Orange, Arterials	45	50	73.7	36	114	327	788
50	N Harbor Dr (Horizon Year)	Harbor Island Dr to Winship Ln	H	54,400	10	County of Orange, Arterials	45	50	74.9	49	147	403	944
51	N Harbor Dr (Horizon Year)	Winship Ln to Liberator Way	H	54,800	10	County of Orange, Arterials	45	50	74.9	49	148	406	948
52	N Harbor Dr (Horizon Year)	Liberator Way to W. Laurel St	H	36,300	10	County of Orange, Arterials	45	50	73.1		98	291	711
53	N Harbor Dr (Horizon Year)	W Laurel St to W Hawthorn St	H	57,800	10	County of Orange, Arterials	40	50	73.6	35	112	324	786
54	N Harbor Dr (Horizon Year)	W Hawthorn St to W Grape St	H	34,400	10	County of Orange, Arterials	35	50	69.8		48	148	407
55	N Harbor Dr (Horizon Year)	W Grape St to W Ash St	H	23,000	10	County of Orange, Arterials	25	50	64.7			47	149
56	N Harbor Dr (Horizon Year)	W Ash St to W Broadway	H	19,000	10	County of Orange, Arterials	25	50	63.9			38	123
57	N Harbor Dr (Horizon Year)	Broadway to W. G St	H	15,200	10	County of Orange, Arterials	25	50	63.0				97
58	N Harbor Dr (Horizon Year)	W. G St to Pacific Hwy	H	15,100	10	County of Orange, Arterials	25	50	62.9				97
59	W Harbor Dr (Horizon Year)	Pacific Hwy to Kettner Blvd	H	24,200	10	County of Orange, Arterials	25	50	65.0			50	156
60	W Harbor Dr (Horizon Year)	Kettner Blvd to W Market St	H	28,400	10	County of Orange, Arterials	40	50	70.6		56	173	464
61	W Harbor Dr (Horizon Year)	W Market St to Front St	H	28,900	10	County of Orange, Arterials	40	50	70.6		57	176	471
62	W Harbor Dr (Horizon Year)	Front St to First Ave	H	27,400	10	County of Orange, Arterials	45	50	71.9		75	226	579
63	E Harbor Dr (Horizon Year)	First Ave to Convention Center Ct	H	25,800	10	County of Orange, Arterials	45	50	71.6		70	215	555
64	E Harbor Dr (Horizon Year)	Convention Center Ct to Fifth Ave	H	25,900	10	County of Orange, Arterials	45	50	71.7		70	216	556
65	E Harbor Dr (Horizon Year)	Fifth Ave to Park Blvd	H	23,600	10	County of Orange, Arterials	45	50	71.3		64	199	517
66	E Harbor Dr (Horizon Year)	Park Blvd to Cesar Chavez Pkwy	H	31,900	10	County of Orange, Arterials	45	50	72.6		88	260	648
67	E Harbor Dr (Horizon Year)	Cesar E Chavez Pkwy to Sampson St	H	15,200	10	County of Orange, Arterials	45	50	69.4		43	130	367
68	E Harbor Dr (Horizon Year)	Sampson St to Schley St	H	13,800	10	County of Orange, Arterials	40	50	67.4			85	256
69	E Harbor Dr (Horizon Year)	Schley St to 28th St	H	12,100	10	County of Orange, Arterials	40	50	66.9			74	227
70	E Harbor Dr (Horizon Year)	28th St to Belt St	H	16,200	10	County of Orange, Arterials	40	50	68.1			99	293
71	E Harbor Dr (Horizon Year)	Belt St to National City Boundary	H	19,000	10	County of Orange, Arterials	40	50	68.8		37	117	335
72	Scott Street (Horizon Year)	Shelter Island Dr to N Harbor Dr	H	12,200	10	County of Orange, Arterials	30	50	63.6			35	115
73	Shelter Island Dr (Horizon Year)	Shelter Island Dr (NB) to Northern T	H	1,700	10	County of Orange, Arterials	20	50	52.7				
74	Shelter Island Dr (Horizon Year)	Shelter Island Dr (SB) to Northern T	H	1,600	10	County of Orange, Arterials	20	50	52.5				
75	Shelter Island Dr (Horizon Year)	Shelter Island Dr to Southern Termi	H	2,600	10	County of Orange, Arterials	25	50	55.5				
76	Harbor Island Dr (Horizon Year)	N Harbor Dr to Harbor Island Drive	H	31,500	10	County of Orange, Arterials	35	50	69.4		43	135	379
77	Pacific Hwy (Horizon Year)	W. Laurel St to W Hawthorn St	H	35,100	10	County of Orange, Arterials	35	50	69.9		49	151	414
78	Pacific Hwy (Horizon Year)	W Hawthorn St to W Grape St	H	30,700	10	County of Orange, Arterials	35	50	69.3		42	132	372
79	Pacific Hwy (Horizon Year)	W Grape St to W Ash St	H	27,500	10	County of Orange, Arterials	35	50	68.8		37	119	340
80	Pacific Hwy (Horizon Year)	W Ash St to W Broadway	H	28,100	10	County of Orange, Arterials	35	50	68.9		38	121	346
81	Shelter Island Dr (Horizon Year)	Scott St to Ped X-Walk	H	6,200	10	County of Orange, Arterials	25	50	59.1				41
82	Shelter Island Dr (Horizon Year)	Ped X-Walk to Roundabout	H	5,600	10	County of Orange, Arterials	25	50	58.7				36

83	Nimitz Blvd (Horizon Year)	Rosecrans St to N. Harbor Dr	H	12,400	10	County of Orange, Arterials	35	50	65.4			54	168
84	Harbor Island Dr (Horizon Year)	Western Terminus to Harbor Island	H	18,800	10	County of Orange, Arterials	35	50	67.2			80	245
85	Harbor Island Dr (Horizon Year)	Harbor Island Dr to Eastern Terminu	H	10,700	10	County of Orange, Arterials	35	50	64.7			47	147
86	W Laurel St (Horizon Year)	N Harbor Dr to Pacific Hwy	H	74,900	10	County of Orange, Arterials	40	50	74.8	47	145	399	942
87	W Hawthorn St (Horizon Year)	N Harbor Dr to Pacific Hwy	H	29,700	10	County of Orange, Arterials	40	50	70.8		58	181	481
88	W Grape St (Horizon Year)	N Harbor Dr to Pacific Hwy	H	23,800	10	County of Orange, Arterials	40	50	69.8		48	146	402
89	W Ash St (Horizon Year)	N Harbor Dr to Pacific Hwy	H	10,400	10	County of Orange, Arterials	40	50	66.2			63	200
90	Broadway St (Horizon Year)	N Harbor Dr to Pacific Hwy	H	6,200	10	County of Orange, Arterials	40	50	64.0			39	122
91	Orange Ave (Horizon Year)	Pomona Ave to Avenida Del Sol	H	31,200	10	County of Orange, Arterials	35	50	69.4		43	134	376
92	Seacoast Drive (Horizon Year)	Palm Ave to Imperial Beach Blvd	H	4,700	10	County of Orange, Arterials	25	50	58.0				
93	Coronado Bay Road (Existing)	E of Silver Strand Blvd	H	4,700	10	County of Orange, Arterials	25	50	58.0				
94	Coronado Bay Road (Horizon Year)	E of Silver Strand Blvd	H	4,800	10	County of Orange, Arterials	25	50	58.1				

Table 1. Construction Noise Analysis - Reference Noise Levels at 50 feet

Equipment		Typical Level @ 50', dBA[1]	Usage Factor[1,2]	Number of Units	Distance to Receiver, ft.	Hard or Soft Site?	Barrier Attenuation, dB	Leq, dBA
Item No.	Description							
Typical mobilization/demolition								
72	AC Cold Planer (est. from doze	81.7	0.4	1	50	hard	0	77.7
29	Loader (Front End Loader)	79.1	0.4	1	50	hard	0	75.1
61	Truck, Dump	76.5	0.4	2	50	hard	0	75.5
2	Backhoe	77.6	0.4	1	50	hard	0	73.6
73	Water Truck (est. from dump tr	76.5	0.4	1	50	hard	0	72.5
	Combined Equipment							***82.3***
Major mobilization/demolition								
72	AC Cold Planer (est. from doze	81.7	0.4	1	50	hard	0	77.7
29	Loader (Front End Loader)	79.1	0.4	1	50	hard	0	75.1
61	Truck, Dump	76.5	0.4	2	50	hard	0	75.5
2	Backhoe	77.6	0.4	1	50	hard	0	73.6
73	Water Truck (est. from dump tr	76.5	0.4	1	50	hard	0	72.5
26	Hammer, Mounted Impact (hoe	90.3	0.2	1	50	hard	0	83.3
48	Saw, Concrete	89.6	0.2	1	50	hard	0	82.6
	Combined Equipment							***87.5***
Building foundations without pile driving								
23	Grader	85	0.4	1	50	hard	0	81.0
18	Excavator	80.7	0.4	2	50	hard	0	79.7
29	Loader (Front End Loader)	79.1	0.4	2	50	hard	0	78.1
61	Truck, Dump	76.5	0.4	2	50	hard	0	75.5
2	Backhoe	77.6	0.4	2	50	hard	0	76.6
73	Water Truck (est. from dump tr	76.5	0.4	1	50	hard	0	72.5
	Combined Equipment							***85.9***
Building foundations with one pile driver								
35	Pile-driver (Impact)	101.3	0.2	1	50	hard	0	94.3
23	Grader	85	0.4	1	50	hard	0	81.0
18	Excavator	80.7	0.4	2	50	hard	0	79.7
29	Loader (Front End Loader)	79.1	0.4	2	50	hard	0	78.1
61	Truck, Dump	76.5	0.4	2	50	hard	0	75.5
2	Backhoe	77.6	0.4	2	50	hard	0	76.6
73	Water Truck (est. from dump tr	76.5	0.4	1	50	hard	0	72.5
	Combined Equipment							***94.9***
Building foundations with two pile drivers								
35	Pile-driver (Impact)	101.3	0.2	2	50	hard	0	97.3
23	Grader	85	0.4	1	50	hard	0	81.0
18	Excavator	80.7	0.4	2	50	hard	0	79.7
29	Loader (Front End Loader)	79.1	0.4	2	50	hard	0	78.1
61	Truck, Dump	76.5	0.4	2	50	hard	0	75.5
2	Backhoe	77.6	0.4	2	50	hard	0	76.6
73	Water Truck (est. from dump tr	76.5	0.4	1	50	hard	0	72.5
	Combined Equipment							***97.6***
Structural framing								
12	Crane	80.6	0.16	2	50	hard	0	75.7
41	Pump, Concrete (or concrete pu	81.4	0.2	2	50	hard	0	77.4
70	Forklift (est. from backhoe)	77.6	0.4	2	50	hard	0	76.6
2	Backhoe	77.6	0.4	1	50	hard	0	73.6
73	Water Truck (est. from dump tr	76.5	0.4	1	50	hard	0	72.5
	Combined Equipment							***82.5***

Table 1, continued. Construction Noise Analysis - Reference Noise Levels at 50 feet

Equipment		Typical Level @ 50', dBA[1]	Usage Factor[1,2]	Number of Units	Distance to Receiver, ft.	Hard or Soft Site?	Barrier Attenuation, dB	Leq, dBA
Item No.	Description							
Marina construction without pile driving								
70	Forklift (est. from backhoe)	77.6	0.4	1	50	hard	0	73.6
12	Crane	80.6	0.16	1	50	hard	0	72.6
76	Barge	80	1	1	50	hard	0	80.0
77	Push Boat	80	0.5	1	50	hard	0	77.0
78	Skiff	80	0.5	2	50	hard	0	80.0
	Combined Equipment							***84.6***
Marina construction with pile driving								
70	Forklift (est. from backhoe)	77.6	0.4	1	50	hard	0	73.6
12	Crane	80.6	0.16	1	50	hard	0	72.6
76	Barge	80	1	1	50	hard	0	80.0
77	Push Boat	80	0.5	1	50	hard	0	77.0
78	Skiff	80	0.5	2	50	hard	0	80.0
35	Pile-driver (Impact)	101.3	0.2	1	50	hard	0	94.3
40	Pumps	80.9	0.5	1	50	hard	0	77.9
	Combined Equipment							***94.8***

1. Obtained or estimated from:
FHWA Roadway Construction Noise Model (RCNM), Version 1.1, December 8, 2008; and/or
"Transit Noise and Vibration Impact Assessment", FTA, (FTA-VA-90-1003-06), May 2006; and/or
"Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances;" BBN/EPA, December 31, 1971
2. Usage Factor = percentage of time equipment is operating in noisiest mode while in use

Table 2. Construction Noise Analysis - Distance to 75 dBA

Equipment		Typical Level @ 50', dBA[1]	Usage Factor[1,2]	Number of Units	Distance to Receiver, ft.	Hard or Soft Site?	Barrier Attenuation, dB	Leq, dBA
Item No.	Description							
Typical mobilization/demolition								
72	AC Cold Planer (est. from doze	81.7	0.4	1	115	hard	0	70.5
29	Loader (Front End Loader)	79.1	0.4	1	115	hard	0	67.9
61	Truck, Dump	76.5	0.4	2	115	hard	0	68.3
2	Backhoe	77.6	0.4	1	115	hard	0	66.4
73	Water Truck (est. from dump tr	76.5	0.4	1	115	hard	0	65.3
	Combined Equipment							***75***
Major mobilization/demolition								
72	AC Cold Planer (est. from doze	81.7	0.4	1	215	hard	0	65.1
29	Loader (Front End Loader)	79.1	0.4	1	215	hard	0	62.5
61	Truck, Dump	76.5	0.4	2	215	hard	0	62.9
2	Backhoe	77.6	0.4	1	215	hard	0	61.0
73	Water Truck (est. from dump tr	76.5	0.4	1	215	hard	0	59.9
26	Hammer, Mounted Impact (hoe	90.3	0.2	1	215	hard	0	70.6
48	Saw, Concrete	89.6	0.2	1	215	hard	0	69.9
	Combined Equipment							***75***
Building foundations without pile driving								
23	Grader	85	0.4	1	175	hard	0	70.1
18	Excavator	80.7	0.4	2	175	hard	0	68.8
29	Loader (Front End Loader)	79.1	0.4	2	175	hard	0	67.2
61	Truck, Dump	76.5	0.4	2	175	hard	0	64.6
2	Backhoe	77.6	0.4	2	175	hard	0	65.7
73	Water Truck (est. from dump tr	76.5	0.4	1	175	hard	0	61.6
	Combined Equipment							***75***
Building foundations with one pile driver								
35	Pile-driver (Impact)	101.3	0.2	1	495	hard	0	74.4
23	Grader	85	0.4	1	495	hard	0	61.1
18	Excavator	80.7	0.4	2	495	hard	0	59.8
29	Loader (Front End Loader)	79.1	0.4	2	495	hard	0	58.2
61	Truck, Dump	76.5	0.4	2	495	hard	0	55.6
2	Backhoe	77.6	0.4	2	495	hard	0	56.7
73	Water Truck (est. from dump tr	76.5	0.4	1	495	hard	0	52.6
	Combined Equipment							***75***
Building foundations with two pile drivers								
35	Pile-driver (Impact)	101.3	0.2	2	680	hard	0	74.6
23	Grader	85	0.4	1	680	hard	0	58.3
18	Excavator	80.7	0.4	2	680	hard	0	57.1
29	Loader (Front End Loader)	79.1	0.4	2	680	hard	0	55.5
61	Truck, Dump	76.5	0.4	2	680	hard	0	52.9
2	Backhoe	77.6	0.4	2	680	hard	0	54.0
73	Water Truck (est. from dump tr	76.5	0.4	1	680	hard	0	49.8
	Combined Equipment							***75***
Structural framing								
12	Crane	80.6	0.16	2	120	hard	0	68.0
41	Pump, Concrete (or concrete pu	81.4	0.2	2	120	hard	0	69.8
70	Forklift (est. from backhoe)	77.6	0.4	2	120	hard	0	69.0
2	Backhoe	77.6	0.4	1	120	hard	0	66.0
73	Water Truck (est. from dump tr	76.5	0.4	1	120	hard	0	64.9
	Combined Equipment							***75***

Table 2, continued. Construction Noise Analysis - Distance to 75 dBA

Equipment		Typical Level @ 50', dBA[1]	Usage Factor[1,2]	Number of Units	Distance to Receiver, ft.	Hard or Soft Site?	Barrier Attenuation, dB	Leq, dBA
Item No.	Description							
Marina construction without pile driving								
70	Forklift (est. from backhoe)	77.6	0.4	1	155	hard	0	63.8
12	Crane	80.6	0.16	1	155	hard	0	62.8
76	Barge	80	1	1	155	hard	0	70.2
77	Push Boat	80	0.5	1	155	hard	0	67.2
78	Skiff	80	0.5	2	155	hard	0	70.2
	Combined Equipment							***75***
Marina construction with pile driving								
70	Forklift (est. from backhoe)	77.6	0.4	1	495	hard	0	53.7
12	Crane	80.6	0.16	1	495	hard	0	52.7
76	Barge	80	1	1	495	hard	0	60.1
77	Push Boat	80	0.5	1	495	hard	0	57.1
78	Skiff	80	0.5	2	495	hard	0	60.1
35	Pile-driver (Impact)	101.3	0.2	1	495	hard	0	74.4
40	Pumps	80.9	0.5	1	495	hard	0	58.0
	Combined Equipment							***75***

1. Obtained or estimated from:
FHWA Roadway Construction Noise Model (RCNM), Version 1.1, December 8, 2008; and/or
"Transit Noise and Vibration Impact Assessment", FTA, (FTA-VA-90-1003-06), May 2006; and/or
"Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances;" BBN/EPA, December 31, 1971
2. Usage Factor = percentage of time equipment is operating in noisiest mode while in use

Table 1. Construction Vibration Analysis - Potential Building Damage

Vibration attenuation constant (n):		1.1						
		Building Category:	**Extremely fragile historic buildings, ruins, ancient monuments**	**Fragile buildings**	**Historic and some old buildings**	**Older residential structures**	**New residential structures**	**Modern industrial/ commercial buildings**
Equipment Item	**Reference PPV at 25 feet, in/s [a]**	**Vibration Damage Impact Criteria, PPV, in/s: [b]**	**0.08**	**0.1**	**0.25**	**0.3**	**0.5**	**0.5**
Pile driver (impact or vibratory)	0.65	Distance to Impact Criteria, feet:	168	138	60	51	32	32
Hydraulic Breaker	0.24		68	56	25	21	13	13
Vibratory roller	0.21		61	50	22	19	12	12
Large bulldozer[c]	0.089		28	23	10	9	6	6
Caisson drilling	0.089		28	23	10	9	6	6
Jackhammer	0.035		12	10	5	4	3	3
Small bulldozer[d]	0.003		2	2	1	1	1	1

[a] Obtained from "Transportation and Construction Vibration Guidance Manual", Caltrans 2020

[b] All criteria are based on the values for continuous/frequent intermittent sources (all of the anticipated sources fall into this category).

[c] Considered representative of other heavy earthmoving equipment such as excavators, graders, backhoes, etc.

[d] Considered representative of smaller equipment such as mini excavators, Bobcat®, skid steer, etc.

Table 2. Construction Vibration Analysis - Potential Building Damage

Vibration attenuation constant (n):	1.1					
		Perceptibility:	**Barely perceptible**	**Distinctly perceptible**	**Strongly perceptible**	**Severe**
Equipment Item	**Reference PPV at 25 feet, in/s [a]**	**Vibration Perception Criteria, PPV, in/s: [b]**	**0.01**	**0.04**	**0.1**	**0.4**
Pile driver (impact or vibratory)	0.65	Distance to Impact Criteria, feet:	1,112	316	138	39
Hydraulic Breaker	0.24		450	128	56	16
Vibratory roller	0.21		399	113	50	14
Large bulldozer[c]	0.089		183	52	23	7
Caisson drilling	0.089		183	52	23	7
Jackhammer	0.035		79	23	10	3
Small bulldozer[d]	0.003		9	3	2	1

[a] Obtained from "Transportation and Construction Vibration Guidance Manual", Caltrans 2020

[b] All criteria are based on the values for continuous/frequent intermittent sources (all of the anticipated sources fall into this category).

[c] Considered representative of other heavy earthmoving equipment such as excavators, graders, backhoes, etc.

[d] Considered representative of smaller equipment such as mini excavators, Bobcat®, skid steer, etc.

Appendix I

Sea Level Rise (The District's Sea Level Rise Vulnerability Assessment and Coastal Resiliency Report [AB 691 Report], prepared by the San Diego Unified Port District)

Sea Level Rise Vulnerability Assessment & Coastal Resiliency Report

JUNE 2019

PORT of SAN DIEGO

In collaboration with

Acknowledgments

Port of San Diego Environmental Advisory Committee – Sea Level Rise Ad-Hoc

Center for Sustainable Energy
San Diego Port Tenants Association
Shelter Island Marina
United States Fish and Wildlife
United States Navy Region Southwest
Southwest Wetlands Interpretive Association (not a member of the EAC)

Participating Agencies

City of Coronado
City of Chula Vista
City of Imperial Beach
City of National City
City of San Diego
San Diego Association of Governments
San Diego County Regional Airport Authority
California Coastal Commission

Advisors

Army Corps of Engineers
Scripps Institution of Oceanography—Center for Climate Change Impacts and Adaptation
Tijuana River National Estuarine Research Reserve
United States Geological Survey
Nexus Planning & Research
ICF International
Energy Policy Initiatives Center, University of San Diego

Web Accessibility: The document has made all attempts to be consistent with California State Assembly Bill 434.

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Commonly Used Terms

Analyses	Evaluation of the physical or financial impacts to assets.
Inundation	Potentially recurring flooding resulting from projected SLR.
Projections	Probability of future projected SLR based on best available science.
Scenarios	Used in the USGS CoSMoS models based on SLR projections.
Temporary coastal flooding from a 100-year storm event	Intermittent inundation of land and/or assets resulting from 100-year storm event caused by storm surge.
Vulnerability	The propensity or predisposition to be adversely affected. Vulnerability encompasses a variety of concepts and elements including sensitivity or susceptibility to harm and lack of capacity to cope and adapt (IPCC 2014).
Vulnerability Assessment	A practice that identifies who and what is exposed and sensitive to change and how able a given system is to cope with extremes and change (Tompkins et al, 2005).

Acronyms and Abbreviations

2018 OPC SLR Guidance	Guidance Ocean Protection Council's State of California: Sea-Level Rise Guidance - 2018 Update
AB 691	California State Assembly Bill 691
AB 691 Report	Port of San Diego Sea Level Rise Vulnerability Assessment & Coastal Resiliency Report
Airport	San Diego International Airport
Airport Authority	San Diego County Regional Airport Authority
Bay	San Diego Bay
CCC	California Coastal Commission
CoSMoS	Coastal Storm Modeling System
District	San Diego Unified Port District
Framework	Adaptive Management Framework
NOAA	National Oceanic and Atmospheric Administration
NRC	National Research Council
OPC	Ocean Protection Council
Port Act	San Diego Unified Port Act
RCP	Representative Concentration Pathways
SLC	State Lands Commission
SLR	Sea Level Rise
Tidelands	San Diego Unified Port District jurisdiction
USGS	United States Geological Survey

Considerations Regarding Methodology and Approach

1. Sea level rise (SLR) projections from the Ocean Protection Council (OPC) were provided in feet. The United States Geological Survey's CoSMoS 3.0 model used to map the extent of flooding operates using the metric system. The OPC SLR projections (with associated timeframes) were matched to the closest value in CoSMoS for use in the District's analyses. As a result, the scenario elevations from CoSMoS may differ from the OPC projections.

2. CoSMoS flood maps illustrate the potential extent of inundation and/or temporary coastal flooding from a 100-year storm event resulting from projected sea level rise for specific water elevations. As the projected water level is calculated from mean sea level, the depth of flooding on land may be less than the projected water elevation and may also vary by location based on topography.

3. Potential inundation and temporary coastal flooding from a 100-year storm event resulting from projected sea level rise were modeled using USGS CoSMoS 3.0. Potential flood extents represented in CoSMoS were derived from elevation data established between 2009-2011. As such, the maps illustrate potential flooding on current conditions without any adaptation measures or new development/redevelopment. The District developed a local model using specific ground elevations to assess impacts to buildings. As the District's

ground elevations may differ from those used in the CoSMoS model, buildings may appear potentially impacted on the CoSMoS flood maps that were not identified as potentially impacted in the District's local building model. The use of the two disparate models may result in inconsistency between the maps and the exposure tables and financial cost estimates related to buildings. Please refer to Chapter 2 and Chapter 3 for more detail.

4. Financial estimates of potential impacts to assets that may result from projected sea level rise induced inundation and/or temporary coastal flooding represent the replacement cost of the asset. The financial estimates of potential impacts should not be construed as the estimated cost of adapting to projected sea level rise for a specific water elevation.

Executive Summary

Legislative Requirements – California Public Resource Code Section 6311.5

In 2013, the State Legislature passed Assembly Bill (AB) 691, which was codified as Section 6311.5 of the California Public Resource Code (herein referred to as AB 691 or Section 6311.5) (SLC 2013). AB 691 requires local trustees of public trust lands whose gross public revenues average over $250,000 between January 1, 2009 and January 1, 2014 to prepare and submit to the State Lands Commission (SLC) by July 1, 2019 an assessment of how the local trustee proposes to address projected sea level rise (SLR). (Section 6311.5(c).) The assessment must include the following:

- An analysis of the impacts of projected SLR, as described in the Resolution of the California Ocean Protection Council (OPC) on Sea-level Rise and the latest version of the State of California Sea-Level Rise Guidance Document;
- Maps showing areas that may be affected by projected SLR in years 2030, 2050 and 2100, including potential impacts of a 100-year storm event;
- An estimate of financial costs of the impact of projected SLR on granted public trust lands, including the potential cost of repair of damage to and the value of lost use of improvements and land, as well as the anticipated cost to prevent or mitigate potential damage; and
- A description of how the local trustee proposes to protect and preserve existing and proposed natural and built environment resources and facilities, including, without limitation how wetlands and restoration and habitat preservation would mitigate impacts to projected SLR. (Section 6311.(c)(1)-(c)(4).)

In addressing projected SLR, the local trustee shall collaborate with lessees, appropriate local, state and federal agencies, as well other users of granted public trust lands. (Section 6311.5(e).) However, AB 691 does not require a local trustee to implement any specific actions to address projected SLR. (Section 6311.5(j).)

San Diego Unified Port District's Approach to AB 691/Section 6311.5

In 1963, the State Legislature passed the San Diego Unified Port Act (Port Act), which was codified as California Harbors and Navigation Code, Appendix 1. The Port Act created the San Diego Unified Port District (District) and granted certain state tidelands and submerged lands in and around San Diego Bay and Imperial Beach oceanfront (collectively, the Bay or the San Diego Bay) to the District, as trustee for all Californians.

As a trustee of state tidelands and submerged lands, the District is subject to Section 6311.5. Pursuant to the requirements of Section 6311.5, as well as to better understand projected SLR and its potential impacts to the District's granted tidelands and submerged tidelands (herein referred to as the "District's jurisdiction")[1] in 2030, 2050 and 2100 and, to quantify the potential impacts of projected SLR, the District initiated a formal SLR assessment (AB 691 Report).

This AB 691 Report analyzes and addresses projected SLR impacts within the District's jurisdiction, including the San Diego International Airport, which the District leases to the San Diego County Regional Airport Authority (Airport Authority).[2]

Specifically, the AB 691 Report:

- Uses best available science to assess the vulnerability of projected SLR on the District's jurisdiction, including the updated OPC's *State of California Sea-Level Rise Guidance: 2018 Update* (2018 OPC SLR Guidance), as required by AB 691;
- Provides maps of areas that may be potentially impacted by projected SLR for the years 2030, 2050, and 2100;

[1]The term "District's jurisdiction" is not intended to indicate permitting authority.
[2]Note that the District has one upland property that is excluded from the AB 691 Report.

- Estimates the financial costs of impacts on granted trust lands; and
- Describes how the District proposes to address projected SLR to protect and preserve natural and built environment resources and facilities on trust lands.

The AB 691 Report is organized based on the requirements of AB 691. Chapter 1 provides an introduction. Chapter 2 provides the methodology for the District's vulnerability assessment and can be used as guidance for future, site-specific assessments. Chapter 3 presents the findings of the District's vulnerability assessment, including the required maps, potential impacts and estimated financial costs of potential SLR impacts. Chapter 4 discusses adaptation planning and strategy implementation. Chapter 5 is the conclusion.

As is called for in Section 6311.5, District staff engaged regional stakeholders, and subject matter experts from public agencies, non-profit groups, and private companies during the development of the AB 691 Report to gather information and learn from SLR and coastal resiliency experts. Stakeholders included the U.S. Navy, federal, state, regional, and local government agencies, academia, environmental interest groups, District tenants, and the San Diego Port Tenants Association.

District's Proposed Method for Addressing Projected Sea Level Rise–Adaptive Management

Given the current science and its level of uncertainty in projections of projected SLR, the District's ability to be flexible in adapting to projected SLR is crucial. For this reason, the District is proposing an adaptive management approach to address projected SLR, defined by the Intergovernmental Panel on Climate Change as "a process of iteratively planning, implementing, and modifying strategies for managing resources in the face of uncertainty and change" (IPCC 2014). Adaptive management is not a new scientific concept and has been used by the District for many of its environmental management programs. Extending the adaptive management approach to projected SLR will allow the District to adjust policies and/or strategies that help to reduce the risks associated with potential inundation and/or temporary coastal flooding from a 100-year storm event from projected SLR based on monitoring and as new information regarding climate science and/or techniques to address coastal hazards emerge.

The Adaptive Management Framework (Framework) as illustrated in Figure ES.1 is composed of three stages: (1) A Vulnerability Assessment, (2) Adaptation Planning, and (3) Strategy Implementation. This Framework promotes a cyclical process whereby each stage can be continually improved as new information is collected and integrated.

Sea Level Rise Projections: Methodology

The District, in consultation with stakeholders, chose SLR projections consistent with the 2018 OPC SLR Guidance. The 2018 OPC SLR Guidance incorporates advances in SLR modeling and improved understanding of the processes that may drive extreme global projected SLR from ice loss from the Greenland and Antarctic ice sheets. This guidance serves as the best available science for this AB 691 Report. Specifically, the District used SLR projections representing the 95th percentile (1-in-20 chance) for the years 2030, 2050, and 2100 (see Table ES.1).

Given the uncertainty of climate science and the variability in projections towards the end of the century, the District also chose to analyze projected SLR impacts using the 50th percentile projection for 2100. The District assessed projected SLR impacts using the four different projections without, then with, 100-year

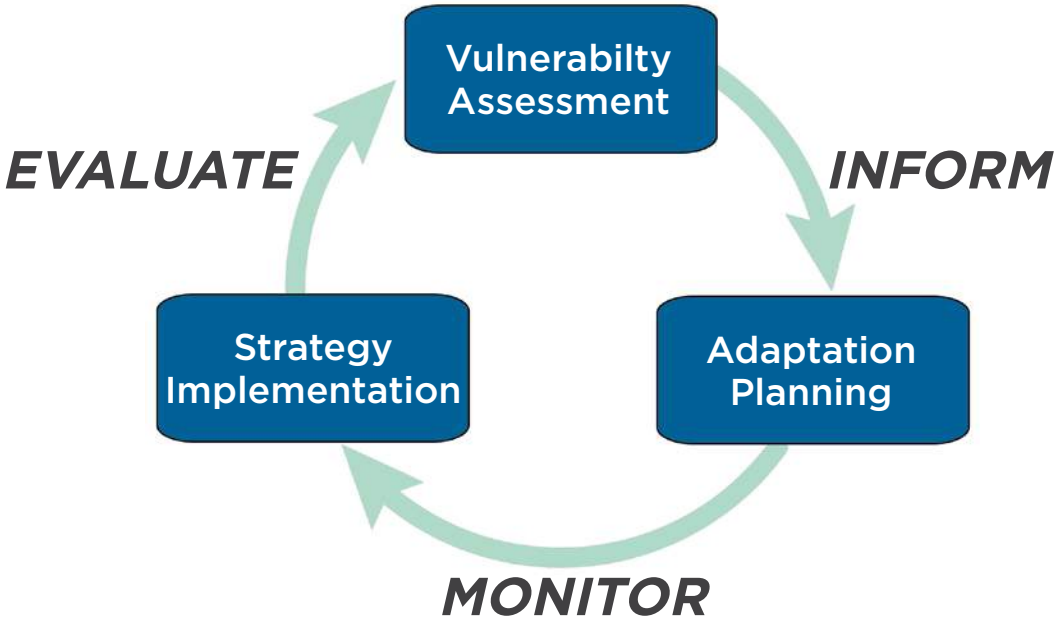

Figure ES.1 Sea Level Rise Adaptive Management Framework

storm events. The intention of separating the analyses was to help the District better understand the impacts caused by potential inundation compared to temporary coastal flooding from a 100-year storm event. (It is also required by Section 6113.5.) Table ES.1 illustrates the single range of SLR projections for years 2030 and 2050 and multiple ranges for the year 2100. See Chapter 2 for more detail regarding selection of SLR projections.

Sea Level Rise Mapping

The projected SLR mapping consists of a quantitative geospatial assessment of future projected SLR and storm surge impacts to District assets for 2030, 2050 and 2100 as required by AB 691. To assess exposure to projected SLR, the District utilized the United States Geological Survey Coastal Storm Modeling System (CoSMoS) 3.0 (USGS 2019). CoSMoS is a dynamic SLR model which allows users to couple projected SLR scenarios with storm events to measure impacts to assets and operations. Since CoSMoS operates in fixed 0.8 foot increments of projected SLR, the OPC SLR projections (with associated timeframes) were matched to the closest value in CoSMoS for use in the District's analyses. As a result, the

Table ES.1 Selected Sea Level Rise Projections

Feet (Meters) Above 1991 – 2009 mean	Median		Likely Range		1-in-20 Chance		1-in-200 Chance	
Year/ Percentile	50% probability SLR meets or exceeds		67% probability SLR is between		5% probability SLR meets or exceeds		0.5% probability SLR meets or exceeds	
	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters
2030	0.5	0.15	0.4 - 0.6	0.12 - 0.18	0.7	0.21	0.9	0.28
2050	0.9	0.27	0.7 - 1.2	0.21 - 0.37	1.4	0.43	2.0	0.61
2100 (RCP 8.5)	2.6	0.79	1.8 - 3.6	0.55 - 1.10	4.5	1.4	7.1	2.16

scenario elevations from CoSMoS may differ slightly from the OPC projections. The selected CoSMoS SLR scenarios and the corresponding OPC projections and are listed in Table ES.2 See Chapter 2 for more detail regarding selection of SLR mapping.

Impacts on Built Environment and Natural Resources

The District assets that were analyzed for potential impacts in this assessment include the transportation network such as roads, rail, bike routes, and pathways; infrastructure such as building structures, parks, sewer lifts and storm drains, marine terminals, wharves, and piers; and natural resources such as nearshore habitats and least tern nesting areas.

Sea Level Rise Vulnerability Results and Potential Impacts

Potential Physical Impacts – Built Environment

Low lying built environment assets in or adjacent to the water, such as beach accessible areas, boat launches, and sewer lifts are projected to experience impacts from potential inundation at 0.8 feet of projected SLR. Assets that provide public access (e.g., pathways, bikeways, piers) and recreational opportunities (e.g. parks) become increasingly impacted by potential inundation and

Table ES.2: Alignment of San Diego Sea Level Rise Projections with CoSMoS Projected Sea Level Rise Scenarios

CoSMoS Model Levels in Meters	Recommended Ocean Protection Council[1] SLR Probabilistic Projections	
	Increase Above Current Levels	Emissions Scenario
0.8 feet/0.25 meters	0.7 feet (0.21 meters)	2030 (1-in-20 Chance)
1.6 feet/0.5 meters	1.4 feet (0.43 meters)	2050 (1-in-20 Chance)
2.5 feet/0.75 meters	2.6 feet (0.79 meters)	2100 (Median)
4.9 feet/1.5 meters	4.5 feet (1.4 meters)	2100 (1-in-20 Chance)

Median = 50% probability SLR meets or exceeds...
1-in-20 Chance = 5% probability meets or exceeds...

[1]Ocean Protection Council 2018. California Sea-Level Rise Guidance 2018 Update

then exacerbated by storm surge from a 100-year storm event starting at 1.6 feet of projected SLR. At 4.9 feet of projected SLR, with and without a 100-year storm event, most District assets are projected to be at risk of projected SLR-induced flooding.

Critical infrastructure such as roads, rail, and the stormwater system are particularly sensitive to potential inundation or a 100-year storm event may obstruct business operations, limit public access, and/or lead to potential reductions in public safety including emergency response and recovery. The quantity of critical infrastructure and associated consequences are projected to occur with potential inundation at 4.9 feet of projected SLR or temporary coastal flooding from a 100-year storm event at 2.5 feet of projected SLR.

The District contains approximately 7,500 slips or moorings for recreational, commercial fishing, sportfishing, marine services, and Harbor Police. While slips and moorings can be elevated for increased projected SLR, substantially larger storm events combined with elevated sea levels may lead to more extensive damage and longer recovery times. Although this analysis did not evaluate impacts to floating docks nor the fueling infrastructure, these assets could also be damaged with higher sea levels and associated storm events.

Tables ES.3 and ES.4 summarize the potential exposure results for each of the assets across all four CoSMoS scenarios in the District. These tables correspond to Figures ES.2 – 5 illustrating projected SLR impacts for all four scenarios. See Chapter 3 for more detail regarding District and Planning District exposure to projected SLR.

Potential Physical Impacts to Natural Resources

Natural resource management is an important part of the District's administration of the public trust. Various natural resources including without limitation subtidal, intertidal, and upland habitats, exist in and around San Diego Bay. As required by AB 691, an evaluation of potential impacts to eelgrass, coastal salt marsh, uplands, and beach and dune habitats was conducted. These habitats exist at specific elevation ranges, in and out of the water column and may be able to persist with rising water elevations if there is available area to which to migrate. Therefore, the natural resource analysis focused on whether there was undisturbed area in and around San

Table ES.3: District Asset Vulnerability from Potential Inundation with Projected Sea Level Rise

Assets	Total Quantity in District	Sensitivity	Adaptive Capacity	Exposure to Inundation			
				0.8 ft SLR	1.6 ft SLR	2.5 ft SLR	4.9 ft SLR
Roads (linear miles)	47.9	HIGH	LOW	1%	1%	2%	26%
Rail (linear miles)	16.2	HIGH	LOW	0%	0%	0%	57%
Bikeways (linear miles)	5.9	LOW	HIGH	1%	2%	10%	55%
Pathways (linear miles)	22.2	LOW	HIGH	7%	8%	15%	60%
Marine Terminals (acres)	233.4	HIGH	LOW	0%	0%	1%	37%
Buildings (count)	590	HIGH	LOW	0%	0%	1%	23%
Piers (count)	15	HIGH	LOW	0%	0%	0%	75%
Stormwater Management (count)	458	HIGH	LOW	4%	4%	7%	45%
Sewer Lifts (count)	10	HIGH	HIGH	20%	20%	30%	70%
Boat Launch Ramps (count)	3	LOW	HIGH	100%	100%	100%	100%
Beach Accessible Areas (acres)	11	HIGH	LOW	71%	75%	80%	93%
Parks (acres)	144.6	LOW	HIGH	3%	3%	6%	45%

Table ES.4: District Asset Vulnerability from Potential Inundation and Temporary Coastal Flooding (100-Year Storm Event) with Projected Sea Level Rise

Assets	Total Quantity in District	Sensitivity	Adaptive Capacity	Exposure to Temporary Coastal Flooding			
				0.8 ft SLR	1.6 ft SLR	2.5 ft SLR	4.9 ft SLR
Roads (linear miles)	4,987.3	HIGH	LOW	2%	5%	16%	46%
Rail (linear miles)	16.2	HIGH	LOW	0%	0%	12%	83%
Bikeways (linear miles)	5.9	LOW	HIGH	10%	17%	34%	82%
Pathways (linear miles)	22.2	LOW	HIGH	14%	24%	43%	78%
Marine Terminals (acres)	233.4	HIGH	LOW	0%	0%	9%	69%
Buildings (count)	590	HIGH	LOW	1%	3%	8%	46%
Piers (count)	15	HIGH	LOW	0%	19%	32%	88%
Stormwater Management (count)	458	HIGH	LOW	5%	14%	30%	66%
Sewer Lifts (count)	10	HIGH	HIGH	30%	30%	50%	90%
Boat Launch Ramps (count)	3	LOW	HIGH	100%	100%	100%	100%
Beach Accessible Areas (acres)	11	HIGH	LOW	79%	83%	90%	95%
Parks (acres)	144.6	LOW	HIGH	6%	11%	25%	72%

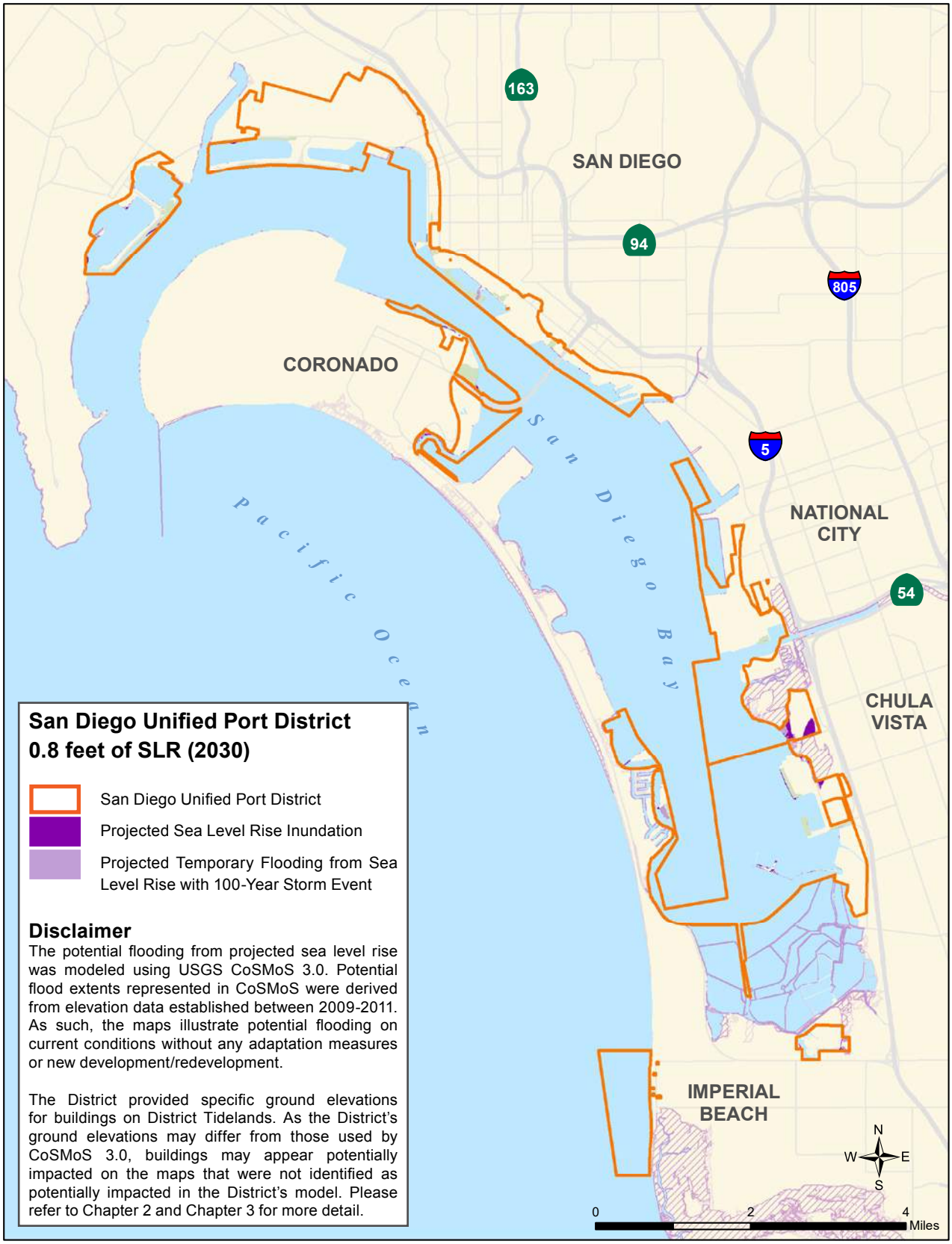

Figure ES.2: District Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise in 2030

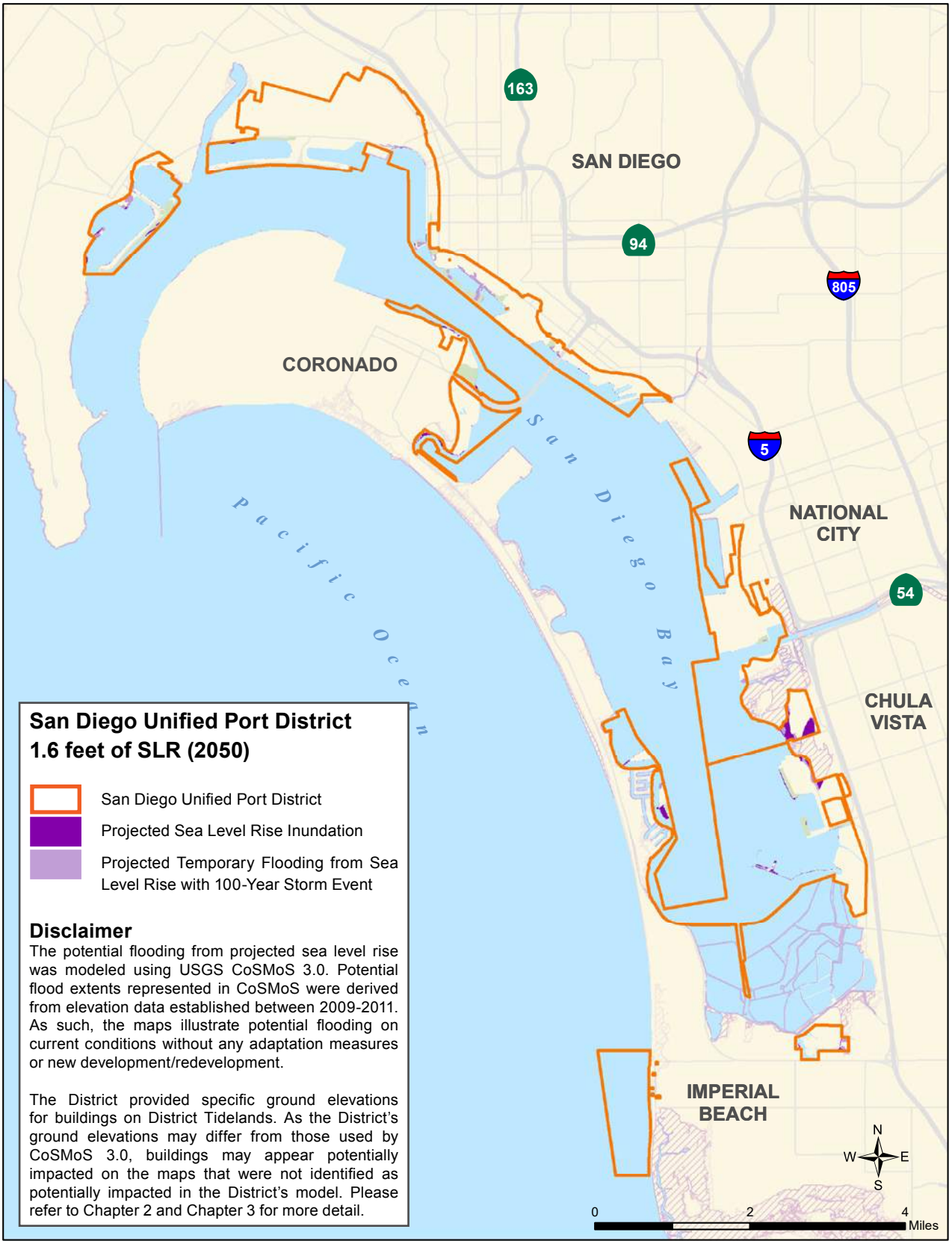

Figure ES.3: District Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise in 2050

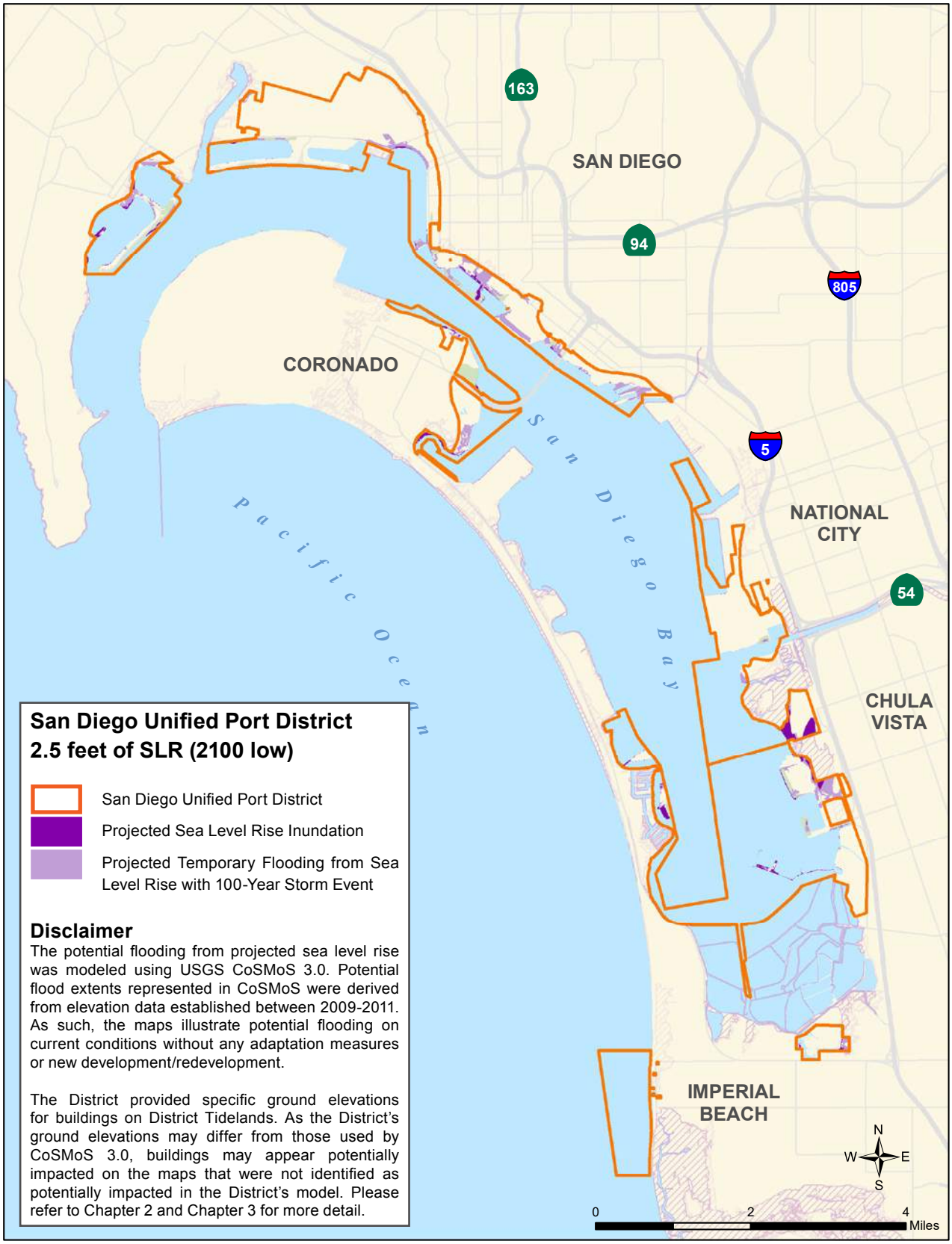

Figure ES.4: District Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise in 2100 (Low Scenario)

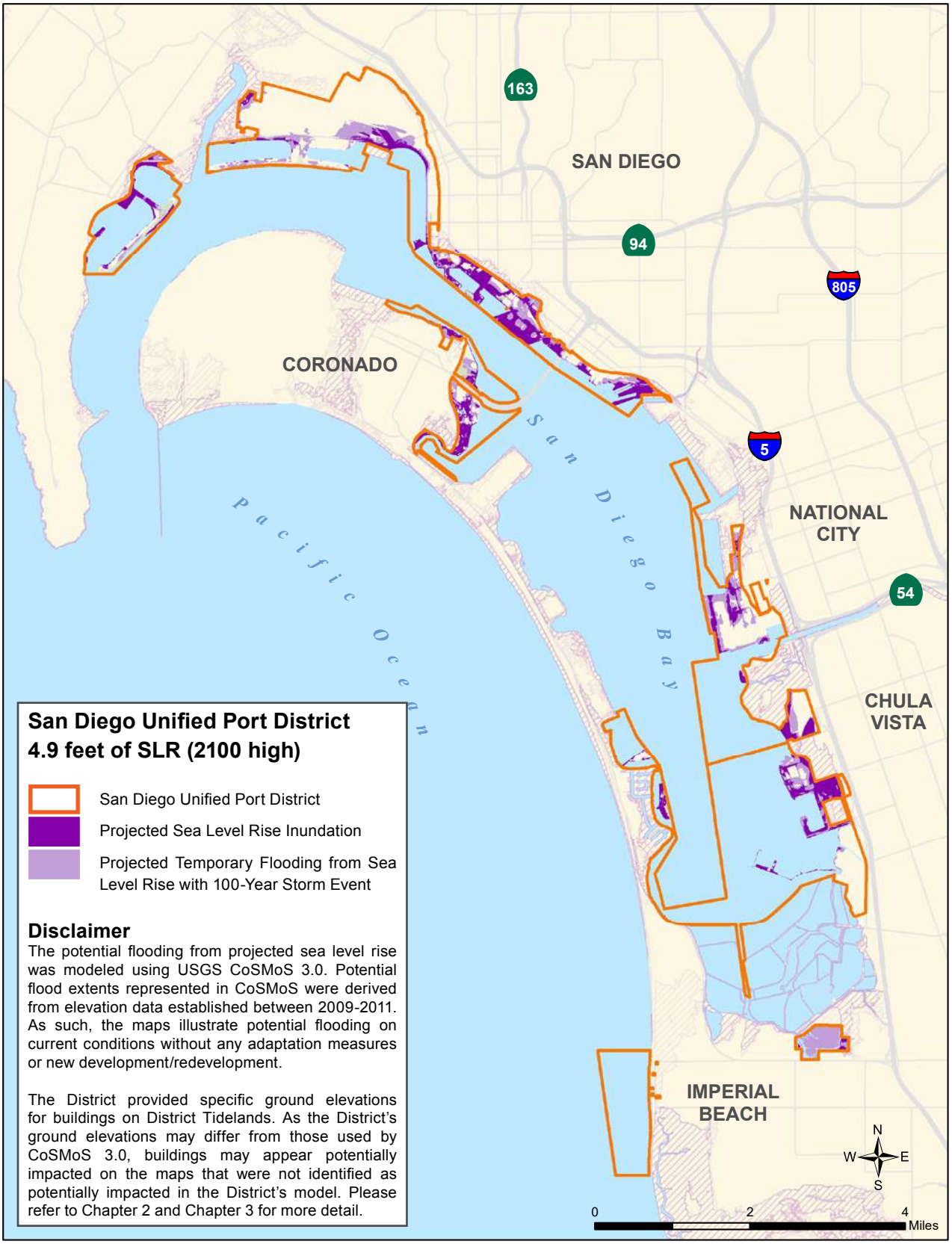

Figure ES.5: District Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise in 2100 (High Scenario)

Diego Bay with appropriate elevations to support these habitats with increasing sea levels. As such, the projected SLR scenarios described in ES.2 were used to assess the potential distribution of each habitat with the assumption that the habitat can move unless otherwise hindered by the built environment.

Overall, the available area that may support salt marsh, beach/dune, and upland habitats decline with increasing projected SLR scenarios. However, the eelgrass habitats showcase a unique trend whereby their acreage increases under the 1.6 feet and 2.5 feet projected SLR scenarios but sharply decline under the 4.9 feet projected SLR scenario. With 4.9 feet of projected SLR, a loss of acres for eelgrass is driven by a reduction in available area to which to move coupled with a loss of area at the deeper portion of its elevation range as water levels increase.

It should be noted that although the total available area for specific habitats may decrease, the area occupied by specific habitat is much less. This indicates that given the right conditions and proper management, the current acreage of habitats may be able to expand over time. For example, the occupied area for salt marsh remains relatively stable throughout the projected SLR scenarios. However, upland habitats that support environmental management objectives such as preservation of nesting sites for California least terns may limit transition of salt marsh. Habitat management objectives will need to be monitored and actively managed among natural resource managers to promote ecological health as projected SLR increases. See Chapter 3 and Appendix B for more detail regarding potential habitat impacts.

Potential Financial Impacts

Table ES.6 shows primary and secondary impacts that may occur from projected SLR. The District selected property and infrastructure that may be damaged from projected SLR, whether due to permanent flooding or temporary coastal flooding from a 100-year storm event.

The potential damages without a storm event represent damages that would result from potential inundation under the “no action” (no adaptation strategies) conditions. That is, potential damages would be caused by increased projected SLR that could permanently

Table ES.5: Future Habitat Distribution

Habitat Type	Baseline		Sea Level Rise Scenarios							
	No Sea Level Rise		Year 2030 +0.8 feet		Year 2050 +1.6 feet		Year 2100 Low +2.5 feet		Year 2100 high +4.9 feet	
	Available	Occupied	Available	Occupied	Available	Occupied	Available	Occupied	Available	Occupied
Eelgrass	1,718	915	1,752.7	982.8	1,762.3	1,016.3	1,747.5	979.4	1,621.5	668.2
Salt Marsh	532	81	472.6	75.9	432.7	74.4	415.1	75.2	370.5	78.3
Beach/ Dune[1]	13	-	-	12.7	-	11.6	-	10.7	-	8.6
Uplands	426	97	394.5	90.1	360.0	82.2	322.1	73.4	222.6	50.8

[1]Beach/dune habitat is assumed to exist where those historical habitats occurred prior to development and have been maintained or allowed to remain. As both are driven by sediment and wind processes, they are considered static with no additional areas available.

flood land, structures, parking lots, and transportation and other infrastructure if no adaptation strategies were enacted to mitigate potential damages. Potential inundation could lead to a loss of District revenue due to a loss of land that support park events, parking, and leases.

For all projected SLR scenarios without a storm event, the greatest potential financial impacts would be due to loss of transportation and other infrastructure (Tables ES.6 and ES.7). For the 0.8- and 1.6-feet scenarios, transportation and other infrastructure combined estimated damages may be over $45 million; and for the 2.5- and 4.9-feet scenarios, estimated damages may be over $95 million, and for the 4.9 feet scenario, infrastructure estimated damages may be over $600 million.

The potential damages from a 100-year storm event represent additional damages that would occur on top of potential inundation damages for the corresponding projected SLR water height (The assessment's SLR projections are associated with water heights before a storm event (i.e., 0.8-, 1.6-, 2.5-, and 4.9-feet). A 100-year storm event could result in an additional temporary coastal flooding from a 100-year storm event. On average, a

Table ES.6: Estimated Financial Impacts: Potential Inundation with Projected Sea Level Rise

Water Height	Predicted Scenario	No Action Scenario Estimated Damages (2018$ rounded to nearest $100,000)	
0.8 feet	2030 SLR with no storm event under 5% likelihood of occurring. Estimate of potential inundation loss in the year 2030.	**Primary Damage:**	
		Property (structures, parking lots)[1]	$1,200,000
		Transportation infrastructure	$18,400,000
		Other infrastructure	$27,300,000
		Secondary Damage:	
		Loss of Port Business Revenue[2]	$16,100,000
		Total	$62,900,000
1.6 feet	2050 SLR with no storm event under 5% likelihood of occurring. Estimate of potential inundation loss in the year 2050.	**Primary Damage:**	
		Property (structures, parking lots)[1]	$1,200,000
		Transportation infrastructure	$23,900,000
		Other infrastructure	$27,300,000
		Secondary Damage:	
		Loss of Port Business Revenue[2]	$16,100,000
		Total	$68,500,000
2.5 feet	2100 SLR with no storm event under 50% likelihood of occurring. Estimate of potential inundation loss in the year 2100.	**Primary Damage:**	
		Property (structures, parking lots)[1]	$6,300,000
		Transportation infrastructure	$61,400,000
		Other infrastructure	$34,700,000
		Secondary Damage:	
		Loss of Port Business Revenue[2]	$24,800,000
		Total	$127,100,000
4.9 feet	2100 SLR with no storm event under 5% likelihood of occurring. Estimate of potential inundation loss in the year 2100.	**Primary Damage:**	
		Property (structures, parking lots)[1]	$266,900,000
		Transportation infrastructure	$551,700,000
		Other infrastructure	$64,300,000
		Secondary Damage:	
		Loss of Port Business Revenue[2]	$39,200,000
		Total	$922,100,000

Table ES.7: Estimated Financial Impacts: Potential Temporary Coastal Flooding (100-Year Storm Event) with Projected Sea Level Rise

Water Height	Predicted Scenario	No Action Scenario Estimated Damages (2018$ rounded to nearest $100,000)	
0.8 feet + water increase from 100-yr storm event	2030 SLR under 5% likelihood of occurring, with 100-year storm event occurring in the year 2030.[3] Estimating per storm event the potential coastal flooding damages in the year 2030.	**Primary Damage:** Structures (commercial, industrial) **Secondary Damage:** Storm Cleanup, Traffic Control, Emergency Response.[4] Total	$1,500,000 $1,500,000
1.6 feet + water increase from 100-yr storm event	2050 SLR under 5% likelihood of occurring, with 100-year storm event occurring in the year 2050.[3] Estimating per storm event the potential coastal flooding damages in the year 2050.	**Primary Damage:** Structures (commercial, industrial) **Secondary Damage:** Storm Cleanup, Traffic Control, Emergency Response.[4] Total	$6,300,000 $6,300,000
2.5 feet + water increase from 100-yr storm event	2100 SLR under 50% likelihood of occurring, with 100-year storm event occurring in the year 2100.[3] Estimating per storm event the potential coastal flooding damages in the year 2100.	**Primary Damage:** Structures (commercial, industrial) **Secondary Damage** Storm Cleanup, Traffic Control, Emergency Response.[4] Total	$12,100,000 $12,100,000
4.9 feet + water increase from 100-yr storm event	2100 SLR under 5% likelihood of occurring, with 100-year storm event occurring in the year 2100.[3] Estimating per storm event the potential coastal flooding damages in the year 2100.	**Primary Damage:** Structures (commercial, industrial) **Secondary Damage:** Storm Cleanup, Traffic Control, Emergency Response.[4] Total	$152,400,000 $152,400,000[5]

Note: Sea level rise estimated damages that occur without a storm event (inundation) are not included in the 100-yr storm estimates. 100-year storm flooding damages represent only those potential damages that would occur in addition to the loss due to sea level rise without a storm event.

[1]Impacted buildings were identified by the District and may not be consistent with the CoSMoS inundation and coastal flooding boundaries. Impacted parking lots were determined from CoSMoS boundaries. Therefore, parking lot and building impacts may not be consistent.

[2]Following the NOAA *What Will Adaptation Cost? Impact Assessment* methodology, this estimate only represents the annual loss for the corresponding scenario year in 2018 dollars. The Impact Assessment methodology estimates damages based on water height and one point in time. However, if the property were lost, the revenue loss would occur for subsequent years as well.

[3]Estimates represent the financial impact from temporary coastal flooding from a 100-year storm event with the corresponding projected SLR elevations.

[4]Cleanup, traffic control, and emergency response are included in annual operating budgets of the District staff. These potential impacts are discussed qualitatively in the report.
[5]Because inundation damages are expected to be substantially greater under the 4.9 feet scenario, 100-year storm event coastal flooding damages are less than previous scenarios.

100-year storm event could result in further flooding of up to approximately 3.77 feet depending upon the scenario and land elevation (OCOF, 2019). Thus, storm event flooding would result in added damages. For example, at 0.8 feet, it is estimated that $62.9 million in potential damages would result from potential inundation plus an additional $1.5 million is estimated if there were 100-year storm flooding event. Again, these estimates assume damages that could transpire without implementing additional adaptation strategies.

The total value ($/year) of each habitat and for those services valued for the whole system under baseline conditions and four projected SLR scenarios (0.8-, 1.6-, 2.5-, and 4.9-feet). Results were found by multiplying the estimated acreage by the total dollar per acre ($/acre) for each habitat.

Current value services provided by natural resources within the District range from an estimated $40 million - $61 million per year. The ecosystem services identified for each of the habitats were combined to estimate the total value of the District's natural resources. With projected SLR, the extant of different habitats has the potential to change, leading to changes in the predicted value of these resources. Under the most extreme projected SLR scenario

(4.9 feet), the value of District natural resources may decrease to a range of $29 million to $45 million. See Chapter 3 and Appendix C for more detail about the financial cost estimates.

Adaptation Planning

For this AB 691 Report, the District is not providing specific adaptation strategies for each potentially vulnerable asset or area on Tidelands (as described in Chapter 3). Due to the diversity and unique characteristics of the Public Trust lands managed by the District, a "one-size-fits-all" strategy is not conducive as adaptation strategies would need to be applied based on site-specific characteristics and vulnerabilities. In addition, the District applies concepts set forth by Assembly Bill 2800, identifying climate-safe infrastructure (and coastal-dependent assets) that are sustainable, adaptive, and that meets design criteria that aim for resilience in the face of shocks and stresses caused by the current and future climate (CSIWG 2018). To remain "climate-safe," the infrastructure and assets should be monitored, and adaptive measures taken to address long-term resiliency.

Instead, this AB 691 Report provides an adaptation planning process that can be used by the District and relevant stakeholders to plan for, and respond to, projected SLR. Developing a process, rather than select strategies that will be applied in the future when conditions may change, provides greater flexibility and potential cost-effectiveness. The District has elected to identify a process developed by the U.S. Navy for its planners and engineers to properly select adaptation strategies based on several criteria using a step-wise decision-making formula (NAVFAC 2017).

Strategy Implementation

The last stage of the proposed SLR planning approach is Strategy Implementation. A "trigger" approach to strategy implementation is intended to set into motion a series of actions to reduce the vulnerability of the asset to potential SLR inundation and temporary coastal flooding from a 100-year storm event. Following an iterative, cyclical process informed by best available climate science, updated with new data about District environmental and economic conditions, and that evaluates the effectiveness of strategies through incorporation of site-specific

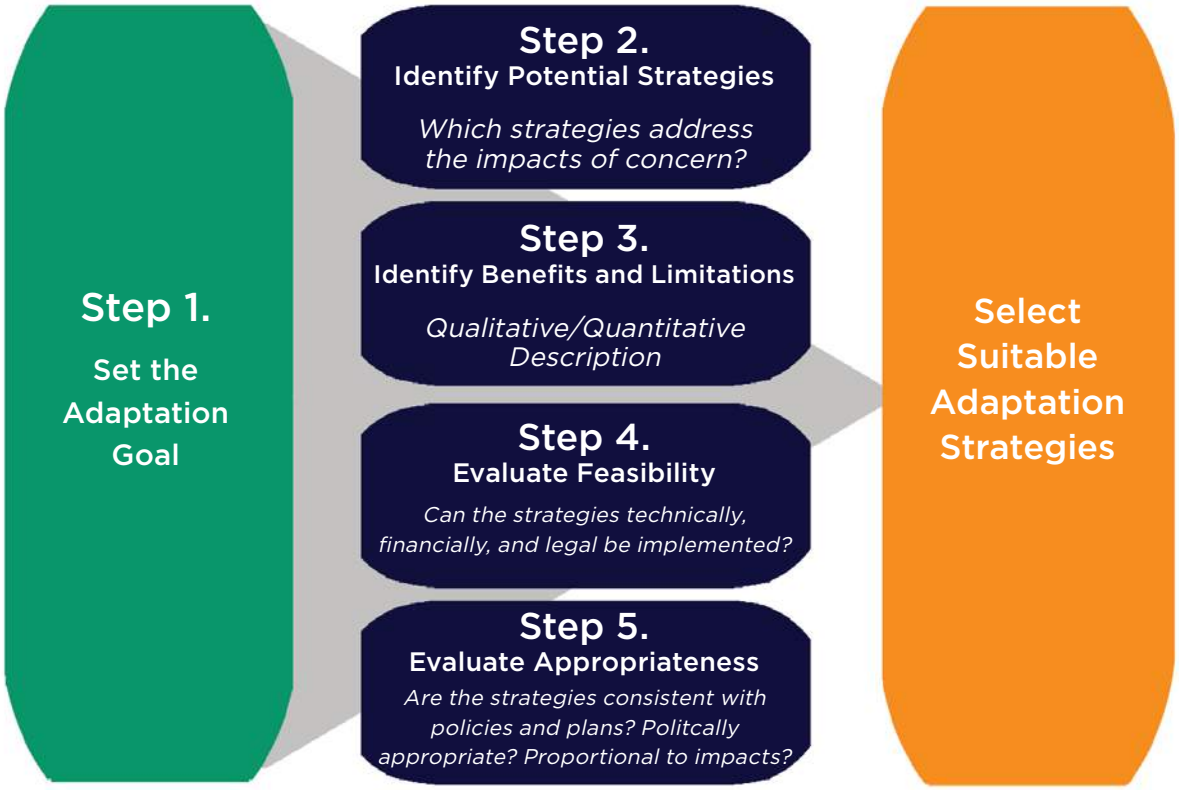

Figure ES.6: Proposed Adaptation Selection Process

assessments, the Framework can be continually improved and refined to reduce the risks associated with potential inundation and temporary coastal flooding from a 100-year storm event from future projected SLR.

Application of the adaptive management approach to potential projected SLR impacts would allow the District to plan and implement adaptation strategies in the near-term while remaining flexible enough to adjust future strategies in the face of uncertain conditions.

See Chapter 4 for more detail regarding adaptation planning and strategy implementation.

Diving at Centre City Embarcadero

Chapter 1 Introduction

In 2013, the State Legislature passed Assembly Bill (AB) 691, which was codified as Section 6311.5 of the California Public Resource Code (herein referred to as AB 691 or Section 6311.5). In promulgating Section 6311.5, the Legislature found that the "effect of climate change and sea level rise ([projected SLR]) will have an enormous implications for the state's economic and social future..." The Legislature also declared that "[a]ddressing the impacts of [projected SLR] . . . shall be among the management priorities of a local trustee." Accordingly, AB 691 requires local trustees of public trust lands whose gross public revenues average over $250,000 between January 1, 2009 and January 1, 2014 to prepare and submit to the State Lands Commission an assessment of how the local trustee proposes to address projected SLR. (Section 6311.5(c).)

Pursuant to AB 691 and subsequent direction from the SLC, and to be a useful tool for the District moving forward to address projected SLR impacts, the objectives of this document (AB 691 Report) are:

- Uses best available science to assess the vulnerability of projected SLR on the District's jurisdiction, including the updated OPC's State of California Sea-Level Rise Guidance: 2018 Update, as required by AB 691;
- Provides maps of areas that may be potentially impacted by projected SLR for the years 2030, 2050, and 2100;
- Estimate the potential impacts and financial costs associated with those potential impacts on granted trust lands in the District;
- Describe how the District proposes to address projected SLR to protect and preserve natural and built environment resources and facilities on trust lands.

1.1 AB 691

In conducting the projected SLR assessment, the local trustee shall consider and use relevant information from the *2009 California Climate Adaptation Strategy* prepared by the Natural Resource Agency, the *Report on Sea Level Rise Preparedness* prepared by the State Lands Commission, the *Sea-Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future*, a report prepared by the National Academy of Sciences, the *Resolution of the California Ocean Protection Council on Sea-Level Rise, the State of California Sea-Level Rise Guidance Document*, and any subsequent updates to those reports that become available six months prior to the date the local trustee submits the assessment to the SLC. (Section 6311.5(d).) The assessment must include the following:

- An analysis of the impacts of projected SLR, as described in the Resolution of the California Ocean Protection Council on Sea-level Rise and the latest version of the State of California Sea-Level Rise Guidance Document;
- Maps showing areas that may be affected by projected SLR in years 2030, 2050 and 2100, including potential impacts of a 100-year storm event;
- An estimate of financial costs of the impact of projected SLR on granted public trust lands, including the potential cost of repair of damage to and the value of lost use of improvements and land, as well as the anticipated cost to prevent or mitigate potential damage; and
- A description of how the local trustee proposes to protect and preserve existing and proposed natural and built environment resources and facilities, including, without limitation how wetlands and restoration and habitat preservation would mitigate impacts projected SLR. (Section 6311.(c)(1)-(c)(4).)

In addressing projected SLR, the local trustee shall collaborate with lessees, appropriate local, state and federal agencies, as well other users of granted public trust lands. (Section 6311.5(e).) However, AB 691 does not require a local trustee to implement any specific actions to address projected SLR. (Section 6311.5(j).) The assessment must be submitted to SLC by July 1, 2019. (Section 63115.(c).)

1.2 Trustee Background

This AB 691 Report analyzes projected SLR impacts for the District, including the San Diego International Airport (Airport), which is located on District tidelands but leased to the San Diego County Regional Airport Authority (Airport Authority).

1.2.1 San Diego Unified Port District

The District was formed by the State Legislature in 1962 through the San Diego Unified Port Act (Port Act), codified in California Harbors and Navigation Code, Appendix 1, and granted certain public trust tidelands and submerged tidelands in and around San Diego Bay (Bay). The District encompasses portions of five cities – San Diego, National City, Chula Vista, Imperial Beach and Coronado - and the San Diego International Airport. With approximately 5,750 acres of water and land, the District hosts a wide range of public trust compliant uses and improvements including public access, maritime, commercial, industrial, institutional, conservation, and recreation.

1.3 Historic Sea Level Rise Measurements in San Diego Bay

The National Oceanic and Atmospheric Association (NOAA) placed tide gauges around the country to track long-term trends in national oceanographic conditions, including changes in water levels. A tide gauge in San Diego Bay was placed in 1906 and is located on the Broadway Pier, which provides over one hundred years of data monitoring water levels and oceanographic conditions in San Diego Bay.

Over the past century, mean global sea level has risen approximately 0.07 inches per year up until 1993 where mean global projected SLR accelerated to a rate of 0.13 inches after 1993 (Church et al. 2013). From 1906 to 2017, the tide gauge in San Diego Bay recorded a rise of approximately 0.09 inches per year (NOAA 2019), equating to an approximate .71 feet, or 8.5 inches of projected SLR in San Diego in total during the 20th century (NOAA 2019).

1.4 Historic Projected Sea Level Rise Information

SLR is projected to potentially impact the coastal lands along the San Diego Bay, creating a set of challenges and related opportunities to build the resilience and adaptive capacity of the area. The potential impacts from projected SLR, such as inundation, storm events, and

increased risk of flooding and coastal erosion, have the potential to impact the District, including natural resources, public access, infrastructure, and business operations.

Previous SLR vulnerability assessments in the region highlighted the vulnerability of coastal areas of San Diego to increasing water elevations. The ICLEI 2012 found that the greatest projected SLR impact in the near-term could be an increase in the frequency and intensity of the kind of flooding that the region already experiences due to waves, storm surge, El Niño events, and very high tides.

Starting around 2050, the Bay may become more vulnerable to potentially reoccurring inundation of certain locations and assets, some of which are being planned and built today.

As a result, this longer term risk of potential inundation should be a consideration in today's decision-making (ICLEI 2012). Recent science summarized in California's 4th Climate Change Assessment noted that projected SLR in San Diego is expected to "increase rapidly in the second half of the century and will be punctuated by short periods of storm-driven extreme sea levels that will imperil existing infrastructure, structures, and ecosystems with increasing frequency" (Kalansky, et. al. 2018). Other studies have highlighted the impacts of projected SLR to commercial and other economic activities within the area, if no adaptation actions are implemented (MIIS 2018).

Biking in Coronado

Chapter 2 Methodology and Approach

The first stage in the District's AB 691 compliance was to undertake a vulnerability assessment, using current, best available science for SLR projections and associated modeling to incorporate new climate science and advances in technology.

The vulnerability assessment (Chapter 2: Methodology and Approach and Chapter 3: Vulnerability Assessment) also provides an opportunity to update the District's inventory of assets and/or changes to geography or topography. By using the best available science and updated assets and topography, the projected SLR mapping can reflect changes over time that may reveal changes in risk associated with changes in exposure, sensitivity, or adaptive capacity.

This chapter summarizes the District's methodology and approach for this AB 691 Report, as required by Section 6113.5. The methodology and approach of the assessment were developed and adapted from best practices used in other projected SLR vulnerability assessments (County of San Mateo 2018). They were also informed by state projected SLR guidance documents (OPC 2018, CCC 2018).

2.1 Project Area

The area of San Diego Bay encompassed by the historic mean high tide line amounts to approximately 15,000 acres of filled and submerged lands, and an existing shoreline around the Bay of approximately 54 miles in length. In accordance with Section 6113.5,

Figure 2.1: San Diego Unified Port District

this AB691 Report evaluates only the tidelands and submerged tidelands granted to the District.

The District has been granted approximately 5,750 acres or about 37 percent of all state tidelands and submerged tidelands around San Diego Bay. The shoreline frontage is approximately 34 miles, which is equivalent to 61 percent of the Bay's total shoreline. The District's tidelands are divided into ten planning districts that correspond to the District's Port Master Plan. Planning district boundaries conform closely to the boundaries of established municipal jurisdictions following logically grouped geographic areas.

The Harbor Island Planning District also includes the Airport. While the District still owns and holds the Airport's underlying land in trust, the Airport, including all land uses, activities, and improvements, is under direct jurisdiction of the Airport Authority. The Airport Authority recently completed an assessment that evaluates risks of projected SLR on the Airport. A summary of potential projected SLR inundation and coastal flooding on the Airport is included in this AB 691 Report.

2.2 Stakeholder Engagement

AB 691 requires local trustees of public trust lands to collaborate with its lessees, local, state and federal government agencies, and users of the granted public trust lands to address projected SLR. District staff, regional stakeholders, and subject matter experts from public agencies, non-profit groups, and private companies were engaged during the development of the AB 691 Report to gather information and learn from projected SLR and coastal experts. Stakeholders included the U.S. Navy, federal, state, regional, and local government agencies, academia, environmental interest groups, District tenants, and the San Diego Port Tenants Association.

Beginning in the fall of 2017 and concluding in the winter of 2018, stakeholders provided technical feedback and offered support for the District's projected SLR approach, including selection of SLR projections to be used in the vulnerability assessment, coastal flooding model, and assets to be evaluated. Stakeholders also provided input on the vulnerability assessment including flood maps in Chapter 3 and the projected SLR planning process described in Chapter 4. The stakeholder process led to a deeper understanding

of SLR projections, asset management, and potential impacts and the creation of the Framework.

2.3 Sea Level Rise Science

The *State of California Sea-Level Rise Guidance Document*, initially released in 2010 and first updated in 2013, provided guidance for incorporating SLR projections into planning, design, permitting, construction, investment, and other decisions. In 2012, the National Research Council (NRC) released *Sea-Level Rise for the Coasts of California, Oregon, and Washington - Past, Present and Future* provided estimates and projections of future sea-level rise (NRC 2012).

The future sea level projections from NRC 2012 guided agencies in their SLR planning in the subsequent years. Since the NRC study, a new Intergovernmental Panel on Climate Change (IPCC) report was published containing updated SLR projections based on new scenarios, model simulations, and scientific advances (Church et al. 2013). New research was also published on the primary drivers of sea level change, which includes important new work on ice sheet mass loss in Antarctica, as well as on new methods for producing probabilistic projections of local sea level change (Kopp et al., 2014).

In April 2017, at the request of the Ocean Protection Council (OPC), a Working Group of OPC's Science Advisory Team released a report synthesizing the state of projected SLR science entitled *Rising Seas in California: An Update on Sea-Level Science* (2017 OPC Science Report). The 2017 OPC Science Report was prepared and peer-reviewed by some of the nation's foremost experts in coastal processes, climate and SLR science, observational and modeling science, the science of extremes, and decision-making under uncertainty. The 2017 OPC Science Report provides a new method for determining probabilistic projections of SLR at historic tide gauges throughout California including the tide gauge in San Diego Bay.

The 2017 OPC Science Report, provided the scientific foundation for the 2018 OPC SLR Guidance (Griggs et al., 2017), which included advances in SLR modeling and improved understanding of the processes that could drive extreme global SLR from ice loss from the Greenland and Antarctic ice sheets. The 2018 OPC SLR Guidance, along with other authoritative peer-reviewed science (if not less precautionary than

the foundation set forth by the 2017 OPC Science Report) serves as the best available science to date on which to base future planning and investing decisions in California at the time this AB 691 Report was completed.

The California Coastal Act directs the California Coastal Commission (CCC) and local governments to use the best available science in coastal land use planning and development. The CCC *Sea Level Rise Policy Guidance 2018* recommends using the SLR projections from the 2018 OPC SLR Guidance as best available science to inform planning decisions and project design. For this AB 691 Report, best available science refers to the 2018 OPC SLR Guidance projections as illustrated in Table 2.1.

Extreme Sea Level Rise Projections

The 2018 OPC SLR Guidance includes an estimation of a potential extreme SLR projection based on research indicating that over 10 feet of projected SLR may be possible by the end of the century. Unlike the RCP 8.5 projections, the 2018 OPC SLR Guidance was not able to provide probabilities of occurrence for this extreme scenario, shown as H++ in Table 2.1. Researchers have been trying to parameterize computer models to predict the influence of melting ice in the West Antarctic, the primary

Table 2.1: Ocean Protection Council Probabilistic Projections in Feet

(Based on Kopp et al., 2014)	Median	Likely Range	1-in-20 Chance	1-in-200 Chance	H++ scenario (Sweet et al., 2017) *Single scenario
	50% probability SLR meets or exceeds...	66% probability SLR is between...	5% probability SLR meets or exceeds...	0.5% probability SLR meets or exceeds	
		Low Risk Aversion		Medium-High Risk Aversion	Extreme Risk Aversion
High emissions 2030	0.9	0.4 - 0.6	0.7	0.9	1.1
High emissions 2050		0.7 - 1.2	1.4	2.0	2.8
High emissions 2100	2.6	1.8 - 3.6	4.5	7.0	10.2

[3]Edwards et al. 2019. Revisiting Antarctic Ice Loss Due to Marine Ice-Cliff Instability. *Nature*.

contributor to the H++ scenario, to better understand its contribution to SLR. New research released in January 2019 indicates that the extreme SLR scenario may be overestimated.[3] As a result, the District did not include this extreme SLR scenario in its assessment. As the scientific conversation continues to evolve, the District plans on integrating new projections of SLR into future vulnerability assessments and its planning process.

2.4 Selection of Sea Level Rise Projections

The District, in consultation with its stakeholders, chose SLR projections consistent with the 2018 OPC SLR Guidance that represents the 95th percentile (1-in-20 chance) for the years 2030, 2050, and 2100 (see Table 2.2).

Given the uncertainty of climate science and the variability in projections towards the end of the century, the District also opted to analyze projected SLR impacts using the 50th percentile projection for 2100. As required by AB 691, the District assessed projected SLR impacts using the four different projections without, then with, 100-year storm events. The intention of separating the analyses was to help the District better understand the impacts caused by potential daily tidal inundation compared to temporary

Table 2.2: Selected Sea Level Rise Projections

Feet (Meters) Above 1991 – 2009 mean	Median		Likely Range		1-in-20 Chance		1-in-200 Chance	
Year/ Percentile	50% probability SLR meets or exceeds		67% probability SLR is between		5% probability SLR meets or exceeds		0.5% probability SLR meets or exceeds	
	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters
2030	0.5	0.15	0.4 - 0.6	0.12 - 0.18	0.7	0.21	0.9	0.28
2050	0.9	0.27	0.7 - 1.2	0.21 - 0.37	1.4	0.43	2.0	0.61
2100 (RCP 8.5)	2.6	0.79	1.8 - 3.6	0.55 - 1.10	4.5	1.4	7.1	2.16

coastal flooding from a 100-year storm event caused by a 100-year storm surge. Table 2.2 illustrates the single range of SLR projections for the years 2030 and 2050 and multiple ranges for the year 2100.

2.5 Sea Level Rise Mapping

The SLR mapping consists of a quantitative geospatial assessment of projected SLR and 100-year storm surge impacts to District assets. For the District, the best available modeling data was the USGS CoSMoS 3.0. CoSMoS is a publicly available, federally supported system and is the primary model used by coastal jurisdictions and agencies along the California coast to assess vulnerabilities from potential inundation and temporary coastal flooding from a 100-year storm event.

United States Geological Survey (USGS) Coastal Storm Modeling System

CoSMoS is a collection of potential inundation maps produced for the California coast by the USGS. CoSMoS incorporates SLR projections and makes detailed predictions (meter-scale) over large geographic scales (hundreds of kilometers) of potential inundation and storm-induced coastal flooding and erosion. CoSMoS combines 0.8 feet projected SLR increments and four different storm return periods (daily, annual, 20-year, 100-year) into a series of inundation maps.

AB 691 requires local trustees to map and assess impacts of projected SLR for the years 2030, 2050, and 2100 (including the potential impacts of 100-year storm events). USGS presents these modeled data independent of any projected analysis timeframe (i.e., they do not indicate when any projected SLR increment will occur). As CoSMoS operates using set 0.8 feet increments of projected SLR, the OPC SLR projections (with associated timeframes) selected by the District were matched to the closest value in CoSMoS for use in the District's analysis. As a result, the scenario elevations from CoSMoS may differ slightly from the OPC projections. The selected CoSMoS SLR scenarios and the corresponding OPC projections and are listed in Table 2.3.

For each CoSMoS mapping increment, both potential daily inundation layers, as well as temporary coastal flooding from a 100-year storm event (storm surge) are included in the analysis. Exposure maps were created by overlaying the

Table 2.3: Alignment of San Diego Sea Level Rise Projections with CoSMoS Projected Sea Level Rise Scenarios

CoSMoS Model Levels in Meters	Recommended Ocean Protection Council[1] SLR Probabilistic Projections	
	Increase Above Current Levels	Emissions Scenario
0.8 feet/0.25 meters	0.7 feet (0.21 meters)	2030 (1-in-20 Chance)
1.6 feet/0.5 meters	1.4 feet (0.43 meters)	2050 (1-in-20 Chance)
2.5 feet/0.75 meters	2.6 feet (0.79 meters)	2100 (Median)
4.9 feet/1.5 meters	4.5 feet (1.4 meters)	2100 (1-in-20 Chance)

Median = 50% probability SLR meets or exceeds...
1-in-20 Chance = 5% probability meets or exceeds...

[1]Ocean Protection Council 2018. California Sea-Level Rise Guidance 2018 Update

CoSMoS scenarios on District tidelands and submerged tidelands. District assets within the extent of projected SLR inundation or temporary coastal flooding from a 100-year storm event were determined to be exposed unless specific elevation data for the asset demonstrated that it was not within projected water elevations for each projected SLR scenario.

2.5.1 Built Environment Assets and Natural Resources

Built environment assets that were analyzed in this assessment include the transportation network such as roads, rail, bike routes, and pathways; infrastructure such as building structures, parks, sewer lifts and storm drains, marine terminals, wharves, and piers. Natural resources such as nearshore habitats and least tern nesting areas were also included.

Built Environment Assets

With input from District staff and stakeholders, assets were further categorized as critical infrastructure (see Table 2.4). Critical infrastructure refers to processes, systems, facilities, technologies, networks, assets and services essential to public health and safety, national security, the regional economy, or effective functioning of the District. Critical infrastructure can be stand-alone or interconnected and interdependent within and across

Table 2.4: District Assets Analyzed for Vulnerability

Assets	Critical Infrastructure
Transportation	
Roads	X
Rail	X
Pathways	
Bikeways	
Infrastructure	
Buildings	X
Marine Terminals	X
Docks and Piers	X
Stormwater Systems	X
Sewer Lifts	
Wastewater Systems	
Sanitary Pumpouts	
Parks	
Boat Launch Ramps	
Fuel Docks	
Natural Resources/Environmental	
Beach Accessible Areas	
Habitats	

the District's boundaries. Disruptions, incapacitation, or destruction of critical infrastructure could result in public safety issues, adverse economic effects, and harm to the District's essential operations.

Additional assets, including but not limited to, communication networks and utilities are critical infrastructure that would be impacted by potential inundation and/or temporary coastal flooding from a 100-year storm event. As this data was not available at the time of AB 691 Report development, it was not included. Omission of this data is not meant to construe the lack of importance of these assets or recognition of potential impacts from projected SLR.

All physical asset data was provided by the District in a spatial format. A more detailed discussion of each asset type evaluated in this AB 691 Report is provided in Appendix A.

Natural Resources

Pursuant to AB 691, the vulnerability assessment evaluated projected SLR impacts to the District's natural resources including subtidal, intertidal, and upland nearshore habitats. Habitats may be

able to respond to changing sea levels if they can keep pace with future water elevations by migrating vertically or upslope. However, habitat area may be constrained by the built environment or conflicting environmental management priorities, which favor one type of habitat over another. Given the geographic and ecological considerations, the assessment of projected SLR impacts necessitated a different method than the geographic overlay approach as applied to other physical assets in the District.

The analysis of future impacts to habitats focused on eelgrass, salt marsh, uplands, and beach/dune habitats found within the District's jurisdiction. A baseline extent or area of each habitat were measured, and their current vertical elevation determined in 0.8 feet elevation increments. The vertical elevation range of each habitat was then used to calculate the *total available area* of undisturbed submerged land or tidelands that could potentially support each habitat. The *absolute occupancy* of each habitat within their corresponding elevation range was calculated by dividing the existing habitat extent by the total available area. Furthermore, *relative occupancy* within each 0.8 feet elevation increment was calculated by dividing the occupied extent per 0.8 feet elevation increment by the total habitat extent within the elevation range. It was assumed in this analysis that these occupancy values remain consistent across all projected SLR scenarios. This information was used to determine predicted occupancy for each habitat as projected SLR increases and habitats migrate upwards.

With an increase in projected SLR, it was assumed that habitats could keep pace and move upslope unless hindered by the built environment. For each SLR scenario, the elevation range of each habitat was adjusted upwards. The total available area of each habitat's new elevation range was calculated. Using the absolute and relative occupancy values, the occupied horizontal extent of each habitat was calculated per projected SLR scenario. This allowed for a comparison of total available area for each habitat as well as the extent of occupied habitat. Further explanation of the data and model assumptions to assess impacts to habitats can be found in Appendix B.

2.6 Sensitivity and Adaptive Capacity

Vulnerability from projected SLR, as addressed in this document, is composed

of three major components: exposure, sensitivity, and adaptive capacity.

- Exposure: How much an asset is subject to potential inundation or temporary coastal flooding from a 100-year storm event. ICF International, Inc. provided and performed the exposure analysis using the OPC projections and CoSMoS.
- Sensitivity: The degree to which the function of an asset or resource would be impaired (i.e., weakened, compromised, or damaged) by the impacts of projected SLR. See Table 2.5. for a description of low and high sensitivity.
- Adaptive Capacity: The inherent ability of an asset or resource to adjust to projected SLR impacts without the need for substantial intervention or modification. See Table 2.6. for a description of low and high adaptive capacity.

In coordination with District staff, assets were categorized according to their sensitivity and adaptive capacity to potential inundation and temporary coastal flooding from a 100-year storm event. Given the broad scope of this assessment and the requirements of AB 691, site-specific assessments were not performed for individual assets exposed to potential inundation and/or temporary coastal flooding from a

Table 2.5: Sensitivity

Category	Rating	Description
Sensitivity	LOW	Asset or resource is not affected or minimally affected by coastal hazards at a given SLR scenario.
	HIGH	An asset or resource would experience major damage or long-term service interruptions due to coastal hazard impacts, requiring significant effort to restore/rebuild to original condition.

Table 2.6: Adaptive Capacity

Category	Rating	Description
Adaptive Capacity	HIGH	Asset or resource can easily be adapted or has the ability and conditions to adapt naturally.
	LOW	Asset or resource has limited ability to adapt without substantial changes.

Table 2.7: Summary of Asset Sensitivity and Adaptive Capacity to Sea Level Rise

Asset	Sensitivity	Adaptive Capacity
Roads	HIGH	LOW
Rails	HIGH	LOW
Bikeways	LOW	HIGH
Pathways	LOW	HIGH
Marine Terminals	HIGH	LOW
Piers	HIGH	LOW
Stormwater Management	HIGH	LOW
Wastewater Management	HIGH	LOW
Sewer Lifts	HIGH	HIGH
Sanitary Pump Outs	LOW	HIGH
Buildings	HIGH	LOW
Beach Accessible Areas	HIGH	LOW
Parks	LOW	HIGH
Boating Facilities	LOW	HIGH
Fuel Docks	HIGH	HIGH
Boat Launch Ramps	LOW	HIGH

100-year storm event. While assets of the same type (e.g. different parks in the District) may have different levels of sensitivity or adaptive capacity given specific site conditions, they have been generalized for this assessment as shown in Table 2.7.

The sensitivity and adaptive capacity of an asset should be used in conjunction with exposure to assess the overall vulnerability of an asset to projected SLR and a 100-year storm event. Those assets with a "HIGH" sensitivity and "LOW" adaptive capacity (shown in orange) are generally at more risk

than assets with a "LOW" sensitivity and "HIGH" adaptive capacity (shown in green). (See Appendix A for more detail about the District's assets and their sensitivity and adaptive capacity to potential inundation and temporary coastal flooding from a 100-year storm event resulting from projected SLR.)

2.7 Financial Impacts Analysis

The financial analysis represents a high-level approximation, with generic structure and infrastructure replacement or repair costs that may not reflect actual costs and specifications in the event of a real loss. Financial costs of assets were collected from local sources, including the District and national construction databases. Revenue losses were calculated using District sources. All costs are in 2018 dollars.

Financial estimates were calculated by primarily following the methodology found in the NOAA report, *What Will Adaptation Cost? An Economic Framework for Coastal Community Infrastructure* (NOAA 2013). The report provides a framework for comparing the costs and benefits of adaptation strategies that would lessen the coastal flooding impacts of current and future projected SLR. Because AB 691 required an estimate of financial impacts and the cost of adaptation strategies without conducting a more comprehensive comparative benefit-cost analysis, this study utilizes the relevant NOAA methodology for estimating the financial impacts rather than the full benefit-cost estimates.

2.8 Limitations

Certain limitations and data constraints shaped the scope of the AB 691 Report, as described below. Additionally, as stated below, certain disclaimers apply to the AB Report and usage of the report by third-parties.

2.8.1 Data Availability

This AB 691 Report used readily available data to identify vulnerable areas and assets and estimate costs. This information was augmented by interviews with District staff and site visits. All asset data, including associated revenue, were provided by the District or from national construction databases.

2.8.2 Use of this AB 691 Report

Consistent with AB 691, data and assessment in this AB 691 Report is intended to be used for informational

and planning purposes only. The data in the AB 691 Report shall be submitted to the SLC as required by Section 6113.5 and may be used by the District in analyzing potential projected SLR and associated California Coastal Act consistency of the proposed Port Master Plan Update at a programmatic level in the proposed Environmental Impact Report. As development or projects move forward, site-specific evaluations are anticipated to be needed to customize projected SLR and associated adaptation measures depending on the location and type of project proposed.

2.8.3 Sea Level Rise Modeling Limitations

This vulnerability assessment relied on existing projected SLR modeling tools. The maps in the AB 691 Report are intended to provide a District-wide scale assessment of potential inundation and temporary coastal flooding from a 100-year storm event due to specific projected SLR and 100-year storm event scenarios.

Flooding due to projected SLR and 100-year storm events were predicted using the currently available best science at a District-wide scale, but there exists a possibility of flooding in areas outside of those predicted, and even the best predictions cannot guarantee the safety of an individual or structure.

All underlying data for the potential inundation and temporary coastal flooding from a 100-year storm event is from CoSMoS 3.0 (with exception of buildings and piers, see below). The model incorporates wave projections, tides, and regional atmospheric forcing to generate sea and surge levels. The CoSMoS Digital Elevation Models (DEM) are based data was derived from the Coastal California Data Merge Project which includes LiDAR data collected from 2009 through 2011 and multi-beam bathymetry collected between 1996 and 2011 extending out to the three nautical mile limit of California's state waters. Consequently, any post-2011 changes to the topography are not captured by the DEM. All projected SLR modeling and mapping were performed by ICF International, Inc. With exception of buildings and piers, all asset exposure tables and hazard mapping reflect output provided by ICF.

CoSMoS does not recognize existing buildings that may overhang the water or piers. As a result, these buildings and piers are incorrectly shown to be impacted by zero water elevation using

the CoSMoS model. To account for this issue, the District chose to develop and implement a local model for buildings to account for footprints that are on land and water and for piers. Instead of using the CoSMoS topographic file, the District provided specific ground elevations for buildings within the District and subtracted the projected water levels for the four SLR scenarios. This local model was applied to all buildings and piers. The application of two differing models resulted in inconsistencies between the CoSMoS projected SLR impacts and the local model. Specifically, some buildings shown to be impacted by potential inundation or temporary coastal flooding from a 100-year storm event in the CoSMoS model, where not show to be impacted using the District's local model. As a result, exposure tables in the AB 691 Report show fewer impacts to buildings from potential inundation and temporary coastal flooding from a 100-year storm event than as illustrated in the flood maps produced by the CoSMoS model. This may result in an underestimation of financial impacts to assets.

The Airport Authority used more recent on-airport ground elevation data than the default settings within the CoSMoS tool. This was done to ensure that all modeled scenarios took into consideration the Airport Authority's recent redevelopment projects.

2.8.4 Financial Analyses Limitations

The adaptation strategy cost estimates are intended to provide an approximation of per unit project costs and do not represent conceptual level of design costs, preliminary design costs, or final design costs. The actual project descriptions for adaptation strategies (and construction costs) may differ from what is provided herein. It is recommended that financial feasibility not be assessed until any preliminary design is accomplished, based on a more thorough consideration of coastal processes, regulatory and environmental opportunities and constraints, and engineering.

The financial impact assessment contains an analysis of recurring revenues and costs to the District from potential loss of property and services. It is based on estimates, assumptions, and other information developed from our research, interviews, telephone discussions with District staff, and information collected through fiscal impact analyses previously prepared.

The financial impact analysis is not considered to be a "financial forecast" nor a "financial projection," as technically defined by the American Institute of Certified Public Accountants. The word "projection" used within this report relates to broad expectations of future events or market conditions. The analysis also does not consider potential projected SLR impacts on public health, socio-economic issues, or environmental damage (e.g., oils spills and discharge of pollution).

The sources of information and basis of the estimates are stated herein. While we believe the sources of information are reliable, the District and the authors of this AB 691 Report do not express an opinion or any other form of assurance on the accuracy of such information. The analyses are based on estimates and assumptions that are inherently subject to uncertainty and variation depending on evolving events. Some assumptions inevitably will not materialize, unanticipated events and circumstances may occur, and actual results may vary from the projections. Therefore, the District and authors of the AB 691 Report cannot and do not represent that the results presented here will be achieved.

Disclaimers:

The District implies no warranties or guarantees regarding any aspect or use of this information. The maps contained herein are not detailed to the parcel scale and a party that uses or relies on said maps does so at its own risk. The District and the authors of this AB 691 Report do not assume liability for any injury, death, property damage, or other effects of projected SLR or any flooding, whether associated with a 100-year storm event or otherwise. Any user (other than the District and SLC) of this report and associated data, findings, recommendations, etc. assumes all responsibility for the use thereof, and further agrees to hold the District and the authors of this AB 691 Report harmless from and against any damage, loss, or liability arising from any use of this information.

Chapter 3 Vulnerability Assessment

3.1 Introduction

This chapter focuses on District vulnerabilities from potential inundation caused by projected SLR, and temporary coastal flooding from a 100-year storm event. Following the methodology presented in Chapter 2, a summary of impacts to District assets from the four modeled SLR scenarios, with and without a 100-year storm event, is provided on a District-wide scale, and at the planning district level. Where impacts to specific assets cannot be quantified, a qualitative summary of the potential consequences to District operations and infrastructure is presented.

Finally, this chapter concludes with a discussion of the estimated financial impacts to the District from projected SLR under the "no action" condition.

3.2 District Vulnerability: Key Takeaways

Overall, potential exposure to District assets is driven by coastal storm events coupled with rising sea levels between 0.8 to 2.5 feet. Beyond 2.5 feet of projected SLR, potential inundation may increase across the District. Low lying assets in or adjacent to the water, such as beach accessible areas, boat launches, and sewer lifts are projected to experience impacts from potential inundation at 0.8 feet of projected SLR. Assets that provide public access (e.g., pathways, bikeways, piers) and recreational opportunities (e.g. parks) become increasing impacted by potential inundation, and then exacerbated by storm surge from a 100-year storm event starting at 1.6 feet of projected SLR.

At 4.9 feet of projected SLR, with and without a 100-year storm event, most

Table 3.1: District Asset Vulnerability from Potential Inundation with Projected Sea Level Rise

Assets	Total Quantity in District	Sensitivity	Adaptive Capacity	Exposure to Inundation			
				0.8 ft SLR	1.6 ft SLR	2.5 ft SLR	4.9 ft SLR
Roads (linear miles)	47.9	HIGH	LOW	1%	1%	2%	26%
Rail (linear miles)	16.2	HIGH	LOW	0%	0%	0%	57%
Bikeways (linear miles)	5.9	LOW	HIGH	1%	2%	10%	55%
Pathways (linear miles)	22.2	LOW	HIGH	7%	8%	15%	60%
Marine Terminals (acres)	233.4	HIGH	LOW	0%	0%	1%	37%
Buildings (count)	590	HIGH	LOW	0%	0%	1%	23%
Piers (count)	15	HIGH	LOW	0%	0%	0%	75%
Stormwater Management (count)	458	HIGH	LOW	4%	4%	7%	45%
Sewer Lifts (count)	10	HIGH	HIGH	20%	20%	30%	70%
Boat Launch Ramps (count)	3	LOW	HIGH	100%	100%	100%	100%
Beach Accessible Areas (acres)	11	HIGH	LOW	71%	75%	80%	93%
Parks (acres)	144.6	LOW	HIGH	3%	3%	6%	45%

Table 3.2: District Asset Vulnerability from Potential Inundation and Temporary Coastal Flooding (100-Year Storm Event) with Projected Sea Level Rise

Assets	Total Quantity in District	Sensitivity	Adaptive Capacity	Exposure to Temporary Coastal Flooding			
				0.8 ft SLR	1.6 ft SLR	2.5 ft SLR	4.9 ft SLR
Roads (linear miles)	4,987.3	HIGH	LOW	2%	5%	16%	46%
Rail (linear miles)	16.2	HIGH	LOW	0%	0%	12%	83%
Bikeways (linear miles)	5.9	LOW	HIGH	10%	17%	34%	82%
Pathways (linear miles)	22.2	LOW	HIGH	14%	24%	43%	78%
Marine Terminals (acres)	233.4	HIGH	LOW	0%	0%	9%	69%
Buildings (count)	590	HIGH	LOW	1%	3%	8%	46%
Piers (count)	15	HIGH	LOW	0%	19%	32%	88%
Stormwater Management (count)	458	HIGH	LOW	5%	14%	30%	66%
Sewer Lifts (count)	10	HIGH	HIGH	30%	30%	50%	90%
Boat Launch Ramps (count)	3	LOW	HIGH	100%	100%	100%	100%
Beach Accessible Areas (acres)	11	HIGH	LOW	79%	83%	90%	95%
Parks (acres)	144.6	LOW	HIGH	6%	11%	25%	72%

District assets have the potential to be impacted by projected SLR-induced flooding.

Critical infrastructure such as roads, rail, and the stormwater system are particularly sensitive to potential SLR inundation or a 100-year storm event that could obstruct business operations, limit public access, and/or lead to public safety challenges including emergency response and recovery. Impacts to critical infrastructure have the potential to increase with potential inundation at 4.9 feet of projected SLR and projected temporary coastal flooding from a 100-year storm event at 2.5 feet of projected SLR.

The District contains approximately 7,500 slips or moorings for recreational, commercial fishing, sportfishing, marine services, and Harbor Police. While slips and moorings can be elevated for increased projected SLR, substantially larger storm events combined with elevated sea levels may lead to more extensive damage and longer recovery times. Although this analysis did not evaluate impacts to floating docks nor the fueling infrastructure, these assets could also be damaged with higher sea levels and 100-year storm events.

Tables 3.1 and 3.2 summarize the exposure results for each of the assets, across all scenarios for all of District Tidelands.

Coronado Ferry Landing

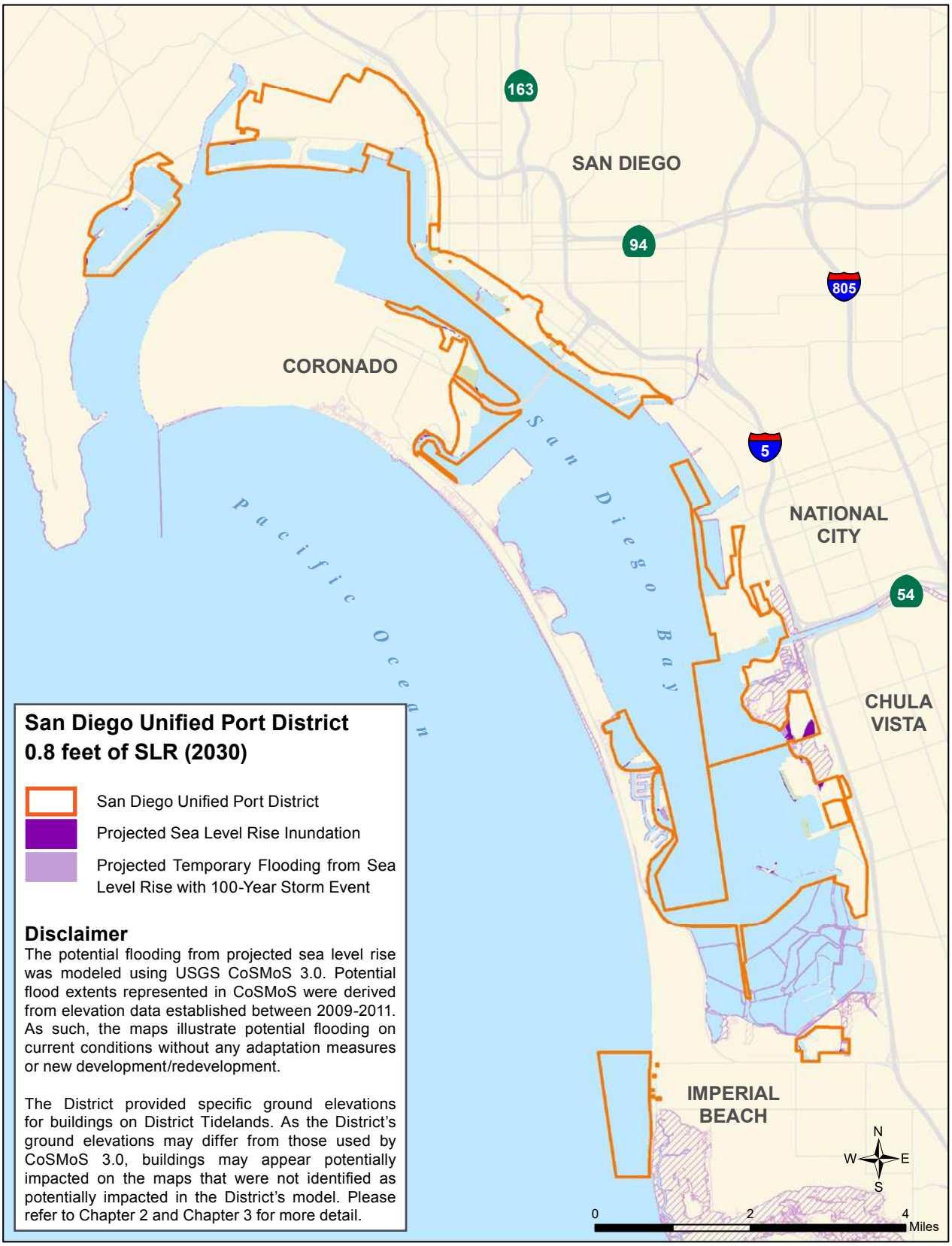

Figure 3.1: District Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise in 2030

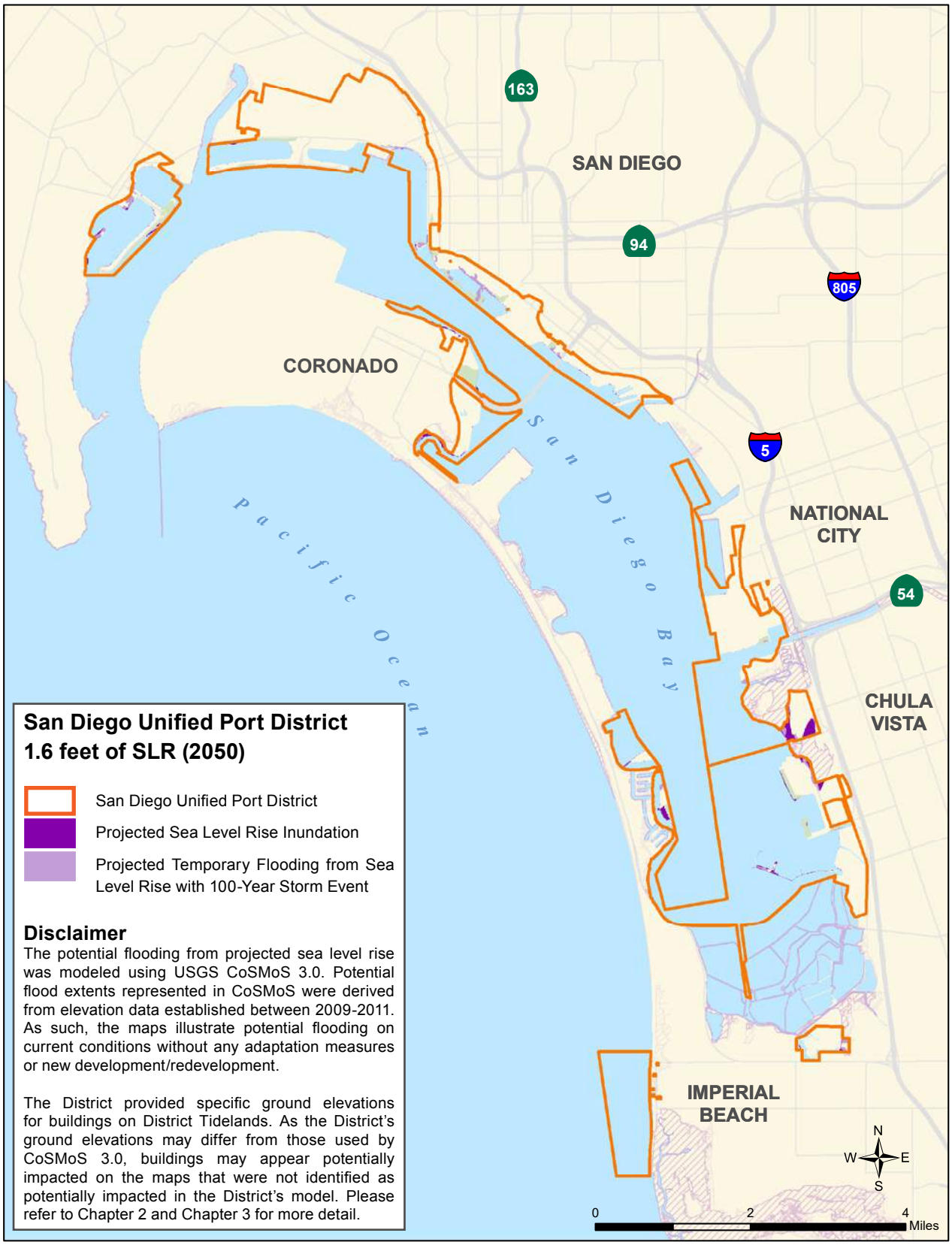

Figure 3.2: District Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise in 2050

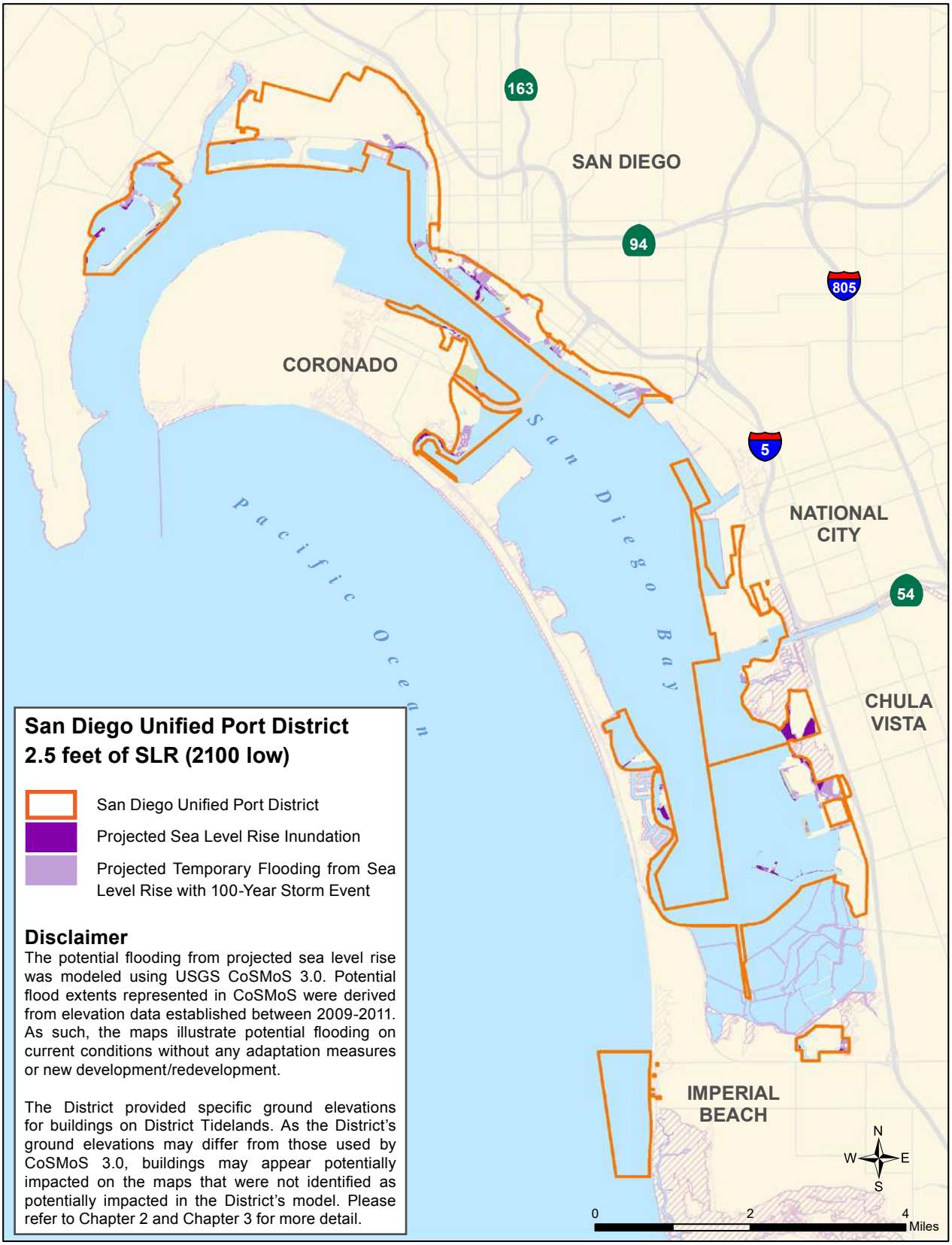

Figure 3.3: District Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise in 2100 (Low Scenario)

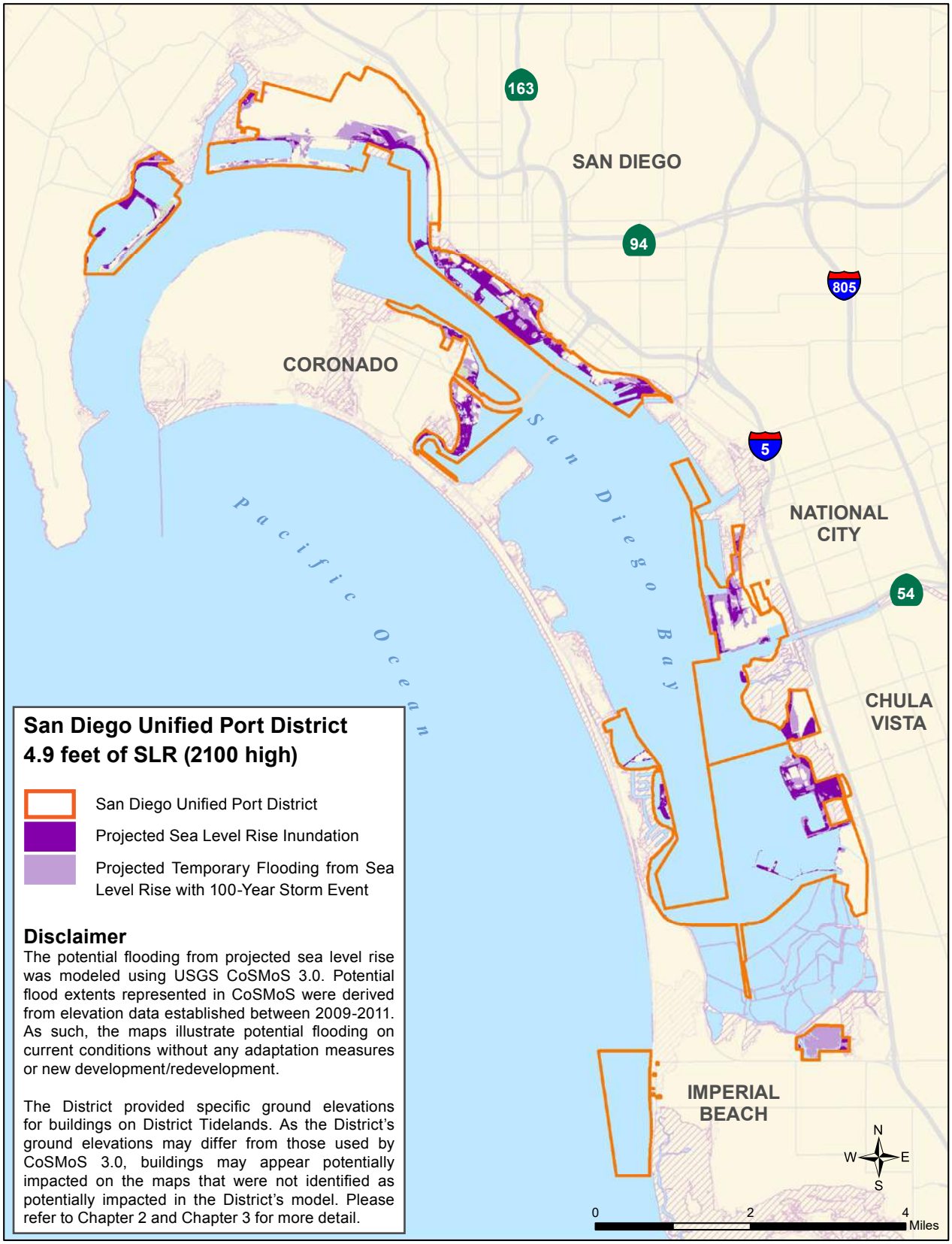

Figure 3.4: District Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise in 2100 High Scenario)

3.3 Planning Districts

The following sections summarize the exposure results for planning district assets across all scenarios.

3.3.1 Shelter Island Planning District

3.3.1.1 Planning District Setting

Located on the south side of the Point Loma Peninsula, the Shelter Island Planning District is adjacent to upland commercial and residential communities, military installations, and the Cabrillo National Monument. The Shelter Island Planning District includes over five miles of waterfront lined with a diverse assortment of water and land uses including commercial fishing, sportfishing, recreational berthing, marine sales and services, and commercial recreation uses. Open space and visitor-serving amenities include a linear recreational park along the Bay with a shoreline pathway and recreation areas, complemented by the La Playa Trail and Kellogg coastal access on the basin side, and the Shelter Island boat launch on the Bay side.

3.3.1.2 Shelter Island Vulnerabilities: Key Takeaways

Low lying areas in Shelter Island may experience impacts from potential inundation and temporary coastal flooding from a 100-year storm event earlier than other areas around San Diego Bay. Past 2050, public access and buildings that are at lower elevations in this Planning District are projected to be substantially impacted by temporary coastal flooding from a 100-year storm event. Shelter Island contains approximately 3,000 slips or moorings as well as fueling stations for recreational boating. While slips and moorings can be elevated for increased projected SLR, substantially larger 100-year storm events combined with elevated sea levels may lead to more extensive damage and longer recovery times. Although this analysis did not evaluate impacts to floating docks nor fueling infrastructure, these assets could also be damaged with higher sea levels and 100-year storm events.

Critical infrastructure such as roadways on or near Shelter Island are particularly sensitive to potential inundation at 4.9 feet of projected SLR as all access to the planning district may be affected. However, because of location specific impacts to Anchorage Lane and the Shelter Island Drive intersection with Scott Street, a 100-year storm event could impede access to West Shelter Island closer to 2050.

Although not predicted to be impacted by projected SLR nor a 100-year storm event, access to the Shelter Island Harbor Police Station, located at the west end Shelter Island, may be limited with 4.9 feet of projected SLR. Water and stormwater facilities could become substantially impacted by potential inundation at 4.9 feet of projected SLR and temporary affected at 2.5 feet of projected SLR with a 100-year storm event. The consequences of potential inundation combined with a 100-year storm event could potentially obstruct business operations, limit public access, and/or lead to challenges to public safety including emergency response and recovery. These consequences are projected to increase rapidly beyond 2.5 feet of projected SLR for potential inundation and temporary coastal flooding from a 100-year storm event.

3.3.1.3 Shelter Island Exposure from Projected Sea Level Rise Inundation and 100-Year Storm Events

The projected exposure to projected SLR impacts in Shelter Island could transform the planning district particularly with 4.9 feet of potential inundation and with potential damage from temporary coastal flooding from a 100-year storm event starting closer to 2050. Although impacts are projected to occur at 0.8 feet and 1.6 feet due to temporary coastal flooding from a 100-year storm event, these would be to a lesser extent (assets impacted) at 4.9 feet of projected SLR.

Potential Inundation

District assets in or directly adjacent to the water at lower elevations may be impacted by potential inundation with 0.8 feet of projected SLR. These include beaches, boat launches, and walkways (see Table 3.3). The Shelter Island Boat Launch was recently reconstructed and designed to accommodate higher sea levels in the future. As the adaptive capacity of these assets is relatively high, these assets should remain operable in the at 1.6 feet and 2.5 feet.

The quantity of District assets such as roads, parks, and buildings impacted by increased SLR is projected to increase over time. At 4.9 feet of projected SLR, a majority of pathways, buildings, beach accessible areas, waste water systems, and the stormwater system are projected to be severely affected by potential inundation. Continued flooding of roadways would reduce public access, disrupt business operations, and potentially limit emergency response. Of important note, access to the Harbor

Table 3.3: Shelter Island Asset Vulnerability from Potential Inundation with Projected Sea Level Rise

Assets	Total Quantity in District	Sensitivity	Adaptive Capacity	Exposure to Inundation			
				0.8 ft SLR	1.6 ft SLR	2.5 ft SLR	4.9 ft SLR
Roads (linear miles)	2.9	HIGH	LOW	0%	0%	4%	32%
Pathways (linear miles)	6.2	LOW	HIGH	10%	14%	22%	66%
Buildings (count)	121	HIGH	LOW	0%	0%	3%	39%
Piers (count)	1	HIGH	LOW	0%	0%	0%	0%
Stormwater Management (count)	13	HIGH	LOW	0%	0%	8%	77%
Beach Accessible Areas (acres)	5	HIGH	LOW	72%	74%	78%	85%
Parks (acres)	27.5	LOW	HIGH	2%	3%	5%	23%
Boat Launch Ramps (count)	1	LOW	HIGH	100%	100%	100%	100%

Table 3.4: Shelter Island Asset Vulnerability from Potential Inundation and Temporary Coastal Flooding (100-Year Storm Event) with Projected Sea Level Rise

Assets	Total Quantity in District	Sensitivity	Adaptive Capacity	Exposure to Temporary Coastal Flooding			
				0.8 ft SLR	1.6 ft SLR	2.5 ft SLR	4.9 ft SLR
Roads (linear miles)	2.9	HIGH	LOW	3%	11%	24%	61%
Pathways (linear miles)	6.2	LOW	HIGH	20%	32%	52%	71%
Buildings (count)	121	HIGH	LOW	3%	9%	17%	55%
Piers (count)	1	HIGH	LOW	0%	0%	0%	0%
Stormwater Management (count)	13	HIGH	LOW	0%	23%	77%	92%
Beach Accessible Areas (acres)	5	HIGH	LOW	77%	80%	83%	87%
Parks (acres)	27.5	LOW	HIGH	4%	11%	20%	35%
Boat Launch Ramps (count)	1	LOW	HIGH	100%	100%	100%	100%

Police Shelter Island Station could be impacted as roadways become inundated. The Shelter Island Fishing Pier is not expected to be potentially inundated at the 4.9 feet SLR scenario.

Temporary coastal flooding from a 100-year storm event (100-year Storm Event)

A 100-year storm event (on top of projected SLR) may lead to greater impacts from temporary coastal flooding from a 100-year storm event. For example, twice as many pathways are affected by temporary coastal flooding from a 100-year storm event as compared to potential inundation beginning at 0.8 feet of projected SLR.

While a small number of buildings may be impacted at 0.8 feet of projected SLR from a 100-year storm event, there is the potential for substantial impacts to Shelter Island structures at 4.9 feet of projected SLR. (See Table 3.4.)

Overall, beyond 2.5 feet of projected SLR, a 100-year storm event has the potential to severely impact the operations of Shelter Island.

Morning on the Bay

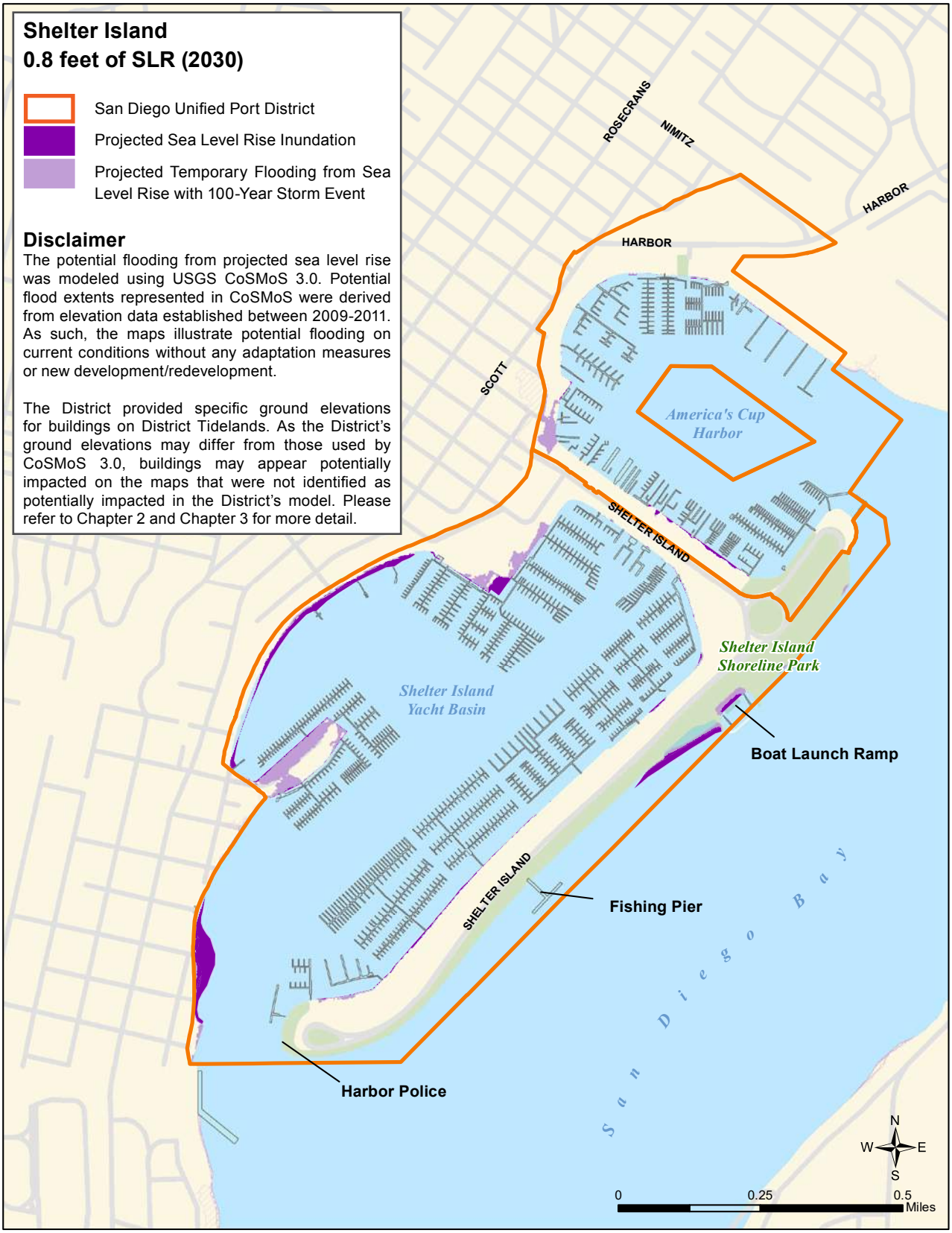

Figure 3.5: Shelter Island Planning District Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise in 2030

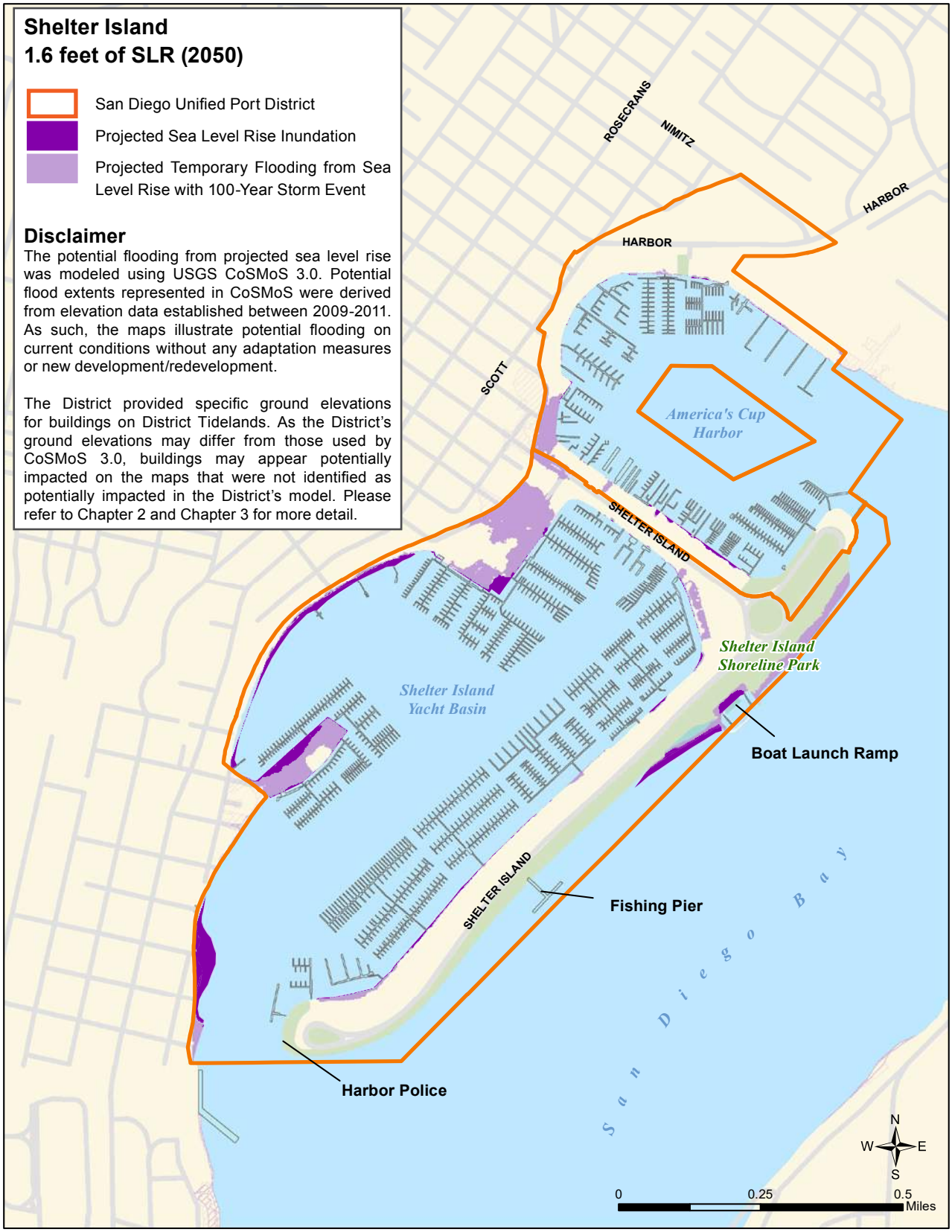

Figure 3.6: Shelter Island Planning District Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise in 2050

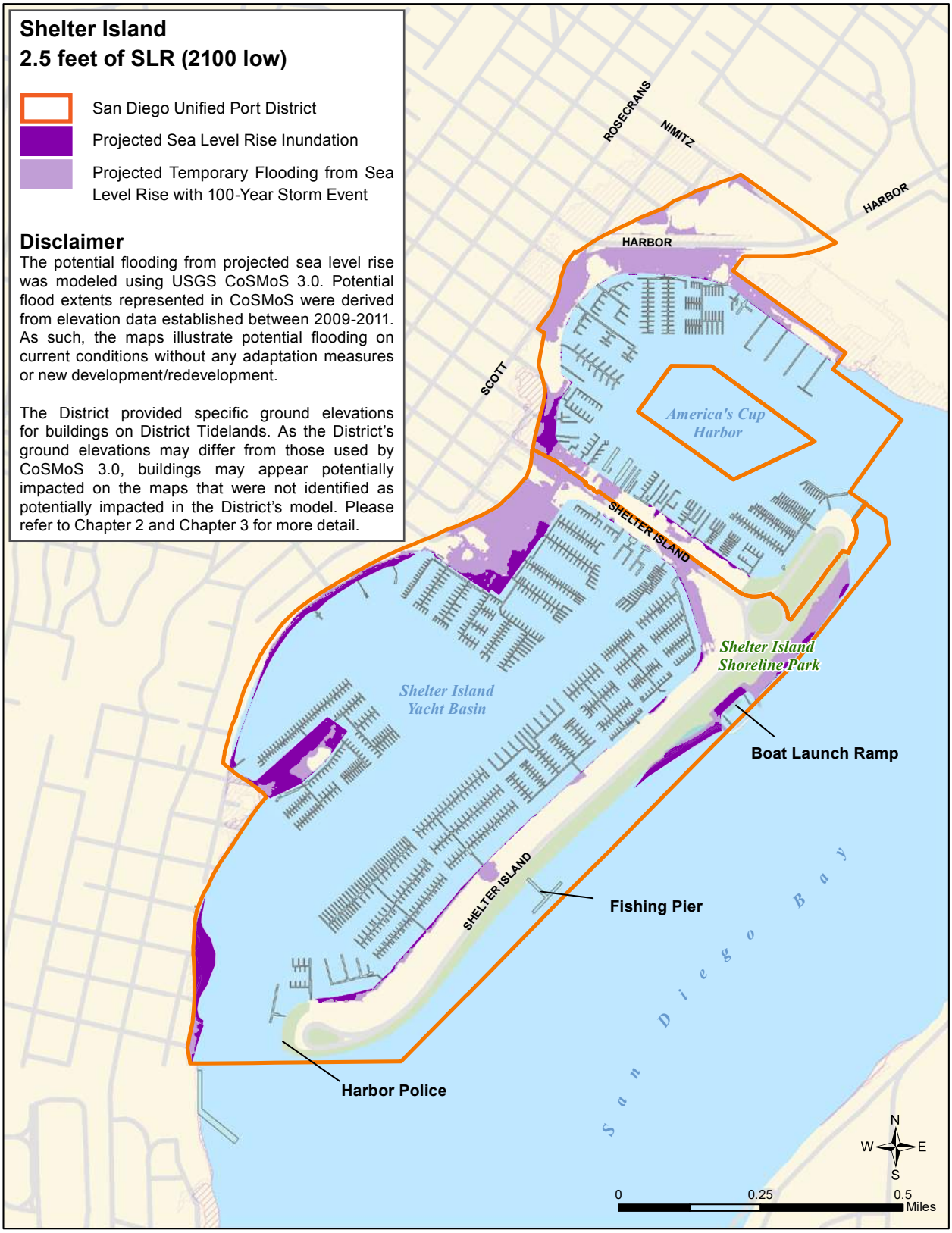

Figure 3.7: Shelter Island Planning District Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise in 2100 (Low Scenario)

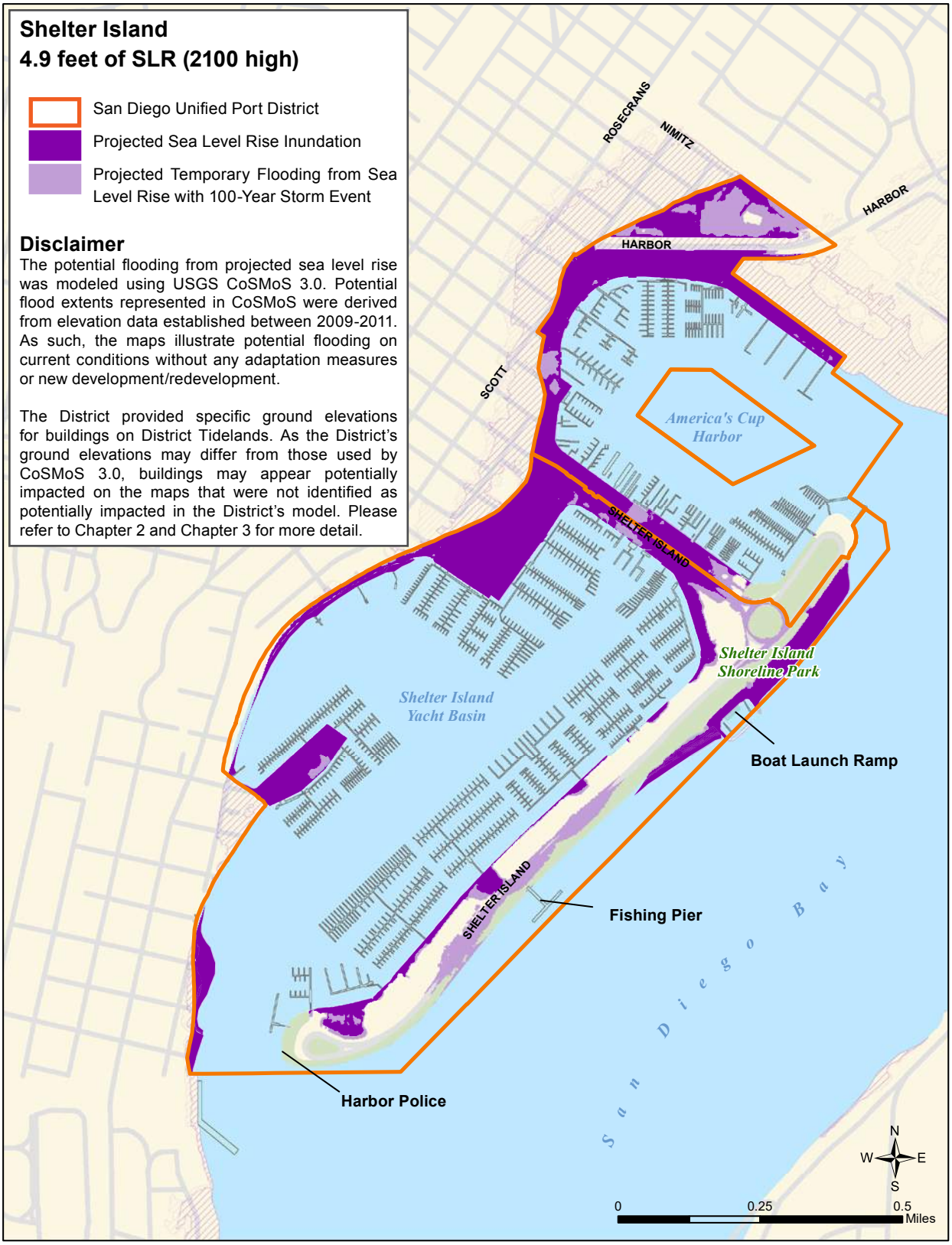

Figure 3.8: Shelter Island Planning District Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise in 2100 (High Scenario)

3.3.2 Harbor Island/Lindbergh Field Planning District

3.3.2.1 Planning District Setting

Located between Downtown San Diego and the Point Loma Peninsula, the Harbor Island/Lindbergh Field Planning District is bounded by San Diego Bay and the Pacific Highway Corridor. Harbor Island Park, located on the bay side of the planning district, provides pedestrian and bicycle pathways interconnecting along the District's comprehensive open space network. Spanish Landing Park located adjacent to the Harbor Island West Marina Basin provides a variety of recreational uses including beach access. With nearly five miles of waterfront, Harbor Island is lined with an assortment of visitor-serving commercial and recreational uses. The District's Harbor Police Headquarters is located within the planning district.

The Airport Authority's assessment was performed separately from the District. Although the Airport Authority used the USGS CoSMoS model to measure impacts of projected SLR, adjustments were made to the results based on more recent ground elevation data from recent on-airport development. As such, the potential SLR inundation and temporary coastal flooding from a 100-year storm event maps shown for the Harbor Island/Lindbergh Field Planning District reflect the most recent potential inundation and flooding data.

3.3.2.2 Harbor Island/Lindbergh Field Vulnerabilities: Key Takeaways

District assets, except beach areas, are largely not projected to be impacted by potential inundation or temporary coastal flooding from a 100-year storm event until the 2100 projected SLR scenarios. The Harbor Police Headquarters may become impacted by the high-end projected SLR scenario (4.9 feet) with a 100-year storm event.

Critical infrastructure such as roads including North Harbor Drive and Harbor Island Drive are exposed to potential inundation and temporary coastal flooding from a 100-year storm event at 4.9 feet of projected SLR. The consequence of potential inundation, combined with a 100-year storm event, may affect business operations, limit public access, and/or create challenges for public safety, including emergency response and recovery. The Pacific Highway Corridor is not projected to be affected by SLR based on the four scenarios analyzed in this assessment.

3.3.2.3 Harbor Island/Lindbergh Field Exposure from Projected Sea Level Rise Inundation and 100-Year Storm Events

Because of its elevation and protective shoreline structures (predominately revetment), Harbor Island is not projected to be substantially impacted by potential inundation until 4.9 feet of SLR. Exposure to temporary coastal flooding from a 100-year storm event caused by a storm surge at 4.9 feet of projected SLR may have substantial impacts in the Harbor Island/Lindbergh Field Planning District.

Although not analyzed in the AB 691 Report, recreational boating slips located at marinas in the planning district may experience damage with higher sea levels and 100-year storm events.

Potential Inundation

District assets in or directly adjacent to the water at lower elevations may be impacted by potential inundation with 0.8 feet of projected SLR. Assets include the beach and minimal areas of the park at Spanish Landing Park (see Table 3.5). The beach accessible area has higher sensitivity to erosion from wave action and adaptive capacity is high. However, as continual sand replenishment can be costly. As the majority of Spanish Landing Park exists at higher elevations, potential inundation is not expected until the 4.9 feet scenario of SLR. Harbor Island Park is not expected to experience potential inundation from projected SLR.

The quantity of District assets such as roads, parks, and buildings impacted by projected SLR is anticipated to increase

Table 3.5: Harbor Island/Lindbergh Field Asset Vulnerability from Potential Inundation with Projected Sea Level Rise

Assets	Total Quantity in District	Sensitivity	Adaptive Capacity	Exposure to Inundation			
				0.8 ft SLR	1.6 ft SLR	2.5 ft SLR	4.9 ft SLR
Roads (linear miles)	20.4	HIGH	LOW	0%	0%	0%	7%
Pathways (linear miles)	3.7	LOW	HIGH	0%	0%	1%	30%
Buildings (count)	106	HIGH	LOW	0%	0%	0%	5%
Stormwater Management (count)	12	HIGH	LOW	0%	0%	0%	8%
Sewer Lifts (count)	3	HIGH	HIGH	0%	0%	0%	33%
Beach Accessible Areas (acres)	0.9	HIGH	LOW	46%	52%	58%	100%
Parks (acres)	18.3	LOW	HIGH	1%	1%	2%	49%

at 4.9 feet of projected SLR. Harbor Drive, an important thoroughfare, is predicted to be impacted at 4.9 feet of projected SLR and may limit access to the Harbor Island Drive and the Harbor Police Headquarters.

Temporary coastal flooding from a 100-year storm event (100-year Storm Event)

With 2.5 feet of projected SLR and a 100-year storm, temporary coastal flooding from a 100-year storm event may occur in Spanish Landing Park, North Harbor Drive, and impact a small number of buildings. With the 4.9 feet of projected SLR and a 100-year storm, significant flooding may impact the planning district and disrupt businesses and challenge emergency operations. Sewer lift stations may be flooded by storm surge and represent an environmental hazard. The Harbor Police Headquarters may also experience flooding at 4.9 feet of projected SLR.

Flooding of the entryway to Harbor Island, at the intersection of North Harbor Drive and Harbor Island Drive, would obstruct access to the island, thereby limiting operations, public access, and critical infrastructure. Substantial 100-year storm events may also erode or damage beach areas, altering their use and capacity.

3.3.2.4 Airport Impacts from Exposure

Airport infrastructure and operations have been established based on historical environmental conditions and

Table 3.6: Harbor Island/Lindbergh Field Asset Vulnerability from Potential Inundation and Temporary Coastal Flooding(100-year storm event) with Projected Sea Level Rise

Assets	Total Quantity in District	Sensitivity	Adaptive Capacity	Exposure to Temporary Coastal Flooding			
				0.8 ft SLR	1.6 ft SLR	2.5 ft SLR	4.9 ft SLR
Roads (linear miles)	20.4	HIGH	LOW	0%	0%	5%	23%
Pathways (linear miles)	3.7	LOW	HIGH	0%	2%	21%	61%
Buildings (count)	106	HIGH	LOW	0%	0%	2%	11%
Stormwater Management (count)	12	HIGH	LOW	0%	0%	0%	33%
Sewer Lifts (count)	3	HIGH	HIGH	0%	0%	0%	67%
Beach Accessible Areas (acres)	0.9	HIGH	LOW	58%	66%	84%	100%
Parks (acres)	18.3	LOW	HIGH	2%	2%	24%	91%

may require adaptation to an evolving climate that could potentially bring higher sea levels, more intense rainfall, and more extreme heat.

The Airport Authority's Climate Resilience Plan (CRP) is intended to address specific issues related to enhancing the Authority's resilience to climate stressors. Development of the CRP included a comprehensive vulnerability assessment to evaluate the risks (economic, social, and environmental) posed to assets by future climate conditions as illustrated below:

Table 3.7: Airport Asset Vulnerability Profiles

Runways and Taxiways	
Description	San Diego International Airport is a single-runway airport with six main and 14 cross taxiways. Navigational aid systems are considered essential to Airport operations and ensure safe and efficient movement of aircraft during approach, departure, and taxiing maneuvers. It is critical to have all visual and navigational aid equipment working properly and maintained in good condition.
Summary	Several runway/taxiway assets are expected to first be impacted by storm surge by 1.6 feet of SLR (year 2050). Assets are not expected to be impacted by potential inundation until 4.9 feet of SLR (year 2100). The runway and taxiways are highly sensitive to flooding because they contain electrical light fixtures, which may be obstructed or damaged if exposed to floodwater for longer than designed. Standing water on the runways and taxiways could prevent aircraft from landing or departing. A loss of runway and taxiways due to flooding will cause the Airport to experience a disruption or delay of aircraft operations. Without a means to efficiently move passengers or cargo, the Airport Authority will face economic losses.

Table 3.7: Airport Asset Vulnerability Profiles (con't)

Airport Facilities	
Description	Airport facilities are divided into landside and airside facilities. Landside facilities are outside of the secure Airport operations area (AOA) and provide for the processing of passengers, cargo, freight, and ground transportation vehicles. Landside facilities include passenger terminals, administration buildings, vehicle storage areas (surface lots), and utilities. Airside facilities include security fencing/gates, aircraft aprons (tarmac), Airport support facilities (e.g., the Airport Traffic Control Tower), and Airport support infrastructure. Airside facilities are largely regulated by criteria and standards developed by the FAA to emphasize safety and efficiency while protecting federal investment in Airport transportation infrastructure.
Summary	Several airside assets are expected to first be impacted by storm surge (rare flooding) by 1.6 feet of SLR (year 2050). Airside assets are not expected to be impacted by the maximum high tide (recurring flooding) until 4.9 feet of SLR (year 2100). Several landside assets are expected to first be impacted by storm surge (rare flooding) by 2.5 feet of SLR (year 2100). Landside assets are not expected to be impacted by the maximum high tide (recurring flooding) until 4.9 feet of SLR (year 2100). Buildings have a high sensitivity to temporary flooding because they may experience widespread structural damage to even temporary exposure and have limited adaptive capacity because they are not easily elevated or relocated. Parking lots and Airport tarmac areas have low sensitivity to flooding but limited adaptive capacity. Many Airport landside and airside facilities are critical for Airport functionality, and loss of assets may result in operational delays or closures.

Table 3.7: Airport Asset Vulnerability Profiles (con't)

Airport Tenant Facilities	
Description	The Airport hosts a number of tenants that lease space from the Airport Authority. Tenants include a wide range of Airport users, such as government agencies (e.g., FAA), vendors providing aircraft and aviation services, companies handling cargo and mail, and general aviation aircraft owners. The facilities associated with the tenants vary depending on specific tenant requirements but include office buildings (and associated surface parking lots), warehouses, on-site storage, and aircraft hangars. The Airport also includes several concessions, which are not highlighted in this profile because they are located in facilities operated by the Airport Authority.
Summary	No tenant facilities are expected to be impacted by storm surge (rare flooding) or by the maximum high tide (recurring flooding) by the end of the century.
Transportation Network	
Description	The transportation network on and surrounding the Airport includes freeways, parking lots, and primary/ secondary roadways to access Airport terminals and parking lots. Roadway ownership is shared by the Airport Authority, City of San Diego, and the California Department of Transportation (Caltrans). Primary roadways consist of critical business and/or emergency access routes to Airport assets or public safety. Secondary roads provide alternative access routes to assets. Also included in Airport transportation is a trolley system operated by the Metropolitan Transit System. However, trolley stops were not included in the CRP, because they are not anticipated to be impacted and are not controlled by the Airport Authority.
Summary	Several transportation routes, including the on-airport vehicle service road, North Harbor Drive, and West Laurel Street are expected to be impacted by storm surge (rare flooding) by 1.6 feet of SLR (year 2050). Most transportation routes are not expected to be impacted by the maximum high tide (recurring flooding) until 4.9 feet of SLR (year 2100). A loss of the access roadway network will result in disruption or closure of Airport operations. Without a means for passengers and employees to access terminals or cargo facilities, the Airport Authority will face economic losses.

Table 3.7: Airport Asset Vulnerability Profiles (con't)

Least Tern Nesting Habitat	
Description	The California least tern, a federally and state-listed endangered seabird, nests from April to September in Southern California. Although least tern prefer to nest in small, scattered clusters on flat sandy areas with minimal vegetation, colonies have nested since the 1970s on sand and gravel adjacent to the runway and taxiways at the Airport. The Airport's ability to provide suitable nesting habitat, protection from predators, and access to foraging in nearby San Diego Bay makes it one of the most productive least tern nesting sites in Southern California.
Summary	Least tern habitats are not expected to be impacted by storm surge (rare flooding) or the maximum high tide (recurring flooding) until 2.5 feet or 4.9 feet of SLR (year 2100). Habitats are sensitive to increased frequency, duration, and depth of flooding. The adaptive capacity of the least terns depends on their inherent resiliency to change, ability to recover from individual events, and ability to migrate in response to climate pressures; the location of nearby habitats that can serve as refuge. Loss of least tern habitat at the Airport will limit nesting options for the migrating seabird and may cause a decline in their local populations.

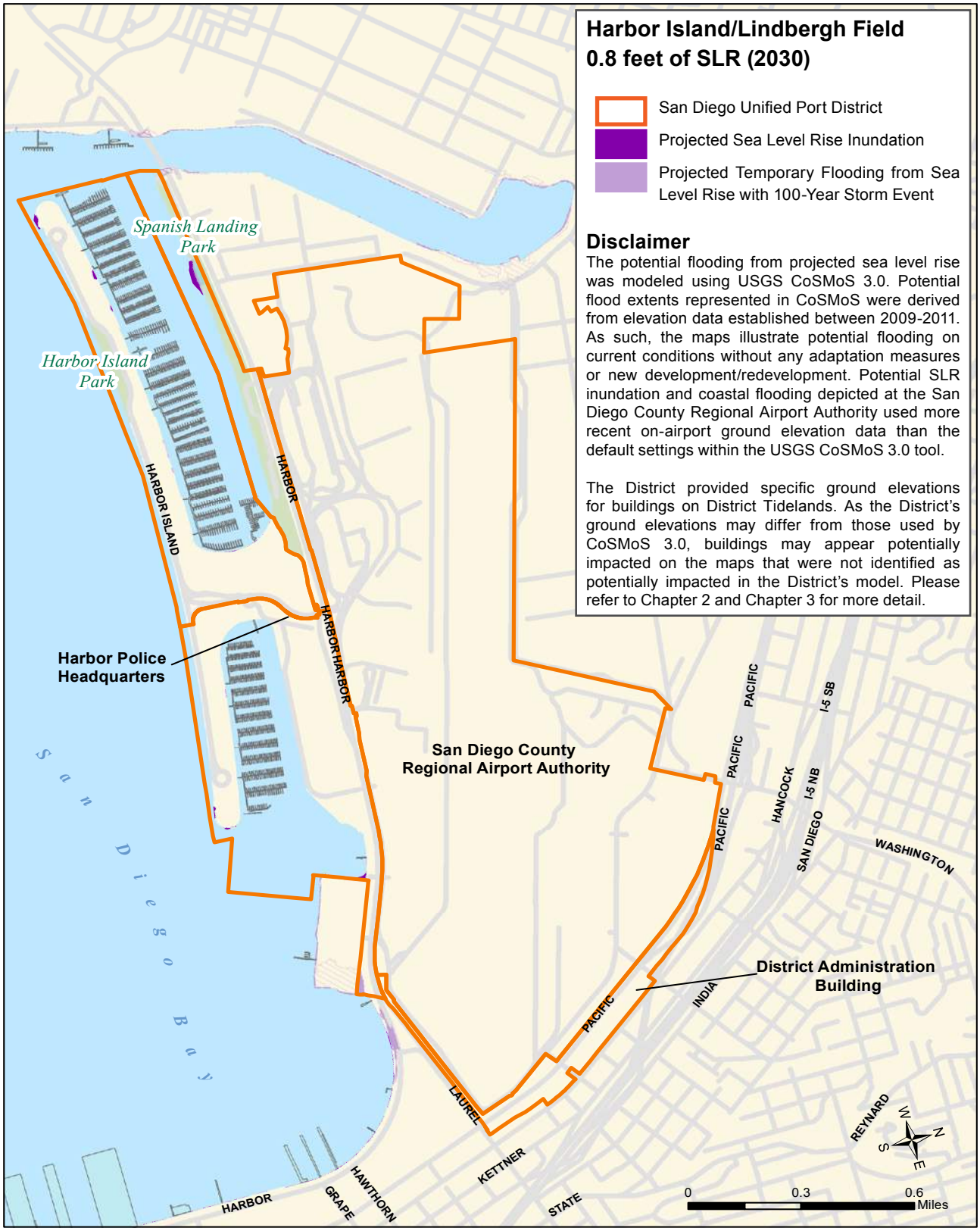

Figure 3.9: Harbor Island/Lindbergh Field Planning District Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise in 2030

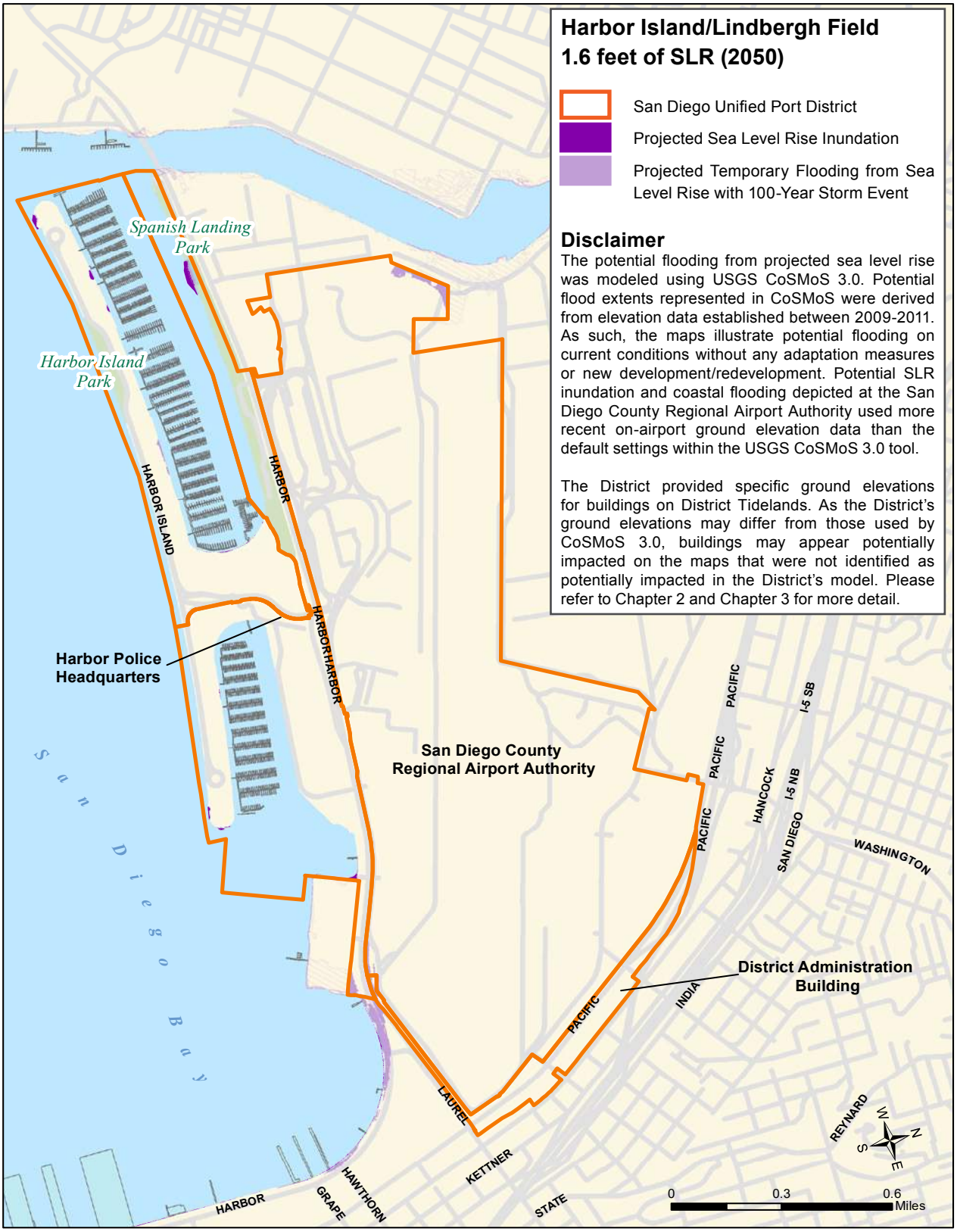

Figure 3.10: Harbor Island/Lindbergh Field Planning District Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise in 2050

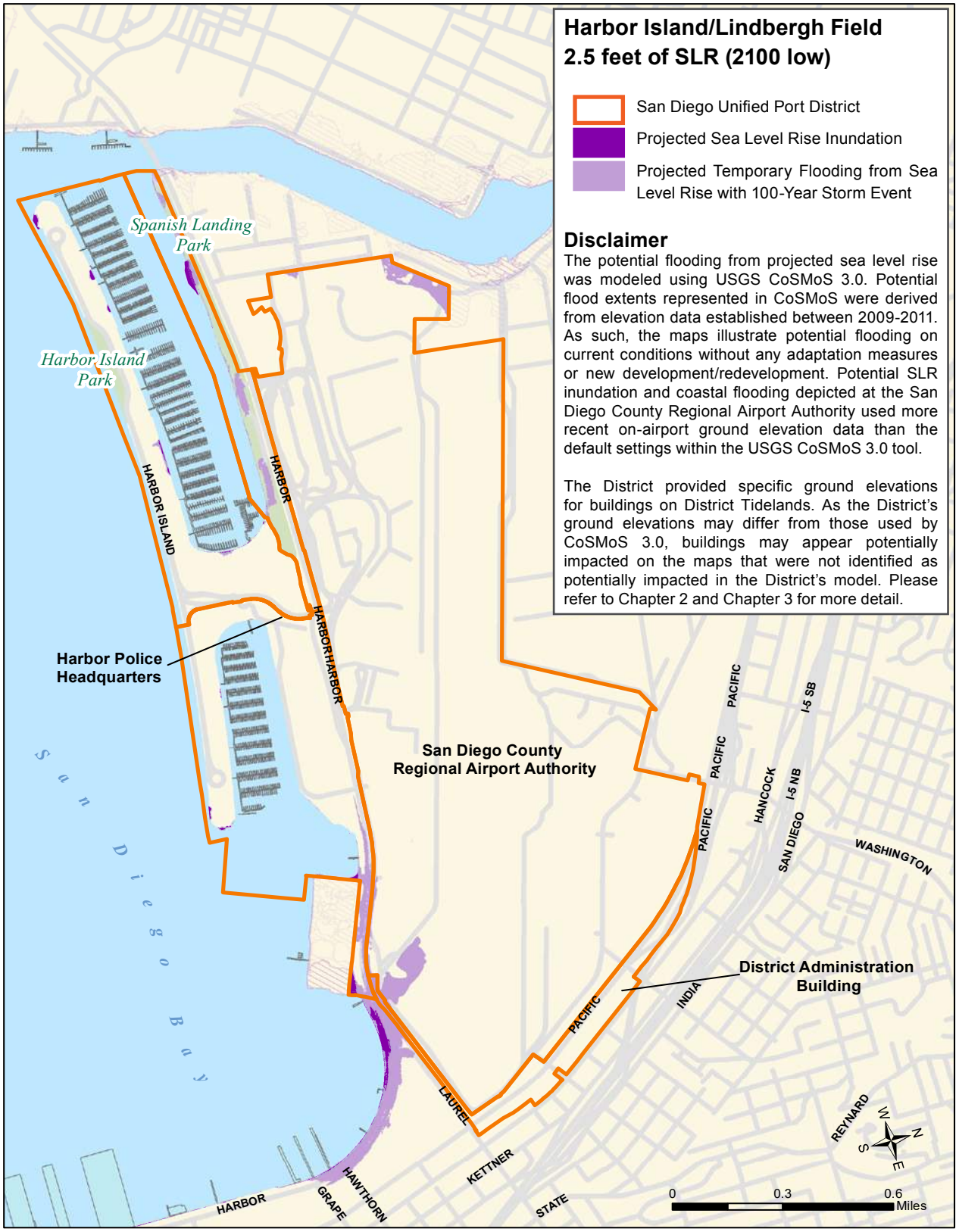

Figure 3.11: Harbor Island/Lindbergh Field Planning District Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise in 2100 (Low Scenario)

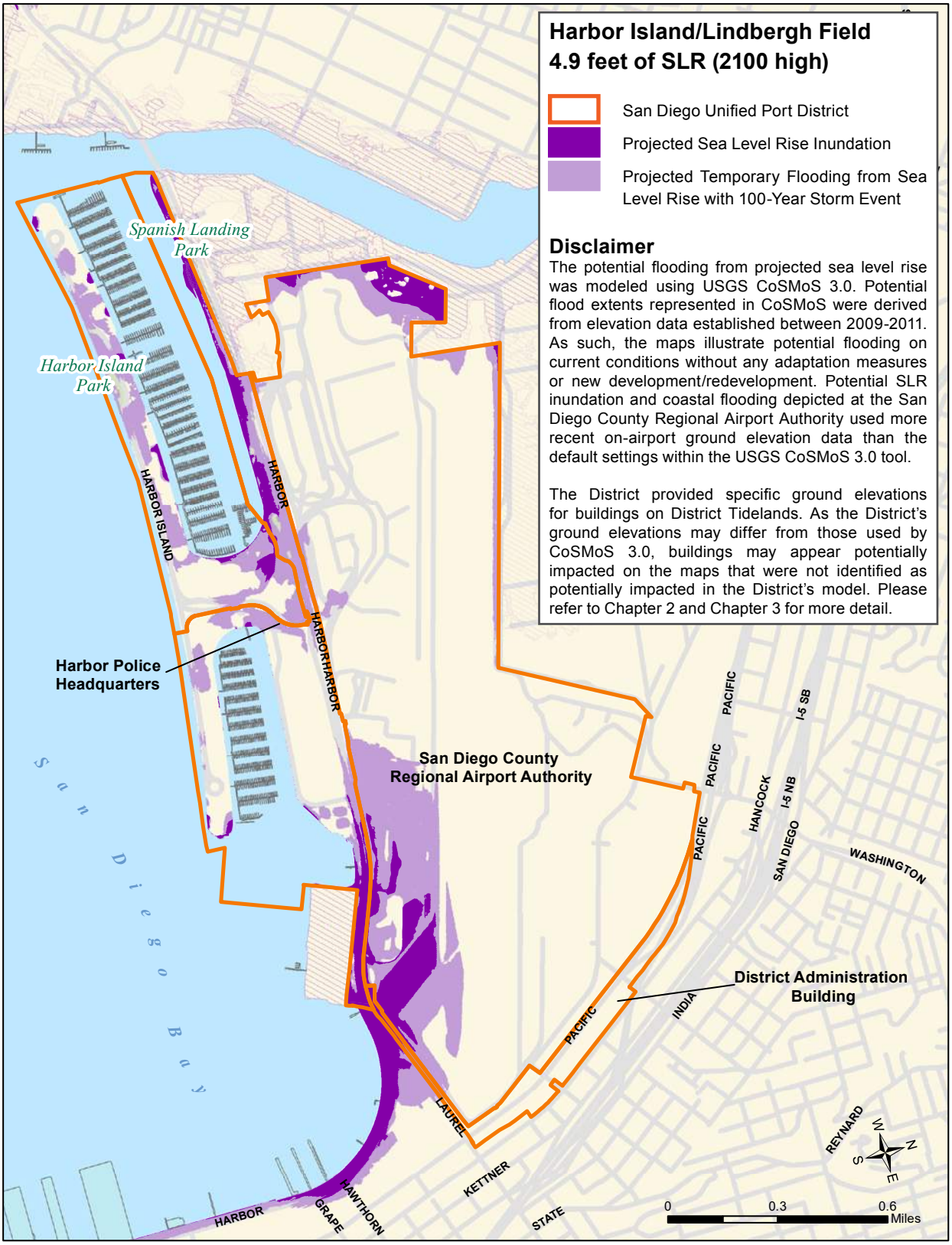

Figure 3.12: Harbor Island/Lindbergh Field Planning District Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise in 2100 (High Scenario)

3.3.3 Centre City Embarcadero Planning District

3.3.3.1 Planning District Setting

Located south of the Airport and adjacent to Downtown San Diego, the Centre City Embarcadero Planning District is home to more than four miles of waterfront containing visitor- and marine-serving uses with pier-side maritime activities including commercial fishing, a cruise terminal, maritime museums, recreational boating, and recreation open space. The Embarcadero Planning District extends from Laurel Street adjacent to the Airport and continues south to the Convention Center.

3.3.3.2 Centre City Embarcadero Vulnerabilities: Key Takeaways

The North Embarcadero is protected by a continuous bulkhead that supports recreational areas and public access features. As a result, the North Embarcadero is not projected to substantially affected by potential inundation beginning with 2.5 feet of projected SLR. Under 4.9 feet projected SLR scenario, potential inundation may disrupt business operations, recreational uses including parks, piers, and pathways, and important transportation corridors throughout the planning district. With a 100-year storm event, temporary coastal flooding from a 100-year storm event may occur in low-lying areas by year 2050 under a 1.6 feet rise in sea levels. As a result, temporary coastal flooding from a 100-year storm event may impact North Harbor Drive adjacent to the United States Coast Guard and across from the Airport. The B Street Cruise Ship Terminal and Broadway Piers may be impacted with a 4.9 feet increase in sea levels combined with a 100-year storm event.

Water and stormwater facilities would become impacted by temporary coastal flooding from a 100-year storm event at all levels of modeled potential inundation projected SLR impacts exacerbated by a 100-year storm event. The consequences of potential inundation combined with a substantial storm event could potentially obstruct business operations, limit public access, and/or lead to challenges to public safety including emergency response and recovery.

3.3.3.3 Centre City Embarcadero Exposure from Projected Sea Level Rise Inundation and 100-Year Storm Events

The projected exposure to projected SLR may affect public access and business operations in the planning district

Table 3.8: Centre City Embarcadero Asset Vulnerability from Potential Inundation with Projected Sea Level Rise

Assets	Total Quantity in District	Sensitivity	Adaptive Capacity	Exposure to Inundation			
				0.8 ft SLR	1.6 ft SLR	2.5 ft SLR	4.9 ft SLR
Roads (linear miles)	6.9	HIGH	LOW	0%	0%	5%	49%
Rail (linear miles)	0.2	HIGH	LOW	0%	0%	0%	100%
Bikeways (linear miles)	1.6	LOW	HIGH	0%	1%	24%	71%
Pathways (linear miles)	5.9	LOW	HIGH	5%	5%	17%	76%
Buildings (count)	119	HIGH	LOW	0%	0%	0%	18%
Piers (count)	9	HIGH	LOW	0%	0%	0%	67%
Stormwater Management (count)	359	HIGH	LOW	5%	5%	8%	43%
Sewer Lifts (count)	3	HIGH	HIGH	33%	33%	67%	100%
Parks (acres)	32.4	LOW	HIGH	1%	1%	9%	55%

particularly with 2.5 feet and 4.9 feet of potential projected SLR inundation, but with potential damage from 100-year storm event temporary coastal flooding from a 100-year storm event scenario starting at 0.8 feet of projected SLR.

Potential Inundation

Given the elevation and existing shoreline armoring composed of bulkhead and revetment, the planning district is projected to withstand potential inundation at 4.9 feet of projected SLR. Backflow from potential inundation within the storm drain system has the potential to cause flooding during the highest tides. At 2.5 feet of projected SLR, public access may become impacted in Embarcadero Marina Park South. Of significance, potential inundation beginning with 2.5 feet of projected SLR and expanding with a 4.9 feet increase in projected SLR, may impact important roadways such as North Harbor Drive. With 4.9 feet of projected SLR, public access and recreational facilities within the planning district are expected to experience potential inundation.

Sewer lifts begin to become impacted at 0.8 feet (all three are projected to be affected at 4.9 feet of projected SLR). Piers within the planning district are not expected to be impacted by potential projected SLR inundation until 2100 under high projected SLR conditions.

Table 3.9: Centre City Embarcadero Asset Vulnerability from Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise

Assets	Total Quantity in District	Sensitivity	Adaptive Capacity	Exposure to Temporary Coastal Flooding			
				0.8 ft SLR	1.6 ft SLR	2.5 ft SLR	4.9 ft SLR
Roads (linear miles)	6.9	LOW	HIGH	4%	16%	41%	64%
Rail (linear miles)	0.2	HIGH	LOW	0%	0%	68%	100%
Bikeways (linear miles)	1.6	LOW	HIGH	21%	33%	54%	92%
Pathways (linear miles)	5.9	LOW	HIGH	15%	33%	57%	95%
Buildings (count)	119	HIGH	LOW	0%	4%	10%	50%
Piers (count)	9	HIGH	LOW	0%	22%	33%	100%
Stormwater Management (count)	359	HIGH	LOW	5%	13%	28%	67%
Sewer Lifts (count)	3	HIGH	HIGH	67%	67%	100%	100%
Parks (acres)	32.4	LOW	HIGH	9%	21%	38%	78%

Temporary coastal flooding from a 100-year storm event (100-year Storm Event)

Public access and the circulation network are forecasted to be the most vulnerable to disruption from temporary coastal flooding from a 100-year storm event beginning at 0.8 feet of projected SLR with impacts growing at 4.9 feet of projected SLR. With 1.6 feet of projected SLR and a 100-year storm event, North Harbor Drive near Laurel Street is predicted to experience temporary coastal flooding from a 100-year storm event disrupting traffic along this important thoroughfare. These impacts may obstruct access to the waterfront, the airport, and commercial fishing operations on the G Street Mole. Embarcadero Marina Park North and South, Tuna Harbor Park, and public accessways may begin to experience temporary coastal flooding from a 100-year storm event with 1.6 feet of projected SLR and a 100-year storm event. Impacts increase throughout the planning district with 4.9 feet of projected SLR and a 100-year storm affecting several buildings and all the piers. At 4.9 feet of projected SLR with a 100-year storm event, the Embarcadero may have substantial hindrances to public access, public safety, and business operations. With a 100-year storm event, the B Street Cruise Ship Terminal, Broadway Pier, and Navy Pier are projected to experience temporary coastal flooding from a 100-year storm event with 4.9 feet of projected SLR.

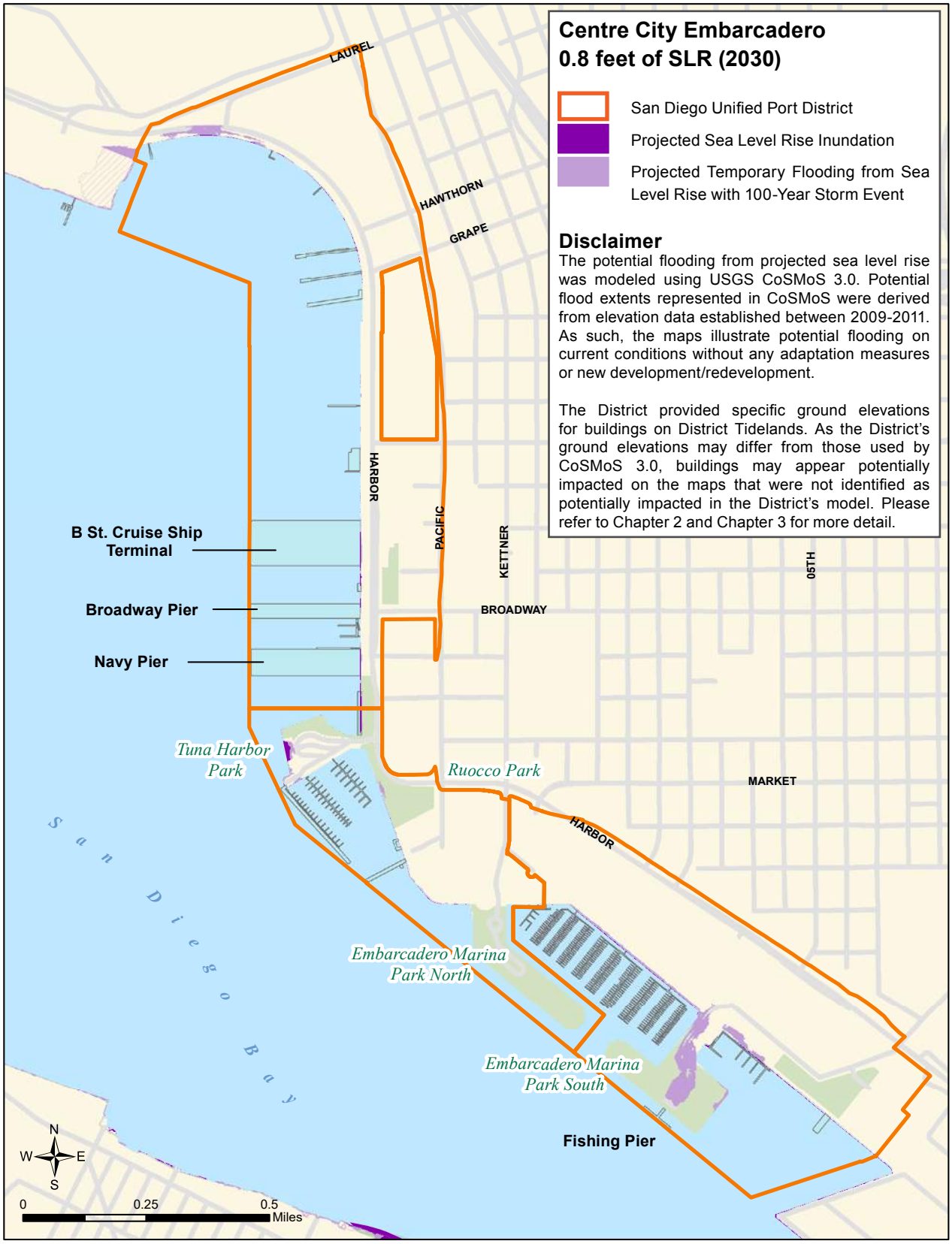

Figure 3.13: Centre City Embarcadero Planning District Temporary Coastal Flooding (100-year storm event) and Inundation with Projected Sea Level Rise in 2030

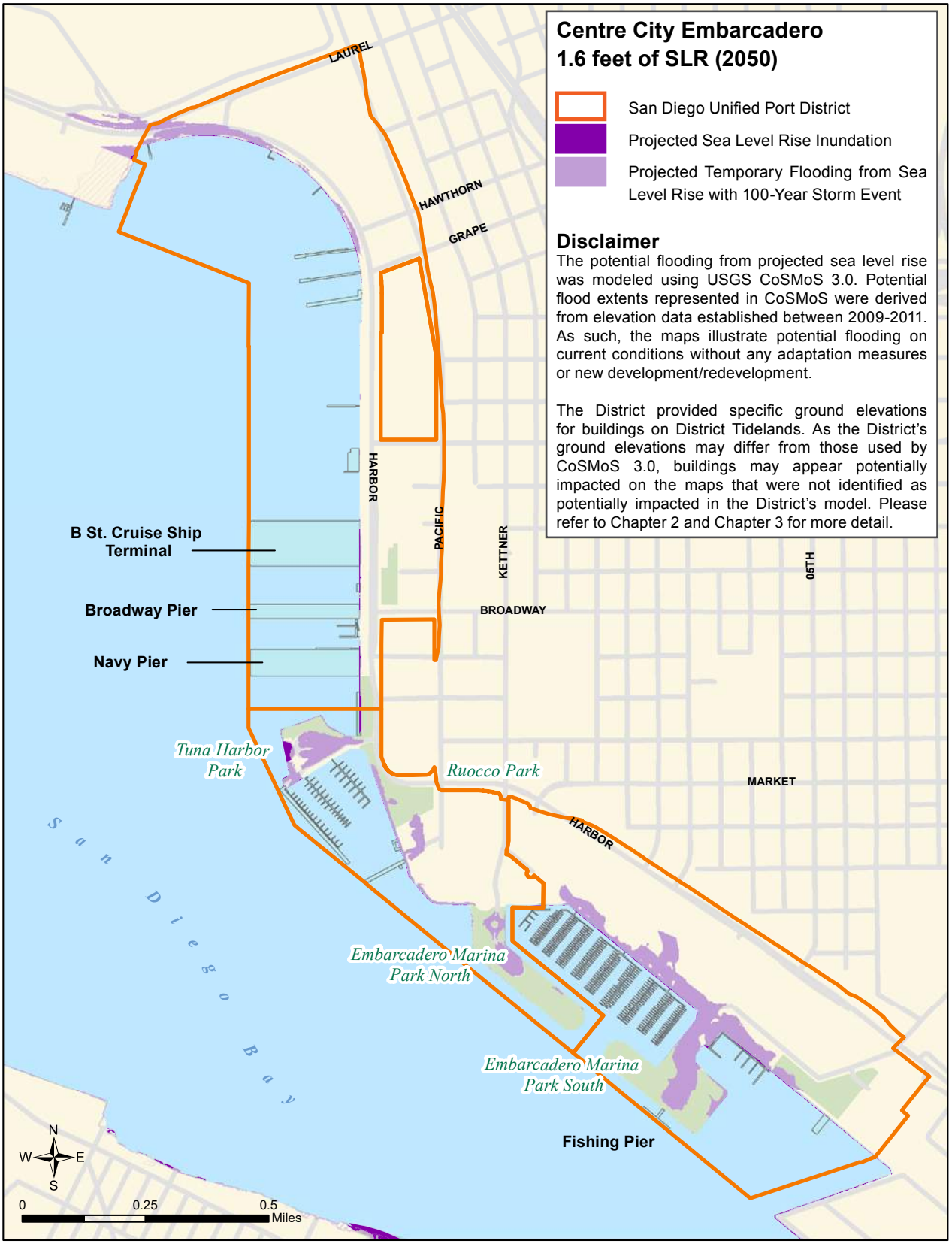

Figure 3.14: Centre City Embarcadero Planning District Temporary Coastal Flooding (100-year storm event) and Inundation with Projected Sea Level Rise in 2050

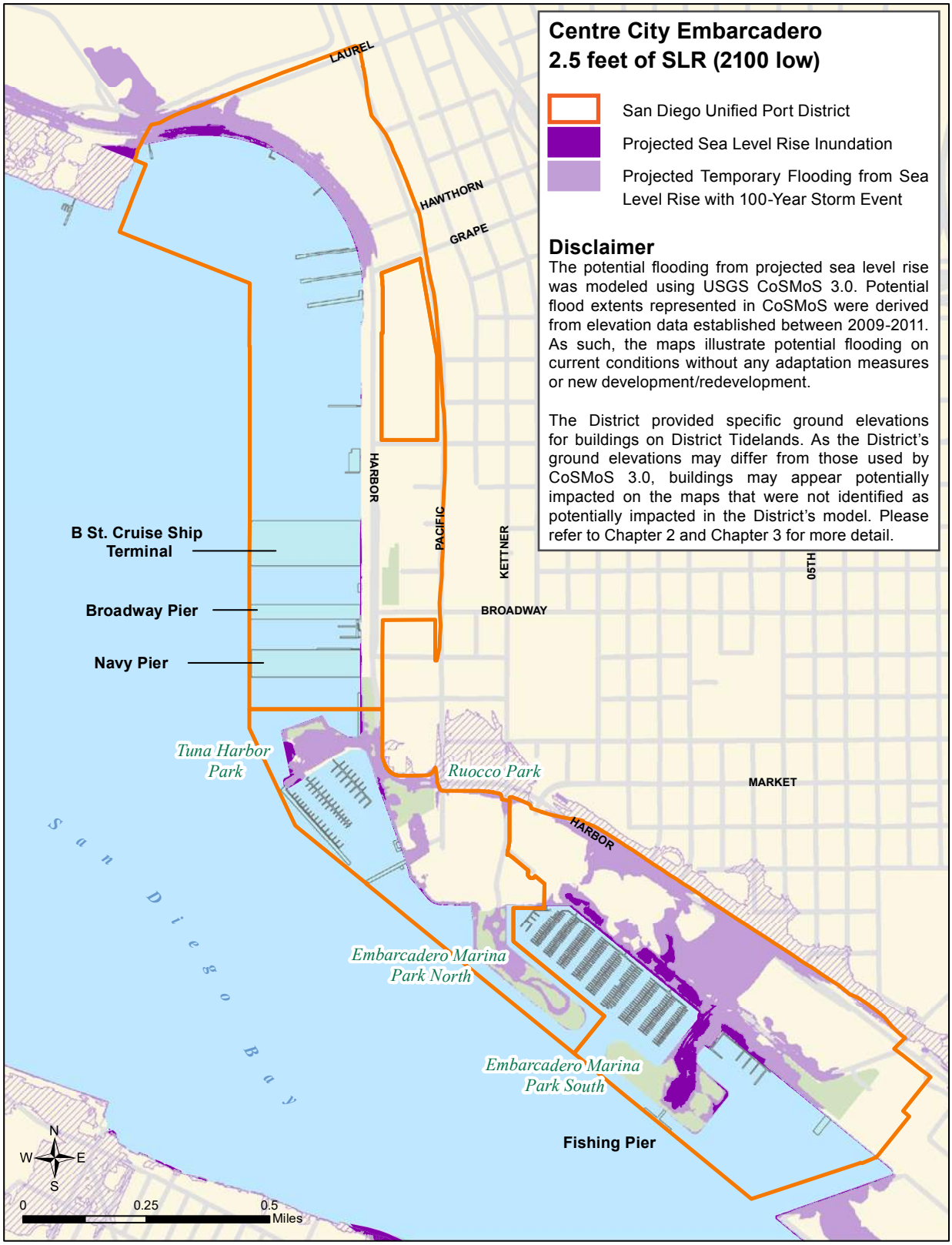

Figure 3.15: Centre City Embarcadero Planning District Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise in 2100 (Low Scenario)

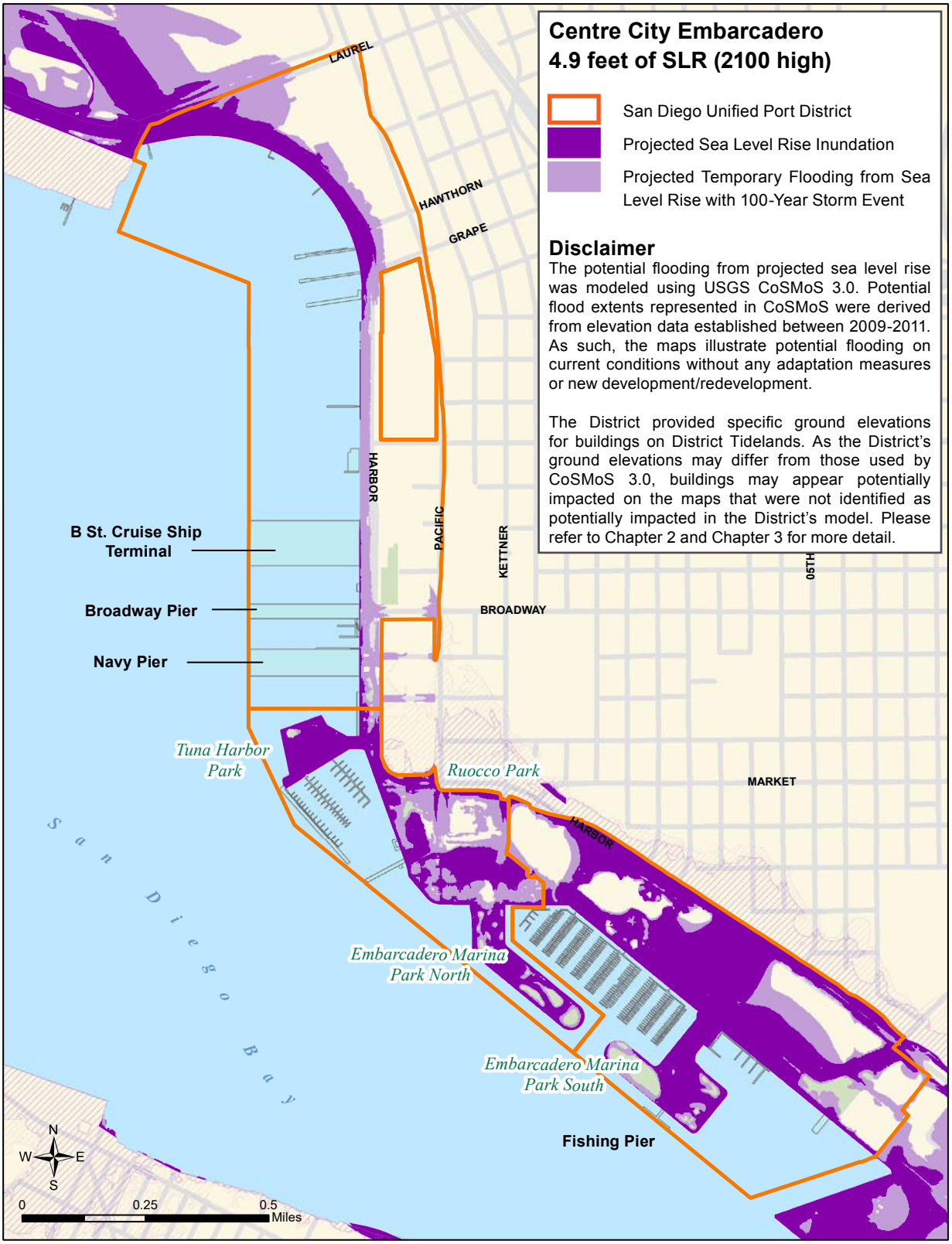

Figure 3.16: Centre City Embarcadero Planning District Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise in 2100 (High Scenario)

3.3.4 Tenth Avenue Marine Terminal Planning District

3.3.4.1 Planning District Setting

Located south of downtown San Diego, the Tenth Avenue Marine Terminal Planning District largely serves as a strategic regional, state, and federal port of entry. This planning district supports maritime trade operations and water-based commerce. The Tenth Avenue Marine Terminal includes eight deep-water berths that can accommodate four large ships. Additionally, several maritime services and industrial uses that support regional commerce and the U.S. Navy, such as shipbuilding and ship repair are located along Harbor Drive south of the Tenth Avenue Marine Terminal. The District's cargo terminals are one of only 17 commercial "strategic ports," designated to support cargo and vessel operations for the U.S. military's Transportation Command and Military Sealift Command.

3.3.4.2 Tenth Avenue Marine Terminal Vulnerabilities: Key Takeaways

The higher elevation and existing shoreline armoring in the Tenth Avenue Marine Terminal Planning District are expected to protect the marine terminal and recreational areas from substantial projected SLR impacts. Past year 2050, the marine terminal (including associated structures), Cesar Chavez Park and pier, public access facilities, and industry in this planning district are projected to be impacted by temporary coastal flooding from a 100-year storm event.

Marine terminal facilities, roadways, and rail in the planning district are considered critical infrastructure and coastal dependent uses, which are particularly sensitive to potential inundation with a 4.9-feet increase in sea level. At 4.9 feet of projected SLR, access to, and operational functions of, the planning district, including the Tenth Avenue Marine Terminal, may be disrupted under the high-end projected SLR scenario. The transportation assets are highly sensitive and have low adaptive capacity due to the lack of alternate routes and large cost to elevate. These impacts are projected to occur at 4.9 feet of potential SLR inundation and potentially at lower projected SLR scenarios with a 100-year storm event.

3.3.4.3 Tenth Avenue Marine Terminal Exposure from Projected Sea Level Rise Inundation and 100-Year Storm Events

The exposure to projected SLR impacts are anticipated to occur near or after year 2050 with more disruptive impacts

from temporary coastal flooding from a 100-year storm event starting at 2.5 feet of projected SLR and potential inundation at 4.9 feet of projected SLR. As this planning district is largely made up of coastal dependent uses with low adaptive capacity, exposure to projected SLR and temporary coastal flooding from a 100-year storm event during a 100-year storm event pose great risks to the District.

Potential Inundation

Given the elevation and existing shoreline armoring composed of marine terminal bulkheads and revetment, this planning district is projected to withstand potential inundation at 4.9 feet of projected SLR.

Cesar Chavez Park and the observation pier are susceptible to potential inundation under the high projected SLR scenario of 4.9 feet. This park represents one of the only points of recreation and public access to the Bayfront within the planning district.

Highly sensitive transportation assets such as rail and road and terminal facilities are vital to operations of the Tenth Avenue Marine Terminal, as well as freight movement throughout the region. Projected inundation at 4.9 feet of projected SLR would disrupt the terminal operations as these assets have limited adaptive capacity to relocate. Lacking alternative routes and requiring high costs to elevate, the rail line is also

Table 3.10: Tenth Avenue Marine Terminal Asset Vulnerability from Potential Inundation with Projected Sea Level Rise

Assets	Total Quantity in District	Sensitivity	Adaptive Capacity	Exposure to Inundation			
				0.8 ft SLR	1.6 ft SLR	2.5 ft SLR	4.9 ft SLR
Roads (linear miles)	5.1	HIGH	LOW	1%	1%	1%	54%
Rail (linear miles)	10.8	HIGH	LOW	0%	0%	0%	62%
Bikeways (linear miles)	0.5	LOW	HIGH	5%	6%	6%	32%
Pathways (linear miles)	0.3	LOW	HIGH	39%	39%	39%	85%
Marine Terminals (acres)	103	HIGH	LOW	0%	0%	1%	62%
Buildings (count)	127	HIGH	LOW	0%	0%	0%	35%
Piers (count)	1	HIGH	LOW	0%	0%	0%	100%
Stormwater Management (count)	15	HIGH	LOW	0%	0%	0%	53%
Sewer Lifts (count)	1	HIGH	HIGH	0%	0%	0%	100%
Parks (acres)	4.2	LOW	HIGH	0%	0%	5%	51%

highly vulnerable to projected SLR. As a Strategic Port, maintenance of operations at the terminal is critical for security purposes.

Temporary coastal flooding from a 100-year storm event (100-year Storm Event)

Recreational uses and associated public access may begin to experience temporary coastal flooding from a 100-year storm event by year 2050 with 1.6 feet of projected SLR. While a small number of buildings may experience temporary coastal flooding from a 100-year storm event within the planning district with 1.6 feet of projected SLR and a 100-year storm event, greater impacts to structures occur at 4.9 feet of projected SLR. While temporary in nature, these impacts may disrupt operations of the facilities

.

Access to Cesar Chavez Park may become obstructed with roads and pathways flooded by projected storm surges from 100-year storm events. The park does not showcase temporary coastal flooding from a 100-year storm event until 4.9 feet of projected SLR. The observational pier located Bayward of Cesar Chavez Park may also become impacted with the high end projected SLR scenario with a 100-year storm event.

Table 3.11: Tenth Avenue Marine Terminal Asset Vulnerability from Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise

Assets	Total Quantity in District	Sensitivity	Adaptive Capacity	Exposure to Temporary Coastal Flooding			
				0.8 ft SLR	1.6 ft SLR	2.5 ft SLR	4.9 ft SLR
Roads (linear miles)	5.1	HIGH	LOW	1%	2%	22%	72%
Rail (linear miles)	10.8	HIGH	LOW	0%	0%	17%	91%
Bikeways (linear miles)	0.5	LOW	HIGH	6%	6%	6%	69%
Pathways (linear miles)	0.3	LOW	HIGH	39%	39%	53%	100%
Marine Terminals (acres)	103	HIGH	LOW	0%	0%	20%	91%
Buildings (count)	127	HIGH	LOW	0%	2%	6%	72%
Piers (count)	1	HIGH	LOW	0%	0%	0%	100%
Stormwater Management (count)	15	HIGH	LOW	0%	7%	40%	87%
Sewer Lifts (count)	1	HIGH	HIGH	0%	0%	0%	100%
Parks (acres)	4.2	LOW	HIGH	4%	10%	24%	100%

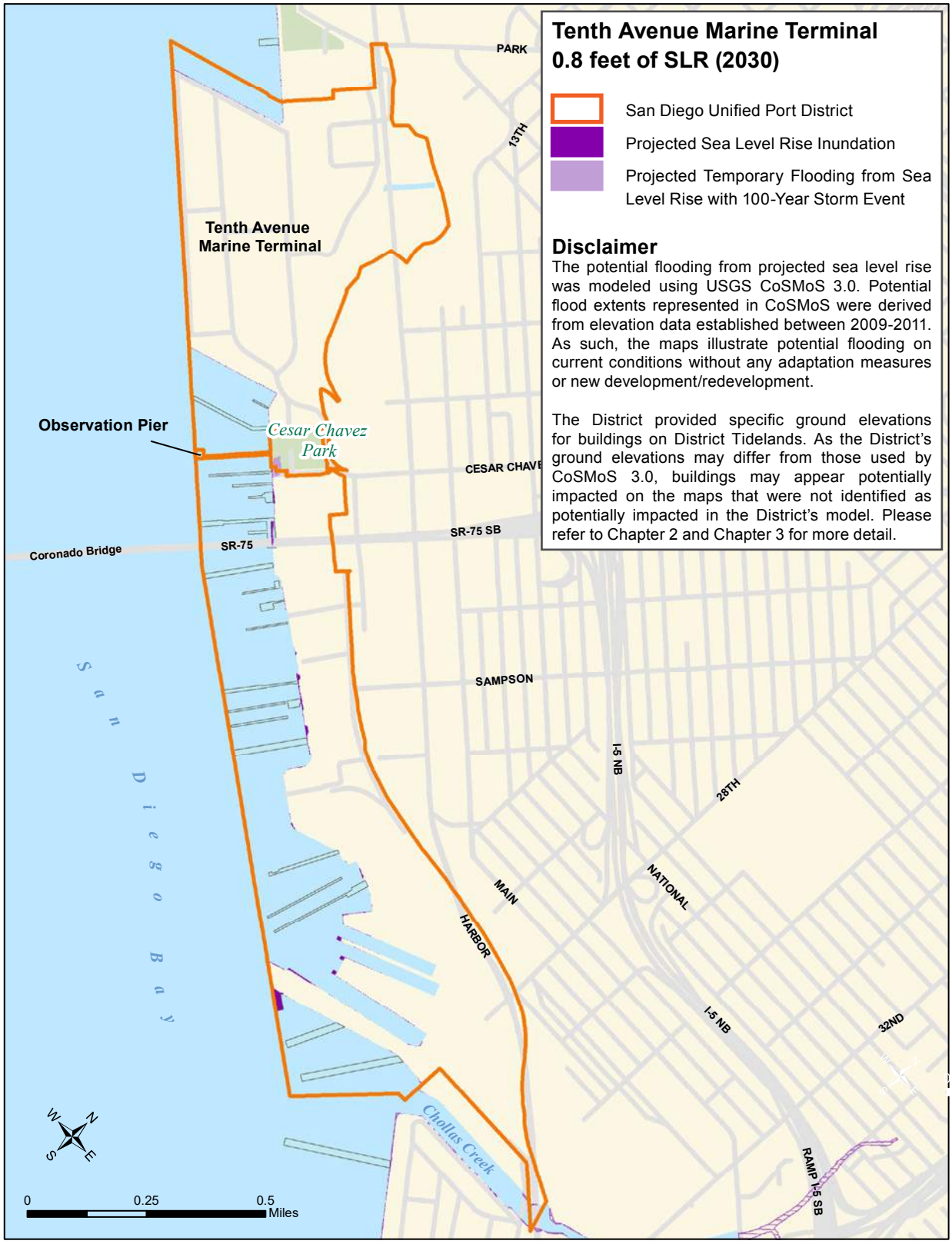

Figure 3.17: Tenth Avenue Marine Terminal Planning District Temporary Coastal Flooding (100-year storm event) and Inundation with Projected Sea Level Rise in 2030

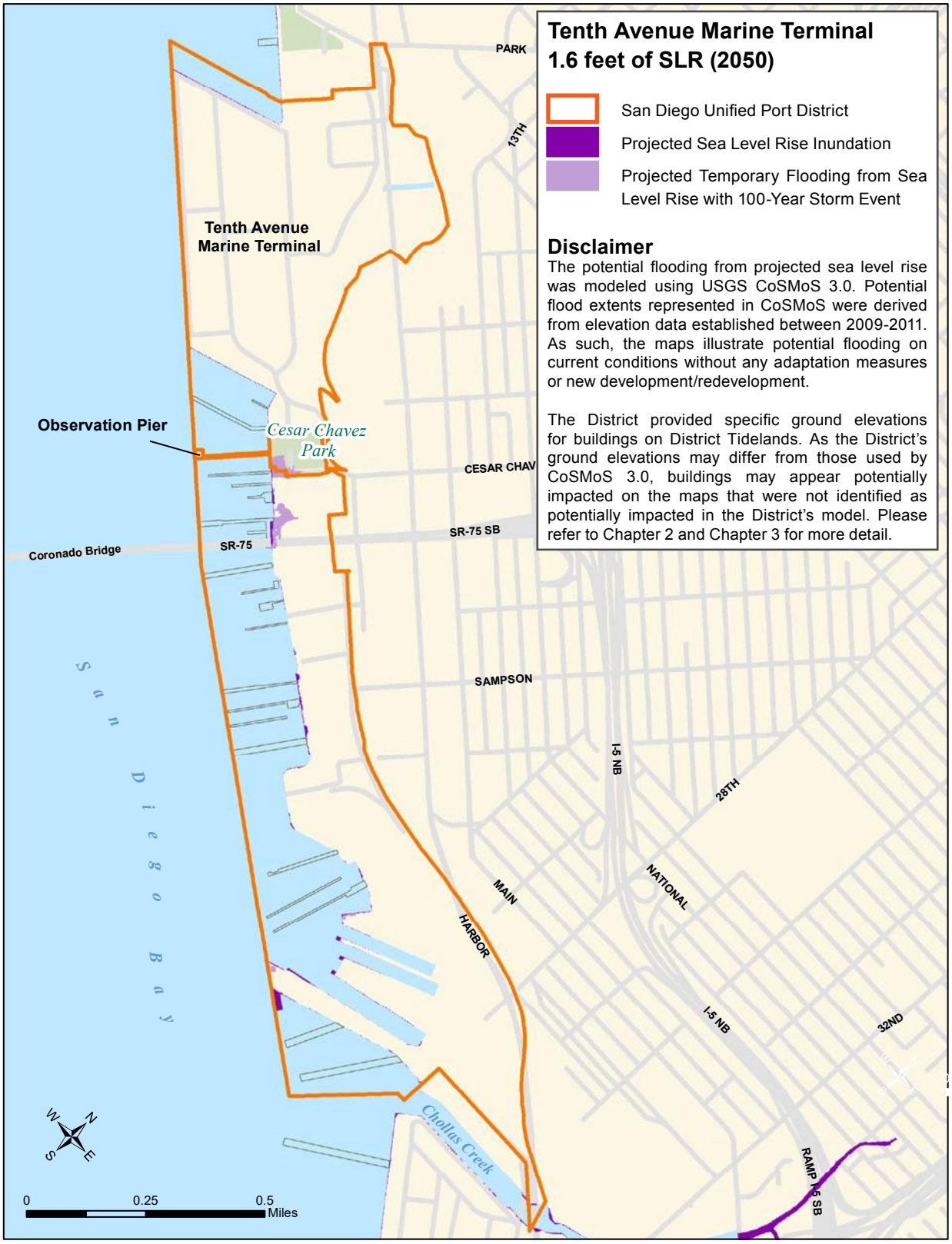

Figure 3.18: Tenth Avenue Marine Terminal Planning District Temporary Coastal Flooding (100-year storm event) and Inundation with Projected Sea Level Rise in 2050

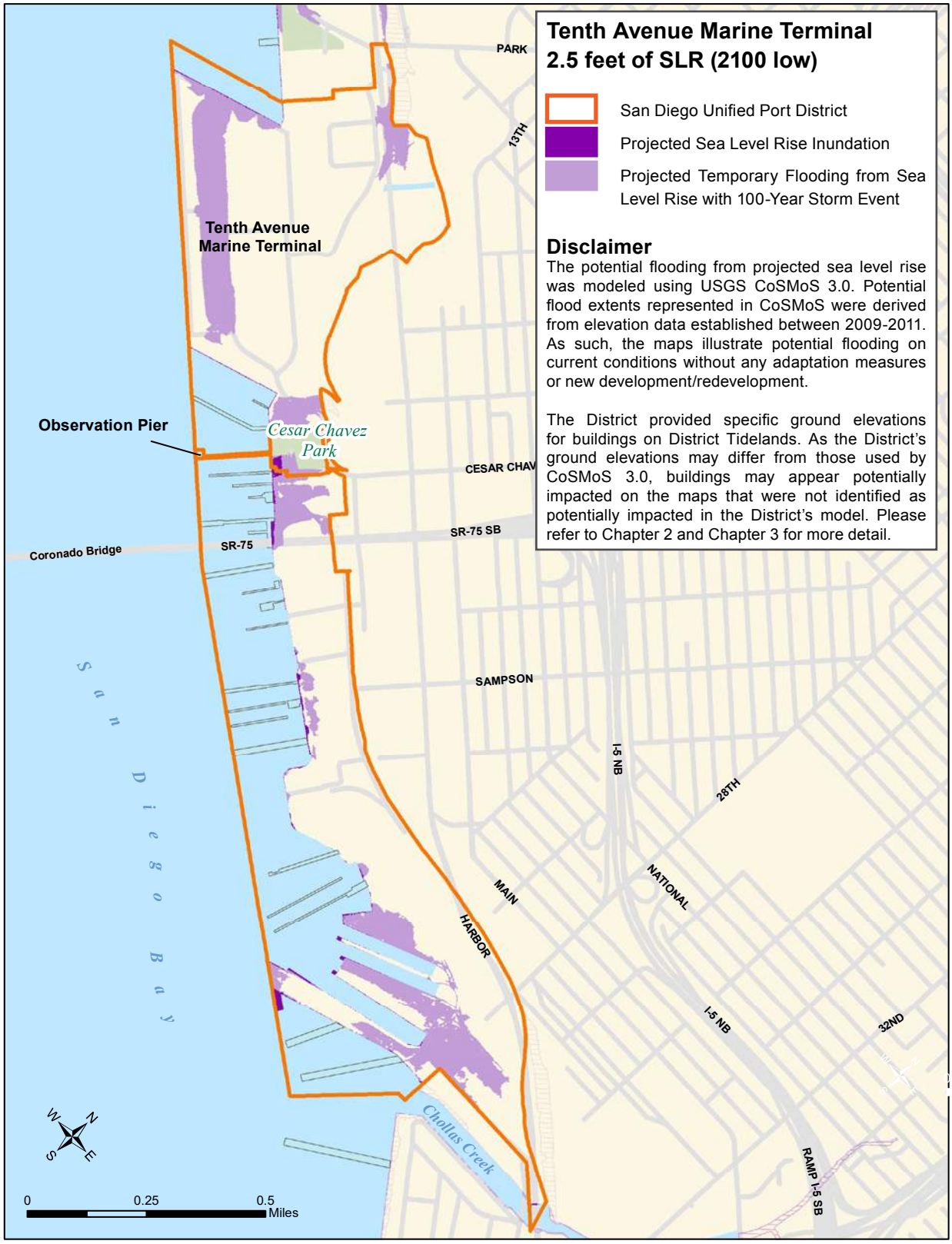

Figure 3.19: Tenth Avenue Marine Terminal Planning District Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise in 2100 (Low Scenario)

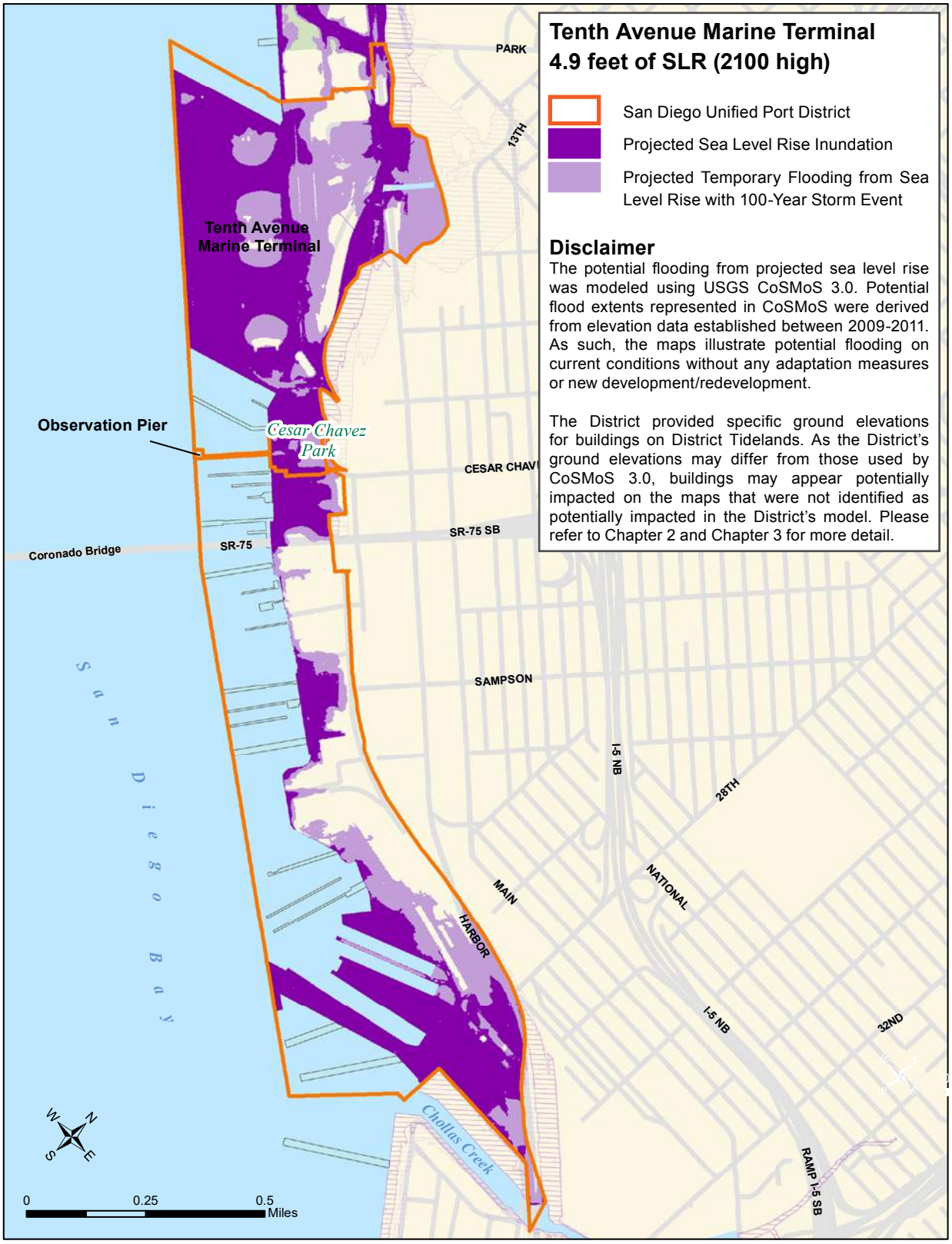

Figure 3.20: Tenth Avenue Marine Terminal Planning District Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise in 2100 (High Scenario)

3.3.5 National City Bayfront Planning District

3.3.5.1 Planning District Setting

The National City Bayfront Planning District is an established and developed marine industrial area with integrated water-oriented recreational areas. Like the Working Waterfront Planning District, coastal dependent uses are prominent within this area. The planning district is made up of 273 acres of waterfront land and 167 acres of water and includes the National City Marine Terminal, Pepper Park, Pier 32 Marina, and the National City Aquatic Center. The District's General Services facility is also located along Tidelands Avenue within this planning district.

3.3.5.2 National City Bayfront Vulnerabilities: Key Takeaways

The higher tion and existing shoreline armoring in the National City Bayfront Planning District are expected to protect the marine terminal and recreational areas from substantial projected SLR impacts. At 4.9 feet of projected SLR, the marine terminal (including associated structures), Pepper Park, and adjacent open space areas at lower elevations in this planning district are projected to be impacted by temporary coastal flooding from a 100-year storm event.

Critical infrastructure such as roadways and rail in the planning district are particularly sensitive to potential inundation at 4.9 feet of projected SLR as all access to the planning district may be affected. As these assets are highly sensitive and have low adaptive capacity due to the lack of alternate routes and large cost to elevate, impact these transportation assets could severely inhibit operations of the District's General Services facility, marine terminals and commercial facilities. These impacts are projected to occur with 4.9 feet of potential inundation and potentially at lower projected SLR scenarios with a 100-year storm event.

A commercial marina is in the planning district along the Sweetwater Channel and is home to over 300 recreational boating slips. While the slips can be elevated in response to increased projected SLR, substantially larger storm events combined with elevated sea levels may lead to damage of the marina slips and boats.

3.3.5.3 National City Bayfront Exposure from Projected Sea Level Rise Inundation and 100-Year Storm Events

The projected exposure to SLR impacts for the National City Bayfront are anticipated to occur with impacts from temporary coastal flooding from a 100-year storm event at 2.5 feet of projected SLR and potential inundation occurring at 4.9 feet of projected SLR. As these impacts are evenly distributed across the recreational and industrial areas, uses associated with District operations at the General Services facility, recreation, public access, or marine terminal operations may be greatly affected. As this planning district is largely made up of coastal dependent uses with low adaptive capacity, exposure to projected SLR and temporary coastal flooding from a 100-year storm event during a storm event pose great risks to the District.

Potential Inundation

Compared to other areas within the District, the National City Bayfront is not projected to be impacted from potential inundation except at the highest SLR scenario. Given the elevation and existing shoreline armoring composed of marine terminal bulkheads and revetment, this planning district is projected to better withstand potential inundation at 4.9 feet of projected SLR.

Highly sensitive transportation assets such as rail and road are vital to District operations and access to the National City Marine Terminal. Projected inundation at 4.9 feet of projected SLR would disrupt operations as these assets have limited adaptive capacity due to their coastal-dependent uses, lack of alternative routes and the high cost of elevating the assets. Potential inundation along Tideland's Avenue in the northern part of the planning District may prevent access to and from the District's General Services facility. The General Services building is not expected to be inundated with higher sea levels. Access to the National City Marine Terminal along Bay Marina Drive is also projected to be impacted. Access to the marine terminal along 32nd Street may not be inundated. With the highest projected SLR scenario, portions of the marine terminal are predicted to be inundated causing disruptions to freight movement.

Pepper Park located along the Sweetwater Channel represents the only park and public access point to the Bayfront within the planning district. Potential inundation of the park may

begin 2.5 feet of projected SLR. With the highest projected SLR scenario of 4.9 feet a large portion of the park and adjoining parking area may become inundated. The Pepper Park fishing pier may also experience inundation at 4.9 feet of projected SLR.

Temporary coastal flooding from a 100-year storm event (100-year Storm Event)

Recreational opportunities and associated public access are projected to be negatively impacted from temporary coastal flooding from a 100-year storm event. Almost 40 percent of pathways become affected at 0.8 feet with Pepper Park becoming increasing more flooding on a temporary basis with increased projected SLR and a 100-year storm event. The Pepper Park-related comfort stations become flooded at 2.5 feet with a 100-year storm event, whereas the Aquatic Center does not become impacted at 4.9 feet of projected SLR.

Temporary coastal flooding from a 100-year storm event along Tideland's Avenue may prevent access to and from the District's General Services facility with a 2.5 feet rise in sea levels. Although the General Services building is not expected to be flooded with higher sea levels and a 100-year storm event, portions of the parking and equipment storage areas may experience temporary coastal flooding from a 100-year storm event under the highest SLR projection. Likewise, access to the National City Marine Terminal along Bay Marina Drive is projected to be impacted with a 100-year storm event, however, access to the marine terminal along 32nd Street may not be flooded.

Table 3.12: National City Bayfront Asset Vulnerability from Potential Inundation with Projected Sea Level Rise

Assets	Total Quantity in District	Sensitivity	Adaptive Capacity	Exposure to Inundation			
				0.8 ft SLR	1.6 ft SLR	2.5 ft SLR	4.9 ft SLR
Roads (linear miles)	2.6	HIGH	LOW	0%	0%	0%	35%
Rail (linear miles)	5.2	HIGH	LOW	0%	0%	0%	45%
Bikeways (linear miles)	0.8	LOW	HIGH	0%	0%	0%	12%
Pathways (linear miles)	1.2	LOW	HIGH	0%	0%	4%	17%
Marine Terminals (acres)	130.4	HIGH	LOW	0%	0%	1%	18%
Buildings (count)	50	HIGH	LOW	0%	0%	0%	4%
Piers (count)	1	HIGH	LOW	0%	0%	0%	100%
Stormwater Management (count)	3	HIGH	LOW	0%	0%	0%	33%
Sewer Lifts (count)	1	HIGH	HIGH	0%	0%	0%	0%
Boat Launch Ramps (count)	1	LOW	HIGH	100%	100%	100%	100%
Parks (acres)	5.5	LOW	HIGH	0%	0%	2%	43%

Table 3.13: National City Bayfront Asset Vulnerability from Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise

Assets	Total Quantity in District	Sensitivity	Adaptive Capacity	Exposure to Temporary Coastal Flooding			
				0.8 ft SLR	1.6 ft SLR	2.5 ft SLR	4.9 ft SLR
Roads (linear miles)	2.6	HIGH	LOW	1%	2%	22%	72%
Rail (linear miles)	5.2	HIGH	LOW	0%	0%	17%	91%
Bikeways (linear miles)	0.8	LOW	HIGH	6%	6%	6%	69%
Pathways (linear miles)	1.2	LOW	HIGH	39%	39%	53%	100%
Marine Terminals (acres)	130.4	HIGH	LOW	0%	0%	20%	91%
Buildings (count)	50	HIGH	LOW	0%	0%	16%	20%
Piers (count)	1	HIGH	LOW	0%	0%	100%	100%
Stormwater Management (count)	3	HIGH	LOW	0%	7%	40%	87%
Sewer Lifts (count)	1	HIGH	HIGH	0%	0%	0%	100%
Boat Launch Ramps (count)	1	LOW	HIGH				
Parks (acres)	5.5	LOW	HIGH	2%	7%	23%	79%

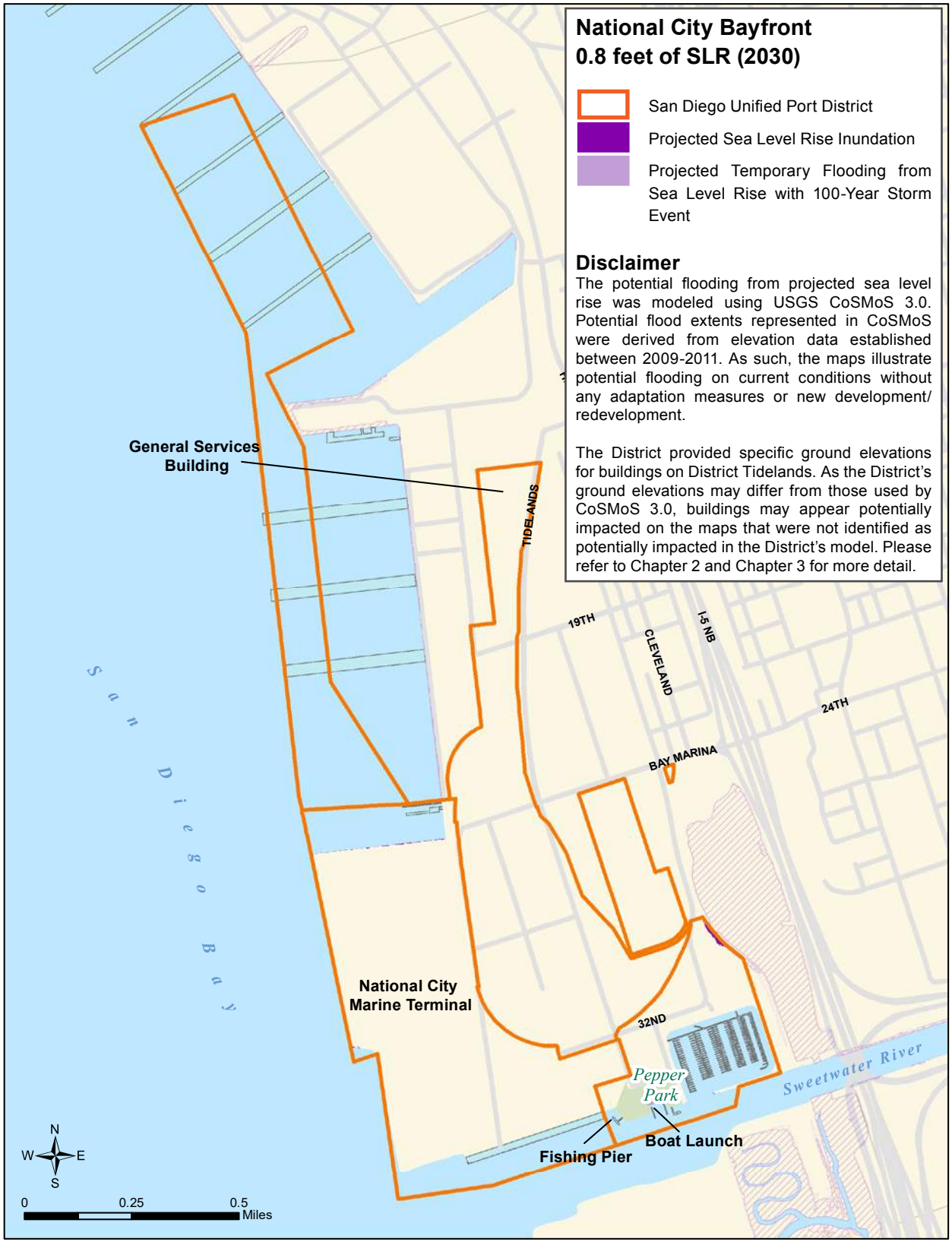

Figure 3.21: National City Bayfront Planning District Temporary Coastal Flooding (100-year storm event) and Inundation with Projected Sea Level Rise in 2030

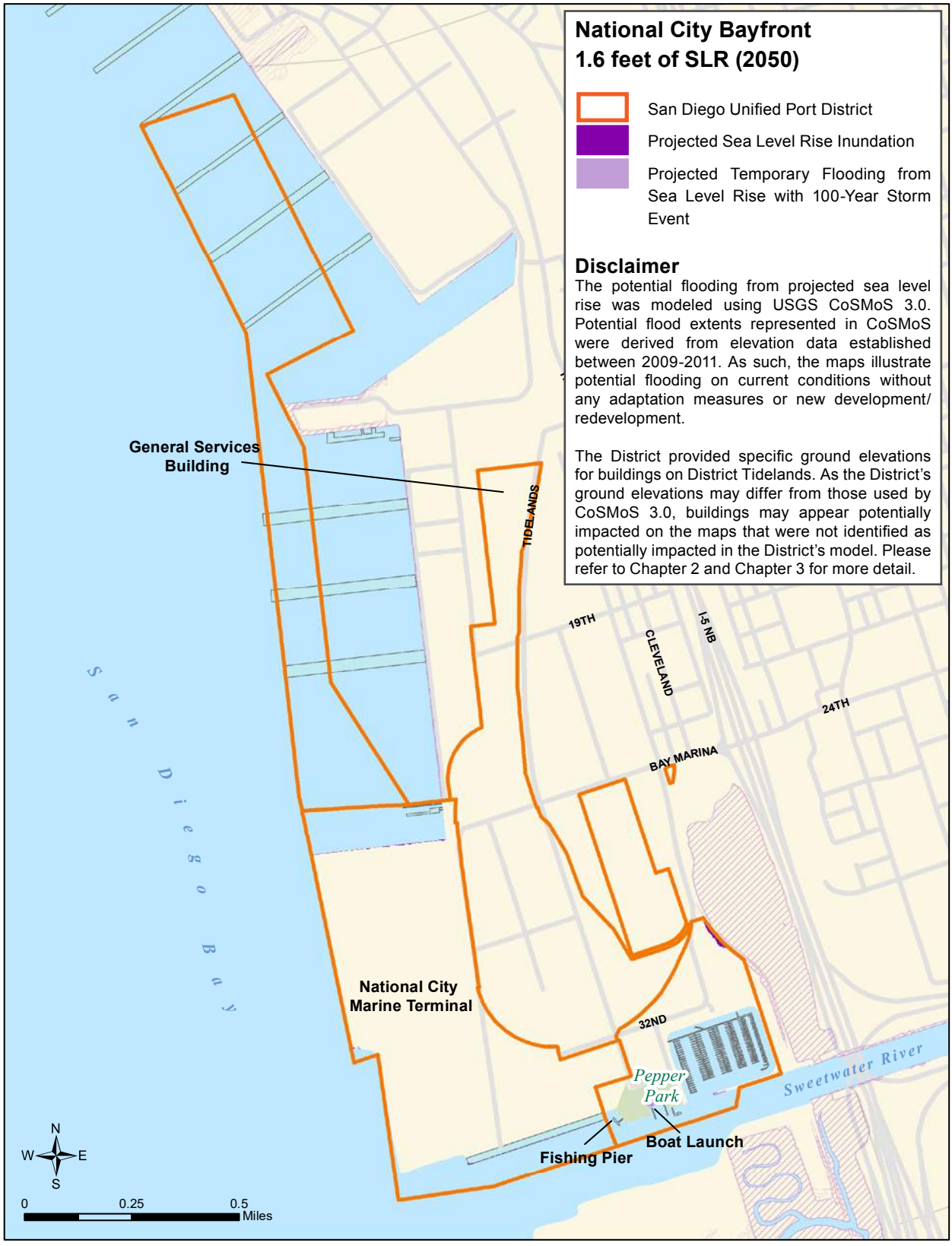

Figure 3.22: National City Bayfront Planning District Temporary Coastal Flooding (100-year storm event) and Inundation with Projected Sea Level Rise in 2050

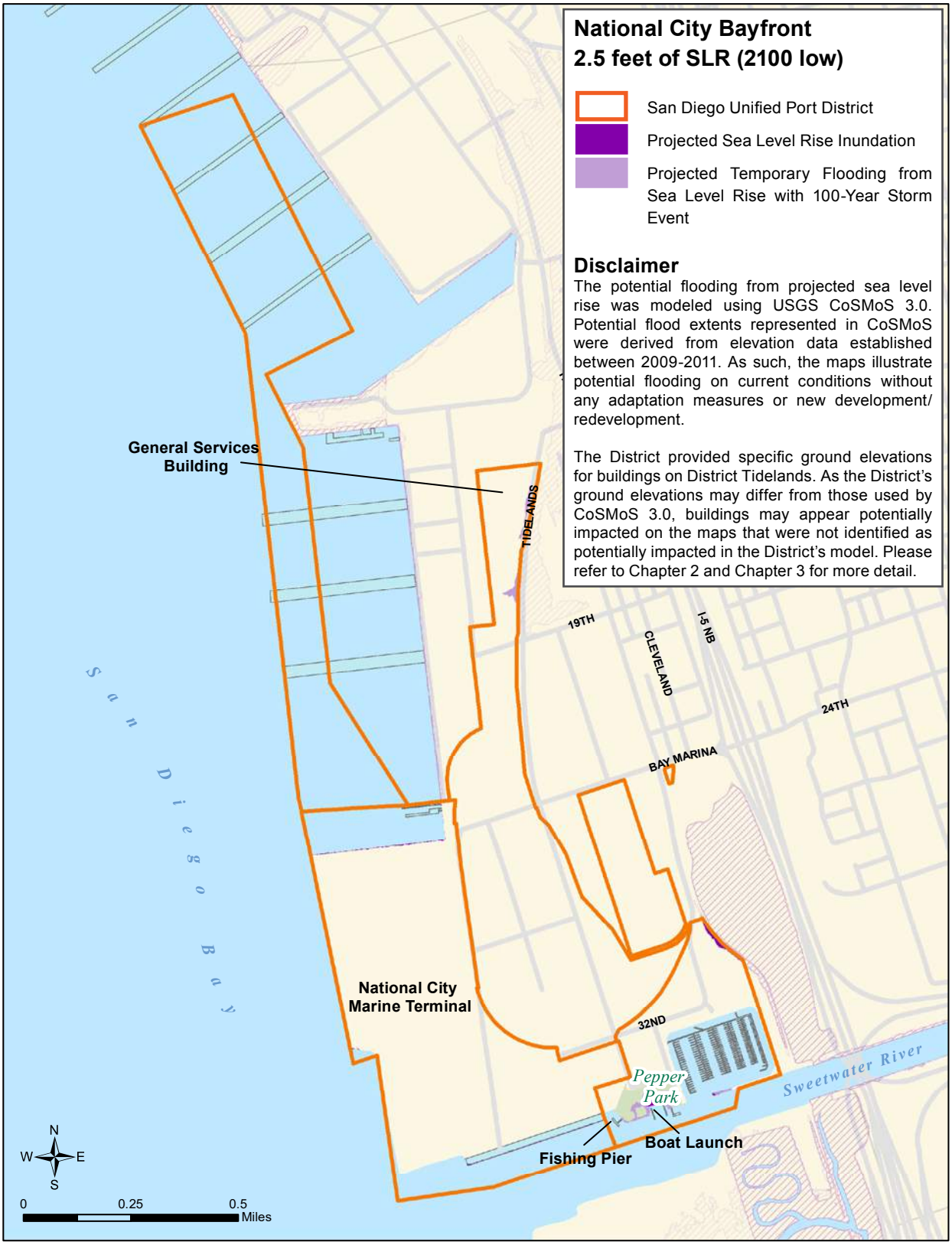

Figure 3.23: National City Bayfront Planning District Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise in 2100 (Low Scenario)

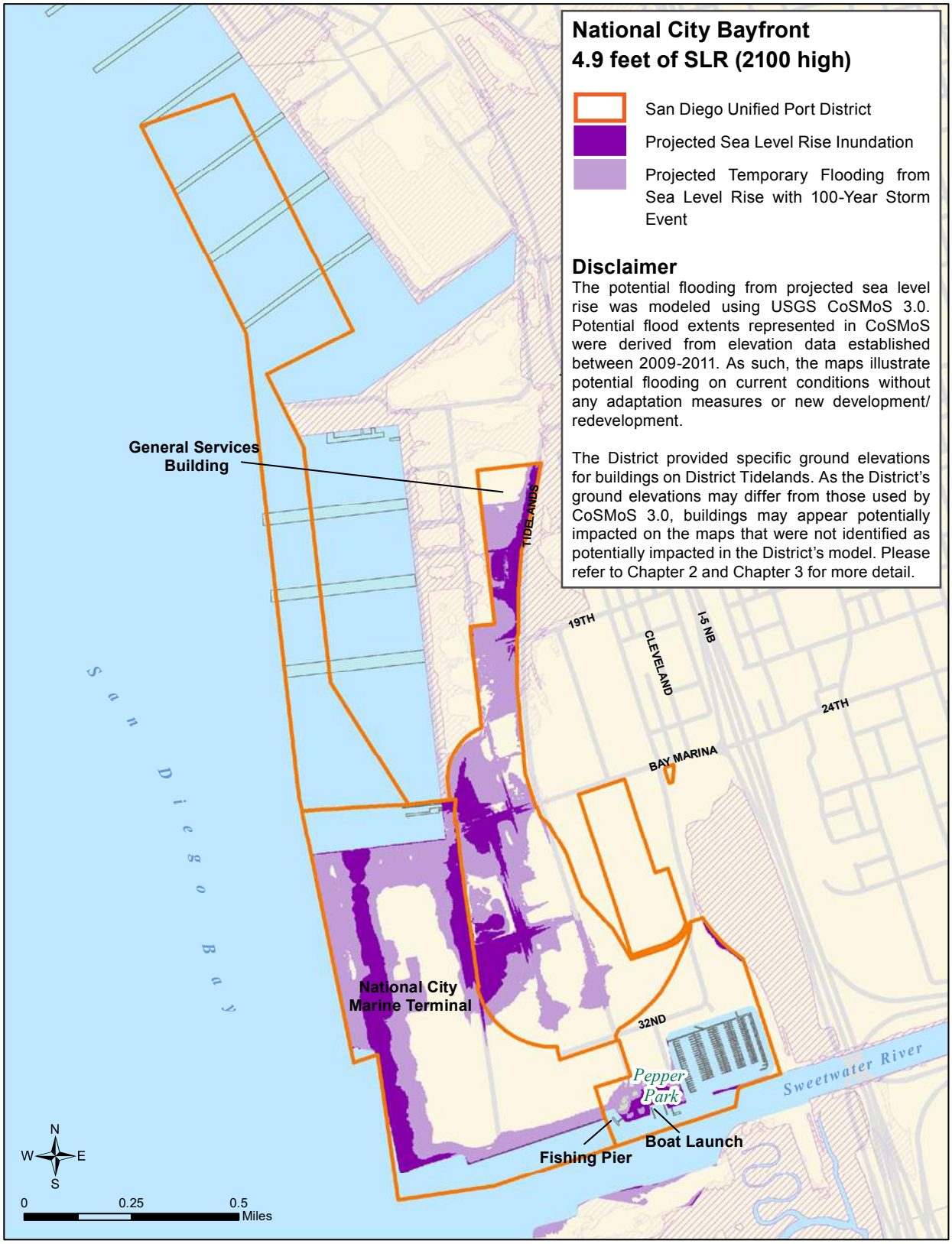

Figure 3.24: National City Bayfront Planning District Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise in 2100 (High Scenario)

3.3.6 Chula Vista Bayfront Planning District

3.3.6.1 Planning District Setting

The Chula Vista Bayfront Planning District will be transformed in the coming years through a large-scale waterfront development, known as the Chula Vista Bayfront Project. Overall, the project will encompass approximately 535 acres and include the redevelopment of parks, open space, shoreline promenades, walking trails, RV camping, and commercial and marine-related facilities. Although the Chula Vista Bayfront Project has already been approved by the California Coastal Commission, design and construction of the project has not occurred. Therefore, the existing conditions of the planning district were included in the AB 691 analysis, i.e., it assumes no development or grade changes.

Currently, the planning district includes public parks, a boat launching ramp, an RV park, marinas, boatyards, warehouses, and a recreated wildlife habitat island. Police and emergency waterborne services are provided from the Harbor Police substation near the boat-launching ramp. Marine and biological resources are abundant throughout the entire planning district, primarily due to its proximity to San Diego Bay and the South San Diego Bay National Wildlife Refuge. The endangered California Least Tern has two nesting locations within the Planning District.

3.3.6.2 Chula Vista Bayfront Vulnerabilities: Key Takeaways

As stated above, the description of impacts hereafter caused by future projected SLR and storm surge are about current conditions and will not impact the final redevelopment of the Chula Vista Bayfront. The District has already conducted site-specific assessments of projected SLR vulnerability to the components of the Chula Vista Bayfront Project such as the proposed road network. Other site-specific assessments are planned to mitigate the effects of potential inundation and flooding caused by projected SLR.

Under existing conditions, low lying recreational areas in Chula Vista Planning District are projected to be impacted from potential future inundation and temporary coastal flooding from a 100-year storm event (from a 100-year storm event) earlier than other areas around San Diego Bay. At 4.9 feet of projected SLR, most of the planning district may be impacted by potential inundation and/or 100-year

storm event temporary coastal flooding from a 100-year storm event affecting public access, recreational areas, and the transportation network. Natural resources in this planning district may also be severely impacted by potential projected SLR inundation. Important nesting habitat for the California Least Tern, which is an endangered species, may begin to become impacted with only 0.8 feet of projected SLR. With 4.9 feet of projected SLR, California least tern habitat becomes impacted at both the D Street Fill along the mouth of the Sweetwater River, and at the Chula Vista Wildlife Reserve.

Chula Vista has a fishing pier and a breakwater that are projected to be affected by projected SLR with a large storm event. Roughly 900 recreational marina slips are susceptible to damage from projected SLR and 100-year storm events that may disrupt accessibility or business operations. Critical infrastructure such as roadways and stormwater systems are particularly sensitive to potential inundation and 100-year storm events. The Harbor Police South Bay Substation, next to the boat-launching ramp in Chula Vista Bayfront Park, is not expected to experience flooding until the high end projected SLR scenario with a storm event.

3.3.6.3 Chula Vista Bayfront Exposure from Projected Sea Level Rise Inundation and 100-Year Storm Events

Under existing conditions, projected impacts from potential inundation and temporary 100-year storm events are projected to occur with 0.8 feet and 1.6 feet of projected SLR. Impacts begin with public access and recreational areas (beaches). At 4.9 feet of projected SLR, a substantial portion of the planning district is projected to be impacted by potential SLR inundation. Historically, Bayside Park has been damaged from storm surge or wave run-up due to King Tides or large storm events. A 100-year storm event with increased projected SLR has the potential to substantially alter the shoreline lacking future adaptation strategies.

Potential Inundation

District assets in or directly adjacent to the water at lower elevations are projected to be impacted by potential inundation with 0.8 feet of projected SLR. These include beaches, boat launches, pathways, and the stormwater system. With the exception of the stormwater system, the adaptive capacity of these other assets, in their current state, is relatively high, and these assets should remain operable even with greater

Table 3.14: Chula Vista Bayfront Asset Vulnerability from Potential Inundation with Projected Sea Level Rise

Assets	Total Quantity in District	Sensitivity	Adaptive Capacity	Exposure to Inundation			
				0.8 ft SLR	1.6 ft SLR	2.5 ft SLR	4.9 ft SLR
Roads (linear miles)	4.5	HIGH	LOW	0%	0%	5%	49%
Bikeways (linear miles)	1.2	LOW	HIGH	0%	1%	24%	71%
Pathways (linear miles)	2.3	LOW	HIGH	5%	5%	17%	76%
Buildings (count)	24	HIGH	LOW	0%	0%	0%	18%
Piers (count)	2	HIGH	LOW	0%	0%	0%	100%
Stormwater Management (count)	39	HIGH	LOW	5%	5%	8%	43%
Beach Accessible Areas (acres)	1.9	HIGH	LOW	86%	87%	89%	98%
Parks (acres)	23.6	LOW	HIGH	9%	21%	38%	78%
Boat Launch Ramps (count)	1	LOW	HIGH	1%	1%	9%	55%

Table 3.15: Chula Vista Bayfront Asset Vulnerability from Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise

Assets	Total Quantity in District	Sensitivity	Adaptive Capacity	Exposure to Temporary Coastal Flooding			
				0.8 ft SLR	1.6 ft SLR	2.5 ft SLR	4.9 ft SLR
Roads (linear miles)	4.5	HIGH	LOW	4%	16%	41%	64%
Bikeways (linear miles)	1.2	LOW	HIGH	21%	33%	54%	92%
Pathways (linear miles)	2.3	LOW	HIGH	15%	33%	57%	95%
Buildings (count)	24	HIGH	LOW	0%	4%	10%	50%
Piers (count)	2	HIGH	LOW	0%	50%	50%	100%
Stormwater Management (count)	39	HIGH	LOW	5%	13%	28%	67%
Beach Accessible Areas (acres)	1.9	HIGH	LOW	89%	91%	94%	100%
Parks (acres)	23.6	LOW	HIGH	9%	21%	38%	78%
Boat Launch Ramps (count)	1	LOW	HIGH	9%	21%	38%	78%

increases in projected SLR. The beach areas are projected to substantially impacted and are susceptible to erosion and complete loss starting in the long-term.

With 2.5 feet of projected SLR, recreational and public access opportunities are projected to be substantially hindered. All three parks in the planning district are predicted to experience potential inundation. Overtopping of the breakwater may occur with 1.6-feet of projected SLR and a storm event. With 4.9 feet of projected SLR, a majority of parks, pathways and bikeways, the fishing pier, buildings, beach areas, roadways, and the stormwater system may be severely affected by potential inundation. Potential inundation along roadways within the planning district may severely curtail access, create challenges to emergency responses, and disrupt business operations within the area.

Temporary coastal flooding from a 100-year storm event (100-year Storm Event)

A 100-year storm event in the planning district is projected to have substantial impacts to public accessibility and recreational opportunities starting at 2.5 feet of projected SLR. While a small number of buildings may be impacted at 1.6 feet of projected SLR with a 100-year storm event, half of the structures are projected to be affected by potential storm surge with 2.5 to 4.9 feet of projected SLR. Beyond 2.5 feet of projected SLR, a 100-year storm event has the potential to severely impact public access in the planning district with most roadways, pathways, bikeways, the fishing pier, and beach areas potentially becoming impacted. The Harbor Police South Bay Substation is in Chula Vista Bayfront Park next to the boat launch ramp. This facility is not expected to experience flooding until the high end projected SLR scenario with a storm event.

Important California Least Tern habitat is susceptible to temporary coastal flooding from a 100-year storm event during a storm event. Much of the nesting site located at the Chula Vista Wildlife Reserve may become flooded during a 100-year storm event with as little as 0.8 feet of projected SLR. The D Street Fill has a higher elevation and may not experience serious flooding until 4.9 feet of projected SLR coupled with a storm event.

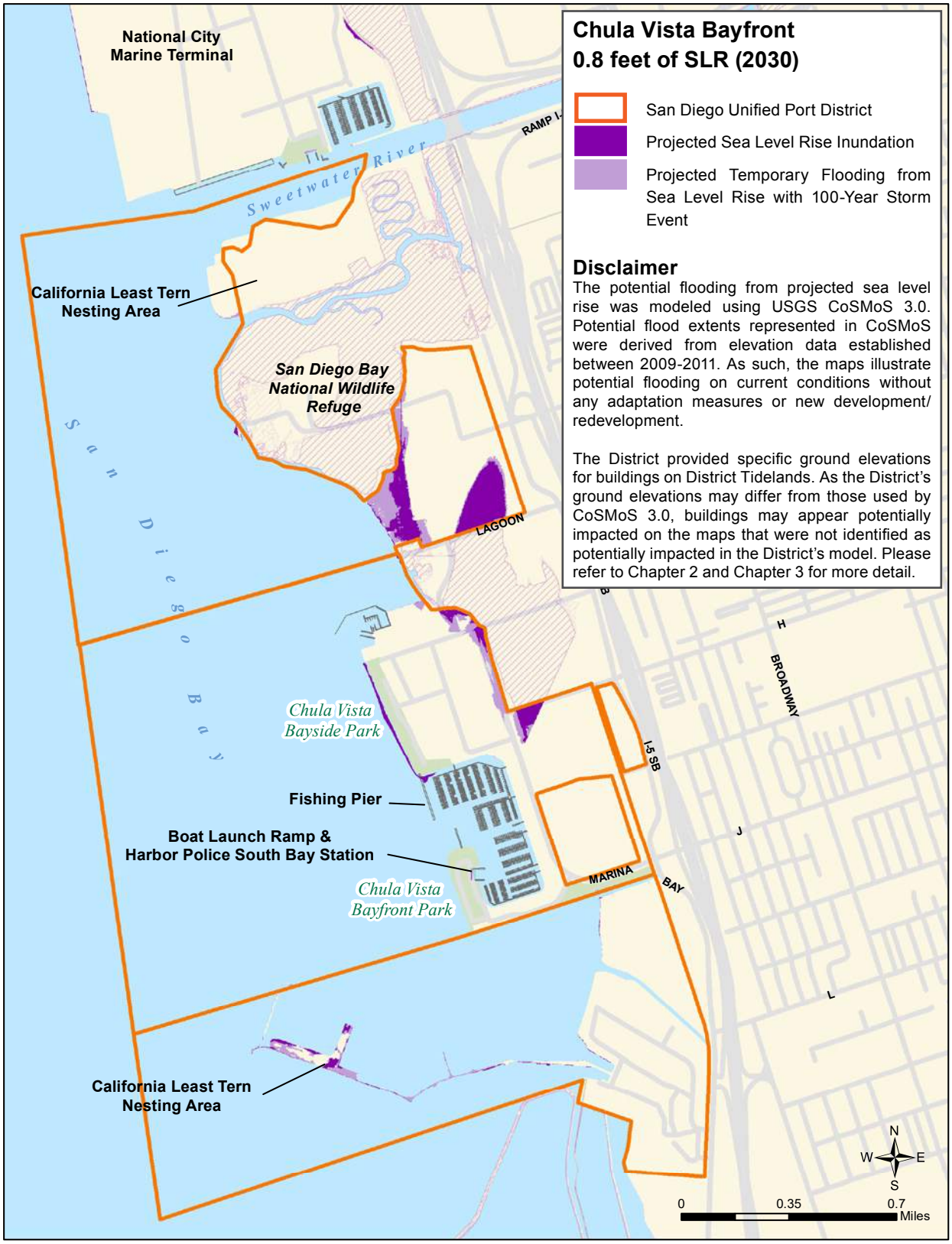

Figure 3.25: Chula Vista Bayfront Planning District Temporary Coastal Flooding (100-year storm event) and Inundation with Projected Sea Level Rise in 2030

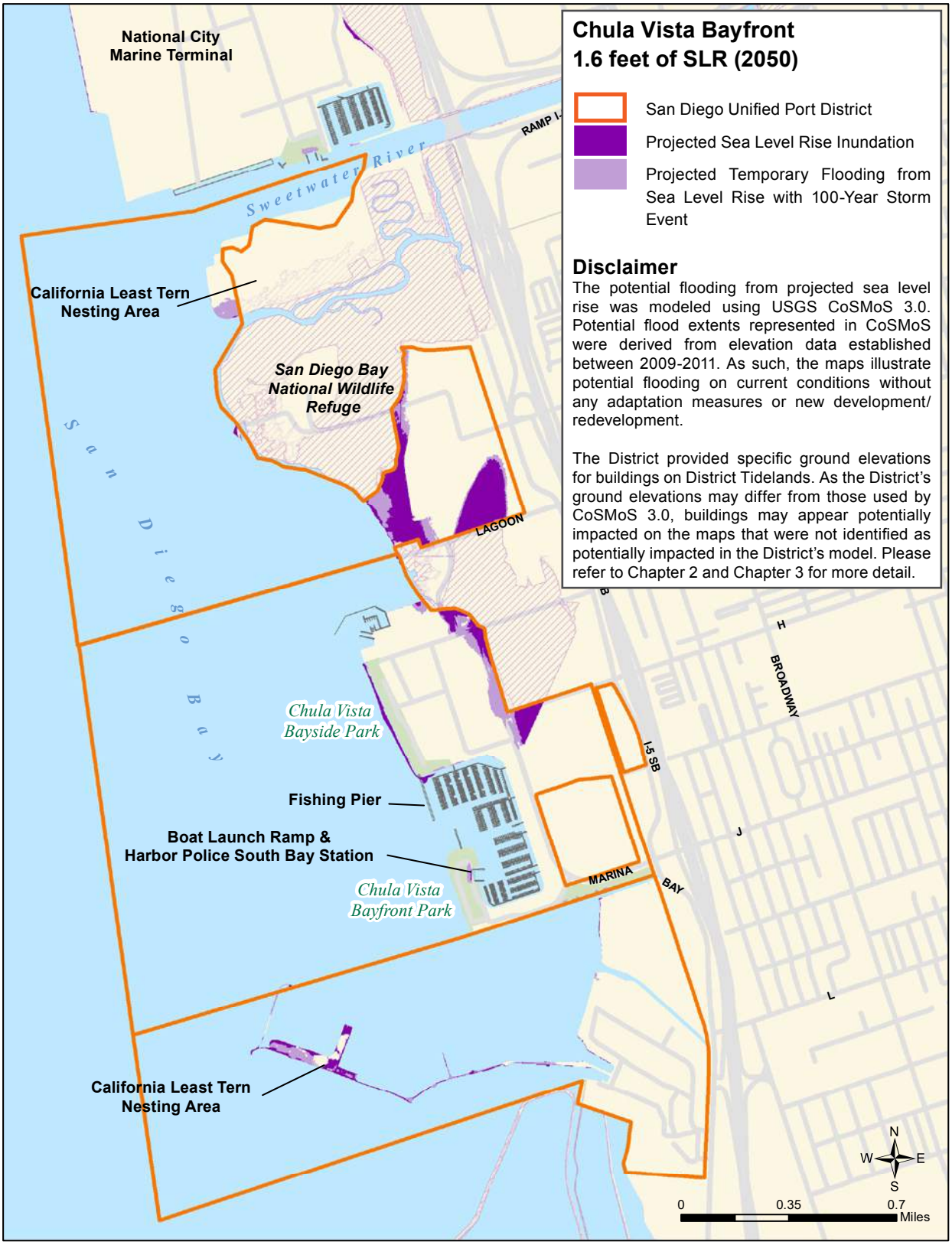

Figure 3.26: Chula Vista Bayfront Planning District Temporary Coastal Flooding (100-year storm event) and Inundation with Projected Sea Level Rise in 2050

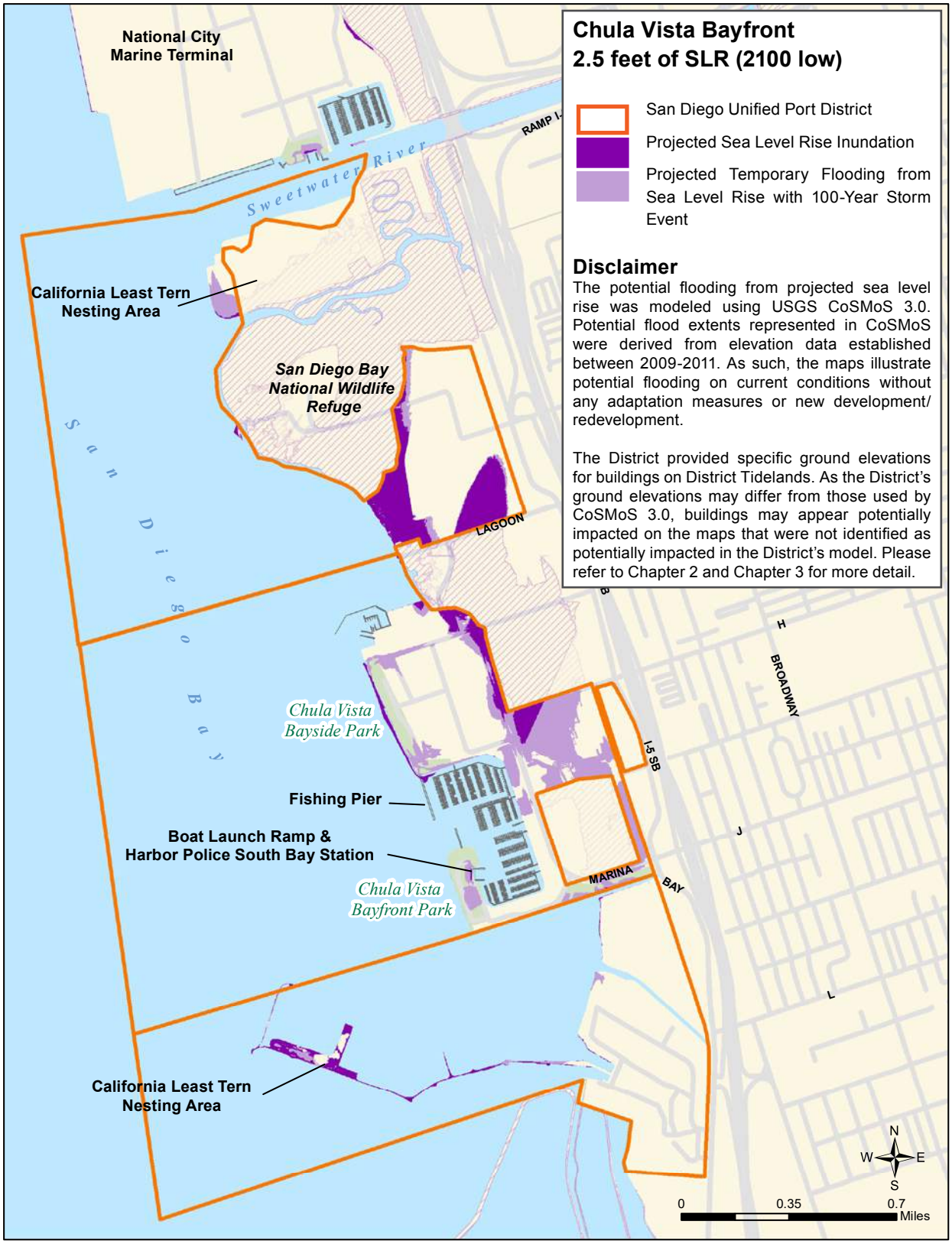

Figure 3.27: Chula Vista Bayfront Planning District Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise in 2100 (Low Scenario)

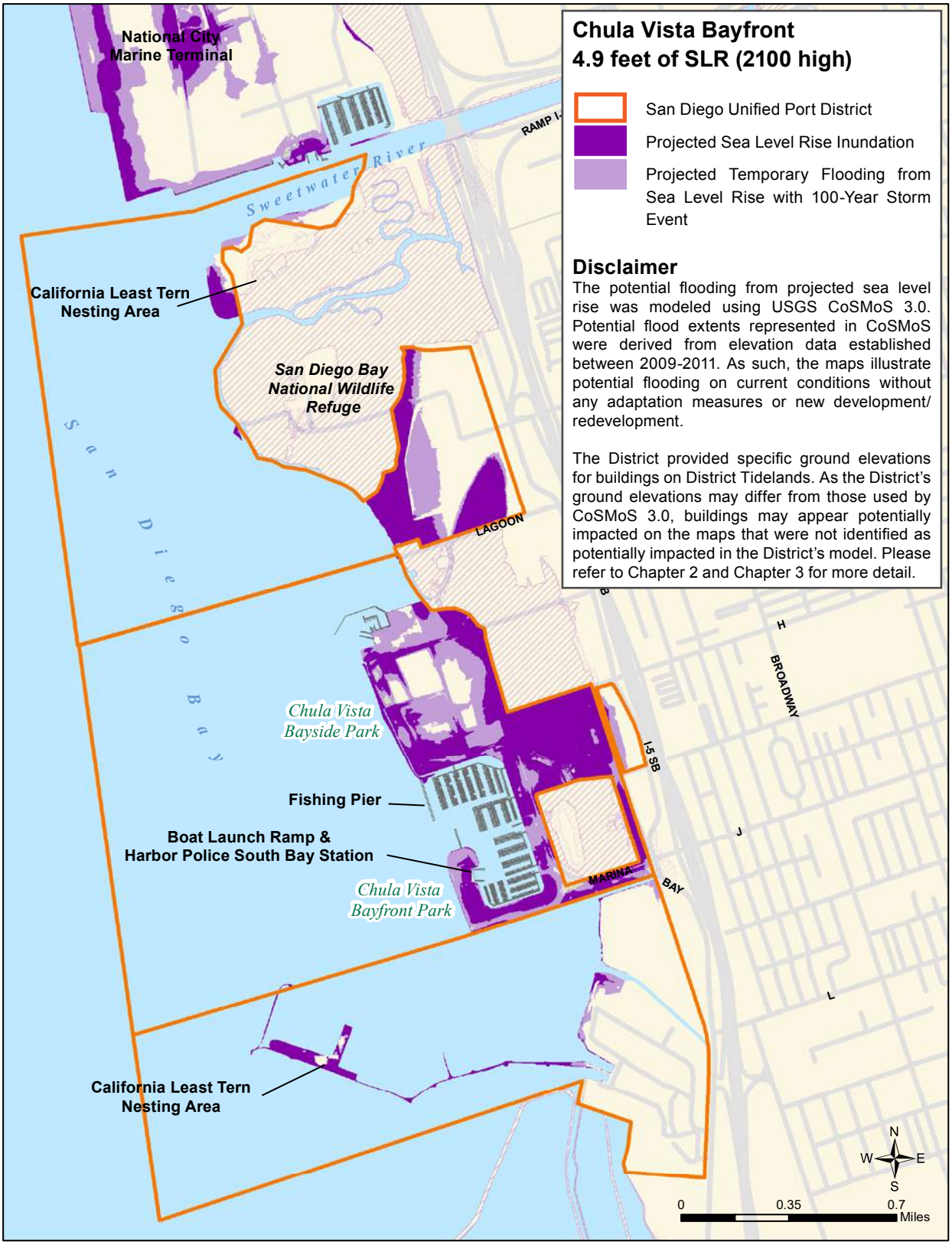

Figure 3.28: Chula Vista Bayfront Planning District Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise in 2100 (High Scenario)

3.3.7 South Bay Salt Lands Planning District

3.3.7.1 Planning District Setting

The South Bay Salt Lands Planning District comprises the water and land areas at the southerly end of the Bay that support a diverse range of natural resources and ecosystems. A former salt pond known as Pond 20 occupies most of the planning district. The District is planning to construct a wetlands mitigation bank in Pond 20. The planning district also contains a portion of the Bayshore Bikeway and is adjacent to the National Wildlife Refuge. Otay River runs along the northern boundary of Pond 20 before emptying into San Diego Bay.

3.3.7.2 South Bay Salt Lands Vulnerabilities: Key Takeaways

The primary asset evaluated in the South Bay Salt Lands Planning District is a short section of the Bayshore Bikeway. While not projected to be impacted by potential inundation at 4.9 feet of projected SLR, impacts from temporary coastal flooding from a 100-year storm event are projected to occur at 1.6 feet of projected SLR. Adaptive capacity is high for this asset as alternative routes are available to access destinations in Coronado, Imperial Beach, and Chula Vista.

3.3.7.3 South Bay Salt Lands Exposure from Projected Sea Level Rise Inundation and 100-Year Storm Events

The projected impacts to potential inundation are minimal for all projected SLR scenarios. However, storm surge will have greater impacts and potentially inhibit cyclist and pedestrian access beginning at 1.6 feet of projected SLR.

Potential Inundation

District assets in or directly adjacent to the water at lower elevations are not projected to be exposed to potential inundation until 4.9 feet of projected SLR. These impacts account for only five percent of the bikeway.

Temporary coastal flooding from a 100-year storm event (100-year Storm Event)

While a very small portion of the bikeway in the planning district may be affected by temporary coastal flooding from a 100-year storm event beginning at 1.6 feet of projected SLR, all the bikeways may be fully flooded during a 100-year storm event at 4.9 feet of projected SLR.

Table 3.16: South Bay Salt Lands Asset Vulnerability from Potential Inundation with Projected Sea Level Rise

Assets	Total Quantity in District	Sensitivity	Adaptive Capacity	Exposure to Inundation			
				0.8 ft SLR	1.6 ft SLR	2.5 ft SLR	4.9 ft SLR
Bikeways (linear miles)	0.3	LOW	HIGH	0%	0%	0%	5%

Table 3.17: South Bay Salt Lands Asset Vulnerability from Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise

Assets	Total Quantity in District	Sensitivity	Adaptive Capacity	Exposure to Temporary Coastal Flooding			
				0.8 ft SLR	1.6 ft SLR	2.5 ft SLR	4.9 ft SLR
Bikeways (linear miles)	0.3	LOW	HIGH	0%	1%	40%	100%

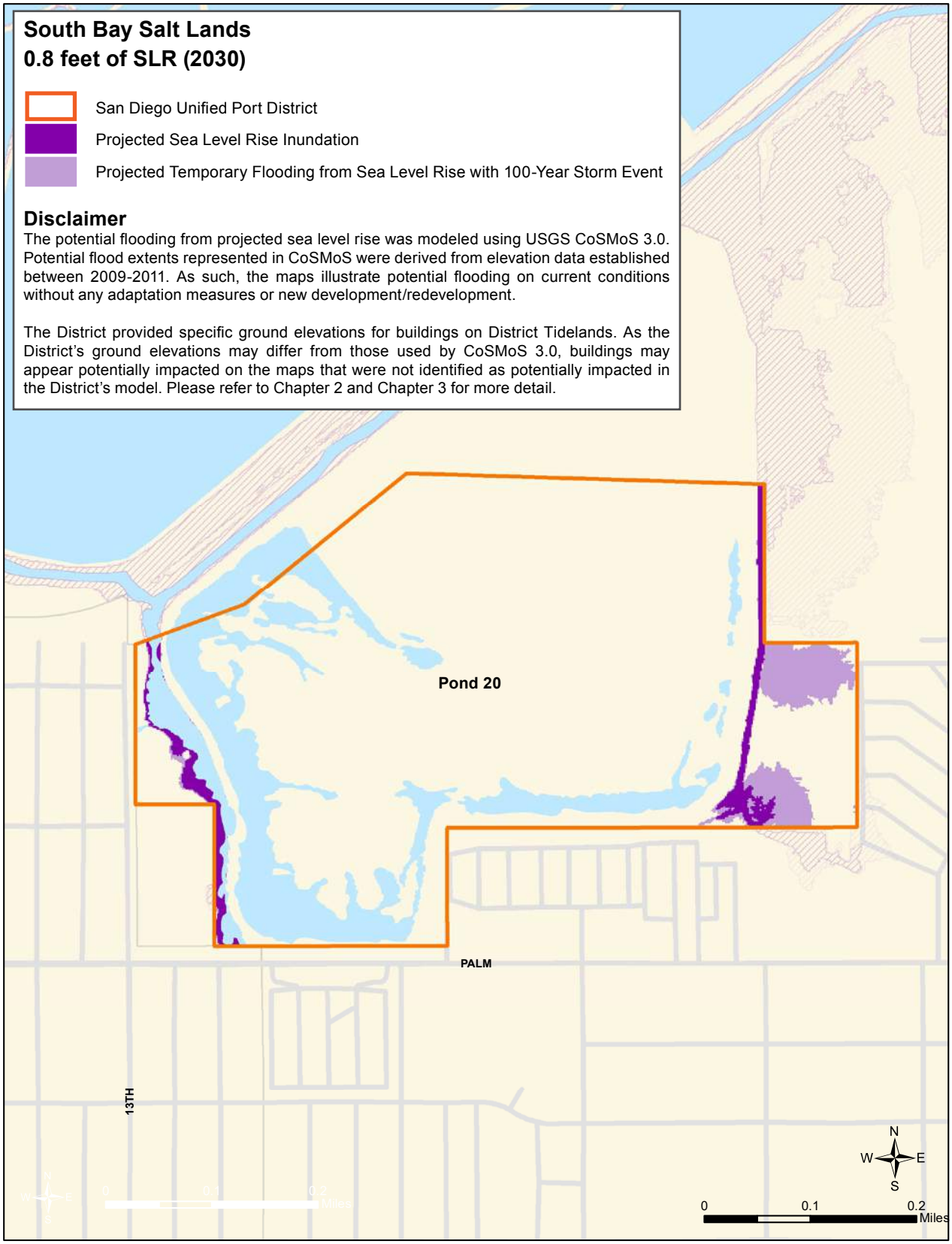

Figure 3.29: South Bay Salt Lands Planning District Temporary Coastal Flooding (100-year storm event) and Inundation with Projected Sea Level Rise in 2030

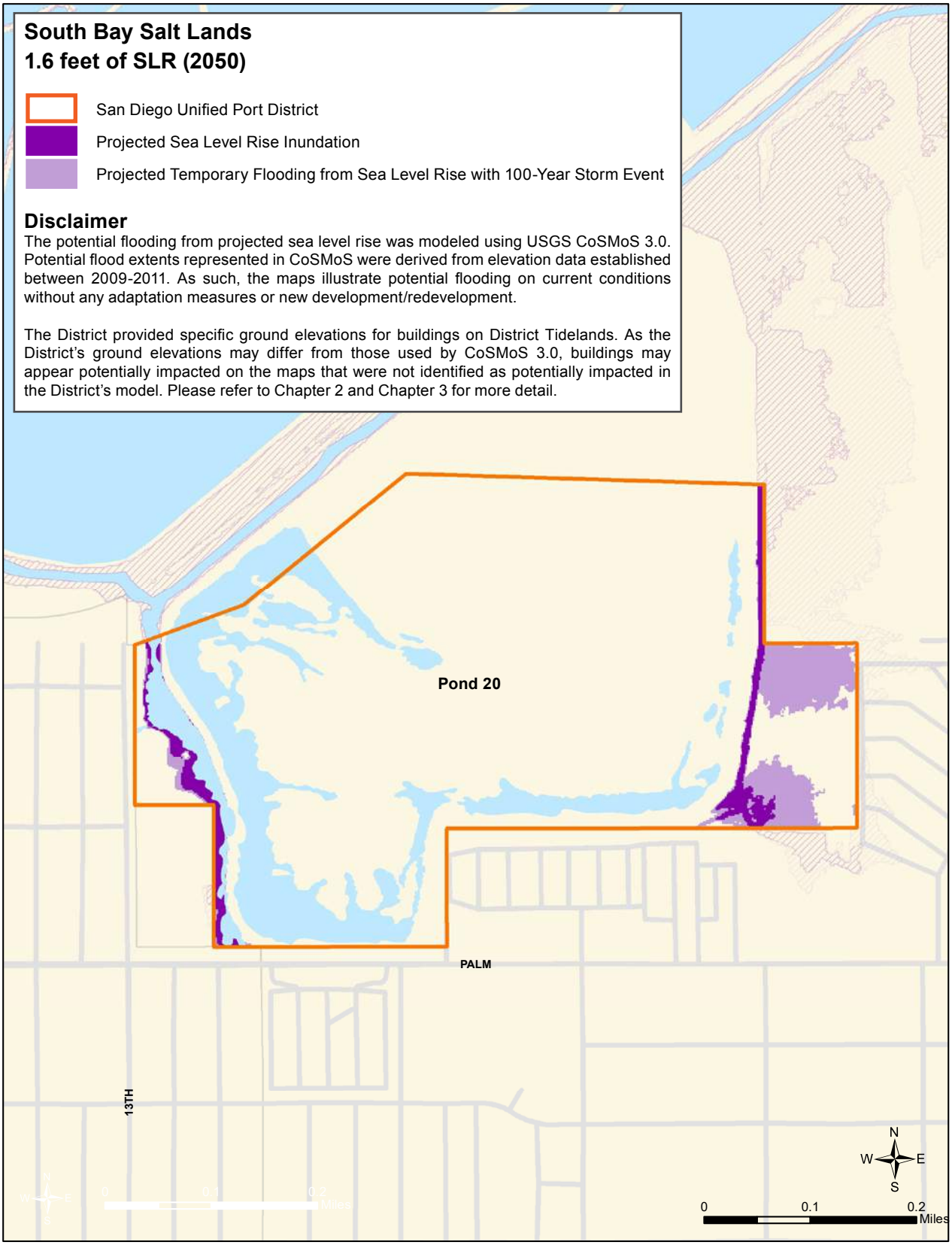

Figure 3.30: South Bay Salt Lands Planning District Temporary Coastal Flooding (100-year storm event) and Inundation with Projected Sea Level Rise in 2050

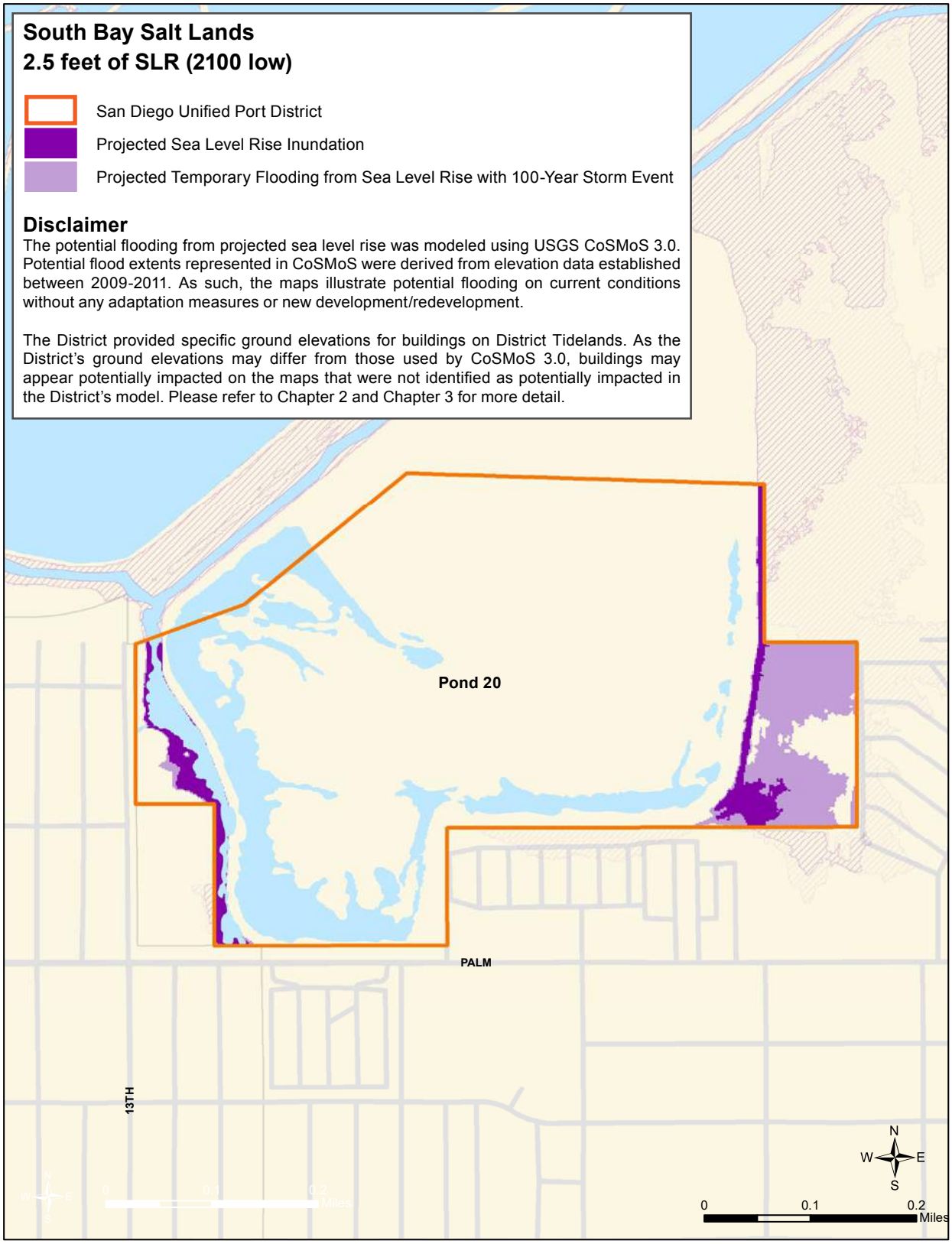

Figure 3.31: South Bay Salt Lands Planning District Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise in 2100 (Low Scenario)

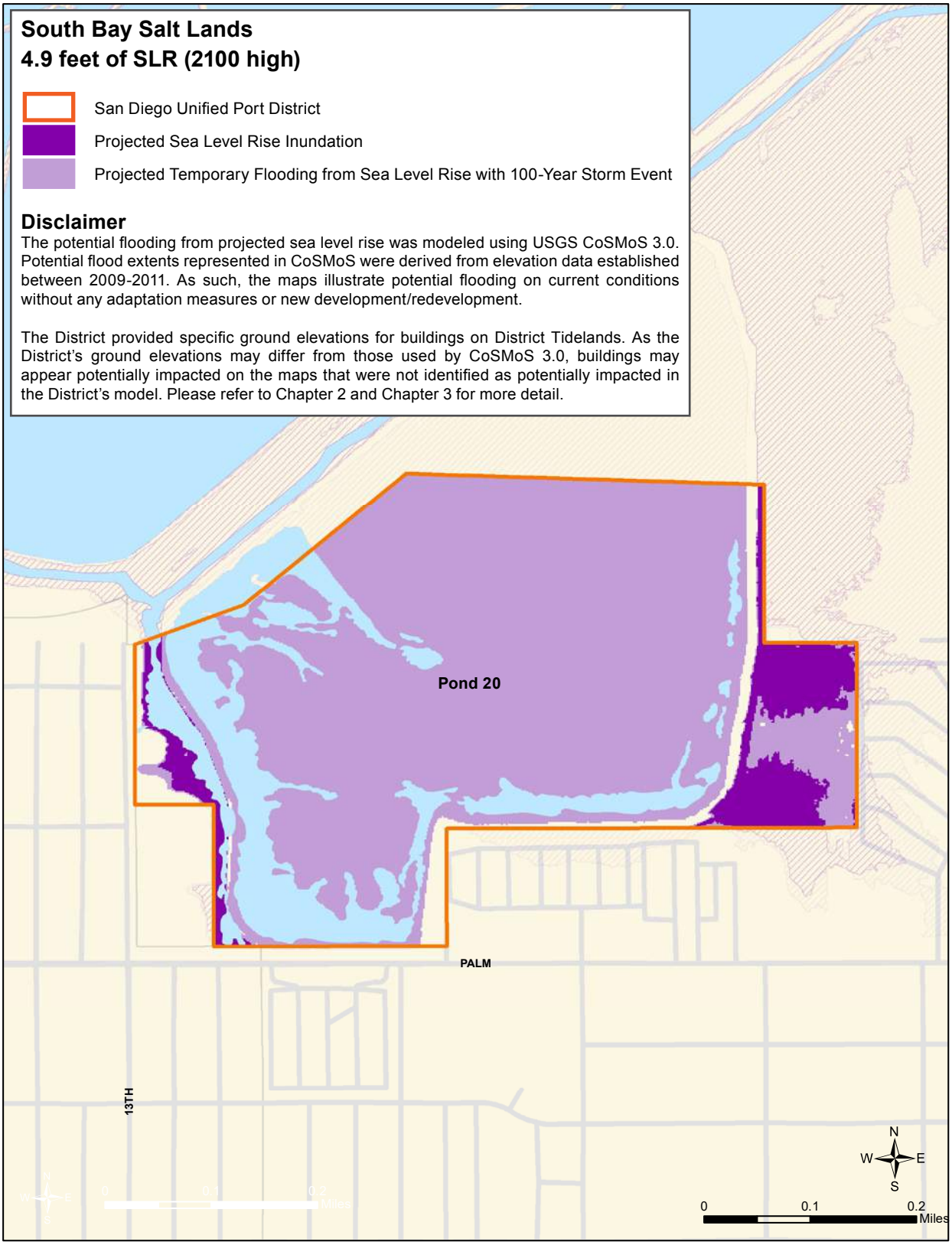

Figure 3.32: South Bay Salt Lands Planning District Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise in 2100 (High Scenario)

3.3.8 Imperial Beach Oceanfront Planning District

3.3.8.1 Planning District Setting

The Imperial Beach Oceanfront Planning District includes retail, restaurant, and open space uses. Key features of the planning district include the Pacific Ocean shoreline along Imperial Beach, the Imperial Beach Municipal Pier, Dunes Park, and state granted Pacific Ocean tidelands and submerged lands. The City of Imperial Beach completed an SLR vulnerability assessment in 2016.[4] The City's assessment considered potential inundation and flooding for various future SLR scenarios and included adaptation strategies to mitigate projected SLR impacts.

3.3.8.2 Imperial Beach Oceanfront Vulnerabilities: Key Takeaways

While 100-year storm event (on top of projected SLR) may lead to greater impacts from temporary coastal flooding compared to potential inundation, the overall impacts are small. Flooded pathways may limit access to the beach and pier starting at 0.8 feet of projected SLR. Dunes Park may be affected by temporary coastal flooding from a 100-year storm event starting at 1.6 feet of projected SLR. The associated comfort station at Dunes Park is projected to be flooded at 4.9 feet of SLR with a 100-year storm event. As neither asset is considered critical infrastructure and sensitivity is low, the risk to these assets is small compared to other areas in the District. While the pier is not projected to be impacted by potential inundation, 100-year storm events may cause physical damage even if the pier is overtopped by waves.

3.3.8.3 Imperial Beach Oceanfront Exposure from Projected Sea Level Rise Inundation and 100-Year Storm Events

District assets in Imperial Beach Oceanfront Planning District anticipated to be impacted by projected SLR with and without a 100-year storm event are pathways and a sewer lift. With a 100-year storm event, public access and recreational opportunities will become more limited with most pathways and parks anticipated to be temporary flooded. The beach may begin to experience potential inundation beginning with 2.5 feet of projected SLR.

[4]City of Imperial Beach Sea Level Rise Assessment (2016)

Potential Inundation

Two district assets: pathways and one sewer lift are projected to be affected by potential inundation with 0.8 feet of projected SLR. As pathways can be elevated and alternative routes exist to access beach areas and the pier, the adaptive capacity is high.

Temporary coastal flooding from a 100-year storm event (100-year Storm Event)

Pathways and the single sewer lift are projected to be impacted by 100-year storm events starting in the near term. At 2.5 feet of projected SLR and beyond, a 100-year storm event has the potential to severely impact the temporary usability of park areas during storm events.

Table 3.18: Imperial Beach Oceanfront Asset Vulnerability from Potential Inundation with Projected Sea Level Rise

Assets	Total Quantity in District	Sensitivity	Adaptive Capacity	Exposure to Inundation			
				0.8 ft SLR	1.6 ft SLR	2.5 ft SLR	4.9 ft SLR
Pathways (linear miles)	0.2	LOW	HIGH	100%	100%	100%	100%
Buildings (count)	5	HIGH	LOW	0%	0%	0%	0%
Piers (count)	1	HIGH	LOW	0%	0%	0%	0%
Sewer Lifts (count)	1	HIGH	HIGH	100%	100%	100%	100%
Parks (acres)	0.3	LOW	HIGH	0%	0%	0%	0%

Table 3.19: Imperial Beach Oceanfront Asset Vulnerability from Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise

Assets	Total Quantity in District	Sensitivity	Adaptive Capacity	Exposure to Temporary Coastal Flooding			
				0.8 ft SLR	1.6 ft SLR	2.5 ft SLR	4.9 ft SLR
Pathways (linear miles)	0.2	LOW	HIGH	100%	100%	100%	100%
Buildings (count)	5	HIGH	LOW	0%	0%	0%	20%
Piers (count)	1	HIGH	LOW	0%	0%	0%	0%
Sewer Lifts (count)	1	HIGH	HIGH	100%	100%	100%	100%
Parks (acres)	0.3	LOW	HIGH	0%	76%	80%	100%

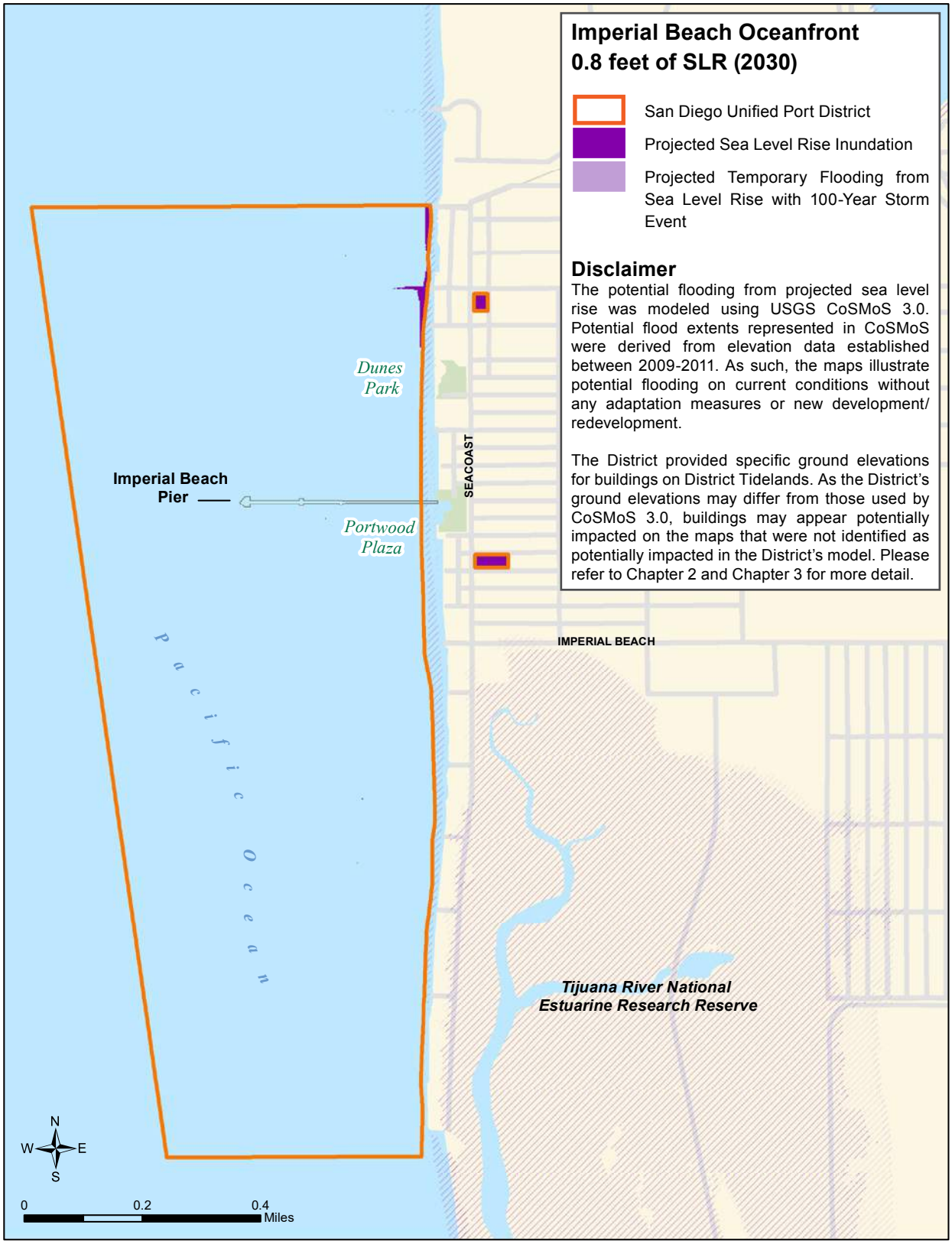

Figure 3.33: Imperial Beach Oceanfront Planning District Temporary Coastal Flooding (100-year storm event) and Inundation with Projected Sea Level Rise in 2030

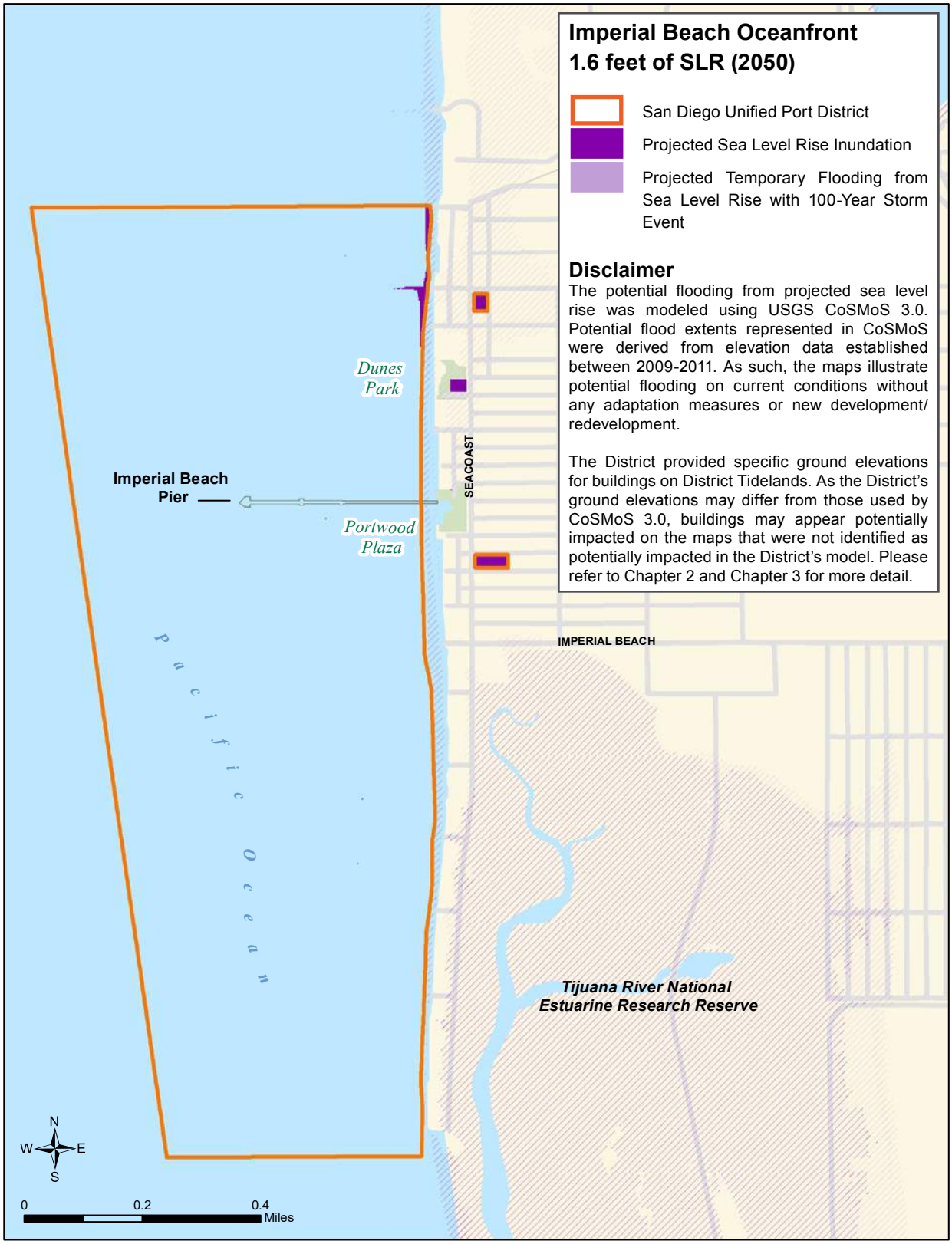

Figure 3.34: Imperial Beach Oceanfront Planning District Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise in 2050

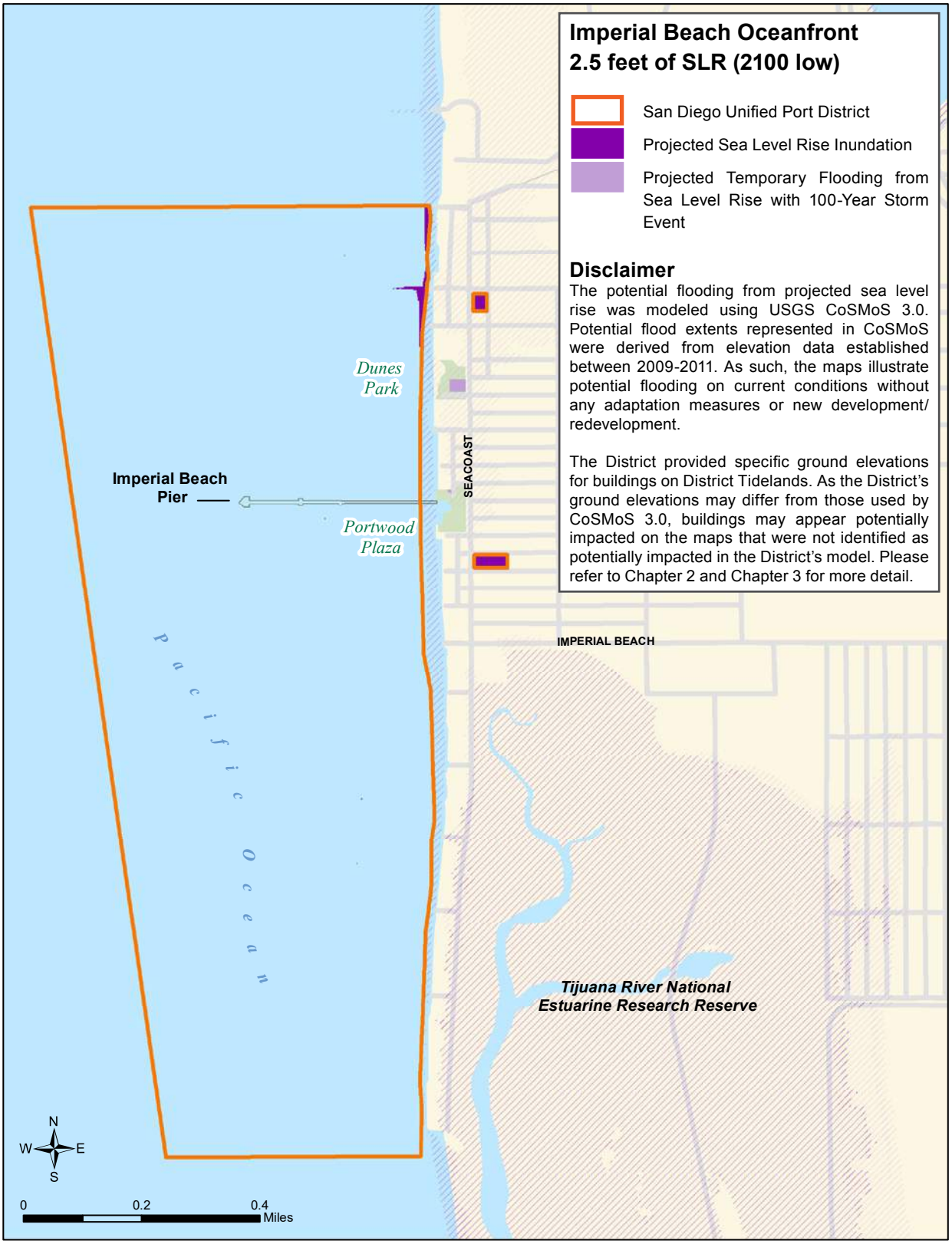

Figure 3.35: Imperial Beach Oceanfront Planning District Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise in 2100 (Low Scenario)

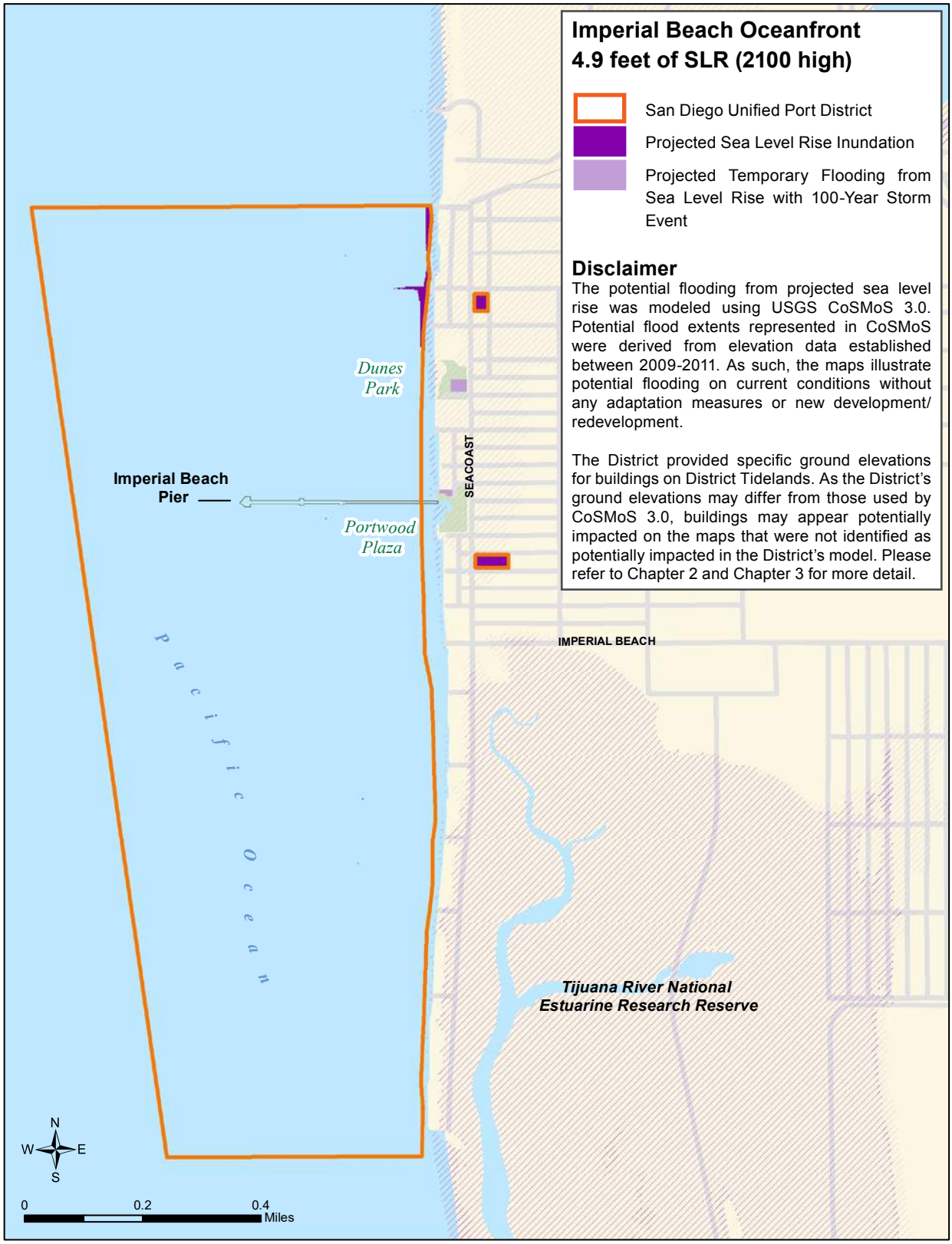

Figure 3.36: Imperial Beach Oceanfront Planning District Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise in 2100 (High Scenario)

3.3.9 Silver Strand South Planning District

3.3.9.1 Planning District Setting

The Silver Strand South Planning District is in the southwest corner of the Bay, east of Silver Strand State Beach. It is characterized by a natural shoreline, a hotel with associated marina, a yacht club, open space, and recreational boat piers.

3.3.9.2 Silver Strand South Vulnerabilities: Key Takeaways

Public access is the primary vulnerability in Silver Strand South Planning District. These impacts, combined with a substantial storm event will limit safe, public access to the water for pedestrians. Roadways, which are critical infrastructure, are particularly sensitive to potential inundation or a temporary storm event starting at 0.8 feet of projected SLR. As there are no alternative routes to reach the islands except for Grand Caribe Causeway or Coronado Bay Road, public access, business operations, and emergency response may be substantially reduced.

There are approximately 160 boat slips in the planning district within the yacht club or recreational marinas. While slips can be elevated for increased projected SLR, substantially larger storm events combined with elevated sea levels may lead to more extensive damage from exposure to waves and storm surge.

3.3.9.3 Silver Strand South Exposure from Projected Sea Level Rise Inundation and 100-Year Storm Events

Exposure from projected SLR impacts within the planning district may occur by year 2050 due to lower elevations. Potential inundation may be possible with the 2.5 feet and 4.9 feet projected SLR scenarios. This may affect public access and business operations. Potential damage from temporary coastal flooding from a 100-year storm event may occur with 0.8 feet and expand with 1.6 feet of projected SLR.

Potential Inundation

Public access areas, such as pathways and roadways, directly adjacent to the water at lower elevations are projected to be impacted by potential inundation with 0.8 feet of projected SLR.

The quantity of District assets such as roads, parks, and buildings impacted by increased projected SLR is projected to increase over time. At 4.9 feet of projected SLR, a majority of

pathways and buildings are projected to be severely affected by potential inundation. Of important concern are roadways that may be inundated with 1.6 feet of projected SLR along Coronado Bay Road. Potential inundation may limit access along Grand Caribe Causeway with a 4.9-foot rise in projected SLR. Grand Caribe Park may also experience potential inundation at 4.9 feet of projected SLR. Continued flooding of roadways would reduce public access, disrupt business operations, and potentially limit emergency response.

Temporary coastal flooding from a 100-year storm event (100-year Storm Event)

A 100-year storm event may begin to impact public access to the waterfront at 0.8 feet of projected SLR. Coastal access in the form of pathways are projected to be substantially impacted after year 2050 and almost completely flooded at 4.9 feet of projected SLR with a 100-year storm event. Approximately 35 percent of parks may be temporarily flooded with a 100-year storm event. However, as pathways and parks have low sensitivity and high adaptive capacity, these assets should become fully functional following a 100-year storm event assuming no substantial damage.

While one building may be impacted at 0.8 feet of projected SLR with a 100-year storm event, there is the potential for substantial impacts to all Silver Strand South buildings at 4.9 feet of projected SLR. In combination with large flooding of roadways, a 100-year storm event may have the potential to severely impact the operations of Silver Strand facilities with 2.5 feet and 4.9 feet of projected SLR.

Table 3.20: Silver Strand South Asset Vulnerability from Potential Inundation with Projected Sea Level Rise

Assets	Total Quantity in District	Sensitivity	Adaptive Capacity	Exposure to Inundation			
				0.8 ft SLR	1.6 ft SLR	2.5 ft SLR	4.9 ft SLR
Roads (linear miles)	0.9	HIGH	LOW	7%	10%	17%	62%
Pathways (linear miles)	0.5	LOW	HIGH	12%	15%	33%	72%
Buildings (count)	10	HIGH	LOW	0%	0%	10%	30%
Parks (acres)	2.6	LOW	HIGH	0%	0%	0%	22%

Table 3.21: Silver Strand South Asset Vulnerability from Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise

Assets	Total Quantity in District	Sensitivity	Adaptive Capacity	Exposure to Temporary Coastal Flooding			
				0.8 ft SLR	1.6 ft SLR	2.5 ft SLR	4.9 ft SLR
Roads (linear miles)	0.9	HIGH	LOW	20%	21%	25%	80%
Pathways (linear miles)	0.5	LOW	HIGH	24%	39%	51%	83%
Buildings (count)	10	HIGH	LOW	10%	10%	30%	100%
Parks (acres)	2.6	LOW	HIGH	0%	1%	1%	35%

Figure 3.37: Silver Strand South Planning District Temporary Coastal Flooding (100-year storm event) and Inundation with Projected Sea Level Rise in 2030

Figure 3.38: Silver Strand South Planning District Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise in 2050

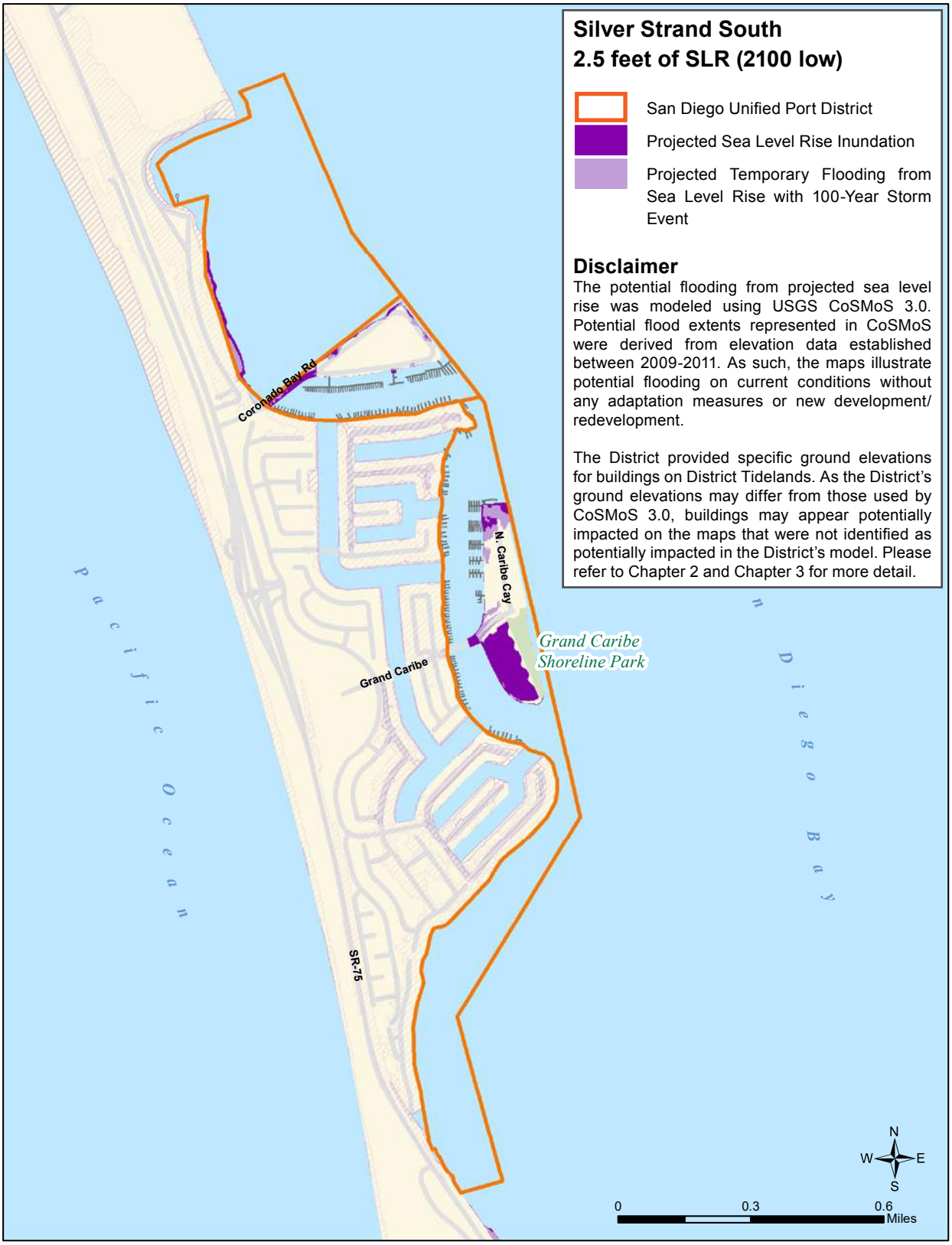

Figure 3.39: Silver Strand South Planning District Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise in 2100 (Low Scenario)

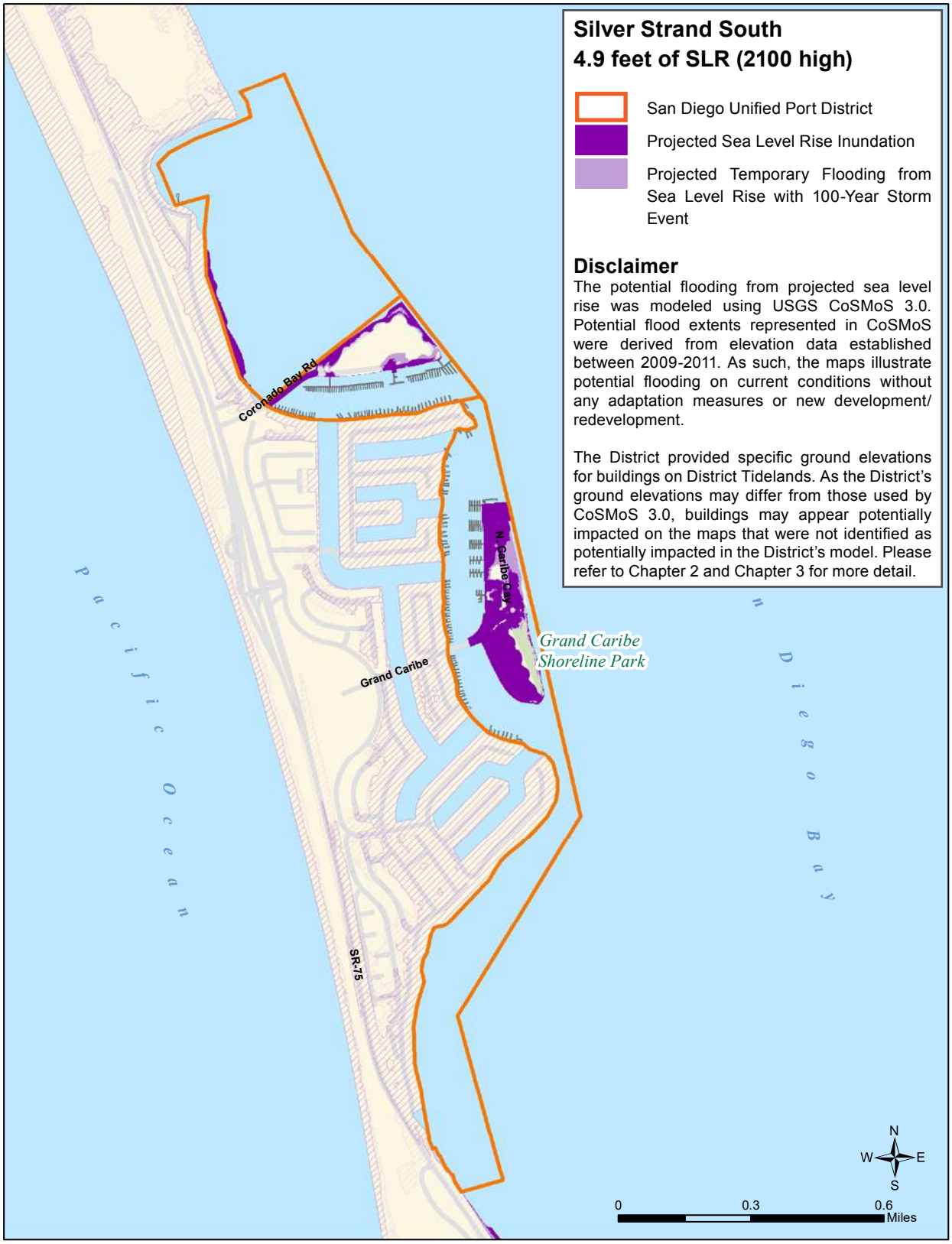

Figure 3.40: Silver Strand South Planning District Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise in 2100 (High Scenario)

3.3.10 Coronado Bayfront Planning District

3.3.10.1 Planning District Setting

The Coronado Bayfront Planning District is characterized by visitor-serving serving recreational activities such as recreational boating, golfing, and extended promenades allowing visitors to explore and access the water. Tidelands Park provides additional opportunities for recreation including play fields, a public beach, and a skate park. The ferry landing on the east side of the planning district provides public water-based transit to and from downtown San Diego.

3.3.10.2 Coronado Bayfront Vulnerabilities: Key Takeaways

Low lying and public access areas (such as beaches) in the Coronado Bayfront Planning District are projected to experience impacts from potential inundation with 0.8 feet of SLR. These impacts combined with a 100-year storm event may limit public access to the water for pedestrians and cyclists. Critical infrastructure such as roadways, on or near, the District are particularly sensitive to potential inundation beyond 2.5 feet of projected SLR, potentially obstructing access to the District parks and recreational areas.

Glorietta Bay, located on the eastern end of the planning district, contains approximately 450 boat slips. While slips can be elevated for increased projected SLR, substantially larger storm events such as a 100-year storm, combined with elevated sea levels, may lead to more extensive damage and longer recovery times.

The only golf course within the District is in the Coronado Bayfront Planning District. As the golf course is located at an elevation already near water level, it is vulnerable to potential inundation and temporary coastal flooding from a 100-year storm event. At 2.5 feet of projected SLR, large portions of the south side of the golf course are projected to be inundated. At 4.9 feet of projected SLR, a majority golf course may be impacted by potential projected SLR inundation and temporary coastal flooding from a 100-year storm event.

3.3.10.3 Coronado Bayfront Exposure from Projected Sea Level Rise Inundation and 100-Year Storm Events

Potential Inundation

District assets directly adjacent to the water at lower elevations are projected to be impacted by potential inundation with

0.8 feet of projected SLR. These include beaches and parks (see Table 3.22). As the adaptive capacity of parks is high, these assets should remain operable even with projected SLR. Beach areas are more sensitive to projected SLR as wave run-up has greater erosional effects on the shoreline. While beaches can be augmented through beach sand replenishment, potential long-term inundation may completely erode or limit access to this asset.

The quantity of District assets affected by potential SLR inundation is projected to increase over time. Critical assets such as the stormwater system become affected with potential inundation at 2.5 feet of projected SLR. Lower elevations in the southern portion of the planning district may experience potential inundation with 1.6 feet of projected SLR. The potential for more widespread inundation may occur at 4.9 feet of projected SLR, with a majority of pathways, bikeways, roads, parks, piers, properties and the stormwater system being impacted.

Temporary coastal flooding from a 100-year storm event (100-year Storm Event)

Public access, via pathways or bikeways, would become increasingly more limited with a storm event starting at 1.6 feet of projected SLR. As these assets have low sensitivity and high adaptive capacity to temporary coastal flooding from a 100-year storm event, they should become fully functional following a storm event assuming no substantial damage.

While a less that ten percent of buildings may be impacted at 1.6 feet of projected SLR with a 100-year storm event, there is the potential for almost half of the buildings to be impacted by a 100-year storm event at 4.9 feet of projected SLR. Roadways within the planning district may experience temporary coastal flooding from a 100-year storm event with a 4.9-foot rise in sea levels.

Table 3.22: Coronado Bayfront Asset Vulnerability from Potential Inundation with Projected Sea Level Rise

Assets	Total Quantity in District	Sensitivity	Adaptive Capacity	Exposure to Inundation			
				0.8 ft SLR	1.6 ft SLR	2.5 ft SLR	4.9 ft SLR
Roads (linear miles)	4.5	HIGH	LOW	0%	0%	0%	10%
Bikeways (linear miles)	1.2	LOW	HIGH	0%	0%	9%	78%
Pathways (linear miles)	2.3	LOW	HIGH	0%	0%	8%	68%
Buildings (count)	24	HIGH	LOW	0%	0%	0%	25%
Piers (count)	1	HIGH	LOW	0%	0%	0%	100%
Stormwater Management (count)	39	HIGH	LOW	0%	0%	6%	75%
Beach Accessible Areas (acres)	1.9	HIGH	LOW	67%	76%	84%	100%
Parks (acres)	23.6	LOW	HIGH	8%	9%	11%	39%

Table 3.23: Coronado Bayfront Asset Vulnerability from Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise

Assets	Total Quantity in District	Sensitivity	Adaptive Capacity	Exposure to Temporary Coastal Flooding			
				0.8 ft SLR	1.6 ft SLR	2.5 ft SLR	4.9 ft SLR
Roads (linear miles)	0.8	HIGH	LOW	0%	0%	0%	59%
Bikeways (linear miles)	1.5	LOW	HIGH	10%	25%	47%	85%
Pathways (linear miles)	2.0	LOW	HIGH	11%	20%	40%	85%
Buildings (count)	28	HIGH	LOW	0%	8%	13%	42%
Piers (count)	1	HIGH	LOW	0%	0%	0%	100%
Stormwater Management (count)	16	HIGH	LOW	6%	31%	31%	81%
Beach Accessible Areas (acres)	3.4	HIGH	LOW	83%	87%	97%	100%
Parks (acres)	29.8	LOW	HIGH	10%	11%	16%	63%

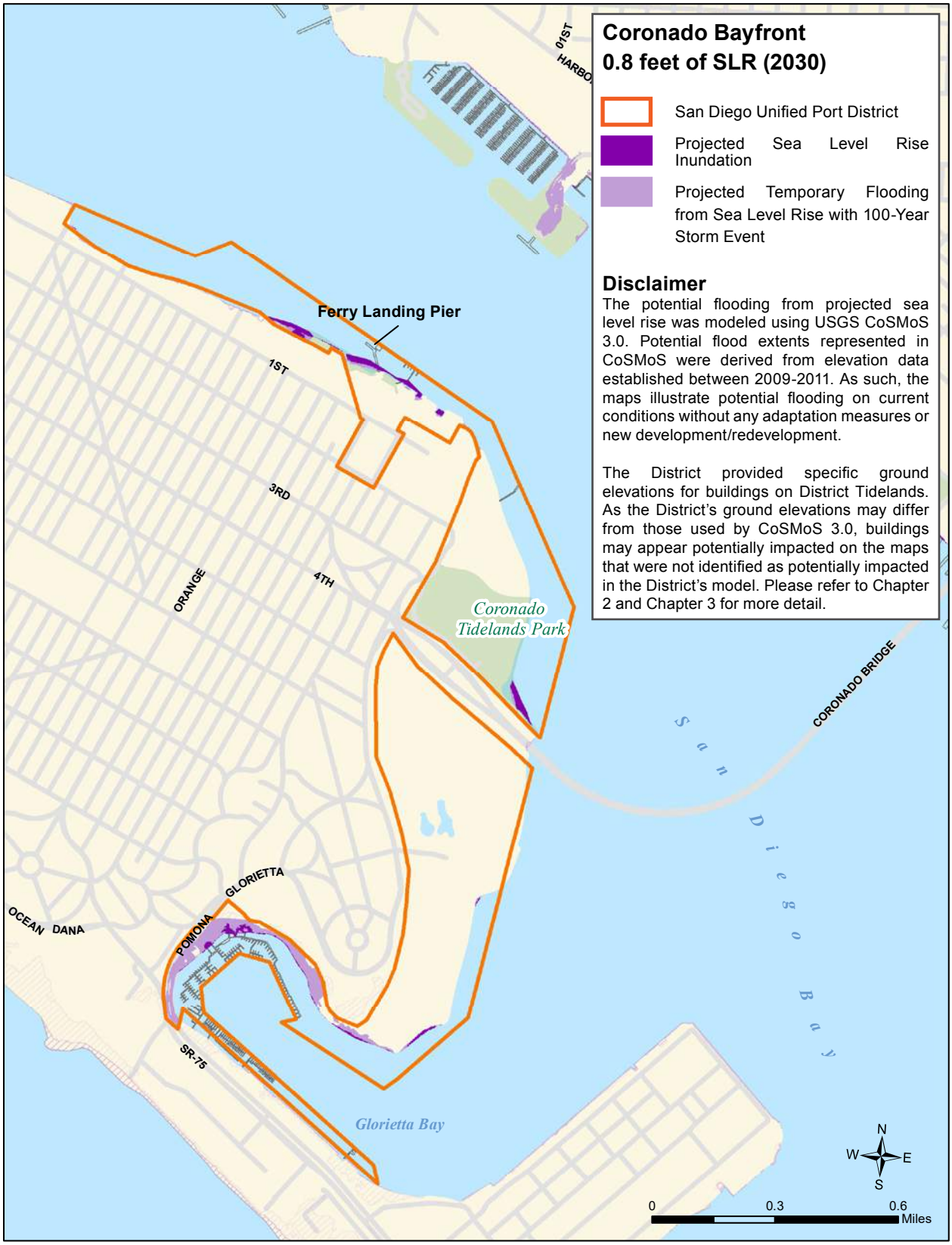

Figure 3.41: Coronado Bayfront Planning District Temporary Coastal Flooding (100-year storm event) and Inundation with Projected Sea Level Rise in 2030

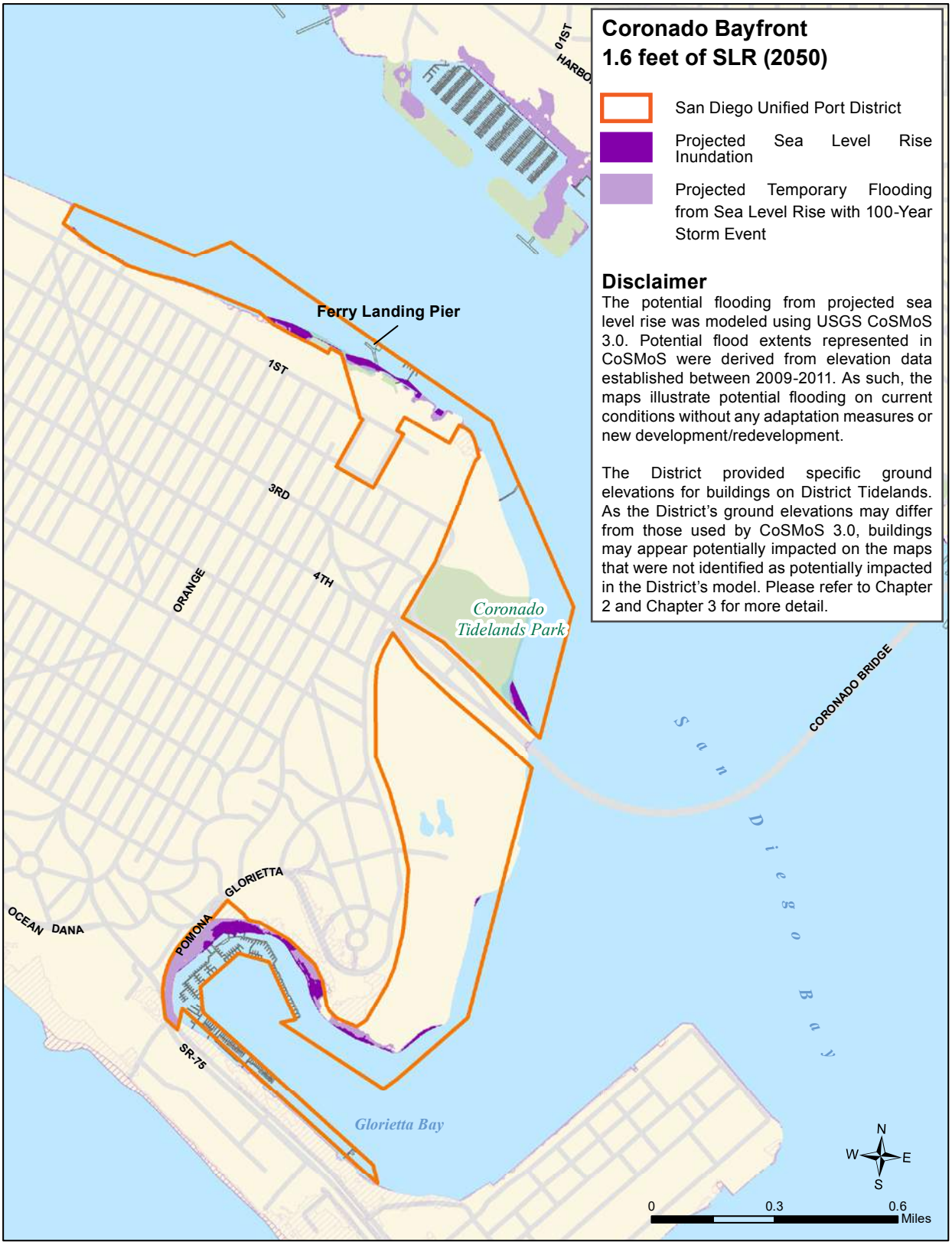

Figure 3.42: Coronado Bayfront Planning District Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise in 2050

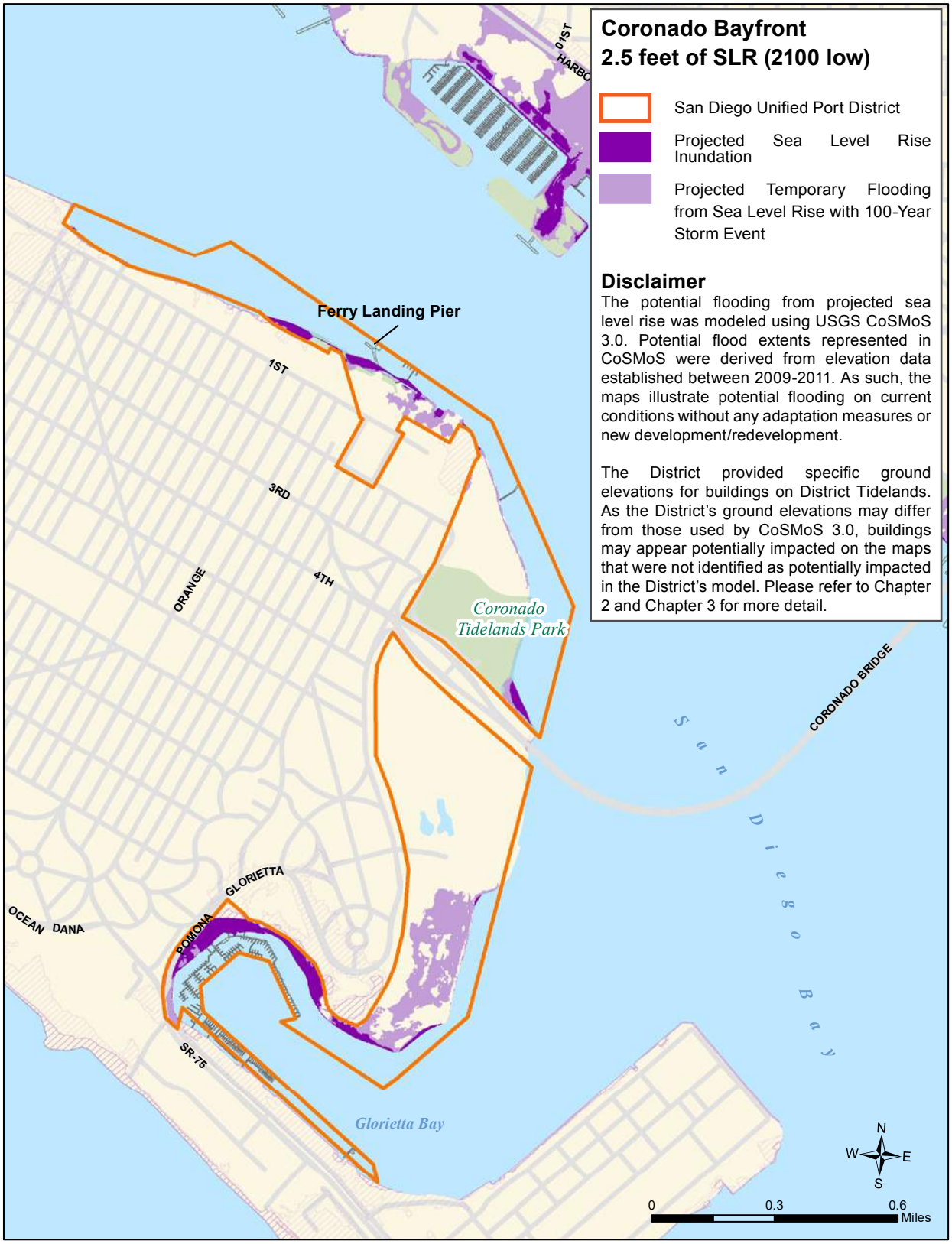

Figure 3.43: Coronado Bayfront Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise in 2100 (Low Scenario)

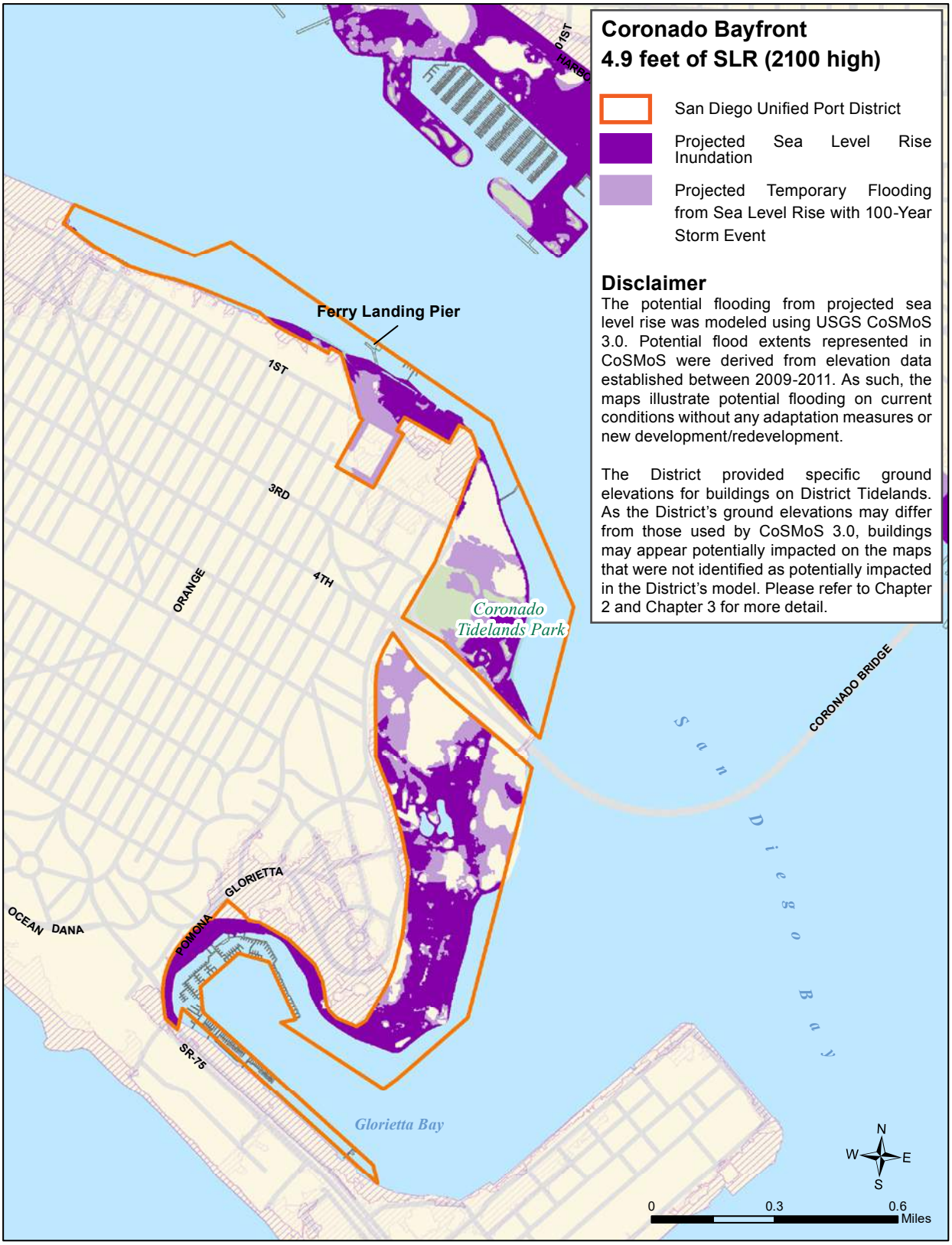

Figure 3.44: Coronado Bayfront Potential Inundation and Temporary Coastal Flooding (100-year storm event) with Projected Sea Level Rise in 2100 (High Scenario)

3.4 Natural Resources

Various natural resources including subtidal, intertidal, and upland habitats, exist in and around the Bay within the District's jurisdiction. These resources provide critical foraging, shelter, and nesting opportunities for marine life and birds. In addition, nearshore habitats help to stabilize the shoreline, collect sediment, and reduce erosion. Habitats in the Bay may be able to persist in the face of projected SLR through natural landward migration and vertical accretion, a process by which a habitat "moves" up elevation or upslope. However, due to the low elevation of these nearshore habitats, as well as constraints from adjacent urban land uses, projected SLR may pose a risk to their future existence and distribution.

The analysis of potential impacts projected SLR may cause to natural resources was conducted on a District-wide scale. As described in Section 2.5, this analysis was conducted differently than the assessment of exposure to infrastructure. Natural resources, within the marine environment, may already be exposed to sea water and varying degrees of potential inundation. The presence and depth of potential inundation are, in fact, key components of the type of natural resources that occur in and around San Diego Bay. Therefore, a typical GIS overlay analysis of potential SLR inundation was not appropriate for determining impacts to natural resources. Instead, an elevation-based analysis of nearshore habitats within the District's jurisdiction was conducted to evaluate future changes to habitat distribution as specific habitats migrate upslope with increasing projected SLR. A full report of potential impacts to nearshore habitats is included in Appendix B.

Baseline Habitat Distribution and Elevation

To assess future impacts to habitats from projected SLR, existing habitat data was obtained in a GIS format and mapped as illustrated in Figure 3.45. Habitats included eelgrass (Zostera marina L. and Z. pacifica), salt marsh including low to high marsh species, uplands representative of a variety of species including but not limited to California sagebrush (Artemisia californica), and beach/dunes. Table 3.24 provides the acreage and elevation range of each of the habitats incorporated into this analysis. Included in the table is the total available area within the District's jurisdiction that exists at a given elevation.

Figure 3.45: San Diego Unified Port District Habitats

Table 3.24: Baseline Habitat Distribution and Elevation

Habitat Type	Baseline Habitat Mapped (acres)	98% Elevation Range (feet, Analysis Range)[1]		Total Available Area (acres)	% Occupied
		Low	High		
Eelgrass	915.0	-10.7	+0.8	1,717.7	53%
Salt Marsh	81.1	+0.8	+11.5	531.6	15%
Beach/Dune[2]	13.5	0	+16.4[3]	NA[2]	NA[2]
Uplands	97.0	+6.6	+27.9[3]	425.9	23%

[1]North American Vertical Datum of 1988
[2]Beach/dune habitat is assumed to exist where those historical habitats occurred prior to development and have been maintained or allowed to remain. As both are driven by sediment and wind processes, they are considered static with no additional areas available.
[3]Maximum value mapped for those habitats.

The proportion of mapped acres to total available acres was calculated to determine percent occupied.

Future Habitat Distribution with Sea Level Rise

As sea level rises, the depth of sea water increases. Habitats may be able to keep pace with rising sea levels by migrating to appropriate elevations suitable for their existence; however, urban land uses adjacent to natural areas along the coast may hinder the movement of habitats and, therefore, reduce the area available for them to persist. Conversely, habitat may increase in area depending on whether there is more space at a higher elevation in which to move.

To understand the future distribution of habitats with increasing sea levels, the area (in acres) per 0.8 feet of elevation was calculated within the District. Only those areas that were considered natural or undisturbed were used to measure area per elevation. Those areas considered urban were used as constraints to habitat movement.

For each baseline habitat area and associated elevation (as presented in Table 3.25), the future sea levels presented in this AB 691 Report were used to assess the future distribution of each habitat with the assumption that the habitat can naturally move upslope to the next 0.8-foot elevation range. For example, eelgrass currently exists between -10.7 feet and +0.8 feet. With

Table 3.25: Future Potential Habitat Distribution

Habitat Type	Baseline[1]		Sea Level Rise Scenarios[2]							
	No Sea Level Rise		Year 2030 +0.8 feet		Year 2050 +1.6 feet		Year 2100 Low +2.5 feet		Year 2100 high +4.9 feet	
	Available	Occupied	Available	Occupied	Available	Occupied	Available	Occupied	Available	Occupied
Eelgrass	1,718	915	1,752.7	982.8	1,762.3	1,016.3	1,747.5	979.4	1,621.5	668.2
Salt Marsh	532	81	472.6	75.9	432.7	74.4	415.1	75.2	370.5	78.3
Beach/ Dune[3]	13	-	-	12.7	-	11.6	-	10.7	-	8.6
Uplands	426	97	394.5	90.1	360.0	82.2	322.1	73.4	222.6	50.8

[1]Baseline values are based on the current vegetation map and elevation data.
[2]All sea level rise scenarios acreages are predictions based on the mapped baseline conditions and the resulting elevation ranges and mapped percent occupancy.
[3]Beach/dune habitats are driven primarily by sediment and wind processes; they are considered static with no additional areas available.

0.8 feet of projected SLR, which may occur by year 2030, eelgrass that exists at lower elevations may not be able to persist as the depth of water increases. However, eelgrass may be able to move upslope and occupy available area between 0.8 and 1.6 feet. If the higher elevation to which eelgrass can move is greater in area compared to the area lost at the lowest elevations (between -10.7 and -9.9 feet), then eelgrass can increase its distribution.

Table 3.25 provides an overview of the available area (in acres) for each habitat type under each of the four projected SLR scenarios based on the analysis range. In addition, the acres of predicted occupied habitat are shown for each habitat based on the baseline occupancy rates. Overall the terrestrial habitats (salt marsh, beach/dune, and upland) decline with the higher projected SLR scenarios. This declining trend is consistent with existing research but likely underestimates the decline due to a variety of assumptions required for this analysis, assuming there is adequate time for habitat to respond in advance of rising seas. Eelgrass has a unique trend, with increasing acreage in the moderate projected SLR scenarios, but then a sharp decline in the 4.9 feet projected SLR scenario. With 4.9 feet of projected

SLR, a loss of acres for eelgrass is driven by a reduction in available area coupled with a larger reduction in the preferred range, with more of the available habitat occurring in the deeper range where occupancy rates are lower.

Available acres of salt marsh habitat decline as projected SLR increases. However, the occupied rate is relatively stable as there may be available uplands to which salt marsh can migrate. It should be noted, however, that upland habitats which support environmental management objectives such as preservation of nesting sites for California least terns may limit transition of salt marsh. Such management objectives will need to be discussed among natural resource managers as projected SLR increases.

Lastly, beach/dune and upland habitats both decline with rising sea levels. These habitats are specifically constrained as sea water encroaches and urban land uses prevent their movement.

The analysis conducted for this AB 691 Report was a general evaluation to assess whether area of land increases or decreases at elevations where habitats are found in the District's jurisdiction. There are many factors that contribute to the presence and absence of specific habitats beyond simply elevation and projected SLR. Therefore, further analysis will need to be considered to better manage natural resources in and around the Bay in the face of projected SLR and 100-year storm events. As a variety of agencies and stakeholders manage natural resources adjacent to the District's jurisdiction, including the U.S. Fish and Wildlife Service and the U.S. Navy, continued coordination is necessary to align management priorities and objectives.

3.5 Financial Impacts

Tables 3.26 and 3.27 on the following pages, shows the estimated financial impacts for the projected SLR scenarios. Table 3.26 shows the predicted sea level heights without a 100-year storm and Table 3.27. shows predicted sea level heights with a 100-year storm.

Tables 3.26 and 3.27 show potential primary and secondary impacts from projected SLR. The District selected properties and infrastructures likely to be damaged from projected SLR, whether due to potential projected SLR inundation, or temporary coastal flooding from a 100-year storm event. The secondary impact categories represent the indirect impacts that

would be caused by the primary impacts, such as loss of District business revenue or storm cleanup, traffic control, and emergency responses. Some impacts, such as the potential loss of business revenue are discussed qualitatively elsewhere in this report.

3.5.1 Sea Level Rise Without a 100-Year Storm Event

The estimated damages without a 100-year storm event represent damages that would result from potential inundation under the "no action" (no adaptation strategies) conditions. That is, potential damages would be caused by increased projected SLR that could permanently flood assets if no adaptation strategies were enacted to mitigate or prevent damages. Potential inundation could lead to a loss of District revenue due to a potential loss of land. (Please see Appendix C for the methodology and more information about how estimates were calculated and what was included in each category.)

For all projected SLR scenarios without a 100-year storm event, the greatest financial impacts would be due to the potential loss of transportation and other infrastructure (Table 3.26). For the 0.8 feet and 1.6 feet scenarios, transportation and other infrastructure combined damages are estimated to be over $45 million; and for the 2.5 feet and 4.9 feet scenarios, damages are estimated to be over $95 million, and for the 4.9 feet scenario, infrastructure damages are estimated to be over $600 million.

Sea level rise impacts are also projected for property throughout the District. For the 0.8 feet and 1.6 feet scenarios, property damages are estimated to be approximately $1.2 million each. Damages for the 2.5 feet scenario are estimated to be over $1 million, and for the 4.9 feet scenarios, damages are estimated to be over $267 million.

Total financial damages, which also include the District's loss of revenue, for 0.8 feet and 1.6 feet are estimated to be $63 and $69 million, respectively. Financial damages for 2.5 feet and 4.9 feet are estimated to range from approximately $127 million to $922 million.

It is important to note that land value is not included in property estimates due to the differing methodology for identifying land and structure impacts. As discussed more in the methodology section in Appendix C, the District

Table 3.26: Estimated Financial Impacts: Potential Inundation with Projected Sea Level Rise

Water Height	Predicted Scenario	No Action Scenario Estimated Damages (2018$ rounded to nearest $100,000)	
0.8 feet	2030 SLR with no storm event under 5% likelihood of occurring. Estimate of potential inundation loss in the year 2030.	**Primary Damage:**	
		Property (structures, parking lots)[1]	$1,200,000
		Transportation infrastructure	$18,400,000
		Other infrastructure	$27,300,000
		Secondary Damage:	
		Loss of Port Business Revenue[2]	$16,100,000
		Total	$62,900,000
1.6 feet	2050 SLR with no storm event under 5% likelihood of occurring. Estimate of potential inundation loss in the year 2050.	**Primary Damage:**	
		Property (structures, parking lots)[1]	$1,200,000
		Transportation infrastructure	$23,900,000
		Other infrastructure	$27,300,000
		Secondary Damage:	
		Loss of Port Business Revenue[2]	$16,100,000
		Total	$68,500,000
2.5 feet	2100 SLR with no storm event under 50% likelihood of occurring. Estimate of potential inundation loss in the year 2100.	**Primary Damage:**	
		Property (structures, parking lots)[1]	$6,300,000
		Transportation infrastructure	$61,400,000
		Other infrastructure	$34,700,000
		Secondary Damage:	
		Loss of Port Business Revenue[2]	$24,800,000
		Total	$127,100,000
4.9 feet	2100 SLR with no storm event under 5% likelihood of occurring. Estimate of potential inundation loss in the year 2100.	**Primary Damage:**	
		Property (structures, parking lots)[1]	$266,900,000
		Transportation infrastructure	$551,700,000
		Other infrastructure	$64,300,000
		Secondary Damage:	
		Loss of Port Business Revenue[2]	$39,200,000
		Total	$922,100,000

Table 3.27: Estimated Financial Impacts: Potential Temporary Coastal Flooding (100-Year Storm Event) with Projected Sea Level Rise

Water Height	Predicted Scenario	No Action Scenario Estimated Damages (2018$ rounded to nearest $100,000)	
0.8 feet + water increase from 100-yr storm event	2030 SLR under 5% likelihood of occurring, with 100-year storm event occurring in the year 2030.[3] Estimating per storm event the potential coastal flooding damages in the year 2030.	**Primary Damage:** Structures (commercial, industrial) **Secondary Damage:** Storm Cleanup, Traffic Control, Emergency Response.[4] Total	$1,500,000 $1,500,000
1.6 feet + water increase from 100-yr storm event	2050 SLR under 5% likelihood of occurring, with 100-year storm event occurring in the year 2050.[3] Estimating per storm event the potential coastal flooding damages in the year 2050.	**Primary Damage:** Structures (commercial, industrial) **Secondary Damage:** Storm Cleanup, Traffic Control, Emergency Response.[4] Total	$6,300,000 $6,300,000
2.5 feet + water increase from 100-yr storm event	2100 SLR under 50% likelihood of occurring, with 100-year storm event occurring in the year 2100.[3] Estimating per storm event the potential coastal flooding damages in the year 2100.	**Primary Damage:** Structures (commercial, industrial) **Secondary Damage** Storm Cleanup, Traffic Control, Emergency Response.[4] Total	$12,100,000 $12,100,000
4.9 feet + water increase from 100-yr storm event	2100 SLR under 5% likelihood of occurring, with 100-year storm event occurring in the year 2100.[3] Estimating per storm event the potential coastal flooding damages in the year 2100.	**Primary Damage:** Structures (commercial, industrial) **Secondary Damage:** Storm Cleanup, Traffic Control, Emergency Response.[4] Total	$152,400,000 $152,400,000[5]

Note: Sea level rise estimated damages that occur without a storm event (inundation) are not included in the 100-yr storm estimates. 100-year storm flooding damages represent only those potential damages that would occur in addition to the loss due to sea level rise without a storm event.

[1]Impacted buildings were identified by the District and may not be consistent with the CoSMoS inundation and coastal flooding boundaries. Impacted parking lots were determined from CoSMoS boundaries. Therefore, parking lot and building impacts may not be consistent.

[2]Following the NOAA *What Will Adaptation Cost? Impact Assessment* methodology, this estimate only represents the annual loss for the corresponding scenario year in 2018 dollars. The Impact Assessment methodology estimates damages based on water height and one point in time. However, if the property were lost, the revenue loss would occur for subsequent years as well.

[3]Estimates represent the financial impact from temporary coastal flooding from a 100-year storm event with the corresponding projected SLR elevations.

[4]Cleanup, traffic control, and emergency response are included in annual operating budgets of the District staff. These potential impacts are discussed qualitatively in the report.

[5]Because inundation damages are expected to be substantially greater under the 4.9 feet scenario, 100-year storm event coastal flooding damages are less than previous scenarios.

identified structure impacts using their own model with local data, while parcel land impacts were based upon CoSMoS identified potential projected SLR inundation boundaries. In some areas, the impacts identified by the two models were not consistent. The value of property typically would be estimated from the value of both land and structures; however, due to the inconsistent methodology, this analysis deemed it inappropriate to combine the output of both models to estimate one property value of parcels with both structures and land. Therefore, only structure estimates are included in the analysis, and not land.

3.5.2 Sea Level Rise with a 100-year Storm Event

The estimated damages for the 100-year storm event represent additional damages that would occur on top of the potential inundation damages for the corresponding projected SLR water height (the assessment's SLR projections are associated with water heights before a storm event (i.e., 0.8 feet, 1.6 feet, 2.5 feet, and 4.9 feet). A 100-year storm event would result in an additional temporary coastal flooding from a 100-year storm event. On average, a 100-year storm event could result in further flooding of up to approximately 3.77 feet depending upon the scenario and land elevation (OCOF, 2019). Thus, 100-year storm event flooding could result in added damages. For example, at 0.8 feet, it is estimated that $62.9 million in damages would result from potential inundation plus an additional $1.5 million is estimated if there were 100-year storm flooding event. Again, these estimates assume damages that would transpire without implementing additional adaptation strategies.

It is important to point out that a 100-year storm event is a storm that is predicted to occur once every 100 years. Thus, it is highly unlikely that a 100-year storm event would occur in 2030, 2050, and 2100. The predicted scenarios in Table 3.27 are not meant to suggest that 100-year storm damages would transpire at all three points in time. Rather, the table provides an estimate of the potential damages for a 100-year storm occurring with a projected SLR scenario (e.g., 1.6 feet).

Coastal flooding damages are estimated to result in damages to structures under this analysis. Storm event flooding, including during a 100-year storm event, is temporary and is not projected to damage the land. While it is foreseeable

that temporary storm flooding could require cleanup, and/or traffic control and emergency response for transportation and other infrastructure (e.g., storm drains), these events were not analyzed.

As shown in Table 3.27, damage to structures would have the greatest financial impacts. Storm event damages, in addition to the previously discussed potential inundation damages, could result in almost $1.5 million in structural damages under the 0.8 feet scenario, and more than $6 million under the 1.6 feet scenario. Estimated flooding damages from a 100-year storm event are $12.1 million under the 2.5 feet scenario, and $152.4 million for the 4.9 feet scenario. The storm flooding analysis accounts for structures that are impacted by potential inundation so that they are not double-counted in the financial estimates.

3.5.3 Natural Resource Valuation

Examining the ecosystem services provided by habitats within the Tidelands will help to better understand the value (monetary and non-monetary) of those habitats. Ecosystem services represent the benefits people obtain from the ecosystem and, through the Millennium Ecosystem Assessment, are organized into four broad categories: provisioning, regulating, cultural, and supporting (Table 3.28; MA, 2005).

Ecosystem services identified for each of these categories document some type of value provided to direct and indirect users of habitats within the District. Shifts in habitat size and type can affect, both positively and negatively, the overall well-being of those users.

Five general valuation methods were identified that can be used to monetize natural resources. While a framework was developed to best analyze the District's natural resources, the time and data constraints associated with these methods are prohibitive. An alternate, preferred approach was developed using a benefit transfer method.

Benefit transfer methodology is the preferred valuation method as it is mostly used in instances where resources (e.g., time and money) are limited. However, caution must be taken to ensure that values are transferred between comparable goods and/or services. If characteristics differ enough between them, the values may not be accurate and could significantly over or underestimate the natural resource in question. Figure 3.29 identifies the

Table 3.28: Primary Ecosystem Services for Port Tideland Habitats

Provisioning	Regulating
• Fisheries support • Animal harvesting • Direct food production • Mineral extraction	• Carbon sequestration • Shoreline stability and erosion control • Flood and storm protection • Water purification and waste treatment
Cultural	**Supporting**
• Cultural activities • Recreation • Education • Tourism • Aesthetics	• Refugia habitat • Habitat provision and food web support • Nutrient cycling

Table 3.29: Advantages and Disadvantages of Benefit Transfer Method

Advantages	Disadvantages
• Avoids the cost and time associated with conducting a primary study • Least data intense of all methods	• Must find studies with comparable natural resources • Values may not reflect actual conditions of resources being evaluated • May require "adjusting" of values • Variations in methods from original studies may not be comparable

resources within the District is estimated to decrease to a range of $29 million to $45 million.

For more information regarding the Resource Valuation Methods, please see Appendix D.

3.6 Cascading Impacts

Cascading impacts can be defined as a series of secondary impacts that are triggered by the primary loss of an asset, a specific function, or a service (County of San Mateo 2018). These impacts could occur when an asset is affected by flooding, and its impacts

primary advantages and disadvantages associated with benefit transfer valuation methods.

Table 3.30 presents the total value ($/year) of each habitat and for those services valued for the whole system under baseline conditions and four projected SLR scenarios (0.8 feet, 1.6 feet, 2.5 feet, and 4.9 feet). Results were found by multiplying the estimated acreage by the total dollar per acre ($/acre) for each habitat. Data provided in Table 3.30 indicate the low and high estimated values ($/acre/yr.) for each case study. Values are differentiated by habitat type and the respective ecosystem service. In some instances, values were collected that represent the system and are not allocated to an individual habitat.

Current value services provided by natural resources within the District range from $40 million to $61 million per year. The ecosystem services identified for each of the habitats were combined to estimate the total value of the District's natural resources. With projected SLR, the extent of different habitats may change, leading to changes in the predicted value of these resources. Under the most extreme projected SLR scenario (4.9 feet), the value of natural

View of Downtown San Diego

Table 3.30: Total Habitat Values

SLR	Acres	Low Estimate ($/yr)	High Estimate ($/yr)
Eelgrass			
Baseline	915	$11,339,205	$11,456,219
0.8 feet	983	$12,178,846	$12,304,524
1.6 feet	1,016	$12,593,963	$12,723,924
2.5 feet	979	$12,137,569	$12,262,821
4.9 feet	668	$8,279,930	$8,365,374
Salt Marsh			
Baseline	81	$676,091	$809,447
0.8 feet	76	$632,848	$757,675
1.6 feet	74	$620,939	$743,417
2.5 feet	75	$627,548	$751,330
4.9 feet	78	$653,392	$782,272
Beach/Dune			
Baseline	13	$41,459	$41,836
0.8 feet	13	$39,002	$39,356
1.6 feet	12	$35,616	$35,939
2.5 feet	11	$32,919	$33,218
4.9 feet	9	$26,559	$26,800
Uplands			
Baseline	97	$228,100	$228,100
0.8 feet	90	$211,871	$211,871
1.6 feet	82	$193,262	$193,262
2.5 feet	73	$172,781	$172,781
4.9 feet	51	$119,404	$119,404
Whole System			
Baseline	1,107	$28,029,798	$48,946,184
0.8 feet	1,161	$29,419,821	$51,373,470
1.6 feet	1,184	$30,003,952	$52,393,492
2.5 feet	1,139	$28,848,345	$50,375,547
4.9 feet	806	$20,414,163	$35,647,614

generate additional adverse effects. Cascading impacts, which are most typically associated with networked infrastructure, cause the effect of a flood to reach beyond the geographic extent of the flood. Roads, rail, and stormwater systems are particularly susceptible to failures and interruptions as disruption in one component can affect the entire system. Cascading impacts should be considered when evaluate vulnerabilities to projected SLR and when planning for adaptation.

Nesting terns in South Bay Salt Lands

Chapter 4 Adaptation Planning and Strategy Implementation

4.1 An Adaptive Management Framework

Given the level of uncertainty in projections of SLR, the District's ability to be flexible in adapting to SLR is crucial. For this reason, the District is proposing an *adaptive management approach* to address projected SLR, defined as "a process of iteratively planning, implementing, and modifying strategies for managing resources in the face of uncertainty and change" (IPCC 2014). Adaptive management is not a new scientific concept and the District already utilizes it for many of its environmental management programs.

Extending the adaptive management approach to coastal resiliency will allow the District to adjust policies and/or strategies that help to reduce the risks associated with projected SLR inundation and temporary coastal flooding from a 100-year storm event as new information regarding climate science and/or techniques to address coastal hazards emerge.

The Adaptive Management Framework (Framework) shown in Figure 4.1 is composed of three stages:

(1) A Vulnerability Assessment
(2) Adaptation Planning
(3) Strategy Implementation.

This Framework promotes an iterative, cyclical process whereby each stage can be continually improved as new information is collected and integrated.

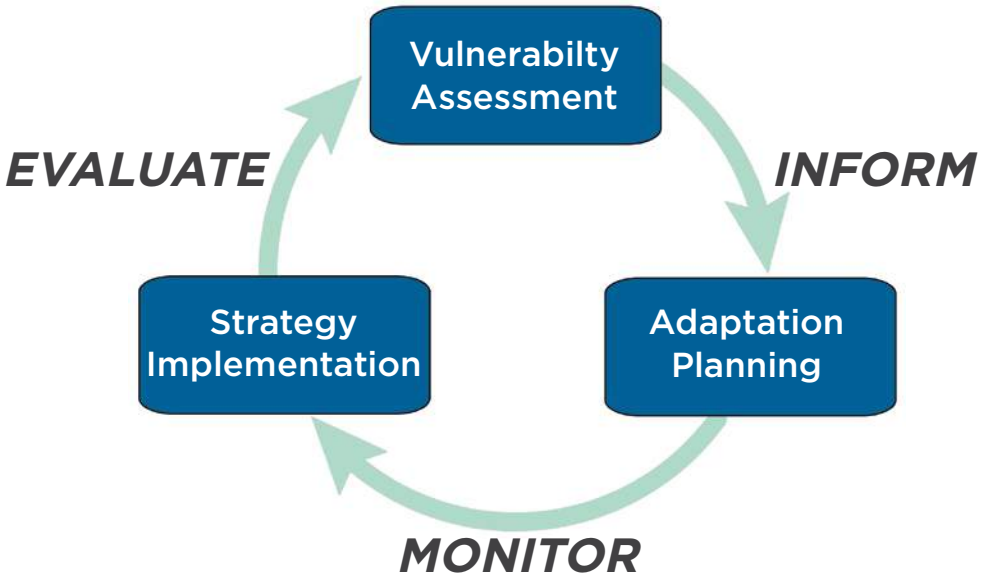

Figure 4.1: Sea Level Rise Adaptive Management Framework

The first stage of the Adaptive Management Framework is the Vulnerability Assessment. The process of conducting a vulnerability assessment is necessary to understand risks of exposure to SLR. This was described in detail in Chapters 2 and 3 of this report. A vulnerability assessment should be conducted regularly to assess progress to reduce risks.

4.2 Adaptation Planning

The second stage of the projected SLR Framework, Adaptation Planning, is intended to provide *guidance* for the selection and implementation of suitable projected SLR adaptation strategies. Informed by the Vulnerability Assessment, this stage involves evaluating the exposure, sensitivity,

The term "Adaptation" is commonly used when planning for projected SLR because of the inherent uncertainty of predicting future sea level changes. Therefore, the strategies used to reduce risks of projected SLR inundation and coastal flooding from a 100-year storm event need to be proactively planned, and require flexibility in their implementation to adjust to changing conditions over time. A strategy may be adaptive if it can be enhanced in the future to higher sea levels due to proactive planning when first implemented.

adaptive capacity, and other associated impacts (e.g., financial) to identify projected SLR adaptation strategies are suitable. This step also includes the develop of a monitoring program that informs *when* to implement the selected strategies.

For this AB 691 Report, the District is not providing specific adaptation strategies for each potentially vulnerable asset or area (as described in Chapter 3). Due to the diversity and unique characteristics of the Public Trust lands managed by the District, a "one-size-fits-all" strategy is not conducive as adaptation strategies would need to be applied based on site-specific characteristics and vulnerabilities.

4.2.1 Adaptation Strategies

The suite of options available for adapting to projected SLR comprises three basic types (protection, accommodation, adjustment) or a hybrid of two or more options.

Protect

Protection strategies typically use natural or man-made infrastructure to defend existing structures or areas in their current location.

Accommodate

Rather than protecting an asset from flooding or erosion, accommodation strategies enable the asset to continue functioning in its exposed environment by making adaptive changes to the asset itself.

Adjust

Adjust strategies focus on removing or relocating existing development out of hazard-prone areas and limiting new development in vulnerable areas.

Furthermore, the District has organized adaptation strategies according to policy change, natural structural approaches, shoreline solutions, or changes to existing buildings. Each of these categories is described below:

- Policy considerations for projected SLR include strategies to reduce flood damage through design guidelines, checklists, setbacks, or operational changes.
- Natural or nature-based solutions include natural features such as wetlands, reefs, living shorelines, and coastal dunes to dissipate wave action and safeguard a shoreline from erosion.

- Shoreline solutions are predominantly used to repel and alter the flow of floodwater. These solutions include sea walls, bulkheads, levees, and breakwaters.
- Building/infrastructure approaches include design and engineering techniques to reduce or prevent damages from potential flooding and inundation. An example of an infrastructure-related approach may be to floodproof electrical equipment in a building or move sensitive equipment from a basement to an upper-level floor.

Tables 4.1 through 4.4 provide a list of adaptation strategies, per the categorizes outlined above. Included in the tables are costs to implement the strategy. It should be noted that the tables represent a non-comprehensive list of strategies, and the District may pursue others.

This AB 691 Report provides an adaptation planning process that can be used by the District and relevant stakeholders to plan for, and respond to, projected SLR. Developing a process, rather than select strategies to be applied in the future when conditions may drastically change, provides greater flexibility and potential

Table 4.1: Examples of Policy Adaptation Strategies

Strategy	Type	Description	Cost
Protect District Mission-Driven Uses	Protect	Coastal-dependent uses, critical infrastructure, and public accessways should employ shoreline adaptation strategies that protect against, then accommodate, temporary coastal flooding or inundation.	N/A
Limit redevelopment in at-risk locations	Protect	Prohibit redevelopment of storm- or flood-damaged structures in highly vulnerable areas or prohibit redevelopment of repetitive loss structures.	N/A
Design standards	Accommodate	Could include minimum elevation requirements for structures and/or utilities.	N/A
Provide Adequate Setbacks	Adjust	Prescribes a distance to waterfront from which all or certain kinds of development are prohibited.	N/A

cost-effectiveness. The U.S. Navy has developed a handbook that provides a framework and methodology to help their planners consider potential inundation and temporary coastal flooding from a 100-year storm event when implementing projects and infrastructure (NAVFAC 2017). The handbook describes a process to properly select adaptation strategies based on several criteria using a step-wise decision-making formula. The District has elected to use a modified version of the Navy's decision-making process as it presents a defensible way to compare appropriate strategies and implement solutions.

Table 4.2: Examples of Natural or Nature-Based Adaptation Strategies

Strategy	Type	Description	Cost
Living Shoreline (wave attenuation)	Protect	Buffer estuaries, bays, and other sheltered shorelines from wave action. May stabilize the shoreline, reduce erosion and provide habitat.	$1,000/linear ft
Living Breakwaters (Oyster Reef/ Floating Reef)	Protect	Intended to protect against storm surge and coastal erosion, a living breakwater is intentionally designed to incorporate natural habitat components.	$500,000/acre
Bioenhancing Concrete	Protect	Bio-enhancing concrete admixtures, complex surface textures and science-based design. The structures are tailored to encourage growth of flora and fauna, which can provide protection in coastal zones.	$2,750/unit
Beach Nourishment	Accommodate	The practice of adding large quantities of sand or sediment to beaches to combat erosion and increase beach width.	$19/cubic yard
Wetland terraces	Accommodate	A wetland-restoration technique used to convert shallow subtidal bottom to marsh. Uses existing bottom sediments to form terraces or ridges at marsh elevation.	$6,500/linear ft
Sediment augmentation	Accommodate	Artificially increasing sediment onto marsh surfaces or elevating eelgrass beds.	$700,000/inch per acre
Restoration	Accommodate	Restoring salt marsh or eelgrass natural hydrology or extensive excavation with revegetation.	$16,000-$45,000/acre

Table 4.3: Examples of Shoreline Strategies

Strategy	Type	Description	Cost
Revetment (Dynamic/ Geotextile)	Protect	Sloping structures placed on banks or cliffs in such a way as to absorb the energy of incoming water. Made from a variety of materials including geotextiles filled with sand or slurry; stone; grouted or cemented stone or gravel; and asphalt.	$325/linear ft
Breakwater (Branch Box/ Floating/ Submerged)	Protect	A breakwater is a coastal structure (usually a rock and rubble mound structure) projecting into the sea that shelters vessels from waves and currents and protects a shore area.	$200/sq. ft Or $16,000/linear ft
Bulkhead	Protect	Vertical shoreline stabilization structures that only retain surcharge loads and soil behind the load.	$13,500/linear ft
Seawall	Protect	Protect the shoreline from wave loads, and to retain surcharge loads and soil behind the wall.	$4,200/ linear ft
Groins	Protect	A shoreline protection structure built perpendicular to the shoreline of the coast to reduce longshore drift and trap sediments.	$5,100/ linear ft
Floating Sector Gate	Protect	Navigable storm surge barriers that move or rotate horizontally to close off a waterway to an incoming storm surge.	$5 million/ gate

Table 4.4: Examples of Building and Infrastructure Strategies

Strategy	Type	Description	Cost
Embankment	Protect	A wall or bank of earth or stone with sloping sides, built to prevent a water body from flooding a land area.	$3,400/ linear ft
Retractable Barriers/ Aquafence	Protect	Temporary barriers used to protect an asset from possible flooding.	$325/ linear ft
Elevate	Accommodate	Increase the ground floor height of an asset or facility.	$44/ sq. ft
Floodable Park	Accommodate	Designed to have areas of lower grade that can accept and hold excess water from nearby areas that would experience damage from flooding.	$750,000/ acre

Figure 4.1 illustrates five steps:

1. Set the Adaption Goal: Articulating the desired outcome of adaptation will help guide the selection of suitable strategies.
2. Identify Potential Strategies: Depending on exposure, sensitivity, adaptive capacity, financial impact, or cascading impacts of a vulnerable asset (e.g. land-based versus water-based, critical infrastructure, coastal-dependency, etc.) potential strategies can be identified.
3. Describe Benefits and Limitations: For each strategy identified, a description of benefits, limitations allows for comparison of strategies.
4. Evaluate Feasibility: The feasibility of each strategy should be assessed to ascertain its capability to be deployed and perform. Feasibility may include, but is not limited to, an evaluation of technical capability, financial viability, or legal consistency.
5. Assess Appropriateness: Each strategy should aim to align with and social, political, environmental, and economic objectives. An evaluation of consistency with existing plans, policies, and standards should be included. Furthermore, a strategy should support the desired outcome.

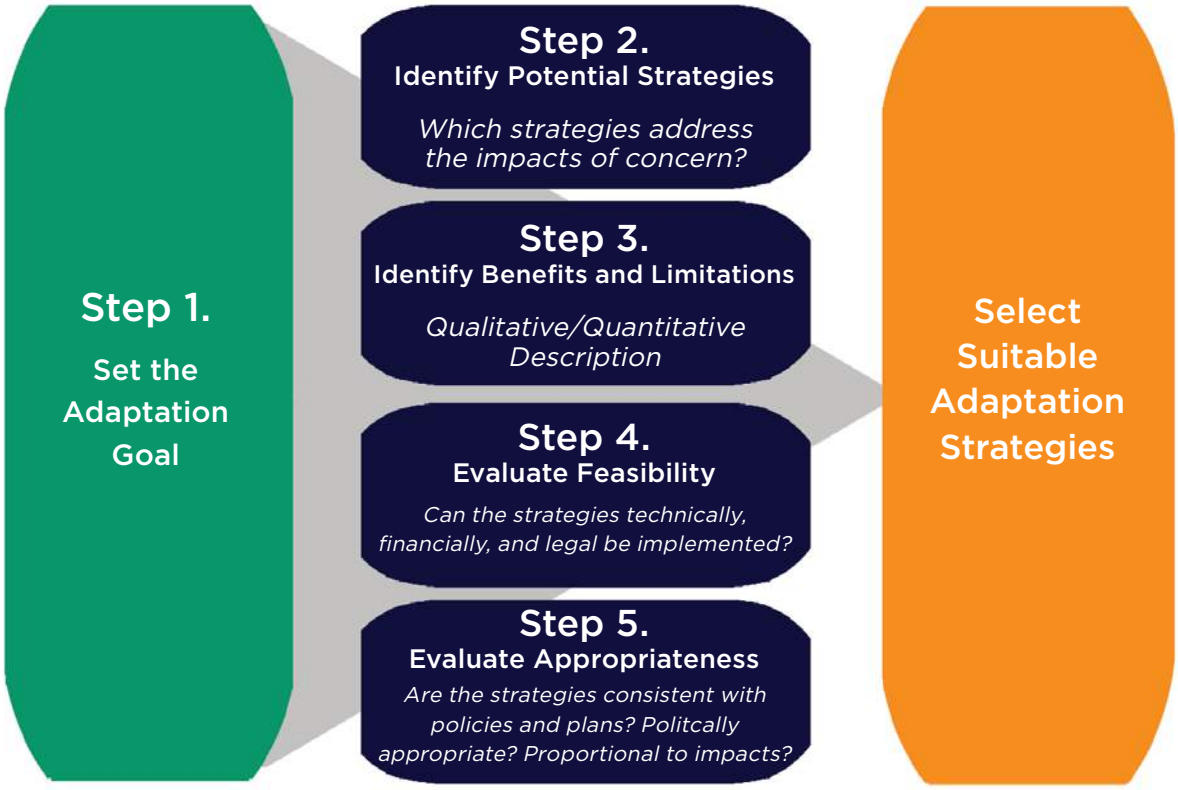

Figure 4.1: Proposed Adaptation Selection Process

The intent of the process described is to select a suitable strategy or strategies to reduce the risk of potential inundation and/or temporary coastal flooding from a 100-year storm event for a specific asset or area.

4.2.2 Develop and Implement a Monitoring Program

Planning and implementation of adaptation strategies occur as part of the District's general course of management of natural resources, maintenance of infrastructure, negotiations of lease terms, or redevelopment of properties. However, the implementation of future adaptation strategies must be flexible to environmental conditions, both physical and financial. By monitoring changing conditions, the District can better understand their evolution, and when to implement adaptation strategies.

The District already implements monitoring programs in and around the Bay. These programs include but are not limited to the of monitoring changes to the physical characteristics of the Bay, water and sediment quality, or habitat migration. Used in conjunction with projections of projected SLR, frequency of storm events, or future costs of damage, the District can better understand the potential trajectory of climate conditions to inform adaptation planning.

Table 4.5 illustrates potential indicators the District could use to monitor conditions in and around San Diego Bay. Where feasible, the District would utilize existing programs, tools, and resources to collect information. Moreover, the District will continue to work with external agencies and stakeholders to collaborate on projected SLR monitoring.

4.3 Strategy Implementation

The third stage of the Adaptive Management projected SLR Framework is Strategy Implementation. As discussed, the implementation of strategies may be precipitated by risk or observed changes through monitoring. The need for strategies may also occur during the regular course of District operations such as performing habitat restoration, installing new infrastructure, or developing new waterfront businesses and coastal dependent uses.

As District projects are located within the coastal zone, projects are subject to California Coastal Act permitting. The District's approach to implementation is largely consistent with the Coastal

Table 4.5: Proposed Sea Level Rise Monitoring Indicators

Indicator	Description
Physical Indicators	
Water levels	Measurement of still water elevations in San Diego Bay
Wave Activity	Measurement of maximum water elevations associated with storm surge and wave activity
Tide Levels	Do tides surpass a defined threshold
Frequency of Storms	Measurement of number of annual storm events
Biological Indicators	
Habitat Extent and Migration	Mapping of habitat acreages and extents in and around San Diego Bay
Habitat Health	Assessment of the diversity of habitat types to support healthy ecosystems
Operational Indicators	
Flooding frequency	Count of flooding events which occur in the built environment
Performance of Flood Defense Infrastructure	Measurement of how existing devices respond to inundation and temporary coastal flooding
Cost of Response	Estimation of the cost to respond to and replace assets damaged by flooding events

Commission's Guidance. As CoSMoS is not developed to be used for design of a project to reduce risks of potential projected SLR-caused inundation and temporary coastal flooding from a 100-year storm event, the District recommends a site-specific projected SLR assessment. This more refined assessment could account for site-specific topographical conditions not captured at a Baywide scale. A site-specific vulnerability assessment also would allow planners the opportunity to adjust design of the intended project and measure impacts given various scenarios of projected SLR.

Choosing appropriate adaptation strategies for specific projects is an important consideration. Selecting the appropriate adaptation strategy or combination of strategies should follow a decision-making process as outlined in this chapter. Following this process will allow District staff and decision-makers to make informed, defensible decisions

to reduce risk to the project as well as the Public Trust uses.

It is important to note, that proactively planning for projected SLR does not mean that strategies need to be designed to reduce the impacts of SLR at the highest range of SLR projections. Strategies can be designed and implemented in the near-term to protect against projected SLR conditions that may be likely to occur, but strategies should have the capacity to be enhanced to protect against changes in projected SLR that are less probable. For example, a project with a 60-year lifespan could be designed to reduce impacts of projected SLR-caused inundation and temporary coastal flooding from a 100-year storm event considering a 2.5-foot rise in sea levels, but have the capacity to adapt to higher levels of projected SLR if conditions are warranted.

Because the future is uncertain, and the Public Trust uses should be protected for future generations, projects administered by the District should include an implementation plan detailing the types of strategies that will be deployed. The plan should include opportunities for monitoring coastal hazards to adapt strategies as necessary to changing conditions.

4.4 Cross-Jurisdictional Collaboration

Fundamental to the District's success in implementing the Framework will be collaboration with other relevant jurisdictions. As potentially vulnerable assets such as roads and storm management systems are linked with adjacent jurisdictions, implementation of specific adaptation strategies may require cross-jurisdictional collaboration and agreements.

An example of an existing collaboration is the District's partnership with the U.S. Navy Southwest Region -two major agencies with management responsibility for the San Diego waterfront. In 2018, the two agencies entered into a Memorandum of Agreement to coordinate on SLR adaptation planning for a period of six years. Future collaborations such as this can increase the effectiveness and efficiency of adaptation strategy planning and implementation.

Chapter 5 Conclusion

Protecting and preserving the Public Trust Uses is an important obligation for the District. As demonstrated throughout this AB 691 Report, projected SLR inundation and temporary coastal flooding from a 100-year storm event may potentially impact District operations if action is not taken to reduce the risks of coastal hazards. Managing the Tideland areas of San Diego Bay represents unique challenges in the face of projected SLR as the District's jurisdiction is in an urban environment where space-dependent strategies may not always be feasible.

As discussed in this report, rather than specifying precise adaptation strategies to mitigate potential projected SLR inundation and coastal flooding, the District has developed an adaptive management planning framework to assess risk and appropriately plan for projected SLR.

The District believes that a process with a menu of options will best serve the diversity of uses along San Diego Bay.

Application of the adaptive management approach will allow the District to plan and implement adaptation strategies in the near-term while remaining flexible enough to adjust future strategies in the face of uncertain conditions. Following an iterative process informed by best available climate science, monitoring data in San Diego Bay, and performance effectiveness of strategies, the Framework can be continually improved to reduce the risks associated with projected SLR inundation and temporary coastal flooding from a 100-year storm event.

The District has been collaborating with federal, state, regional, and local agencies regarding projected SLR. Of significance, the District and Navy

Regional Southwest recently entered into a Memorandum of Agreement to align their planning initiatives related to projected SLR and coastal flooding. As the two largest land managers along San Diego Bay, a continued partnership between the District and the Navy is crucial to protecting coastal dependent uses. Likewise, working with academia is important for the District to identify and fill research gaps. Continued research in San Diego Bay will help to refine future models of projected SLR and coastal flooding that can be used to inform the proper implementation of adaptation strategies. As a result, the District and academic institutions such as Scripps Institution of Oceanography will continue their long-standing relationship of research in San Diego Bay.

Through this AB 691 Report, the District acknowledges that planning for projected SLR is a long-term process. The ability to prepare and collaborate across the San Diego Region should help protect the Public Trust. This AB 691 Report meets the requirements of AB 691 or Section 6311.5 and sets the foundation for the District to become more resilient in the future.

Embarcadero Marina Park North

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Appendices

APPENDIX A	District Assets
APPENDIX B	Nearshore Habitat Mapping and Resiliency Evaluation for the San Diego Unified Port District
APPENDIX C	Financial Analysis
APPENDIX D	Port of San Diego Natural Resources Valuation Methods

APPENDIX A

District Assets

The following section describes in more detail the District assets and their sensitivity and adaptive capacity to potential inundation and temporary coastal flooding from a 100-year storm event resulting from projected SLR. The descriptions are intended to be general in nature. Specific assets will have varying degrees of sensitivity and adaptive capacity to potential inundation and temporary coastal flooding from a 100-year storm event with projected SLR considering factors such as location, economic life cycle, size, condition, and design. Therefore, the discussion should be considered a broad view of the asset type.

Table AP.A1: Summary of Asset Sensitivity and Adaptive Capacity to Sea Level Rise

Asset	Sensitivity	Adaptive Capacity
Roads	HIGH	LOW
Rails	HIGH	LOW
Bikeways	LOW	HIGH
Pathways	LOW	HIGH
Marine Terminals	HIGH	LOW
Piers	HIGH	LOW
Stormwater Management	HIGH	LOW
Wastewater Management	HIGH	LOW
Sewer Lifts	HIGH	HIGH
Sanitary Pump Outs	LOW	HIGH
Buildings	HIGH	LOW
Beach Accessible Areas	HIGH	LOW
Parks	LOW	HIGH
Boating Facilities	LOW	HIGH
Fuel Docks	HIGH	HIGH
Boat Launch Ramps	LOW	HIGH

Transportation

The transportation system throughout the District has two distinct objectives: the movement of people and the movement of goods. To facilitate these objectives, the District collaborates with adjacent jurisdictions to maintain a roadway network that provides vehicular connections to, from, and through the District. The network within the District consists of roads, rail, bikeways, and pathways. While the transportation system connects to adjacent jurisdictions, this vulnerability assessment only considers transportation assets on Tidelands.

A. Roads:

A road is an accessway solely dedicated for the use of vehicular traffic. Examples of roadways include, but are not limited to, general lanes and dedicated transit lanes. There are approximately 44.3 linear miles of roads on Tidelands consisting of two-lane and multi-lane routes supporting people and cargo movement.

Sensitivity

Roads generally have high sensitivity to potential inundation and temporary coastal flooding from a 100-year storm event with projected SLR because exposure could force road closures, although alternate routes allow for detours. However, based on the District's geographic location directly adjacent to water, many areas of the District have single access points that limit alternate routes. Temporary coastal flooding from a 100-year storm event with projected SLR (that does not cause structural damage to roads), may limit public access, goods movement, and/or emergency responders. Inundation of roads could render them unusable and with potential cascading effects that disrupt business operations and permanently limit public access.

Adaptive Capacity

Roads may continue to facilitate mobility in the aftermath of temporary coastal flooding from a 100-year storm event with projected SLR assuming no structural damage. Alternate routes may be available for some roadways, and once water drains from the roads, roads are typically usable again without requiring significant repair. Sections of road could

be elevated (relocation is more difficult), although at substantial cost; therefore, the adaptive capacity is very low for potential inundation.

B. Rail:

Rail lines refer to the continuous lines of bars laid to form rail infrastructure. Rail lines located in the District move freight to and from the marine terminals. There are approximately 16.1 linear miles of rail lines located on Tidelands.

Sensitivity

Rail lines are highly sensitive to even small amounts of standing water on the tracks (Adapting to Rising Tides, 2011). If a portion of track is affected by potential inundation, it may result in the closure of that immediate section with potential for larger disruptions in service if alternative routes are not available.

Adaptive Capacity

The high sensitivity of rail operations resulting from potential inundation and temporary coastal flooding from a 100-year storm event with projected SLR combined with the limited ability to relocate or elevate rail infrastructure make the adaptive capacity of rail very low. The adaptive capacity to withstand impacts to rail infrastructure is further hampered by the lack of alternative rail lines in the region.

C. Bikeways:

Bikeways are paths or lanes for the use of bicycles. Bikeways provide alternative mobility options for visitors and workers to access Tidelands. Bikeways consist of dedicated bike paths or multi-use paths. There are approximately 5.9 linear miles (31,297 linear feet) of bikeways on Tidelands, including but not limited to the Bayshore Bikeway.

Sensitivity

Assuming storm events do not cause permanent damage, bikeways have low sensitivity to temporary coastal flooding from a 100-year storm event with projected SLR. The same bikeways have higher sensitivity to potential inundation with projected SLR if they become inaccessible and/or unsafe for public use and no alternative routes exist.

Adaptive Capacity

The adaptive capacity of bikeways on Tidelands is high. Bikeways could be reconfigured or relocated to avoid potentially flooded areas or elevated in place. Like roads, once the floodwaters recede, and assuming no substantial structural damage, the bikeways are usable.

D. Pathways:

Pathways provide pedestrian and/or bicycle access to the waterfront for visitors and workers to Tidelands. Pathways take the form of walkways, which include promenades (waterside), sidewalks, or nature trails. There are approximately 22.2 linear miles (117,034 linear feet) of pathways on District tidelands.

Sensitivity

Pathways have low sensitivity to potential temporary coastal flooding from a 100-year storm event with projected SLR although it limits public access and potentially reduces public safety. Pathways are more highly sensitive to potential inundation from projected SLR as it may render pathways unusable. Compared to hardened surfaces, nature trails, such as in La Playa or South Bay, are more prone to erosion and damage resulting from potential inundation and temporary coastal flooding from a 100-year storm event with projected SLR.

Adaptive Capacity

The adaptive capacity of pathways to temporary coastal flooding from a 100-year storm event with projected SLR on Tidelands is high. Assuming not a major storm event, pathways, except for nature trails, may be able to withstand temporary coastal flooding from a 100-year storm event with projected SLR and should become usable with receding floodwaters and cleanup. Nature trails may have limited adaptive capacity if substantial erosion occurs and the trail cannot be rebuilt or relocated.

The adaptive capacity of pathways to potential inundation from projected SLR is generally high, depending on geographic constraints. Many pathways can be reconfigured or relocated to avoid areas projected

to be impacted by inundation from SLR. While waterside promenades or nature trails may be constrained by adjacent structures or natural resource areas and relocation or reconfiguration is not possible, there is the potential to elevate in place.

Marine Terminals

The District operates two marine transport terminals and two cruise ship terminals. The Tenth Avenue and National City marine terminals are part of the Port's working waterfront. Tenth Avenue provides break-bulk and refrigerated container distribution facilities while the National City location provides vehicle import/export operations. The District also has two cruise ship terminals, located at B Street and at Broadway Pier. These terminals include a 30,000-square-foot main cruise ship terminal building, two supplemental structures for passenger reception and baggage handling and two warehouse areas (SDUPD, 2019).

Sensitivity

Terminal and maritime operations are highly sensitive to potential inundation and temporary coastal flooding from a 100-year storm event with projected SLR, potentially prompting temporary closures of operations. Closure of the terminals or maritime industrial activities would disrupt the delivery of goods and services and could have broader regional economic impacts. The Tenth Avenue Marine Terminal is designated as a Strategic Port, which is utilized be the United States military for the deployments around the world. In addition, marine terminals may be utilized as important conduits of goods and services in the aftermath of an emergency.

Adaptive Capacity

The adaptive capacity of marine terminals and maritime industrial uses is low. The coastal-dependent nature combined with heavy industrial infrastructure limits relocation of facilities or structures. Even small increases in SLR may render piers unusable if bumper systems are not modified.

Piers

A pier is platform supported on pillars or girders leading out from the shore into a body of water. On Tidelands, the piers provide docking points for a variety of vessels,

such as commercial fishing or excursion vessels, as well as recreational opportunities including fishing. Piers on Tidelands also offer opportunities for physical and visual public access.

Sensitivity

Piers are highly sensitive to potential inundation and temporary coastal flooding from a 100-year storm event with projected SLR that may limit the ability of vessels to dock or prevent visitors from accessing the pier.

Adaptive Capacity

The adaptive capacity of fixed piers is low, as few alternatives may exist for vessel berthing. In addition, raising piers requires substantial over-water work and costs.

Stormwater management

The stormwater management system includes storm drains and pipes that connect to flood control infrastructure to the bay. The vulnerability of storm drains to SLR depends on their current storage and flow capacity as well as the elevation of catch basins and outfalls.

Sensitivity

Stormwater infrastructure has high sensitivity to potential inundation and temporary coastal flooding from a 100-year storm event with projected SLR and may cause backflows upstream. The infrastructure is more sensitive to temporary coastal flooding from a 100-year storm event with projected SLR with the addition of onshore precipitation.

Adaptive Capacity

The adaptive capacity of stormwater infrastructure is low in the long-term. Stormwater pumps may assist water flows in the near-term but have limited effectiveness in the long-term. The adaptive capacity of the stormwater infrastructure system is very low in the long-term because of the cost, logistics, and cross-jurisdictional collaboration necessary to plan and implement adaptation strategies (e.g., elevate or relocate).

Wastewater

Wastewater infrastructure includes sewer lifts, along with sanitary pump outs used in marinas. There are ten sewer lifts located on Tidelands. There are 14 sanitary pump outs located on Tidelands.

A. Sewer lifts:

Sensitivity

Sewer lifts, which help pump wastewater from lower to higher point elevations, have high sensitivity to temporary coastal flooding from a 100-year storm event with projected SLR. The lifts have also higher sensitivity to inundation as they may become unusable, compromising the larger system's operational capacity.

Adaptive capacity

Adaptive capacity of sewer lifts is high as these facilities can be elevated upon replacement at the end of the service life.

B. Sanitary Pump-outs:

Sensitivity

Sanitary pump outs have high sensitivity to potential inundation and temporary coastal flooding from a 100-year storm event with projected SLR as they could become temporary unusable, compromising their capacity to operate.

Adaptive Capacity

Sanitary pump-outs at marinas can be modified or elevated to address rising sea levels. Adaptive capacity of sanitary pump-outs is high.

Buildings

There are approximately 590 buildings including District and tenant buildings located on Tidelands, providing or support a diverse array of commercial, recreational, industrial, or government services.

Sensitivity

Buildings have high sensitivity to potential inundation and temporary coastal flooding from a 100-year storm event with projected SLR as damage to the

structure as well as associated electrical or water infrastructure may render the facility unusable following an event.

Adaptive Capacity

Buildings have low adaptive capacity to potential inundation because they are not easily elevated or relocated. Buildings have a higher adaptive capacity to temporary coastal flooding potential from a 100-year storm event with projected SLR as structures cab be protected by sandbags, temporary flood barriers, and pump systems can assist to remove water.

Park & Beach Areas

The District manages 22 Parks and recreation areas on tidelands spread across 144 acres, which provide free or low-cost recreational opportunities for visitors. Parks and beach areas across District tideland also provide important environmental, economic, and public health benefits.

A. Beach areas:

Sensitivity

Beach accessible areas have high sensitivity to temporary coastal flooding from a 100-year storm event with projected SLR because of their direct exposure to wave impacts that can cause widespread erosion.

Adaptive Capacity

Adaptive capacity for beach areas is high in the near-term with the application of beach sand replenishment actions. Adaptive capacity is low in the long-term as potential inundation and temporary coastal flooding from a 100-year storm event with projected SLR will most likely scour the sand and erode the beach areas and in areas backed by coastal development.

B. Parks:

Sensitivity

Temporary coastal flooding and inundation will affect the ability for visitors to access and enjoy the parks. Parks have low sensitivity to

temporary coastal flooding from a 100-year storm event with projected SLR as the parks become usable when flood waters recede (and assuming no substantial physical damage). Parks have higher sensitivity to inundation as they become unsafe and unusable to the public.

Adaptive Capacity

Adaptive capacity of park areas is high to potential inundation and temporary coastal flooding from a 100-year storm event with projected SLR. Park areas may be able be elevated through soil augmentation or infrastructure can be enhanced to expedite water runoff from temporary coastal flooding from a 100-year storm event with projected SLR. In addition, alternative park options are available in the region.

Boating facilities

A boating facility supports vessel operations. Boating facilities on Tidelands include fuel docks and boat launches.

A. Fuel Docks

Fuel docks provide fuel access to recreational vessels and Harbor Police on San Diego Bay.

Sensitivity

Fuel docks on Tidelands are located on floating structures and may become temporarily unavailable during storm events or elevated water levels. As a result, they have high sensitivity to potential inundation and temporary coastal flooding from a 100-year storm event with projected SLR.

Adaptive Capacity

Fuel docks can be modified to withstand higher sea levels. The adaptive capacity of fuel docks assets is high.

B. Boat Launches

Boat launches a ramp on the shore by which vessels can be moved to and from the water. The District has three public boat launch facilities located in Chula Vista, National City, and Shelter Island.

Sensitivity

Boat launches have low sensitivity to potential inundation and temporary coastal flooding from a 100-year storm event with projected SLR (depending on mean sea level in relation to the ramp elevation).

Adaptive Capacity

The adaptive capacity of boat launch ramps is high depending on the ability to expand the ramp inland.

Marinas Slips

A boat slip is the portion of a pier or float where a vessel is berthed or moored. There are approximately 7,500 slips (and moorings) on District Tidelands; almost 75 percent of these in recreational marinas. The remainder are used for commercial fishing, sportfishing, marine service, or within yacht clubs. The District maintains almost 40 slips across the Bay for Harbor Police.

Sensitivity

Marina slips are located on floating structures and may become damaged during storm events. As they can float, they have low sensitivity to potential inundation and temporary coastal flooding from a 100-year storm event with projected SLR.

Adaptive Capacity

Marina slips may be modified to withstand higher sea levels. The adaptive capacity of fuel docks assets is high.

APPENDIX B

NEARSHORE HABITAT MAPPING AND RESILIENCY EVALUATION FOR THE SAN DIEGO UNIFIED PORT DISTRICT JURISDICTION

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May 2019

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Contents

Tables and Figures

Acronyms and Abbreviations

Acronym	Definition
°F	degrees Fahrenheit
AB	Assembly Bill
CEMP	California Eelgrass Mitigation Policy
cm	centimeters
CoSMoS	Coastal Storm Modeling System
District	Unified Port District of San Diego
GIS	geographic information system
NOAA	National Oceanic and Atmospheric Administration
ROW	right-of-way
SANDAG	San Diego Association of Governments
SLR	sea level rise
USGS	United States Geological Survey
WMA	Watershed Management Area

Section 1
Introduction

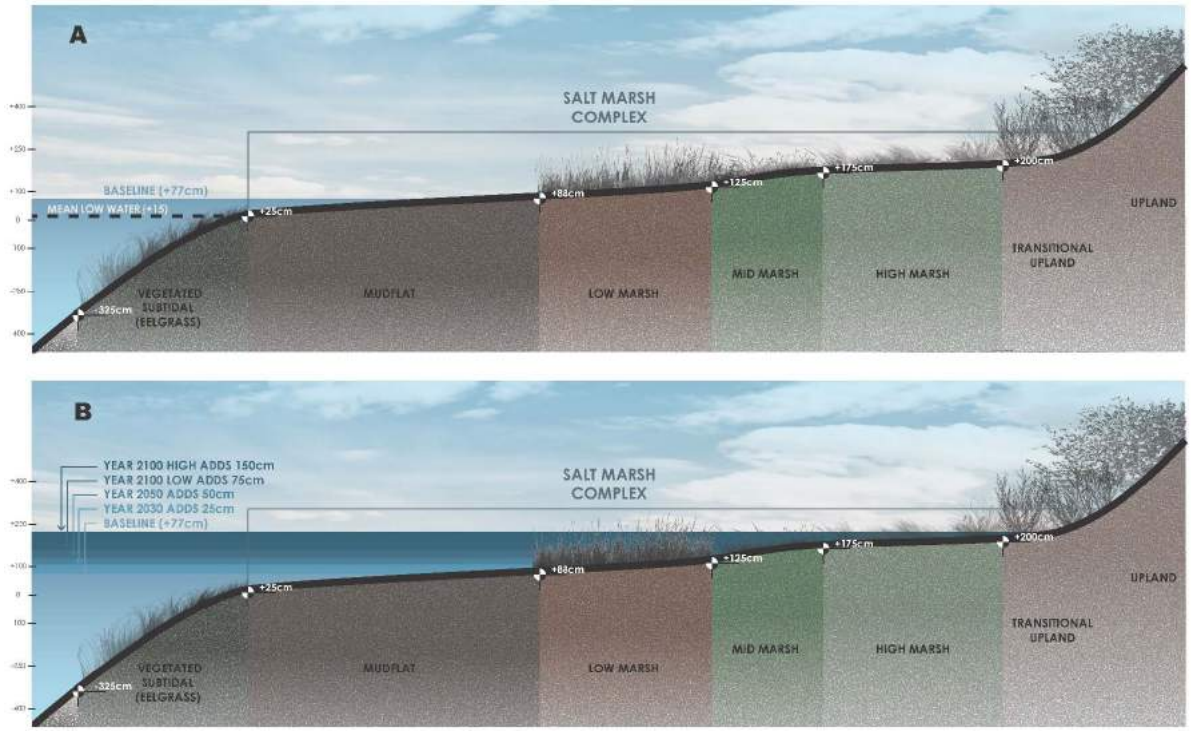
Pursuant to Assembly Bill 691, the San Diego Unified Port District (hereafter referred to as "District") as a trustee of public trust lands, is required to assess its vulnerabilities to future sea level rise. The law requires the District to analyze the impacts coastal flooding and inundation exacerbated future scenarios of sea level rise and extreme storms may have on its natural and manmade resources and facilities. Included in the assessment shall be an evaluation of the financial impacts to these resources as well as a description of how the District proposes to protect and preserve them. A final report must be submitted to the State Lands Commission no later than July 1, 2019.

This study is intended to support the District's AB 691 submittal by evaluating potential impacts to nearshore habitats with increasing levels of sea level throughout the District's jurisdiction. Nearshore habitats capable of supporting biodiversity, including salt marsh and eelgrass, can persist in the face of sea- level rise through natural landward migration and vertical accretion, a process by which the habitat "moves" up elevation or upslope. In San Diego Bay, landward (horizontal) marsh migration into adjacent, low-lying uplands is largely constrained by coastal development. Furthermore, sediment inputs from the ocean and connecting waterways are minimal in San Diego Bay and therefore natural accretion is slow to nonexistent (Thorne et al. 2018). Illustration 1 provides an example cross-section depicting salt marsh complex and eelgrass (two tidally influenced habitat types) under baseline conditions and evaluated sea level rise scenarios.

This evaluation uses the USGS Coastal Storm Modeling System (CoSMoS) elevation data on 4 selected scenarios with corresponding years: 25 cm (2030), 50cm (2050), 75 cm (2100 LOW), and 150 cm (2100 HIGH) based on the 2018 California Ocean Protection Council Sea Level Rise Guidance (Illustration 1B). CoSMoS makes detailed predictions (meter-scale, as used in this analysis) over large geographic scales (100s of kilometers) of storm-induced coastal flooding and erosion for both current and future sea-level rise (SLR) scenarios. CoSMoS v3.0 for Southern California shows projections for future climate scenarios (sea-level rise and storms) to provide emergency responders and coastal planners with information that can be used to increase public safety, mitigate physical damages, and more effectively manage and allocate resources within complex coastal settings (Barnard et al, 2018).

Both, a qualitative and quantitative analysis of existing nearshore habitats within District jurisdiction was completed, along with a prediction of future habitat distribution, analysis of trends over time, implications of modeled change, and recommended management and monitoring strategies for future planning. It is important to note that this analysis examines future sea level rise scenarios on current natural resources, land uses, and management practices. This work will help the District to analyze a range of potential changes to the habitats of San Diego Bay, and to develop effective adaptive management strategies to maintain the maximum practicable diversity in habitat capable of supporting species and other ecosystem services.

Illustration 1. Illustration 1 provides an example cross-section depicting salt marsh complex and eelgrass (two tidally influenced habitat types) under baseline conditions (A) and under the four evaluated sea level rise scenarios (B). The illustration keeps the surface contour and habitat constant for both A and B while showing the added water depth for each scenario in B. Note that without landward migration or changes to surface elevations (i.e. accretion) the habitat becomes deeper and deeper relative to sea level.



Section 2
Existing Conditions

2.1 Climate

San Diego Bay is located along Southern California's Pacific Coast just north of the Tijuana River and U.S./Mexico border (see Figure 1). This geographic region is dominated by a semiarid Mediterranean climate and is characterized by warm to hot dry summers and mild to cool wet winters. The Mediterranean climate results in relatively long periods of low flow dry conditions with modest runoff into San Diego Bay. These dry conditions are punctuated by brief, seasonal episodes of heavy rainfall and higher volume runoff. Daytime temperatures rarely exceed 95 degrees Fahrenheit (°F) and nighttime temperatures usually remain above freezing in the winter. Seasonal rainfall along the coast averages from 10 to 14 inches per year, with approximately 75% of the precipitation falling from November through March.

2.2 Watershed

The San Diego Bay Watershed Management Area (WMA) encompasses over 415 square miles (668 square kilometers), and is the largest within the boundaries of San Diego County (Figure 2). There are three contributing hydrologic units: the smaller but heavily populated Pueblo Hydrologic Unit to the north, Sweetwater Hydrologic Unit in the middle, and the Otay Hydrologic Unit to the south. The San Diego Bay WMA is heavily developed in many areas and supports over 50% of the county's working and/or residential population (Project Clean Water 2019).

The Sweetwater Hydrologic Unit is the largest of the three San Diego Bay hydrologic units, encompassing over 145,000 acres half undeveloped and open space lands (60%) with the remaining areas heavily developed, with the population concentrated in the lower watershed estimated at 340,000 (Project Clean Water 2019).

The Otay Hydrologic Unit is the second largest in the county, comprising nearly 98,500 acres of land and be further broken down into three distinct hydrologic areas, each with unique geological and environmental features: Coronado, Otay Valley, and Dulzura. The Otay River is the central creek that collects and conveys most of the watershed's water. The watershed is composed primarily of undeveloped and open spaces, which make up roughly 68% of the watershed with high density uses occurring at the downstream end and low density and natural space occurring in the upper end. (Project Clean Water 2019).

The smallest of the contributing hydrologic units is the Pueblo Hydrologic Unit, covering about 38,000 acres (approximately 14%) of the San Diego Bay WMA. Unlike the Sweetwater and Otay hydrologic units, Pueblo 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. (Project Clean Water 2019).

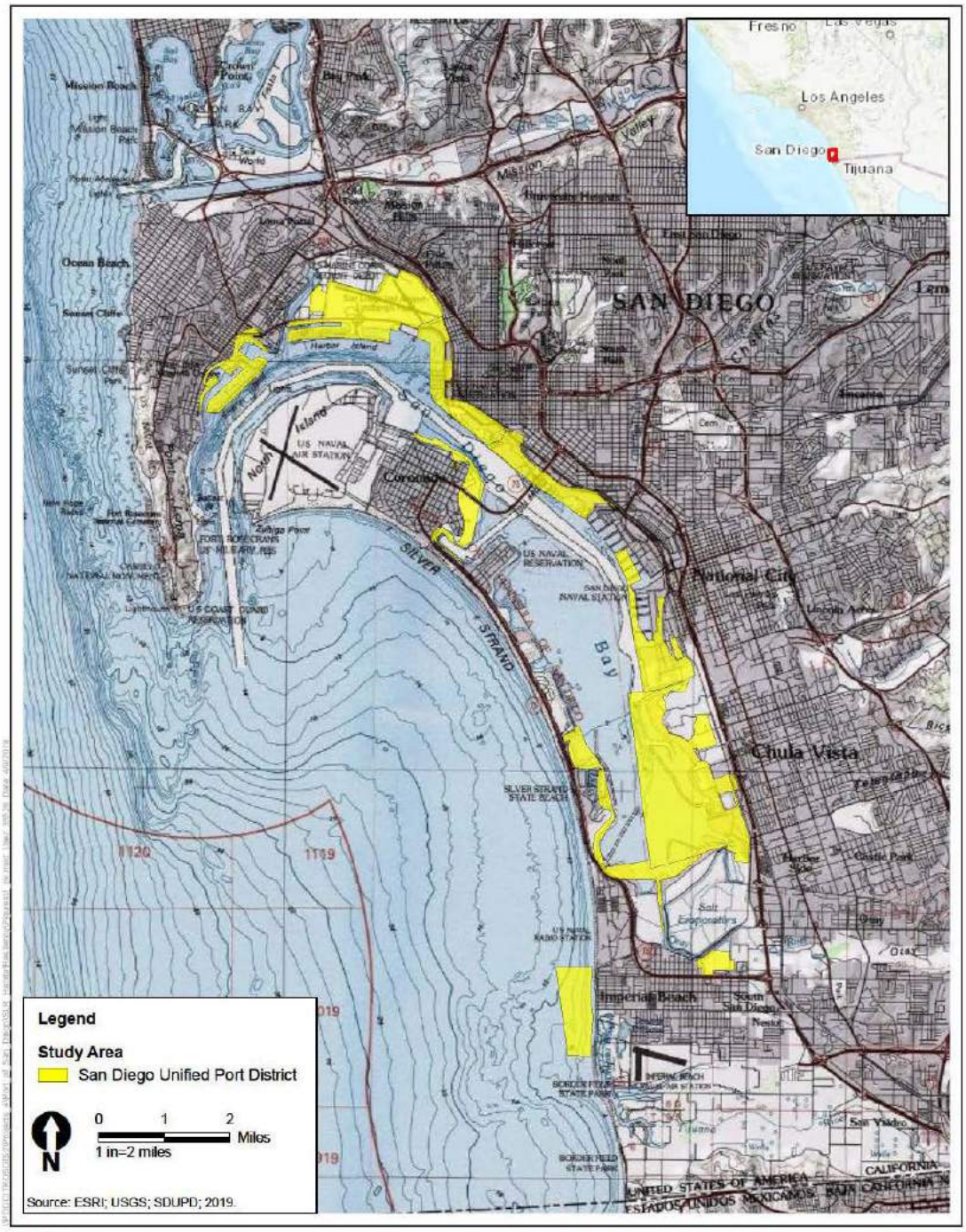


Figure 1
Regional Location

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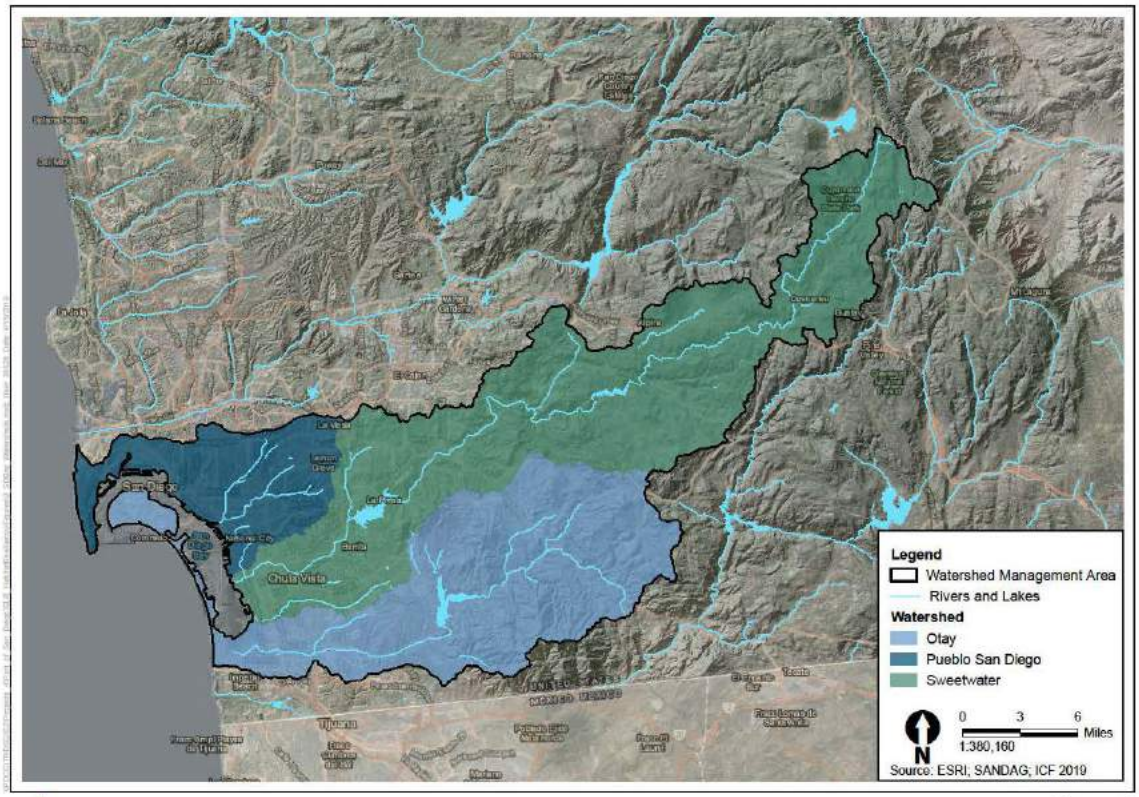

Figure 2
San Diego Bay Watersheds

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2.3 Habitats

The following is a summary of the key habitat types found within San Diego Bay.

2.3.1 Eelgrass (Subtidal)

Eelgrass (*Zostera marina* L. and *Z. pacifica*) is a native marine plant indigenous to the soft-bottom bays and estuaries of the northern hemisphere. Eelgrass can be found along the west coast of North America, ranging from Baja California and the Sea of Cortez to Alaska. It is associated with healthy shallow bays and estuaries and is a highly productive species. It is one of the only physical structures (biotic or other) along these shallow subtidal shorelines and embayments and as such is a *foundation* or *habitat forming* species. Eelgrass is protected under the Clean Water Act and locally managed under the California Eelgrass Mitigation Policy (CEMP), which was developed and amended by National Oceanic and Atmospheric Administration (NOAA) Fisheries (NAVFAC 2013 and NOAA 2014).

Eelgrass plays many roles within coastal bays and estuary ecosystems and contributes to ecosystem functions at multiple levels as a primary and secondary producer, habitat structuring element, substrate for epiphytes and epifauna, and sediment stabilizer and nutrient cycling facilitator. Eelgrass provides important nursery habitat for young fish and invertebrates, acting as foraging areas and shelter. It is also a food source for migratory waterfowl and sea turtles, and provides spawning surfaces for invertebrates and commercially important fish such as the Pacific herring and many bass species (NAVFAC 2013 and NOAA 2014)

2.3.2 Salt Marsh Complex

Salt marsh complexes are an association of herbaceous and suffrutescent, salt-tolerant hydrophytes that form a moderate to dense cover and can reach a height of 1 meter (3 feet). Most species are active in summer and dormant in winter (Holland 1986). Coastal salt marsh plants are distributed along distinct zones depending upon such environmental factors as frequency and length of tidal inundation, salinity levels, and nutrient status (MacDonald 1977). In the higher littoral zone, there is much less tidal inflow, resulting in lower salinity levels, while soil salinity in the lower littoral zone is fairly constant due to everyday annual tidal flow (Adam 1990).

Salt marsh species often segregate along elevation bands due to different exposures to the tides, resulting in varied tidal inundation and other stratified environmental variables. The lowest elevations support mudflats, an important habitat characterized by a lack of vegetation, exposure during daily low tides, and complex benthic invertebrate populations. Around San Diego Bay, the first terrestrial plant species, at the lowest elevation, is California cordgrass (*Spartina foliosa*) also referred to as low marsh. The next vegetation band is mid marsh, generally dominated by Pacific pickleweed (*Sarcocornia pacifica*) and saltwort (*Batis maritima*), which then transitions to high marsh, including alkali-heath (*Cressa truxillensis*) and Parish's pickleweed (*Arthrocnemum subterminale*). Other characteristic species include saltgrass (*Distichlis spicata*) and salty Susan (*Jaumea carnosa*). There is also an upland transitional area often associated with the outer limits of salt marsh complexes that is not directly affected by the tide but still supports a unique mix of salt tolerant perennial species including bladderpod (*Peritoma arborea*), coast goldenbush (Isocoma menziesii) and arrowweed (*Pluchea sericea*).

San Diego Bay also supports saltpans which are unvegetated to sparsely vegetated flat, alkaline areas near the coast that are subject to tidal influence. In coastal areas, saltpans are most often associated with salt marsh habitat. While saltpans can cover relatively large areas, they often occur in a mosaic pattern with more densely vegetated areas within the salt marsh. Vegetation is limited to non-existent in saltpans due to seasonally high soil salinity levels that prevent colonization by perennial salt marsh species (Ferren et al. 1987).

2.3.3 Uplands

A variety of upland habitats existing around San Diego Bay. The primary native community is Diegan coastal sage scrub which may be dominated by a variety of species depending upon site-specific topographic, geographic, and edaphic conditions. California sagebrush (*Artemisia californica*) is more dominant in coastal forms (Oberbauer 2008), but it often occurs with various codominant species. There are several recognized subassociations of Diegan coastal sage scrub based upon the dominant species. Typical Diegan coastal sage scrub dominants include California sagebrush, California buckwheat (*Eriogonum fasciculatum*), laurel sumac (*Malosma laurina*), black sage (*Salvia mellifera*), lemonadeberry (*Rhus integrifolia*), and California encelia (*Encelia californica*).

Another common upland community is nonnative grassland which is characterized by a dense to sparse cover of annual grasses, often with native and nonnative annual forbs (Holland 1986). Typical grasses within the region include ripgut grass (*Bromus diandrus*), red brome (*Bromus madritensis* ssp. *rubens*), soft chess (*Bromus hordeaceus*), wild oats (*Avena* spp.), and fescue (*Vulpia myuros*). Disturbance-related annuals, such as non-native red stem filaree (*Erodium cicutarium*) and horseweed (*Conyza canadensis*), are common to this community. Though named as a nonnative community, nonnative grassland often has significant biological value because it provides foraging habitat for raptors; can support native grassland species; and often supports sensitive wildlife species.

Disturbed habitat is any land that has been permanently altered by previous human activity, including grading, repeated clearing, intensive agriculture, vehicular damage, or dirt roads. Disturbed land is typically characterized by large amounts of bare ground and an absence of remnant native vegetation with little to no biological value without active restoration. Disturbed habitat in San Diego Nay includes dirt roads, berms, and areas of bare ground.

Photo showing typical disturbed areas including large areas of compacted bare ground and nonnative ruderal species.

2.3.4 Beach/Dune

Beach habitat is the flat, sandy area along the immediate coastline that occurs between mean tide and the foredune, or to the farthest inland reach of storm waves. This habitat is characterized by high exposure to salt spray and sand blast, and sandy substrate with a low organic content and water-holding capacity (Barbour and Major 1977). The lower portions of beaches are unvegetated, while the upper beach can transition to dunes. Dunes are an area of loose to partially stabilized sand that forms near the shore above the high tide line. The plants found in this community can tolerate harsh conditions, such as high winds, salt, and a low nutrient supply. Many of the plants in this community have deep taproots and/or a prostrate growth form to help stabilize them in the loose sand. Dominant native plants within the coastal strand community include beach-bur (*Ambrosia chamissonis*), beach evening-primrose (*Camissonia cheiranthifolia* ssp. *suffruticosa*), sand-verbena (*Abronia maritima, A. umbellata* var. *umbellata),* lotus (*Acmispon heermannii, A. prostratus*), and salt bush (*Atriplex watsonii, A. leucophylla*).

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Section 3
Study Overview

The following section provides an overview of the evaluation process; including data, assumptions, general methods, and analysis. The resiliency analysis of each sea level rise scenario identifies areas open to horizontal expansion of eelgrass and salt marsh habitat as well as development and other barriers that will impede habitat horizontal expansion. This is a predictive analysis scaled to a bay-wide extent using existing regional data and is intended for general planning purposes. Focused management actions would require additional studies to provide site-specific details and greater resolution.

3.1 Data Compilation

It was determined that existing datasets would be used to set baseline extent of habitats and barriers to habitat expansion. The habitat data used in this analysis is consistent with the datasets that have been used in previous District planning documents such as the *Integrated Natural Resource Management Plan for San Diego Bay*. The following datasets were consulted to complete this evaluation (no supplemental data was collected at this time):

- United States Geological Survey (USGS) topobathymetry raster surface was the source of baseline current conditions elevation across the analysis. **Coastal Storm Modeling System (CoSMoS) Raster** elevation data was chosen as the baseline to match other District reports analyzing sea level rise (USGS CoSMoS 2016).
- Habitats were provided by the District as geographic information system (GIS), file geodatabasepolygons with feature classes named **Eelgrass, Salt Marsh, Beach/Dune, and Uplands**. The eelgrass data is from 2017 and other resources are slightly older. The salt marsh polygons are generalized and broken down by elevation using literature from ESA's Pond 20 report (District 2017, data not publicly available).
- **Current Land Use** published by the San Diego Association of Governments (SANDAG) was downloaded via the SanGIS data portal to filter down to developed lands as barriers to habitat expansion (SanGIS2018).
- **Pavement** is District data representing maintained paved areas included in the Barriers to Habitat Expansion layer (District 2017, data not publicly available).
- **Docks & Wharfs** is District data included in development of the Barriers to Habitat Expansion layer (District 2017, data not publicly available).
- **Open Water, San Diego Bay Shoreline** polygon from USGS was used in development of Barriers to Habitat Expansion layer (USGS 2017).

3.2 Assumptions

Prior to conducting the analysis, a series of assumptions were developed as described below. Assumptions were broken into two groups, those that applied to the entire model (i.e., *model-wide*) versus habitat-specific decisions (i.e., *habitat-specific*). These are described below.

3.2.1 Model-Wide Assumptions

The following assumptions apply to the entire model:

- The model is intended for general understanding of how future sea levels may affect nearshore habitats found within District jurisdiction. As the District jurisdiction does not encompass all of San Diego Bay, additional evaluation would be needed to address all habitats within the larger bay limits.
- This is not a hydrodynamic model and is, intended for estimating trends and identifying future analysis and monitoring needs. Additional studies and modeling efforts are required for finer scale interpretation as well as project-level and site-specific analysis.
- There are many Sea Level Rise predictions available. This analysis uses the same sea level rise scenarios utilized in the District's *Sea Level Rise Vulnerability Assessment and Coastal Resiliency Report* (District, in prep). Future sea level rise projections are obtained from the California Ocean Protection Council Sea Level Rise Guidance projections for San Diego Bay and then converted to the nearest available scenario using the USGS CoSMoS model. This includes:
    - Use of the USGS CoSMoS for baseline elevation data; and
    - Evaluation of the following selected scenarios:
        - Year 2030, +25 centimeters (cm)
        - Year 2050, +50 cm;
        - Year 2100 Low Estimate, +75 cm; and
        - Year 2100 High Estimate, +150 cm.
- This analysis did not couple future sea level rise scenarios with a 100-year storm event. Storm event data was determined to be inappropriate for the District level analysis and calculations. Hydrodynamic modeling of project specific locations are recommended if accurate storm event predictions are desired.
- The habitat categories chosen for this analysis were based on past comments from resource agencies and stakeholders, each habitat's capacity to support listed species including regionally significant or rare, the ability to provide high ecological services/functions, and adequate data for evaluation. In addition, each of the habitat categories has a unique relationship to elevation and the corresponding frequency of tidal inundation. Four distinct habitat categories were chosen, including:
    - Uplands
    - Salt Marsh (estuary)
    - Beach/Dune
    - Eelgrass

- The analysis intentionally disregards all other possible environmental variables and assumes the primary driver to habitat persistence is water depth and inundation frequency, and the primary mechanism for habitat persistence is upwards landward migration (i.e., to move to higher elevations horizontally up slope) to keep pace with sea level elevation changes and remain in their preferred habitat range.
- The analysis assumes that existing (2019) land uses and shoreline conditions remain and no management actions are taken to assist in habitat migration.
- Each habitat was assigned a minimum and maximum elevation (referenced to the North American Vertical Datum of 1988) based on the most current habitat mapping data available. This elevation range was then assumed to be the "analysis range" for each habitat relative to current sea level. It can then be used to predict total available acres for each habitat category under the future sea level rise scenarios.
- The elevation range and percent occupancy (cover) for each habitat type is held constant for all sea level rise scenarios and does not account/quantify any changes that may result from other environmental variables that may also change with sea level.
- Landward migration rates differ by habitat due to various environmental conditions as well as the dispersal and/or growth mechanism for the dominant plants of that community (Borchert et al. 2018). This analysis assumes that adequate time would be available under every sea level rise scenario to allow each habitat to move (i.e., we assume that every habitat can keep up with sea level rise if provided the space to do so).
- Due to current land uses in the San Diego Bay watersheds it is assumed that little to no significant accretion (sediment and organic material build up) will occur (Thorne et al. 2018). A recent study measured low accretion rates for San Diego Bay and south San Diego County watersheds, with middle bay Sweetwater River contributing 0.15 cm per year. (Thorne et al. 2018).
- The following tidal datum was used for all analysis in this report. Note that the NOAA datum is displayed as Mean Lower Low Water (MLLW). Any use in the document were converted to NAVD88.

Station ID: 9410170 **PUBLICATION DATE:** 09/20/2017
Name: San Diego, San Diego Bay, CA
NOAA Chart: 18772 **Latitude:** 32° 42.9' N (32.71419)
USGS Quad: Point Loma **Longitude:** 117° 10.4' W (-117.17358)

T I D A L D A T U M S*
LENGTH OF SERIES: 19 YEARS
TIME PERIOD: January 1983 - December 2001
TIDAL EPOCH: 1983-2001

HIGHEST OBSERVED WATER LEVEL (11/25/2015)	= 2.511
MEAN HIGHER HIGH WATER	MHHW = 1.745
MEAN HIGH WATER	MHW = 1.519
MEAN TIDE LEVEL	MTL = 0.902
MEAN SEA LEVEL	MSL = 0.896
MEAN LOW WATER	MLW = 0.285
North American Vertical Datum	NAVD88 = 0.132
MEAN LOWER LOW WATER	MLLW = 0.000
LOWEST OBSERVED WATER LEVEL (12/17/1937)	= -0.942

*Tidal datums at SAN DIEGO, SAN DIEGO BAY based on elevations of tidal datums referred to Mean Lower Low Water (MLLW), in METERS:

3.2.2 Habitat-Specific Assumptions

The following assumptions apply to specific habitats:

- The following elevation ranges (NAVD88) were used for each of the habitats based on existing literature and current San Diego Bay vegetation mapping, details on the methodology to determine the elevation range are included in Section 3.3.
  - Eelgrass: -325 cm to +25 cm
  - Salt Marsh: +25 cm to +350 cm
  - Beach/Dune: > 0 cm
  - Uplands: > 200 cm
- As it is difficult to determine the exact elevation of the interface between beach and mudflats habitats and subtidal habitats, any area below +25 cm is considered subtidal habitat for this analysis, which could include eelgrass and unvegetated areas.

- Uplands were defined as occurring above +200 cm, which corresponds to the low end of upland transitional habitat range calculated for other reference wetlands in southern California including the preliminary design for the Pond 20 restoration project (ESA 2018). Habitat above this elevation is outside the higher high water limit and should not receive tidal inundation although it may still be influenced by subsurface saline conditions.
- For the primary evaluation salt marsh was evaluated as a single habitat type. However, it is important to acknowledge that a series of sub-habitat types can occur ranging from mudflat on the lowest end and high marsh and transitional uplands on the high end. Each of these sub-habitats represents a different inundation band and supports different vegetation and wildlife. High functioning salt marshes support a mix of these sub-habitat types at varying levels of diversity. Additional analysis was completed to look closer at these sub-habitat types to allow for the District to better understand the changes over time. Due to the resolution in the data, caution should be taken when viewing these results for anything other than future data needs and long-term monitoring.

3.3 Determining Existing Habitat Suitability

Key terminology are *italicized* and underlined below with select terms visually depicted in Illustration 2.

Step 1: All available habitat datasets for San Diego Bay were combined to create a District baseline habitat map, as shown on Figure 3.

Step 2: Habitat data that originated as GIS polygons were rasterized and projected to UTM zone 11NAD83 horizontal and NAVD88 vertical datums to match the 1-meter cells of USGS CoSMoS topobathymetric surface. Then the topobathymetric data and each of the habitat rasters were clipped to the District jurisdiction and reclassified into 25 cm classes (*elevation class*) of vertical distribution. The reclassification included 78, 25 cm elevation classes (a range of 1,950 cm) ranging from -475 cm to +1,475 cm NAVD88. The output gives an attribute table with total number of 1-meter raster cells at each elevation and the number of 1-meter cells that are occupied by a specific habitat (*existing habitat or occupied cells*) at each elevation. These 1-meter cells are compiled to calculate aerial extent within any given limits. Note that all calculations were done using square meters and then converted to acres for discussion as this is a common large scale unit of measure for the general public to understand.

Step 3: Habitat rasters and topobathymetric datasets were combined and compared to the map of existing habitats to determine the *maximum vertical distribution range* (low and high elevation) of each habitat under baseline conditions.

Step 4: The maximum vertical distribution range was then compared to the data to determine where the majority of each habitat occurs and to identify outliers. The outliers were removed from the analysis to avoid artificially expanding the suitable range and diluting the ability to detect change under future sea level rise scenarios. These outliers may exist due to differing methods of data collections as well as errors in the dataset and mapping. The lower and upper 1% of the data for eelgrass and salt marsh habitat was removed and the analysis focused on the remaining 98% of the data and the corresponding range. Removal of the lower and upper 1% range accounts for possible errors in the data that over estimates its extent, which may result in an inaccurate portrayal

of the elevation where the habitat is found. This refined 98% range is referred to as the *analysis range* and was used in all future steps.

Step 5: Once the analysis range was finalized for each habitat type, the *total available area* for each habitat type was calculated for the analysis range as well as for each 25 cm elevation class within any given analysis range. In addition, the *absolute occupancy* of each habitat within their corresponding analysis range was calculated by dividing the existing habitat by the total available area. Furthermore, *relative occupancy* within each 25 cm elevation class was calculated by dividing occupied cells in each 25 cm elevation class by the total number of occupied cells in the analysis range.

This information was used to determine baseline cover for each habitat, including absolute percent cover across District lands and the relative distribution of each habitat within the elevation classes. As stated in the assumptions, it is assumed that these cover values remain consistent across all sea level rise scenarios.

Step 6: The relative occupancy was used to define a *preferred range* (i.e. the range where the majority of mapped habitat occurs) for each habitat type as follows:

- ***Eelgrass and salt marsh—*** habitat communities have a strong relationship to environmental variables tied to sea level, inundation frequency, and other corresponding environmental variables such as light, temperature, and sediment. This often results in changes in density, cover, and species types at the extreme ends of their ranges. As such, the preferred range is the elevation increment(s) where the largest percentage of mapped habitat occurs. Each 25 cm elevation increment that supported 10% or more of the total mapped habitat contributed to the preferred range.
- ***Beaches and dunes*** are not an actual vegetation community but rather a topographic feature driven by wind and sediment processes as well as tidal action that may or may not support vegetation. As such, no preferred range was identified. Any responses to sea level rise from these communities such as migration upslope would require functional wind and sediment processes, which are severely altered in San Diego Bay. In addition, these habitats are severely constrained by existing land uses on the upper edge. Due to land use constraints and the lack of adequate physical processes, it is assumed that the potential for these two habitats to migrate is limited to non-existent. Therefore, the upper edge of the current elevation distribution is considered to remain static in all sea level rise scenarios while the lower edge of the distribution would be affected.
- ***Upland*** habitats have the potential to occur across all available areas above tidal influence. Any variances in the current vertical distribution and associated upland cover is likely the result of other variables—including slope, soil, freshwater availability, and disturbance—as well as other variables not associated with sea level. As such upland is not considered to have a preferred range.
- Figure 3. Baseline Mapped Habitat, Current Conditions

Figure 3
Baseline Mapped Habitat
Current Conditions

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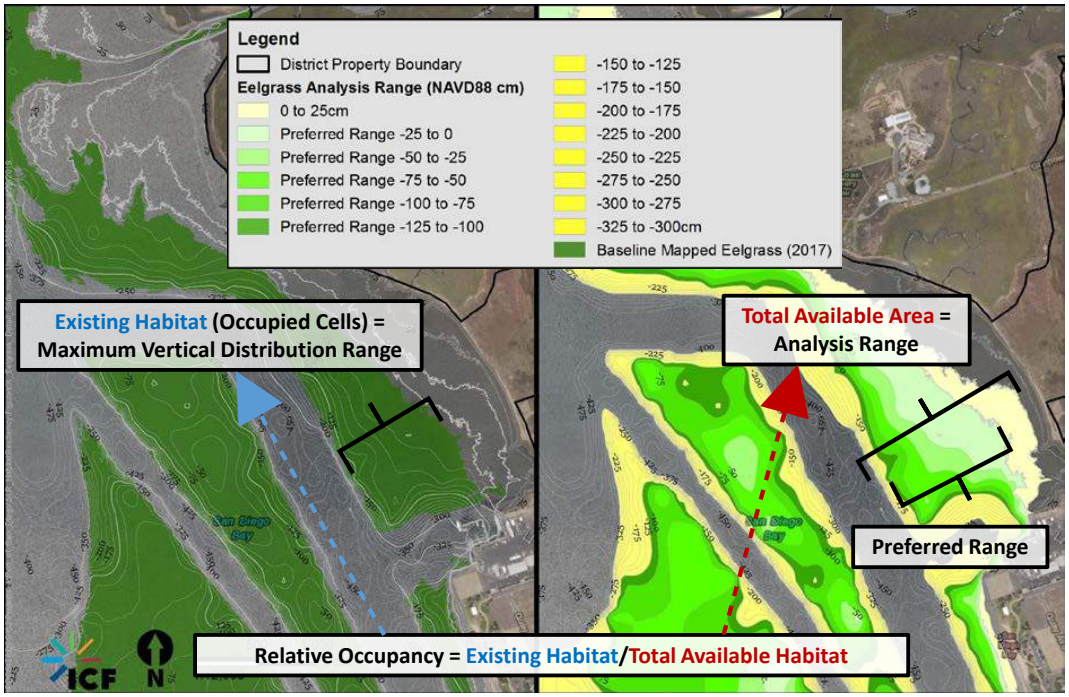
Illustration 2. Depiction of Select Key Terminology Used in Section 3.3



3.4 Predicting Future Conditions

Each habitat category was evaluated against each of the four sea level rise scenarios to understand how the total available area, absolute occupancy (total vegetated area), and relative occupancy (overall distribution) may change. The analysis range was applied to each scenario to calculate the total available area and preferred range of each habitat using current absolute and relative occupancy across total available area within District jurisdiction. Tables including these numbers are included in the appendix.

Step 1: A habitat barrier map was compiled identifying any area currently supporting development that would preclude or inhibit habitat from growing. The barriers data was created using a combination of existing data layers as well as a few manual edits. The habitat barrier map can be used, modified, or built upon for future sea level rise monitoring and planning efforts.

- SANDAG's Land Use data was initially filtered to remove all lands suitable to support habitat including *Water, Undevelopable Natural Area, Vacant and Undeveloped Land, Open Space Park or Preserve, Other Recreation – Low, Other Recreation – High, Landscape Open Space, Beach – Passive, Beach – Active, Bay or Lagoon,* and *Extractive Industry (SanGIS 2018)*. During this process a few errors were noted and corrected to the extent possible, including natural and developed lands not included or incorrectly identified.
    - Some natural areas were erroneously included in the land use filter, and some developed areas were not included.

- Other data layers were added to improve the accuracy of barriers layer, including:
  - A high-resolution shoreline polygon from USGS was incorporated to remove the open water out of the marinas as it was included in the barriers data. The existing land use data grouped both the land side and water side for each marina as developed; however, eelgrass is known to occur in many of the marinas within San Diego Bay. This same exercise removed the Coronado Bridge right-of-way (ROW) as a barrier to habitat as softbottom areas occur under the ROW.
  - Pavement extent data provided by the District was added as a barrier to habitat expansion.
  - The docks and wharfs data provided by the District was used to add major industrial wharfs as additional barriers to expansion, although narrow floating docks and small marinas were not included as barriers to habitat.
  - Select manual edits were also applied to improve the barrier layer, including filling in a paved parking area on Grand Caribe in the Coronado Cays, part of the San Diego International Airport, as well as parts of the National City Marine Terminal. These manual changes were based on input from District staff and on the team's site understanding.

Step 2: To calculate the areas suitable to support habitat (any type) the final barriers GIS layer was extracted from the District jurisdiction lands yielding a raster with only suitable areas. As with the baseline analysis a table of 1-meter cell counts available (total available area) for habitat within each of the same 25 cm elevation classes was generated. During this process it was discovered that the USGS CoSMoS topobathymetry data appears to have areas with scarce bathymetry data and as a result force an average slope up to known terrestrial elevations. For example, it was noted that a slope was artificially added to the data on the water side of a deep bulkhead in the National City Marine Terminal where habitat suitable elevations do not presently exist. This area was manually corrected and other data errors along the terrestrial/bathymetric data interface persist as a known issue with this dataset. It is recommended that future studies create a better topobathymetric surface specifically for San Diego Bay.

Step 3: Once the GIS mapping exercise of barriers and suitable areas for habitat was complete, increments of 25 cm of sea level were added to the original elevation increments to achieve each of the various sea level rise scenarios (i.e., 25 cm, 50 cm, 75 cm, and 150 cm). As the elevation range suitable for each habitat is always relevant to sea level and topography is considered constant, a new map of suitable areas for each habitat based on their analysis range was generated. From this map, total available area was calculated as well as a new total acreage of habitat assuming the relative occupancy for each elevation class remains constant.

Section 4
Results

4.1 Baseline Conditions

The following provides a summary of the baseline conditions used for this analysis including baseline acres from existing habitat maps, total available area (acres) for each habitat within the analysis range and a calculated percent occupancy for each habitat.

Table 4-1. Summary of Mapped Habitat, Mapped Elevation Range, and Modeled Suitable Habitat

Habitat Type	Baseline Habitat Mapped (acres)	Analysis Range (cm, 98% Elevation Ran)* Low	Analysis Range (cm, 98% Elevation Ran)* High	Total Available Area (acres)	% Occupied (Absolute Occupancy)
Eelgrass	915.0	-325	+25	1,717.7	53%
Salt Marsh	81.1	+25	+350	531.6	15%
Beach/Dune**	13.5	0	+500***	NA**	NA**
Uplands	97.0	+200	+850***	425.9	23%

*NAVD88 cm

** Beach/dune habitat is assumed to exist where those historical habitats occurred prior to development and have been allowed to remain. As both are driven by sediment and wind processes, they are considered static with no additional areas available.

*** Maximum value mapped for those habitats.

4.1.1 Eelgrass

According to 2017 mapping, 98% of the eelgrass within District jurisdiction was found from -325 cm to 25 cm NAVD88. The preferred range (highest density) includes 78% of the population and ranges from -125 to 0 cm. Current conditions suitable for eelgrass habitat is shown on Figure 4a. The purpose of the exhibit is to display all areas within the District that have the potential to support eelgrass, falling within the existing range of mapped eelgrass. In addition, Figure 4a shows the area identified as preferred habitat based on the elevation range where the highest density of eelgrass occurs. Out of the 1,717 acres of total district waters at this elevation, currently 53% (915 acres) of the area is occupied. The remaining 47% of the available area that is unoccupied is a result of a wide variety of environmental variables not evaluated in this document, many of which may be site specific. These variables could include temperature, light, salinity, sediment, water quality in addition to land use and disturbances.

Table 4-2. Eelgrass Habitat Analysis Elevation Range and Preferred Elevation Range

Analysis Range (98% Elevation Range)	-325 cm to +25 cm
Baseline Acres	915 acres
Preferred Range	-125 cm to 0 cm
Acreage within Preferred	715 acres

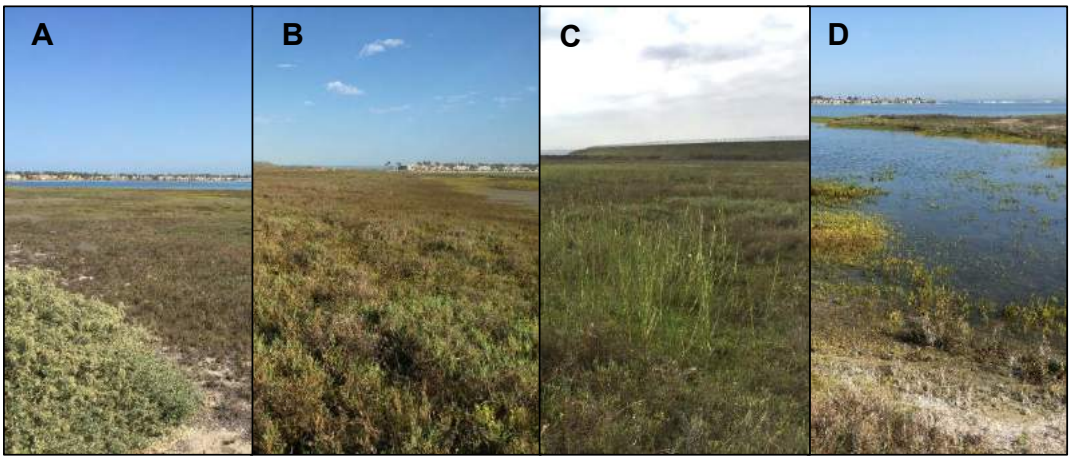
Photo showing eelgrass in San Diego Bay and a juvenile fish. Note the bare ground and spare tall shoots typical of deeper areas within the analysis range. Photo credit, Marine Taxonomic Services.

4.1.2 Salt Marsh

Based on existing salt marsh mapping 98% of this habitat type occurs from 25 cm to 350 cm NAVD88; with more than 75% of salt marsh currently occurring between a more narrow band (the preferred range) of 100 cm and 200 cm. Figure 4b displays the total area within the District that is suitable for salt marsh as well as the area that falls within the preferred range. Of the area that has the potential to support salt marsh, currently only 15 percent (81 acres) is occupied. The remaining areas may be unoccupied for a variety of reasons including environmental variables as well as land use differences and possible disturbances. This analysis was not designed to explain the drivers behind unoccupied areas.

Table 4-3. Salt Marsh Eelgrass Habitat Analysis Elevation Range and Preferred Elevation Range

Analysis Range (98% Elevation Range)	+25 cm to +350 cm
Baseline Acres	81 acres
Preferred Range	+100 cm to +200 cm
Acreage within Preferred	60 acres



Photos of Salt Marsh Complex in San Diego Bay, Emory Cove. Each photo shows a different subhabitat along elevation and tidal inundation gradients, note changing vegetation**. A.** Upland to high marsh transition, **B.** High Marsh to Mid Marsh, **C.** Mid Marsh to Low Marsh, and **D.** Low Marsh to Mudflat and Subtidal.

4.1.3 Uplands

Overall topography in the District is limited with subtidal areas reaching -13.5 meters in depth near the shipyards just north of the Coronado Bridge and the highest elevation of habitat mapped within the District at +9.75 meters. This coupled with the high intensity of land uses and developed land surrounding San Diego Bay trap upland habitats between rising sea levels and the development of a busy port district. According to baseline mapping, uplands currently occupy 22.8% of 97 acres of available area. Uplands can be found at any elevation above 200 cm and do not have a preferred elevation range as the only limit is the lower limit and sea level interaction. Figure 4c displays the current suitable areas for uplands, based on any available area above 200 cm without permanent development.

4.1.4 Beach and Dunes

Beaches and dunes are not expected to regenerate or migrate with sea level rise as the natural processes of sediment and wind are substantially manipulated. This analysis assumes beaches and dunes currently occur in the areas where they can be supported. The currently mapped beach and dune habitat is shown on Figure 3, totaling 13.5 acres ranging from 125 cm to 500 cm.

Photo showing Tidelands Park with Coronado Bridge in the background, riprap in the foreground, and a recreational park at the back.

Figure 4a
Mapped Suitable Areas for Eelgrass
Current Conditions

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Figure 4b
Mapped Suitable Areas for Salt Marsh
Current Conditions

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Figure 4c
Mapped Suitable Areas for Uplands
Current Conditions

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4.2 Future Conditions, Sea Level Rise Scenarios

The following table provides an overview of the available area (in acres) for each habitat type under each of the four sea level rise scenarios based on the analysis range. In addition, the acres of predicted occupied habitat are shown for each habitat based on the baseline absolute and relative occupancy rates. Overall the terrestrial habitats (salt marsh, beach/dune, and upland) decline with increasing sea level rise scenarios. The decreasing trend is consistent with existing research but likely underestimates the decline due to a variety of assumptions required for this analysis, in particular assuming there is adequate time for habitat to respond in advance of rising seas. The subtidal habitat (eelgrass) has a unique trend, with increasing acreage in the moderate sea level rise scenarios but a sharp decline in the 2100 High scenario. The 2100 High eelgrass trend is driven by a reduction in available area coupled with a larger reduction in the preferred range, with more of the available habitat occurring in the deeper range where occupancy rates are lower. The trends for each habitat are discussed further below.

Table 4-4. Existing and Predicted Acreage Available for Each Habitat Type and Percent Occupied

	Baseline* No Sea Level Rise		Sea Level Rise Scenarios** Year 2030 +25 cm		Sea Level Rise Scenarios** Year 2050 +50 cm		Sea Level Rise Scenarios** Year 2100 Low +75 cm		Sea Level Rise Scenarios** Year 2100 High +150 cm	
Habitat Type	**Available**	**Occupied**	**Available**	**Occupied**	**Available**	**Occupied**	**Available**	**Occupied**	**Available**	**Occupied**
Eelgrass	1,718	915	1,752.7	982.8	1,762.3	1,016.3	1,747.5	979.4	1,621.5	668.2
Salt Marsh	532	81	472.6	75.9	432.7	74.4	415.1	75.2	370.5	78.3
Beach/ Dune***	13	-	-	12.7	-	11.6	-	10.7	-	8.6
Uplands	426	97	394.5	90.1	360.0	82.2	322.1	73.4	222.6	50.8

* Baseline values are based on the current vegetation map and elevation data.
** All sea level rise scenarios acreages are predictions based on the mapped baseline conditions and the resulting elevation ranges and mapped percent occupancy.
*** Beach/dune habitats are driven primarily by sediment and wind processes, they are considered static with no additional areas available.

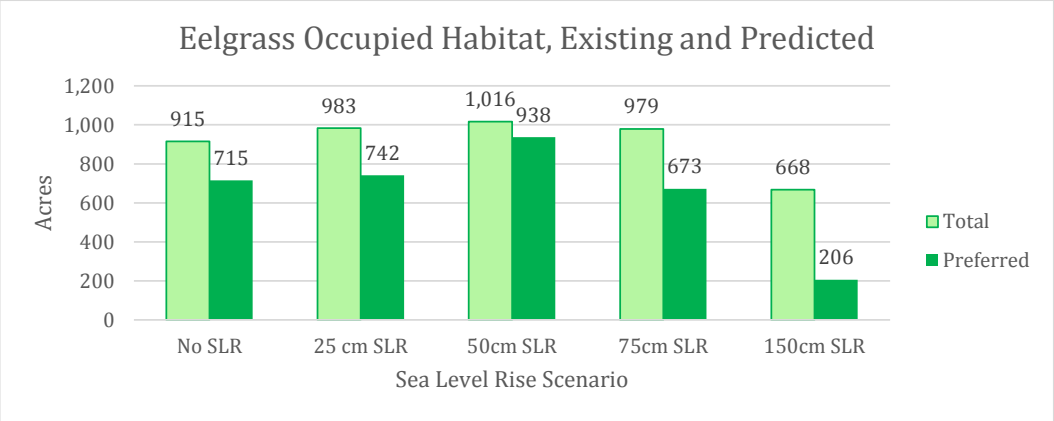
4.2.1 Eelgrass

Based on existing eelgrass mapping this habitat type occurs from -325 to +25 cm NAVD88; with 78% of current mapping occurring between -125 and 0 cm, i.e. the preferred range. Figure 4a displays the current suitable habitat and the elevation for eelgrass throughout the District. The graph below summarizes current and predicted eelgrass habitat under future sea level rise scenarios. As seen in Graph 1, the overall availability for eelgrass increases for the first three sea level rise scenarios as a result of increased acres of area within the preferred range (-125 cm to 0 cm) where eelgrass relative cover is higher. However, the availability for eelgrass takes a sharp

decline (27 percent decrease) in the Year 2100 High scenario that assumes +150 cm. Figure 5a shows predicted suitable habitat for the Year 2100 High Scenario, after +150 cm sea level rise. The sharp decline in availability for eelgrass occurs as the slopes increase and a larger percentage of the suitable habitat occurs deeper than the preferred range where eelgrass occurs at much lower densities.

A similar trend is observed when looking closer at the preferred elevation range, with eelgrass habitat increasing 31% in the 50 cm SLR scenario. However, the preferred area begins a declining trend in both 2100 scenarios with a 6% decline in the +75 scenario and a 73% decline in the +150 scenario. Under 2100 High scenario, 73% of the current eelgrass populations will be deeper than the preferred elevation range. Unlike other habitats, eelgrass is a single species habitat that responds to changing environmental conditions with varying densities and heights. The loss of the preferred range in the 2100 scenarios has implications on habitat structure and corresponding functions, as eelgrass structure changes along an elevation gradient. At the deeper end of the range eelgrass is often sparse and tall while at the shallow end of the range eelgrass is often very dense and short.

Graph 1. Eelgrass Occupied Habitat in District, Existing and Predicted



4.2.2 Salt Marsh Complex

Based on existing salt marsh mapping this habitat type occurs from +25 cm to +350 cm NAVD88; with 75% of current mapping occurring between 100 cm and 200 cm. Figure 4b displays the current suitable habitat and the elevation for salt marsh throughout the District. Figure 5b shows predicted suitable habitat for the Year 2100 High Scenario, after +150 cm sea level rise. The chart below summarizes current and predicted salt marsh habitat under future sea level rise scenarios. As seen in Graph 2, there is an overall reduction in total occupied habitat for all for scenarios, with a loss of 7 to 3 acres relative to the existing 81 acres of mapped salt marsh. When looking closer at the preferred range, which was determined to be between +100 and +200 cm, it appears that acreage decreases slightly with the first three scenarios but increases slightly under the 2100 High scenario, with 2 additional acres in the preferred range. For all scenarios, it appears there is space for existing salt marsh habitat to occupy if lateral migration occurs. Many of these areas are currently being occupied by upland habitats. Understanding the current conditions of the new salt marsh areas including existing habitats, soils, compaction, sensitive species management and other

environmental variables, would help to understand the likelihood of habitat migrating and whether additional management actions would be required. Under each sea level rise scenario salt marsh habitat would move upslope into existing upland areas, while the lower range of salt marsh would be encroached upon by eelgrass.

It is important to remember that unlike eelgrass (a monoculture), salt marsh habitat is comprised of multiple sub-habitat types ranging from mudflat at the lowest elevation, to low marsh, mid marsh, high marsh, and transitional uplands as the high end. As these sub-habitats align themselves along an inundation gradient, an additional analysis looking the preferred elevation range of the complex may in fact hide some of the story. For example an analysis of the preferred range of the salt marsh complex may overemphasize the "center" (high and mid marsh) and not a good mix of salt marsh sub-habitats. In order to look closer at this trend, an analysis of the sub-habitats was completed.

Graph 2. Salt Marsh Occupied Habitat in District, Existing and Predicted

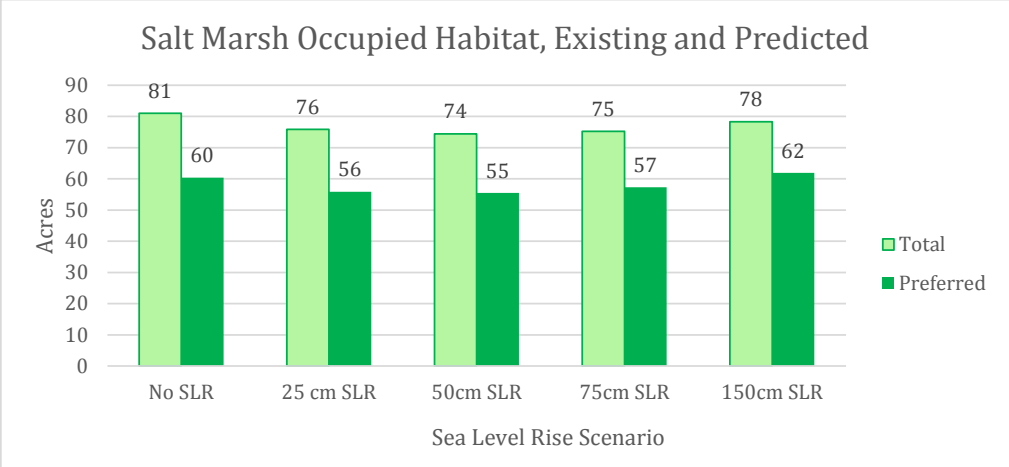


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Figure 5a
Potentially Suitable Areas for Eelgrass
Year 2100 High Scenario, +150cm

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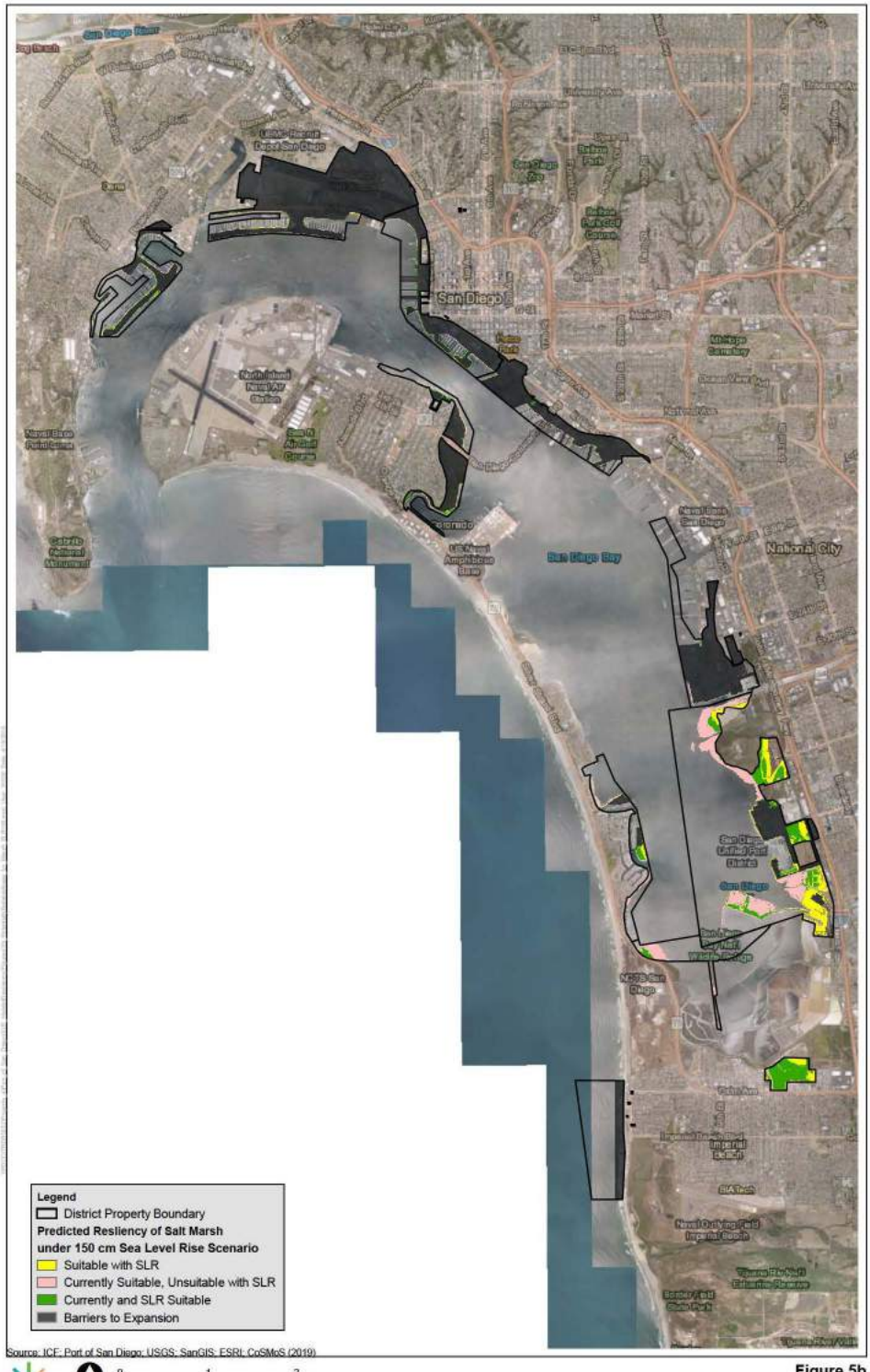

Figure 5b
Potentially Suitable Areas for Salt Marsh
Year 2100 High Scenario, +150cm

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Figure 5c
Potentially Suitable Areas for Uplands
Year 2100 High Scenario, +150cm

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Figure 5d
Potentially Suitable Areas for Beach and Dune
Year 2100 High Scenario, +150cm

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Salt Marsh Sub-Habitats Analysis

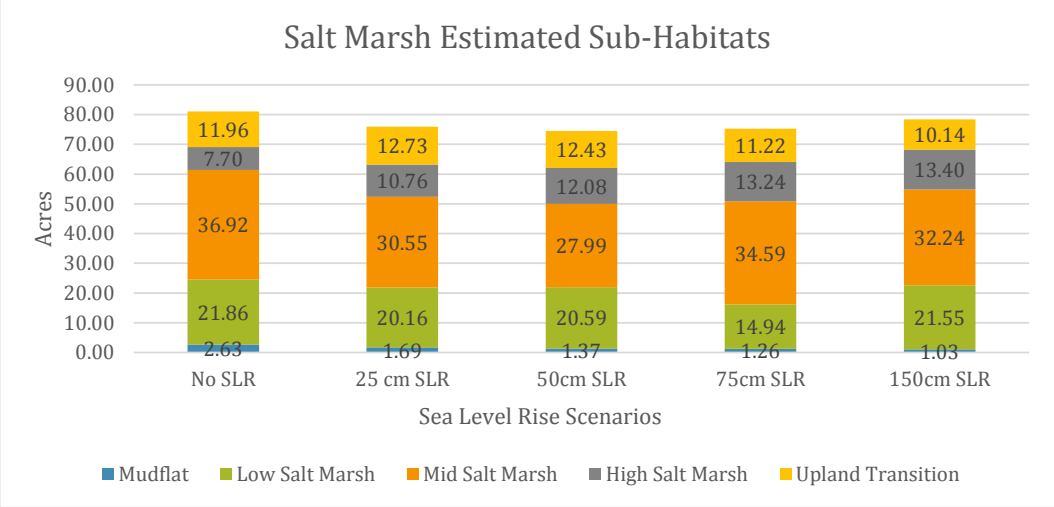
As stated above and further illustrated in Table 5, salt marsh can be divided into 5 sub-habitats including mudflat, low coastal salt marsh, mid coastal salt marsh, high coastal salt marsh, and upland transition. Elevations for the salt marsh components were defined using existing elevation information in San Diego Bay, no vegetation mapping to this resolution was available. The unique elevation bands for each salt marsh sub-habitat is being applied to the existing salt marsh complex mapping (ESA 2017 and NAVFAC 2013). As no formal mapping or field verification of these sub-habitats has been completed, this analysis should be used for conversation purposes and to advise future monitoring and data needs.

Table 4-5. Salt Marsh Habitats, Elevation Range, Associated Floral Species

Target Habitat	Elevation NAVD88 (cm)	Associated Floral Species
Subtidal (unvegetated)	Below -325	unvegetated
Subtidal (eelgrass)	+325 to +25	eelgrass (*Zostera marina*) or non-vegetated
Mudflat	+25 to +125	non-vegetated
Low Coastal Salt Marsh	+88 to +125	California cordgrass (*Spartina foliosa*) or non-vegetated
Mid Coastal Salt Marsh	+125 to +175	dwarf saltwort (*Salicornia bigelovii*), Pacific swampfire (*Salicornia virginica*), *Jaumea carnosa, Batis maritime,* Parish's glasswort (*Arthrocnemum subterminale*)
High Coastal Salt Marsh	+175 to +200	*Salicornia virginica,* Parish's glasswort (*Arthrocnemum subterminale), Monanthochloe littoralis, Distichlis spicata, Frankenia salina, Limonium californicum, Suaeda taxifolia*
Upland Transition	above +200 AND immediately adjacent to salt marsh and tidal exchange	California buckwheat (*Eriogonum fasciculatum*), wild rye *(Leymus condensatus* and *L. triticoides*), western ragweed (*Ambrosia psilostachya*), California poppy (*Eschscholzia californica*), purple needlegrass (*Nasella pulchra*), coast goldenbush (*Isocoma menziesii*), black sage (*Salvia mellifera*), coyote brush (*Baccharis pilularus*), bladderpod (*Cleome isomeris*), coast sunflower (*Encelia californica*), deerweed (*Lotus scoparius*), arrow weed (*Pluchea sericea*)

Graph 3 depicts the overall mix of sub-habitats and any changes in the diversity of those sub-habitats by sea level rise scenario. Each of the salt marsh sub-habitats are estimated from the existing habitat, predicted habitat, and topography ranges as described above. In all cases mudflat is the lowest relative cover representing less than 2 percent of the total salt marsh habitat with the most significant drop occurring in the +150 cm scenario. Mid marsh habitat consistently makes up the largest percentage of each scenario ranging from 28 percent to 37 percent. Low marsh is the second largest group, representing 20 percent of each scenario other than in the +75 scenario where there is a decline of 15 percent. Low marsh is often considered a regionally significant habitat, further emphasizing the need to map this habitat properly.

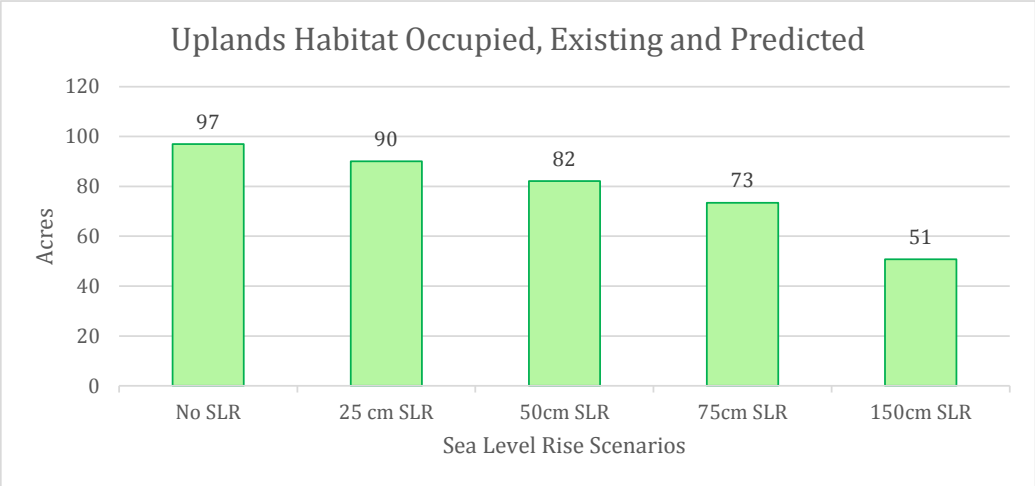
Graph 3. Salt Marsh Estimated Sub-Habitats in District



4.2.3 Uplands

Upland habitats within the District are bound by the rising ocean on the low end and urban development on the high end in addition to occupying area that may be used by retreating salt marsh habitat. As shown in the graph below, with limited space to migrate this habitat could potentially lose nearly a third of its footprint after 150 cm of sea level rise. According to baseline mapping, uplands currently occupies 22.8% of available area, and that same rate was applied to available area after each sea level rise increment was calculated. As a result, upland habitat area declines roughly 47 percent by the end of the century under the +150 cm scenario. Figure 4c displays the current suitable areas for uplands, based on any available area above 200 cm without permanent development. Figure 5c shows predicted suitability of the same area after 150 cm sea level rise.

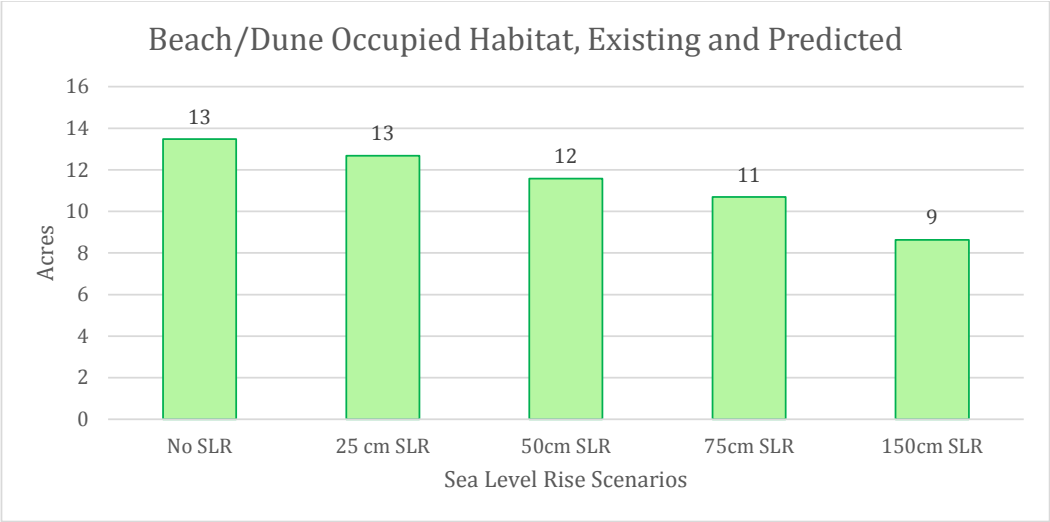
Graph 4. Uplands Occupied Habitat in District, Existing and Predicted



4.2.4 Beach and Dunes

Beaches and dunes are not expected to regenerate or migrate with sea level rise as the natural processes of sediment and wind are substantially manipulated. This analysis assumes beaches and dunes currently occur in the areas where they can be supported. Beaches and dunes are not expected to regenerate or migrate with sea level rise. This analysis predicts that beach and dune will be lost to inundation from the current 13 acres to potentially around 9 acres. Current conditions and predicted loss are displayed on Figure 4d, which includes a detailed image of Coronado, as a typical example of the small beaches scattered around the District jurisdiction.

Graph 5. Beach/Dune Occupied Habitat in District Acres, Existing and Predicted



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Section 5
Recommendations

The purpose of this evaluation was to compile mapping of nearshore habitats and evaluate their resiliency to sea level rise pursuant to AB 691 on behalf of the District using 4 selected scenarios: 2030 (25 cm), 2050 (50cm), 2100 (75 cm), and 2100 (150 cm). This work is intended to help the District to analyze a range of potential changes to the habitat of San Diego Bay, and to develop effective adaptive management strategies to maintain the maximum practicable diversity in habitat capable of supporting species and other habitat services. Please be aware that this is a predictive analysis scaled to a bay-wide extent using existing regional data and is intended for general planning purposes. In addition, it is important to remember that sea level rise predictions contain an inherent amount of error in addition to the datasets used to complete this evaluation. The following recommendations are put forward for consideration in future planning and evaluation exercises.

5.1.1 Recommendations

- Implement policies and plan for ecosystem-based engineering solutions for shorelines and wetland restoration and enhancement.
- Consider nature-based solutions where hard infrastructure and steep natural topography limit migration.
- Dredge sediments to be used to increase wetland elevations to outpace SLR.
- Continue partnerships and collaboration with key agencies and stakeholders to monitor the health of habitats and ecosystems in and around San Diego Bay.

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Section 6
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Appendix A

Data Summary Tables

Table 1. Data summary of each elevation class, total area (square meters and acres) of habitat suitability, and acres of occupied habitat.

Class*	Elevation Range (NAVD88 cm) Low	Elevation Range (NAVD88 cm) High	Habitat Suitability Within District Sq. Meters	Habitat Suitability Within District Acres	Occupied Habitat in District (acres)** Eelgrass	Occupied Habitat in District (acres)** Salt Marsh	Occupied Habitat in District (acres)** Beach/Dune	Occupied Habitat in District (acres)** Uplands
1	-475	-450	257465	63.6	0.08	-	-	-
2	-450	-425	220175	54.4	0.15	-	-	-
3	-425	-400	235568	58.2	0.57	-	-	-
4	-400	-375	282425	69.8	4.62	-	-	-
5	-375	-350	253158	62.6	3.26	-	-	-
6	-350	-325	241148	59.6	3.85	-	-	-
7	-325	-300	251207	62.1	5.13	-	-	-
8	-300	-275	213665	52.8	6.08	-	-	-
9	-275	-250	221134	54.6	7.70	-	-	-
10	-250	-225	241431	59.7	10.29	-	-	0.03
11	-225	-200	337231	83.3	18.27	-	-	5.91
12	-200	-175	364168	90.0	36.62	-	-	1.53
13	-175	-150	314712	77.8	43.84	-	0.00	1.02
14	-150	-125	383402	94.7	63.40	-	0.00	0.77
15	-125	-100	577704	142.8	113.70	-	0.02	0.69
16	-100	-75	646122	159.7	133.83	-	0.06	0.66
17	-75	-50	571738	141.3	118.02	-	0.13	0.62
18	-50	-25	1100250	271.9	179.75	-	0.20	0.60
19	-25	0	1260418	311.5	169.55	0.04	0.36	1.24
20	0	25	468218	115.7	8.86	0.44	0.80	1.66
21	25	50	392925	97.1	1.49	1.04	1.10	1.63
22	50	75	252128	62.3	0.49	1.60	0.88	1.98
23	75	100	161533	39.9	0.32	6.06	0.87	2.41
24	100	125	149267	36.9	0.16	15.79	0.59	2.36

Class*	Elevation Range (NAVD88 cm) Low	Elevation Range (NAVD88 cm) High	Habitat Suitability Within District Sq. Meters	Habitat Suitability Within District Acres	Occupied Habitat in District (acres)** Eelgrass	Occupied Habitat in District (acres)** Salt Marsh	Occupied Habitat in District (acres)** Beach/Dune	Occupied Habitat in District (acres)** Uplands
25	125	150	137595	34.0	0.06	17.69	0.60	3.23
26	150	175	145814	36.0	0.01	19.22	0.77	2.49
27	175	200	89498	22.1	0.01	7.70	0.95	3.56
28	200	225	124979	30.9	0.00	4.33	1.68	7.74
29	225	250	140404	34.7	-	2.94	1.22	7.86
30	250	275	153840	38.0	-	1.69	1.32	5.87
31	275	300	131168	32.4	-	1.00	1.16	6.40
32	300	325	116591	28.8	-	0.97	0.75	6.97
33	325	350	155670	38.5	-	1.03	0.66	10.87
34	350	375	154038	38.1	-	0.42	0.11	11.11
35	375	400	90550	22.4	-	0.22	0.02	10.37
36	400	425	90258	22.3	-	0.03	0.03	6.46
37	425	450	105943	26.2	-	0.03	0.01	4.27
38	450	475	80465	19.9	-	0.03	0.03	3.78
39	475	500	65846	16.3	-	0.03	0.00	2.04
40	500	525	49996	12.4	-	0.02	-	0.93
41	525	550	39166	9.7	-	0.01	-	1.39
42	550	575	33302	8.2	-	0.01	-	1.80
43	575	600	31360	7.7	-	0.01	-	2.38
44	600	625	32836	8.1	-	0.01	-	2.21
45	625	650	29212	7.2	-	0.01	-	1.74
46	650	675	21590	5.3	-	0.01	-	0.75
47	675	700	20244	5.0	-	0.00	-	0.54
48	700	725	16050	4.0	-	0.00	-	0.46
49	725	750	10711	2.6	-	-	-	0.36
50	750	775	10969	2.7	-	-	-	0.63

Class*	Elevation Range (NAVD88 cm) Low	Elevation Range (NAVD88 cm) High	Habitat Suitability Within District Sq. Meters	Habitat Suitability Within District Acres	Occupied Habitat in District (acres)** Eelgrass	Occupied Habitat in District (acres)** Salt Marsh	Occupied Habitat in District (acres)** Beach/Dune	Occupied Habitat in District (acres)** Uplands
51	775	800	8173	2.0	-	-	-	0.01
52	800	825	4736	1.2	-	-	-	0.01
53	825	850	2170	0.5	-	-	-	0.00
54	850	875	1006	0.2	-	-	-	-
55	875	900	874	0.2	-	-	-	-
56	900	925	720	0.2	-	-	-	-
57	925	950	472	0.1	-	-	-	-
58	950	975	221	0.1	-	-	-	-
59	975	1000	4	0.0	-	-	-	-
60	1000	1025	-	-	-	-	-	-
61	1025	1050	-	-	-	-	-	-
62	1050	1075	-	-	-	-	-	-
63	1075	1100	-	-	-	-	-	-
64	1100	1125	-	-	-	-	-	-
65	1125	1150	-	-	-	-	-	-
66	1150	1175	-	-	-	-	-	-
67	1175	1200	-	-	-	-	-	-
68	1200	1225	-	-	-	-	-	-
69	1225	1250	-	-	-	-	-	-
70	1250	1275	-	-	-	-	-	-
71	1275	1300	-	-	-	-	-	-
72	1300	1325	-	-	-	-	-	-
73	1325	1350	-	-	-	-	-	-
74	1350	1375	-	-	-	-	-	-
75	1375	1400	-	-	-	-	-	-
76	1400	1425	-	-	-	-	-	-

Class*	Elevation Range (NAVD88 cm) Low	Elevation Range (NAVD88 cm) High	Habitat Suitability Within District Sq. Meters	Habitat Suitability Within District Acres	Occupied Habitat in District (acres)** Eelgrass	Occupied Habitat in District (acres)** Salt Marsh	Occupied Habitat in District (acres)** Beach/Dune	Occupied Habitat in District (acres)** Uplands
77	1425	1450	-	-	-	-	-	-
78	1450	1475	-	-	-	-	-	-

* Value in this table represents the GIS code for a 25cm elevation range of CoSMoS elevation data in NAVD88

** The counts in this table represent 1sq m cells of occupied habitat

Table 2. Summary of data used for eelgrass habitat evaluation for each SLR scenario.

Class*	Elevation Range (NAVD88 cm) Low	Elevation Range (NAVD88 cm) High	Habitat Suitable Jurisdiction (acres)	Eelgrass in District (acres)	% Occupied**	Relative %	Comments
Baseline Current Conditions							
1	-475	-450	-	-	-	-	Outside Analysis Range
2	-450	-425	-	-	-	-	Outside Analysis Range
3	-425	-400	-	-	-	-	Outside Analysis Range
4	-400	-375	-	-	-	-	Outside Analysis Range
5	-375	-350	-	-	-	-	Outside Analysis Range
6	-350	-325	-	-	-	-	Outside Analysis Range
7	-325	-300	62.1	5.1	8%	1%	Analysis Range, including 98% of current habitat
8	-300	-275	52.8	6.1	12%	1%	Analysis Range, including 98% of current habitat
9	-275	-250	54.6	7.7	14%	1%	Analysis Range, including 98% of current habitat
10	-250	-225	59.7	10.3	17%	1%	Analysis Range, including 98% of current habitat
11	-225	-200	83.3	18.3	22%	2%	Analysis Range, including 98% of current habitat
12	-200	-175	90.0	36.6	41%	4%	Analysis Range, including 98% of current habitat
13	-175	-150	77.8	43.8	56%	5%	Analysis Range, including 98% of current habitat
14	-150	-125	94.7	63.4	67%	7%	Analysis Range, including 98% of current habitat
15	-125	-100	142.8	113.7	80%	12%	Preferred elevation range of habitat
16	-100	-75	159.7	133.8	84%	15%	Preferred elevation range of habitat
17	-75	-50	141.3	118.0	84%	13%	Preferred elevation range of habitat

Class*	Elevation Range (NAVD88 cm) Low	Elevation Range (NAVD88 cm) High	Habitat Suitable Jurisdiction (acres)	Eelgrass in District (acres)	% Occupied**	Relative %	Comments
18	-50	-25	271.9	179.8	66%	20%	Preferred elevation range of habitat
19	-25	0	311.5	169.6	54%	19%	Preferred elevation range of habitat
20	0	25	115.7	8.9	8%	1%	
21	25	50	97.1	-	-	-	Outside Analysis Range
22	50	75	62.3	-	-	-	Outside Analysis Range
23	75	100	39.9	-	-	-	Outside Analysis Range
24	100	125	36.9	-	-	-	Outside Analysis Range
25	125	150	34.0	-	-	-	Outside Analysis Range
26	150	175	36.0	-	-	-	Outside Analysis Range
27	175	200	22.1	-	-	-	Outside Analysis Range
28	200	225	30.9	-	-	-	Outside Analysis Range
2030 SLR Scenario (+25 cm)							
1	-500	-475	-	-	-	-	Outside Analysis Range
2	-475	-450	-	-	-	-	Outside Analysis Range
3	-450	-425	-	-	-	-	Outside Analysis Range
4	-425	-400	-	-	-	-	Outside Analysis Range
5	-400	-375	-	-	-	-	Outside Analysis Range
6	-375	-350	-	-	-	-	Outside Analysis Range
7	-350	-325	62.1	-	-	-	Outside Analysis Range
8	-325	-300	52.8	4.4	8%	0%	Analysis Range, including 98% of current habitat
9	-300	-275	54.6	6.3	12%	1%	Analysis Range, including 98% of current habitat
10	-275	-250	59.7	8.4	14%	1%	Analysis Range, including 98% of current habitat
11	-250	-225	83.3	14.4	17%	1%	Analysis Range, including 98% of current habitat

Class*	Elevation Range (NAVD88 cm) Low	Elevation Range (NAVD88 cm) High	Habitat Suitable Jurisdiction (acres)	Eelgrass in District (acres)	% Occupied**	Relative %	Comments
12	-225	-200	90.0	19.7	22%	2%	Analysis Range, including 98% of current habitat
13	-200	-175	77.8	31.6	41%	3%	Analysis Range, including 98% of current habitat
14	-175	-150	94.7	53.4	56%	5%	Analysis Range, including 98% of current habitat
15	-150	-125	142.8	95.5	67%	10%	Analysis Range, including 98% of current habitat
16	-125	-100	159.7	127.2	80%	13%	Preferred elevation range of habitat
17	-100	-75	141.3	118.4	84%	12%	Preferred elevation range of habitat
18	-75	-50	271.9	227.1	84%	23%	Preferred elevation range of habitat
19	-50	-25	311.5	205.9	66%	21%	Preferred elevation range of habitat
20	-25	0	115.7	63.0	54%	6%	
21	0	25	97.1	7.4	8%	1%	
22	25	50	62.3	-	-	-	
23	50	75	39.9	-	-	-	
24	75	100	36.9	-	-	-	
25	100	125	34.0	-	-	-	Outside Analysis Range
26	125	150	36.0	-	-	-	
27	150	175	22.1	-	-	-	
28	175	200	30.9	-	-	-	
2050 SLR Scenario (+50 cm)							
1	-525	-500	-	-	-	-	
2	-500	-475	-	-	-	-	
3	-475	-450	-	-	-	-	
4	-450	-425	-	-	-	-	

Class*	Elevation Range (NAVD88 cm) Low	Elevation Range (NAVD88 cm) High	Habitat Suitable Jurisdiction (acres)	Eelgrass in District (acres)	% Occupied**	Relative %	Comments
5	-425	-400	-	-	-	-	Outside Analysis Range
6	-400	-375	-	-	-	-	
7	-375	-350	62.1	-	-	-	
8	-350	-325	52.8	-	-	-	
9	-325	-300	54.6	4.5	8%	0%	Analysis Range, including 98% of current habitat
10	-300	-275	59.7	6.9	12%	1%	Analysis Range, including 98% of current habitat
11	-275	-250	83.3	11.7	14%	1%	Analysis Range, including 98% of current habitat
12	-250	-225	90.0	15.5	17%	2%	Analysis Range, including 98% of current habitat
13	-225	-200	77.8	17.0	22%	2%	Analysis Range, including 98% of current habitat
14	-200	-175	94.7	38.6	41%	4%	Analysis Range, including 98% of current habitat
15	-175	-150	142.8	80.5	56%	8%	Analysis Range, including 98% of current habitat
16	-150	-125	159.7	106.8	67%	11%	
17	-125	-100	141.3	112.5	80%	11%	Preferred elevation range of habitat
18	-100	-75	271.9	227.9	84%	22%	Preferred elevation range of habitat
19	-75	-50	311.5	260.2	84%	26%	Preferred elevation range of habitat
20	-50	-25	115.7	76.5	66%	8%	Preferred elevation range of habitat
21	-25	0	97.1	52.9	54%	5%	Preferred elevation range of habitat
22	0	25	62.3	4.8	8%	0%	
23	25	50	39.9	-	-	-	

Class*	Elevation Range (NAVD88 cm) Low	Elevation Range (NAVD88 cm) High	Habitat Suitable Jurisdiction (acres)	Eelgrass in District (acres)	% Occupied**	Relative %	Comments
24	50	75	36.9	-	-	-	
25	75	100	34.0	-	-	-	
26	100	125	36.0	-	-	-	Outside Analysis Range
27	125	150	22.1	-	-	-	
28	150	175	30.9	-	-	-	
2100 Low SLR Scenario (+75 cm)							
1	-550	-525	-	-	-	-	
2	-525	-500	-	-	-	-	
3	-500	-475	-	-	-	-	
4	-475	-450	-	-	-	-	
5	-450	-425	-	-	-	-	Outside Analysis Range
6	-425	-400	-	-	-	-	
7	-400	-375	62.1	-	-	-	
8	-375	-350	52.8	-	-	-	
9	-350	-325	54.6	-	-	-	
10	-325	-300	59.7	4.9	8%	1%	Analysis Range, including 98% of current habitat
11	-300	-275	83.3	9.6	12%	1%	Analysis Range, including 98% of current habitat
12	-275	-250	90.0	12.7	14%	1%	Analysis Range, including 98% of current habitat
13	-250	-225	77.8	13.4	17%	1%	Analysis Range, including 98% of current habitat
14	-225	-200	94.7	20.8	22%	2%	Analysis Range, including 98% of current habitat
15	-200	-175	142.8	58.1	41%	6%	Analysis Range, including 98% of current habitat
16	-175	-150	159.7	90.0	56%	9%	Analysis Range, including 98% of current habitat

Class*	Elevation Range (NAVD88 cm) Low	Elevation Range (NAVD88 cm) High	Habitat Suitable Jurisdiction (acres)	Eelgrass in District (acres)	% Occupied**	Relative %	Comments
17	-150	-125	141.3	94.5	67%	10%	Analysis Range, including 98% of current habitat
18	-125	-100	271.9	216.5	80%	22%	Preferred elevation range of habitat
19	-100	-75	311.5	261.1	84%	27%	Preferred elevation range of habitat
20	-75	-50	115.7	96.6	84%	10%	Preferred elevation range of habitat
21	-50	-25	97.1	64.2	66%	7%	Preferred elevation range of habitat
22	-25	0	62.3	33.9	54%	3%	Preferred elevation range of habitat
23	0	25	39.9	3.1	8%	0%	
24	25	50	36.9	-	-	-	
25	50	75	34.0	-	-	-	
26	75	100	36.0	-	-	-	Outside Analysis Range
27	100	125	22.1	-	-	-	
28	125	150	30.9	-	-	-	
2100 High SLR Scenario (+150 cm)							
1	-625	-600	-	-	-	-	
2	-600	-575	-	-	-	-	
3	-575	-550	-	-	-	-	Outside Analysis Range
4	-550	-525	-	-	-	-	
5	-525	-500	-	-	-	-	
6	-500	-475	-	-	-	-	
7	-475	-450	62.1	-	-	-	
8	-450	-425	52.8	-	-	-	
9	-425	-400	54.6	-	-	-	
10	-400	-375	59.7	-	-	-	

Class*	Elevation Range (NAVD88 cm) Low	Elevation Range (NAVD88 cm) High	Habitat Suitable Jurisdiction (acres)	Eelgrass in District (acres)	% Occupied**	Relative %	Comments
11	-375	-350	83.3	-	-	-	
12	-350	-325	90.0	-	-	-	
13	-325	-300	77.8	6.4	8%	1%	Analysis Range, including 98% of current habitat
14	-300	-275	94.7	10.9	12%	2%	Analysis Range, including 98% of current habitat
15	-275	-250	142.8	20.1	14%	3%	Analysis Range, including 98% of current habitat
16	-250	-225	159.7	27.5	17%	4%	Analysis Range, including 98% of current habitat
17	-225	-200	141.3	31.0	22%	5%	Analysis Range, including 98% of current habitat
18	-200	-175	271.9	110.6	41%	17%	
19	-175	-150	311.5	175.6	56%	26%	
20	-150	-125	115.7	77.4	67%	12%	
21	-125	-100	97.1	77.3	80%	12%	
22	-100	-75	62.3	52.2	84%	8%	Preferred elevation range of habitat
23	-75	-50	39.9	33.3	84%	5%	Preferred elevation range of habitat
24	-50	-25	36.9	24.4	66%	4%	Preferred elevation range of habitat
25	-25	0	34.0	18.5	54%	3%	Preferred elevation range of habitat
26	0	25	36.0	2.8	8%	0%	
27	25	50	22.1	-	-	-	Outside Analysis Range
28	50	75	30.9	-	-	-	

Table 3. Summary of data used for saltmarsh habitat evaluation for each SLR scenario.

Class*	Elevation Range (NAVD88 cm) Low	Elevation Range (NAVD88 cm) High	Habitat Suitable Jurisdiction (acres)	Saltmarsh in District (acres)	% Occupied**	Relative %	Comment
Baseline Current Conditions							
21	25	50	97.1	1.0	1%	1%	Analysis Range, including 98% of current habitat
22	50	75	62.3	1.6	3%	2%	Analysis Range, including 98% of current habitat
23	75	100	39.9	6.1	15%	7%	Analysis Range, including 98% of current habitat
24	100	125	36.9	15.8	43%	19%	Preferred elevation range of habitat
25	125	150	34.0	17.7	52%	22%	Preferred elevation range of habitat
26	150	175	36.0	19.2	53%	24%	Preferred elevation range of habitat
27	175	200	22.1	7.7	35%	10%	Preferred elevation range of habitat
28	200	225	30.9	4.3	14%	5%	Analysis Range, including 98% of current habitat
29	225	250	34.7	2.9	8%	4%	Analysis Range, including 98% of current habitat
30	250	275	38.0	1.7	4%	2%	Analysis Range, including 98% of current habitat
31	275	300	32.4	1.0	3%	1%	Analysis Range, including 98% of current habitat
32	300	325	28.8	1.0	3%	1%	Analysis Range, including 98% of current habitat
33	325	350	38.5	1.0	3%	1%	Analysis Range, including 98% of current habitat
34	350	375	38.1	0.4	-	-	Outside Analysis Range
35	375	400	22.4	0.2	-	-	Outside Analysis Range
36	400	425	22.3	0.0	-	-	Outside Analysis Range

Class*	Elevation Range (NAVD88 cm) Low	Elevation Range (NAVD88 cm) High	Habitat Suitable Jurisdiction (acres)	Saltmarsh in District (acres)	% Occupied**	Relative %	Comment
37	425	450	26.2	0.0	-	-	Outside Analysis Range
38	450	475	19.9	0.0	-	-	Outside Analysis Range
39	475	500	16.3	0.0	-	-	Outside Analysis Range
2030 SLR Scenario (+25 cm)							
21	0	25	97.1	-	0%	0%	
22	25	50	62.3	0.7	1%	1%	Analysis Range, including 98% of current habitat
23	50	75	39.9	1.0	3%	1%	Analysis Range, including 98% of current habitat
24	75	100	36.9	5.6	15%	7%	Analysis Range, including 98% of current habitat
25	100	125	34.0	14.6	43%	19%	Preferred elevation range of habitat
26	125	150	36.0	18.7	52%	25%	Preferred elevation range of habitat
27	150	175	22.1	11.8	53%	16%	Preferred elevation range of habitat
28	175	200	30.9	10.8	35%	14%	Preferred elevation range of habitat
29	200	225	34.7	4.9	14%	6%	Analysis Range, including 98% of current habitat
30	225	250	38.0	3.2	8%	4%	Analysis Range, including 98% of current habitat
31	250	275	32.4	1.4	4%	2%	Analysis Range, including 98% of current habitat
32	275	300	28.8	0.9	3%	1%	Analysis Range, including 98% of current habitat
33	300	325	38.5	1.3	3%	2%	Analysis Range, including 98% of current habitat
34	325	350	38.1	1.0	3%	1%	Analysis Range, including 98% of current habitat

Class*	Elevation Range (NAVD88 cm) Low	Elevation Range (NAVD88 cm) High	Habitat Suitable Jurisdiction (acres)	Saltmarsh in District (acres)	% Occupied**	Relative %	Comment
35	350	375	22.4	0.2	-	-	
36	375	400	22.3	0.0	-	-	
37	400	425	26.2	0.0	-	-	
38	425	450	19.9	0.0	-	-	
39	450	475	16.3	0.0	-	-	
2050 SLR Scenario (+50 cm)							
21	-25	0	97.1	0.0	-	0%	
22	0	25	62.3	0.0	-	0%	
23	25	50	39.9	0.4	1%	1%	Analysis Range, including 98% of current habitat
24	50	75	36.9	0.9	3%	1%	Analysis Range, including 98% of current habitat
25	75	100	34.0	5.2	15%	7%	Analysis Range, including 98% of current habitat
26	100	125	36.0	15.4	43%	21%	Preferred elevation range of habitat
27	125	150	22.1	11.5	52%	15%	Preferred elevation range of habitat
28	150	175	30.9	16.5	53%	22%	Preferred elevation range of habitat
29	175	200	34.7	12.1	35%	16%	Preferred elevation range of habitat
30	200	225	38.0	5.3	14%	7%	Analysis Range, including 98% of current habitat
31	225	250	32.4	2.7	8%	4%	Analysis Range, including 98% of current habitat
32	250	275	28.8	1.3	4%	2%	Analysis Range, including 98% of current habitat
33	275	300	38.5	1.2	3%	2%	Analysis Range, including 98% of current habitat

Class*	Elevation Range (NAVD88 cm) Low	Elevation Range (NAVD88 cm) High	Habitat Suitable Jurisdiction (acres)	Saltmarsh in District (acres)	% Occupied**	Relative %	Comment
34	300	325	38.1	1.3	3%	2%	Analysis Range, including 98% of current habitat
35	325	350	22.4	0.6	3%	1%	Analysis Range, including 98% of current habitat
36	350	375	22.3	0.0	-	-	
37	375	400	26.2	0.0	-	-	
38	400	425	19.9	0.0	-	-	
39	425	450	16.3	0.0	-	-	
2100 Low SLR Scenario (+75 cm)							
21	-50	-25	97.1	0.0		0%	
22	-25	0	62.3	0.0		0%	
23	0	25	39.9	0.0		0%	
24	25	50	36.9	0.4	1%	1%	Analysis Range, including 98% of current habitat
25	50	75	34.0	0.9	3%	1%	Analysis Range, including 98% of current habitat
26	75	100	36.0	5.5	15%	7%	Analysis Range, including 98% of current habitat
27	100	125	22.1	9.5	43%	13%	Preferred elevation range of habitat
28	125	150	30.9	16.1	52%	21%	Preferred elevation range of habitat
29	150	175	34.7	18.5	53%	25%	Preferred elevation range of habitat
30	175	200	38.0	13.2	35%	18%	Preferred elevation range of habitat
31	200	225	32.4	4.5	14%	6%	Analysis Range, including 98% of current habitat
32	225	250	28.8	2.4	8%	3%	Analysis Range, including 98% of current habitat

Class*	Elevation Range (NAVD88 cm) Low	Elevation Range (NAVD88 cm) High	Habitat Suitable Jurisdiction (acres)	Saltmarsh in District (acres)	% Occupied**	Relative %	Comment
33	250	275	38.5	1.7	4%	2%	Analysis Range, including 98% of current habitat
34	275	300	38.1	1.2	3%	2%	Analysis Range, including 98% of current habitat
35	300	325	22.4	0.8	3%	1%	Analysis Range, including 98% of current habitat
36	325	350	22.3	0.6	3%	1%	Analysis Range, including 98% of current habitat
37	350	375	26.2	0.0	-	-	
38	375	400	19.9	0.0	-	-	
39	400	425	16.3	0.0	-	-	
2100 High SLR Scenario (+150 cm)							
21	-125	-100	97.1	0.0	-	0%	
22	-100	-75	62.3	0.0	-	0%	
23	-75	-50	39.9	0.0	-	0%	
24	-50	-25	36.9	0.0	-	0%	
25	-25	0	34.0	0.0	-	0%	
26	0	25	36.0	0.0	-	0%	
27	25	50	22.1	0.2	1%	0%	Analysis Range, including 98% of current habitat
28	50	75	30.9	0.8	3%	1%	Analysis Range, including 98% of current habitat
29	75	100	34.7	5.3	15%	7%	Analysis Range, including 98% of current habitat
30	100	125	38.0	16.3	43%	21%	Preferred elevation range of habitat
31	125	150	32.4	16.9	52%	22%	Preferred elevation range of habitat
32	150	175	28.8	15.4	53%	20%	Preferred elevation range of habitat

Class*	Elevation Range (NAVD88 cm) Low	Elevation Range (NAVD88 cm) High	Habitat Suitable Jurisdiction (acres)	Saltmarsh in District (acres)	% Occupied**	Relative %	Comment
33	175	200	38.5	13.4	35%	17%	Preferred elevation range of habitat
34	200	225	38.1	5.3	14%	7%	Analysis Range, including 98% of current habitat
35	225	250	22.4	1.9	8%	2%	Analysis Range, including 98% of current habitat
36	250	275	22.3	1.0	4%	1%	Analysis Range, including 98% of current habitat
37	275	300	26.2	0.8	3%	1%	Analysis Range, including 98% of current habitat
38	300	325	19.9	0.7	3%	1%	Analysis Range, including 98% of current habitat
39	325	350	16.3	0.4	3%	1%	Analysis Range, including 98% of current habitat

Table 4. Summary of data used for beach/dune habitat evaluation for each SLR scenario.

Class*	Elevation Range (NAVD88 cm) Low	Elevation Range (NAVD88 cm) High	Beach/Dune Existing and Predicted (acres) Baseline Beach/Dune	Beach/Dune Existing and Predicted (acres) SLR Scenario 2030 (+25cm)	Beach/Dune Existing and Predicted (acres) SLR Scenario 2050 (+50cm)	Beach/Dune Existing and Predicted (acres) SLR Scenario 2100 (+75cm)	Beach/Dune Existing and Predicted (acres) SLR Scenario 2100 (+150cm)	
20	0	25	0.8	0.8	0.8	0.8	0.8	Lost to innundation, possible eelgrass or open water
21	25	50	1.1	1.1	1.1	1.1	1.1	Lost to innundation, possible eelgrass or open water
22	50	75	0.9	0.9	0.9	0.9	0.9	Lost to innundation, possible eelgrass or open water
23	75	100	0.9	0.9	0.9	0.9	0.9	Lost to innundation, possible eelgrass or open water
24	100	125	0.6	0.6	0.6	0.6	0.6	Lost to innundation, possible eelgrass or open water
25	125	150	0.6	0.6	0.6	0.6	0.6	Lost to innundation, possible eelgrass or open water
26	150	175	0.8	0.8	0.8	0.8	0.8	Analysis range
27	175	200	0.9	0.9	0.9	0.9	0.9	Analysis range
28	200	225	1.7	1.7	1.7	1.7	1.7	Analysis range
29	225	250	1.2	1.2	1.2	1.2	1.2	Analysis range
30	250	275	1.3	1.3	1.3	1.3	1.3	Analysis range
31	275	300	1.2	1.2	1.2	1.2	1.2	Analysis range
32	300	325	0.8	0.8	0.8	0.8	0.8	Analysis range
33	325	350	0.7	0.7	0.7	0.7	0.7	Analysis range
34	350	375	0.1	0.1	0.1	0.1	0.1	Analysis range

Class*	Elevation Range (NAVD88 cm) Low	Elevation Range (NAVD88 cm) High	Beach/Dune Existing and Predicted (acres) Baseline Beach/Dune	Beach/Dune Existing and Predicted (acres) SLR Scenario 2030 (+25cm)	Beach/Dune Existing and Predicted (acres) SLR Scenario 2050 (+50cm)	Beach/Dune Existing and Predicted (acres) SLR Scenario 2100 (+75cm)	Beach/Dune Existing and Predicted (acres) SLR Scenario 2100 (+150cm)	
35	375	400	0.0	0.0	0.0	0.0	0.0	Analysis range
36	400	425	0.0	0.0	0.0	0.0	0.0	Analysis range
37	425	450	0.0	0.0	0.0	0.0	0.0	Analysis range
38	450	475	0.0	0.0	0.0	0.0	0.0	Analysis range
39	475	500	0.0	0.0	0.0	0.0	0.0	Analysis range
40	500	525	0	0	0	0	0	Analysis range

Table 5. Summary of data used for upland habitat evaluation for each SLR scenario.

Class*	Elevation Range (NAVD88 cm) Low	Elevation Range (NAVD88 cm) High	Uplands Existing and Predicted (acres) Hab Suitable Jurisdiction	Uplands Existing and Predicted (acres) Baseline Uplands	Uplands Existing and Predicted (acres) SLR Scenario 2030 (+25cm)	Uplands Existing and Predicted (acres) SLR Scenario 2050 (+50cm)	Uplands Existing and Predicted (acres) SLR Scenario 2100 (+75cm)	Uplands Existing and Predicted (acres) SLR Scenario 2100 (+150cm)	
28	200	225	30.9	7.7	7.7	7.7	7.7	7.7	Lost to innundation, possible eelgrass or open water
29	225	250	34.7	7.9	7.9	7.9	7.9	7.9	Lost to innundation, possible eelgrass or open water
30	250	275	38.0	5.9	8.7	8.7	8.7	8.7	Lost to innundation, possible eelgrass or open water
31	275	300	32.4	6.4	7.4	7.4	7.4	7.4	Lost to innundation, possible eelgrass or open water
32	300	325	28.8	7.0	6.6	6.6	6.6	6.6	Lost to innundation, possible eelgrass or open water
33	325	350	38.5	10.9	8.8	8.8	8.8	8.8	Lost to innundation, possible eelgrass or open water
34	350	375	38.1	11.1	8.7	8.7	8.7	8.7	Analysis range
35	375	400	22.4	10.4	5.1	5.1	5.1	5.1	Analysis range
36	400	425	22.3	6.5	5.1	5.1	5.1	5.1	Analysis range
37	425	450	26.2	4.3	6.0	6.0	6.0	6.0	Analysis range
38	450	475	19.9	3.8	4.5	4.5	4.5	4.5	Analysis range
39	475	500	16.3	2.0	3.7	3.7	3.7	3.7	Analysis range
40	500	525	12.4	0.9	2.8	2.8	2.8	2.8	Analysis range
41	525	550	9.7	1.4	2.2	2.2	2.2	2.2	Analysis range
42	550	575	8.2	1.8	1.9	1.9	1.9	1.9	Analysis range
43	575	600	7.7	2.4	1.8	1.8	1.8	1.8	Analysis range
44	600	625	8.1	2.2	1.8	1.8	1.8	1.8	Analysis range

Class*	Elevation Range (NAVD88 cm) Low	Elevation Range (NAVD88 cm) High	Uplands Existing and Predicted (acres) Hab Suitable Jurisdiction	Uplands Existing and Predicted (acres) Baseline Uplands	Uplands Existing and Predicted (acres) SLR Scenario 2030 (+25cm)	Uplands Existing and Predicted (acres) SLR Scenario 2050 (+50cm)	Uplands Existing and Predicted (acres) SLR Scenario 2100 (+75cm)	Uplands Existing and Predicted (acres) SLR Scenario 2100 (+150cm)	
45	625	650	7.2	1.7	1.6	1.6	1.6	1.6	Analysis range
46	650	675	5.3	0.7	1.2	1.2	1.2	1.2	Analysis range
47	675	700	5.0	0.5	1.1	1.1	1.1	1.1	Analysis range
48	700	725	4.0	0.5	0.9	0.9	0.9	0.9	Analysis range
49	725	750	2.6	0.4	0.6	0.6	0.6	0.6	Analysis range
50	750	775	2.7	0.6	0.6	0.6	0.6	0.6	Analysis range
51	775	800	2.0	0.0	0.5	0.5	0.5	0.5	Analysis range
52	800	825	1.2	0.0	0.3	0.3	0.3	0.3	Analysis range
53	825	850	0.5	0.0	0.1	0.1	0.1	0.1	Analysis range
54	850	875	0.2	0.0	0.1	0.1	0.1	0.1	Analysis range
55	875	900	0.2	0.0	0.0	0.0	0.0	0.0	Analysis range
56	900	925	0.2	0.0	0.0	0.0	0.0	0.0	Analysis range
57	925	950	0.1	0.0	0.0	0.0	0.0	0.0	Analysis range
58	950	975	0.1	0.0	0.0	0.0	0.0	0.0	Analysis range
59	975	1000	0.0	0.0	0.0	0.0	0.0	0.0	Analysis range

Notes: This data is derived from CoSMoS Elevation data clipped to the District jurisdiction and then filtered to remove barriers to habitat expansion. Then the data was reclassified into the same blocks used across this analysis. The field for value in the table represents the GIS code for a 25cm elevation block, as specified in the Range Low and Range High columns. The Hab Suitable Jurisdiction field represents how many 1sq m cells of that elevation block are available in the District jurisdiction. The light green shading includes the analysis range and quantity of 1sq m cells within the 98% relative total. Uplands in District under current conditions are occupied based on latest available mapping. Darker green indicates Preferred range of habitat. The Uplands in District is the predicted occupied count of 1sq m cells based on available area at the same percent occupied as current. Uplands run out of available habitat in District jurisdiction at 850cm NAVD88. Uplands currently occupies about 22% of total area based on vertical distribution. This analysis is assuming 22% cover remains consistent with SLR and habitat can migrate but is also lost to inundation.

APPENDIX C

NEXUS Planning & Research

Financial Analysis

As part of the analysis for AB691, the Port of San Diego (District) was required to provide "an estimate of the financial cost of the impact of sea level on granted public trust lands." While the AB691 mandate does not require a benefit-cost analysis, the cost of adaptation strategies to mitigate potential sea level rise damages were also estimated. This report summarizes the results of this financial analysis and details how the costs were estimated.

Summary of Estimated Financial Impacts

The tables, on the next pages, show the estimated financial impacts for the projected sea level rise scenarios. The table shows the predicted water heights without a 100-year storm and with a 100-year storm. The District chose these water heights by first reviewing the California Ocean Protection Council probabilistic projections (OPC, 2018), and then aligning them to CoSMoS v3.0. The OPC projections were aligned to CoSMoS because CoSMoS provides GIS layers that show the extent and depth of flooding for multiple scenarios, including those with and without a 100-year storm. These GIS layers were used to identify specific property and infrastructure, with the exception of structures, that could be impacted by sea level rise with and without a 100-year storm.

Tables AP.C1 and AP.C2 show potential primary and secondary impacts from projected sea level rise. The District selected the primary categories (e.g., buildings, etc.) that represent property and infrastructure likely to be damaged from sea level rise, whether due to potential inundation or temporary coastal flooding from a 100-year storm event with projected SLR. The secondary impact categories represent the indirect impacts that would be caused by the primary impacts, such as loss of District business revenue or storm cleanup, traffic control, and emergency response. Some impacts, such as loss of tenant business revenue are discussed qualitatively elsewhere in this report.

The water heights shown in Table AP.C1 and AP.C2 represent projected sea level rise for 2030 (0.8 feet), 2050 (1.6 feet), and 2100 (4.9 feet) with a 5 percent probability of occurring. Additionally, impacts were estimated for 2100 (2.5 feet) with a 50 percent probability of occurring. By including

Table AP.C1: Estimated Financial Impacts: Potential Inundation with Projected Sea Level Rise

Water Height	Predicted Scenario	No Action Scenario Estimated Damages (2018$ rounded to nearest $100,000)	
0.8 feet	2030 SLR with no storm event under 5% likelihood of occurring. Estimate of potential inundation loss in the year 2030.	**Primary Damage:**	
		Property (structures, parking lots)[1]	$1,200,000
		Transportation infrastructure	$18,400,000
		Other infrastructure	$27,300,000
		Secondary Damage:	
		Loss of Port Business Revenue[2]	$16,100,000
		Total	**$62,900,000**
1.6 feet	2050 SLR with no storm event under 5% likelihood of occurring. Estimate of potential inundation loss in the year 2050.	**Primary Damage:**	
		Property (structures, parking lots)[1]	$1,200,000
		Transportation infrastructure	$23,900,000
		Other infrastructure	$27,300,000
		Secondary Damage:	
		Loss of Port Business Revenue[2]	$16,100,000
		Total	**$68,500,000**
2.5 feet	2100 SLR with no storm event under 50% likelihood of occurring. Estimate of potential inundation loss in the year 2100.	**Primary Damage:**	
		Property (structures, parking lots)[1]	$6,300,000
		Transportation infrastructure	$61,400,000
		Other infrastructure	$34,700,000
		Secondary Damage:	
		Loss of Port Business Revenue[2]	$24,800,000
		Total	**$127,100,000**
4.9 feet	2100 SLR with no storm event under 5% likelihood of occurring. Estimate of potential inundation loss in the year 2100.	**Primary Damage:**	
		Property (structures, parking lots)[1]	$266,900,000
		Transportation infrastructure	$551,700,000
		Other infrastructure	$64,300,000
		Secondary Damage:	
		Loss of Port Business Revenue[2]	$39,200,000
		Total	**$922,100,000**

Table AP.C2: Estimated Financial Impacts: Potential Temporary Coastal Flooding (100-Year Storm Event) with Projected Sea Level Rise

Water Height	Predicted Scenario	No Action Scenario Estimated Damages (2018$ rounded to nearest $100,000)	
0.8 feet + water increase from 100-yr storm event	2030 SLR under 5% likelihood of occurring, with 100-year storm event occurring in the year 2030.[3] Estimating per storm event the potential coastal flooding damages in the year 2030.	**Primary Damage:** Structures (commercial, industrial) **Secondary Damage:** Storm Cleanup, Traffic Control, Emergency Response.[4] Total	$1,500,000 $1,500,000
1.6 feet + water increase from 100-yr storm event	2050 SLR under 5% likelihood of occurring, with 100-year storm event occurring in the year 2050.[3] Estimating per storm event the potential coastal flooding damages in the year 2050.	**Primary Damage:** Structures (commercial, industrial) **Secondary Damage:** Storm Cleanup, Traffic Control, Emergency Response.[4] Total	$6,300,000 $6,300,000
2.5 feet + water increase from 100-yr storm event	2100 SLR under 50% likelihood of occurring, with 100-year storm event occurring in the year 2100.[3] Estimating per storm event the potential coastal flooding damages in the year 2100.	**Primary Damage:** Structures (commercial, industrial) **Secondary Damage** Storm Cleanup, Traffic Control, Emergency Response.[4] Total	$12,100,000 $12,100,000
4.9 feet + water increase from 100-yr storm event	2100 SLR under 5% likelihood of occurring, with 100-year storm event occurring in the year 2100.[3] Estimating per storm event the potential coastal flooding damages in the year 2100.	**Primary Damage:** Structures (commercial, industrial) **Secondary Damage:** Storm Cleanup, Traffic Control, Emergency Response.[4] Total	$152,400,000 $152,400,000[5]

Note: Sea level rise estimated damages that occur without a storm event (inundation) are not included in the 100-yr storm estimates. 100-year storm flooding damages represent only those potential damages that would occur **in addition** to the loss due to sea level rise without a storm event.

[1]Impacted buildings were identified by the District and may not be consistent with the CoSMoS inundation and coastal flooding boundaries. Impacted parking lots were determined from CoSMoS boundaries. Therefore, parking lot and building impacts may not be consistent.

[2]Following the NOAA *What Will Adaptation Cost? Impact Assessment* methodology, this estimate only represents the annual loss for the corresponding scenario year in 2018 dollars. The Impact Assessment methodology estimates damages based on water height and one point in time. However, if the property were lost, the revenue loss would occur for subsequent years as well.

[3]Estimates represent the financial impact from temporary coastal flooding from a 100-year storm event with the corresponding projected SLR elevations.

[4]Cleanup, traffic control, and emergency response are included in annual operating budgets of the District staff. These potential impacts are discussed qualitatively in the report.

[5]Because inundation damages are expected to be substantially greater under the 4.9 feet scenario, 100-year storm event coastal flooding damages are less than previous scenarios.

this additional scenario, the analysis presents a range for a 2100 impacts with a lower and higher probability of transpiring.

The financial estimates were developed following the impact assessment methodology option found in the NOAA report entitled, *What Will Adaptation Cost?* (NOAA, 2013). Although each water height represents a predicted scenario associated with a particular year (i.e., 2030, 2050, and 2100), the estimates were not tied to planning horizons for specific years. Rather, these estimates signify the potential damages for each water height regardless of when they occur. Furthermore, the estimates are independent of one another. Each scenario's estimate only represents potential damages – in 2018 dollars – for the corresponding water height. The estimates do not account for previous damages that may have occurred.

Sea Level Rise without a Storm Event

¬The estimated damages without a storm event represent the cost of potential damages that could result from potential inundation under the "no action" conditions. That is, estimated damages could be caused by increased sea level rise that could permanently flood land, structures, parking lots, and transportation and other infrastructure if no adaptation strategies were enacted to mitigate damages. This permanent flooding from sea level rise is referred to as inundation throughout this chapter. Inundation could lead to a loss of District revenue due to a loss of land that could affect park events, parking, and leases. Please see the methodology section for more information about how these estimates were calculated and what was included in each category.

For all sea level rise water height scenarios without a storm event, the greatest financial impacts would be due to loss of transportation and other infrastructure (Table AP.C1). For the 0.8 and 1.6 feet scenarios, transportation and other infrastructure combined damages are estimated to be over $45 million. Combined damages for the 2.5 feet scenario are estimated to be over $95 million, and for the 4.9 feet scenario, infrastructure damages are estimated to be over $600 million.

Sea level rise impacts are also projected for property throughout the District. For the 0.8 feet and 1.6 feet scenarios, property damages are estimated to be approximately $1.2 million each. Damages for the 2.5 feet scenario are estimated to be over $1 million, and for the 4.9 feet scenarios, damages are estimated to be over $267 million.

Total financial damages, which also include the District's loss of revenue, for 0.8 feet and 1.6 feet

are estimated to be $63 and $69 million, respectively. Financial damages for 2.5 feet and 4.9 feet are estimated to range from approximately $127 million to $922 million.

It is important to note that land value is not included in property estimates due to the differing methodology for identifying land and structure impacts. As discussed more in the methodology section, the District identified structure impacts using their own model with local data, while parcel land impacts were based upon CoSMoS identified inundation boundaries. In some areas, the impacts identified by the two models were not consistent. The value of property typically would be estimated from the value of both land and structures; however, due to the inconsistent methodology, this analysis deemed it inappropriate to combine the output of both models to estimate one property value of parcels with both structures and land. Therefore, only structure estimates are included in the analysis, and not land.

Sea Level Rise with a 100-year Storm Event

The estimated damages for the 100-year storm event represent *additional* damages that could occur on top of the potential inundation damages for the corresponding sea level rise water height. This study's sea level rise projections are associated with water heights before a storm event (i.e., 0.8, 1.6, 2.5, and 4.9 feet). A storm event w\could result in additional temporary coastal flooding from a 100-year storm event. On average, a 100-year storm event could result in further coastal flooding of up to approximately 1.15 meters (3.77 ft.) depending upon the scenario and land elevation (OCOF, 2019). Thus, storm event flooding could result in added damages. For example, at 0.8 feet, it is estimated that $62,900,00 in damages could result from potential inundation and an additional $1,500,000 could occur if there were a 100-year storm flooding event. Again, these estimates assume damages that could transpire without implementing additional adaptation strategies.

It is important to point out that a 100-year storm event is a storm that is predicted to occur once every 100 years. Thus, it is highly unlikely that a 100-year storm event would occur in 2030, 2050, and 2100. The predicted scenarios in Table AP.C2 are not meant to suggest that 100-year storm damages would transpire at all three points in time. Rather, the table estimates what the damages *could* be if a 100-year storm corresponded with a particular sea level rise water height (e.g., 1.6 feet).

Coastal flooding damages are only assumed to result in damages to the District structures under this analysis. Storm event flooding is temporary and is not assumed to damage the land or parking lots. While it is foreseeable that temporary coastal flooding could require cleanup, and/or traffic control and

emergency response for transportation and other infrastructure (e.g., storm drains), these financials cost fall within the normal operating budget of the District.

As shown in Table AP.C2, damage to structures would have the greatest financial impacts. Storm event damages, in addition to the previously discussed potential inundation damages, could result in almost $1.5 million in structural damages under the 0.8 feet scenario, and more than $6 million under the 1.6 feet scenario. Estimated flooding damages from a 100-year storm event are $12.1 million under the 2.5 feet scenario, and $152.4 million for the 4.9 feet scenario. The storm flooding analysis accounts for structures that are impacted by potential inundation so that they are not double-counted in the financial estimates.

Methodology

Financial estimates were calculated by primarily following the methodology found in the NOAA report *What Will Adaptation Cost? An Economic Framework for Coastal Community Infrastructure* (NOAA, 2013). The report provides a framework for comparing the cost and benefits of adaptation strategies that could lessen the coastal flooding impacts of current and future sea level rise. Because AB691 only required an estimate of financial impacts and the cost of adaptation strategies without conducting a more comprehensive comparative benefit-cost analysis, this study only utilizes the relevant NOAA methodology for estimating the financial impacts rather than the full benefit-cost estimates.

The District selected water height scenarios from the probabilistic projections for the height of sea level rise for the La Jolla tide gauge (OPC, 2018). They selected four scenarios as shown in Table AP.C3 below. The table also shows the corresponding GIS layers from CoSMoS v3.0 that were used to determine both the extent of chronic inundation due to sea level rise and temporary flooding caused by a 100-year storm for all assets except structures. The District developed their own model for identifying building impacts, which is discussed more in this section.

While the water heights are predicted to occur in particular future timeframes (i.e., 2030, 2050, 2100), the NOAA impact assessment methodology bases Estimated damages on water height instead of a planning horizon. This means that all monetized impacts are shown in present value (2018$), and do not account for previous damages that may occur. For example, estimated damages at 1.6 feet are independent from estimated damages at 0.8 feet.

Table AP.C3: Selected Sea Level Rise Scenarios

Ft. Above the Average Relative Sea Level Over 1991 – 2009	Represents	Corresponding CoSMoS Layer
0.7 feet	5% probability sea level rise meets or exceeds height under high emissions in 2030.	0.25 meter (0.82 ft.)
1.4 feet	5% probability sea level rise meets or exceeds height under high emissions in 2050.	0.50 meter (1.64 ft.)
2.6 feet	50% probability sea level rise meets or exceeds height under high emissions in 2100.	0.75 meter (2.46 ft.)
4.6 feet	5% probability sea level rise meets or exceeds height under high emissions in 2100.	1.50 meter (4.92 ft.)

The analysis was based upon these projected increases in sea level rise following the NOAA impact assessment option in their report. Impacts were assessed for each of the water heights without and with a 100-year storm event. These estimates represent potential damages under a "no action" scenario without adaptation strategies being applied. This analysis had three broad steps:

1. Identify potential impacts by overlaying CoSMoS files over parcels, transportation, and other infrastructure in the District. The District provided data that identified impacted buildings and depth of flooding from their own local model.
2. Monetize the impacts. The next section details how these financial estimates were calculated.
3. Sum the estimated monetary impacts for each water height scenario, shown in Tables AP.C1 and AP.C2 to calculate an overall estimate of potential damages.

For the most part, potential impacts were identified by overlaying the CoSMoS GIS files and intersecting them with the asset GIS layers in ArcMap, either as part of the District initial vulnerability assessment that identified District assets at risk for sea level rise damages or this specific cost analysis that also utilized GIS to identify impacts. When available, this cost analysis used the identified impacts from the vulnerability assessment to be consistent. Additionally, the District developed their own model for

identifying impacts to structures based on their local ground elevation data. Table AP.C4 shows the assets that were included in this analysis as either a primary or secondary impact. Primary impacts are those damages to property and infrastructure that are directly caused by chronic inundation and/or flooding. Secondary impacts result from the damages caused to the primary impacts. For example, a loss of the District's parking lots could result in a loss of parking revenue for the District.

The potential impacts of sea level rise could differ depending upon whether impacts were due to potential inundation or temporary coastal flooding. For example, temporary coastal flooding is unlikely to result in the loss of land, parking lots, or certain infrastructure. Therefore, this analysis assumed no temporary coastal flooding damages for these assets.

Table AP.C4 also shows the approach for valuing each category depending upon whether the estimated damage was due to potential inundation (sea level rise with permanent water increase) or due to temporary coastal flooding from a 100-year storm event. (The next section explains these estimation procedures in more detail.)

The value of impacted parcel lands is not included in this analysis because of the differing methodology between structures and land. Typically, inundation estimates would be based upon the value of the structure and the land combined because both could be permanently lost. However, the District developed their own model for estimating structure impacts that was not consistent with the CoSMoS model's inundation and flooding boundaries in some areas. Therefore, it was deemed inappropriate to combine the output from both models to develop one property estimate that represented both land and structures. Alternatively, the District decided to use the structure estimates only. Furthermore, it should also be noted that structure impacts may not be consistent with other asset impacts, such as roads, due to the differing models.

Estimating Primary and Secondary Impacts

This section describes how the primary and secondary impacts were calculated for each asset category, including any assumptions and business rules. As shown in Table AP.C4, most of the estimates for primary impacts were calculated using the replacement cost method. The replacement cost method uses the cost of a similar new item as an estimate of its replacement value, which is then its estimated value (USACE, 1995). Estimates are shown in 2018 dollars. When necessary, estimates for earlier years were inflated to 2018 using the San Diego Region Consumer Price Index (CPI).

Table AP.C4: Methods for Valuing Primary and Secondary Impacts

Asset Category/Impact Type **Primary Impacts**	Methods(s) for Valuing	Data Source(s)
Structures (inundation)	Replacement cost to rebuild the structure in 2018$	District AMP building file with ground elevation; RSMeans (2018)
Structures (100-year storm flooding)	Replacement costs in 2018$. USACE depth damage functions for structure damage only (not contents).	USACE depth damage functions for commercial/industrial property; District AMP building file with ground elevation; RSMeans (2018)
Parking lots[1] (inundation)	Replacement cost to rebuild the parking lot in 2018$	District GIS pavement layer; Cost per square foot from private paving company.
Transportation infrastructure: Roads, rail, bikeways, promenades (inundation)	Replacement costs in 2018$.	NEXUS (2017) Table B-1; Federal Railroad Administration Cost Worksheet; City of San Diego Bicycle Master Plan (2013); District asset inventory
Other infrastructure: Sewer lifts, fuel docks (inundation)	Replacement costs in 2018$	Port of Olympia (2012); Oceanside (2018); District Asset Inventory
Asset Category/Impact Type **Secondary Impacts[2]**	Methods(s) for Valuing	Data Source(s)
Loss of Port revenue due to tenant leases, parking revenue, and park special event permit fees (inundation)	Estimated loss of annual revenue in $2018	District lease data; District parking revenue; District monthly park permits

[1]Only includes tenant parking lots that were included in the District GIS pavement layer.

[2]Cleanup, traffic control, and emergency response are considered secondary impacts, and are included in annual operating budgets of the District staff. These potential impacts are discussed qualitatively in the report.

Structures (inundation)

Structures are at risk for potential inundation when they are located on land where sea level rise is projected to expand the shoreline. When that land is permanently inundated, it is assumed that the land and structure are lost. The resulting financial consequence is the total loss to the land and structure owner. While the District owns the underlying land, tenants lease the building residing on top of it. Thus, both the District and tenants are impacted by potential inundation.

There are no residential structures in the District, only District- and tenant-leased operations, commercial, and industrial structures. Because the District owns the underlying land and it is all public lands, the analysis was unable to consider comparable properties to estimate the sale of similar commercial and industrial properties. Instead, the structures were valued using the replacement cost method of what it would cost to build the structure today. The costs were estimated using the District Asset Management Program (AMP) structure inventory that provided area and perimeter data. Then, the cost to rebuild was calculated using the RSMeans square foot model estimator (RSMeans Online, 2018). RSMeans is construction cost database that provides information that can be used to estimate residential and commercial construction project costs. Their square foot model combines material, labor, and equipment costs into square foot unit costs.

It is also important to note that the District AMP structure inventory and GIS layer only provided the footprint of the building. Thus, even though it was unknown whether higher floors had the same square footage, they were assumed to have the same. This could result in an overestimate, especially for hotel towers that have a much larger first floor than subsequent floors. The structure inventory was also incomplete for the purposes of RSMeans estimation. The number of stories was added by visual inspection on Google Earth, and the District staff provided structure framing/material by commercial and industrial use type. In a few cases, the value of structures could not be estimated due to missing data that could not be obtained.

The District developed their own model for identifying structures that were impacted by sea level rise. Using their local data, they subtracted each building's ground elevation from the mean projected water elevation for each CoSMoS scenario. If the resulting value was negative, the building was not considered impacted; if it were positive, it was deemed impacted. It is important to note that these identified structure impacts differed from those that were identified by overlaying the CoSMoS GIS layers on top of the District's GIS building file. This is likely due to CoSMoS taking into account the topography of the land, and thus, unlike the District's methodology, where individual building ground

levels were applied. This difference in methodology essentially resulted in differing inundation and flood boundaries, and associated impacts, for each model.

Structures (100-year storm event flooding)

Flooding is temporary and is not assumed to damage the land. However, it may damage the structure. The analysis estimated coastal flooding damages using the District's AMP structure inventory, District-provided depth files, and USACE depth-damage functions (USACE, 2006). Depth-damage functions or curves predict the percentage of damage that is caused to a structure. The percentage of damage to a structure is determined from the depth of flooding that is projected. This depth is typically based upon the first-floor elevation; however, those data were unavailable, and depth was measured from the ground elevation.

The depth of flooding was based on District depth files developed from their own model, as explained in the previous section. Using the square footage of the structure, and the cost per square foot to build a comparable structure from RS Means (RSMeans Online, 2018), this study first estimated the replacement cost of the structure. Then, the percentage of damage was determined from the depth-damage function curve and multiplied by the estimated replacement cost of the structure to arrive at a monetary estimate of damages.

Because the USACE commercial depth-damage curves are based on 2-story structures, the analysis only considered the estimated cost of the structure's first two floors. For example, a 10-story hotel would not expect to have the percentage (e.g., 66%) applied to all 10 stories. This would overestimate the damages. Therefore, the analysis calculated the replacement cost using the square footage from each structure's first two floors. In cases where the number of stories was missing from the District AMP structure file and the structure could not be viewed on Google Earth, the analysis assumed a 1-story building

Structures that were already shown to be potentially impacted by inundation were not included in the corresponding scenario's storm event coastal flooding damage estimates. It was assumed that once a structure was impacted by inundation, it would not have additional flooding impacts.

Parking lots (Inundation)

Inundation would result in the loss of parking lots because the land underneath them would be permanently underwater. The parking lots were identified by District staff of from the District's

pavement GIS file by overlaying CoSMoS layers. Parking structures were not included in this analysis because they were not identified on the pavement GIS file.

The total square feet of each parking lot was calculated in GIS, and was multiplied by $3.56 square foot. While some sources provide an estimate of cost per parking space, it was more efficient to use the square foot method because it did not require site surveys to count parking spaces. The cost per square was estimated from the Ohio Paving & Construction and adjusted to San Diego region using the RSMeans regional indexes.

This analysis utilized the following business rules because chronic inundation that only impacted part of the lot would not be estimated to result in a total loss.

- When less than 50% of the parking lot's total square feet were impacted, the analysis estimated a corresponding proportional loss.
- When 50% or more of the parking lot's total square feet were impacted, the analysis assumed 100% loss of the parking lot's square feet.

Transportation infrastructure (Inundation)

Like land and parking lots, it was assumed that temporary storm flooding would not damage roads, rail, bikeways, and promenades. Potential inundation, however, could result in the loss of these infrastructures. Replacement costs were used to estimate the value of these assets. The District provided the estimates of the total linear feet impacted in its asset inventory table. The estimates were developed by overlaying CoSMoS files and intersecting with each asset's GIS layer.

Roadways: The District's asset inventory provided the total linear feet affected by each scenario. These values were multiplied by the estimated cost to build in linear feet. Because the asset inventory did not breakdown the total linear feet by classification of roads, the cost per linear feet was based on a roadway similar to Pacific Highway since it is the primary highway running through the District. This figure, $7,362 per linear foot, was the road replacement cost sourced from another San Diego region study and inflated to 2018 dollars (Nexus, 2017, Table B-1).

Rail: The District's asset inventory provided the total linear feet impacted for each scenario. These values were converted in linear miles, and multiplied by the estimated cost to build a rail line in miles. Again, the asset inventory did not breakdown the rail classification. It was assumed that the rail

represented a commuter rail, rather than light rail, since the COASTER and Amtrak are the primary rail running through the District; however, a more detailed asset inventory could be conducted to break apart the light rail costs. The costs were calculated from the Federal Railroad Administration (FRA) capital projects estimation worksheet. The estimated cost per linear mile was $1,879.798, after inflating to 2018$. This estimate represents the cost to replace the track, and does not include stations and support facilities (e.g., rail yards).

Bikeways: The District asset inventory provided an estimate of the total linear feet impacted for each scenario. These values were converted into miles, and multiplied by the estimated cost to build a bikeway per linear mile. Again, the bikeway impacts were not broken down by classification. It was assumed that the impacted bikeways were bike paths (Class I). The costs to replace these bike paths were estimated at $755,533 a linear mile (2018$) using estimates from the 2013 City of San Diego Bicycle Master Plan (City of San Diego, 2013).

Walkways: The District asset inventory also provided an estimate of the total linear feet impacted for each scenario. Walkways impacts were not categorized, and were assumed to be paved pedestrian paths, such as those typically found along the District's waterfront. The total linear feet impacted was multiplied by the estimated cost to build a walkway per linear foot. The cost per linear foot of $1,071 (2018$) was the replacement cost sourced from another San Diego region study and inflated to 2018 dollars (Nexus, 2017, Table B-1). This estimate includes walkway lighting, benches, and garbage cans.

Other infrastructure (Inundation)

In addition to transportation infrastructure, it is anticipated that other operational infrastructure would be impacted by potential inundation. Inundation could result in these infrastructures being permanently underwater, and thus unusable. It was assumed that temporary coastal storm flooding could not damage these infrastructures. This analysis quantified impacts to sewer lifts and fuel docks. Due to the complexity of estimating storm drain replacement costs, these impacts are discussed qualitatively elsewhere in this report.

Sewer lifts: The asset inventory identified the number of sewer lifts impacted by each scenario. The estimated cost to replace each sewer lift station was $7,400,000 (2018$) based on the estimated cost to replace their Oceanside Boulevard Sewer Lift station (City of Oceanside, 2018).

Fuel dock: The District's asset inventory identified the number of fuel docks affected by each scenario.

The cost to replace each fuel dock was based on another study's estimated construction costs to build a marine fueling station (Port of Olympia, 2012). The estimated cost per fueling station was $4,153,614 (2018$).

Secondary Impacts

In addition to the primary impacts already discussed, this study also considered secondary impacts, such as loss of use or revenue, and clean up and emergency response. The District decided to quantify the financial impacts related to loss of revenue resulting from the loss of tenant leases, parking revenue, and special event permit fees in their parks.

The loss of revenue estimates included here are the result of inundation. Again, it was assumed that temporary coastal flooding caused by a 100-year storm with projected SLR would not affect revenue because the flooding would be temporary and recede. In actuality, storms could result in a temporary loss of use of park and parking lot facilities; however, it was unknown how long this temporary loss would last. For the sake of simplicity, the District decided to estimate permanent revenue loss rather than both permanent and temporary. Furthermore, in some cases, inundation would pre-empt 100-year storm flooding losses because the land would already be lost.

Lease revenue loss (Inundation)

The District leases land to tenants and collects revenue from these leases. Many of these tenants operate commercial or industrial business on these lands. The District may offer an annual flat lease amount, and in some cases, require an additional minimum rent based on the business's annual revenue.

Lease revenue data were joined to the District's parcel inventory using the lease-out number. (The parcel inventory was previously intersected by CoSMoS layers and identified impacted parcels for each scenario.) The District's parcel inventory includes split parcels, which are identified in this analysis as parcel objects. Because a lease may span multiple parcel objects, the amount of the lease was distributed based on the percentage of square feet for each parcel object. In most cases, only land leases were assumed to permanently lose revenue because water leases, such as marinas, were assumed to continue operating under sea level rise conditions. However, there was one exception: Shelter Island lost all road access beginning with the 0.8 feet sea level rise scenario. Therefore, it was assumed that businesses operating on the island, including water-based businesses, may not be able to continue operations because they would be inaccessible.[1]

The annual revenue loss was calculated using the following business rules:

- For those leases on Shelter Island, 100% loss of the annual lease amount for both land and water parcel leases.
- For non-Shelter Island leases:
  - Water leases are not impacted
  - When less than 50% of the parcel object's square feet were impacted, the analysis estimated a corresponding proportional loss of parcel object's annual lease amount.
  - When more than 50% of the parcel object's square feet were impacted, the analysis assumed 100% loss of the parcel object's annual lease amount.

Parking Revenue Loss (Inundation)

The District operates parking lots and structures around Tidelands. The loss of parking lots due to potential inundation would result in the loss of parking revenue as well. This analysis only includes District owned and operated parking lots and structures. The impacted lots were identified from CoSMoS and the GIS pavement layer. District staff identified two impacted parking structures, both of which were underground structures. The loss of revenue was estimated from the District's parking revenue spreadsheet that displayed the annual revenue by lots and garages.

The annual revenue loss was calculated using the following business rules:

- For parking lots on Shelter Island, 100% loss of the annual parking lot revenue due to the loss of island accessibility in all scenarios.
- For non-Shelter Island *parking lots*:
  - When less than 50% of the parking lot's square feet were impacted, the analysis estimated a corresponding proportional loss of annual revenue.
  - When more than 50% of the parking lot's square feet were impacted, the analysis assumed 100% loss of annual revenue.
- For non-Shelter Island underground *parking structures*:
  - When the inundation layer intersected the structure, the analysis assumed 100% loss of annual revenue due to the structure being underground.

[1]The financial impacts related to Shelter Island's inaccessibility only apply to revenue, and not property loss. This is because the secondary impact of lease revenue loss is due to the tenants' loss of use, while the primary impacts of land and structure are valued for the overall loss of the tangible assets for the District, not the loss of its use.

Park Special Event Permit Revenue (Inundation)

The District provides parks throughout the district for public use and enjoyment. Residents and businesses can rent these facilities for special events. The District collects revenue from these events. The impacted parks were identified from CoSMoS and the District parks GIS layer. The District provided the monthly park permit revenue by park.

The annual revenue loss was calculated using the following business rules:

- For parks on Shelter Island, 100% loss of the annual special event revenue due to the loss of island accessibility in all scenarios.
- For non-Shelter Island parks:
    - When less than 50% of the park's square feet were impacted, the analysis estimated a corresponding proportional loss of annual special event revenue.
    - When more than 50% of the park's square feet were impacted, the analysis assumed 100% loss of annual special event revenue.

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APPENDIX D

Port of San Diego
Natural Resource Valuation Methods

May 2019

Prepared for the Port of San Diego

Prepared by the Energy Policy Initiatives Center

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About EPIC

The Energy Policy Initiatives Center (EPIC) is a non-profit research center of the USD School of Law that studies energy policy issues affecting California and the San Diego region. EPIC's mission is to increase awareness and understanding of energy- and climate-related policy issues by conducting research and analysis to inform decision makers and educating law students.

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TABLE OF CONTENTS

EXECUTIVE SUMMARY

This report summarizes the methods available to value natural resources within the Port of San Diego and establishes a framework to determine a range in values for four habitats, based on ecosystem services provided by each, using a benefit transfer method.

Key Findings

Habitats within the Port Tidelands provide four types of ecosystem services. Of the habitats identified for valuation, four different categories of ecosystem services are considered to assist in determining monetary values for the natural resources. These categories include: provisioning, regulating, cultural, and supporting services.

Benefit transfer methodology is the preferred valuation method. Five general valuation methods were identified that can be used to monetize natural resources. While a framework was developed to best analyze the Port's natural resources, the time and data constraints associated with these methods are prohibitive. An alternate, preferred approach was developed using a benefit transfer method. Here, values from case studies were applied to the Port's natural resources.

Current value services provided by natural resources within Port Tidelands range from a low estimate of $40 million - $61 million per year. The ecosystem services identified for each of the habitats were combined to estimate the total value of the Port's natural resources. With sea level rise, the extant of different habitats is projected to change, leading to changes in the predicted value of these resources. Under the most extreme sea level rise scenario (150cm), the value of Port Tidelands natural resources is projected to decrease to a range of $29 million to $45 million.

1 | INTRODUCTION

Assembly Bill 691 (AB 691) was approved by the California legislature in 2013 and mandates the financial costs of sea level rise be considered for lands held in the Public Trust. As part of the Port of San Diego's (Port) sea level rise analysis, natural resources within Port Tidelands must be evaluated to understand their economic value.

This analysis identifies the natural resources with Port Tidelands to be evaluated and their accompanying ecosystem services. It provides a discussion on the types of goods and services that can be evaluated and presents an overview of each of the valuation methods currently available. After assessing the advantages and disadvantages of each, a framework for valuing the Port's natural resources was established and, using a benefit transfer approach, a literature review was conducted to estimate a range in values for the four primary habitats.

2 | NATURAL RESOURCES WITHIN PORT TIDELANDS

This section first documents the type and size of habitats found within Port Tidelands, and then identifies those relevant ecosystem services provided by these coastal habitats.

2.1 Habitats within the San Diego Bay

Habitats and their extant within the San Diego Bay were identified by ICF consultants on behalf of the Port as part of the Port's seal level rise planning efforts.[1] Table 1 identifies the current and predicted future acreage for four main habitat groups within the Port Tidelands – Eelgrass, Salt Marsh, Beach/Dune, and Uplands.[2] These habitats are considered the natural resources with which a valuation method must be determined.

Table 1. Extant of Habitats within the San Diego Bay

Habitat	Current (Baseline Acres)	SLR 25cm (acres)	SLR 50cm (acres)	SLR 75cm (acres)	SLR 150cm (acres)
Eelgrass	915	983	1016	979	668
Salt Marsh	81	76	74	75	78
Beach/Dune	13	13	12	11	9
Uplands	97	90	82	73	51
Total Acres	**1,107**	**1,161**	**1,184**	**1,139**	**806**

2.2 Ecosystem Services Provided by Habitats in the Port Tidelands

Examining the ecosystem services provided by habitats within the Port Tidelands will help to better understand the value (monetary and non-monetary) of those habitats. Ecosystem services represent the benefits people obtain from the ecosystem and, through the Millennium Ecosystem Assessment, are organized into four broad categories: provisioning, regulating, cultural, and supporting (Figure 1; MA, 2005). Ecosystem services identified for each of these categories document some type of value provided to direct and indirect users of habitats within the Port Tidelands. Shifts in habitat size and type can affect, both positively and negatively, the overall well-being of those users.

[1] ICF findings have not yet been released in a report. Data were provided by ICF to EPIC.
[2] Once published, refer to ICF report for further discussion on habitat characteristics and traits.

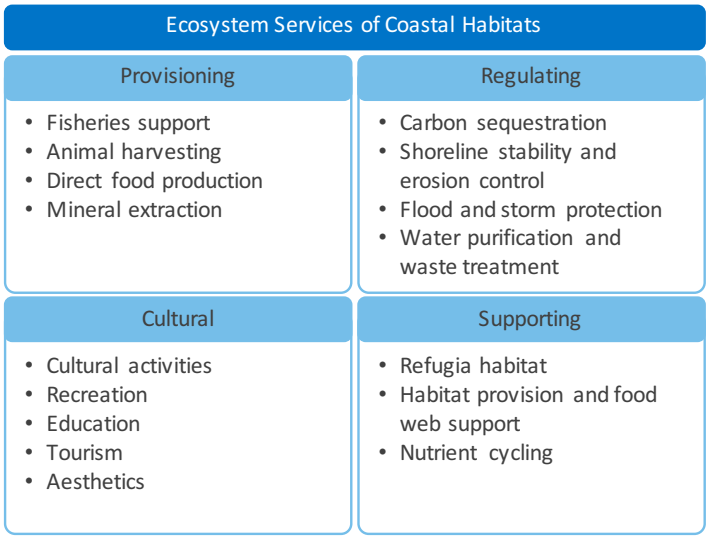

Figure 1. Primary Ecosystem Services for Port Tideland Habitats

2.2.1• Provisioning Ecosystem Services

Provisioning services include material products directly obtained from the habitat. These services are often traded through conventional markets and can, consequently, be valued more easily than other types of ecosystem services. The primary provisioning services identified here include: fisheries support, animal harvesting, direct food production, and mineral (e.g., salt) extraction.

2.2.2• Regulating Ecosystem Services

Regulating services provide benefits to users through the regulation of ecosystem services and are rarely given a value in conventional markets. Generally, users derive an indirect use from these services in some physical or material capacity. The primary regulating services identified here include: carbon sequestration, shoreline stability and erosion control, flood and storm protection, and water purification and waste treatment.

2.2.3• Cultural Ecosystem Services

Unlike the first two types of services, cultural ecosystem services provide non-material benefits to individuals. Generally, these services do not involve the extraction of resource(s) and the use by one individual does not preclude the use of another. The primary cultural services identified here include: cultural activities, recreation, education, tourism, and general aesthetic provisions.

2.2.4• Supporting Ecosystem Services

Supporting ecosystem services provide benefits that support the other services identified above. With these services, there are no direct uses by individuals; however, the presence of these services can increase the productivity of habitats and, consequently, increase the benefits received by users of other ecosystem services. Additionally, the elimination of some of these services could result in the loss of other ecosystem services. The primary supporting services identified here include: refuge habitat, habitat provision and food web support, and nutrient cycling.

3 | VALUATION METHODS

This section provides a discussion on how goods and services can be classified and documents those methods that can be used to determine a monetary value for natural resources via the ecosystem services identified in the previous section. In addition, it evaluates a potential framework for the Port to value its natural resources within the Port Tidelands.

3.1 Types of Goods and Services

The economic value of goods and services provided by natural resources can have either market or non-market based values (Figure 2). Determining the value of market based goods and services uses explicit data from the market in which it is sold. Non-market based goods and services, however, require an indirect analysis of how the resource is used (use value) or preserved (non-use value).

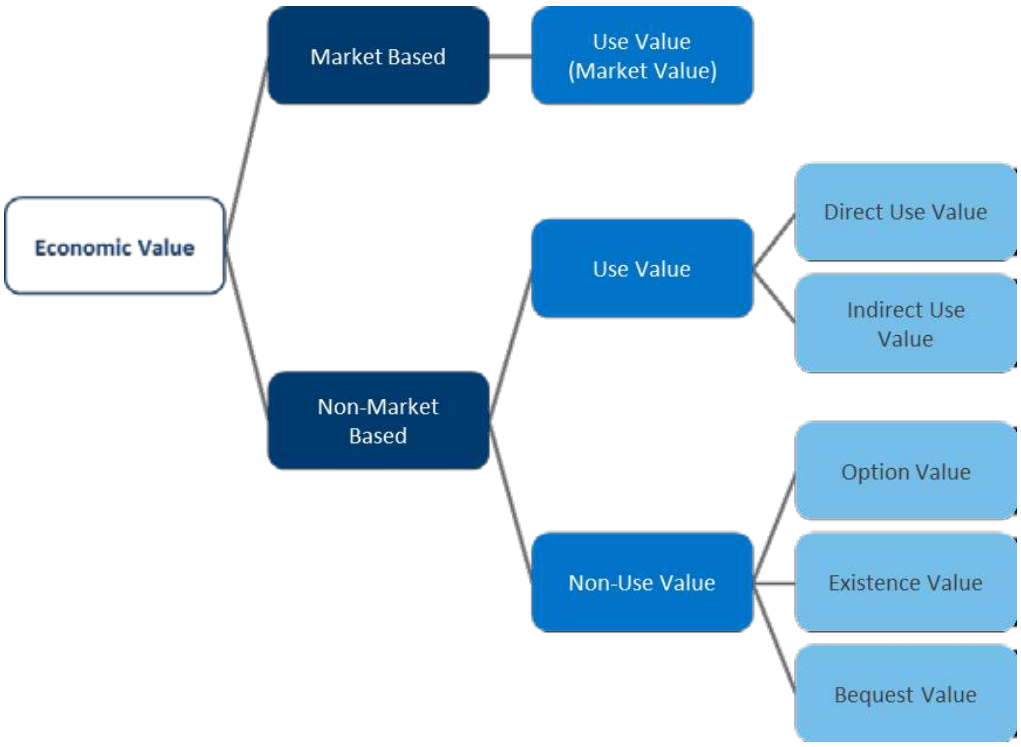

Figure 2. Classification of Economic Values for Non-Market Goods and Services

3.1.1 Market Goods and Services

Market goods and services include those that are currently bought or sold in the marketplace. The value of these goods and services is a use value and can be inferred from their associated supply and demand curves (e.g., at what price are sellers willing to sell and at what price are buyers willing to buy?). There are three ways to value market goods and services according to market conditions. The first, and easiest, is to assign the good or service a value equal to the market price – the price at which the good or service is sold

within any market (Figure 2, a).[3] The second way is to estimate the producer surplus associated with the service (Figure 2, b), and the third the consumer surplus (Figure 2, c). To estimate both the producer and consumer surplus, more detailed knowledge of the supply and demand curves must be known.

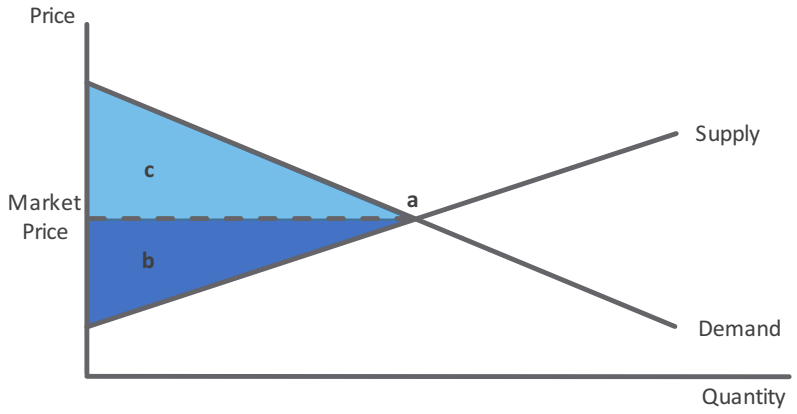

Figure 3. Illustrative Supply and Demand Curves

Market goods and services in a coastal context include the use of natural resources for a profit, such as through aquaculture, fishing, or the extraction of minerals (e.g., salt).

3.1.2• Non-market Goods and Services

Non-market goods and services are not bought or sold in a market and the value is thus not revealed in market pricing. There are five categories of non-market goods and services that are classified as either having a use or non-use value (Figure 2). Together, use and non-use represent the total value of a (natural) resource.

Use Value. A natural resource has use value when a consumer actively uses the resource and it can be categorized as either a direct or indirect use value (Figure 4). Direct use value is derived from the direct consumption or use of the resource without paying for it. For coastal systems, examples of direct use values include recreation, aquaculture[4], and fishing. Indirect use value is derived from the indirect use of a resource for some form of economic gain. Examples of indirect use include flood protection, shoreline stabilization, and water purification.

[3] Market value and market price are considered equal when the market is in equilibrium. Deviations from equilibrium can result in a market price that over- or under-values a good or service, although typically only marginally.

[4] Although, aquaculture projects can have operational costs associated with the use of a natural resource (e.g., water rights permitting or leasing rights).

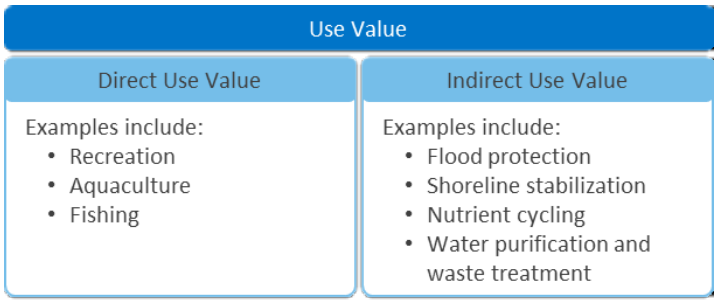

Figure 4. Use Value Categories for Non-Market Goods and Services

Non-Use Value. Non-use value relates to benefits provided to society when there is no active use of the resources being evaluated. Types of non-use value include: option, existence, and bequest (Figure 5). Option value refers to the value of a resource for future use even if that future use is unlikely. Existence value refers to value of knowing a particular natural resource exists even though the person valuing the resource has no intention to use or experience the resource. Bequest value refers to the value someone would be willing to pay to preserve a natural resource for future generations.

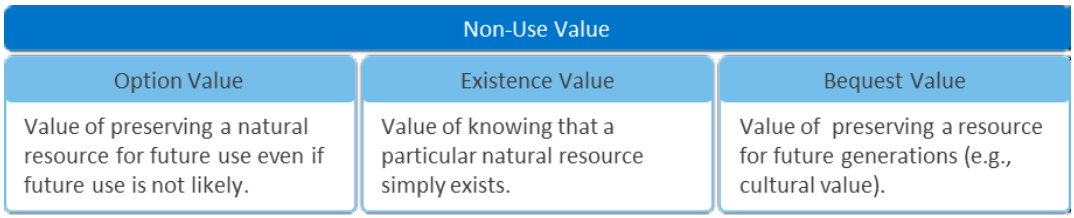

Figure 5. Non-Use Value Categories for Non-Market Goods and Services

3.2 Applicable Valuation Methods

Five general methods have been identified that can be used to determine a monetary value for natural resources (Figure 6). Of these methods, two – stated and revealed preference – have multiple ways to determine a value. The preferred method for valuing specific ecosystem services provided by natural resources are discussed further in Section 4.

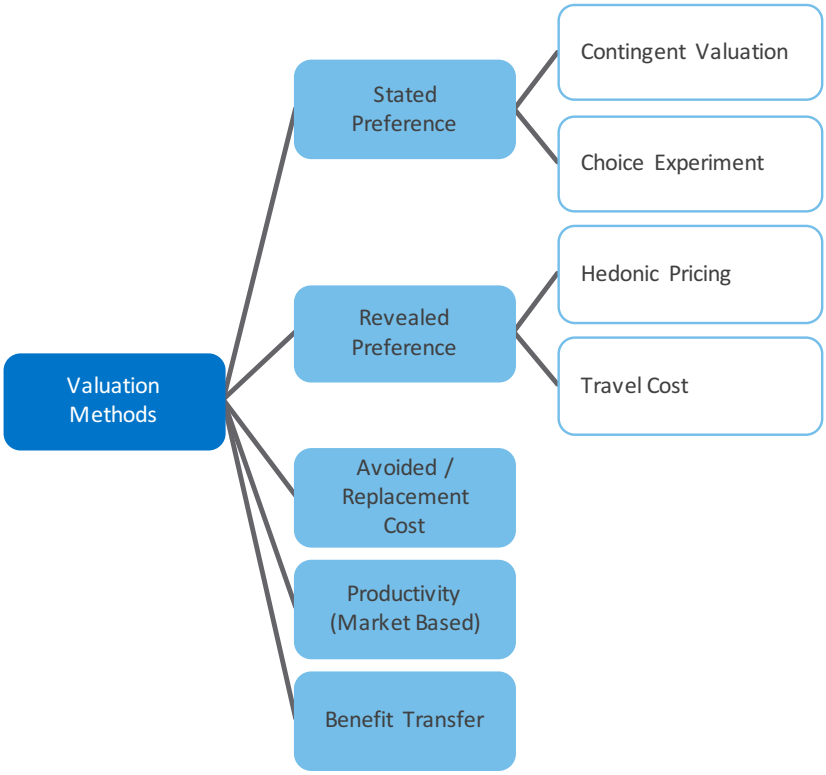

Figure 6. Methods for Valuing Natural Resources

3.2.1• Stated preference

Stated preference methods (contingent valuation and choice experiment) require surveys to estimate an individuals' willingness to pay (WTP) for a resource or their preferred ranking of individual aspects of a given resource (e.g., ecosystem services). WTP represents the perceived worth of a natural resource as stated by survey respondents. There are two commonly accepted forms of stated preference – contingent valuation and choice experiment.

Under contingent valuation, survey respondents are directly asked how much they would be willing to pay to prevent the degradation of or to improve a natural resource. Similarly, they could also be asked how much they would be willing to accept in exchange for the loss of the natural resource. Survey results are then aggregated to represent a hypothetical market for the resource and determine an overall value or worth. With this method, however, considerable caution and care must be used in the development of the survey questions and methods to limit bias in responses. Contingent valuation surveys are also generally limited to the resource as a whole and typically are not used to evaluate individual ecosystem services.

Choice experiment methods do not directly ask for the WTP of survey respondents, but has them rank or rate a set of characteristics relevant to the resource in question alongside a price or cost. The WTP is then inferred from survey results. This approach can be challenging for some survey respondents if little background information or context is known at the time of the survey. However, this method can limit some of the bias, in the form of overstated preferences, found in contingent valuation survey results.

Figure 7 identifies the primary advantages and disadvantages associated with stated preference valuation methods.

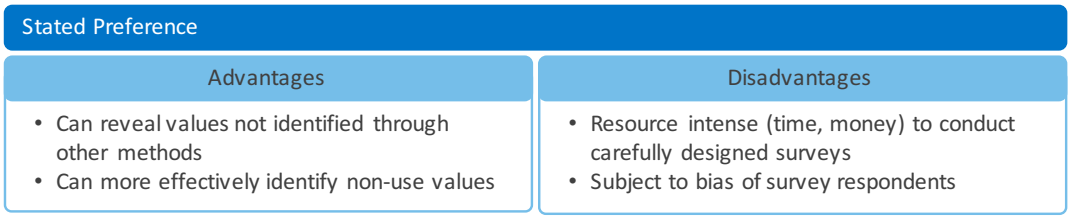

Figure 7. Advantages and Disadvantages of Stated Preference Method

3.2.2• Revealed preference

Unlike stated preference, revealed preference methods determine the value of a natural resource based on real market data rather than hypothetical markets. The primary downside to this is that non-use values are rarely, if ever, captured. There are two typical revealed preference methods that can be applied to natural resources – hedonic pricing and travel cost.

Hedonic pricing generally relies on housing price data to estimate the value of natural resources. Under this method, a statistical analysis is conducted the determine the relationship between housing values and set environmental variables. The change in housing price as a function of a change in an individual environmental variable, holding all others constant, theoretically represents the value of that resource. However, this method is extremely data heavy and modeled relationships based on the data may not account for some external factors that might influence housing price.

The travel cost method also relies on large datasets, but to determine the amount of money individuals pay to visit a natural resource. Data is generally collected that shows the distance at which visitors travelled to get to the site and how often they frequent the site. This typically is only applied for parks and other recreational areas and does not capture non-use values.

Figure 8 identifies the primary advantages and disadvantages associated with revealed preference valuation methods.

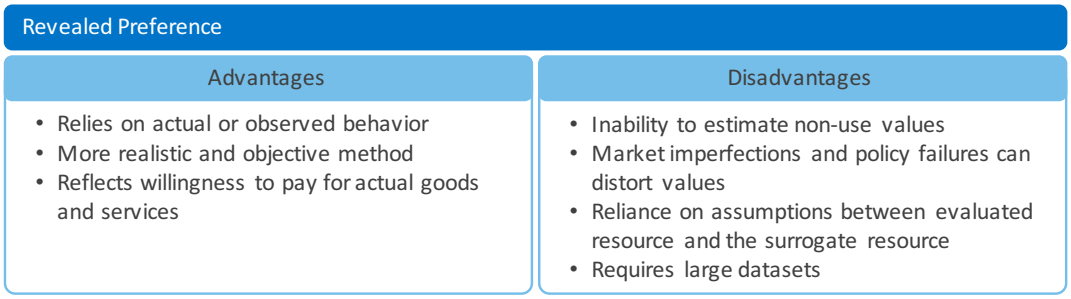

Figure 8. Advantages and Disadvantages of Revealed Preference Method

3.2.3• Productivity (Market based pricing)

The productivity method relies on market values when a change in a given natural resource directly increases or decreases the production of a market resource. Here, a statistical relationship between the natural resource and the market resource is established to determine the overall value. For instance, if a salt marsh provides vital nursery habitat for a fishery, then the loss of that habitat would decrease the productivity and value of the fishery. Similar to some other methods, this method generally requires a large amount of data and the relationship between the natural resource and market resource must be well understood to derive applicable relationship functions.

Figure 9 identifies the primary advantages and disadvantages associated with stated productivity valuation methods.

Productivity (Market based pricing)	
Advantages	**Disadvantages**
• Market-based pricing is intuitive • Tends to have a practical appeal to policy makers	• Tendency to ignore non-use values • Market imperfections and policy failures can distort values • Modeling of biophysical relationships can be complex and/or data intensive

Figure 9. Advantages and Disadvantages of Productivity Method

3.2.4• Avoided/Replacement Cost

Avoided or replacement cost methods value a natural resource on the potential costs that would be incurred if the resource were to be lost (avoided) or the cost to replace the resource (replacement). For instance, if a habitat that provides storm surge protection is hypothetically removed, what would be the cost of damage to homes during a storm event (avoided) or the cost to build a seawall to prevent storm damage to the same degree as the habitat (replacement). Determining comparable replacement measures can limit the accuracy in valuing natural resources with this method.

Figure 10 identifies the primary advantages and disadvantages associated with avoided/replacement cost valuation methods.

Avoided/Replacement Cost	
Advantages	**Disadvantages**
• Less demanding of resources (time, data, etc.) than most other methods	• Tendency to ignore non-use values • Market imperfections and policy failures can distort values • Tendency to undervalue natural resources

Figure 10. Advantages and Disadvantages of Avoided/Replacement Cost Method

3.2.5• Benefit Transfer

Benefit transfer methodology is separate from the methodologies outlined above as it relies on information already obtained through other studies conducted for different, but comparable resources. Values can be from any of the above type of analyses and applied, or transferred, to a natural resource

with similar conditions and characteristics. This method is mostly used in instances where resources (e.g., time and money) are limited. However, caution must be taken to ensure that values are transferred between comparable goods and/or services. If characteristics differ enough between them, the values may not be accurate and could significantly over or underestimate the natural resource in question.

Figure 11 identifies the primary advantages and disadvantages associated with benefit transfer valuation methods.

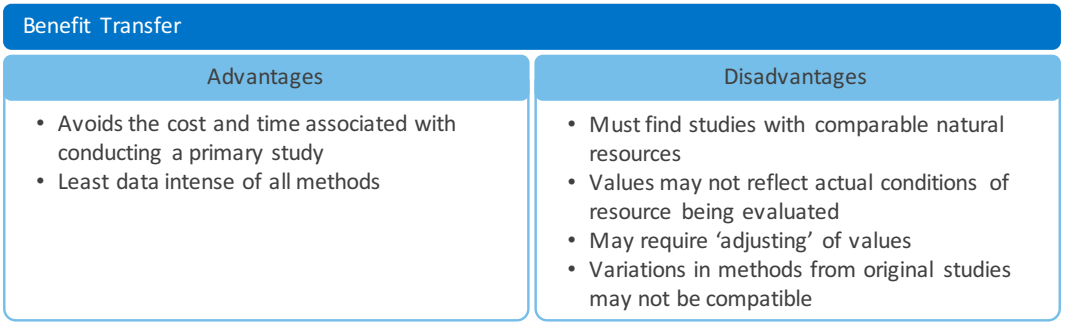

Figure 11. Advantages and Disadvantages of Benefit Transfer Method

3.3 Valuation Framework for Port Tidelands

Often, the ecosystem services identified in Section 2.2 can be valued with more than one method identified above. However, studies and literature have identified preferred methods for estimating the value of specific non-market based goods and services based on their respective advantages and disadvantages (Figure 12). Revealed preference methods are preferred for direct use values, productivity or avoided/replacement cost methods are preferred for indirect use values, and stated preference methods are the preferred choice for the three types of non-use values (option, existence, and bequest values). For a given natural resource, this can include the use of multiple valuation strategies specific to the individual ecosystem services being provided by that resource. However, the benefit transfer approach is the preferred method for all types of use and non-use values when resources are limited and only a broader habitat value is required.

For the valuation of habitats within the Port Tidelands, a benefit transfer approach is recommended. This approach will provide the Port with a sufficient understanding of the approximate values of its natural resources. Additionally, this will limit the time, effort, and cost associated with conducting more extensive surveys and statistical analyses. Primary studies have been conducted for similar habitats across California, the United States, and globally that can be applied to develop a range in values for the habitats within the Port Tidelands. These values are further discussed in Section 4 with limitations to this approach discussed in Section 5.

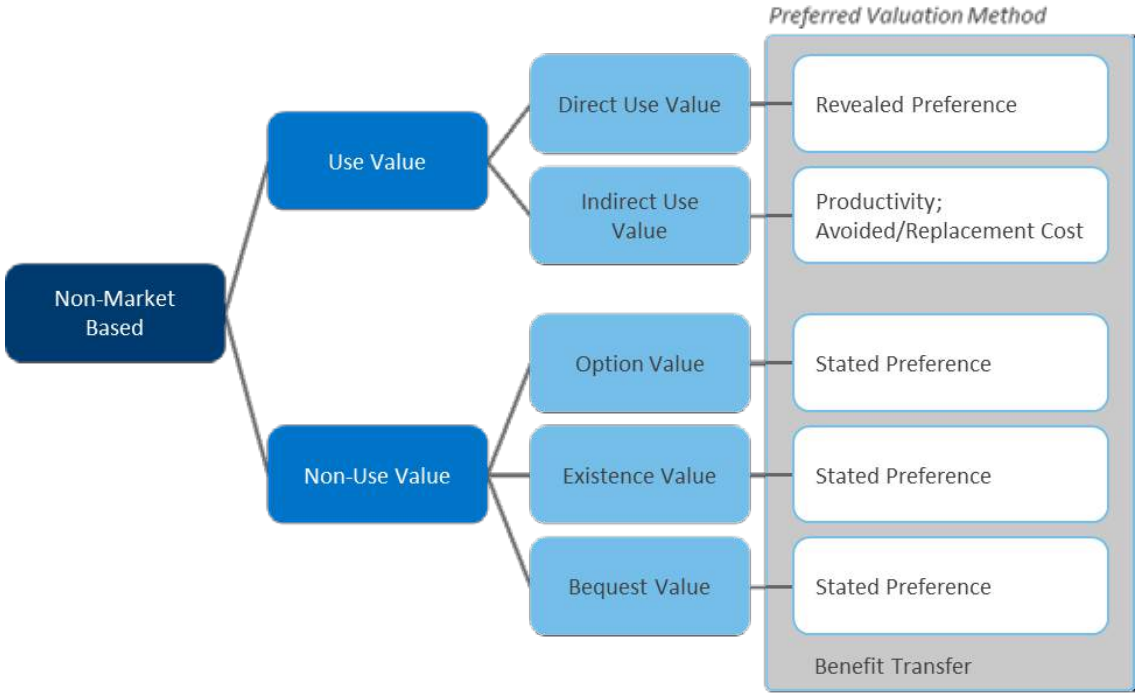

Figure 12. Non-Market Based Valuation Framework for Natural Resources within Port Tidelands

4 | Applied Valuation Strategy

A literature review was conducted to identify values that could be readily transferred to the four habitats identified within Port Tidelands. While values provided do not exhaust all potential values of the Port's natural resources, they encompass the general availability of applicable case studies.

Data provided in Table 2 indicate the low and high estimated values ($/acre/yr) for each case study. Values are differentiated by habitat type and the respective ecosystem service. In some instances, values were collected that represent the system as a whole and are not allocated to an individual habitat. For case studies where a single value was estimated, the low and high estimates are equal.

Table 2. Literature-Based Values of Habitat Values

Ecosystem Service	Low Estimate ($/acre/yr)	High Estimate ($/acre/yr)	Source(s)
Eelgrass			
Nutrient cycling	$12,302	$12,302	Brenner et al., 2010
Nitrogen sequestration	$19	$144	Capone, 1982
Carbon sequestration	$42	$44	Windham, 2008; Ballard et al., 2016
Carbon storage	$30	$30	Ballard et al., 2016
Salt Marsh			
Carbon sequestration	$23	$753	Windham, 2008; Cahoon 1993; Sifleet, 2011
Carbon storage	$9	$924	Cahoon 1993; Stifleet, 2011
Flood/Storm protection	$6,149	$6,149	Feagin et al., 2010
Recreation	$2,160	$2,160	Feagin et al., 2010
Nitrogen sequestration	$0.02	$0.12	DeLaune et al., 1986
Beach/Dune			
Carbon sequestration	$17	$45	Windham, 2008; Jones et al. 2008
Recreation	$3,055	$3,055	Raheem et al., 2009
Cultural activities	$5	$5	Raheem et al., 2009
Uplands			
Flood/Storm protection	$193	$193	Feagin et al., 2010
Recreation	$2,160	$2,160	Feagin et al., 2010
Whole System			
Pollution buffering	$35	$4,002	De Groot et al., 2002
	$11	$13	Batker et al., 2014
	$1,255	$1,415	Braux et al., 1995
	$6,792	$6,792	Brenner et al., 2010
	$565	$565	Wilson, 2010
Water flow regulation	$771	$771	Camacho-Valdez et al., 2013
	$10	$10	Costanza et al., 1997
Education	$0	$3	EPA, 2015
	$4	$4	EPA, 2015
	$0	$3	Coal Oil Point Reserve, n.d.
	$0	$0	Bolsa Chica Land Trust, 2015
Aesthetics	$4	$1,052	De Groot et al., 2002
Refugia habitat	$252	$252	Brenner et al., 2010
	$119	$283	Schmidt et al., 2014

Nutrient Cycling	$2,373	$12,302	Costanza et al., 1997
	$56	$13,656	De Groot et al., 2002
Flood/Storm protection	$87,008	$87,008	Thibodeau & Ostro 1981
	$16	$8,430	Batker et al., 2014
	$162	$3,169	Woodward & Wui, 2001
	$20	$9,324	Woodward & Wui, 2001
Cultural activities	$3	$3	Raheem et al., 2009

Table 3 presents aggregated values for each habitat and for those services valued for the whole system. Results indicate the overall low and high value estimate ($/acre/yr) using a benefit transfer approach. In instances were more than one case study was identified for the same habitat and ecosystem service, an average of the two was calculated.

Table 3. Aggregated Habitat Values

	Low Estimate ($/acre/yr)	High Estimate ($/acre/yr)
Eelgrass	$12,392	$12,520
Salt Marsh	$8,341	$9,986
Beach/Dune	$3,077	$3,105
Uplands	$2,352	$2,352
Whole System	$25,332	$44,234

Table 4 presents the total value ($/yr) of each habitat and for those services valued for the whole system under baseline conditions and four sea level rise scenarios (25cm, 50cm, 75cm, and 150cm). Results were found by multiplying the estimated acreage by the total dollar per acre ($/acre) for each habitat provided in Table 3.

Table 4. Total Habitat Values

	Acres	Low Estimate ($/yr)	High Estimate ($/yr)
Eelgrass			
Baseline	915	$11,339,205	$11,456,219
SLR 25cm	983	$12,178,846	$12,304,524
SLR 50cm	1,016	$12,593,963	$12,723,924
SLR 75cm	979	$12,137,569	$12,262,821
SLR 150cm	668	$8,279,930	$8,365,374
Salt Marsh			
Baseline	81	$676,091	$809,447
SLR 25cm	76	$632,848	$757,675
SLR 50cm	74	$620,939	$743,417

SLR 75cm	75	$627,548	$751,330
SLR 150cm	78	$653,392	$782,272
Beach/Dune			
Baseline	13	$41,459	$41,836
SLR 25cm	13	$39,002	$39,356
SLR 50cm	12	$35,616	$35,939
SLR 75cm	11	$32,919	$33,218
SLR 150cm	9	$26,559	$26,800
Uplands			
Baseline	97	$228,100	$228,100
SLR 25cm	90	$211,871	$211,871
SLR 50cm	82	$193,262	$193,262
SLR 75cm	73	$172,781	$172,781
SLR 150cm	51	$119,404	$119,404
Whole System			
Baseline	1,107	$28,029,798	$48,946,184
SLR 25cm	1,161	$29,419,821	$51,373,470
SLR 50cm	1,184	$30,003,952	$52,393,492
SLR 75cm	1,139	$28,848,345	$50,375,547
SLR 150cm	806	$20,414,163	$35,647,614

5 | LIMITATIONS

There are several limitations associated with the approach taken here to value natural resources within the Port Tidelands. Primary limitations that should be acknowledged include: data availability and transferability and scaling data to match the size of habitats within the Port's jurisdiction.

Data availability and transferability. While numerous case studies exist that provide primary valuation analysis using methods identified in this report other than benefit transfer, there is a gap in case studies specific to Southern California coastal lands and their resources. Additionally, currently available data does not uniformly cover the ecosystem services and habitats identified in this report. This decreases the relative accuracy in value ranges when comparing across habitats.

The transfer of data from other regions outside of Southern California can lead to a misrepresentation of the true value of natural resources within Port Tidelands. Conditions, such as local climate and neighboring land use patterns, will differ across regions and transferring values may not accurately reflect those in San Diego.

Scaling data. Scaling data from one or more study to reflect the size of habitats within the Port Tidelands may deviate from the true value of the Port's natural resources. This applies because of two conditions. In the first, the marginal benefits of some ecosystem services may not scale linearly. For instance, the marginal benefit of some ecosystem services may decrease as the size of the habitat that provides that service increases. Conversely, some ecosystem services may be most valuable when habitats are larger (e.g., habitat provision). Under the second condition, the make-up and extant of habitats within Port Tidelands is not explicitly known, especially when considering predicted acreage under various sea level rise scenarios. A recent analysis of Port habitats yielded greater insights into their current extant; however, how salt marsh was defined in that study may not match with how a salt marsh is defined in other case studies.

6 | CONCLUSION

This report summarizes the methods available to value natural resources within the Port of San Diego and establishes a framework to determine a range in values for four habitats, based on ecosystem services provided by each, using a benefit transfer method.

The four habitats identified here were evaluated by ICF consultants on behalf of the port and a set of ecosystem services were identified for each that fell into one of four categories. These categories include: provisioning, regulating, cultural, and supporting. A discussion on the types of goods and services that can be valued and how to value them was provided as a means to better understand how to translate non-monetary ecosystem services for natural resources into a dollar value.

While a preferred valuation framework was identified, current resource constraints of the Port (e.g., time) prevent the adoption of a fully comprehensive valuation assessment. The next best alternative, which significantly reduces the cost and time constraints of other methods, was select as the preferred path forward – a benefit transfer approach. Using this methodology, a literature review was conducted of the primary ecosystem services offered by the Port's habitats to establish a range in potential value.

Results of the literature review indicate a combined value of all Port natural resources to be between $40 million and $61 million currently. This range in values will change as certain habitats expand or recede in response to sea level rise. Under the most extreme sea level rise scenario (150cm), the value of Port Tidelands natural resources is projected to decrease to a range of $29 million to $45 million.

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Appendix J

CERP/MCAS Inconsistency Analyses

MARITIME CLEAN AIR STRATEGY	
Goals and Objectives	**Consistency Determination**
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 Port's two marine cargo terminal.	**Consistent.** The proposed project contains Mobility, Ecological, Economics, and Environmental Justice Elements' policies, and Development Standards that complement and support transitioning to 100% ZE Trucks. The proposed project would not obstruct the implementation of and would not be inconsistent with the Long-Term Goal for Trucks. **Policies** **Mobility** M Policy 2.2.1. Through CDPs issued by the District, permittees shall plan, design, and implement improvements to the mobility network that provide opportunities for efficient and sustainable goods movement. These improvements shall be developed in accordance with Chapter 5, Planning Districts, including any development standards within the applicable planning district or subdistrict. M Policy 2.2.2. Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero-emission goods movement mobility options and maritime equipment, and supportive infrastructure improvements, in alignment with District sustainability and maritime clean air strategies. M Policy 2.2.3. The District shall engage with stakeholders, such as railway companies, trucking companies, cargo and freight shipping lines, and service providers, to identify and implement feasible sustainable freight strategies in accordance with the District's environmental and operational strategies, plans, and regulations, as well as the State's sustainability objectives. **Ecology** ECO Policy 3.1.2. Permittees shall implement clean air action measures, which may include: a. Efficient buildings design features; b. Vehicles, vessels, and advanced technologies powered by alternative fuels or electric powered; c. Parking management programs; d. Alternative transportation programs; e. Energy efficient lighting; and f. Native tree planting and landscaping. ECO Policy 3.1.4. Permittees shall implement infrastructure and clean vessel technologies, for both in-transit and while at-berth, such as advancing alternative fuels and expansion of marine terminal electrification, when applicable. **Economics**

MARITIME CLEAN AIR STRATEGY	
Goals and Objectives	**Consistency Determination**
	ECON Policy 2.3.2. The District and permittees shall coordinate the investment in improvements to marine terminal and maritime industrial operations that improve functionality and efficiency through modernization of terminal infrastructure and equipment, including electrification that supports optimization of cargo movement and reduces emissions. **Environmental Justice** EJ Policy 3.2.2. Maritime development shall transition to clean, modern, and operationally efficient marine terminal facilities and working waterfront businesses based on feasibility and best available science. EJ Policy 3.2.3. Through CDPs issued by the District, permittees shall pursue electrification of marine terminal and working waterfront operations, including drayage trucks, prioritizing the facilities adjacent to Portside Communities, to reduce reliance on fossil fuels from mobile and portable sources, in alignment with related State and District goals. **Development Standards** Sustainable Freight and Shipping Methods PD 4.7 Development, including operations, shall implement the emissions reductions goals of the California Sustainable Freight Action Plan or similar, future plans by implementing the measures below. Such improvements may be planned, designed, and implemented by third parties through partnerships or leases with the District, subject to the discretion of BPC: a. Continue to implement a vessel speed reduction program for operations, occupants, tenants, and permittees at the Tenth Avenue Marine Terminal; and b. Require development on the terminal to implement electrification or other improvements to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include: 1. Developing a compilation of improvements, such as installation of electric infrastructure to support on-terminal cargo-handling equipment and shore power; 2. Developing on-site renewable energy production and battery storage consistent with State goals and requirements and preferably ahead of schedule, where feasible; 3. Developing infrastructure for zero-emission vehicles and trucks consistent with State goals and

MARITIME CLEAN AIR STRATEGY	
Goals and Objectives	**Consistency Determination**
	requirements and preferably ahead of schedule, where feasible; 4. Developing a program that phases in the use of zero-emission vehicles and trucks, including drayage trucks and specialized heavy trucks by District occupants, tenants, and permittees at the Tenth Avenue Marine Terminal consistent with State goals and requirements and preferably ahead of schedule, where feasible; and 5. Supporting implementation of pilot programs or demonstration projects that advance deployment of zero-emission equipment, vehicles, and trucks. Sustainable Shipyards PD 4.21. Development shall be required to invest in electrification or other improvements on-site to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include investment in a compilation of improvements, such as installation of electric infrastructure to support equipment and operations on-site. The following PMPU PEIR Mitigation Measure support the conclusion that the PMPU does not obstruct the attainment of the goals and objectives contained within the MCAS. **Mitigation Measures** In addition, implementation of MM-AQ-7 will ensure the feasibility of 100% ZE trucks is reviewed annually and becomes required, as soon as the District determines it is feasible. 100% ZE Truck trips by 2030 is five-years in advance of CARB regulations which may not be enough time for the trucking inventory in San Diego Region to fully convert to ZE Trucks. The District does not own or operate the heavy-duty trucks which service the marine terminals. Most District tenants do not own and operate the heavy-duty trucks that transport their cargo as most are owned and operated by independent tucking companies or individual truckers. Current cost of ZE heavy-duty trucks is three-times the cost of traditional diesel technology. ZE heavy-duty trucks presently are not widely commercially available, and the current technology is limited to short-range duty cycles (e.g. 150 miles or less). which identifies 15 feasibility factors, evaluated at the 130-mile and 300-mile range, contributing to the present infeasibility of this requirement. MM-AQ-7 is described in full within the Final PEIR, Volume 2, Section 4.2, *Air Quality and Health Risk*.

MARITIME CLEAN AIR STRATEGY	
Goals and Objectives	**Consistency Determination**
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% zero-emission (ZE), by 2030.	**Consistent.** The proposed project contains mitigation measures to reduce DPM emissions and use ZE or NZE CHE when feasible, in addition to the Mobility and Environmental Justice Elements' policies, and Development Standards that complement and support the transition to 100% zero-emissions cargo handling equipment. The proposed project would not obstruct the implementation of and would not be inconsistent with the Long-Term Goal for Cargo Handling Equipment. **Policies** **Mobility** M Policy 2.1.5. The District shall seek investment and grant opportunities for infrastructure, equipment, and technologies that enable the District's marine terminals to efficiently and sustainably transfer goods between waterside and landside. M Policy 2.2.1. Through CDPs issued by the District, permittees shall plan, design, and implement improvements to the mobility network that provide opportunities for efficient and sustainable goods movement. These improvements shall be developed in accordance with Chapter 5, Planning Districts, including any development standards within the applicable planning district or subdistrict. M Policy 2.2.2. Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero-emission goods movement mobility options and maritime equipment, and supportive infrastructure improvements, in alignment with District sustainability and maritime clean air strategies. M Policy 2.2.3. The District shall engage with stakeholders, such as railway companies, trucking companies, cargo and freight shipping lines, and service providers, to identify and implement feasible sustainable freight strategies in accordance with the District's environmental and operational strategies, plans, and regulations, as well as the State's sustainability objectives. **Environmental Justice** EJ Policy 3.2.2. Maritime development shall transition to clean, modern, and operationally efficient marine terminal facilities and working waterfront businesses based on feasibility and best available science. EJ Policy 3.2.3. Through CDPs issued by the District, permittees shall pursue electrification of marine terminal and working waterfront operations, including drayage trucks, prioritizing the facilities adjacent to Portside Communities, to reduce

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	reliance on fossil fuels from mobile and portable sources, in alignment with related State and District goals. **Development Standards** Sustainable Freight and Shipping Methods PD 4.7. Development, including operations, shall implement the emissions reductions goals of the California Sustainable Freight Action Plan or similar, future plans by implementing the measures below. Such improvements may be planned, designed, and implemented by third parties through partnerships or leases with the District, subject to the discretion of BPC: a. Continue to implement a vessel speed reduction program for operations, occupants, tenants, and permittees at the Tenth Avenue Marine Terminal; and b. Require development on the terminal to implement electrification or other improvements to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include: 1. Developing a compilation of improvements, such as installation of electric infrastructure to support on-terminal cargo-handling equipment and shore power; 2. Developing on-site renewable energy production and battery storage consistent with State goals and requirements and preferably ahead of schedule, where feasible; 3. Developing infrastructure for zero-emission vehicles and trucks consistent with State goals and requirements and preferably ahead of schedule, where feasible; 4. Developing a program that phases in the use of zero-emission vehicles and trucks, including drayage trucks and specialized heavy trucks by District occupants, tenants, and permittees at the Tenth Avenue Marine Terminal consistent with State goals and requirements and preferably ahead of schedule, where feasible; and 5. Supporting implementation of pilot programs or demonstration projects that advance deployment of zero-emission equipment, vehicles, and trucks. Sustainable Shipyards PD 4.21. Development shall be required to invest in electrification or other improvements on-site to reduce the reliance on fossil fuels, reduce criteria air pollutants and

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	greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include investment in a compilation of improvements, such as installation of electric infrastructure to support equipment and operations on-site. The following PMPU PEIR Mitigation Measures support the conclusion that the PMPU does not obstruct the attainment of the goals and objectives contained within the MCAS. **Mitigation Measures** In addition, implementation of MM-AQ-7 will ensure the feasibility of 100% ZE cargo handling equipment is reviewed annually and becomes required as soon as the District determines it is feasible. Additionally, MM-AQ-3 requires the implementation of other DPM reducing actions during proposed project construction. Providing a sustainable cargo network requires balancing economic, social and environmental priorities. Key components include maintaining a safe, secure, efficient, and reliable network that reduces air quality pollution and greenhouse gas emissions and minimizes impacts. The proposed project promotes the creation of a sustainable cargo network via the electrification of maritime equipment and mobility modes on Tidelands. Implementation of electrification includes the planning, monitoring, logistical updates, and infrastructure improvements that could facilitate electrification along the cargo network. 100% zero-emission Cargo Handling Equipment (CHE) by 2030 is five-years in advance of the Executive Order and may not be enough time to transition all types of CHE from diesel to ZE technologies. The District does not own or operate all of the pieces of CHE on the two marine cargo terminals; without discretionary actions that may result in air quality impacts, the District cannot require their use for existing or prospective tenants. However, some tenants have voluntarily begun to transition their equipment. In April 2022, Dole Produce (Port District Tenant at TAMT) procured five (5) new zero-emission yard trucks, which are used at the terminal to move containers. The Port is investing in ZE cargo handling equipment and its supporting infrastructure upgrades. On January 11, 2022, the Board of Port Commissioners approved the acquisition of two all-electric mobile harbor cranes with a procurement cost not-to-exceed $14,760,000 for use at Tenth Avenue Marine Terminal. The fully electric cranes would eliminate tailpipe emissions from the District's most polluting piece of equipment, the diesel-powered mobile harbor crane.

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	Please note that MM-AQ-3 and MM-AQ-7 are described in full within the Final PEIR, Volume 2, Section 4.2, *Air Quality and Health Risk*.
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 contains Mobility and Ecology Policies that complement and support transitioning to ZE/near-zero emission (NZE) technologies and/or other lower-emitting engines or alternative fuels. The proposed project would not obstruct the implementation of, and would not be inconsistent with the Long-Term Goal for Harbor Craft. **Policies** **Mobility** M Policy 1.1.7. Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero emission technologies and supportive infrastructure improvements for passenger-related oceangoing vessels and harbor craft that facilitate the movement of people in alignment with District sustainability and maritime clean air strategies. M Policy 2.1.4. The District shall require, where feasible, efficient and sustainable dockside operations for oceangoing vessels and freight-related harbor craft. M Policy 2.1.5. The District shall seek investment and grant opportunities for infrastructure, equipment, and technologies that enable the District's marine terminals to efficiently and sustainably transfer goods between waterside and landside. M Policy 2.2.8. Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero emission technologies and supportive infrastructure improvements for freight-related oceangoing vessels and harbor craft in alignment with District sustainability and maritime clean air strategies. **Ecology** ECO Policy 3.1.4. Permittees shall implement infrastructure and clean vessel technologies, for both in-transit and while at-berth, such as advancing alternative fuels and expansion of marine terminal electrification, when applicable. The following PMPU PEIR Mitigation Measures support the conclusion that the PMPU does not obstruct the attainment of the goals and objectives contained within the MCAS. **Mitigation Measures**

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	The proposed project contains Mobility and Ecology policies and two mitigation measures, MM-AQ-6 and MM-AQ-7, that complement and support transitioning Harbor Craft to ZE and NZE to reduce baseline emissions in half. The mitigation measure and policies relevant to this Long-Term Goal include actions, such as efficient dockside operations and achieving ZE and NZE for Harbor Craft. Emissions from Harbor Craft can be reduced in half provided the technology and funding to procure it and associated infrastructure are available. Currently ZE harbor craft are not commercially available and are customer designed and built for the needs and requirements of its operator. MM-AQ-6 and MM-AQ-7 are described in full within the Final PEIR, Volume 2, Section 4.2, *Air Quality and Health Risk*.
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.	**Consistent.** The proposed project contains Mobility, Environmental Justice, Ecological, and Safety and Resilience Policies, as well as Development Standards that complement and support transitioning to ZE/near-zero emission (NZE) technologies in a manner that meets operational needs and reduces emissions. These Policies and Development Standards do not obstruct the implementation of the MCAS and are not inconsistent with the Long-Term Goal for the Port Fleet. **Policies** **Mobility** M Policy 1.1.7. Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero emission technologies and supportive infrastructure improvements for passenger-related oceangoing vessels and harbor craft that facilitate the movement of people in alignment with District sustainability and maritime clean air strategies. M Policy 2.1.2. The District shall encourage the development of versatile infrastructure that can adapt to future needs and support multiple modes of travel for the transfer of freight between waterside and landside uses. M Policy 2.1.4. The District shall require, where feasible, efficient and sustainable dockside operations for oceangoing vessels and freight-related harbor craft. M Policy 2.1.5. The District shall seek investment and grant opportunities for infrastructure, equipment, and technologies that enable the District's marine terminals to efficiently and sustainably transfer goods between waterside and landside. **Environmental Justice**

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	EJ Policy 3.2.1. The District and its tenants shall participate in community air quality monitoring, such as supporting ongoing monitoring efforts that incorporate community involvement, and develop maritime clean air strategies to reduce criteria pollutant emissions from industrial and maritime sources, especially near the Portside communities. EJ Policy 3.2.2. Maritime development shall transition to clean, modern, and operationally efficient marine terminal facilities and working waterfront businesses based on feasibility and best available science. **Ecology** ECO Policy 3.1.3. In cooperation with regional, state, and federal agencies, the District shall advance maritime clean air strategies to help improve local air quality. **Safety & Resiliency** SR Policy 1.3.1. The District shall provide public safety facilities on water and on land for the HPD to maintain public safety capabilities in alignment with the Port Act. SR Policy 3.1.2. The District shall encourage, support, and plan to deploy net zero carbon emission projects and technologies on Tidelands. **Development Standards** Sustainable Freight and Shipping Methods PD 4.7. Development, including operations, shall implement the emissions reductions goals of the California Sustainable Freight Action Plan or similar, future plans by implementing the measures below. Such improvements may be planned, designed, and implemented by third parties through partnerships or leases with the District, subject to the discretion of BPC: a. Continue to implement a vessel speed reduction program for operations, occupants, tenants, and permittees at the Tenth Avenue Marine Terminal; and b. Require development on the terminal to implement electrification or other improvements to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include: 1. Developing a compilation of improvements, such as installation of electric infrastructure to support on-terminal cargo-handling equipment and shore power; 2. Developing on-site renewable energy production and battery storage consistent with State goals and

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	requirements and preferably ahead of schedule, where feasible; 3. Developing infrastructure for zero-emission vehicles and trucks consistent with State goals and requirements and preferably ahead of schedule, where feasible; 4. Developing a program that phases in the use of zero-emission vehicles and trucks, including drayage trucks and specialized heavy trucks by District occupants, tenants, and permittees at the Tenth Avenue Marine Terminal consistent with State goals and requirements and preferably ahead of schedule, where feasible; and 5. Supporting implementation of pilot programs or demonstration projects that advance deployment of zero-emission equipment, vehicles, and trucks. Sustainable Shipyards PD 4.21. Development shall be required to invest in electrification or other improvements on-site to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include investment in a compilation of improvements, such as installation of electric infrastructure to support equipment and operations on-site. The following PMPU PEIR Mitigation Measures support the conclusion that the PMPU does not obstruct the attainment of the goals and objectives contained within the MCAS. **Mitigation Measures** The proposed project contains mitigation measures (notably MM-AQ-2, MM-AQ-6, and MM-AQ-7) and Mobility, Ecological, Environmental Justice, Safety and Resiliency and Development Standards policies that complement and support transitioning the Port-owned fleet and equipment to ZE and NZE, including charging infrastructure for electric vehicles. The proposed project's planning horizon is not in conflict with and would not obstruct the District from implementing a transition to ZE and NZE equipment for the Port-owned fleet, earlier than 2050. The transition of District owned fleet and equipment to ZE, or NZE vehicles and equipment is underway and will continue as funding and ZE or NZE technology becomes available. MM-AQ-2 requires the implementation of air quality Best Management Practices during construction of all future PMPU-consistent projects. MM-AQ-6 requires the use of modern harbor craft and dredgers during construction activities.

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	MM-AQ-7 requires the District to conduct an Annual Technology Review to promote the use of new emission control technologies during future construction- and operation-related activities. Please note that MM-AQ-2, MM-AQ-6, and MM-AQ-7 are described in full within the Final PEIR, Volume 2, Section 4.2, *Air Quality and Health Risk*.
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.	**Consistent.** The proposed project includes Mobility, Ecology, Environmental Justice policies, as well as Development Standards that require the transition to shore power, the utilization of technologies that do not rely on fossil fuels, and slowing the rate of travel (Vessel Speed Reduction) to and from port facilities. Each of these actions would decrease the emissions arising from ocean-going vessels while at berth or in transit. The District is actively electrifying the two marine cargo terminals and the cruise ship terminal with infrastructure to provide shore power for ocean-going vessels that are capable of connecting to an electrical hook-up. Shore power infrastructure is in place at TAMT, is being expanded at the cruise ship terminal and is being designed for installation at the NCMT (note the NCMT is not within with proposed project). These Policies and Development Standards do not obstruct the implementation of the MCAS and are not inconsistent with the Long-Term Goal for Ocean Going Vessels. **Policies** **Mobility** M Policy 2.1.4. The District shall require, where feasible, efficient and sustainable dockside operations for oceangoing vessels and freight-related harbor craft. M Policy 2.1.5. The District shall seek investment and grant opportunities for infrastructure, equipment, and technologies that enable the District's marine terminals to efficiently and sustainably transfer goods between waterside and landside. M Policy 2.2.2. Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero-emission goods movement mobility options and maritime equipment, and supportive infrastructure improvements, in alignment with District sustainability and maritime clean air strategies. M Policy 2.2.8. Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero emission technologies and supportive infrastructure improvements for freight-related oceangoing vessels and harbor craft in

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	alignment with District sustainability and maritime clean air strategies **Ecology** ECO Policy 3.1.3. In cooperation with regional, state, and federal agencies, the District shall advance maritime clean air strategies to help improve local air quality. ECO Policy 3.1.4. Permittees shall implement infrastructure and clean vessel technologies, for both in-transit and while at-berth, such as advancing alternative fuels and expansion of marine terminal electrification, when applicable. **Environmental Justice** EJ Policy 3.2.2. Maritime development shall transition to clean, modern, and operationally efficient marine terminal facilities and working waterfront businesses based on feasibility and best available science. **Development Standards** Sustainable Freight and Shipping Methods PD 4.7. Development, including operations, shall implement the emissions reductions goals of the California Sustainable Freight Action Plan or similar, future plans by implementing the measures below. Such improvements may be planned, designed, and implemented by third parties through partnerships or leases with the District, subject to the discretion of BPC: a. Continue to implement a vessel speed reduction program for operations, occupants, tenants, and permittees at the Tenth Avenue Marine Terminal; and b. Require development on the terminal to implement electrification or other improvements to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include: 1. Developing a compilation of improvements, such as installation of electric infrastructure to support on-terminal cargo-handling equipment and shore power; 2. Developing on-site renewable energy production and battery storage consistent with State goals and requirements and preferably ahead of schedule, where feasible; 3. Developing infrastructure for zero-emission vehicles and trucks consistent with State goals and requirements and preferably ahead of schedule, where feasible;

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	4. Developing a program that phases in the use of zero-emission vehicles and trucks, including drayage trucks and specialized heavy trucks by District occupants, tenants, and permittees at the Tenth Avenue Marine Terminal consistent with State goals and requirements and preferably ahead of schedule, where feasible; and 5. Supporting implementation of pilot programs or demonstration projects that advance deployment of zero-emission equipment, vehicles, and trucks. PD 4.8. Expand shore power capabilities at the Tenth Avenue Marine Terminal as adjacent utility upgrades occur.
Health Risk	
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 not obstruct the implementation of, and would not be inconsistent with, Health Goal 1. The proposed project represents a modernization of the current Port Master Plan and includes policies related to Mobility, Environmental Justice, Ecology, and Economics, , as well as Development Standards and mitigation measures, aimed at improving community health by reducing emissions and lessening exposure to poor air quality within the Portside Communities. The inclusion of the District's first Environmental Justice Element into the proposed project indicates the District's commitment to improving the air quality and participation within the Portside Communities. **Policies** **Mobility** M Policy 2.1.5. The District shall seek investment and grant opportunities for infrastructure, equipment, and technologies that enable the District's marine terminals to efficiently and sustainably transfer goods between waterside and landside. M Policy 2.2.1. Through CDPs issued by the District, permittees shall plan, design, and implement improvements to the mobility network that provide opportunities for efficient and sustainable goods movement. These improvements shall be developed in accordance with Chapter 5, Planning Districts, including any development standards within the applicable planning district or subdistrict. M Policy 2.2.2. Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero-emission goods movement mobility options and maritime equipment, and supportive infrastructure improvements, in alignment with District sustainability and maritime clean air strategies. M Policy 2.2.3. The District shall engage with stakeholders, such as railway companies, trucking companies, cargo and

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	freight shipping lines, and service providers, to identify and implement feasible sustainable freight strategies in accordance with the District's environmental and operational strategies, plans, and regulations, as well as the State's sustainability objectives. **Environmental Justice** EJ Policy 3.2.1 The District and its tenants shall participate in community air quality monitoring, such as supporting ongoing monitoring efforts that incorporate community involvement, and develop maritime clean air strategies to reduce criteria pollutant emissions from industrial and maritime sources, especially near the Portside communities. EJ Policy 3.2.2. Maritime development shall transition to clean, modern, and operationally efficient marine terminal facilities and working waterfront businesses based on feasibility and best available science. EJ Policy 3.2.3. Through CDPs issued by the District, permittees shall pursue electrification of marine terminal and working waterfront operations, including drayage trucks, prioritizing the facilities adjacent to Portside Communities, to reduce reliance on fossil fuels from mobile and portable sources, in alignment with related State and District goals. **Ecology** ECO Policy 3.1.2 Permittees shall implement clean air action measures, which may include: a. Efficient buildings design features; b. Vehicles, vessels, and advanced technologies powered by alternative fuels or electric powered; c. Parking management programs; d. Alternative transportation programs; e. Energy efficient lighting; and f. Native tree planting and landscaping. ECO Policy 3.1.4 Permittees shall implement infrastructure and clean vessel technologies, for both in-transit and while at-berth, such as advancing alternative fuels and expansion of marine terminal electrification, when applicable. **Economics** ECON Policy 2.3.2 The District and permittees shall coordinate the investment in improvements to marine terminal and maritime industrial operations that improve functionality and efficiency through modernization of terminal infrastructure and equipment, including electrification that supports optimization of cargo movement and reduces emissions.

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	Development Standards Sustainable Freight and Shipping Methods PD 4.7. Development, including operations, shall implement the emissions reductions goals of the California Sustainable Freight Action Plan or similar, future plans by implementing the measures below. Such improvements may be planned, designed, and implemented by third parties through partnerships or leases with the District, subject to the discretion of BPC: a. Continue to implement a vessel speed reduction program for operations, occupants, tenants, and permittees at the Tenth Avenue Marine Terminal; and b. Require development on the terminal to implement electrification or other improvements to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include: 1. Developing a compilation of improvements, such as installation of electric infrastructure to support on-terminal cargo-handling equipment and shore power; 2. Developing on-site renewable energy production and battery storage consistent with State goals and requirements and preferably ahead of schedule, where feasible; 3. Developing infrastructure for zero-emission vehicles and trucks consistent with State goals and requirements and preferably ahead of schedule, where feasible; 4. Developing a program that phases in the use of zero-emission vehicles and trucks, including drayage trucks and specialized heavy trucks by District occupants, tenants, and permittees at the Tenth Avenue Marine Terminal consistent with State goals and requirements and preferably ahead of schedule, where feasible; and 5. Supporting implementation of pilot programs or demonstration projects that advance deployment of zero-emission equipment, vehicles, and trucks. Sustainable Shipyards PD 4.21. Development shall be required to invest in electrification or other improvements on-site to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include investment in

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	a compilation of improvements, such as installation of electric infrastructure to support equipment and operations on-site. The following PMPU PEIR Mitigation Measures support the conclusion that the PMPU does not obstruct the attainment of the goals and objectives contained within the MCAS. **Mitigation Measures:** The proposed project includes mitigation measures to be required, when appropriate, during project construction and operation, in addition to Mobility and Environmental Justice policies guiding the District to reduce its reliance on fossil fuels and to accomplish the transition to electric or other near zero or zero emissions power sources. MM-AQ-2 requires the implementation of air quality Best Management Practices during construction of all future PMPU-consistent projects. MM-AQ-3 requires a future project proponent to implement diesel emission-reduction measures during construction of all future PMPU-consistent projects. MM-AQ-6 requires the use of modern harbor craft and dredgers during construction activities . MM-AQ-7 requires the District to conduct an Annual Technology Review to promote the use of new emission control technologies during future construction- and operation-related activities. MM-AQ-2, MM-AQ-3, MM-AQ-6, and MM-AQ-7, which are described in full within the Final PEIR, Volume 2, Section 4.2, *Air Quality and Health Risk*.
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	The proposed project would not obstruct the implementation of, and would not be inconsistent with, Health Objective 1 completion as the objective has been met. The proposed project includes Economics, Ecology, and Environmental Justice Elements' policies, as well as mitigation measures, that require coordination with agencies to improve air quality by working with other agencies to study, monitor, or take action to protect the Portside Community's air quality, health and safety. The Board of Port Commissioners received the Final HRA Report following a presentation by staff in June 2022, whereafter the report was made available to the public. At this point in time, the BPC has not elected to adopt an emission reduction goal nor a cancer risk reduction goal. The District has prepared an HRA for the two marine cargo terminals, so the goal to identify existing health risk levels is feasible and has been met. The HRA established the Baseline Health Risk from the MCAS 2019 Emissions Inventory. The HRA further forecasted the reduction in health risk from the reduced

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inform a cancer risk reduction goal.	emissions anticipated from implementing key MCAS objectives related to equipment and vehicle transition to ZE and NZE as well as installation of electrical infrastructure. **Policies** **Economics** Econ Policy 2.3.2. The District and permittees shall coordinate the investment in improvements to marine terminal and maritime industrial operations that improve functionality and efficiency through modernization of terminal infrastructure and equipment, including electrification that supports optimization of cargo movement and reduces emissions. Listed below are three Ecology (ECO) Policies that address the District's goal of increasing air quality benefits to the Portside Community and decreasing negative health risks due to toxic air contaminants, such as DPM. **Ecology** ECO Policy 3.1.1. Permittees shall implement programs and activities that reduce exposure to toxic air contaminants and criteria air pollutants in and adjacent to Tidelands. ECO Policy 3.1.2. Permittees shall implement clean air action measures, which may include: a. Efficient buildings design features; b. Vehicles, vessels, and advanced technologies powered by alternative fuels or electric powered; c. Parking management programs; d. Alternative transportation programs; e. Energy efficient lighting; and f. Native tree planting and landscaping. ECO Policy 3.1.4. Permittees shall implement infrastructure and clean vessel technologies, for both in-transit and while at-berth, such as advancing alternative fuels and expansion of marine terminal electrification, when applicable. **Environmental Justice** EJ Policy 3.2.1. The District and its tenants shall participate in community air quality monitoring, such as supporting ongoing monitoring efforts that incorporate community involvement, and develop maritime clean air strategies to reduce criteria pollutant emissions from industrial and maritime sources, especially near the Portside communities. EJ Policy 3.2.2. Maritime development shall transition to clean, modern, and operationally efficient marine terminal facilities and working waterfront businesses based on feasibility and best available science.

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	EJ Policy 3.2.4. Support actions and measures taken by tenants and occupants on Tidelands that improve environmental conditions and advance long-term sustainability. The following PMPU PEIR Mitigation Measures support the conclusion that the PMPU does not obstruct the attainment of the goals and objectives contained within the MCAS. **Mitigation Measures** Four air quality mitigation measures require, and Ecology, Economics, and Environmental Justice Elements' policies encourage, the continued transition away from diesel powered equipment and vehicles as well as installing supportive infrastructure. These mitigation measures include MM-AQ-2, MM-AQ-3, MM-AQ-5, and MM-AQ-6. MM-AQ-2 requires the implementation of air quality Best Management Practices during construction of all future PMPU-consistent projects. MM-AQ-3 requires a future project proponent to implement diesel emission-reduction measures during construction of all future PMPU-consistent projects. MM-AQ-5 requires a future project proponent to use low-VOC interior and exterior coatings during construction of all PMPU-consistent projects. MM-AQ-6 requires the use of modern harbor craft and dredgers during construction activities. MM-AQ-2, MM-AQ-3, MM-AQ-5, and MM-AQ-6 are all described in full within the Final PEIR, Volume 2, Section 4.2, *Air Quality and Health Risk*.
Health Objective 2: Assist the San Diego Air Pollution Control District and the California Air Resources Board (CARB) 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.	**Consistent.** The proposed project would not obstruct the implementation of, and would not be inconsistent with Health Objective 2 completion as the objective has been met. The proposed project includes Ecology and Environmental Justice Elements' policies that require coordination with agencies to improve air quality by working with other agencies to study, monitor, or take action to protect the Portside Community's air quality, health and safety. Following completion of the Preliminary HRA in December 2021, Port staff met regularly with CARB and San Diego APCD staff to ensure both modeling efforts – the update to the Port's HRA, and CARB's San Diego Regional & Portside Community Modeling Presentation (which is CARB's cumulative health risk analysis, also referred to as the CARB's Regional Air Toxics Modeling) – were using the best and most accurate data and modeling parameters. Collaborative meetings continued throughout 2022 following these initial coordination meetings. In addition to soliciting ways to clarify and/or improve the

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	Port's HRA, Port staff provided CARB with the 2019 MCAS Emissions Inventory that includes data and information related to the Port's marine cargo terminal operations and nearby ferry activity. The Preliminary HRA and now Final HRA are available for CARB and others to use for separate modeling and other associated type analyses. **Policies** **Ecology** ECO Policy 4.1.5. The District shall engage with regional and State partners to advance the development of statewide clean air goals and regulations to improve air quality. **Environmental Justice** EJ Policy 3.1.1. The District shall work to reduce the cumulative health burdens on neighboring communities, especially disadvantaged communities, in developing, adopting, implementing, and enforcing environmental laws, regulations, and policies. EJ Policy 3.1.2. The District shall collaborate with adjacent jurisdictions, occupants, tenants, permittees, and community stakeholders to provide transition zone areas adjacent to Tidelands between maritime industrial, commercial, and residential uses as well as other sensitive receptors in adjacent disadvantaged communities. EJ Policy 3.1.3. The District may collaborate with stakeholders from adjacent disadvantaged communities and adjacent jurisdictions to identify improvements that may facilitate improved pedestrian access between Tidelands and adjacent disadvantaged communities.
Health Objective 3: Work collaboratively with the San Diego Air Pollution Control District (SDAPCD) on the SDAPCD's Portside Air Quality Improvement and 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	**Consistent.** The proposed project would not obstruct the implementation of, and would not be inconsistent with Health Objective 3**.** The proposed project contains Ecology and Environmental Justice Elements' polices directing the Port to work collaboratively with other agencies to lessen the poor air quality burdens of the Portside Communities. In October 2021, the Board of Port Commissioners approved a resolution to enter into a Memorandum of Agreement (MOA) with the San Diego County SDAPCD to contribute $103,000 of one-time funding from the District's Maritime Industrial Impact Fund (MIIF) to the SDAPCD PAIR Program. The intent of the PAIR Program is to provide new portable air filtration devices and indoor air monitoring systems to selected residences within the Portside Community at no cost to participants. All new portable air filtration devices and indoor air monitoring systems were to be procured by the SDAPCD

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Portside Community residences.	and will reduce/remove pollutants found within participating residences to improve indoor air quality. **Policies** **Ecology** ECO Policy 4.1.5. The District shall engage with regional and State partners to advance the development of statewide clean air goals and regulations to improve air quality. **Environmental Justice** EJ Policy 3.1.1. The District shall work to reduce the cumulative health burdens on neighboring communities, especially disadvantaged communities, in developing, adopting, implementing, and enforcing environmental laws, regulations, and policies. EJ Policy 3.1.2. The District shall collaborate with adjacent jurisdictions, occupants, tenants, permittees, and community stakeholders to provide transition zone areas adjacent to Tidelands between maritime industrial, commercial, and residential uses as well as other sensitive receptors in adjacent disadvantaged communities. EJ Policy 3.1.3. The District may collaborate with stakeholders from adjacent disadvantaged communities and adjacent jurisdictions to identify improvements that may facilitate improved pedestrian access between Tidelands and adjacent disadvantaged communities.
Health Objective 4: Collaborate with the San Diego Air Pollution Control District (SDAPCD) as it evaluates and considers developing a new rule to control emissions from indirect sources, in accordance with the timelines and dates established by the SDAPCD.	**Consistent.** The proposed project would not obstruct the implementation of, and would not be inconsistent with Health Objective 4. The proposed project contains Ecology and Environmental Justice Elements' policies directed toward collaboration and development of equitable regulations. SDAPCD is in the early stages of Rule Making and District staff meet regularly with SDAPCD staff to coordinate and communicate on several clean air initiatives including the development of new or reconsideration of existing regulations implemented by APCD. This Objective has been and continues to be met. **Policies** **Ecology** ECO Policy 4.1.5. The District shall engage with regional and State partners to advance the development of statewide clean air goals and regulations to improve air quality. **Environmental Justice** EJ Policy 3.1.1. The District shall work to reduce the cumulative health burdens on neighboring communities, especially disadvantaged communities, in developing, adopting,

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	implementing, and enforcing environmental laws, regulations, and policies. EJ Policy 3.1.2. The District shall collaborate with adjacent jurisdictions, occupants, tenants, permittees, and community stakeholders to provide transition zone areas adjacent to Tidelands between maritime industrial, commercial, and residential uses as well as other sensitive receptors in adjacent disadvantaged communities. EJ Policy 3.1.3. The District may collaborate with stakeholders from adjacent disadvantaged communities and adjacent jurisdictions to identify improvements that may facilitate improved pedestrian access between Tidelands and adjacent disadvantaged communities**.**
Community	
Community Goal 1: Enrich the AB 617 Portside Community through Education, Engagement, and Urban Greening.	**Consistent.** The proposed project would not obstruct the implementation of, and would not be inconsistent with Community Goal 1. The Port District's Environmental Education Program (EEP) supports local organizations that provide unique curriculum pertaining to the environmental health and protection of the San Diego Bay. The EEP was developed to educate students, teachers, and communities throughout the San Diego Bay watershed about pollution prevention, environmental stewardship, healthy ecosystems, and natural resources connected with the San Diego Bay. As a component of the EEP, the District established the School Partnership Program to ensure environmental education reaches students from each of the five member cities. In May 2022, the Board of Port Commissioners adopted a resolution authorizing agreements with twelve environmental education programs to educate an estimated 75,000 students on pollution prevention and natural resources within the San Diego Bay watershed in the total amount of $850,000 over three years. The proposed project's Environmental Justice policies address ecological education, which include activities with the residents of the Portside Community that provide air quality educational materials relating to the District's plans and actions to improve the health of those residents. The PMPU, PD4 urban greening Development Standards are also shown below, and show that the PMPU supports this MCAS Goal. **Policies** **Environmental Justice** EJ Policy 2.1.2. Continue to support environmental education opportunities for communities and schools in Portside and Tidelands Border Communities, other disadvantaged

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	communities, and relevant indigenous communities and tribes in the region. EJ Policy 2.1.3. The District may support or participate in urban greening opportunities in adjacent disadvantaged communities, where feasible and consistent with requirements of the Port Act. EJ Policy 2.2.1. Ensure that the expressed concerns of people from disadvantaged and indigenous communities are acknowledged and considered as part of the District's planning and development decisions. EJ Policy 2.2.2. Engage people from disadvantaged communities and relevant indigenous communities and tribes that may be impacted by upcoming activities or development on Tidelands to encourage meaningful participation in the District's planning and development decisions, including but not limited to participation in discussions to identify mitigation options for projects that may impact them. EJ Policy 3.2.5. The District shall collaborate with the Portside Community, indigenous communities, and adjacent disadvantaged communities on District climate-related adaptation and resiliency planning to address existing and future environmental issues stemming from climate-related hazards. Further, within the PMPU, Planning District 4 (adjacent to Portside Community), the Cesar Chavez Park Subdistrict, the proposed project includes a Planned Improvement that would modify Cesar Chavez Parkway to accommodate vehicular traffic with connected pedestrian, bicycle, and other mobility enhancements. That Planned Improvement also includes working with adjoining jurisdictions to support urban greening efforts, such as tree canopy and walkability enhancements. PD4.11. Modify Cesar Chavez Parkway to accommodate vehicular traffic while allowing for pedestrian, bicycle, and mobility enhancements. This includes partnering with adjacent jurisdictions to support urban greening efforts, such as walkability improvements, enhanced tree canopy, and stormwater treatment opportunities, consistent with the City of San Diego's planned Bay to Park link along Cesar Chavez Parkway between 25th Street and Cesar Chavez Park. Additionally, a new Development Standard has been added to the PMPU, PD4 - Cesar Chavez Park Subdistrict that states: PD4.19. Develop additional urban greening features to Cesar Chavez Park to establish an enhanced buffer between the park and industrial uses, where feasible.

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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.	**Consistent.** The proposed project would not obstruct the implementation of, and would not be inconsistent with Community Objective 1. District Staff are committed to keeping the community engaged and educated on MCAS implementation with established groups and meetings. The proposed project contains Environmental Justice and Ecology policies that provide for stakeholders in other agencies and the Portside Community to discuss future input and involvement in the District's decision making processes related to emission reduction projects. Projects supported and implemented by the District regularly include input from established processes such as through the public participation requirements of CEQA and the California Coastal Act and their implementing regulations, including but not limited to scoping meetings, public review and comment on CEQA documentation, and public hearings on proposed projects. **Policies** **Environmental Justice** EJ Policy 3.1.1. The District shall work to reduce the cumulative health burdens on neighboring communities, especially disadvantaged communities, in developing, adopting, implementing, and enforcing environmental laws, regulations, and policies. EJ Policy 3.1.2. The District shall collaborate with adjacent jurisdictions, occupants, tenants, permittees, and community stakeholders to provide transition zone areas adjacent to Tidelands between maritime industrial, commercial, and residential uses as well other sensitive receptors in adjacent disadvantaged communities. EJ Policy 3.2.1. The District and its tenants shall participate in community air quality monitoring, such as supporting ongoing monitoring efforts that incorporate community involvement, and develop maritime clean air strategies to reduce criteria pollutant emissions from industrial and maritime sources, especially near the Portside communities. EJ Policy 3.2.3. Through CDPs issued by the District, permittees shall pursue electrification of marine terminal and working waterfront operations, including drayage trucks, prioritizing the facilities adjacent to Portside Communities, to reduce reliance on fossil fuels from mobile and portable sources, in alignment with related State and District goals. **Ecology** ECO Goal 4 also addresses public participation in District decisions to improve the environmental quality of the San

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	Diego Bay that involves air quality, as well as water quality. Goal 4 requires "Collaborative stewardship for the ecological health of San Diego Bay." ECO Objective 4.1. Partner with regional agencies on shared priorities, describes the types of collaboration and coordination the District would conduct. ECO Policy 4.1.5. The District shall engage with regional and State partners to advance the development of statewide clean air goals and regulations to improve air quality.
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.	**Consistent.** The proposed project does not obstruct the implementation of, and is not inconsistent with, Community Objective 2. District staff are committed to keeping the community engaged and educated on MCAS implementation with established groups and meetings. This is an objective anticipating ongoing efforts by District staff rather than a one-time informational meeting. District staff can and do provide periodic updates regarding a number of environmental initiatives to interest groups, governing bodies and the Board of Port Commissioners. For example, District staff has provided updates on tree canopy and Vessel Seed Reduction (VSR) to the AB617 Steering Committee in November 2021 and VSR and HRA results at the Maritime Stakeholders Forum in December 2021. District staff presented updates to the AB 617 Portside Community Steering Committee and the National City, City Council on January 18, 2022. Staff updated the Barrio Logan Community Planning Group on January 19, 2022 and presented the Final HRA August 17, 2022. Staff presented the Final HRA to the MCAS/CERP Subcommittee August 18, 2022 and the full Community Steering Committee August 23, 2022. The proposed project's EJ Policy 3.2.1 specifies monitoring to assist in understanding air quality emissions levels and subsequent projects to those reduce emissions. **Policy** **Environmental Justice** EJ Policy 3.2.1. The District and its tenants shall participate in community air quality monitoring, such as supporting ongoing monitoring efforts that incorporate community involvement, and develop maritime clean air strategies to reduce criteria pollutant emissions from industrial and maritime sources, especially near the Portside communities.
Community Objective 3: Port staff will convene a group of stakeholders to explore increasing tree canopy in the Portside	**Consistent.** The proposed project would not obstruct the implementation of, and would not be inconsistent with Community Objective 3. With sponsorship from the CA Department of Forestry and in collaboration with Urban Core, 20 new trees will be planted outside the open field area at

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Community and continue to work with groups like Urban Corps of San Diego County to advance this objective.	Cesar Chavez park in late 2022. Some of this effort will coincide with the Field Turf Rehabilitation efforts at the field also located at the park. A group of local park users (stakeholders) has been engaged for feedback on these efforts, in addition to the community outreach conducted by Urban Core that preceded the Ports involvement. The proposed project contains Environmental Justice policy aimed at greening the urban environment with particular attention to disadvantaged communities. **Policies:** **Environmental Justice** EJ Policy 2.1.3. The District may support or participate in urban greening opportunities in adjacent disadvantaged communities, where feasible and consistent with requirements of the Port Act. Further, within the PMPU, Planning District 4 (adjacent to Portside Community), the Cesar Chavez Park Subdistrict, the proposed project includes a Planned Improvement that would modify Cesar Chavez Parkway to accommodate vehicular traffic with connected pedestrian, bicycle, and other mobility enhancements. That Planned Improvement also includes working with adjoining jurisdictions to support urban greening efforts, such as tree canopy and walkability enhancements. PD4.11. Modify Cesar Chavez Parkway to accommodate vehicular traffic while allowing for pedestrian, bicycle, and mobility enhancements. This includes partnering with adjacent jurisdictions to support urban greening efforts, such as walkability improvements, enhanced tree canopy, and stormwater treatment opportunities, consistent with the City of San Diego's planned Bay to Park link along Cesar Chavez Parkway between 25th Street and Cesar Chavez Park. Additionally, a new Development Standard has been added to the PMPU, PD4 - Cesar Chavez Park Subdistrict that states: PD4.19. Develop additional urban greening features to Cesar Chavez Park to establish an enhanced buffer between the park and industrial uses, where feasible. .
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.	**Consistent.** The proposed project would not obstruct the implementation of, and would not be inconsistent with Community Objective 4**.** The Port District's Environmental Education Program (EEP) supports local organizations that provide unique curriculum pertaining to the environmental health and protection of the San Diego Bay. The EEP was developed to educate students, teachers, and communities throughout the San Diego Bay

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	watershed about pollution prevention, environmental stewardship, healthy ecosystems, and natural resources connected with the San Diego Bay. Expansion of programs at the District is at the discretion of the Board of Port Commissioners. As a component of the EEP, the District established the School Partnership Program to ensure environmental education reaches students from each of the five member cities. In May 2022, the Board of Port Commissioners adopted a resolution authorizing agreements with twelve environmental education programs to educate an estimated 75,000 students on pollution prevention and natural resources within the San Diego Bay watershed in the total amount of $850,000 over three years. The following Environmental Justice policies support continued education program opportunities. **Policies:** **Environmental Justice** EJ Policy 2.1.1. Continue to work with partners promote and expand awareness of recreational opportunities for the people from disadvantaged communities and relevant indigenous communities and tribes to explore Tidelands. EJ Policy 2.1.2. Continue to support environmental education opportunities for communities and schools in Portside and Tidelands Border Communities, other disadvantaged communities, and relevant indigenous communities and tribes in the region. EJ Policy 2.1.3. The District may support or participate in urban greening opportunities in adjacent disadvantaged communities, where feasible and consistent with requirements of the Port Act
Community Objective 5: Work with Portside Community residents and stakeholders to complete a comprehensive update in 2025 to the MCAS, including goals and objectives for 2026 to 2030 that are **S**pecific, **M**easurable, **A**ttainable, **R**elevant, **T**imebound, **I**nclusive, and **E**quitable that reflects updated technology, regulations, and market conditions.	**Consistent.** The proposed project would not obstruct the implementation of, and would not be inconsistent with Community Objective 5. The proposed project's Environmental Justice Policy 3.2.1 specifies monitoring to assist in understanding air quality emissions levels and subsequent projects to reduce emissions. Port District staff anticipate updating the MCAS, including status of its goals and objectives in 2025. The robust outreach and continuous engagement with the community, SDACPD, CARB and established stakeholder groups will support its update in 2025 and is supported by Ecology policy 3.1.3. **Policies:** **Environmental Justice** EJ Policy 3.2.1. The District and its tenants shall participate in community air quality monitoring, such as supporting ongoing

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	monitoring efforts that incorporate community involvement and develop maritime clean air strategies to reduce criteria pollutant emissions from industrial and maritime sources, especially near the Portside communities. **Ecology** ECO Policy 3.1.3. In cooperation with regional, state, and federal agencies, the District shall advance maritime clean air strategies to help improve local air quality.
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.	**Consistent.** The proposed project would not obstruct the implementation of, and would not be inconsistent with Cargo Handling Equipment Goal 1. The replacement of CHE powered with diesel to ZE, or NZE technology will occur over time as funding and ZE/NZE CHE become commercially available. Some types of ZE CHE are currently available while others, such as Harbor Cranes must be ordered, and purpose built. The District and tenants continue to replace diesel powered equipment as technology and financial abilities allow, as this transition is not mandated by permit or legislation; the transition is voluntary. In April 2022, Dole Produce (Port District Tenant at TAMT) procured five (5) new zero-emission yard trucks, which are used at the terminal to move containers. On January 11, 2022, the Board of Port Commissioners approved the acquisition of two all-electric mobile harbor cranes with a procurement cost not-to-exceed $14,760,000 for use at Tenth Avenue Marine Terminal. The fully electric cranes would eliminate tailpipe emissions from the District's most polluting piece of equipment, the diesel-powered mobile harbor crane. The proposed project includes Mobility, Environmental Justice and Development Standards policies guiding the District to reduce its reliance on fossil fuels for cargo handling equipment and to accomplish the transition of that equipment to electric or other near zero or zero emissions power sources. **Policies** **Mobility** M Policy 2.1.5. The District shall seek investment and grant opportunities for infrastructure, equipment, and technologies that enable the District’s marine terminals to efficiently and sustainably transfer goods between waterside and landside. M Policy 2.2.1. Through CDPs issued by the District, permittees shall plan, design, and implement improvements to the mobility network that provide opportunities for efficient and

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	sustainable goods movement. These improvements shall be developed in accordance with Chapter 5, Planning Districts, including any development standards within the applicable planning district or subdistrict. M Policy 2.2.2. Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero-emission goods movement mobility options and maritime equipment, and supportive infrastructure improvements, in alignment with District sustainability and maritime clean air strategies. M Policy 2.2.3. The District shall engage with stakeholders, such as railway companies, trucking companies, cargo and freight shipping lines, and service providers, to identify and implement feasible sustainable freight strategies in accordance with the District's environmental and operational strategies, plans, and regulations, as well as the State's sustainability objectives. **Environmental Justice** EJ Policy 3.2.2. Maritime development shall transition to clean, modern, and operationally efficient marine terminal facilities and working waterfront businesses based on feasibility and best available science. EJ Policy 3.2.3. Through CDPs issued by the District, permittees shall pursue electrification of marine terminal and working waterfront operations, including drayage trucks, prioritizing the facilities adjacent to Portside Communities, to reduce reliance on fossil fuels from mobile and portable sources, in alignment with related State and District goals. **Development Standards** Sustainable Freight and Shipping Methods PD 4.7. Development, including operations, shall implement the emissions reductions goals of the California Sustainable Freight Action Plan or similar, future plans by implementing the measures below. Such improvements may be planned, designed, and implemented by third parties through partnerships or leases with the District, subject to the discretion of BPC: a. Continue to implement a vessel speed reduction program for operations, occupants, tenants, and permittees at the Tenth Avenue Marine Terminal; and b. Require development on the terminal to implement electrification or other improvements to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include:

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	1. Developing a compilation of improvements, such as installation of electric infrastructure to support on-terminal cargo-handling equipment and shore power; 2. Developing on-site renewable energy production and battery storage consistent with State goals and requirements and preferably ahead of schedule, where feasible; 3. Developing infrastructure for zero-emission vehicles and trucks consistent with State goals and requirements and preferably ahead of schedule, where feasible; 4. Developing a program that phases in the use of zero-emission vehicles and trucks, including drayage trucks and specialized heavy trucks by District occupants, tenants, and permittees at the Tenth Avenue Marine Terminal consistent with State goals and requirements and preferably ahead of schedule, where feasible; and 5. Supporting implementation of pilot programs or demonstration projects that advance deployment of zero-emission equipment, vehicles, and trucks. Sustainable Shipyards PD 4.21. Development shall be required to invest in electrification or other improvements on-site to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include investment in a compilation of improvements, such as installation of electric infrastructure to support equipment and operations on-site.
Cargo Handling Equipment Objective 1: Reduce emissions from cargo handling equipment by approximately 90% for nitrogen oxides (NOX), 80% for diesel particulate matter (DPM), and 50% for carbon dioxide equivalent (CO2e) below 2019 levels by January 1, 2025.	**Consistent.** The proposed project would not obstruct the implementation of, and would not be inconsistent with Cargo Handling Equipment Objective 1. **Policies** **Ecology** ECO Policy 3.1.1. Permittees shall implement programs and activities that reduce exposure to toxic air contaminants and criteria air pollutants in and adjacent to Tidelands. ECO Policy 3.1.2. Permittees shall implement clean air action measures, which may include: a. Efficient buildings design features; b. Vehicles, vessels, and advanced technologies powered by alternative fuels or electric powered; c. Parking management programs;

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	d. Alternative transportation programs; e. Energy efficient lighting; and f. Native tree planting and landscaping. **Environmental Justice** EJ Policy 3.2.1. The District and its tenants shall participate in community air quality monitoring, such as supporting ongoing monitoring efforts that incorporate community involvement, and develop maritime clean air strategies to reduce criteria pollutant emissions from industrial and maritime sources, especially near the Portside communities. EJ Policy 3.2.2. Maritime development shall transition to clean, modern, and operationally efficient marine terminal facilities and working waterfront businesses based on feasibility and best available science. EJ Policy 3.2.4. Support actions and measures taken by tenants and occupants on Tidelands that improve environmental conditions and advance long-term sustainability. As found above, the proposed project's Draft Program Environmental Impact Report (PEIR) provides for air quality (AQ) mitigation measures to decrease the proposed project's potential to emit criteria pollutants that exceed required thresholds. These measures are found next, however, not all measures below are described in detail, as they may be found above in Health Objective 1. The following PMPU PEIR Mitigation Measures support the conclusion that the PMPU does not obstruct the attainment of the goals and objectives contained within the MCAS. **Mitigation Measures** Achieving these quantitative reductions by 2025 will be difficult as there is not enough time to coordinate with tenants and other stakeholders (owners and operators and manufacturers of CHE) to convert enough equipment to ZE or NZE to meet the percentage emission reductions by 2025; many pieces of CHE have not reached the end of their lifecycle use; the financial requirements to replace diesel-powered equipment is unknown and speculative; not all pieces of CHE are commercially available and far exceed the current cost of traditionally diesel-powered equipment. Nonetheless, reductions of criteria pollutants and toxic air contaminants are addressed through air quality mitigation measures listed below and are further supported through Ecology and Environmental Justice policies. Applicable mitigation measures will ensure that future projects employ cargo handling equipment will participate in meeting the emission reduction objectives.

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	MM-AQ-2 requires the implementation of air quality Best Management Practices during construction of all future PMPU-consistent projects. MM-AQ-5 requires a future project proponent to use low-VOC interior and exterior coatings during construction of all PMPU-consistent projects. MM-AQ-9 requires a future project proponent to incorporate sustainability measures related to water and energy use and the recycling of waste in their project. MM-AQ-11 requires a project proponent to install electric vehicle charging infrastructure. These mitigation measures include MM-AQ-2, MM-AQ-5, MM-AQ-9, and MM-AQ-11, which are described in full within the Final PEIR, Volume 2, Section 4.2, *Air Quality and Health Risk*.
Harbor Craft	
Harbor Craft Goal 1: Reduce emissions from Harbor Craft by advancing emerging zero emission and advanced technologies.	**Consistent.** The proposed project would not obstruct the implementation of, and would not be inconsistent with Harbor Craft Goal 1. **Policies** **Mobility** M Policy 2.1.4. The District shall require, where feasible, efficient and sustainable dockside operations for oceangoing vessels and freight-related harbor craft. M Policy 2.2.8. Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero emission technologies and supportive infrastructure improvements for freight-related oceangoing vessels and harbor craft in alignment with District sustainability and maritime clean air strategies. The following PMPU PEIR Mitigation Measures support the conclusion that the PMPU does not obstruct the attainment of the goals and objectives contained within the MCAS. **Mitigation Measures** Through Mobility policies and the imposition of mitigation measure MM-AQ-6, District permittees as well as the District can increase the amount of zero and near-zero emissions harbor craft and associated technologies on Tidelands that will support achievement of the goal. It is important to note however, the District does not own nor operate Harbor Craft therefore the District lacks direct control to convert harbor craft, except for vessels used by the Harbor Police. ZE/NZE harbor craft are not commercially available and

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	must be custom designed and built, such as the Crowley E-Tug currently under design and construction. MM-AQ-6 is described in full within the Final PEIR, Volume 2, Section 4.2, *Air Quality and Health Risk*.
Harbor Craft Objective 1: Facilitate implementation of the first all-electric tugboat in the United States by June 30, 2026.	**Consistent.** The proposed project does not obstruct the implementation of the MCAS and is not inconsistent with Harbor Craft Objective 1. The Port District continues to be an active partner with Crowley Marine Services in the design, development and deployment of North Americas first zero-emission electric tugboat and associated landside charging infrastructure, which is expected to be operational in late 2023. In addition to MM-AQ-6 calling for the use of modern harbor craft and dredgers during construction to avoid emissions, the proposed project has Economics and Mobility Elements' policies, and Development Standards that support development of the new zero emission tugboat. **Policies** **Economics** ECON Policy 2.3.2. The District and permittees shall coordinate the investment in improvements to marine terminal and maritime industrial operations that improve functionality and efficiency through modernization of terminal infrastructure and equipment, including electrification that supports optimization of cargo movement and reduces emissions. **Mobility** M Policy 2.1.4. The District shall require, where feasible, efficient and sustainable dockside operations for oceangoing vessels and freight-related harbor craft. M Policy 2.2.8. Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero emission technologies and supportive infrastructure improvements for freight-related oceangoing vessels and harbor craft in alignment with District sustainability and maritime clean air strategies **Development Standards** Sustainable Freight and Shipping Methods PD4.7. Development, including operations, shall implement the emissions reductions goals of the California Sustainable Freight Action Plan or similar, future plans by implementing the measures below. Such improvements may be planned, designed, and implemented by third parties through partnerships or leases with the District, subject to the discretion of BPC:

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	a. Continue to implement a vessel speed reduction program for operations, occupants, tenants, and permittees at the Tenth Avenue Marine Terminal; and b. Require development on the terminal to implement electrification or other improvements to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include: 1. Developing a compilation of improvements, such as installation of electric infrastructure to support on-terminal cargo-handling equipment and shore power; 2. Developing on-site renewable energy production and battery storage consistent with State goals and requirements and preferably ahead of schedule, where feasible; 3. Developing infrastructure for zero-emission vehicles and trucks consistent with State goals and requirements and preferably ahead of schedule, where feasible; 4. Developing a program that phases in the use of zero-emission vehicles and trucks, including drayage trucks and specialized heavy trucks by District occupants, tenants, and permittees at the Tenth Avenue Marine Terminal consistent with State goals and requirements and preferably ahead of schedule, where feasible; and 5. Supporting implementation of pilot programs or demonstration projects that advance deployment of zero-emission equipment, vehicles, and trucks. PD4.8. Expand shore power capabilities at the Tenth Avenue Marine Terminal as adjacent utility upgrades occur. The following PMPU PEIR Mitigation Measures support the conclusion that the PMPU does not obstruct the attainment of the goals and objectives contained within the MCAS. **Mitigation Measures** MM-AQ-6 requires the use of modern harbor craft and dredgers during construction activities and is described in full within the Final PEIR, Volume 2, Section 4.2, *Air Quality and Health Risk*.
Harbor Craft Objective 2: Identify suitable projects to assist with advancing the State's goals for commercial harbor craft by supporting:	**Consistent.** There are three (3) commercial fuel docks in the San Diego Bay and District staff has been in contact with each and informed them of the upcoming rules. Each has indicated it is ready for the switch in fuel type. District staff has confirmed that there is an available supply of renewable diesel to facilitate a switch from traditional diesel to renewable diesel by January

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a. Existing fuel docks with the transition to renewable diesel by January 1, 2023; b. Installation and maintenance of landside shore power for all facilities that receive more than 50 visits per year by 2024; c. All new excursion vessels transition to zero emission capable hybrid technologies starting on January 1, 2025; and d. 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.	1, 2023, the date which the SDAPCD rule governing fuel usage goes into effect. The switch does not require any infrastructure upgrades. District staff is engaged with the short-run ferry operator to collaborate on public funding opportunities to assist with the financial burden of converting the existing diesel engines to ZE technology, including the necessary landside infrastructure for charging capabilities. These efforts will also assist the transition of additional excursion vessels. Both short-run ferries and excursion vessels have time to plan, design, and seek funding to transition their existing vessels and operations in anticipation of the Harbor Craft objective in 2025 and 2026. TAMT is already electrified with shore power capabilities; the NCMT, while electrification is under design, is outside the purview of the proposed project. The District does not own nor operate excursion vessels or the short-run ferries and thus lack legal control of the vessels to force their conversion to ZE. The proposed project's Mobility and Economics Elements' policies, and Development Standards present a long-term plan that would govern District operations and development potential to year 2050. These policies will ensure the proposed project does not obstruct achievement of the objective. These Policies and Development Standards do not obstruct the implementation of the MCAS and are not inconsistent with Harbor Craft Objective 2. **Policies** **Mobility** M Policy 2.2.2. Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero-emission goods movement mobility options and maritime equipment, and supportive infrastructure improvements, in alignment with District sustainability and maritime clean air strategies. M Policy 2.2.8. Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero emission technologies and supportive infrastructure improvements for freight-related oceangoing vessels and harbor craft in alignment with District sustainability and maritime clean air strategies. **Economics** ECON Policy 2.3.2. The District and permittees shall coordinate the investment in improvements to marine terminal and maritime industrial operations that improve functionality and

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	efficiency through modernization of terminal infrastructure and equipment, including electrification that supports optimization of cargo movement and reduces emissions. **Development Standards** **Sustainable Freight and Shipping Methods** PD4.7. Development, including operations, shall implement the emissions reductions goals of the California Sustainable Freight Action Plan or similar, future plans by implementing the measures below. Such improvements may be planned, designed, and implemented by third parties through partnerships or leases with the District, subject to the discretion of BPC: a. Continue to implement a vessel speed reduction program for operations, occupants, tenants, and permittees at the Tenth Avenue Marine Terminal; and b. Require development on the terminal to implement electrification or other improvements to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include: 1. Developing a compilation of improvements, such as installation of electric infrastructure to support on-terminal cargo-handling equipment and shore power; 2. Developing on-site renewable energy production and battery storage consistent with State goals and requirements and preferably ahead of schedule, where feasible; 3. Developing infrastructure for zero-emission vehicles and trucks consistent with State goals and requirements and preferably ahead of schedule, where feasible; 4. Developing a program that phases in the use of zero-emission vehicles and trucks, including drayage trucks and specialized heavy trucks by District occupants, tenants, and permittees at the Tenth Avenue Marine Terminal consistent with State goals and requirements and preferably ahead of schedule, where feasible; and 5. Supporting implementation of pilot programs or demonstration projects that advance deployment of zero-emission equipment, vehicles, and trucks. PD4.8. Expand shore power capabilities at the Tenth Avenue Marine Terminal as adjacent utility upgrades occur.

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Trucks	
Truck Goal 1: Improve the air quality in the Portside Community by accelerating the implementation of zero emission/near zero emission trucks.	**Consistent.** The proposed project would not obstruct the implementation of, and would not be inconsistent with achieving Truck Goal 1. The proposed project includes the Mobility and Environmental Justice Elements' policies and mitigation measures listed below that complement Truck Goal 1 and ensure PMPU implementation will not obstruct implementing the MCAS and associated goals and objectives. **Policies** **Environmental Justice** EJ Policy 3.2.3. Through CDPs issued by the District, permittees shall pursue electrification of marine terminal and working waterfront operations, including drayage trucks, prioritizing the facilities adjacent to Portside Communities, to reduce reliance on fossil fuels from mobile and portable sources, in alignment with related State and District goals. **Mobility** M Policy 2.2.3. The District shall engage with stakeholders, such as railway companies, trucking companies, cargo and freight shipping lines, and service providers, to identify and implement feasible sustainable freight strategies in accordance with the District's environmental and operational strategies, plans, and regulations, as well as the State's sustainability objectives. The following PMPU PEIR Mitigation Measures support the conclusion that the PMPU does not obstruct the attainment of the goals and objectives contained within the MCAS. **Mitigation Measures** MM-AQ-2 requires the implementation of air quality Best Management Practices during construction of all future PMPU-consistent projects. MM-AQ-3 requires a future project proponent to implement diesel emission-reduction measures during construction of all future PMPU-consistent projects. MM-AQ-7 requires the District to conduct an Annual Technology Review to promote the use of new emission control technologies during future construction- and operation-related activities. MM-AQ-8 requires a project-level environmental review if a future development project will have impacts that were not identified and mitigated in the Final PEIR. MM-AQ-2, MM-AQ-3, MM-AQ-7, and MM-AQ-8 are all described in full within the Final PEIR, Volume 2, Section 4.2, *Air Quality and Health Risk*.

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Goals and Objectives	**Consistency Determination**
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.	**Consistent.** The proposed project would not obstruct the implementation of and would not conflict with Truck Objective 1A. The District does not own or operate the region's heavy-duty truck fleet. Zero Emission Heavy-duty trucks are not commercially available, and the technology is currently limited to short-range duty cycles (150 miles), and due to the lack of regional charging infrastructure, long-range duty cycles are not currently supportable. In June 2022, staff completed the Final Heavy-Duty Zero Emission Truck Transition Plan and presented it to the Board of Port Commissioners, which identified pathway(s) to meet the MCAS zero emission truck goals for 2026 and 2030. Based on the truck cohort that travels to and from TAMT, that Truck Transition Plan outlined a targeted pathway consisting of replacing 86 to 153 diesel truck trips with zero emission truck trips to attain 40% zero emission truck trips by 2026. The Truck Transition Plan also recommends the following strategies to help meet the 2026 goal: • Providing technical assistance to truck operators; • Develop and present a Short-Haul Zero Emission Truck Program for the Board's consideration by the end of 2022. In addition, pursue outside funding opportunities to offer subsidies, with priority to trucks identified in the Targeted Pathway. • Assisting in the planning, design, and implementation of zero emission supporting infrastructure; and • Supporting and promoting policy goals to increase adoption of zero emission trucks. Advancing progress towards the District's long-term goal in 2030 would involve the following framework: • Developing a truck registry to track trips and monitor progress; • Conducting biennial updates to the Plan; and • Collecting data for new projects located at the marine cargo terminals. In addition to completing the development of the Truck Transition Plan, the following Safety & Resiliency and Ecology Elements' policies, and Development Standards will ensure the objective is not obstructed by implementation of the proposed project.

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Goals and Objectives	**Consistency Determination**
	Policies **Safety & Resiliency** SR Policy 3.1.2. The District shall encourage, support, and plan to deploy net zero carbon emission projects and technologies on Tidelands. **Ecology** ECO Policy 3.1.5. The District shall explore financing programs in coordination with regional, State, and Federal partners to implement recommended clean air measures. **Development Standards** Sustainable Shipyards PD4.21. Development shall be required to invest in electrification or other improvements on-site to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include investment in a compilation of improvements, such as installation of electric infrastructure to support equipment and operations on-site.
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.	**Consistent.** The proposed project would not obstruct the implementation of, and would not be inconsistent with Truck Objective 1B. A short-haul, on-road, Zero Emission Truck Program is under development and anticipated to be ready for the Board's consideration within the first quarter of 2023. The proposed project contains Safety and Resiliency and Ecology Elements' policies and Development Standards that support the District's transition to near-zero and zero-emission trucks **Policies** **Safety & Resiliency** SR Policy 3.1.2. The District shall encourage, support, and plan to deploy net zero carbon emission projects and technologies on Tidelands. **Ecology** ECO Policy 3.1.5. The District shall explore financing programs in coordination with regional, State, and Federal partners to implement recommended clean air measures. **Development Standards** Sustainable Shipyards PD 4.21. Development shall be required to invest in electrification or other improvements on-site to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include investment in

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Goals and Objectives	**Consistency Determination**
	a compilation of improvements, such as installation of electric infrastructure to support equipment and operations on-site.
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.	**Consistent.** The proposed project would not obstruct the implementation of, and would not be inconsistent with Truck Objective 1C and encourages coordination among Federal and State agencies to reduce toxic air emissions and achieve deployment of zero to near-zero emission vehicles. The following Ecology Element policy will support implementing this MCAS objective. **Policy** **Ecology** ECO Policy 4.1.5. The District shall engage with regional and State partners to advance the development of statewide clean air goals and regulations to improve air quality
Truck Objective 1D: In collaboration with the California Air Resources Board, the Port will utilize a truck registry or other system to summarize annual truck trips to the Port's marine cargo terminals and measure progress to achieve Port goals.	**Consistent.** The proposed project does not obstruct the implementation of and is not inconsistent with Truck Objective 1D. The following Ecology Element policies encourage coordination among Federal and State agencies to improve the District's air emissions and achieve zero to near-zero emission vehicles. Port Staff is developing the Truck Registry system and anticipates its deployment by June 2023. **Policies** **Ecology** ECO Policy 3.1.3. In cooperation with regional, state, and federal agencies, the District shall advance maritime clean air strategies to help improve local air quality. ECO Policy 4.1.5. The District shall engage with regional and State partners to advance the development of statewide clean air goals and regulations to improve air quality
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.	**Consistent.** The proposed project would not obstruct the implementation of, and would not be inconsistent with Truck Objective 1E. District staff regularly provide updates on clean air initiatives to the Board and various stakeholder groups. The first biennial emissions report is scheduled to occur on or before October 2023 as directed by the Objective. Further, the following Ecology Element policies direct coordination with regional partners to advance the transition to zero emissions technologies.

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	Policies **Ecology** ECO Policy 3.1.3. In cooperation with regional, state, and federal agencies, the District shall advance maritime clean air strategies to help improve local air quality. ECO Policy 4.1.5. The District shall engage with regional and State partners to advance the development of statewide clean air goals and regulations to improve air quality
Truck Goal 2: Facilitate the deployment of infrastructure to support the transition to zero emission truck trips to the Port's marine cargo terminals.	**Consistent.** The proposed project would not obstruct the implementation of, and would not be inconsistent with Truck Goal 2 and directs participation from permittees to reduce air emissions and use zero and near-zero vehicles, trucks and equipment. The direction is provided by the Ecology and Environmental Justice Element policies, below. **Policies** **Ecology** ECO Policy 3.1.4. Permittees shall implement infrastructure and clean vessel technologies, for both in-transit and while at-berth, such as advancing alternative fuels and expansion of marine terminal electrification, when applicable. **Environmental Justice** EJ Policy 3.2.3. Through CDPs issued by the District, permittees shall pursue electrification of marine terminal and working waterfront operations, including drayage trucks, prioritizing the facilities adjacent to Portside Communities, to reduce reliance on fossil fuels from mobile and portable sources, in alignment with related State and District goals.
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.	**Consistent.** The proposed project would not obstruct the implementation of, and would not be inconsistent with Truck Objective 2A which is supported by Economic, Ecology and Environmental Justice Elements' policies listed below. Additionally, the District issued an RFI (5/23 – 7/25/2022) seeking information to facilitate deployment of infrastructure to support the transition to zero-emission (ZE) truck trips to and from the District's marine cargo terminals in San Diego and National City. The RFI's objective is to identify opportunities to deploy public-facing infrastructure for both battery electric and hydrogen fuel cell ZE technologies for Heavy Duty (HD) trucks. The RFI identified four (4) potential sites on Tidelands as well as four additional sites throughout the region. The District is also interested in opportunities on property not controlled by the District located throughout San Diego County along high-volume freight corridors. These areas include, but are not limited to, areas adjacent to District Tidelands, Otay Mesa, and

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	along the Interstates (I)-5, I-8, and I-15. Staff intends to take the results of the RFI to the BPC in the Fall of 2022 and receive direction on how to proceed. Please note that these efforts also support CERP Action E4: Increase number of truck parking and staging facilities with electric capabilities. **Policies** **Economics** ECON Policy 2.1.2. The District shall coordinate with permittees to provide infrastructure that supports a mix of water and land uses, including the needs of established Tidelands industries and emerging Public Trust–consistent businesses, while also providing environmental benefit. ECON Policy 2.3.2. The District and permittees shall coordinate the investment in improvements to marine terminal and maritime industrial operations that improve functionality and efficiency through modernization of terminal infrastructure and equipment, including electrification that supports optimization of cargo movement and reduces emissions. **Ecology** ECO Policy 3.1.4. Permittees shall implement infrastructure and clean vessel technologies, for both in-transit and while at-berth, such as advancing alternative fuels and expansion of marine terminal electrification, when applicable. **Environmental Justice** EJ Policy 3.2.3. Through CDPs issued by the District, permittees shall pursue electrification of marine terminal and working waterfront operations, including drayage trucks, prioritizing the facilities adjacent to Portside Communities, to reduce reliance on fossil fuels from mobile and portable sources, in alignment with related State and District goals.
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.	**Consistent.** The proposed project does not obstruct the implementation of and is not inconsistent with Truck Objective 2B. The proposed project contains Environmental Justice Element policies and Development Standards that encourage coordination on truck routes, infrastructure, and improvement of air quality. **Policies** **Environmental Justice** EJ Policy 3.1.2. The District shall collaborate with adjacent jurisdictions, occupants, tenants, permittees, and community stakeholders to provide transition zone areas adjacent to Tidelands between maritime industrial, commercial, and residential uses as well as other sensitive receptors in adjacent disadvantaged communities.

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	EJ Policy 3.1.3. The District may collaborate with stakeholders from adjacent disadvantaged communities and adjacent jurisdictions to identify improvements that may facilitate improved pedestrian access between Tidelands and adjacent disadvantaged communities. EJ Policy 3.2.1. The District and its tenants shall participate in community air quality monitoring, such as supporting ongoing monitoring efforts that incorporate community involvement and develop maritime clean air strategies to reduce criteria pollutant emissions from industrial and maritime sources, especially near the Portside communities. **Development Standards** Sustainable Shipyards PD4.21. Development shall be required to invest in electrification or other improvements on-site to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include investment in a compilation of improvements, such as installation of electric infrastructure to support equipment and operations on-site.
Truck Goal 3: Support the designated truck route to avoid truck impacts on the local community.	**Consistent.** The proposed project would not obstruct the implementation of, and would not be inconsistent with Truck Goal 3. The City of National City has designated Truck Routes throughout their jurisdiction, including the streets used to access Tidelands facilities and recreation areas. The City of San Diego also has a designated truck route principally focused on truck movements between the interstate freeway system and the working waterfront along San Diego Bay. Truck routes within neighboring jurisdictions are enforced by that jurisdiction, in this case, the City of National City and the City of San Diego. Additionally, adherence to all laws, which includes designated truck routes, is a standard condition of Coastal Development Permits issued by the Port. Additionally, the Port has an established Truck Route Violation Hotline for residents to express concerns over truck traffic issues or other issues related to marine terminals. A recorded message is played in English and Spanish, and then the caller can leave a detailed message regarding truck issues. The caller is asked to leave details such as the name of the trucking company and the vehicle license number or container number. The hotline also tracks Tenth Avenue Marine Terminal noise complaints related to cargo and construction activities. Hotline# (619) 686-8100.

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	The proposed project contains the following Development Standards policies that directly relate to the use of designated truck routes. **Development Standards** Truck Routes PD4.22. District occupants, tenants, and permittees shall use designated truck routes to, from, and through the planning district. PD4.23. Coordinate with the City of San Diego to ensure that truck route requirements and truck parking prohibitions in adjacent neighborhoods are followed.
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 residential neighborhoods by leveraging technology to support dedicated lanes and signal prioritization.	**Consistent.** The proposed project would not obstruct the implementation of, and would not be inconsistent with Truck Objective 3A. The Port District remains engaged and committed to the Harbor Drive Multimodal Corridor Study led by Caltrans District 11. District staff attended the last Project Development Team meeting hosted by Caltrans in May 2022 whereat project milestone dates were discussed and revised as needed. Environmental review is anticipated to begin fall of 2022. The majority of proposed project improvements are not within Tidelands therefore the District is not leading the effort and lacks jurisdiction along Harbor Drive to implement the project. Nonetheless, the proposed project contains Mobility Element policies and Development Standards that are supportive of this project. **Policies** **Mobility** M Policy 2.1.1. The District shall prioritize the use of existing land on terminals for maritime uses and operations, including but not limited to navigational facilities and shipping industries. M Policy 2.1.5. The District shall seek investment and grant opportunities for infrastructure, equipment, and technologies that enable the District's marine terminals to efficiently and sustainably transfer goods between waterside and landside. M Policy 2.1.7. The District, in coordination with permittees of development, tenants, and adjacent jurisdictions, shall maintain and develop improvements to linkages between the marine terminals and landside networks, including but not limited to roadways, rail, pipelines, and the electrical grid, to enable efficient movement of goods along those networks and to support the working waterfront. M Policy 2.2.1. Through CDPs issued by the District, permittees shall plan, design, and implement improvements to the mobility network that provide opportunities for efficient and

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	sustainable goods movement. These improvements shall be developed in accordance with *Chapter 5, Planning Districts*, including any development standards within the applicable planning district or subdistrict. M Policy 2.2.2. Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero-emission goods movement mobility options and maritime equipment, and supportive infrastructure improvements, in alignment with District sustainability and maritime clean air strategies. **Development Standards** Roadway Improvements PD4.1. Modify the entire segment of northbound and southbound Harbor Drive within the District's jurisdiction by: a. Providing a multi-use pathway; and b. Including one "flexible" lane in each direction that is dedicated for trucks, transit buses, and/or shuttles with an information technology system (or similar technology) and signalization improvements that can be modified or adjusted during peak and nonpeak hours between the Tenth Avenue Marine Terminal's back gate and Cesar Chavez Parkway. PD4.2. Coordinate with transportation agencies and adjacent jurisdictions to reconfigure portions of Harbor Drive outside the District's jurisdiction to implement roadway improvements consistent with the improvements described in PD4.1 supporting improved efficiency and safety for vehicular traffic, goods movement, and pedestrian and bicycle facilities. PD4.3. Coordinate with adjacent jurisdictions to provide appropriate signage to identify designated truck routes. PD4.4. Coordinate with the City of San Diego to ensure that truck route requirements and truck parking prohibitions in adjacent neighborhoods are followed.
Fleet	
Fleet Goal 1: Update Port purchasing and/or procurement policies to acquire zero emission vehicles and best available alternative fuels or technologies.	**Consistent.** The proposed project would not obstruct the implementation of, and would not be inconsistent with Fleet Goal 1. In addition to mitigation measures GHG-2 requiring the purchase of zero emission fleet vehicles, the proposed project includes Mobility and Economics Elements' policies and Development Standards that support the District's transition to zero emission fleet vehicles.

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	Policies **Mobility** M Policy 2.1.2. The District shall encourage the development of versatile infrastructure that can adapt to future needs and support multiple modes of travel for the transfer of freight between waterside and landside uses. M Policy 2.1.5. The District shall seek investment and grant opportunities for infrastructure, equipment, and technologies that enable the District's marine terminals to efficiently and sustainably transfer goods between waterside and landside. **Economics** ECON Policy 1.2.3. The District shall research and pursue appropriate grant funding, and partnerships, from regional, State, and federal sources to advance the District's mission. **Development standards** Sustainable Freight and Shipping Methods PD4.7. Development, including operations, shall implement the emissions reductions goals of the California Sustainable Freight Action Plan or similar, future plans by implementing the measures below. Such improvements may be planned, designed, and implemented by third parties through partnerships or leases with the District, subject to the discretion of BPC: a. Continue to implement a vessel speed reduction program for operations, occupants, tenants, and permittees at the Tenth Avenue Marine Terminal; and b. Require development on the terminal to implement electrification or other improvements to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include: 1. Developing a compilation of improvements, such as installation of electric infrastructure to support on-terminal cargo-handling equipment and shore power; 2. Developing on-site renewable energy production and battery storage consistent with State goals and requirements and preferably ahead of schedule, where feasible; 3. Developing infrastructure for zero-emission vehicles and trucks consistent with State goals and requirements and preferably ahead of schedule, where feasible; 4. Developing a program that phases in the use of zero-emission vehicles and trucks, including drayage trucks

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	and specialized heavy trucks by District occupants, tenants, and permittees at the Tenth Avenue Marine Terminal consistent with State goals and requirements and preferably ahead of schedule, where feasible; and 5. Supporting implementation of pilot programs or demonstration projects that advance deployment of zero-emission equipment, vehicles, and trucks. PD4.8. Expand shore power capabilities at the Tenth Avenue Marine Terminal as adjacent utility upgrades occur. The following PMPU PEIR Mitigation Measures support the conclusion that the PMPU does not obstruct the attainment of the goals and objectives contained within the MCAS. **Mitigation Measures** MM-GHG-2 requires the purchase of alternative fuel, electric, or hybrid vehicles and equipment and is described in full within the Final PEIR, Volume 2, Section 4.6, *Greenhouse Gas Emissions and Energy*.
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.	**Consistent.** The proposed project would not obstruct the implementation of, and would not be inconsistent with Fleet Objective 1A. In addition to mitigation measures GHG-2 requiring the purchase of zero emission fleet vehicles, the proposed project includes Mobility and Economics policies and Development Standards that support the District's transition to zero emission fleet vehicles. **Policies** **Mobility** M Policy 2.1.2. The District shall encourage the development of versatile infrastructure that can adapt to future needs and support multiple modes of travel for the transfer of freight between waterside and landside uses. M Policy 2.1.5. The District shall seek investment and grant opportunities for infrastructure, equipment, and technologies that enable the District's marine terminals to efficiently and sustainably transfer goods between waterside and landside. **Economics** ECON Policy 1.2.3. The District shall research and pursue appropriate grant funding, and partnerships, from regional, State, and federal sources to advance the District's mission. **Development Standards** Sustainable Freight and Shipping Methods PD 4.7. Development, including operations, shall implement the emissions reductions goals of the California Sustainable Freight Action Plan or similar, future plans by implementing the measures below. Such improvements may be planned,

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	designed, and implemented by third parties through partnerships or leases with the District, subject to the discretion of BPC: a. Continue to implement a vessel speed reduction program for operations, occupants, tenants, and permittees at the Tenth Avenue Marine Terminal; and b. Require development on the terminal to implement electrification or other improvements to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include: 1. Developing a compilation of improvements, such as installation of electric infrastructure to support on-terminal cargo-handling equipment and shore power; 2. Developing on-site renewable energy production and battery storage consistent with State goals and requirements and preferably ahead of schedule, where feasible; 3. Developing infrastructure for zero-emission vehicles and trucks consistent with State goals and requirements and preferably ahead of schedule, where feasible; 4. Developing a program that phases in the use of zero-emission vehicles and trucks, including drayage trucks and specialized heavy trucks by District occupants, tenants, and permittees at the Tenth Avenue Marine Terminal consistent with State goals and requirements and preferably ahead of schedule, where feasible; and 5. Supporting implementation of pilot programs or demonstration projects that advance deployment of zero-emission equipment, vehicles, and trucks. PD4.8. Expand shore power capabilities at the Tenth Avenue Marine Terminal as adjacent utility upgrades occur. The following PMPU PEIR Mitigation Measures support the conclusion that the PMPU does not obstruct the attainment of the goals and objectives contained within the MCAS. **Mitigation Measures** MM-GHG-2 requires the purchase of alternative fuel, electric, or hybrid vehicles and equipment and is described in full within the Final PEIR, Volume 2, Section 4.6, *Greenhouse Gas Emissions and Energy*.
Fleet Objective 1B: Create a zero emission vehicle transition plan in Fiscal Year	**Consistent.** The proposed project would not obstruct the implementation of, and would not be inconsistent with Fleet Objective 1B. In addition to mitigation measures GHG-2

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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.	requiring the purchase of zero emission fleet vehicles, the proposed project includes Mobility and Economics policies, and Development Standards policies that support the District's transition to zero emission fleet vehicles. **Policies** **Mobility** M Policy 2.1.2. The District shall encourage the development of versatile infrastructure that can adapt to future needs and support multiple modes of travel for the transfer of freight between waterside and landside uses. M Policy 2.1.5. The District shall seek investment and grant opportunities for infrastructure, equipment, and technologies that enable the District's marine terminals to efficiently and sustainably transfer goods between waterside and landside. **Economics** ECON Policy 1.2.3. The District shall research and pursue appropriate grant funding, and partnerships, from regional, State, and federal sources to advance the District's mission. **Development Standards** Sustainable Freight and Shipping Methods PD4.7. Development, including operations, shall implement the emissions reductions goals of the California Sustainable Freight Action Plan or similar, future plans by implementing the measures below. Such improvements may be planned, designed, and implemented by third parties through partnerships or leases with the District, subject to the discretion of BPC: a. Continue to implement a vessel speed reduction program for operations, occupants, tenants, and permittees at the Tenth Avenue Marine Terminal; and b. Require development on the terminal to implement electrification or other improvements to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include: 1. Developing a compilation of improvements, such as installation of electric infrastructure to support on-terminal cargo-handling equipment and shore power; 2. Developing on-site renewable energy production and battery storage consistent with State goals and requirements and preferably ahead of schedule, where feasible; 3. Developing infrastructure for zero-emission vehicles and trucks consistent with State goals and

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	requirements and preferably ahead of schedule, where feasible; 4. Developing a program that phases in the use of zero-emission vehicles and trucks, including drayage trucks and specialized heavy trucks by District occupants, tenants, and permittees at the Tenth Avenue Marine Terminal consistent with State goals and requirements and preferably ahead of schedule, where feasible; and 5. Supporting implementation of pilot programs or demonstration projects that advance deployment of zero-emission equipment, vehicles, and trucks. PD4.8. Expand shore power capabilities at the Tenth Avenue Marine Terminal as adjacent utility upgrades occur. The following PMPU PEIR Mitigation Measures supplement the conclusion that the PMPU does not obstruct the attainment of the goals and objectives contained within the MCAS. **Mitigation Measures** MM-GHG-2 requires the purchase of alternative fuel, electric, or hybrid vehicles and equipment and is described in full within the Final PEIR, Volume 2, Section 4.6, *Greenhouse Gas Emissions and Energy*.
Fleet Goal 2: Procure zero emission vehicles and necessary electric vehicle charging equipment and infrastructure beginning in Fiscal Year 2022.	**Consistent.** The proposed project would not obstruct the implementation of, and would not be inconsistent with Fleet Goal 2. **Policies** **Mobility** M Policy 2.1.2. The District shall encourage the development of versatile infrastructure that can adapt to future needs and support multiple modes of travel for the transfer of freight between waterside and landside uses. M Policy 2.1.5. The District shall seek investment and grant opportunities for infrastructure, equipment, and technologies that enable the District's marine terminals to efficiently and sustainably transfer goods between waterside and landside. **Economics** ECON Policy 1.2.3. The District shall research and pursue appropriate grant funding, and partnerships, from regional, State, and federal sources to advance the District's mission. **Development Standards** Sustainable Freight and Shipping Methods. PD4.7. Development, including operations, shall implement the emissions reductions goals of the California Sustainable Freight Action Plan or similar, future plans by implementing the

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	measures below. Such improvements may be planned, designed, and implemented by third parties through partnerships or leases with the District, subject to the discretion of BPC: a. Continue to implement a vessel speed reduction program for operations, occupants, tenants, and permittees at the Tenth Avenue Marine Terminal; and b. Require development on the terminal to implement electrification or other improvements to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include: 1. Developing a compilation of improvements, such as installation of electric infrastructure to support on-terminal cargo-handling equipment and shore power; 2. Developing on-site renewable energy production and battery storage consistent with State goals and requirements and preferably ahead of schedule, where feasible; 3. Developing infrastructure for zero-emission vehicles and trucks consistent with State goals and requirements and preferably ahead of schedule, where feasible; 4. Developing a program that phases in the use of zero-emission vehicles and trucks, including drayage trucks and specialized heavy trucks by District occupants, tenants, and permittees at the Tenth Avenue Marine Terminal consistent with State goals and requirements and preferably ahead of schedule, where feasible; and 5. Supporting implementation of pilot programs or demonstration projects that advance deployment of zero-emission equipment, vehicles, and trucks. PD4.8. Expand shore power capabilities at the Tenth Avenue Marine Terminal as adjacent utility upgrades occur. The following PMPU PEIR Mitigation Measure support the conclusion that the PMPU does not obstruct the attainment of the goals and objectives contained within the MCAS. **Mitigation Measure** Mitigation measure GHG-2 directs the purchase of Port District ZE fleet vehicles and equipment in addition to the Mobility and Economics Elements' policies, and Development Standards policies that support the District's transition to near-zero and zero-emission truck emissions. As of September 2022, 16 ZE Port Fleet vehicles have been purchased by and delivered to the

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	Port General Services Department which far exceeds the objective of 2 vehicles purchased by 2022 and is an eligibility requirement for the SDG&E's Power Your Drive for Fleets Program, subject of Fleet Objective 2B, below. MM-GHG-2 requires the purchase of alternative fuel, electric, or hybrid vehicles and equipment and is described in full within the Final PEIR, Volume 2, Section 4.6, *Greenhouse Gas Emissions and Energy*.
Fleet Objective 2A: Procure at least two battery electric medium- to heavy-duty vehicles in Fiscal Year 2022.	**Consistent.** The proposed project would not obstruct the implementation of, and would not be inconsistent, with Fleet Objective 2A. **Policies** **Mobility** M Policy 2.1.2. The District shall encourage the development of versatile infrastructure that can adapt to future needs and support multiple modes of travel for the transfer of freight between waterside and landside uses. M Policy 2.1.5. The District shall seek investment and grant opportunities for infrastructure, equipment, and technologies that enable the District's marine terminals to efficiently and sustainably transfer goods between waterside and landside. **Economics** ECON Policy 1.2.3. The District shall research and pursue appropriate grant funding, and partnerships, from regional, State, and federal sources to advance the District's mission. **Development Standards** Sustainable Freight and Shipping Methods PD4.7. Development, including operations, shall implement the emissions reductions goals of the California Sustainable Freight Action Plan or similar, future plans by implementing the measures below. Such improvements may be planned, designed, and implemented by third parties through partnerships or leases with the District, subject to the discretion of BPC: a. Continue to implement a vessel speed reduction program for operations, occupants, tenants, and permittees at the Tenth Avenue Marine Terminal; and b. Require development on the terminal to implement electrification or other improvements to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include: 1. Developing a compilation of improvements, such as installation of electric infrastructure to support on-terminal cargo-handling equipment and shore power;

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	2. Developing on-site renewable energy production and battery storage consistent with State goals and requirements and preferably ahead of schedule, where feasible; 3. Developing infrastructure for zero-emission vehicles and trucks consistent with State goals and requirements and preferably ahead of schedule, where feasible; 4. Developing a program that phases in the use of zero-emission vehicles and trucks, including drayage trucks and specialized heavy trucks by District occupants, tenants, and permittees at the Tenth Avenue Marine Terminal consistent with State goals and requirements and preferably ahead of schedule, where feasible; and 5. Supporting implementation of pilot programs or demonstration projects that advance deployment of zero-emission equipment, vehicles, and trucks. PD4.8. Expand shore power capabilities at the Tenth Avenue Marine Terminal as adjacent utility upgrades occur. The following PMPU PEIR Mitigation Measure support the conclusion that the PMPU does not obstruct the attainment of the goals and objectives contained within the MCAS. **Mitigation Measures** Mitigation measure GHG-2 directs the purchase of Port District ZE fleet vehicles and equipment in addition to the Mobility and Economics Elements' policies, and Development Standards that support the District's transition to near-zero and zero-emission truck emissions. As of September 2022, 16 ZE Port Fleet vehicles have been purchased by and delivered to the Port General Services Department which far exceeds the objective of 2 vehicles purchased by 2022. MM-GHG-2 requires the purchase of alternative fuel, electric, or hybrid vehicles and equipment and is described in full within the Final PEIR, Volume 2, Section 4.6, *Greenhouse Gas Emissions and Energy*.
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.	**Consistent.** The proposed project would not obstruct the implementation of, and would not be inconsistent with Fleet Objective 2B. **Policies** **Mobility** M Policy 2.1.2. The District shall encourage the development of versatile infrastructure that can adapt to future needs and support multiple modes of travel for the transfer of freight between waterside and landside uses.

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	M Policy 2.1.5. The District shall seek investment and grant opportunities for infrastructure, equipment, and technologies that enable the District's marine terminals to efficiently and sustainably transfer goods between waterside and landside. **Economics** ECON Policy 1.2.3. The District shall research and pursue appropriate grant funding, and partnerships, from regional, State, and federal sources to advance the District's mission. **Development Standards** Sustainable Freight and Shipping Methods PD4.7. Development, including operations, shall implement the emissions reductions goals of the California Sustainable Freight Action Plan or similar, future plans by implementing the measures below. Such improvements may be planned, designed, and implemented by third parties through partnerships or leases with the District, subject to the discretion of BPC: a. Continue to implement a vessel speed reduction program for operations, occupants, tenants, and permittees at the Tenth Avenue Marine Terminal; and b. Require development on the terminal to implement electrification or other improvements to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include: 1. Developing a compilation of improvements, such as installation of electric infrastructure to support on-terminal cargo-handling equipment and shore power; 2. Developing on-site renewable energy production and battery storage consistent with State goals and requirements and preferably ahead of schedule, where feasible; 3. Developing infrastructure for zero-emission vehicles and trucks consistent with State goals and requirements and preferably ahead of schedule, where feasible; 4. Developing a program that phases in the use of zero-emission vehicles and trucks, including drayage trucks and specialized heavy trucks by District occupants, tenants, and permittees at the Tenth Avenue Marine Terminal consistent with State goals and requirements and preferably ahead of schedule, where feasible; and

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	5. Supporting implementation of pilot programs or demonstration projects that advance deployment of zero-emission equipment, vehicles, and trucks. PD4.8. Expand shore power capabilities at the Tenth Avenue Marine Terminal as adjacent utility upgrades occur. The following PMPU PEIR Mitigation Measures support the conclusion that the PMPU does not obstruct the attainment of the goals and objectives contained within the MCAS. **Mitigation Measures** Mitigation measure GHG-2 directs the purchase of Port District ZE fleet vehicles and equipment in addition to the Mobility and Economics Elements' policies, and Development Standards policies that support the District's transition to near-zero and zero-emission truck emissions. As of September 2022, 16 ZE Port Fleet vehicles have been purchased by and delivered to the Port General Services Department which is an eligibility requirement for the subject program MM-GHG-2 requires the purchase of alternative fuel, electric, or hybrid vehicles and equipment and is described in full within the Final PEIR, Volume 2, Section 4.6, *Greenhouse Gas Emissions and Energy*.
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.** The proposed project would not obstruct the implementation of, and would not conflict with Shipyard Goal 1. The Port District and SDAPCD staff meet regularly on a number of clean air initiatives working cooperatively to implement exiting and researching new approaches to rules, regulations and programs to reduce harmful air emissions. The following Water and Land Use and Ecology Element policies direct the continuation of the partnership with the SDAPCD. **Policies** **Water & Land Use** WLU Policy 8.1.1. The District shall build on existing agency partnerships to strengthen communications, develop new methods to share information, and coordinate initiatives to improve the District's waterfront. **Ecology** ECO Policy 3.1.3. In cooperation with regional, state, and federal agencies, the District shall advance maritime clean air strategies to help improve local air quality. ECO Policy 3.1.5. The District shall explore financing programs in coordination with regional, State, and Federal partners to implement recommended clean air measures.

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	ECO Policy 4.1.5. The District shall engage with regional and State partners to advance the development of statewide clean air goals and regulations to improve air quality.
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.** Rule 1210 does not directly relate to the proposed project. Nonetheless, the Program EIR's health risk assessment evaluates applicable provisions of Rule 1210 as well as thresholds for toxic air contaminants during buildout construction and operation of the proposed project and requires implementation of numerous mitigation measures to reduce emissions and associated impact(s) as feasible. Additionally, the proposed project contains Environmental Justice Element policies and Development Standards that support the reduction in emissions and improvement of air quality. These policies and Development Standards do not obstruct the implementation of the MCAS and are not inconsistent with Shipyard Objective 1. **Policies** **Environmental Justice** EJ Policy 3.1.2. The District shall collaborate with adjacent jurisdictions, occupants, tenants, permittees, and community stakeholders to provide transition zone areas adjacent to Tidelands between maritime industrial, commercial, and residential uses as well as other sensitive receptors in adjacent disadvantaged communities. EJ Policy 3.1.3. The District may collaborate with stakeholders from adjacent disadvantaged communities and adjacent jurisdictions to identify improvements that may facilitate improved pedestrian access between Tidelands and adjacent disadvantaged communities. EJ Policy 3.2.1. The District and its tenants shall participate in community air quality monitoring, such as supporting ongoing monitoring efforts that incorporate community involvement, and develop maritime clean air strategies to reduce criteria pollutant emissions from industrial and maritime sources, especially near the Portside communities. **Development Standards** Sustainable Shipyards PD4.21. Development shall be required to invest in electrification or other improvements on-site to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include investment in a compilation of improvements, such as installation of electric infrastructure to support equipment and operations on-site.

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	The following PMPU PEIR Mitigation Measures support the conclusion that the PMPU does not obstruct the attainment of Shipyard Objective 1. **Mitigation Measures** Among the mitigation measures listed below, mitigation measure MM-AQ-8 directs project level environmental reviews to ensure site specific activities that result in potential negative impacts are adequately analyzed, disclosed and mitigated. MM-AQ-2 requires the implementation of air quality Best Management Practices during construction of all future PMPU-consistent projects. MM-AQ-3 requires a future project proponent to implement diesel emission-reduction measures during construction of all future PMPU-consistent projects. MM-AQ-4 requires a future project proponent to implement fugitive dust control measures during construction of all PMPU-consistent projects. MM-AQ-5 requires a future project proponent to use low-VOC interior and exterior coatings during construction of all PMPU-consistent projects. MM-AQ-6 requires the use of modern harbor craft and dredgers during construction activities. MM-AQ-7 requires the District to conduct an Annual Technology Review to promote the use of new emission control technologies during future construction- and operation-related activities. MM-AQ-8 requires a project-level environmental review if a future development project will have impacts that were not identified and mitigated in the Final PEIR. MM-AQ-9 requires a future project proponent to incorporate sustainability measures related to water and energy use and the recycling of waste in their project. MM-AQ-10a requires the project proponent of a new hotel to be constructed prior to 2030 to use electric energy only, except for cooking and kitchen uses. MM-AQ-10b requires all future new development that would be constructed after 2030 to be carbon neutral. MM-AQ-11 requires a project proponent to install electric vehicle charging infrastructure. MM-AQ-12 requires a project proponent of a project that includes recreational boat slips to install a 240-volt electrical outlet at each new slip. MM-AQ-2, MM-AQ-3, MM-AQ-4, MM-AQ-5, MM-AQ-6, MM-AQ-7, MM-AQ-8, MM-AQ-9, MM-AQ-10a, MM-AQ-10b, MM-AQ-11,

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	and MM-AQ-12 are all described in full within the Final PEIR, Volume 2, Section 4.2, *Air Quality and Health Risk*.
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 proposed project would not obstruct the implementation of and would not conflict with Shipyard Objective 2. The following Economic and Environmental Justice Element policies, and Development Standard direct Port staff's continued collaboration and partnership with shipyard tenants to reduce emissions from industrial activities along the waterfront. **Policies** **Economics** ECON Policy 2.3.2. The District and permittees shall coordinate the investment in improvements to marine terminal and maritime industrial operations that improve functionality and efficiency through modernization of terminal infrastructure and equipment, including electrification that supports optimization of cargo movement and reduces emissions. ECON Policy 2.3.18. The District and its tenants are encouraged to hold workforce development events as a means to complement the maritime industry and support economic prosperity of adjacent portside communities. **Environmental Justice** EJ Policy 3.1.1. The District shall work to reduce the cumulative health burdens on neighboring communities, especially disadvantaged communities, in developing, adopting, implementing, and enforcing environmental laws, regulations, and policies. EJ Policy 3.2.1. The District and its tenants shall participate in community air quality monitoring, such as supporting ongoing monitoring efforts that incorporate community involvement and develop maritime clean air strategies to reduce criteria pollutant emissions from industrial and maritime sources, especially near the Portside communities. EJ Policy 3.2.2. Maritime development shall transition to clean, modern, and operationally efficient marine terminal facilities and working waterfront businesses based on feasibility and best available science. EJ Policy 3.2.3. Through CDPs issued by the District, permittees shall pursue electrification of marine terminal and working waterfront operations, including drayage trucks, prioritizing the facilities adjacent to Portside Communities, to reduce reliance on fossil fuels from mobile and portable sources, in alignment with related State and District goals.

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	EJ Policy 3.2.4. Support actions and measures taken by tenants and occupants on Tidelands that improve environmental conditions and advance long-term sustainability. **Development Standards** Sustainable Shipyards PD4.21. Development shall be required to invest in electrification or other improvements on-site to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include investment in a compilation of improvements, such as installation of electric infrastructure to support equipment and operations on-site. The following PMPU PEIR Mitigation Measure support the conclusion that the PMPU does not obstruct the attainment of the goals and objectives contained within the MCAS. **Mitigation Measures** Mitigation measure AQ-8 directs project level environmental reviews to ensure site specific activities that result in potential negative impacts are adequately analyzed, disclosed and mitigated. MM-AQ-8 requires a project-level environmental review if a future development project will have impacts that were not identified and mitigated in the Final PEIR. This mitigation measure is described in full within the Final PEIR, Volume 2, Section 4.2, *Air Quality and Health Risk*.
Ocean-Going Vessels	
Ocean-Going Vessels In-Transit Goal 1: Reduce annual ocean-going vessel in-transit emissions.	**Consistent.** The proposed project would not obstruct the implementation of and would not conflict with OGV In-transit Goal 1. The following Mobility and Ecology Element policies, and Development Standard advance the goal to reduce ocean-going vessel in-transit emissions. **Policies** **Mobility** M Policy 1.1.7. Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero emission technologies and supportive infrastructure improvements for passenger-related oceangoing vessels and harbor craft that facilitate the movement of people in alignment with District sustainability and maritime clean air strategies. M Policy 2.2.8. Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero emission technologies and supportive infrastructure improvements for

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	freight-related oceangoing vessels and harbor craft in alignment with District sustainability and maritime clean air strategies. **Ecology** ECO Policy 3.1.4. Permittees shall implement infrastructure and clean vessel technologies, for both in-transit and while at-berth, such as advancing alternative fuels and expansion of marine terminal electrification, when applicable. **Development Standards** Sustainable Freight and Shipping Methods PD4.7. Development, including operations, shall implement the emissions reductions goals of the California Sustainable Freight Action Plan or similar, future plans by implementing the measures below. Such improvements may be planned, designed, and implemented by third parties through partnerships or leases with the District, subject to the discretion of BPC: a. Continue to implement a vessel speed reduction program for operations, occupants, tenants, and permittees at the Tenth Avenue Marine Terminal; and b. Require development on the terminal to implement electrification or other improvements to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include: 1. Developing a compilation of improvements, such as installation of electric infrastructure to support on-terminal cargo-handling equipment and shore power; 2. Developing on-site renewable energy production and battery storage consistent with State goals and requirements and preferably ahead of schedule, where feasible; 3. Developing infrastructure for zero-emission vehicles and trucks consistent with State goals and requirements and preferably ahead of schedule, where feasible; 4. Developing a program that phases in the use of zero-emission vehicles and trucks, including drayage trucks and specialized heavy trucks by District occupants, tenants, and permittees at the Tenth Avenue Marine Terminal consistent with State goals and requirements and preferably ahead of schedule, where feasible; and

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	5. Supporting implementation of pilot programs or demonstration projects that advance deployment of zero-emission equipment, vehicles, and trucks.
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.	**Consistent.** The proposed project would not obstruct the implementation of and would not conflict with Objective 1A as it includes Mobility Element policies that promoted and Development Standard that will support 90% participation. **Policies** **Mobility** M Policy 1.1.7. Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero emission technologies and supportive infrastructure improvements for passenger-related oceangoing vessels and harbor craft that facilitate the movement of people in alignment with District sustainability and maritime clean air strategies. M Policy 2.2.8. Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero emission technologies and supportive infrastructure improvements for freight-related oceangoing vessels and harbor craft in alignment with District sustainability and maritime clean air strategies **Development Standards** Sustainable Freight and Shipping Methods PD4.7. Development, including operations, shall implement the emissions reductions goals of the California Sustainable Freight Action Plan or similar, future plans by implementing the measures below. Such improvements may be planned, designed, and implemented by third parties through partnerships or leases with the District, subject to the discretion of BPC: a. Continue to implement a vessel speed reduction program for operations, occupants, tenants, and permittees at the Tenth Avenue Marine Terminal; and b. Require development on the terminal to implement electrification or other improvements to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include: 1. Developing a compilation of improvements, such as installation of electric infrastructure to support

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	on-terminal cargo-handling equipment and shore power; 2. Developing on-site renewable energy production and battery storage consistent with State goals and requirements and preferably ahead of schedule, where feasible; 3. Developing infrastructure for zero-emission vehicles and trucks consistent with State goals and requirements and preferably ahead of schedule, where feasible; 4. Developing a program that phases in the use of zero-emission vehicles and trucks, including drayage trucks and specialized heavy trucks by District occupants, tenants, and permittees at the Tenth Avenue Marine Terminal consistent with State goals and requirements and preferably ahead of schedule, where feasible; and 5. Supporting implementation of pilot programs or demonstration projects that advance deployment of zero-emission equipment, vehicles, and trucks.
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 would not obstruct the implementation of and would not conflict with OGV Goal 2 and is supported by the following Ecology, Environmental Justice and Mobility policies below that include requirements to implement electrification infrastructure or other improvements that decrease the reliance on fossil fuels thereby decreasing criteria pollutants and greenhouse gases. **Policies** **Mobility** M Policy 1.1.7. Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero emission technologies and supportive infrastructure improvements for passenger-related oceangoing vessels and harbor craft that facilitate the movement of people in alignment with District sustainability and maritime clean air strategies. M Policy 2.1.4. The District shall require, where feasible, efficient and sustainable dockside operations for oceangoing vessels and freight-related harbor craft. M Policy 2.1.5. The District shall seek investment and grant opportunities for infrastructure, equipment, and technologies that enable the District's marine terminals to efficiently and sustainably transfer goods between waterside and landside.

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	M Policy 2.2.2. Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero-emission goods movement mobility options and maritime equipment, and supportive infrastructure improvements, in alignment with District sustainability and maritime clean air strategies. M Policy 2.2.8. Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero emission technologies and supportive infrastructure improvements for freight-related oceangoing vessels and harbor craft in alignment **Ecology** ECO Policy 3.1.3. In cooperation with regional, state, and federal agencies, the District shall advance maritime clean air strategies to help improve local air quality. ECO Policy 3.1.4. Permittees shall implement infrastructure and clean vessel technologies, for both in-transit and while at-berth, such as advancing alternative fuels and expansion of marine terminal electrification, when applicable. **Environmental Justice** EJ Policy 3.2.2. Maritime development shall transition to clean, modern, and operationally efficient marine terminal facilities and working waterfront businesses based on feasibility and best available science. EJ Policy 3.2.3. Through CDPs issued by the District, permittees shall pursue electrification of marine terminal and working waterfront operations, including drayage trucks, prioritizing the facilities adjacent to Portside Communities, to reduce reliance on fossil fuels from mobile and portable sources, in alignment with related State and District goals.
Ocean-going Vessels At-Berth Objective 2A: For cruise ships, add one additional plug to the existing shore power system by 2023.	**Consistent.** The proposed project would not obstruct the implementation of and would not conflict with Objective 2A, which includes Economic Element policies that support the District's transition to near-zero and zero-emission technologies at the cruise ship terminal. **Policies** **Economics** ECON Policy 2.3.7. The District shall coordinate with the cruise industry to identify infrastructure and marketing opportunities that improve the industry's economic viability and increase the contribution to the regional economy. ECON Policy 2.3.8. The District shall coordinate with the cruise ship industry to implement modifications to relevant Tidelands

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	support facilities to accommodate increases in cruise demand, both in terms of type and volume, such as landside transportation services for passengers, passenger processing, and baggage handling**.**
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 National City Marine Terminal is not included in the proposed project's description and this Objective relates only to that Terminal (Planning District 5). Nonetheless, the following policies promote the installation and use of shore power for at-berth ocean-going vessels. The proposed project would not obstruct the implementation of and would not conflict with Ocean-going Vessels at-Berth Objective 2B. **Policies** **Mobility** M Policy 1.1.7. Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero emission technologies and supportive infrastructure improvements for passenger-related oceangoing vessels and harbor craft that facilitate the movement of people in alignment with District sustainability and maritime clean air strategies. M Policy 2.1.4. The District shall require, where feasible, efficient and sustainable dockside operations for oceangoing vessels and freight-related harbor craft. M Policy 2.1.5. The District shall seek investment and grant opportunities for infrastructure, equipment, and technologies that enable the District's marine terminals to efficiently and sustainably transfer goods between waterside and landside. M Policy 2.2.2. Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero-emission goods movement mobility options and maritime equipment, and supportive infrastructure improvements, in alignment with District sustainability and maritime clean air strategies. M Policy 2.2.8. Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero emission technologies and supportive infrastructure improvements for freight-related oceangoing vessels and harbor craft in alignment with District sustainability and maritime clean air strategies. **Ecology** ECO Policy 3.1.3. In cooperation with regional, state, and federal agencies, the District shall advance maritime clean air strategies to help improve local air quality.

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	ECO Policy 3.1.4. Permittees shall implement infrastructure and clean vessel technologies, for both in-transit and while at-berth, such as advancing alternative fuels and expansion of marine terminal electrification, when applicable. **Environmental Justice** EJ Policy 3.2.2. Maritime development shall transition to clean, modern, and operationally efficient marine terminal facilities and working waterfront businesses based on feasibility and best available science. EJ Policy 3.2.3. Through CDPs issued by the District, permittees shall pursue electrification of marine terminal and working waterfront operations, including drayage trucks, prioritizing the facilities adjacent to Portside Communities, to reduce reliance on fossil fuels from mobile and portable sources, in alignment with related State and District goals
Rail	
Rail Goal 1: Upgrade rail capabilities at the Tenth Avenue Marine Terminal to allow for more efficient and cleaner operations.	**Consistent.** The proposed project would not obstruct the implementation of and would not conflict with Rail Goal 1. Proposed project policies include steps to increase the efficiencies of freight movement, which also decrease air quality emissions. The efficiencies could reduce standing times and headways for both ocean-going vessels and drayage trucks that would allow for a reduction in emissions near the Portside Community. **Policies** **Mobility** M Policy 2.1.7. The District, in coordination with permittees of development, tenants, and adjacent jurisdictions, shall maintain and develop improvements to linkages between the marine terminals and landside networks, including but not limited to roadways, rail, pipelines, and the electrical grid, to enable efficient movement of goods along those networks and to support the working waterfront. M Policy 2.2.3. The District shall engage with stakeholders, such as railway companies, trucking companies, cargo and freight shipping lines, and service providers, to identify and implement feasible sustainable freight strategies in accordance with the District's environmental and operational strategies, plans, and regulations, as well as the State's sustainability objectives. M Policy 2.2.4. The District shall engage with railroad operators and agencies that have transportation authority to maintain, enhance, and expand access between the cargo terminals and the regional freight infrastructure.

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	M Policy 2.2.5. The District, in coordination with permittees of development, tenants, and adjacent jurisdictions, and regional transportation agencies, shall maintain and develop improvements to linkages between the marine terminals and landside networks, including but not limited to roadways, rail, and pipelines, to enable efficient movement of goods along those networks and to support the working waterfront. M Policy 2.2.7. In coordination with operators and stakeholders, the District shall plan for improvements to railroad corridors, such as spurs, rail storage facilities, switching facilities, and suitable rail trackage within the working waterfront, both on dock and near dock, to better interface the movement of cargo between ship and land carriers.
Rail Objective 1: Outline options to further develop rail upgrades, including rail reconfiguration within the Tenth Avenue Marine Terminal by June 30, 2026.	**Consistent.** The proposed project would not obstruct the implementation of and would not conflict with rail upgrades at Tenth Avenue Marine Terminal. The following Mobility policies demonstrate its consistency with Rail Objective 1. **Policies** **Mobility** M Policy 2.1.7. The District, in coordination with permittees of development, tenants, and adjacent jurisdictions, shall maintain and develop improvements to linkages between the marine terminals and landside networks, including but not limited to roadways, rail, pipelines, and the electrical grid, to enable efficient movement of goods along those networks and to support the working waterfront. M Policy 2.2.3. The District shall engage with stakeholders, such as railway companies, trucking companies, cargo and freight shipping lines, and service providers, to identify and implement feasible sustainable freight strategies in accordance with the District's environmental and operational strategies, plans, and regulations, as well as the State's sustainability objectives. M Policy 2.2.4. The District shall engage with railroad operators and agencies that have transportation authority to maintain, enhance, and expand access between the cargo terminals and the regional freight infrastructure. M Policy 2.2.5. The District, in coordination with permittees of development, tenants, and adjacent jurisdictions, and regional transportation agencies, shall maintain and develop improvements to linkages between the marine terminals and landside networks, including but not limited to roadways, rail, and pipelines, to enable efficient movement of goods along those networks and to support the working waterfront.

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	M Policy 2.2.7. In coordination with operators and stakeholders, the District shall plan for improvements to railroad corridors, such as spurs, rail storage facilities, switching facilities, and suitable rail trackage within the working waterfront, both on dock and near dock, to better interface the movement of cargo between ship and land carriers.
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.	**Consistent.** The proposed project would not obstruct the implementation of and would not conflict with Rail Goal 2. The following Mobility Element policies direct coordination, collaboration and partnership with providers and users of freight rail movements and actions at 'switchyards' to reduce emissions associated with goods movement via rail. **Policies** **Mobility** M Policy 2.1.7. The District, in coordination with permittees of development, tenants, and adjacent jurisdictions, shall maintain and develop improvements to linkages between the marine terminals and landside networks, including but not limited to roadways, rail, pipelines, and the electrical grid, to enable efficient movement of goods along those networks and to support the working waterfront. M Policy 2.2.3. The District shall engage with stakeholders, such as railway companies, trucking companies, cargo and freight shipping lines, and service providers, to identify and implement feasible sustainable freight strategies in accordance with the District's environmental and operational strategies, plans, and regulations, as well as the State's sustainability objectives. M Policy 2.2.4. The District shall engage with railroad operators and agencies that have transportation authority to maintain, enhance, and expand access between the cargo terminals and the regional freight infrastructure. M Policy 2.2.5. The District, in coordination with permittees of development, tenants, and adjacent jurisdictions, and regional transportation agencies, shall maintain and develop improvements to linkages between the marine terminals and landside networks, including but not limited to roadways, rail, and pipelines, to enable efficient movement of goods along those networks and to support the working waterfront. M Policy 2.2.7. In coordination with operators and stakeholders, the District shall plan for improvements to railroad corridors, such as spurs, rail storage facilities, switching facilities, and suitable rail trackage within the working waterfront, both on dock and near dock, to better

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	interface the movement of cargo between ship and land carriers.
Rail Objective 2: Encourage tenants that rely on rail operations that move cargo to use cleaner switchers.	**Consistent.** The proposed project would not obstruct the implementation of and would not conflict with Rail Objective 2. The following Mobility Element policies direct coordination, partnership with users of freight rail movements and actions at 'switchyards' to reduce emissions associated with goods movement via rail. Users of freight rail services do not own or operate switchers; switchers and operation thereof are controlled by the rail service provider, in this case BNSF. **Policies** **Mobility** M Policy 2.1.7. The District, in coordination with permittees of development, tenants, and adjacent jurisdictions, shall maintain and develop improvements to linkages between the marine terminals and landside networks, including but not limited to roadways, rail, pipelines, and the electrical grid, to enable efficient movement of goods along those networks and to support the working waterfront. M Policy 2.2.3. The District shall engage with stakeholders, such as railway companies, trucking companies, cargo and freight shipping lines, and service providers, to identify and implement feasible sustainable freight strategies in accordance with the District's environmental and operational strategies, plans, and regulations, as well as the State's sustainability objectives. M Policy 2.2.4. The District shall engage with railroad operators and agencies that have transportation authority to maintain, enhance, and expand access between the cargo terminals and the regional freight infrastructure. M Policy 2.2.5. The District, in coordination with permittees of development, tenants, and adjacent jurisdictions, and regional transportation agencies, shall maintain and develop improvements to linkages between the marine terminals and landside networks, including but not limited to roadways, rail, and pipelines, to enable efficient movement of goods along those networks and to support the working waterfront. M Policy 2.2.7. In coordination with operators and stakeholders, the District shall plan for improvements to railroad corridors, such as spurs, rail storage facilities, switching facilities, and suitable rail trackage within the working waterfront, both on dock and near dock, to better interface the movement of cargo between ship and land carriers

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Enabling	
Enabling Goal 1: Establish partnerships with stakeholders, tenants, and agencies to help increase the likelihood of implementation and project success.	**Consistent.** The proposed project would not obstruct the implementation of and would not conflict with Enabling Goal 1. Given the numerous sources of emissions and the abundance of federal, state, regional and local governing bodies responsible for their creation as well as avoidance, improving regional air quality mandates partnerships with all private and public agencies involved. The following Environmental Justice Element policies and Development Standard reinforces the need for partnerships. **Policies** **Environmental Justice** EJ Policy 3.1.2. The District shall collaborate with adjacent jurisdictions, occupants, tenants, permittees, and community stakeholders to provide transition zone areas adjacent to Tidelands between maritime industrial, commercial, and residential uses as well as other sensitive receptors in adjacent disadvantaged communities. EJ Policy 3.1.3. The District may collaborate with stakeholders from adjacent disadvantaged communities and adjacent jurisdictions to identify improvements that may facilitate improved pedestrian access between Tidelands and adjacent disadvantaged communities. EJ Policy 3.2.1. The District and its tenants shall participate in community air quality monitoring, such as supporting ongoing monitoring efforts that incorporate community involvement, and develop maritime clean air strategies to reduce criteria pollutant emissions from industrial and maritime sources, especially near the Portside communities. **Development Standards** Sustainable shipyards PD4.21. Development shall be required to invest in electrification or other improvements on-site to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include investment in a compilation of improvements, such as installation of electric infrastructure to support equipment and operations on-site.
Enabling Objective 1A: Pursue a potential Memorandum of Understanding with the San Diego Air Pollution Control District to administer	**Consistent.** The proposed project would not obstruct the implementation of, and would not conflict with Enabling Objective 1A. the proposed project policies directs District staff to coordinate and collaborate with regional, State and Federal agencies to transition to, and fund, electric-based technologies to improve air quality and reduce harmful emissions. The two

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Goals and Objectives	**Consistency Determination**
California Air Resources Board Funding to help fund zero emission/ near zero emission trucks and/or cargo handling equipment.	Ecology Element policies reinforce this direction and are listed below. **Policies** **Ecology** ECO Policy 3.1.5. The District shall explore financing programs in coordination with regional, State, and Federal partners to implement recommended clean air measures. ECO Policy 4.1.5. The District shall engage with regional and State partners to advance the development of statewide clean air goals and regulations to improve air quality.
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.	**Consistent.** The proposed project would not obstruct the implementation of, and would not conflict with Enabling Objective 1B, the following Economics and Ecology Elements' policies reinforce staff efforts for creative goods movement beyond the San Diego region. **Policies** **Economics** ECON Policy 2.2.1. Maintain the District's marine terminals to the standards of the National Port Readiness Network and the Commercial Strategic Seaports Program, which are administered by the U.S. Department of Transportation's Maritime Administration. The Strategic Port designation commits the District to providing cargo and vessel operations in support of national defense efforts on short notice. **Ecology** ECO Policy 4.1.5. The District shall engage with regional and State partners to advance the development of statewide clean air goals and regulations to improve air quality.
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.	**Consistent.** The proposed project would not obstruct the implementation of, and would not conflict with Enabling Goal 2. Goals and objectives of the proposed project are in alignment with discovering and utilizing new or existing technologies that could provide options to reduce emissions at District facilities and to improve air quality in and surrounding the Portside Community. The proposed project contains the following Ecology and Environmental Justice Element policies: **Policies** **Ecology** ECO Policy 3.1.3. In cooperation with regional, state, and federal agencies, the District shall advance maritime clean air strategies to help improve local air quality.

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	Environmental Justice EJ Policy 3.2.2. Maritime development shall transition to clean, modern, and operationally efficient marine terminal facilities and working waterfront businesses based on feasibility and best available science. In addition, the proposed project includes MM-AQ-7 which provides for the District to conduct an annual technology review to identify additional options that become available to attain emission reductions and other MCAS-related goals. MM-AQ-7 is described in full within the Final PEIR, Volume 2, Section 4.2, *Air Quality and Health Risk*.
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.	**Consistent**. The proposed project would not obstruct the implementation of and would not conflict with Objective 2A. The policies below promote achieving Objective 2A, requires monitoring air emissions and incorporating the Portside Community in that process. **Policies** **Environmental Justice** EJ Policy 3.2.1. The District and its tenants shall participate in community air quality monitoring, such as supporting ongoing monitoring efforts that incorporate community involvement, and develop maritime clean air strategies to reduce criteria pollutant emissions from industrial and maritime sources, especially near the Portside communities. **Ecology** ECO Policy 3.1.3. In cooperation with regional, state, and federal agencies, the District shall advance maritime clean air strategies to help improve local air quality.
Enabling Objective 2B: Establish an Emissions Reduction Incentive Program.	**Consistent.** The proposed project would not obstruct the implementation of and would not conflict with Objective 2B. The Ecology and Environmental Justice Element policies below direct permittees to participate in an incentive program once developed, as well as adhering to applicable regulations. **Policies** **Ecology** ECO Policy 3.1.1. Permittees shall implement programs and activities that reduce exposure to toxic air contaminants and criteria air pollutants in and adjacent to Tidelands. **Environmental Justice** EJ Policy 3.1.1. The District shall work to reduce the cumulative health burdens on neighboring communities, especially disadvantaged communities, in developing, adopting,

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	implementing, and enforcing environmental laws, regulations, and policies.
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.	**Consistent.** The proposed project would not obstruct the implementation of and would not conflict with Objective 2C. The policies identified below direct staff to seek various funding sources to achieve improved environmental conditions, while also maintaining a vibrant maritime industry that supports regional, state and national interests. **Policies** **Mobility** M Policy 2.1.5. The District shall seek investment and grant opportunities for infrastructure, equipment, and technologies that enable the District's marine terminals to efficiently and sustainably transfer goods between waterside and landside. **Safety & Resiliency** SR Policy 3.1.2. The District shall encourage, support, and plan to deploy net zero carbon emission projects and technologies on Tidelands. **Ecology** ECO Policy 3.1.5. The District shall explore financing programs in coordination with regional, State, and Federal partners to implement recommended clean air measures. **Economics** ECON Policy 1.2.1. The District shall explore revenue sources for adequate funding of capital improvements to develop new, and maintain existing, District-operated infrastructure and facilities. ECON Policy 1.2.4. The District shall explore the creation of, and allow for the use of, different financing mechanisms to help fund the building of new infrastructure or improvement to existing infrastructure, including multimodal transportation facilities, water and stormwater systems, information and communication systems, and public space. ECON Policy 1.2.6. The District shall explore creation of an infrastructure program, as an option to assist funding for future public infrastructure and amenities, including and not limited to, roadways, sidewalks, promenades, parks, recreational facilities, pier improvements and if such a program is created, permittees of development shall contribute a fair share to the cost of public infrastructure and access improvements, in accordance with that program.

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	Development Standards Sustainable Shipyards PD4.21. Development shall be required to invest in electrification or other improvements on-site to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include investment in a compilation of improvements, such as installation of electric infrastructure to support equipment and operations on-site.
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.	**Consistent.** The proposed project would not obstruct the implementation of and would not conflict with Enabling Objective 2D. The following Environmental Justice and Mobility Element policies, and Development Standard policies promote the credible and professional installation and maintenance of zero emission technology. **Policies** **Environmental Justice** EJ Policy 3.2.3. Through CDPs issued by the District, permittees shall pursue electrification of marine terminal and working waterfront operations, including drayage trucks, prioritizing the facilities adjacent to Portside Communities, to reduce reliance on fossil fuels from mobile and portable sources, in alignment with related State and District goals. **Mobility** M Policy 2.2.1. Through CDPs issued by the District, permittees shall plan, design, and implement improvements to the mobility network that provide opportunities for efficient and sustainable goods movement. These improvements shall be developed in accordance with *Chapter 5, Planning Districts*, including any development standards within the applicable planning district or subdistrict. M Policy 2.2.2. Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero-emission goods movement mobility options and maritime equipment, and supportive infrastructure improvements, in alignment with District sustainability and maritime clean air strategies. **Development Standards** Sustainable Freight and Shipping Methods PD4.7. Development, including operations, shall implement the emissions reductions goals of the California Sustainable Freight Action Plan or similar, future plans by implementing the measures below. Such improvements may be planned, designed, and implemented by third parties through

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Goals and Objectives	**Consistency Determination**
	partnerships or leases with the District, subject to the discretion of BPC: a. Continue to implement a vessel speed reduction program for operations, occupants, tenants, and permittees at the Tenth Avenue Marine Terminal; and b. Require development on the terminal to implement electrification or other improvements to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include: 1. Developing a compilation of improvements, such as installation of electric infrastructure to support on-terminal cargo-handling equipment and shore power; 2. Developing on-site renewable energy production and battery storage consistent with State goals and requirements and preferably ahead of schedule, where feasible; 3. Developing infrastructure for zero-emission vehicles and trucks consistent with State goals and requirements and preferably ahead of schedule, where feasible; 4. Developing a program that phases in the use of zero-emission vehicles and trucks, including drayage trucks and specialized heavy trucks by District occupants, tenants, and permittees at the Tenth Avenue Marine Terminal consistent with State goals and requirements and preferably ahead of schedule, where feasible; and 5. Supporting implementation of pilot programs or demonstration projects that advance deployment of zero-emission equipment, vehicles, and trucks.
Enabling Objective 2E: Promote adoption of zero emission technologies by Port tenants, truckers, and other users of equipment.	**Consistent.** The MCAS is not a regulatory tool that requires operators of diesel-powered equipment to transition to zero and near zero emission powered trucks and equipment, rather, it's a comprehensive strategy to promote that transition regardless of existing entitlements and future discretionary actions. The Ecology, Environmental Justice and Mobility Elements' policies identified below guide that voluntary transition in advance of State and federally legislated requirements. The proposed project would not obstruct the implementation of, and would not conflict with Enabling Objective 2E.

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Goals and Objectives	**Consistency Determination**
	Polices **Ecology** ECO Policy 3.1.1. Permittees shall implement programs and activities that reduce exposure to toxic air contaminants and criteria air pollutants in and adjacent to Tidelands. **Environmental Justice** EJ Policy 3.2.1. The District and its tenants shall participate in community air quality monitoring, such as supporting ongoing monitoring efforts that incorporate community involvement, and develop maritime clean air strategies to reduce criteria pollutant emissions from industrial and maritime sources, especially near the Portside communities. EJ Policy 3.2.2. Maritime development shall transition to clean, modern, and operationally efficient marine terminal facilities and working waterfront businesses based on feasibility and best available science. EJ Policy 3.2.3. Through CDPs issued by the District, permittees shall pursue electrification of marine terminal and working waterfront operations, including drayage trucks, prioritizing the facilities adjacent to Portside Communities, to reduce reliance on fossil fuels from mobile and portable sources, in alignment with related State and District goals. **Mobility** M Policy 2.2.1. Through CDPs issued by the District, permittees shall plan, design, and implement improvements to the mobility network that provide opportunities for efficient and sustainable goods movement. These improvements shall be developed in accordance with *Chapter 5, Planning Districts*, including any development standards within the applicable planning district or subdistrict. M Policy 2.2.2. Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero-emission goods movement mobility options and maritime equipment, and supportive infrastructure improvements, in alignment with District sustainability and maritime clean air strategies. M Policy 2.2.3. The District shall engage with stakeholders, such as railway companies, trucking companies, cargo and freight shipping lines, and service providers, to identify and implement feasible sustainable freight strategies in accordance with the District's environmental and operational strategies, plans, and regulations, as well as the State's sustainability objectives.

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	Development Standards Sustainable Freight and Shipping Methods PD 4.7. Development, including operations, shall implement the emissions reductions goals of the California Sustainable Freight Action Plan or similar, future plans by implementing the measures below. Such improvements may be planned, designed, and implemented by third parties through partnerships or leases with the District, subject to the discretion of BPC: a. Continue to implement a vessel speed reduction program for operations, occupants, tenants, and permittees at the Tenth Avenue Marine Terminal; and b. Require development on the terminal to implement electrification or other improvements to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include: 1. Developing a compilation of improvements, such as installation of electric infrastructure to support on-terminal cargo-handling equipment and shore power; 2. Developing on-site renewable energy production and battery storage consistent with State goals and requirements and preferably ahead of schedule, where feasible; 3. Developing infrastructure for zero-emission vehicles and trucks consistent with State goals and requirements and preferably ahead of schedule, where feasible; 4. Developing a program that phases in the use of zero-emission vehicles and trucks, including drayage trucks and specialized heavy trucks by District occupants, tenants, and permittees at the Tenth Avenue Marine Terminal consistent with State goals and requirements and preferably ahead of schedule, where feasible; and 5. Supporting implementation of pilot programs or demonstration projects that advance deployment of zero-emission equipment, vehicles, and trucks.

COMMUNITY EMISSIONS REDUCTION PLAN	PROPOSED PROJECT CONSISTENCY
Overall Goals	

COMMUNITY EMISSIONS REDUCTION PLAN	PROPOSED PROJECT CONSISTENCY
GOAL 1. By 2031, reduce Diesel PM from 2018 levels by 80% in ambient air at all Portside Community locations.	**Consistent.** The proposed project would not conflict with or obstruct the implementation of Goal 1. The District and tenants continue to replace diesel powered equipment with ZE technology and/or use alternative fuels when available. The replacement of CHE powered with diesel to ZE, or NZE technology will occur over time as funding and ZE/NZE CHE become commercially available. Some types of ZE CHE are currently available while others, such as Harbor Cranes, must be ordered and purpose built. The District and tenants continue to voluntarily replace diesel powered equipment with ZE equipment, as technology and financial abilities allow. In April 2022, Dole Produce (Port District Tenant at TAMT) procured five (5) new zero-emission yard trucks, which are used at the terminal to move containers. On January 11, 2022, the Board of Port Commissioners approved the acquisition of two all-electric mobile harbor cranes with a procurement cost not-to-exceed $14,760,000 for use at Tenth Avenue Marine Terminal. The fully electric cranes would eliminate tailpipe emissions from the District's most polluting piece of equipment, the diesel-powered mobile harbor crane. The proposed project includes policies within the Mobility, Environmental Justice and Economics Elements, and Development Standards guiding the District to reduce its reliance on fossil fuels and to accomplish the transition to electric or other near zero or zero emissions power sources. Each of these policies is complementary to the CERP Goal #1 and the proposed project will not obstruct or be inconsistent with its achievement. **Policies** **Mobility** M Policy 1.1.7. Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero emission technologies and supportive infrastructure improvements for passenger-related oceangoing vessels and harbor craft that facilitate the movement of people in alignment with District sustainability and maritime clean air strategies. M Policy 2.2.1. Through CDPs issued by the District, permittees shall plan, design, and implement improvements to the mobility network that provide opportunities for efficient and sustainable goods movement. These improvements shall be developed in accordance with Chapter 5, Planning Districts, including any development standards within the applicable planning district or subdistrict.

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	M Policy 2.2.2. Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero-emission goods movement mobility options and maritime equipment, and supportive infrastructure improvements, in alignment with District sustainability and maritime clean air strategies. M Policy 2.2.3. The District shall engage with stakeholders, such as railway companies, trucking companies, cargo and freight shipping lines, and service providers, to identify and implement feasible sustainable freight strategies in accordance with the District's environmental and operational strategies, plans, and regulations, as well as the State's sustainability objectives. M Policy 2.2.8. Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero emission technologies and supportive infrastructure improvements for freight-related oceangoing vessels and harbor craft in alignment with District sustainability and maritime clean air strategies. **Environmental Justice** EJ Policy 3.2.2. Maritime development shall transition to clean, modern, and operationally efficient marine terminal facilities and working waterfront businesses based on feasibility and best available science. EJ Policy 3.2.3. Through CDPs issued by the District, permittees shall pursue electrification of marine terminal and working waterfront operations, including drayage trucks, prioritizing the facilities adjacent to Portside Communities, to reduce reliance on fossil fuels from mobile and portable sources, in alignment with related State and District goals. **Ecology** ECO Policy 3.1.2 Permittees shall implement clean air action measures, which may include: a. Efficient buildings design features; b. Vehicles, vessels, and advanced technologies powered by alternative fuels or electric powered; c. Parking management programs; d. Alternative transportation programs; e. Energy efficient lighting; and f. Native tree planting and landscaping. ECO Policy 3.1.4 Permittees shall implement infrastructure and clean vessel technologies, for both in-transit and while at-berth, such as advancing alternative fuels and expansion of marine terminal electrification, when applicable.

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	Economics ECON Policy 2.3.2 The District and permittees shall coordinate the investment in improvements to marine terminal and maritime industrial operations that improve functionality and efficiency through modernization of terminal infrastructure and equipment, including electrification that supports optimization of cargo movement and reduces emissions. **Development Standards** Sustainable Freight and Shipping Methods PD 4.7 Development, including operations, shall implement the emissions reductions goals of the California Sustainable Freight Action Plan or similar, future plans by implementing the measures below. Such improvements may be planned, designed, and implemented by third parties through partnerships or leases with the District, subject to the discretion of BPC: a. Continue to implement a vessel speed reduction program for operations, occupants, tenants, and permittees at the Tenth Avenue Marine Terminal; and b. Require development on the terminal to implement electrification or other improvements to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include: 1. Developing a compilation of improvements, such as installation of electric infrastructure to support on-terminal cargo-handling equipment and shore power; 2. Developing on-site renewable energy production and battery storage consistent with State goals and requirements and preferably ahead of schedule, where feasible; 3. Developing infrastructure for zero-emission vehicles and trucks consistent with State goals and requirements and preferably ahead of schedule, where feasible; 4. Developing a program that phases in the use of zero-emission vehicles and trucks, including drayage trucks and specialized heavy trucks by District occupants, tenants, and permittees at the Tenth Avenue Marine Terminal consistent with State goals and requirements and preferably ahead of schedule, where feasible; and 5. Supporting implementation of pilot programs or demonstration projects that advance deployment of zero-emission equipment, vehicles, and trucks.

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	Sustainable Shipyards PD 4.21. Development shall be required to invest in electrification or other improvements on-site to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include investment in a compilation of improvements, such as installation of electric infrastructure to support equipment and operations on-site. The following PMPU PEIR Mitigation Measures support the conclusion that the PMPU does not obstruct the attainment of the goals and objectives contained within the CERP. **Mitigation Measures:** MM-AQ-2 requires the implementation of air quality Best Management Practices during construction of all future PMPU-consistent projects. MM-AQ-3 requires a future project proponent to implement diesel emission-reduction measures during construction of all future PMPU-consistent projects. MM-AQ-6 requires the use of modern harbor craft and dredgers during construction activities. MM-AQ-7 requires the District to conduct an Annual Technology Review to promote the use of new emission control technologies during future construction- and operation-related activities. MM-AQ-2, MM-AQ-3, MM-AQ-6, and MM-AQ-7 are all described in full within the Final PEIR, Volume 2, Section 4.2, *Air Quality and Health Risk*.
GOAL 2. Medium and Heavy Duty trucks servicing Portside Community to be 100% ZEV 5 years ahead of the California state requirements.	**Consistent.** The proposed project would not obstruct the implementation of and would not conflict with Goal 2. The proposed project includes mitigation measures to be required, when appropriate during project construction and operation, in addition to the Economics, Ecology, Mobility and Environmental Justice Elements' policies listed below that ensure PMPU implementation will not obstruct CERP Goal 2. **Policies** **Environmental Justice** EJ Policy 3.2.2. Maritime development shall transition to clean, modern, and operationally efficient marine terminal facilities and working waterfront businesses based on feasibility and best available science. EJ Policy 3.2.3. Through CDPs issued by the District, permittees shall pursue electrification of marine terminal and working

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	waterfront operations, including drayage trucks, prioritizing the facilities adjacent to Portside Communities, to reduce reliance on fossil fuels from mobile and portable sources, in alignment with related State and District goals. **Mobility** M Policy 2.2.1. Through CDPs issued by the District, permittees shall plan, design, and implement improvements to the mobility network that provide opportunities for efficient and sustainable goods movement. These improvements shall be developed in accordance with Chapter 5, Planning Districts, including any development standards within the applicable planning district or subdistrict. M Policy 2.2.2. Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero-emission goods movement mobility options and maritime equipment, and supportive infrastructure improvements, in alignment with District sustainability and maritime clean air strategies. M Policy 2.2.3. The District shall engage with stakeholders, such as railway companies, trucking companies, cargo and freight shipping lines, and service providers, to identify and implement feasible sustainable freight strategies in accordance with the District's environmental and operational strategies, plans, and regulations, as well as the State's sustainability objectives. **Ecology** ECO Policy 3.1.2 Permittees shall implement clean air action measures, which may include: a. Efficient buildings design features; b. Vehicles, vessels, and advanced technologies powered by alternative fuels or electric powered; c. Parking management programs; d. Alternative transportation programs; e. Energy efficient lighting; and f. Native tree planting and landscaping. ECO Policy 3.1.4. Permittees shall implement infrastructure and clean vessel technologies, for both in-transit and while at-berth, such as advancing alternative fuels and expansion of marine terminal electrification, when applicable. **Economics** ECON Policy 2.3.2 The District and permittees shall coordinate the investment in improvements to marine terminal and maritime industrial operations that improve functionality and efficiency through modernization of terminal infrastructure

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	and equipment, including electrification that supports optimization of cargo movement and reduces emissions. **Development Standards** Sustainable Freight and Shipping Methods PD 4.7 Development, including operations, shall implement the emissions reductions goals of the California Sustainable Freight Action Plan or similar, future plans by implementing the measures below. Such improvements may be planned, designed, and implemented by third parties through partnerships or leases with the District, subject to the discretion of BPC: a. Continue to implement a vessel speed reduction program for operations, occupants, tenants, and permittees at the Tenth Avenue Marine Terminal; and b. Require development on the terminal to implement electrification or other improvements to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include: 1. Developing a compilation of improvements, such as installation of electric infrastructure to support on-terminal cargo-handling equipment and shore power; 2. Developing on-site renewable energy production and battery storage consistent with State goals and requirements and preferably ahead of schedule, where feasible; 3. Developing infrastructure for zero-emission vehicles and trucks consistent with State goals and requirements and preferably ahead of schedule, where feasible; 4. Developing a program that phases in the use of zero-emission vehicles and trucks, including drayage trucks and specialized heavy trucks by District occupants, tenants, and permittees at the Tenth Avenue Marine Terminal consistent with State goals and requirements and preferably ahead of schedule, where feasible; and 5. Supporting implementation of pilot programs or demonstration projects that advance deployment of zero-emission equipment, vehicles, and trucks. Sustainable Shipyards PD 4.21. Development shall be required to invest in electrification or other improvements on-site to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include investment

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	in a compilation of improvements, such as installation of electric infrastructure to support equipment and operations on-site. The following PMPU PEIR Mitigation Measures support the conclusion that the PMPU does not obstruct the implementation of CERP Goal 2. **Mitigation Measures** MM-AQ-2 requires the implementation of air quality Best Management Practices during construction of all future PMPU-consistent projects. MM-AQ-7 requires the District to conduct an Annual Technology Review to promote the use of new emission control technologies during future construction- and operation-related activities. MM-AQ-8 requires a project-level environmental review if a future development project will have impacts that were not identified and mitigated in the Final PEIR. MM-AQ-2, MM-AQ-7, and MM-AQ-8 are all described in full within the Final PEIR, Volume 2, Section 4.2, *Air Quality and Health Risk*. MM-GHG-2 requires the purchase of alternative fuel, electric, or hybrid vehicles and equipment and is described in full within the Final PEIR, Volume 2, Section 4.6, *Greenhouse Gas Emissions and Energy*.
GOAL 3. Establish ZEV HD/MD truck charging infrastructure in Portside, by specified dates in Action E1, with 4 sites operational by 2026.	**Consistent.** The proposed project would not obstruct the implementation of and would not conflict with the implementation of CERP Goal 3 regarding installation of EV Charging infrastructure. The Port District issued an RFI (5/23 – 7/25/2022) seeking information to facilitate deployment of infrastructure to support the transition to zero-emission (ZE) truck trips to and from the Port District's marine cargo terminals in San Diego and National City. The RFI's objective is to identify opportunities to deploy public-facing infrastructure for both battery electric and hydrogen fuel cell ZE technologies for Heavy Duty (HD) trucks. The RFI has identified four (4) potential sites on Tidelands as well as four additional sites throughout the region. The Port District is also interested in opportunities on property not controlled by the Port District located throughout San Diego County along high-volume freight corridors. These areas include, but are not limited to, areas adjacent to District Tidelands, Otay Mesa, and along the Interstates (I)-5, I-8, and I-15. Staff intends to take the results of the RFI to the Board of Port Commissioners in the Fall of 2022 and receive direction on how to proceed. Please note that

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	these efforts also support CERP Action E4: Increase number of truck parking and staging facilities with electric capabilities. The proposed project is consistent with and will not obstruct implementation of CERP Goal 3 which is supported by the following Economic, Ecology, Mobility, Environmental Justice and Development Standards policies. **Policies** **Economics** ECON Policy 2.1.2. The District shall coordinate with permittees to provide infrastructure that supports a mix of water and land uses, including the needs of established Tidelands industries and emerging Public Trust–consistent businesses, while also providing environmental benefit. ECON Policy 2.3.2. The District and permittees shall coordinate the investment in improvements to marine terminal and maritime industrial operations that improve functionality and efficiency through modernization of terminal infrastructure and equipment, including electrification that supports optimization of cargo movement and reduces emissions. **Mobility** M Policy 2.2.2. Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero-emission goods movement mobility options and maritime equipment, and supportive infrastructure improvements, in alignment with District sustainability and maritime clean air strategies. **Ecology** ECO Policy 3.1.4 Permittees shall implement infrastructure and clean vessel technologies, for both in-transit and while at-berth, such as advancing alternative fuels and expansion of marine terminal electrification, when applicable. **Environmental Justice** EJ Policy 3.2.3 Through CDPs issued by the District, permittees shall pursue electrification of marine terminal and working waterfront operations, including drayage trucks, prioritizing the facilities adjacent to Portside Communities, to reduce reliance on fossil fuels from mobile and portable sources, in alignment with related State and District goals. **Development Standards** Sustainable Freight and Shipping Methods PD 4.7 Development, including operations, shall implement the emissions reductions goals of the California Sustainable Freight Action Plan or similar, future plans by implementing the measures below. Such improvements may be planned, designed, and implemented by third parties through

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	partnerships or leases with the District, subject to the discretion of BPC: a. Continue to implement a vessel speed reduction program for operations, occupants, tenants, and permittees at the Tenth Avenue Marine Terminal; and b. Require development on the terminal to implement electrification or other improvements to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include: 1. Developing a compilation of improvements, such as installation of electric infrastructure to support on-terminal cargo-handling equipment and shore power; 2. Developing on-site renewable energy production and battery storage consistent with State goals and requirements and preferably ahead of schedule, where feasible; 3. Developing infrastructure for zero-emission vehicles and trucks consistent with State goals and requirements and preferably ahead of schedule, where feasible; 4. Developing a program that phases in the use of zero-emission vehicles and trucks, including drayage trucks and specialized heavy trucks by District occupants, tenants, and permittees at the Tenth Avenue Marine Terminal consistent with State goals and requirements and preferably ahead of schedule, where feasible; and 5. Supporting implementation of pilot programs or demonstration projects that advance deployment of zero-emission equipment, vehicles, and trucks. Sustainable Shipyards PD 4.21. Development shall be required to invest in electrification or other improvements on-site to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include investment in a compilation of improvements, such as installation of electric infrastructure to support equipment and operations on-site.
GOAL 4. Reduce emissions from HD/MD trucks servicing indirect sources by 100% 5 years in advance of regulatory requirements.	**Consistent.** The proposed project would not obstruct the implementation of and would not conflict with CERP Goal 4. The proposed project includes mitigation measures, to be required when appropriate, during project construction and operation, in addition to the Mobility, Environmental Justice,

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	Ecology and Economics Elements' policies, and Development Standards policies listed below. **Policies** **Environmental Justice** EJ Policy 3.2.2 Maritime development shall transition to clean, modern, and operationally efficient marine terminal facilities and working waterfront businesses based on feasibility and best available science. EJ Policy 3.2.3. Through CDPs issued by the District, permittees shall pursue electrification of marine terminal and working waterfront operations, including drayage trucks, prioritizing the facilities adjacent to Portside Communities, to reduce reliance on fossil fuels from mobile and portable sources, in alignment with related State and District goals. **Mobility** M Policy 2.2.1Through CDPs issued by the District, permittees shall plan, design, and implement improvements to the mobility network that provide opportunities for efficient and sustainable goods movement. These improvements shall be developed in accordance with *Chapter 5, Planning Districts*, including any development standards within the applicable planning district or subdistrict. M Policy 2.2.2Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero-emission goods movement mobility options and maritime equipment, and supportive infrastructure improvements, in alignment with District sustainability and maritime clean air strategies. M Policy 2.2.3. The District shall engage with stakeholders, such as railway companies, trucking companies, cargo and freight shipping lines, and service providers, to identify and implement feasible sustainable freight strategies in accordance with the District's environmental and operational strategies, plans, and regulations, as well as the State's sustainability objectives. **Ecology** ECO Policy 3.1.2 Permittees shall implement clean air action measures, which may include: a. Efficient buildings design features; b. Vehicles, vessels, and advanced technologies powered by alternative fuels or electric powered; c. Parking management programs; d. Alternative transportation programs; e. Energy efficient lighting; and

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	f. Native tree planting and landscaping. ECO Policy 3.1.4 Permittees shall implement infrastructure and clean vessel technologies, for both in-transit and while at-berth, such as advancing alternative fuels and expansion of marine terminal electrification, when applicable. **Economics** ECON Policy 2.3.2. The District and permittees shall coordinate the investment in improvements to marine terminal and maritime industrial operations that improve functionality and efficiency through modernization of terminal infrastructure and equipment, including electrification that supports optimization of cargo movement and reduces emissions. **Development Standards** Sustainable Freight and Shipping Methods PD 4.7 Development, including operations, shall implement the emissions reductions goals of the California Sustainable Freight Action Plan or similar, future plans by implementing the measures below. Such improvements may be planned, designed, and implemented by third parties through partnerships or leases with the District, subject to the discretion of BPC: a. Continue to implement a vessel speed reduction program for operations, occupants, tenants, and permittees at the Tenth Avenue Marine Terminal; and b. Require development on the terminal to implement electrification or other improvements to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include: 1. Developing a compilation of improvements, such as installation of electric infrastructure to support on-terminal cargo-handling equipment and shore power; 2. Developing on-site renewable energy production and battery storage consistent with State goals and requirements and preferably ahead of schedule, where feasible; 3. Developing infrastructure for zero-emission vehicles and trucks consistent with State goals and requirements and preferably ahead of schedule, where feasible; 4. Developing a program that phases in the use of zero-emission vehicles and trucks, including drayage trucks and specialized heavy trucks by District occupants, tenants, and permittees at the Tenth Avenue Marine

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	Terminal consistent with State goals and requirements and preferably ahead of schedule, where feasible; and 5. Supporting implementation of pilot programs or demonstration projects that advance deployment of zero-emission equipment, vehicles, and trucks. Sustainable Shipyards PD 4.21. Development shall be required to invest in electrification or other improvements on-site to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include investment in a compilation of improvements, such as installation of electric infrastructure to support equipment and operations on-site. The following PMPU PEIR Mitigation Measures support the conclusion that the PMPU does not obstruct the attainment of CERP Goal 4. **Mitigation Measures** MM-AQ-2 requires the implementation of air quality Best Management Practices during construction of all future PMPU-consistent projects. MM-AQ-3 requires a future project proponent to implement diesel emission-reduction measures during construction of all future PMPU-consistent projects. MM-AQ-7 requires the District to conduct an Annual Technology Review to promote the use of new emission control technologies during future construction- and operation-related activities. MM-AQ-8 requires a project-level environmental review if a future development project will have impacts that were not identified and mitigated in the Final PEIR. MM-AQ-2, MM-AQ-3, MM-AQ-7, and MM-AQ-8 are all described in full within the Final PEIR, Volume 2, Section 4.2, *Air Quality and Health Risk*. MM-GHG-2 requires the purchase of alternative fuel, electric, or hybrid vehicles and equipment and is described in full within the Final PEIR, Volume 2, Section 4.6, Greenhouse Gas Emissions and Energy.
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,	**Not Applicable.** This goal relates to action to be taken by SDAPCD, not the District. The proposed project is not in conflict with and does not obstruct SDAPCD staff from preparing and presenting a cumulative cancer risk for Portside Communities.

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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.	
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.** This goal relates to action to be taken by SDAPCD, not the District. The proposed project is not in conflict 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	**Consistent:** The proposed project would not obstruct the implementation of and would not conflict with Goal 7. The District has prepared an HRA for the two marine cargo terminals; the goal to identify existing health risk levels has been met. The HRA established the Baseline Health Risk from the MCAS 2019 Emissions Inventory. The HRA further forecasted the reduction in health risk from the reduced emissions anticipated from implementing key MCAS objectives related to equipment and vehicle transition to ZE and NZE as well as installation of electrical infrastructure. The Board of Port Commissioners received the Final HRA Report following a presentation by staff in June 2022, whereafter the report was made available for public consumption. At this point in time, the BPC has not yet adopted an emission reduction goal nor a cancer risk reduction goal. The following Ecology, Economics and Environmental Justice Elements' policies encourage the continued transition away from diesel powered equipment and vehicles as well as installing supportive infrastructure. **Policies** **Economics** Econ Policy 2.3.2. The District and permittees shall coordinate the investment in improvements to marine terminal and maritime industrial operations that improve functionality and efficiency through modernization of terminal infrastructure

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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.	and equipment, including electrification that supports optimization of cargo movement and reduces emissions. Listed below are three Ecology (ECO) Policies that address the District's goal of increasing air quality benefits to the Portside Community and decreasing negative health risks due to toxic air contaminants, such as DPM. **Ecology** ECO Policy 3.1.1. Permittees shall implement programs and activities that reduce exposure to toxic air contaminants and criteria air pollutants in and adjacent to Tidelands. ECO Policy 3.1.2. Permittees shall implement clean air action measures, which may include: a. Efficient buildings design features; b. Vehicles, vessels, and advanced technologies powered by alternative fuels or electric powered; c. Parking management programs; d. Alternative transportation programs; e. Energy efficient lighting; and f. Native tree planting and landscaping. ECO Policy 3.1.4. Permittees shall implement infrastructure and clean vessel technologies, for both in-transit and while at-berth, such as advancing alternative fuels and expansion of marine terminal electrification, when applicable. **Environmental Justice** EJ Policy 3.2.1 The District and its tenants shall participate in community air quality monitoring, such as supporting ongoing monitoring efforts that incorporate community involvement, and develop maritime clean air strategies to reduce criteria pollutant emissions from industrial and maritime sources, especially near the Portside communities. EJ Policy 3.2.2 Maritime development shall transition to clean, modern, and operationally efficient marine terminal facilities and working waterfront businesses based on feasibility and best available science. EJ Policy 3.2.4 Support actions and measures taken by tenants and occupants on Tidelands that improve environmental conditions and advance long-term sustainability. The proposed project includes mitigation measures, during project construction and operation. The following mitigation measures do not directly affect completion of the HRA, however, their imposition at the project level is consistent with the intent of reducing cancer risk from diesel powered equipment.

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	The following PMPU PEIR Mitigation Measures support the conclusion that the PMPU does not obstruct the attainment of the goals and objectives contained within the CERP. **Mitigation Measures** MM-AQ-2 requires the implementation of air quality Best Management Practices during construction of all future PMPU-consistent projects. MM-AQ-3 requires a future project proponent to implement diesel emission-reduction measures during construction of all future PMPU-consistent projects. MM-AQ-5 requires a future project proponent to use low-VOC interior and exterior coatings during construction of all PMPU-consistent projects. MM-AQ-6 requires the use of modern harbor craft and dredgers during construction activities. MM-AQ-2, MM-AQ-3, MM-AQ-5, and MM-AQ-6 are all described in full within the Final PEIR, Volume 2, Section 4.2, *Air Quality and Health Risk*.
GOAL 8. By 2026 reduce cancer risk below 10/million for each permitted stationary source, including portable equipment, in the Portside Environmental Justice Community.	**Not Applicable.** Permitting of stationary sources of emissions is the domain of the SDAPCD. The Port District holds various stationary source permits. The proposed project would not obstruct the implementation of and would not be inconsistent with Goal 8. Furthermore, the proposed project is not in conflict with and will not obstruct the SDAPCD from working with permittees to reduce cancer risk associate with their stationary emission sources. Nonetheless, the proposed project includes Mobility, Ecology, Economics, Environmental Justice Elements' policies, and Development Standards that may aid ACPDs effort to reduce cancer risk in the Portside Community. **Policies** **Mobility** M Policy 2.2.1 Through CDPs issued by the District, permittees shall plan, design, and implement improvements to the mobility network that provide opportunities for efficient and sustainable goods movement. These improvements shall be developed in accordance with *Chapter 5, Planning Districts*, including any development standards within the applicable planning district or subdistrict. M Policy 2.2.2 Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero-emission goods movement mobility options and maritime equipment, and supportive infrastructure improvements, in alignment with District sustainability and maritime clean air strategies.

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	M Policy 2.2.3 The District shall engage with stakeholders, such as railway companies, trucking companies, cargo and freight shipping lines, and service providers, to identify and implement feasible sustainable freight strategies in accordance with the District's environmental and operational strategies, plans, and regulations, as well as the State's sustainability objectives. **Ecology** ECO Policy 3.1.2 Permittees shall implement clean air action measures, which may include: a. Efficient buildings design features; b. Vehicles, vessels, and advanced technologies powered by alternative fuels or electric powered; c. Parking management programs; d. Alternative transportation programs; e. Energy efficient lighting; and f. Native tree planting and landscaping. ECO Policy 3.1.4 Permittees shall implement infrastructure and clean vessel technologies, for both in-transit and while at-berth, such as advancing alternative fuels and expansion of marine terminal electrification, when applicable. **Economics** ECON Policy 2.3.2 The District and permittees shall coordinate the investment in improvements to marine terminal and maritime industrial operations that improve functionality and efficiency through modernization of terminal infrastructure and equipment, including electrification that supports optimization of cargo movement and reduces emissions. **Environmental Justice** EJ Policy 3.2.2 Maritime development shall transition to clean, modern, and operationally efficient marine terminal facilities and working waterfront businesses based on feasibility and best available science. EJ Policy 3.2.3 Through CDPs issued by the District, permittees shall pursue electrification of marine terminal and working waterfront operations, including drayage trucks, prioritizing the facilities adjacent to Portside Communities, to reduce reliance on fossil fuels from mobile and portable sources, in alignment with related State and District goals. **Development Standards** Sustainable Freight and Shipping Methods PD 4.7 Development, including operations, shall implement the emissions reductions goals of the California Sustainable Freight Action Plan or similar, future plans by implementing

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	the measures below. Such improvements may be planned, designed, and implemented by third parties through partnerships or leases with the District, subject to the discretion of BPC: a. Continue to implement a vessel speed reduction program for operations, occupants, tenants, and permittees at the Tenth Avenue Marine Terminal; and b. Require development on the terminal to implement electrification or other improvements to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include: 1. Developing a compilation of improvements, such as installation of electric infrastructure to support on-terminal cargo-handling equipment and shore power; 2. Developing on-site renewable energy production and battery storage consistent with State goals and requirements and preferably ahead of schedule, where feasible; 3. Developing infrastructure for zero-emission vehicles and trucks consistent with State goals and requirements and preferably ahead of schedule, where feasible; 4. Developing a program that phases in the use of zero-emission vehicles and trucks, including drayage trucks and specialized heavy trucks by District occupants, tenants, and permittees at the Tenth Avenue Marine Terminal consistent with State goals and requirements and preferably ahead of schedule, where feasible; and 5. Supporting implementation of pilot programs or demonstration projects that advance deployment of zero-emission equipment, vehicles, and trucks. Sustainable Shipyards PD 4.21. Development shall be required to invest in electrification or other improvements on-site to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include investment in a compilation of improvements, such as installation of electric infrastructure to support equipment and operations on-site. The following PMPU PEIR Mitigation Measures support the conclusion that the PMPU does not obstruct the attainment of the goals and objectives contained within the CERP.

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	Mitigation Measures: MM-AQ-2 requires the implementation of air quality Best Management Practices during construction of all future PMPU-consistent projects. MM-AQ-3 requires a future project proponent to implement diesel emission-reduction measures during construction of all future PMPU-consistent projects. MM-AQ-6 requires the use of modern harbor craft and dredgers during construction activities. MM-AQ-7 requires the District to conduct an Annual Technology Review to promote the use of new emission control technologies during future construction- and operation-related activities. MM-AQ-2, MM-AQ-3, MM-AQ-6, and MM-AQ-7 are all described in full within the Final PEIR, Volume 2, Section 4.2, *Air Quality and Health Risk*.
GOAL 9. By 2031 complete Harbor Drive 2.0 truck freight improvements, including enforcement and signage of truck route for National City.	**Consistent.** CALTRANS is the lead agency designing and installing the Harbor Drive 2.0 project; the District is an engaged partner. The majority of the improvements contemplated are not within the District's Jurisdiction. Nonetheless, the proposed project would not obstruct the implementation of and would not conflict with, CERP Goal 9. Relevant Mobility and Development Standards policies are listed below. **Policies** **Mobility** M Policy 1.1.8 The District shall coordinate with agencies that have transportation authority, and with adjacent jurisdictions and permittees, to plan shared mobility infrastructure in support of the safe movement of people and/or goods. Specific transit improvements included in this Plan are outlined in *Chapter 5, Planning Districts*, including any planned improvements within the applicable planning district or subdistrict. M Policy 2.1.7 The District, in coordination with permittees of development, tenants, and adjacent jurisdictions, shall maintain and develop improvements to linkages between the marine terminals and landside networks, including but not limited to roadways, rail, pipelines, and the electrical grid, to enable efficient movement of goods along those networks and to support the working waterfront. M Policy 2.2.1 Through CDPs issued by the District, permittees shall plan, design, and implement improvements to the mobility network that provide opportunities for efficient and sustainable goods movement. These improvements shall be

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	developed in accordance with Chapter 5, Planning Districts, including any development standards within the applicable planning district or subdistrict. M Policy 2.2.2 Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero-emission goods movement mobility options and maritime equipment, and supportive infrastructure improvements, in alignment with District sustainability and maritime clean air strategies. M Policy 2.2.5 The District, in coordination with permittees of development, tenants, and adjacent jurisdictions, and regional transportation agencies, shall maintain and develop improvements to linkages between the marine terminals and landside networks, including but not limited to roadways, rail, and pipelines, to enable efficient movement of goods along those networks and to support the working waterfront. M Policy 2.2.6 The District and permittees shall optimize off-terminal land-based freight networks to maintain, enhance, and expand the vitality of the working waterfront. **Development Standards** Roadway Improvements PD4.1. Modify the entire segment of northbound and southbound Harbor Drive within the District's jurisdiction by: a. Providing a multi-use pathway; and b. Including one "flexible" lane in each direction that is dedicated for trucks, transit buses, and/or shuttles with an information technology system (or similar technology) and signalization improvements that can be modified or adjusted during peak and nonpeak hours between the Tenth Avenue Marine Terminal's back gate and Cesar Chavez Parkway. PD4.2. Coordinate with transportation agencies and adjacent jurisdictions to reconfigure portions of Harbor Drive outside the District's jurisdiction to implement roadway improvements consistent with the improvements described in PD4.1 supporting improved efficiency and safety for vehicular traffic, goods movement, and pedestrian and bicycle facilities. PD4.3. Coordinate with adjacent jurisdictions to provide appropriate signage to identify designated truck routes. PD4.4. Coordinate with the City of San Diego to ensure that truck route requirements and truck parking prohibitions in adjacent neighborhoods are followed.
GOAL 10. By 2031 increase tree canopy in the Portside Community to 35%.	**Not Applicable.** The proposed project would not obstruct the implementation of and would not conflict with Goal 10 or with SDAPCD, City of San Diego, National City and stakeholders

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	increasing the tree canopy of the Portside Community. Residential uses are not allowed within District Tidelands and District resources may not be used for off-Tidelands improvements. Nonetheless, with sponsorship from the CA Department of Forestry and in collaboration with Urban Core, the community planted 20 new trees outside the open field area at Cesar Chavez park, in late 2022. Some of this effort coincided with the Field Turf Rehabilitation efforts at the field also located at the park. A group of local park users (stakeholders) has been engaged for feedback on these efforts, in addition to the community outreach conducted by Urban Core that preceded the Ports involvement. The proposed project contains the following Environmental Justice policy aimed at greening the urban environment with particular attention to disadvantaged communities. **Policies** **Environmental Justice** EJ Policy 2.1.3. The District may support or participate in urban greening opportunities in adjacent disadvantaged communities, where feasible and consistent with requirements of the Port Act. Further, within the PMPU, Planning District 4 (adjacent to Portside Community), the Cesar Chavez Park Subdistrict, the proposed project includes a Planned Improvement that would modify Cesar Chavez Parkway to accommodate vehicular traffic with connected pedestrian, bicycle, and other mobility enhancements. That Planned Improvement also includes working with adjoining jurisdictions to support urban greening efforts, such as tree canopy and walkability enhancements. PD4.11. Modify Cesar Chavez Parkway to accommodate vehicular traffic while allowing for pedestrian, bicycle, and mobility enhancements. This includes partnering with adjacent jurisdictions to support urban greening efforts, such as walkability improvements, enhanced tree canopy, and stormwater treatment opportunities, consistent with the City of San Diego's planned Bay to Park link along Cesar Chavez Parkway between 25th Street and Cesar Chavez Park. Additionally, a new Development Standard has been added to the PMPU, PD4 - Cesar Chavez Park Subdistrict that states: PD4.19. Develop additional urban greening features to Cesar Chavez Park to establish an enhanced buffer between the park and industrial uses, where feasible.

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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 would not obstruct the implementation of Goal 11 and would not conflict with SDAPCD, City of San Diego, and stakeholders from developing a new vision for park/green space and increasing park space for the Portside Community. The following Environmental Justice Element policy supports CERP Goal 11. **Environmental Justice** EJ Policy 2.1.3 The District may support or participate in urban greening opportunities in adjacent disadvantaged communities, where feasible and consistent with requirements of the Port Act.
Outreach and Community Engagement Strategies	
Action A1: Incident Response Plan	**Not Applicable.** Action A1 is the not the responsibility of the District but instead that of the SDAPCD, County of San Diego – Office of Emergency Services (OES), and Community Steering Committee (CSC) Members. The proposed project would not obstruct the implementation of and would not conflict with those entities preparing and implementing an incident plan for major, unplanned air contaminant releases.
Action A2: Develop and Implement a Public Participation Plan	**Not Applicable.** According to the CERP, Action A2 is the responsibility of SDAPCD, Community Steering Committee, and the public but not that of the District. The proposed project would not obstruct the implementation of and would not conflict with the development and implementation of a Public Participation Plan. However, the proposed project includes Environmental Justice policies concerning stakeholder engagement that are found below. EJ Policy 2.2.1. Ensure that the expressed concerns of people from disadvantaged and indigenous communities are acknowledged and considered as part of the District's planning and development decisions. EJ Policy 2.2.2. Engage people from disadvantaged communities and relevant indigenous communities and tribes that may be impacted by upcoming activities or development on Tidelands to encourage meaningful participation in the District's planning and development decisions, including but not limited to participation in discussions to identify mitigation options for projects that may impact them. EJ Policy 3.2.1. The District and its tenants shall participate in community air quality monitoring, such as supporting ongoing monitoring efforts that incorporate community involvement, and develop maritime clean air strategies to reduce criteria pollutant emissions from industrial and maritime sources, especially near the Portside communities.

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Action A3: Develop Plan to Quantify and Prioritize the Community Health Risks from Air Pollutants	**Not Applicable.** The CERP lists the SDAPCD, CARB, and Community Steering Committee Members as responsible for this Action. The proposed project would not obstruct the implementation of and would not conflict with the development of a plan to quantify and prioritize community health risks from air pollutants. The proposed project does not require the preparation of a Health Risk Assessment, however, the District prepared an HRA that was accepted by the Board in June 2022, with a final report published in July 2022.
Action A4: Establish an Office of Environmental Justice within the APCD	**Not Applicable.** The CERP requires the SDAPCD and Community Steering Committee Members to be responsible for establishing and providing input, respectively an Office of Environmental Justice. The proposed project would not obstruct the implementation of and would not conflict with the establishment of an Office of Environmental Justice within the SDAPCD.
Outreach and Community Engagement Strategies	
Action B1: Implement Additional Flexibility for Mobile Source Incentives	**Not Applicable.** The CERP shows that the SDAPCD, CARB, and Community Steering Committee Members to be responsible for implementing flexibility for mobile source incentives. The proposed project would not obstruct the implementation of and would not be conflict with implementing incentives for additional flexibility for mobile source incentives.
Action B2: Reduce Emissions from Passenger Vehicles	**Not Applicable.** Pursuant to the CERP, the SDAPCD, CARB, and the Community Steering Committee members are responsible for developing and implementing strategies to reduce emissions from passenger vehicles. The proposed project would not obstruct the implementation of and would not conflict with Action B2.
Action B3: Reduce Exposure to Air Pollution	**Not Applicable.** Pursuant to the CERP, both SDAPCD and the Community Steering Committee members are responsible for developing and implementing a residential air filtration and air monitoring program for up to 1,000 residents of the Portside Community. The proposed project would not obstruct the implementation of and would not conflict with this Action. However, the proposed project also addresses air quality monitoring through the following policy and is therefore, complementary to Action B3. EJ Policy 3.2.1. The District and its tenants shall participate in community air quality monitoring, such as supporting ongoing monitoring efforts that incorporate community involvement, and develop maritime clean air strategies to reduce criteria pollutant emissions from industrial and maritime sources, especially near the Portside communities.
Action B4: Incentives Outreach	**Not Applicable.** Pursuant to the CERP, the SDAPCD, CARB, and the Community Steering Committee members are responsible to develop a plan for augmenting the SDAPCD role in

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	contacting implementing agencies or entities, such as the Port of San Diego, Cities, or candidates for incentive funding. The proposed project would not obstruct the implementation of and would not conflict with the SDAPCD contacting agencies, entities, or candidates for incentive funding opportunities.
Rule Development Strategies	
Action C1: Evaluate Rule 1206 to potentially regulate residential structures between 1-4 dwelling units	**Not Applicable.** The CERP places responsibility for Action C1 on the SDAPCD, the Community Steering Committee members, and regulated Facilities for this Rule 1206 evaluation. The proposed project would not obstruct the implementation of and would not conflict with evaluating Rule 1206 to regulate residential structures.
Action C2: Evaluate District Rule 1210 to Potentially Reduce Health Risks	**Not Applicable.** The CERP places responsibility for Action C2 on the SDAPCD, the Community Steering Committee members, and regulated Facilities for this evaluation of Rule 1210. The proposed project would not obstruct the implementation of and would not conflict with evaluating Rule 1210 to reduce health risks. However, SDAPCD did pass a more stringent Rule 1210, in November 2021.
Action C3: Evaluating Existing Rules and Considering New Rules	**Not Applicable.** The proposed project would not obstruct the implementation of and would not conflict with the SDAPCD, Community Steering Committee (CSC) members, and regulated Facilities evaluating existing and considering new rules.
Action C4: Propose the amendment of District Rule 1401	**Not Applicable.** The proposed project would not obstruct the implementation of and would not conflict with the SDAPCD, Community Steering Committee (CSC) Members, and regulated Facilities proposing amendments to Rule 1401.
Enforcement Actions/Strategies	
Action D1: Propose the Development of a Supplemental Environmental Project (SEP) Program within the Violation Settlement Program	**Not Applicable.** The proposed project would not obstruct the implementation of and would not conflict with the SDAPCD, Community Steering Committee (CSC) members, and regulated Facilities proposing the development of a supplemental environmental project program.
Action D2: Evaluate the Feasibility of Expanding Mobile Source Enforcement Program	**Not Applicable.** The proposed project would not obstruct the implementation of and would not conflict with the California Air Resources Board (CARB) SDAPCD, Community Steering Committee (CSC) members, and regulated Facilities evaluating the feasibility of expanding their mobile source enforcement program.
Action D3: Evaluate the Current Air Quality Complaint Process	**Not Applicable.** The proposed project would not obstruct the implementation of and would not conflict with the SDAPCD, Community Steering Committee (CSC) members, and regulated Facilities evaluating their current air quality complaint processes.

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Action D4: Increase APCD Presence in Portside Community	**Not Applicable.** The proposed project would not obstruct the implementation of and would not conflict with the SDAPCD and Community Steering Committee (CSC) members increasing their staff presence in Portside Communities.
Action D5: Evaluate the Feasibility of Utilizing Portable Emission Analyzers to Verify Compliance	**Not Applicable.** The proposed project would not obstruct the implementation of and would not conflict with the SDAPCD, Community Steering Committee (CSC) Members, and regulated Facilities from evaluating the feasibility of utilizing portable emission analyzers to verify compliance.
Action D6: Promote enforcement of existing air quality rules and regulations pertaining to mobile sources.	**Not Applicable.** The proposed project would not obstruct the implementation of and would not conflict with the SDAPCD, California Air Resources Board (CARB), and Community Steering Committee (CSC) members promoting enforcement of existing air quality rules and regulations pertaining to mobile sources.
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.	**Consistent.** The proposed project would not obstruct the implementation of and would not conflict with CERP Action E1. The proposed project includes mitigation measures, to be required when appropriate, during project construction and operation, in addition to the Ecology, Mobility, Environmental Justice and Development Standard policies listed below that complement CERP Action E1. **Policies** **Environmental Justice** EJ Policy 3.2.3. Through CDPs issued by the District, permittees shall pursue electrification of marine terminal and working waterfront operations, including drayage trucks, prioritizing the facilities adjacent to Portside Communities, to reduce reliance on fossil fuels from mobile and portable sources, in alignment with related State and District goals. **Ecology** ECO Policy 3.1.2 Permittees shall implement clean air action measures, which may include: a. Efficient buildings design features; b. Vehicles, vessels, and advanced technologies powered by alternative fuels or electric powered; c. Parking management programs; d. Alternative transportation programs; e. Energy efficient lighting; and f. Native tree planting and landscaping. **Mobility** M Policy 2.2.2. Through CDPs issued by the District, permittees shall advance as part of development the implementation of

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	zero-emission, when feasible, and near-zero-emission goods movement mobility options and maritime equipment, and supportive infrastructure improvements, in alignment with District sustainability and maritime clean air strategies. M Policy 2.2.3. The District shall engage with stakeholders, such as railway companies, trucking companies, cargo and freight shipping lines, and service providers, to identify and implement feasible sustainable freight strategies in accordance with the District's environmental and operational strategies, plans, and regulations, as well as the State's sustainability objectives. **Development Standards** Sustainable Freight and Shipping Methods PD 4.7 Development, including operations, shall implement the emissions reductions goals of the California Sustainable Freight Action Plan or similar, future plans by implementing the measures below. Such improvements may be planned, designed, and implemented by third parties through partnerships or leases with the District, subject to the discretion of BPC: a. Continue to implement a vessel speed reduction program for operations, occupants, tenants, and permittees at the Tenth Avenue Marine Terminal; and b. Require development on the terminal to implement electrification or other improvements to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include: 1. Developing a compilation of improvements, such as installation of electric infrastructure to support on-terminal cargo-handling equipment and shore power; 2. Developing on-site renewable energy production and battery storage consistent with State goals and requirements and preferably ahead of schedule, where feasible; 3. Developing infrastructure for zero-emission vehicles and trucks consistent with State goals and requirements and preferably ahead of schedule, where feasible; 4. Developing a program that phases in the use of zero-emission vehicles and trucks, including drayage trucks and specialized heavy trucks by District occupants, tenants, and permittees at the Tenth Avenue Marine Terminal consistent with State goals and requirements and preferably ahead of schedule, where feasible; and

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	5. Supporting implementation of pilot programs or demonstration projects that advance deployment of zero-emission equipment, vehicles, and trucks. The following PMPU PEIR Mitigation Measures support the conclusion that the PMPU does not obstruct the attainment of CERP Action E2. **Mitigation Measures** MM-AQ-2 requires the implementation of air quality Best Management Practices during construction of all future PMPU-consistent projects. MM-AQ-3 requires a future project proponent to implement diesel emission-reduction measures during construction of all future PMPU-consistent projects. MM-AQ-7 requires the District to conduct an Annual Technology Review to promote the use of new emission control technologies during future construction- and operation-related activities. MM-AQ-8 requires a project-level environmental review if a future development project will have impacts that were not identified and mitigated in the Final PEIR. MM-AQ-2, MM-AQ-3, MM-AQ-7, and MM-AQ-8 are all described in full within the Final PEIR, Volume 2, Section 4.2, *Air Quality and Health Risk*.
Action E2: Fair outcome for small fleet owners and truck drivers	**Not Applicable.** The proposed project would not obstruct the implementation of and would not conflict with the Air Pollution Control District (APCD) and California Air Resources Board (CARB) evaluating potential regulatory impacts of truck replacements and maintenance on small fleets or truk drivers. The proposed project also would not preclude SDAPCD or CARB from focusing grant opportunities on small fleets or truck drivers.
Action E3: Support dedicated truck route and avoid truck impacts to local community.	**Consistent.** The proposed project would not obstruct the implementation of and would not conflict with Action E3, and includes the following Mobility and Development Standards policies that support adherence to the designated truck routes in Barrio Logan **Policies** **Mobility** M Policy 1.1.8 The District shall coordinate with agencies that have transportation authority, and with adjacent jurisdictions and permittees, to plan shared mobility infrastructure in support of the safe movement of people and/or goods. Specific transit improvements included in this Plan are outlined in

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	Chapter 5, Planning Districts, including any planned improvements within the applicable planning district or subdistrict. M Policy 2.1.7 The District, in coordination with permittees of development, tenants, and adjacent jurisdictions, shall maintain and develop improvements to linkages between the marine terminals and landside networks, including but not limited to roadways, rail, pipelines, and the electrical grid, to enable efficient movement of goods along those networks and to support the working waterfront. M Policy 2.2.1 Through CDPs issued by the District, permittees shall plan, design, and implement improvements to the mobility network that provide opportunities for efficient and sustainable goods movement. These improvements shall be developed in accordance with *Chapter 5, Planning Districts*, including any development standards within the applicable planning district or subdistrict. **Development Standards** Truck Routes PD4.22. District occupants, tenants, and permittees shall use designated truck routes to, from, and through the planning district. PD4.23. Coordinate with the City of San Diego to ensure that truck route requirements and truck parking prohibitions in adjacent neighborhoods are followed.
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.	**Consistent.** The proposed project would not obstruct the implementation of and would not conflict with the County of San Diego, City of San Diego, SANDAG, and CALTRANS increasing the number of parking and staging facilities with electric charging capabilities to address regional parking needs and alleviate the truck parking burdens within the Portside Community. The following proposed project's policies complement Action F4. **Policies** M Policy 2.2.2. Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero-emission goods movement mobility options and maritime equipment, and supportive infrastructure improvements, in alignment with District sustainability and maritime clean air strategies. ECO Policy 3.1.2. Permittees shall implement clean air action measures, which may include: a. Efficient buildings design features; b. Vehicles, vessels, and advanced technologies powered by alternative fuels or electric powered; c. Parking management programs; d. Alternative transportation

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	programs; e. Energy efficient lighting; and f. Native tree planting and landscaping. **Development Standards** Sustainable Freight and Shipping Methods Sustainable Freight and Shipping Methods PD 4.7 Development, including operations, shall implement the emissions reductions goals of the California Sustainable Freight Action Plan or similar, future plans by implementing the measures below. Such improvements may be planned, designed, and implemented by third parties through partnerships or leases with the District, subject to the discretion of BPC: a. Continue to implement a vessel speed reduction program for operations, occupants, tenants, and permittees at the Tenth Avenue Marine Terminal; and b. Require development on the terminal to implement electrification or other improvements to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include: 1. Developing a compilation of improvements, such as installation of electric infrastructure to support on-terminal cargo-handling equipment and shore power; 2. Developing on-site renewable energy production and battery storage consistent with State goals and requirements and preferably ahead of schedule, where feasible; 3. Developing infrastructure for zero-emission vehicles and trucks consistent with State goals and requirements and preferably ahead of schedule, where feasible; 4. Developing a program that phases in the use of zero-emission vehicles and trucks, including drayage trucks and specialized heavy trucks by District occupants, tenants, and permittees at the Tenth Avenue Marine Terminal consistent with State goals and requirements and preferably ahead of schedule, where feasible; and 5. Supporting implementation of pilot programs or demonstration projects that advance deployment of zero-emission equipment, vehicles, and trucks. PD4.21 (TAMT Development Standards – Goods Movement Standards). Development shall be required to invest in electrification or other improvements on-site to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include investment

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	in a compilation of improvements, such as installation of electric infrastructure to support equipment and operations on-site.
Land Use Strategies	
Action F1: Support land uses that serve as a buffer between industrial and residential uses in the Portside Community.	**Consistent.** The proposed project would not obstruct the implementation of and would not conflict with Action F1. The proposed project governs land uses on Tidelands; however, residential uses are not allowed. Residential uses are allowed in some areas immediately adjacent to Tidelands. The following mitigation measures that are to be required when appropriate, during project construction and operation, in addition to the Environmental justice and Water and Land Use policies, take into consideration the proximity of potentially inconsistent land uses. **Policies** **Environmental Justice** EJ Policy 3.1.1 The District shall work to reduce the cumulative health burdens on neighboring communities, especially disadvantaged communities, in developing, adopting, implementing, and enforcing environmental laws, regulations, and policies. EJ Policy 3.1.2 The District shall collaborate with adjacent jurisdictions, occupants, tenants, permittees, and community stakeholders to provide transition zone areas adjacent to Tidelands between maritime industrial, commercial, and residential uses as well as other sensitive receptors in adjacent disadvantaged communities. EJ Policy 3.1.4. Maritime industrial development that is sited abutting a Portside community shall incorporate industrial site design standards that consider the health and environmental quality of the Portside community, such as, but not limited to, truck route signage, setbacks from property lines, greening buffer, parking requirements, ingress/egress points, noise and light screening, air emission dispersion, and interior air quality for employees. **Water and Land Use** WLU Policy 5.1.1 The District shall continue to maintain, expand, and enhance District facilities consistent with the Port Act and in support of the District's mission. For more detail, refer to *Chapter 1, Introduction*. WLU Policy 5.1.3 All development shall be located, designed, and constructed to: a. Give highest priority to the use of existing land space in harbors for coastal-dependent port purposes, including, but not limited to, navigational facilities, shipping

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	industries, commercial fishing, sportfishing, maritime commerce, and necessary support and access facilities. b. Provide for other benefits consistent with the Public Trust, including, but not limited to: improved recreational opportunities in the public realm, including Recreation Open Space that is adjacent to the water's edge, or the conservation of adjacent wildlife habitat areas, to the extent feasible. The following PMPU PEIR Mitigation Measures supplement the conclusion that the PMPU does not obstruct the attainment of the goals and objectives contained within the CERP. **Mitigation Measures:** MM-AQ-8 requires a project-level environmental review if a future development project will have impacts that were not identified and mitigated in the Final PEIR. This mitigation measure is described in full within the Final PEIR, Volume 2, Section 4.2, *Air Quality and Health Risk*.
Action F2: Reduce exposures for sensitive receptors within 500 feet of Port, freeways, and industries	**Not Applicable.** The CERP identifies this Action as the responsibility of the California Department of Transportation (CALTRANS). However, the proposed project would not obstruct the implementation of and would not conflict with CALTRANS efforts to reduce exposures for sensitive receptors, within 500 feet of ports, freeways, and industries. Nonetheless, the proposed project aligns with this Action, as shown by the following policies. EJ Policy 3.1.1 The District shall work to reduce the cumulative health burdens on neighboring communities, especially disadvantaged communities, in developing, adopting, implementing, and enforcing environmental laws, regulations, and policies. EJ Policy 3.1.2. The District shall collaborate with adjacent jurisdictions, occupants, tenants, permittees, and community stakeholders to provide transition zone areas adjacent to Tidelands between maritime industrial, commercial, and residential uses as well as other sensitive receptors in Portside Communities. EJ Policy 3.1.4. Maritime industrial development that is sited abutting a Portside community shall incorporate industrial site design standards that consider the health and environmental quality of the Portside community, such as, but not limited to, truck route signage, setbacks from property lines, greening buffer, parking requirements, ingress/egress points, noise and light screening, air emission dispersion, and interior air quality for employees.
Action F3: Urban Greening.	**Consistent.** The proposed project is consistent with Action F3 and is not in conflict with and does not obstruct the other jurisdictions' implementation of urban greening projects or

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	from promoting programs, projects, and funding opportunities to increase urban greening efforts. For example, with sponsorship from the CA Department of Forestry and in collaboration with Urban Core, 20 new trees will be planted outside the open field area at Cesar Chavez Park in late 2022. Some of this effort will coincide with the Field Turf Rehabilitation efforts at the field also located at the Park. Further, with sponsorship from the CA Department of Forestry and in collaboration with Urban Core, 20 new trees will be planted outside the open field area at Cesar Chavez Park in late 2022. Some of this effort will coincide with the Field Turf Rehabilitation efforts at the field also located at the Park. The proposed project contains the following policies aimed at greening the urban environment with particular attention to disadvantaged communities. **Policies** **Environmental Justice** EJ Policy 2.1.3. The District may support or participate in urban greening opportunities in adjacent disadvantaged communities, where feasible and consistent with requirements of the Port Act. EJ Policy 2.3.1 Through CDPs issued by the District, the District shall consider environmental justice issues, including potential health impacts, associated with decisions involved in implementing this Plan to reduce adverse environmental effects that may impact adjacent disadvantaged communities to Tidelands. Further, within the PMPU, Planning District 4 (adjacent to Portside Community), the Cesar Chavez Park Subdistrict, the proposed project includes a Planned Improvement that would modify Cesar Chavez Parkway to accommodate vehicular traffic with connected pedestrian, bicycle, and other mobility enhancements. That Planned Improvement also includes working with adjoining jurisdictions to support urban greening efforts, such as tree canopy and walkability enhancements. PD4.11. Modify Cesar Chavez Parkway to accommodate vehicular traffic while allowing for pedestrian, bicycle, and mobility enhancements. This includes partnering with adjacent jurisdictions to support urban greening efforts, such as walkability improvements, enhanced tree canopy, and stormwater treatment opportunities, consistent with the City of San Diego's planned Bay to Park link along Cesar Chavez Parkway between 25th Street and Cesar Chavez Park. Additionally, a new Development Standard has been added to the PMPU, PD4 - Cesar Chavez Park Subdistrict that states:

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	PD4.19. Develop additional urban greening features to Cesar Chavez Park to establish an enhanced buffer between the park and industrial uses, where feasible.
Action F4: Public school exposure reduction	**Not Applicable.** This Action is identified as the responsibility of the SDAPCD (with San Diego Gas and Electric (SDGE), City of San Diego and City of National City support). However, the proposed project would not obstruct the implementation of and would not conflict with reducing the exposure of public schools to air quality pollution. Please refer to the following Environmental Justice Element policy that shows the PMPU supports this Action. EJ Policy 3.1.2. The District shall collaborate with adjacent jurisdictions, occupants, tenants, permittees, and community stakeholders to provide transition zone areas adjacent to Tidelands between maritime industrial, commercial, and residential uses as well as other sensitive receptors in adjacent disadvantaged communities.
Action F5: Support Harbor Drive Multimodal Corridor Study (HDMCS – "Harbor Drive 2.0") Land Use Proposals.	**Consistent.** CALTRANS is the lead agency designing and installing the project; the District is an engaged partner. The majority of the improvements contemplated are not within the Districts jurisdiction. Nonetheless, the proposed project would not obstruct the implementation of and would not conflict with Action F5. Relevant Mobility and Development Standards policies are listed below. **Policies** **Mobility** M Policy 1.1.8 The District shall coordinate with agencies that have transportation authority, and with adjacent jurisdictions and permittees, to plan shared mobility infrastructure in support of the safe movement of people and/or goods. Specific transit improvements included in this Plan are outlined in *Chapter 5, Planning Districts*, including any planned improvements within the applicable planning district or subdistrict. M Policy 2.1.7 The District, in coordination with permittees of development, tenants, and adjacent jurisdictions, shall maintain and develop improvements to linkages between the marine terminals and landside networks, including but not limited to roadways, rail, pipelines, and the electrical grid, to enable efficient movement of goods along those networks and to support the working waterfront. M Policy 2.2.1 Through CDPs issued by the District, permittees shall plan, design, and implement improvements to the

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	mobility network that provide opportunities for efficient and sustainable goods movement. These improvements shall be developed in accordance with Chapter 5, Planning Districts, including any development standards within the applicable planning district or subdistrict. M Policy 2.2.5 The District, in coordination with permittees of development, tenants, and adjacent jurisdictions, and regional transportation agencies, shall maintain and develop improvements to linkages between the marine terminals and landside networks, including but not limited to roadways, rail, and pipelines, to enable efficient movement of goods along those networks and to support the working waterfront. M Policy 2.2.6 The District and permittees shall optimize off-terminal land-based freight networks to maintain, enhance, and expand the vitality of the working waterfront. M Policy 2.2.11 The District shall engage with adjacent jurisdictions and regional, State, and federal agencies to create a connected and flexible multimodal corridor that provides efficient freeway access by leveraging technology to support dedicated lanes, signal prioritization, and/or geofencing. Refer to *Chapter 5.4, Planning District 4: Working Waterfront* for applicable planned improvements related to this policy. **Development Standards** Roadway Improvements PD4.1. Modify the entire segment of northbound and southbound Harbor Drive within the District's jurisdiction by: a. Providing a multi-use pathway; and b. Including one "flexible" lane in each direction that is dedicated for trucks, transit buses, and/or shuttles with an information technology system (or similar technology) and signalization improvements that can be modified or adjusted during peak and nonpeak hours between the Tenth Avenue Marine Terminal's back gate and Cesar Chavez Parkway. PD4.2. Coordinate with transportation agencies and adjacent jurisdictions to reconfigure portions of Harbor Drive outside the District's jurisdiction to implement roadway improvements consistent with the improvements described in PD4.1 supporting improved efficiency and safety for vehicular traffic, goods movement, and pedestrian and bicycle facilities. PD4.3. Coordinate with adjacent jurisdictions to provide appropriate signage to identify designated truck routes. PD4.4. Coordinate with the City of San Diego to ensure that truck route requirements and truck parking prohibitions in adjacent neighborhoods are followed.

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Action F6: Neighborhood Resiliency & Housing Stability	**Not Applicable.** There are no residential neighborhoods or housing within the District's jurisdiction. Nonetheless, the proposed project would not obstruct the implementation of and would not conflict with the County of San Diego Health and Human Services Agency (HHSA), SANDAG, and SDAPCD working with regional, State and local governmental agencies to evaluate neighborhood resiliency and housing stability at the Portside Community.
Action F7: Improve Transportation Efficiencies.	**Consistent.** The proposed project would not obstruct the implementation of and would not conflict with SDAPCD, SANDAG, Naval Base San Diego, the District, City of San Diego, City of National City, and Caltrans working with regional and local transportation agencies to improve transportation efficiencies. Relevant proposed project Environmental Justice and Mobility policies are included below. **Policies** **Environmental Justice** EJ Policy 3.2.1 The District and its tenants shall participate in community air quality monitoring, such as supporting ongoing monitoring efforts that incorporate community involvement, and develop maritime clean air strategies to reduce criteria pollutant emissions from industrial and maritime sources, especially near the Portside communities. EJ Policy 3.2.2 Maritime development shall transition to clean, modern, and operationally efficient marine terminal facilities and working waterfront businesses based on feasibility and best available science. EJ Policy 3.2.3 Through CDPs issued by the District, permittees shall pursue electrification of marine terminal and working waterfront operations, including drayage trucks, prioritizing the facilities adjacent to Portside Communities, to reduce reliance on fossil fuels from mobile and portable sources, in alignment with related State and District goals. **Mobility** M Policy 2.2.1 Through CDPs issued by the District, permittees shall plan, design, and implement improvements to the mobility network that provide opportunities for efficient and sustainable goods movement. These improvements shall be developed in accordance with *Chapter 5, Planning Districts*, including any development standards within the applicable planning district or subdistrict. M Policy 2.2.2 Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero-emission goods movement mobility options and maritime equipment, and

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	supportive infrastructure improvements, in alignment with District sustainability and maritime clean air strategies. M Policy 2.2.3 The District shall engage with stakeholders, such as railway companies, trucking companies, cargo and freight shipping lines, and service providers, to identify and implement feasible sustainable freight strategies in accordance with the District's environmental and operational strategies, plans, and regulations, as well as the State's sustainability objectives.
Action F8: Truck Diversion	**Consistent.** Although the streets and highways within the Portside Communities are within the exclusive jurisdiction of the City of San Diego and Caltrans, and the CERP identifies the following entities with responsibility to implement this Action: City of San Diego; CALTRANS;, and the Barrio Logan Community Planning Group, the proposed project would not obstruct the implementation of and would not conflict with working to divert truck traffic to Cesar E. Chavez Parkway to access Tenth Avenue Marine Terminal. The proposed project requires the compliance with designated truck routes, as shown below. Based on this, the proposed project is complementary to Action E3. PD4.22. (Development Standards – Goods Movement Standards) District occupants, tenants, and permittees shall use designated truck routes to, from, and through the planning district. PD4.23. (Development Standards – Goods Movement Standards) Coordinate with the City of San Diego to ensure that truck route requirements and truck parking prohibitions in adjacent neighborhoods are followed. PD4.3 Coordinate with adjacent jurisdictions to provide appropriate signage to identify designated truck routes. PD4.4 Coordinate with the City of San Diego to ensure that truck route requirements and truck parking prohibitions in adjacent neighborhoods are followed.
Working Waterfront Activities (District, Navy, and Shipyards)	
Action G1: Reduce Diesel Emissions from cargo handling equipment (CHE).	**Consistent.** The proposed project would not obstruct the implementation of and would not conflict with Action G1. The replacement of CHE powered with diesel to ZE, or NZE technology will occur over time as funding and ZE/NZE CHE become commercially available. Some types of ZE CHE are currently available while others, such as Harbor Cranes must be ordered, and purpose built. The District and tenants continue to replace diesel powered equipment as technology and financial abilities allow, as this transition is not mandated by permit or legislation; the transition is voluntary.

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	In April 2022, Dole Produce (Port District Tenant at TAMT) procured five (5) new zero-emission yard trucks, which are used at the terminal to move containers. On January 11, 2022, the Board of Port Commissioners approved the acquisition of two all-electric mobile harbor cranes with a procurement cost not-to-exceed $14,760,000 for use at Tenth Avenue Marine Terminal. The fully electric cranes would eliminate tailpipe emissions from the District's most polluting piece of equipment, the diesel-powered mobile harbor crane. The proposed project includes mitigation measures, to be required when appropriate, during project construction and operation, in addition to Mobility, Environmental Justice and Development Standards policies guiding the District to reduce its reliance on fossil fuels for cargo handling equipment and to accomplish the transition of that equipment to electric or other near zero or zero emissions power sources. Each of these policies is complementary to Action G1 and will not obstruct or be inconsistent with its achievement. **Policies** **Mobility** M Policy 1.1.7. Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero emission technologies and supportive infrastructure improvements for passenger-related oceangoing vessels and harbor craft that facilitate the movement of people in alignment with District sustainability and maritime clean air strategies. M Policy 2.2.1. Through CDPs issued by the District, permittees shall plan, design, and implement improvements to the mobility network that provide opportunities for efficient and sustainable goods movement. These improvements shall be developed in accordance with Chapter 5, Planning Districts, including any development standards within the applicable planning district or subdistrict. M Policy 2.2.2. Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero-emission goods movement mobility options and maritime equipment, and supportive infrastructure improvements, in alignment with District sustainability and maritime clean air strategies. M Policy 2.2.3. The District shall engage with stakeholders, such as railway companies, trucking companies, cargo and freight shipping lines, and service providers, to identify and implement feasible sustainable freight strategies in accordance with the District's environmental and operational strategies,

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	plans, and regulations, as well as the State's sustainability objectives. M Policy 2.2.8. Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero emission technologies and supportive infrastructure improvements for freight-related oceangoing vessels and harbor craft in alignment with District sustainability and maritime clean air strategies. **Environmental Justice** EJ Policy 3.2.2. Maritime development shall transition to clean, modern, and operationally efficient marine terminal facilities and working waterfront businesses based on feasibility and best available science. EJ Policy 3.2.3. Through CDPs issued by the District, permittees shall pursue electrification of marine terminal and working waterfront operations, including drayage trucks, prioritizing the facilities adjacent to Portside Communities, to reduce reliance on fossil fuels from mobile and portable sources, in alignment with related State and District goals. **Development Standards** Sustainable Freight and Shipping Methods PD 4.7 Development, including operations, shall implement the emissions reductions goals of the California Sustainable Freight Action Plan or similar, future plans by implementing the measures below. Such improvements may be planned, designed, and implemented by third parties through partnerships or leases with the District, subject to the discretion of BPC: a. Continue to implement a vessel speed reduction program for operations, occupants, tenants, and permittees at the Tenth Avenue Marine Terminal; and b. Require development on the terminal to implement electrification or other improvements to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include: 1. Developing a compilation of improvements, such as installation of electric infrastructure to support on-terminal cargo-handling equipment and shore power; 2. Developing on-site renewable energy production and battery storage consistent with State goals and requirements and preferably ahead of schedule, where feasible;

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	3. Developing infrastructure for zero-emission vehicles and trucks consistent with State goals and requirements and preferably ahead of schedule, where feasible; 4. Developing a program that phases in the use of zero-emission vehicles and trucks, including drayage trucks and specialized heavy trucks by District occupants, tenants, and permittees at the Tenth Avenue Marine Terminal consistent with State goals and requirements and preferably ahead of schedule, where feasible; and 5. Supporting implementation of pilot programs or demonstration projects that advance deployment of zero-emission equipment, vehicles, and trucks. Sustainable Shipyards PD 4.21. Development shall be required to invest in electrification or other improvements on-site to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include investment in a compilation of improvements, such as installation of electric infrastructure to support equipment and operations on-site. The following PMPU PEIR Mitigation Measures support the conclusion that the PMPU does not obstruct the attainment of the goals and objectives contained within the CERP. **Mitigation Measures** MM-AQ-7 requires the District to conduct an Annual Technology Review to promote the use of new emission control technologies during future construction- and operation-related activities. It is described in full within the Final PEIR, Volume 2, Section 4.2, *Air Quality and Health Risk*.
Action G2: Reduce Emissions from Ships at Berth.	**Consistent.** The proposed project would not obstruct the implementation of and would not conflict with Action G2 as indicated by the following Mobility, Environmental Justice and Development Standards policies listed below. These include requirements for implementation of electrification or other improvements that could decrease the reliance on fossil fuels and decrease criteria pollutants and greenhouse gases. **Policies** **Mobility** M Policy 1.1.7. Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero emission technologies and supportive infrastructure improvements for passenger-related oceangoing vessels and harbor craft that

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	facilitate the movement of people in alignment with District sustainability and maritime clean air strategies. M Policy 2.1.4 The District shall require, where feasible, efficient and sustainable dockside operations for oceangoing vessels and freight-related harbor craft. M Policy 2.1.5 The District shall seek investment and grant opportunities for infrastructure, equipment, and technologies that enable the District's marine terminals to efficiently and sustainably transfer goods between waterside and landside. M Policy 2.2.2 Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero-emission goods movement mobility options and maritime equipment, and supportive infrastructure improvements, in alignment with District sustainability and maritime clean air strategies. M Policy 2.2.3 The District shall engage with stakeholders, such as railway companies, trucking companies, cargo and freight shipping lines, and service providers, to identify and implement feasible sustainable freight strategies in accordance with the District's environmental and operational strategies, plans, and regulations, as well as the State's sustainability objectives. M Policy 2.2.8 Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero emission technologies and supportive infrastructure improvements for freight-related oceangoing vessels and harbor craft in alignment **Ecology** ECO Policy 3.1.3 In cooperation with regional, state, and federal agencies, the District shall advance maritime clean air strategies to help improve local air quality. ECO Policy 3.1.4. Permittees shall implement infrastructure and clean vessel technologies, for both in-transit and while at-berth, such as advancing alternative fuels and expansion of marine terminal electrification, when applicable. **Environmental Justice** EJ Policy 3.2.2. Maritime development shall transition to clean, modern, and operationally efficient marine terminal facilities and working waterfront businesses based on feasibility and best available science. EJ Policy 3.2.3. Through CDPs issued by the District, permittees shall pursue electrification of marine terminal and working waterfront operations, including drayage trucks, prioritizing the facilities adjacent to Portside Communities, to reduce

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	reliance on fossil fuels from mobile and portable sources, in alignment with related State and District goals. **Development Standards** Sustainable Freight and Shipping Methods PD 4.7 Development, including operations, shall implement the emissions reductions goals of the California Sustainable Freight Action Plan or similar, future plans by implementing the measures below. Such improvements may be planned, designed, and implemented by third parties through partnerships or leases with the District, subject to the discretion of BPC: a. Continue to implement a vessel speed reduction program for operations, occupants, tenants, and permittees at the Tenth Avenue Marine Terminal; and b. Require development on the terminal to implement electrification or other improvements to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include: 1. Developing a compilation of improvements, such as installation of electric infrastructure to support on-terminal cargo-handling equipment and shore power; 2. Developing on-site renewable energy production and battery storage consistent with State goals and requirements and preferably ahead of schedule, where feasible; 3. Developing infrastructure for zero-emission vehicles and trucks consistent with State goals and requirements and preferably ahead of schedule, where feasible; 4. Developing a program that phases in the use of zero-emission vehicles and trucks, including drayage trucks and specialized heavy trucks by District occupants, tenants, and permittees at the Tenth Avenue Marine Terminal consistent with State goals and requirements and preferably ahead of schedule, where feasible; and 5. Supporting implementation of pilot programs or demonstration projects that advance deployment of zero-emission equipment, vehicles, and trucks. Sustainable Shipyards PD 4.21. Development shall be required to invest in electrification or other improvements on-site to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include investment

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	in a compilation of improvements, such as installation of electric infrastructure to support equipment and operations on-site.
Action G3: Reduce emissions from harbor craft	**Consistent.** The proposed project, through Mobility and Ecology policies and MM-AQ-6, would allow for permittees and the District to increase the amount of near-zero and zero emissions harbor craft and applicable technologies on Tidelands. The proposed project would not obstruct the implementation of and would not conflict with Action G3. The Port District does not own nor operate Harbor Craft therefore the District lacks direct control to convert harbor craft, except for vessels used by the Harbor Police. ZE/NZE harbor craft are not commercially available and must be custom designed and built, such as the Crowley E-Tug currently under design and construction. **Policies** **Mobility** M Policy 1.1.7. Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero emission technologies and supportive infrastructure improvements for passenger-related oceangoing vessels and harbor craft that facilitate the movement of people in alignment with District sustainability and maritime clean air strategies. M Policy 2.2.8. Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero emission technologies and supportive infrastructure improvements for freight-related oceangoing vessels and harbor craft in alignment with District sustainability and maritime clean air strategies. **Ecology** ECO Policy 3.1.4 Permittees shall implement infrastructure and clean vessel technologies, for both in-transit and while at-berth, such as advancing alternative fuels and expansion of marine terminal electrification, when applicable. The following PMPU PEIR Mitigation Measures support the conclusion that the PMPU does not obstruct the attainment of the goals and objectives contained within the CERP. **Mitigation Measures** MM-AQ-6 requires the use of modern harbor craft and dredgers during construction activities and is described in full within the Final PEIR, Volume 2, Section 4.2, *Air Quality and Health Risk*.

COMMUNITY EMISSIONS REDUCTION PLAN	PROPOSED PROJECT CONSISTENCY
Action G4: Reduce DPM and NOx emissions from portable air compressors and other diesel sources at shipyards.	**Consistent.** The shipyards listed in Action G4 are responsible for compliance with this Action. The proposed project would not obstruct the implementation of and would not conflict with Action G4. Nonetheless, as illustrated in Actions G1, G2, and G5, the proposed project's policies listed in those responses would reduce DPM and NOx emissions at District shipyards.
Action G5: Promote best practices for reducing diesel, VOC and other emissions from ship repair activities.	**Consistent.** This Action relates to the U.S. Navy and the shipyard operators. The proposed project would not obstruct the implementation of and would not conflict with Action G5. Nonetheless, in support of this conclusion, the following policies, development standards, and mitigation measures show consistency with this Action. **Policies** **Mobility** M Policy 2.1.5. The District shall seek investment and grant opportunities for infrastructure, equipment, and technologies that enable the District's marine terminals to efficiently and sustainably transfer goods between waterside and landside. M Policy 2.2.1. Through CDPs issued by the District, permittees shall plan, design, and implement improvements to the mobility network that provide opportunities for efficient and sustainable goods movement. These improvements shall be developed in accordance with Chapter 5, Planning Districts, including any development standards within the applicable planning district or subdistrict. M Policy 2.2.2. Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero-emission goods movement mobility options and maritime equipment, and supportive infrastructure improvements, in alignment with District sustainability and maritime clean air strategies. M Policy 2.2.3. The District shall engage with stakeholders, such as railway companies, trucking companies, cargo and freight shipping lines, and service providers, to identify and implement feasible sustainable freight strategies in accordance with the District's environmental and operational strategies, plans, and regulations, as well as the State's sustainability objectives. **Environmental Justice** EJ Policy 3.2.2. Maritime development shall transition to clean, modern, and operationally efficient marine terminal facilities and working waterfront businesses based on feasibility and best available science.

COMMUNITY EMISSIONS REDUCTION PLAN	PROPOSED PROJECT CONSISTENCY
	EJ Policy 3.2.3. Through CDPs issued by the District, permittees shall pursue electrification of marine terminal and working waterfront operations, including drayage trucks, prioritizing the facilities adjacent to Portside Communities, to reduce reliance on fossil fuels from mobile and portable sources, in alignment with related State and District goals. **Development Standards** Sustainable Freight and Shipping Methods PD 4.7. Development, including operations, shall implement the emissions reductions goals of the California Sustainable Freight Action Plan or similar, future plans by implementing the measures below. Such improvements may be planned, designed, and implemented by third parties through partnerships or leases with the District, subject to the discretion of BPC: c. Continue to implement a vessel speed reduction program for operations, occupants, tenants, and permittees at the Tenth Avenue Marine Terminal; and d. Require development on the terminal to implement electrification or other improvements to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include: 6. Developing a compilation of improvements, such as installation of electric infrastructure to support on-terminal cargo-handling equipment and shore power; 7. Developing on-site renewable energy production and battery storage consistent with State goals and requirements and preferably ahead of schedule, where feasible; 8. Developing infrastructure for zero-emission vehicles and trucks consistent with State goals and requirements and preferably ahead of schedule, where feasible; 9. Developing a program that phases in the use of zero-emission vehicles and trucks, including drayage trucks and specialized heavy trucks by District occupants, tenants, and permittees at the Tenth Avenue Marine Terminal consistent with State goals and requirements and preferably ahead of schedule, where feasible; and 10. Supporting implementation of pilot programs or demonstration projects that advance deployment of zero-emission equipment, vehicles, and trucks.

COMMUNITY EMISSIONS REDUCTION PLAN	PROPOSED PROJECT CONSISTENCY
	Sustainable Shipyards PD 4.210. Development shall be required to invest in electrification or other improvements on-site to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include investment in a compilation of improvements, such as installation of electric infrastructure to support equipment and operations on-site. The following PMPU PEIR Mitigation Measures support the conclusion that the PMPU does not obstruct the attainment of the goals and objectives contained within the CERP. **Mitigation Measures** In addition, implementation of MM-AQ-7 will ensure the feasibility of 100% ZE cargo handling equipment is reviewed annually and becomes required as soon as the District determines it is feasible. Additionally, MM-AQ-3 requires the implementation of other DPM reducing actions during proposed project construction. Further, relating to VOCs, MM-AQ-5 requires a future project proponent to use low-VOC interior and exterior coatings during construction of all PMPU-consistent projects. MM-AQ-3, MM-AQ-5, and MM-AQ-7 are described in full, within the Final PEIR, Volume 2, Section 4.2, *Air Quality and Health Risk*.
Action G6: Reduce emissions from shipyard employee transportation	**Consistent.** This Action relates to SANDAG and the shipyards' operators. The proposed project would not obstruct the implementation of or conflict with, Action G6. Nonetheless, the proposed project's policies referenced throughout this consistency review apply to this Action. Based on this, the proposed project's policies and mitigation measures are complementary to Action G6. Other policies that apply include the following. M Policy 1.1.8. The District shall coordinate with agencies that have transportation authority, and with adjacent jurisdictions and permittees, to plan shared mobility infrastructure in support of the safe movement of people and/ or goods. Specific transit improvements included in this Plan are outlined in Chapter 5, Planning Districts, including any planned improvements within the applicable planning district or subdistrict. M Policy 1.1.10. The District shall provide areas for transit stops and transit lanes for expanded transit opportunities on Tidelands and explore a means for financing expanded transit opportunities with agencies that have transportation

COMMUNITY EMISSIONS REDUCTION PLAN	PROPOSED PROJECT CONSISTENCY
	authority. Specific transit improvements included in this Plan are outlined in Chapter 5, Planning Districts, including any planned improvements within the applicable planning district or subdistrict. M Policy 1.1.11. The District shall require certain development, as applicable, to develop and comply with project-specific Transportation Demand Management (TDM) guidelines, with the intent to reduce dependence on single-occupancy vehicles and reduce vehicle miles traveled to and from the proposed development site. M Policy 1.1.21. The District – independently or in collaboration with other agencies with transportation authority and adjacent jurisdictions and permittees – may identify additional waterside or landside access opportunities in the future to enhance the mobility network for the movement of people.
Action G7: Promote adoption of ZE technologies by Port tenants, truckers, and other users of equipment	**Consistent.** The proposed project represents a modernization of the current Port Master Plan. It further includes policies related to Environmental Justice and Mobility aimed at improving community health by reducing emissions through the deployment of ZE technologies, thereby lessening exposure to poor air quality within the Portside Communities. The inclusion of the District's first Environmental Justice Element in the proposed project indicates the District's commitment to improving the air quality and public participation within the Portside Communities. The results of technology transition and supportive infrastructure reduce emissions and thereby improve public health overall and within the Portside Community. The proposed project would not obstruct the implementation of, or conflict with Action G7. It would not conflict with the District's ability to promote adoption of ZE technologies as such technologies become feasible and available. The proposed project includes policies within the Mobility, Environmental Justice, Ecology, Economics Elements, and Development Standards, as listed below. **Policies** **Mobility** M Policy 1.1.8 The District shall coordinate with agencies that have transportation authority, and with adjacent jurisdictions and permittees, to plan shared mobility infrastructure in support of the safe movement of people and/or goods. Specific transit improvements included in this Plan are outlined in *Chapter 5, Planning Districts*, including any planned improvements within the applicable planning district or subdistrict.

COMMUNITY EMISSIONS REDUCTION PLAN	PROPOSED PROJECT CONSISTENCY
	M Policy 2.2.1 Through CDPs issued by the District, permittees shall plan, design, and implement improvements to the mobility network that provide opportunities for efficient and sustainable goods movement. These improvements shall be developed in accordance with *Chapter 5, Planning Districts*, including any development standards within the applicable planning district or subdistrict. M Policy 2.2.2 Through CDPs issued by the District, permittees shall advance as part of development the implementation of zero-emission, when feasible, and near-zero-emission goods movement mobility options and maritime equipment, and supportive infrastructure improvements, in alignment with District sustainability and maritime clean air strategies. M Policy 2.2.3 The District shall engage with stakeholders, such as railway companies, trucking companies, cargo and freight shipping lines, and service providers, to identify and implement feasible sustainable freight strategies in accordance with the District's environmental and operational strategies, plans, and regulations, as well as the State's sustainability objectives. **Environmental Justice** EJ Policy 3.2.2 Maritime development shall transition to clean, modern, and operationally efficient marine terminal facilities and working waterfront businesses based on feasibility and best available science. EJ Policy 3.2.3 Through CDPs issued by the District, permittees shall pursue electrification of marine terminal and working waterfront operations, including drayage trucks, prioritizing the facilities adjacent to Portside Communities, to reduce reliance on fossil fuels from mobile and portable sources, in alignment with related State and District goals. **Ecology** ECO Policy 3.1.4 Permittees shall implement infrastructure and clean vessel technologies, for both in-transit and while at-berth, such as advancing alternative fuels and expansion of marine terminal electrification, when applicable. **Economics** ECON Policy 2.3.2 The District and permittees shall coordinate the investment in improvements to marine terminal and maritime industrial operations that improve functionality and efficiency through modernization of terminal infrastructure and equipment, including electrification that supports optimization of cargo movement and reduces emissions.

COMMUNITY EMISSIONS REDUCTION PLAN	PROPOSED PROJECT CONSISTENCY
	Development Standards Sustainable Freight and Shipping Methods PD 4.7 Development, including operations, shall implement the emissions reductions goals of the California Sustainable Freight Action Plan or similar, future plans by implementing the measures below. Such improvements may be planned, designed, and implemented by third parties through partnerships or leases with the District, subject to the discretion of BPC: a. Continue to implement a vessel speed reduction program for operations, occupants, tenants, and permittees at the Tenth Avenue Marine Terminal; and b. Require development on the terminal to implement electrification or other improvements to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include: 1. Developing a compilation of improvements, such as installation of electric infrastructure to support on-terminal cargo-handling equipment and shore power; 2. Developing on-site renewable energy production and battery storage consistent with State goals and requirements and preferably ahead of schedule, where feasible; 3. Developing infrastructure for zero-emission vehicles and trucks consistent with State goals and requirements and preferably ahead of schedule, where feasible; 4. Developing a program that phases in the use of zero-emission vehicles and trucks, including drayage trucks and specialized heavy trucks by District occupants, tenants, and permittees at the Tenth Avenue Marine Terminal consistent with State goals and requirements and preferably ahead of schedule, where feasible; and 5. Supporting implementation of pilot programs or demonstration projects that advance deployment of zero-emission equipment, vehicles, and trucks. Sustainable Shipyards PD 4.21. Development shall be required to invest in electrification or other improvements on-site to reduce the reliance on fossil fuels, reduce criteria air pollutants and greenhouse gas emissions, and demonstrate consistency with State goals and requirements, which may include investment in a compilation of improvements, such as installation of

COMMUNITY EMISSIONS REDUCTION PLAN	PROPOSED PROJECT CONSISTENCY
	electric infrastructure to support equipment and operations on-site.
Action G8: Reducing emissions associated with traffic at Naval Base San Diego	**Not Applicable.** The CERP assigns the responsibility for this Action to the US Navy. The proposed project does not generate new or additional traffic at Naval Base San Diego, which is outside the proposed project's geographic limits.
Advocacy Measures	
Action H1: Support Emission Reduction Opportunities	**Not Applicable.** The CERP assigns the responsibility for meeting Action H1 to the SDAPCD and the Community Steering Committee. As illustrated throughout this consistency review, the proposed project, either by its policies, development standards, or PEIR mitigation measures, is aimed at reducing air quality emissions that negatively affect the health of the Portside Community. The proposed project is complementary to this Action and does not obstruct its implementation nor is it inconsistent with Action H1.

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Appendix K

San Diego Unified Port District –
Coastal Development
Permit Regulations

(28)

SAN DIEGO UNIFIED PORT DISTRICT

COASTAL DEVELOPMENT PERMIT REGULATIONS

Adopted by the Board of Port Commissioners
of the San Diego Unified Port District
July 1, 1980
Resolution No. 80-193, Document No. 12937

Amended by the Board of Port Commissioners
of the San Diego Unified Port District
December 2, 1980, Resolution No. 80-343

Amended by the Board of Port Commissioners
of the San Diego Unified Port District
February 14, 1984, Resolution No. 84-62

COASTAL DEVELOPMENT PERMIT REGULATIONS

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COASTAL DEVELOPMENT PERMIT REGULATIONS

1. Authority

   a. These regulations are adopted pursuant to Public Resources Code Sections 30715 and 30715.5 and apply to Coastal Development Permits required for new development located within the jurisdiction of the San Diego Unified Port District, where permit authority has been delegated to the District pursuant to the California Coastal Act of 1976.

   b. The granting of a Coastal Development Permit, as required by State law, assures that the development is consistent with the adopted and certified Port Master Plan. It does not remove the requirement to obtain other permits and clearances, including, but not limited to, those of the U. S. Army Corps of Engineers, environmental agencies, and the Board of Port Commissioners.

2. Purpose

The purpose of the regulations is to provide procedures and criteria for the issuance of Coastal Development Permits in accordance with provisions of the California Coastal Act of 1976.

3. Definitions

Except for the terms contained in this section, the terms used herein shall have the same meaning as those used in Division 20 of the California Public Resources Code commencing with Section 3000.

   a. "Board" shall mean the Board of Port Commissioners of the San Diego Unified Port District.

   b. "Director" shall mean the Port Director of the District or his or her authorized representative.

c. "District" shall mean the San Diego Unified Port District.

d. "Port Master Plan," or "Plan," shall mean the Port Master Plan of the San Diego Unified Port District.

e. "Appellant-Aggrieved Person." An appeal may be filed by an applicant or aggrieved person. An "aggrieved person" means any person who, in person or through a representative, appeared at a public hearing of the District in connection with the decision or action appealed, or who, by other appropriate means prior to a hearing, informed the District of the nature of his or her concerns or who for good cause was unable to do either.

4. General Policy

a. Any public or private development located in any area of the District certified in the Port Master Plan shall be required to obtain a Coastal Development Permit, certifying that a determination has been made by the Board that said development conforms with the certified Port Master Plan; provided, however, the foregoing shall not be applicable if the development is exempt from these regulations and is not required to obtain such permit.

b. The decision as to the issuance of a Coastal Development Permit under these regulations shall be based solely on the conformity of the proposed development with the certified Port Master Plan.

5. Assignment of Duties

The Port Director is designated as the authority primarily responsible for implementation of these regulations.

6. Withdrawal of Application; Removal from Active Consideration

a. The applicant may withdraw or remove from active consideration an application for a Coastal Development Permit as required in these regulations at any time before the decision on the permit is made by the Board.

b. Withdrawal must be made in writing or stated in the record of the public hearing on the development, where a hearing is required.

c. Removal from active consideration must be made in writing or stated in the record of the public hearing on the development, where a hearing is required. If the application is not returned for active consideration within ninety (90) calendar days, it shall be considered to be withdrawn.

7. Categorical Determination

a. At the time any development is subject to review for the issuance of a Coastal Development Permit, the Director shall determine the category of development.

b. A categorical determination shall be made by the Director and shall contain sufficient information to determine into which of the four categories specified in Section 7.d. of these regulations the development shall be placed. This determination shall be made with reference to the certified Port Master Plan, including maps, and land use designations.

c. The categorical determination shall be made as a part of the project plan approval process, in accordance with established District Development Approval procedures.

d. Categories of development are defined as follows:

(1) Excluded developments are those defined in Section 8 of these regulations;

(2) Emergency developments are those necessary to maintain, repair, restore, demolish, protect, or replace property or facilities damaged, destroyed, or threatened by imminent danger from a sudden, unexpected occurrence, which demands immediate action to prevent or mitigate loss of, or damage to, life, health, property, or essential public services. Emergency includes, but is not limited to, such occurrences as fire, flood, windstorm, earthquake, or other soil or geologic movements, as well as occurrences as riot, accident, or sabotage;

(3) Non-appealable developments are those not classified in these regulations in Section 7.a.(1) as "Excluded," in 7.a.(2) as "Emergency," or in 7.a.(4) as "Appealable";

(4) Appealable developments are:

(a) Developments for the storage, transmission, and processing of liquefied natural gas and crude oil in such quantities as would have a significant impact upon the oil and gas supply of the state or nation or both the state and nation;

(b) Waste water treatment facilities, except such facilities which process waste water discharged incidental to normal port activities;

(c) Roads or highways which are not principally for internal circulation within the Port boundaries;

(d) Office and residential buildings not principally devoted to administration of activities within the Port; hotels, motels, and shopping facilities not principally devoted to the sale of commercial goods utilized for water-oriented purposes; commercial fishing facilities; and recreational small craft marine-related facilities;

(e) Oil refineries;

(f) Petrochemical production plants.

e. The categorical determination shall be made within thirty (30) working days of the developer's project plan submittal.

f. The determination shall be furnished the applicant.

g. Appeals from the determination shall be made to the Board of Port Commissioners.

h. A fee, as determined by the Director, may be charged for processing a categorical determination.

i. If a proposed development is classified as being appealable, a copy of the determination shall be forwarded within ten (10) working days to the Coastal Commission.

8. Excluded Developments

No Coastal Development Permit shall be required for the following types of development, under the following conditions:

a. Existing Facilities: The operation, repair, maintenance, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of use beyond that previously existing, including but not limited to:

(1) Interior or exterior alterations involving such things as partitions, plumbing, and electrical conveyances;

(2) Public and private utilities used to provide electric power, natural gas, sewer, or other utility services;

(3) Streets, sidewalks, gutters, bicycle and pedestrian paths, and similar facilities;

(4) Restoration or rehabilitation of deteriorated or damaged structures, facilities, or mechanical equipment to meet current standards of public health, safety, District policy, or as required by contractual conditions;

(5) Additions to existing structures, provided the addition will not result in an increase of more than 50 percent of the floor area, or 2,500 square feet, whichever is less; or additions to existing structures of not more than 10,000 square feet of floor area, if the project is in an area where all public services and facilities are available to

allow for the maximum development permissible in the Port Master Plan, and where the area in which the project is located is not environmentally sensitive;

(6) Addition of safety or health protection devices for use during construction of, or in conjunction with, existing structures, facilities, mechanical equipment, or topographical features, including navigational devices;

(7) New copy on existing on- and off-premise signs;

(8) Maintenance and control of existing vegetation;

(9) Demolition and removal of individual small structures, except where structures are of historical, archaeological, or architectural significance;

(10) Repair, maintenance, or minor alteration of existing mooring facilities, floats, piers, bulkhead, revetment, buoys, or similar structures;

(11) Periodic maintenance dredging which involves negligible or no enlargement of the existing facility;

(12) Interior and exterior remodeling of airport facilities, marine terminal facilities, existing marine-oriented industrial structures, and commercial or recreational facilities;

(13) Maintenance of wildlife habitat area, fish enhancement structures, streamflows, and stream channels (clearing of debris) to protect fish and wildlife resources.

b. Replacement or Reconstruction: Replacement or reconstruction of existing structures and facilities where the new structure will

be located essentially on the same site as the structure replaced and will have substantially the same purpose and capacity as the structure replaced, including but not limited to:

(1) Replacement of a commercial structure with a new structure of substantially the same size, purpose, and capacity;

(2) Replacement or reconstruction of existing utility systems and/or facilities involving negligible or no expansion of capacity;

(3) Replacement, stabilization, or reconstruction of mooring facilities, floats, piers, bulkhead, revetment, shoreline protection, buoys, or similar structures.

c. New Construction or Conversion of Small Structures: Construction and location of limited numbers of new, small facilities or structures and installation of small, new equipment and facilities, involving negligible or no change of existing use of the property, including but not limited to:

(1) Commercial, industrial, and recreational structures designed for an occupant load of thirty (30) persons or less, if not in conjunction with the building of four (4) or more structures, and if not involving the use of significant amounts of hazardous substances;

(2) Water main, sewer, electrical, gas, or other utility extensions of reasonable length to serve such construction;

(3) Accessory structures, including, but not limited to,

on-premise signs, small parking lots, fences, walkways, swimming pools, miscellaneous work buildings, temporary trailers, small accessory piers, minor mooring facilities, buoys, floats, pilings, or similar structures; and seasonal or temporary use items such as lifeguard towers, mobile food units, portable restrooms, or similar structures;

d. Minor Alterations to Land: Minor public or private alterations in the condition of land, water, and/or vegetation which do not involve the removal of mature, scenic trees, including but limited to:

(1) Land grading, except where located in a waterway, wetland, officially designated scenic area, or in officially mapped areas of severe geologic hazard;

(2) New gardening or landscaping;

(3) Filling of earth into previously excavated land with material compatible with the natural features of the site;

(4) Minor alterations in land, water, and vegetation on existing officially designated wildlife management areas or fish production facilities which result in improvement of habitat for fish and wildlife resources or greater fish production;

(5) Minor temporary uses of land and water having negligible or no permanent effects on the environment, including festivals, boating activities, parades, and running or bicycling events;

(6) Minor trenching or backfilling where the surface is restored;

(7) Maintenance dredging where the spoil is deposited in a spoil area authorized by all applicable local, state, and federal regulatory agencies.

e. Information Collection: Basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major significant disturbance to an environmental resource.

f. Inspections: Activities limited to inspection, checking or performance or quality of an operation, examining the health and safety of a project, or related activities.

9. Emergency Developments

a. It is recognized that, in some instances, a person or public agency performing a public service may need to undertake work to protect life, public health and safety, and property or to maintain public and private services before obtaining a Coastal Development Permit. Where such persons or agencies proceed without a Coastal Development Permit, they shall comply with the requirements of this section.

b. Applications in cases of emergencies shall be made to the Director by letter, if time allows, or by telephone or in person if time does not allow. Applications shall include the nature of the emergency, the cause of the emergency, the location of the emergency, and the work required to deal with the emergency.

c. The Director shall verify the facts, including the existence and nature of the emergency, insofar as time allows.

d. The Director may grant an emergency permit for the development upon reasonable terms and conditions, including an expiration date, if he or she finds that:

(1) An emergency exists and requires action more quickly than permitted by the procedures for permits;

(2) The work proposed would be consistent with the certified Port Master Plan or of a temporary nature.

e. The Director shall report to the Board at the earliest time the nature of the emergency and the work involved. This report shall be informational only; the decision to issue an emergency permit is solely at the discretion of the Director.

10. Non-appealable Developments

a. Application Procedure

Application for a Coastal Development Permit for a non-appealable development shall be made on a form approved by the Director and shall contain at least the following:

(1) A description of the proposed development sufficient to determine whether the project complies with the certified Port Master Plan;

(2) A Categorical Determination as required by Section 7 of these regulations;

(3) Either a Draft or Final Environmental Impact Report, a Draft or Final Negative Declaration, or a Finding of Categorical Exemption on the proposed development, as required by the California Environmental Quality Act and District regulations;

(4) A statement as to the status of conceptual approval of the proposed development;

(5) Processing fee, as established by the Director.

b. Acceptance of Application

(1) A permit application shall be deemed accepted upon determination of the Director that it is complete, in the proper form, contains all necessary attachments, and that all processing fees have been paid;

(2) The determination of acceptance shall be made not later than ten (10) working days after receipt of the application;

(3) The date and time of the acceptance shall be affixed to the application by the Director;

(4) Rejection of an application on the grounds that it is incomplete may be appealed to the Board.

c. Staff Review and Findings

(1) Not more than sixty (60) calendar days after acceptance of an application for a Coastal Development Permit for a non-appealable development, the Director shall prepare a report on the proposed development. The report may take the form of a Board agenda sheet, staff memorandum, or Director's report to the Board, and shall include the following:

(a) A brief description of the proposed development;

(b) A statement of facts relating to the application;

(c) A statement that the proposed development conforms, or does not conform, to the certified Port Master Plan;

(d) A recommendation to approve or deny the Coastal Development Permit. If the recommendation is to approve the permit, it may also contain recommended conditions to assure conformity with the Port Master Plan.

(e) Such other information as the Director may feel is relevant.

(2) The above report shall be promptly forwarded to the applicant and the Board.

d. Board Action

If the Board finds that a proposed non-appealable development conforms to the certified Port Master Plan as provided above, and after the Final Environmental Impact Report has been certified or the Negative Declaration has been adopted, whichever is applicable, the Board shall authorize the Director to issue a Coastal Development Permit. The permit may contain conditions relating to or assuring conformity to the Port Master Plan.

e. Issuance of Permit

As soon as possible after the Board has authorized the Director to issue a Coastal Development Permit for a non-appealable development, the Director shall issue the permit.

f. Forwarding of Environmental Documents

The Director shall forward all Draft or Final Environmental Impact Reports and Draft or Final Negative Declarations relating to non-appealable developments to the Coastal Commission in a timely manner for comment.

11. Appealable Developments

a. Application Procedure

Application for a Coastal Development Permit for an appealable development shall be made on a form approved by the Director and shall contain at least the following:

(1) A description of the proposed development sufficient to determine whether the project complies with the certified Port Master Plan;

(2) A Categorical Determination as required by Section 7 of these regulations;

(3) Either a Draft or Final Environmental Impact Report, a Draft or Final Negative Declaration, or a Finding of Categorical Exemption on the proposed development, as required by the California Environmental Quality Act and District regulations;

(4) A statement as to the status of conceptual approval of the proposed development;

(5) The names and addresses of all individuals or firms owning property, and the addresses of all dwelling units or businesses within 100 feet of the perimeter of the proposed development, together with sufficient District Property Maps and/or San Diego County Assessor's Parcel Maps identifying each property as to the owner, dwelling unit, or business address;

(6) A processing fee, as established by the Director.

b. Acceptance of Application

(1) A permit application shall be deemed accepted upon determination of the Director that it is complete, in the proper form, and that all processing fees have been paid;

(2) The determination of acceptance shall be made not later than ten (10) working days from receipt of the application;

(3) The date and time of the acceptance shall be affixed to the application by the Director;

(4) Rejection of an application on the grounds that it is incomplete may be appealed to the Board.

c. Scheduling of Public Hearing

The Director shall schedule a public hearing before the Board not later than sixty (60) calendar days after acceptance of the application for an appealable development. The hearing may be scheduled at the same date and place as the public hearing on the Draft Environmental Impact Report or the adoption of the Negative Declaration on the proposed development, whichever is applicable.

d. Notice of Hearing

Notice of the public hearing on an appealable development shall be mailed to the following at least ten (10) calendar days prior to the scheduled date of hearing:

(1) The applicant;

(2) All persons who have requested in writing to be notified of public hearings on the project, or of coastal development

permit decisions within the Planning District (as defined in the Plan) where the proposed development is located, and have provided stamped, self-addressed envelopes for such mailing;

(3) All property owners, lessees, and residents of property within 100 feet of the perimeter of the proposed development;

(4) The Mayor and City Manager of the city in which the proposed development is located;

(5) The California Coastal Commission.

e. Content of Notice

The notice of public hearing on an appealable development shall consist of at least the following information:

(1) The name of the applicant;

(2) A brief description of the development and its proposed location;

(3) The date, time, and place of the public hearing;

(4) A statement that the appealable development is within the California Coastal Zone, that a Coastal Development Permit is required, and that testimony shall be directed to the relationship of the proposed project to the Port Master Plan.

f. Staff Review and Recommendation

Not less than three (3) calendar days prior to the scheduled hearings on an appealable development, the Director shall submit a report to the Board on the proposed development. The report

may take the form of a Board agenda sheet, staff memorandum, or Director's report to the Board, and shall include at least the following:

(1) A brief description of the proposed development;

(2) A statement of facts relating to the application;

(3) A statement that the proposed development conforms, or does not conform, to the certified Port Master Plan;

(4) A recommendation to approve or deny the Coastal Development Permit. If the recommendation is to approve the permit, it may also contain recommended conditions to assure conformity with the Port Master Plan;

(5) Such other information as the Director may feel is relevant.

g. Public Hearing

The public hearing on a proposed appealable development shall be conducted in accordance with current procedures of the Board and shall afford persons the opportunity to appear at the hearing and inform the Board of the nature of their concerns regarding the project. Testimony shall be directed to the relationship of the project to the Port Master Plan. Oral and written comments shall be submitted prior to the close of the public hearing.

h. Board Decision

Following the public hearing, if the Board finds that the proposed development conforms to the certified Port Master Plan, and after the Final Environmental Impact Report has been certified or the Negative Declaration has been adopted,

whichever is applicable, the Board shall authorize the Director to issue a Coastal Development Permit, pending expiration of the appeal period cited in Section 11.j. and 11.k. of these regulations.

i. Notice of Board Action

Notice of the action of the Board on a proposed appealable development shall be mailed to the applicant, the Coastal Commission, and all persons who have requested in writing to be notified of the Board action on the subsequent development and submitted self-addressed, stamped envelopes, not later than five (5) working days following the decision of the Board.

j. Appeal

Appeals of the decision of the Board shall be made to the Coastal Commission pursuant to Chapter 7 of Division 20 of the Public Resource Code, commencing with Section 30600, not later than ten (10) working days after receipt of the notice of the Board decision by the Coastal Commission.

k. Action on Appeal

Upon receipt of a notice of Appeal from the Coastal Commission, the Director shall refrain from issuing a Coastal Development Permit for the proposed development and shall, within five (5) working days, deliver to the Executive Director of the Commission all relevant documents and materials used by the Board in its consideration of the Coastal Development Permit application.

1. Issuance of Coastal Development Permit

If the Board has authorized the Director to issue a Coastal Development Permit for an appealable development pursuant to Section 11.h. of these regulations and a written appeal has not been filed within ten (10) working days after receipt of the notice of the Board decision by the Coastal Commission, the Director shall issue the permit immediately.

12. Enforcement

a. Inspection

The Director shall, within limits of staff availability, periodically inspect approved developments to ensure compliance with the Coastal Development Permit.

b. Violations

Whenever the Director determines that a violation of a permit term, condition, or provision has occurred or is threatened, he or she shall take appropriate action to correct such violation. Where authorized by the Board, this may include filing action in the name of the District for equitable relief to enjoin such violation, or for civil penalties, or for both.

13. District Authority

The powers and authority granted to the District by special action of the State legislature, ratified by a vote of the people, and contained in the San Diego Unified Port District Act of 1962, to develop and operate Port and other functions on the tidelands and submerged lands granted to the District, shall not be abrogated or amended by these regulations. In particular, the granting of a Coastal Development Permit shall be considered separately from any tenancy arrangements or other contractual agreements between the District and other parties, or for the discharge of the District's duties under its own enabling statute.

14. Permits

a. Format of Permits

Permits shall be issued in a form approved by the Director and shall include:

(1) A statement indicating the type of Coastal Development Permit issued and the date and Resolution Number of the Board action authorizing the issuance of the permit;

(2) A statement limiting the permit to the development reviewed and approved by the Board;

(3) A description of the permitted development;

(4) Any permit terms and conditions approved by the Board;

(5) Standard provisions regarding development compliance to the project plans, code and permitting requirements of local, state, and federal agencies, and the Coastal Development Permit Regulations of the San Diego Unified Port District.

b. Notice of Receipt and Acknowledgement

No permit shall become effective until a copy of the permit has been returned to the Director, upon which copy all permittees or authorized agents have acknowledged that they have received a copy of the permit and have accepted its contents.

c. Disputes Over Contents of Permits

Any permittee who feels that the permit does not correctly embody the action of the Board shall immediately so inform the Director. Any such questions that cannot be resolved by consultation between the permittee and the Director shall promptly be referred by the Director to the Board for decision.

d. Amendments to Permits

Applications for amendments to permits shall be made in writing to the Director and shall include an adequate description of the proposed amendment, including maps or drawings where appropriate. The Director shall determine whether or not a proposed amendment is a material change to the permit. If the Director determines that the proposed amendment is immaterial, notice of such determination shall be submitted to the Board and mailed to all parties the Director has reason to know may be interested in the application. If no objection is received at the Director's office within ten (10) working days, the determination of immateriality shall be conclusive. If the Director determines that the proposed amendment is a material change, or that the proposed amendment is not in conformance with the certified Port Master Plan, the amendment will be denied. Appeals to the Director's action shall be referred to the Board after notice to any person(s) the Director has reason to know would be interested in the matter. The Board shall determine whether the proposed development with the proposed amendment is material or immaterial in nature, is consistent with the requirements of the certified Port Master Plan, and whether the amendment be granted or a new permit required.

e. Assignment of Permits

(1) Any person who has obtained, pursuant to the certified Port Master Plan and these Regulations, a permit to perform a development may assign such permit to another person subject to the following requirements:

(a) Submission of an affidavit executed by the assignee attesting to the assignees agreement to comply with the terms and conditions of the permit;

(b) Evidence of the assignee's legal interest in the real property involved and legal capacity to undertake the development as approved and to satisfy the conditions required in the permit;

(c) The original permittee's request to assign all rights to undertake the development of the assignee;

(d) A copy of the original permit showing that it has not expired.

(2) The applicant for assignment shall submit a request for approval of assignment of the permit, together with the above documents to the Director. The assignment shall be effective upon the Director's written approval of the documentation submitted. The Director's review shall ordinarily be completed within ten (10) working days of the receipt of a completed application for assignment. The completed application form and supporting documentation shall become part of the project file maintained by the Director.

(3) Prior to completion of all development authorized by the permit and satisfaction of all permit conditions, no person other than the permittee may perform or undertake development under the permit without assignment of the permit under this section.

SAN DIEGO UNIFIED PORT DISTRICT

INTER-STAFF COMMUNICATION

REFERENCE COPY #19171

Date: February 14, 1986

To: CHRISTINE M. STEIN, District Clerk

From: EMILY HEDGES KELLEY, Associate Project Analyst, Property Engineering

Subject: Coastal Development Permit Regulations

On February 14, 1984, by Resolution No. 84-62, the Board of Port Commissioners amended the District Coastal Development Permit Regulations. The amended sections were never incorporated into the previously adopted (Resolution No. 80-193, Document No. 12937) and amended (Resolution No. 80-343, Document No. 13434) regulations for purposes of documentation.

The amended sections have now been incorporated into the previously documented regulations, and the title sheet and table of contents have been modified to accommodate this incorporation.

Please document the amended District Coastal Development Permit Regulations and return one copy to Property Engineering for our records.

Emily Hedges Kelley

EMILY HEDGES KELLEY
Associate Project Analyst
Property Engineering

EHK/mn

Attachment: Coastal Development Permit Regulations

Re San Diego Unified Port District
Amendment of Coastal Development
Permit Regulations

RESOLUTION 84-62

WHEREAS, the San Diego Unified Port District Coastal Development Permit Regulations (Regulations) adopted by the Board of Port Commissioners of the San Diego Unified Port District on July 1, 1980 by Resolution No. 80-193, as amended on December 2, 1980 by Resolution No. 80-343, were certified by the California Coastal Commission on January 21, 1981; and

WHEREAS, since this certification the District has been administering the Coastal Permitting of Port tideland developments in accordance with the certified Regulations, and has subsequently identified certain aspects of the Regulations which, if amended, would simplify the permitting process and greatly reduce administrative time and paperwork; and

WHEREAS, Section 7 of the Regulations entitled "Categorical Determination", is proposed to be revised to eliminate a form processing step by incorporating the Categorical Determination process into an established District procedure for the approval of development proposals, and such revision is in conformance with Section 30600 (b) of the California Coastal Act, which allows this process to "be incorporated and made a part of the procedures relating to any other appropriate land use development permit issued by the local government;" and

WHEREAS, Section 14 entitled "Permits", is proposed to be added to the Regulations to allow the District to issue conditioned permits to ensure Master Plan compliance and provide a method to administer the resolution of dispute, assignment, and the amendment of permits for developments revised after permit issuance, in which no material

change to the permitted land use is proposed, the language and intent of this section being similar to that certified by the California Coastal Commission in applicable sections of the Port of Los Angeles and Port of Long Beach Master Plan Implementation Guidelines; and

WHEREAS, Section 30716 of the California Coastal Act and Section 13637 of the Coastal Commission's Administrative Regulations allow for the administrative processing of minor amendments by the Executive Director of the Commission; NOW, THEREFORE,

BE IT RESOLVED by the Board of Port Commissioners of the San Diego Unified Port District as follows:

1. Section 7, paragraph b of the Regulations is hereby amended as follows:

   b. A categorical determination shall be made by the Director and shall contain sufficient information to determine into which of the four categories specified in Section 7 d of these regulations the development shall be placed. This determination shall be made with reference to the certified Port Plan, including maps, and land use designations.

2. Section 7, paragraph c of the Regulations is hereby amended as follows:

   c. The categorical determination shall be made as a part of the project plan approval process, in accordance with established District Development Approval procedures.

3. Section 7, paragraph e of the Regulations is hereby amended as follows:

   e. The categorical determination shall be made within thirty (30) working days of the developer's project plan submittal.

4. Section 14 is hereby added to the Regulations as follows:

14. Permits

a. Format of Permits

Permits shall be issued in a form approved by the Director and shall include:

(1) A statement indicating the type of Permit issued and the date and Resolution Number of the Board action authorizing the issuance of the permit.

(2) A statement limiting the permit to the development reviewed and approved by the Board.

(3) A description of the permitted development.

(4) Any permit terms and conditions approved by the Board.

(5) Standard provisions regarding development compliance to the project plans, code and permitting requirements of local, state, and federal agencies, and the Coastal Development Permit Regulations of the San Diego Unified Port District.

b. Notice of Receipt and Acknowledgement

No permit shall become effective until a copy of the permit has been returned to the Director, upon which copy all permittees or authorized agents have acknowledged that they have received a copy of the permit and have accepted its contents.

c. Disputes Over Contents of Permits

Any permittee who feels that the permit does not correctly embody the action of the Board shall immediately so inform the Director. Any such questions that cannot be resolved by consultation between the permittee and the Director shall promptly be referred by the Director to the Board for decision.

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interested in the matter. The Board shall determine whether the proposed development with the proposed amendment is material or immaterial in nature, is consistent with the requirements of the certified Port Master Plan, and whether the amendment be granted or a new permit required.

e. Assignment of Permits

(1) Any person who has obtained, pursuant to the certified Port Master Plan and these Regulations, a permit to perform a development may assign such permit to another person subject to the following requirements:

(a) Submission of an affidavit executed by the assignee attesting to the assignee's agreement to comply with the terms and conditions of the permit;

(b) Evidence of the assignee's legal interest in the real property involved and legal capacity to undertake the development as approved and to satisfy the conditions required in the permit;

(c) The original permittee's request to assign all rights to undertake the development of the assignee; and

(d) A copy of the original permit showing that it has not expired.

(2) The applicant for assignment shall submit a request for approval of assignment of the permit, together with the above documents to the Director. The assignment shall be effective upon the Director's written approval of the documentation submitted. The Director's review shall ordinarily be completed

within ten (10) working days of the receipt of a completed application for assignment. The completed application form and supporting documentation shall become part of the project file maintained by the Director.

(3) Prior to completion of all development authorized by the permit and satisfaction of all permit conditions, no person other than the permittee may perform or undertake development under the permit without assignment of the permit under this section.

5. The Board of Port Commissioners requests the Executive Director of the California Coastal Commission to find the amendment of the Regulations to be minor in nature in accordance with Section 30716 of the Coastal Act, and to process said amendment pursuant to Section 13637 of the Coastal Commission's Administrative Regulations.

ADOPTED this 14th day of February, 1984.

Presented by: DON L. NAY, Port Director

ASSISTANT PORT DIRECTOR

Approved: JOSEPH D. PATELLO, Port Attorney

Appendix L

D. Vigil, SDAPCD,
July 25, 2022, Email

PORT of SAN DIEGO

August 18, 2022

Domingo Vigil
Deputy Director
San Diego APCD

VIA EMAIL: Domingo.Vigil@sdapcd.org

RE: CERP Implementation 2021-2022 Reporting for San Diego Port District

Domingo,

Thank you for the opportunity to provide the following information on the Port of San Diego's efforts to improve air quality and its related health benefits for the AB 617 Portside community and the San Diego region. In support of the Community Emissions Reduction Plan (CERP) the Port is pleased to provide status information for the ten Action items (E1, E3, F1, F3, F5, F7, G1, G2, G3 and G7) the Port participates in advancing, which are also closely aligned with our Maritime Clean Air Strategy goals and objectives. We appreciate the continued cooperative working relationship with APCD as we work toward our shared goal of improved air quality.

Please let us know if you have any questions about the information provided.

Best,

Peter Eichar, AICP

Program Manager, Planning

Action/Strategy	Status (June 2021 to July 2022)	Other notes or clarifying comments
E1 (pg. 33-35)	**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.** **Request For Information for HD Truck Charging** The Port District issued an RFI (5/23 – 7/25/2022) seeking information to facilitate deployment of infrastructure to support the transition to zero-emission (ZE) truck trips to and from the Port District's marine cargo terminals in San Diego and National City. The RFI's objective is to identify opportunities to deploy public-facing infrastructure for both battery electric and hydrogen fuel cell ZE technologies for Heavy Duty (HD) trucks. The RFI has identified four (4) potential sites on Tidelands as well as four additional sites throughout the region. The Port District is also interested in opportunities on property not controlled by the Port District located throughout San Diego County along high-volume freight corridors. These areas include, but are not limited to, areas adjacent to District Tidelands, Otay Mesa, and along the Interstates (I)-5, I-8, and I-15. Staff intends to take the results of the RFI to the BPC in the Fall of 2022 and receive direction on how to proceed. Please note that these efforts also support CERP Action E4: Increase number of truck parking and staging facilities with electric capabilities. **Heavy Duty Zero Emission Truck Transition Plan** In June 2022, staff completed the Final Heavy-Duty Zero Emission Truck Transition Plan and presented	

	it to the Board of Port Commissioners, which identified pathway(s) to meet the MCAS zero emission truck goals for 2026 and 2030. The targeted pathway consists of replacing between 86 to 153 diesel truck trips with zero emission truck trips in an effort to attain 40% zero emission truck trips by 2026. The Truck Transition Plan also recommends the following strategies to help meet our 2026 goal: • Providing technical assistance to truck operators; • Develop and present a Short-Haul Zero Emission Truck Program for the Board's consideration by the end of 2022. In addition, pursue outside funding opportunities to offer subsidies, with priority to trucks identified in the Targeted Pathway; • Assisting in the planning, design, and implementation of zero emission supporting infrastructure; and • Supporting and promoting policy goals to increase adoption of zero emission trucks. Advancing progress towards the District's long-term goal in 2030 would involve the following framework: • Developing a truck registry to track trips and monitor progress; • Conducting biennial updates to the Plan; and • Collecting data for new projects located at the marine cargo terminals.	
E3 (pg. 36-38)	**Support dedicated truck route and avoid truck impacts to local community** Port District support of Designated Truck Routes includes:	The Port of San Diego has an established Truck Route Violation Hotline for residents to express concerns over truck traffic issues or other issues related to

	• Coastal Development Permits issued along the working waterfront include the standard condition for project operations to comply with all applicable rules and regulations. • Compliance with the designated truck routes in Barrio Logan are specifically called out as Special Conditions. • Trucks entering/existing the Tenth Avenue Marine Terminal are additionally made aware of the truck routes via signage at TAMT and if the driver is new to TAMT, they are provided with a map of the designated route. • A Port of San Diego Hotline is also maintained.	marine terminals. A recorded message is played in English and Spanish, and then the caller can leave a detailed message regarding truck issues. The caller is asked to leave details such as the name of the trucking company and the vehicle license number or container number. Additionally, the hotline will also track Tenth Avenue Marine Terminal noise complaints related to cargo and construction activities. Hotline# (619) 686-8282
F1 (pg. 41-42)	**Support land uses that serve as a buffer between industrial and residential uses in the Portside Community** Consistent with the recently updated Barrio Logan Community Plan adoption, the Port District is advancing a comprehensive update to the Master Plan. The Draft PMPU contains a first ever Environmental Justice Element, as well as other goals and policies. Examples of policies relate to incompatible land uses and maintaining appropriate separation or buffers to mitigate adjacency, while many others are related to ensuring compatible land use development. For more information on the Draft PMPU Environmental Justice Policies, please refer	Port Master Plan Update | Port of San Diego

	to the Environmental Justice Element beginning on page 139.	
F3 (pg. 43-45)	**Urban greening** The Port District is advancing a comprehensive update to the Master Plan. The PMPU contains goals and policies aimed at greening the urban environment with particular attention to disadvantaged communities. With sponsorship from the CA Department of Forestry and in collaboration with Urban Core, 20 new trees will be planted outside the open field area at Cesar Chavez Park in late 2022. Some of this effort will coincide with the Field Turf Rehabilitation efforts at the field also located at the Park. As a component of the National City Bayfront Projects & Plan Amendments, currently in the environmental analysis phase of approval, includes a 2.5-acre expansion of Pepper Park. Public outreach on the future park design was held in 2022; however, no final design has been determined. Additional green open space and native, drought-tolerant vegetation, including additional trees, is under consideration.	
F5 (pg. 46-47)	**Support Harbor Drive Multimodal Corridor Study land use proposals** Port Staff remains engaged and committed to the Harbor Drive Multimodal Corridor Study led by Caltrans District 11. Most recently, Port Staff attended the last Project Development Team meeting hosted by Caltrans in May 2022 whereat project milestone dates were discussed and revised as needed. Environmental review is anticipated to begin this fall.	

F7 (pg. 49-51)	**Improve transportation efficiencies** As a component of the National City Bayfront Projects & Plan Amendments, the *Bayshore Bikeway* will include the permanent alignment of Segment 5 of the Bayshore Bikeway in National City. The preferred route is between the former railroad right-of-way and Marina Way on the southern end, and along McKinley Avenue on the northern end. An additional component of the National City Plan is the Pasha Connector Rail Project that proposes a connector rail track which would connect the BNSF National City Yard directly to the existing rail loop and loading tracks on the NCMT and improve efficiencies by allowing Pasha to have easier access to empty rail cars at the BNSF National City Yard. The Draft PMPU proposes a Mobility Element containing goals and policies aimed at improving transportation efficiency, including a sustainable network that facilities the movement of goods.	Port Master Plan Update | Port of San Diego
G1 (pg. 53-54)	**Reduce diesel emissions from cargo handling equipment** In April 2022, Dole Produce (Port District Tenant at TAMT) procured five (5) new zero-emission yard trucks, which are used at the terminal to move containers. On January 11, 2022, the Board of Port Commissioners approved the acquisition of two all-electric mobile harbor cranes with a procurement cost not-to-exceed $14,760,000 for use at Tenth Avenue Marine Terminal. The fully electric cranes would eliminate tailpipe emissions from the District's most polluting piece of equipment, the diesel-powered mobile harbor crane.	
G2 (pg.54-55)	**Reduce emissions from ships at berth**	

	On May 10, 2022, the Board of Port Commissioners adopted a resolution approving a public-private partnership agreement with Clean Air Engineering - Maritime, Inc. to design, build, and operate a barge-based emissions control and capture system (i.e. Bonnet) to comply with CARB regulations and reduce emissions from regulated non-shore powered capable vessels at berth. The Bonnet is expected to be operational by 2025.	
G3 (pg. 55-56)	**Reduce emissions from harbor craft** The Port District continues to be an active partner with Crowley Marine Services in the design, development and deployment of North Americas first zero-emission electric tugboat and associated landside charging infrastructure, expected to be operational summer 2023.	
G7 (pg. 59)	**Promote adoption of ZE technologies by Port tenants, truckers, and other users of equipment** Through direct acquisitions of cargo handling equipment (mobile harbor crane) and General Services fleet vehicles (two trucks and two passenger vans), the Port District promotes the use of new and emerging non-diesel powered technologies. In April of 2022 the Port District partnered with Nikola to hold a “Ride-and-Drive” event that made a battery electric heavy-duty truck available to test drive around the TAMT. This even offered an opportunity for truck drivers to become more familiar with the emerging technology.	
Goal 7 (pg. 10 and 139)	**Conduct a Health Risk Assessment (HRA) for the Port’s two marine cargo terminals to establish an updated baseline that relies on the Port’s 2019 Emissions Inventory**	2022-July-Updated-HRA-Report.pdf (windows.net)

	The preliminary HRA was completed in October 2021, and presentations were provided to the Board of Port Commissioners in December 2021 (Preliminary Draft HRA) and June 2022 (Updated HRA). The Updated HRA Report is a technical document establishing the Baseline Health Risk of maritime operations at the Port's two marine cargo terminals and forecasts the potential reduction of health risk should certain MCAS objectives be achieved.	

From: Vigil, Domingo <Domingo.Vigil@sdapcd.org>
Sent: Monday, July 25, 2022 9:39 PM
To: Larry Hofreiter <lhofreiter@portofsandiego.org>
Subject: Time Sensitive - Request for Updates on Portside CERP Strategy Implementation

Hi Larry, I am working on putting together an annual report for CARB on the Portside CERP implementation. We are required to submit annual reports to CARB in October. I am currently collecting data/information to put together a presentation for the Portside CSC in August, then present to our Board in September and finally submit the report to CARB in October.

Chapter 7 of the CERP (attached) contains all the actions and strategies that APCD and a number of partner organizations, including yours, are working on. I would like to kindly request a brief update **by Friday, August 12** on the projects/actions that the Port is currently supporting and/or moving forward in support of CERP strategies. If you could please provide the information in the format below, I would greatly appreciate it. For your convenience the table below identifies the Actions/Strategies that your organization is listed on as a partner and the page number on the attached document where you can find details about that action. If you have any pictures or links to resources that can support or help illustrate your update, please feel free to include them on your response to me.

Please let me know if you have any questions. Please be advised that I will be out of town starting on July 30th and will be back in the office on August 4.

Thank you for your collaboration on the development and implementation of the Portside CERP!

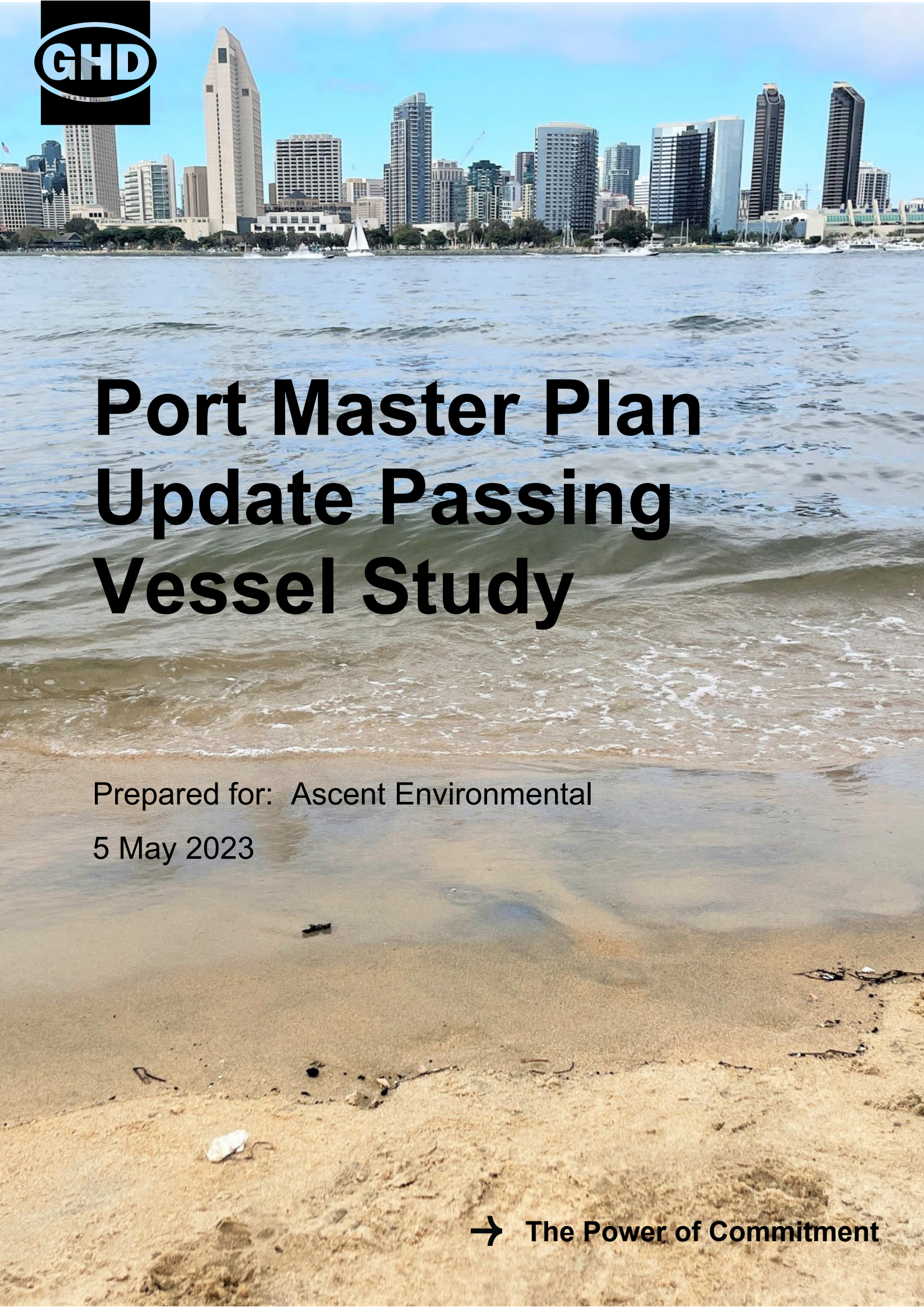
Action/Strategy	Status (what actions have you implemented in the past year-- June 2021 to present-- that support of the CERP Action/Strategy)	Other notes or clarifying comments
E1 (pg. 33-35)		
E3 (pg. 36-38)		
F1 (pg. 41-42)		
F3 (pg. 43-45)		
F5 (pg. 46-47)		
F7 (pg. 49-51)		
G1 (pg. 53-54)		
G2 (pg.54-55)		
G3 (pg. 55-56)		
G7 (pg. 59)		

Domingo Vigil | Deputy Director
San Diego County Air Pollution Control District
10124 Old Grove Road San Diego, California 92131
(619) 952-2916

Domingo.Vigil@sdcounty.ca.gov
www.sdapcd.org
https://www.twitter.com/sdapcd
https://www.facebook.com/SDAPCD

Appendix M

Port Master Plan Update Passing Vessel Study, prepared by GHD, Inc, May 2023



Port Master Plan Update Passing Vessel Study

Prepared for: Ascent Environmental

5 May 2023

→ The Power of Commitment

Project name		Port of San Diego Passing Vessel Study			
Document title		Port Master Plan Update Passing Vessel Study			
Project number		12583737			
File name		PMPU Passing Vessel Study Draft_5-5-2023.docx			
Status	**Revision**	**Author**	**Reviewer**		**Approved for issue**
			Name	**Signature**	**Date**
Draft	No. 1	Braden Froble/ Brian Leslie	Aaron Holloway		05/05/2023

GHD

2305 Historic Decatur Road, Suite 102

San Diego, CA 92106, USA

ghd.com

Executive Summary

The San Diego Unified Port District (Port District) is preparing a Port Master Plan Update (PMPU) that sets a comprehensive vision for the Port District and its jurisdiction. To comply with the California Environmental Quality Act (CEQA), the District prepared a Draft Program Environmental Impact Report (PEIR), which was circulated for an approximately 63-day public comment period between November 8, 2021 and January 10, 2022. This study has been prepared in response to comments received during public review to provide substantial evidence in support of Port District responses. This study's intended application is limited to supporting the District's responses and is not intended to be used for broader application.

This study examined the relationship between the proposed increase in recreational and commercial vessel trips associated with the PMPU buildout scenario and the potential for shoreline erosion from wakes generated from those trips along naturalized shoreline areas within the Port. The study also evaluates whether the potential natural shoreline changes would result in impacts to established eelgrass beds within subtidal waters in the bay. The potential for sea level rise (SLR) to result in exacerbation of beach profile change was also considered. A SLR scenario of 1.4 feet was selected to be consistent with the Port's SLR Vulnerability Assessment for year 2050, which is the full buildout horizon year for the PMPU.

Four vessel traffic scenarios were developed and modeled: a baseline scenario, a proposed PMPU vessel traffic scenario, a baseline scenario with 1.4 feet of SLR, and a proposed PMPU vessel traffic scenario with 1.4 feet of SLR. These scenarios were developed based on 2023 survey data provided by the Port of San Diego, with the purpose of providing a reasonable estimate of current and future vessel traffic within the San Diego Bay (Bay). These scenarios were used to analyze potential impacts at the four study beaches (i.e., Shoreline Park Beach, Kellogg Beach, Coronado Ferry Landing Beach, and Silver Strand Beach), which were identified as being representative of natural and potentially vulnerable shorelines within the Bay which receive varying vessel traffic.

A Vessel Wake Prediction Tool (VWPT) v3.13, as developed by the U.S. Army Corps of Engineers (USACE) was used to estimate the waves generated from recreational and commercial vessels (i.e., typical fishing vessel). This data in combination with survey use patterns from proposed PMPU points of origin were then used to generate a wave climate for each study beach. A wave climate was estimated for a baseline vessel traffic scenario and proposed PMPU vessel traffic scenario. Shoreline evolution at the study beaches was then estimated using CSHORE, a USACE-derived one dimensional cross shore evolution model that predicts beach profile change based on a series of oceanographic inputs. The purpose of the shoreline modeling was to assess the potential effects of increased PMPU vessel traffic scenarios, and the waves they may produce, on sandy shorelines in the Bay.

A comparative analysis was undertaken to evaluate the beach change from a baseline vessel traffic condition to the proposed PMPU vessel traffic conditions. Predicted beach change from the baseline to proposed vessel traffic scenarios was quantified using the mean higher high water (MHHW) shoreline position as a proxy for beach width. See Figure ES-1 for an example of how beach width change was measured for a specific study site. At Kellogg Beach, the predicted shoreline evolution results display very small changes in beach width with increased vessel traffic – increase in beach width of 0.86 inch for the baseline to proposed condition and 1.24 inch from the baseline to proposed with SLR scenario. At Shoreline Park Beach, the predicted shoreline evolution results also display very small changes in beach width of -1.88 inch and -1.58 inch for the baseline to proposed, and baseline to proposed with SLR scenarios; respectively. No change, 0.00 inches of change was reported at the other two beaches (Coronado Ferry Landing and Silver Strand Beach) for both the proposed conditions and proposed conditions with SLR. These values are at such a scale that they are outside the confidence limits of the model results and shoreline change at this scale would be undetectable with conventional survey grade equipment. Thus, based on the model results it is unlikely that the increase in boat wakes will result in measurable changes at the shoreline.

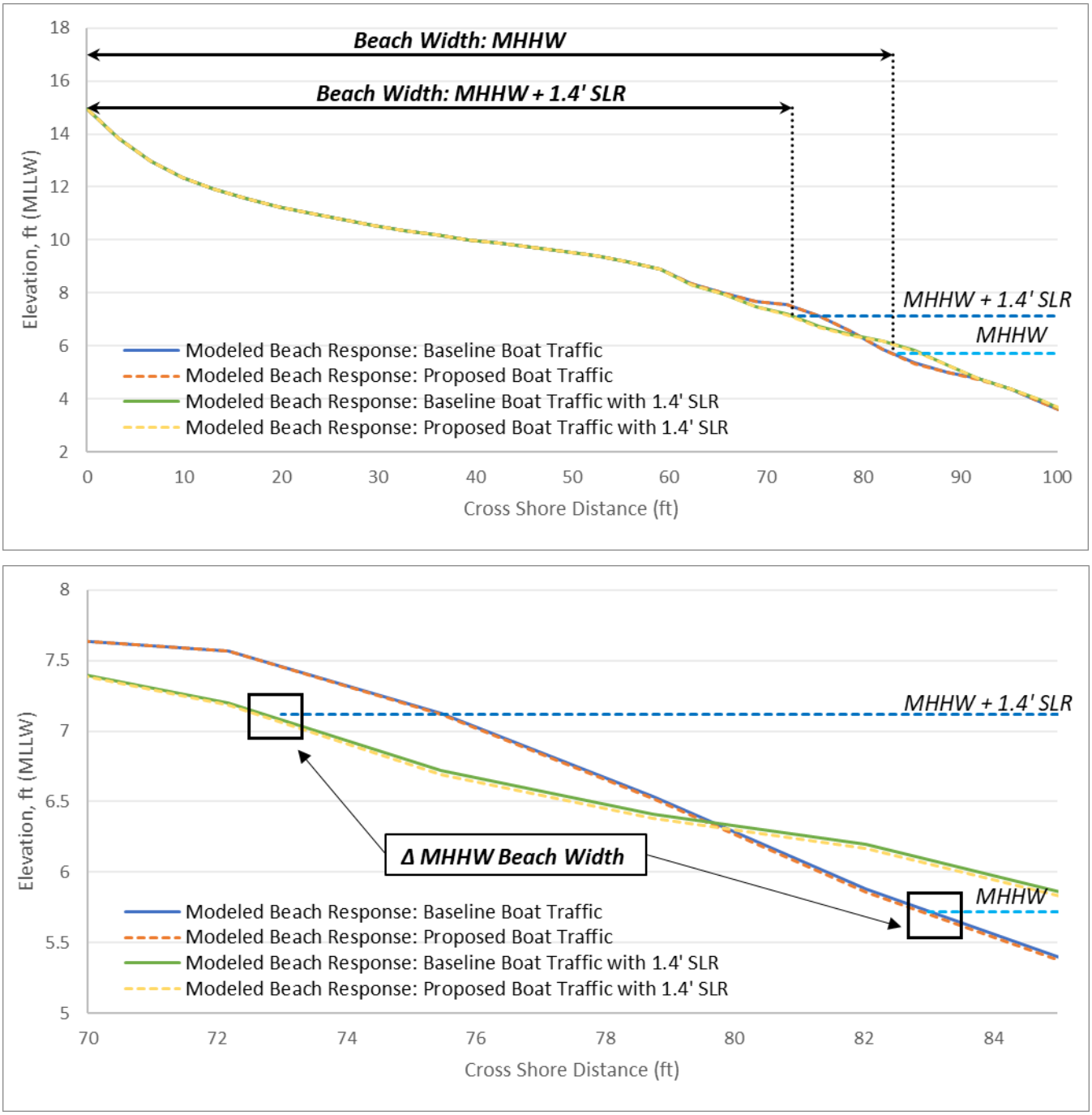


Figure ES-1: Beach Width Measurement Comparisons. MHHW beach width and MHHW + SLR compared to transect origin (top). Baseline compared to Proposed Vessel Traffic with and without SLR (below).

An evaluation of the proposed PMPU vessel traffic increases on existing eelgrass beds within the Bay was conducted at all study beaches where eelgrass habitat exists. This included all study beaches except for Kellogg Beach. The cross-shore position of eelgrass was identified along each study beach profile based on a 2020 eelgrass survey conducted for the Port by Merkel & Associates. The potential for the beach profile to change along the mapped eelgrass beds was examined through a comparative analysis of the vertical profile change between the baseline to proposed PMPU vessel traffic scenario and the baseline to proposed PMPU vessel traffic scenario with SLR. The results suggests that there could potentially be very small vertical change occurring through the eelgrass bed at Shoreline Park Beach as a result of increased vessel traffic. At Shoreline Park Beach, the predicted vertical change (i.e. negative indicating loss in elevation and positive values indicating gain in elevation) was -0.02 to 0.24 inches, and 0.00 to 0.26 inches for baseline to proposed, and baseline to proposed with SLR; respectively, which is considered to be outside the confidence limits of the model results and shoreline change at this scale would be undetectable with conventional survey grade equipment. The results display negligible change below an elevation

of approximately -3 feet at Shoreline Park Beach. At Coronado Ferry Landing Beach, the predicted vertical change was negligible for the baseline to proposed (no SLR) scenario, and the results suggest no change (0.00 inch) for the baseline to proposed with SLR scenario. At Silver Strand Beach, the model results suggest that there is no vertical change (0.00 inch) occurring through the offshore eelgrass bed for the baseline to proposed with and without SLR.

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Resumes are provided as Attachment 1 to this report.

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1. Introduction

The Port of San Diego (Port) is preparing the Port Master Plan Update (PMPU) that sets a comprehensive vision for the San Diego Unified Port District (District).. The PMPU is based on an approach known as the District's "Integrated Planning Process." This updated Plan is based on a set of long-range planning principles that form a framework for future planning on Tidelands. The principles and framework were all identified and developed as a part of the Integrated Planning Process, which also included robust and extensive public outreach and stakeholder engagement. Through the Integrated Planning Process, the District aimed to modernize methods for water and land planning and provide a guide for future users and development on Tidelands. The PMPU would establish specific goals, objectives, policies, and development standards to direct future development, facilitate a diverse range of uses and activities, and provide a broad range of proposed public improvements. The PMPU would allow for the addition of 550 new boat slips throughout PMPU area (Figure 1-1). Of this total, 485 boat slips would be for recreational vessels and 65 boat slips would be for commercial fishing vessels.

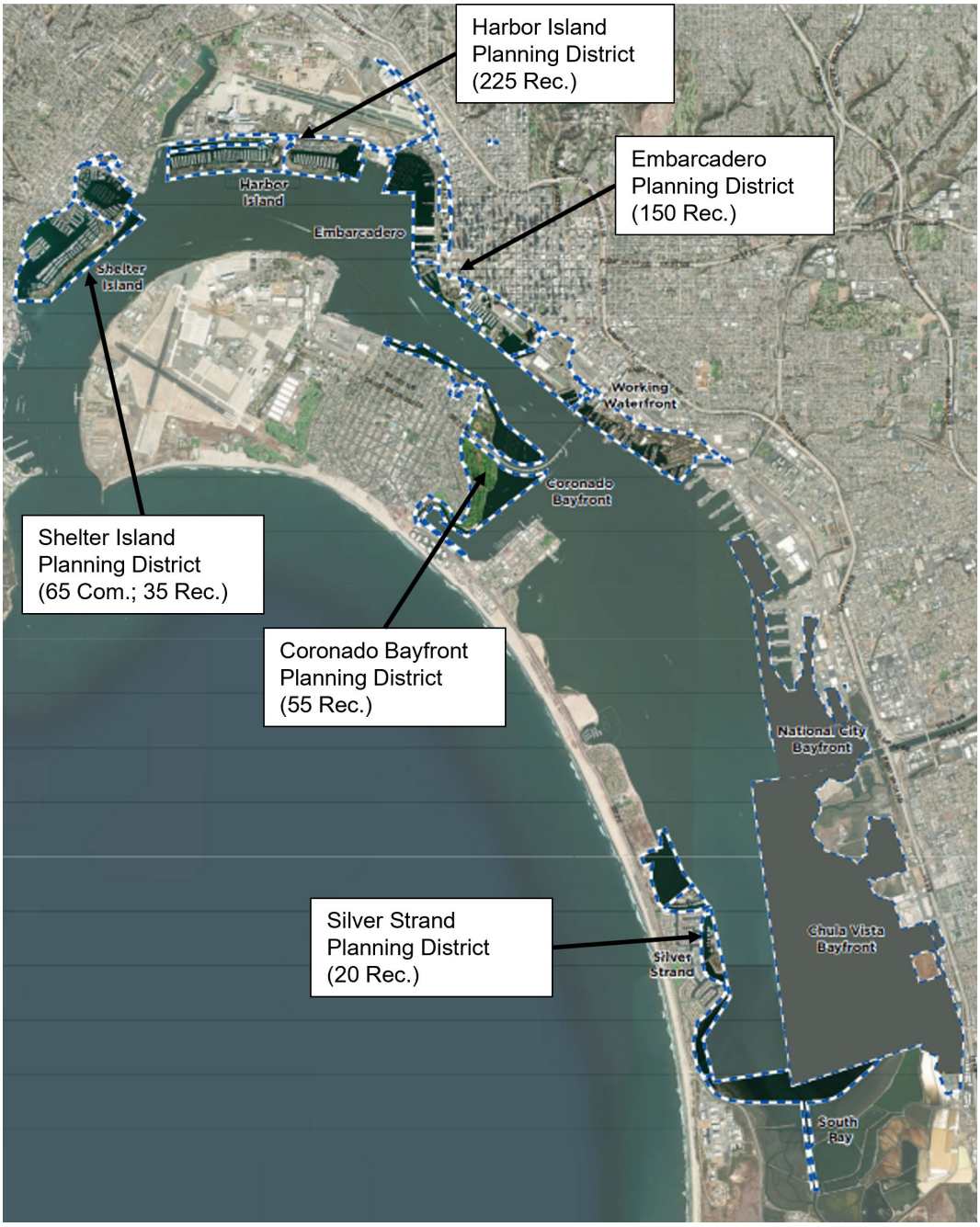


Figure 1-1. Port of San Diego Planning Districts (Port of San Diego, 2021)

1.1 Limitations

This report has been prepared by GHD Inc. (GHD) for Ascent Environmental and may only be used and relied on by Ascent Environmental for the purpose agreed between GHD Inc. and Ascent Environmental .

GHD otherwise disclaims responsibility to any person other than Ascent Environmental arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report. GHD disclaims liability arising from any of the assumptions being incorrect.

GHD has prepared this report on the basis of information provided by Ascent Environmental and others who provided information to GHD (including Government authorities), which GHD has not independently verified or checked beyond the agreed scope of work. GHD does not accept liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions in that information.

The opinions, conclusions and any recommendations in this report are based on information obtained from, and testing undertaken at or in connection with, specific sample points. Site conditions at other parts of the site may be different from the site conditions found at the specific sample points.

GHD has utilized two numerical models, CShore and Vessel Wake Prediction Tool (VWPT) v3.13, as developed by the U.S. Army Corps of Engineers, to support this analysis. These models serve as a representation only and does not reflect reality in every aspect. These models contain simplified assumptions to derive modeled outcomes. The actual variables will inevitably be different to those used to prepare the model. Accordingly, the outputs of these models cannot be relied upon to represent actual conditions without due consideration of the inherent and expected inaccuracies. Such considerations are beyond GHD's scope.

The information, data and assumptions ("Inputs") used as inputs into the Model are from publicly available sources or provided by or on behalf of Ascent Environmental and the Port of San Diego. GHD has not independently verified or checked Inputs beyond its agreed scope of work. GHD's scope of work does not include review or update of the models as further Inputs becomes available.

2. Study Purpose & Approach

The purpose of this study is to examine the relationship between the proposed increase in vessel trips and the potential for shoreline erosion along these naturalized shoreline areas, within the PMPU area. Potential impacts to eelgrass beds within the Port will also be assessed using the beach response as a proxy.

Our scope and approach for this study consisted of the following steps:

1. Develop maximum wave generation scenario: Vessel waves were compared for recreational and commercial vessels – both in terms of wave heights generated from the vessels and maximum wave heights approaching study shorelines (based on where vessels could safety travel). The vessel generating the maximum wave height at the shore will be carried forward as the design wave / vessel for the study, as a conservative assumption. This wave/vessel will be used to develop a predicted wave climate for the study beaches based on the maximum number of trips described in step 2.
2. Define cumulative wave loading (annual trips / wave climate): A wave climate will be generated for two scenarios: 1) Baseline boat traffic conditions and 2) proposed boat traffic conditions. In the context of this study, the baseline boat traffic condition scenario was defined based on usage patterns derived from 2023 survey data provided by the Port of San Diego and is meant to provide a reasonable estimate of vessel traffic for the baseline conditions. For recreational vessels, the survey data suggests that a reasonable vessel traffic scenario is that 10% of docked vessels leave the slip once per month, and 90% of docked vessels leave the slip annually (once per year). For commercial vessels (including sport fishing), the survey data suggests a reasonable scenario as:

   20% of vessels operate daily 5 months of the year,

   50% of vessels operate daily 2 months out of the year, and

   100% of vessels operate daily the remaining 5 months out of the year.

   The proposed boat traffic condition scenario is defined as the cumulative wave climate of the baseline plus the proposed trips from the Port's PMPU full buildout.
3. Evaluate shoreline change: The wave climate scenarios were then applied to four, representative natural shorelines in the bay using an industry accepted one-dimensional cross shore evolution model.
4. Evaluate Potential for eelgrass impacts: Cross shore sediment transport results were then examined in relation to the most recent San Diego Bay eelgrass survey to evaluate potential beach profile changes within eelgrass habitat areas.

3. Study Area

The San Diego Bay supports a variety of maritime uses, from small recreational crafts to large commercial cargo vessels. As such, there are several harbors and marinas that accommodate vessels ranging in size from 20 feet in length to 250 feet. Most of these harbors and marinas are in the northern reaches of the Bay, north of the Sweetwater Channel. The shoreline bordering these areas is largely stabilized with structures such as rock slope protection (RSP) or bulkhead walls. South of the Sweetwater Channel, the Bay is much shallower and is classified as a no wake zone (less than 5 mph) to protect wildlife.

Small segments of naturalized shoreline still exist within the Bay, many of which have required coastal management techniques to maintain. These areas include both tidal marsh and sandy beaches that have become popular destinations for beachgoers. Natural processes, such as tidal currents and wind waves, can erode these sand-dominant shorelines. Anthropogenic factors, such as vessel waves within the Bay, can also contribute to the erosion of these shorelines. At locations such as Kellogg Beach (Shelter Island), receding shorelines have been combated through beach nourishment.

This study is focused on shoreline change that may result from the potential increase in vessel traffic that corresponds to the allowable increase in boat slips proposed under the PMPU. Four representative sand-dominant beaches have been identified within the vicinity of the Port's Planning Districts. These areas include:

- Kellogg Beach (Shelter Island)
- Shoreline Park Beach (Shelter Island)
- Coronado Ferry Landing Beach (Coronado Island)
- Silver Strand Beach (Coronado Island)

The focused study areas are shown below in Figure 3-1. All of these beaches are valued by the surrounding communities as they are popular destinations for locals and tourists alike. These locations were also chosen due to the proximity to the Port's Planning Districts which have a proposed increase in boat slips under the PMPU implementation. Representative photos of each study beach are shown below in Figure 3-2.

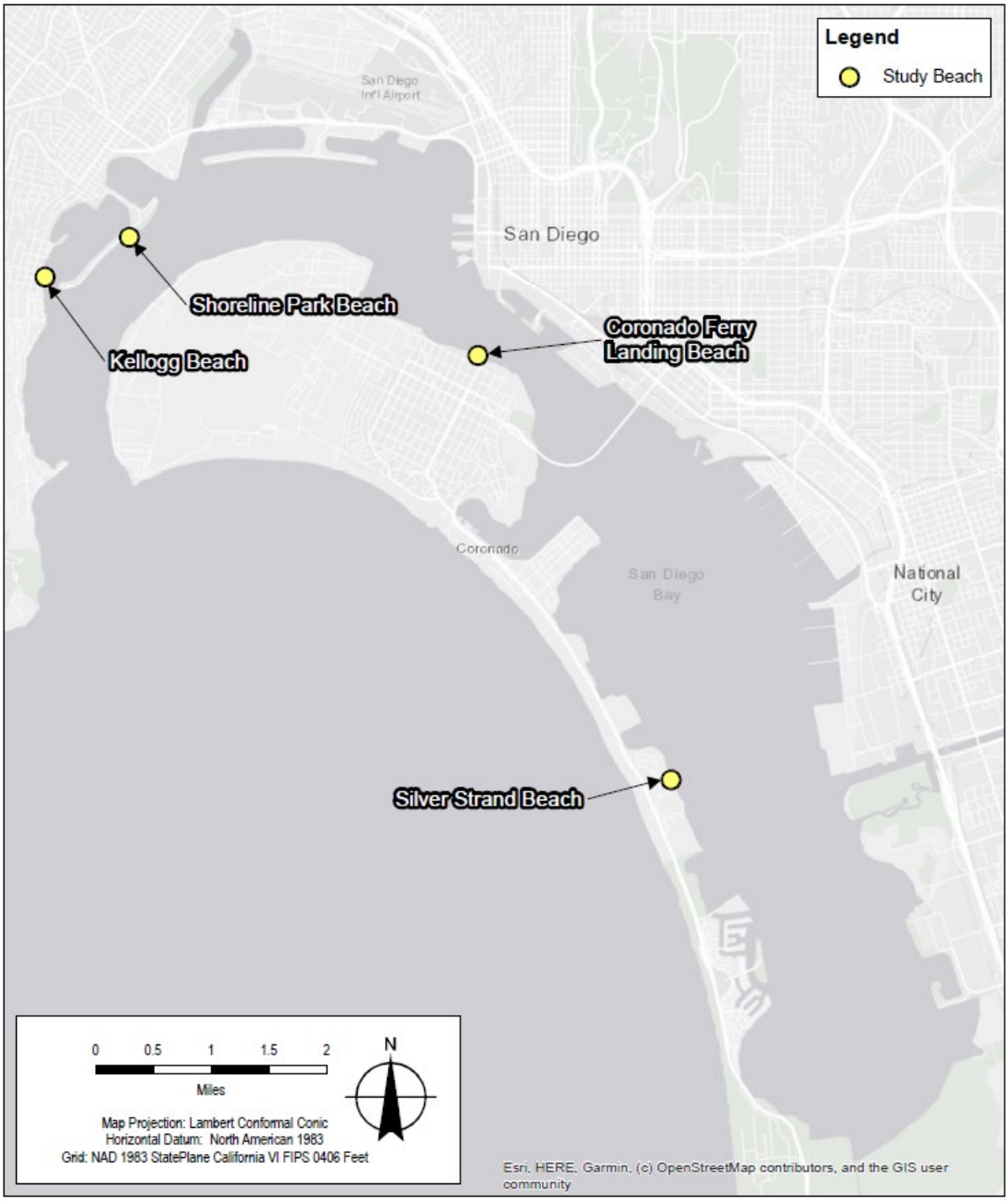


Figure 3-1. Study beaches within the San Diego Bay

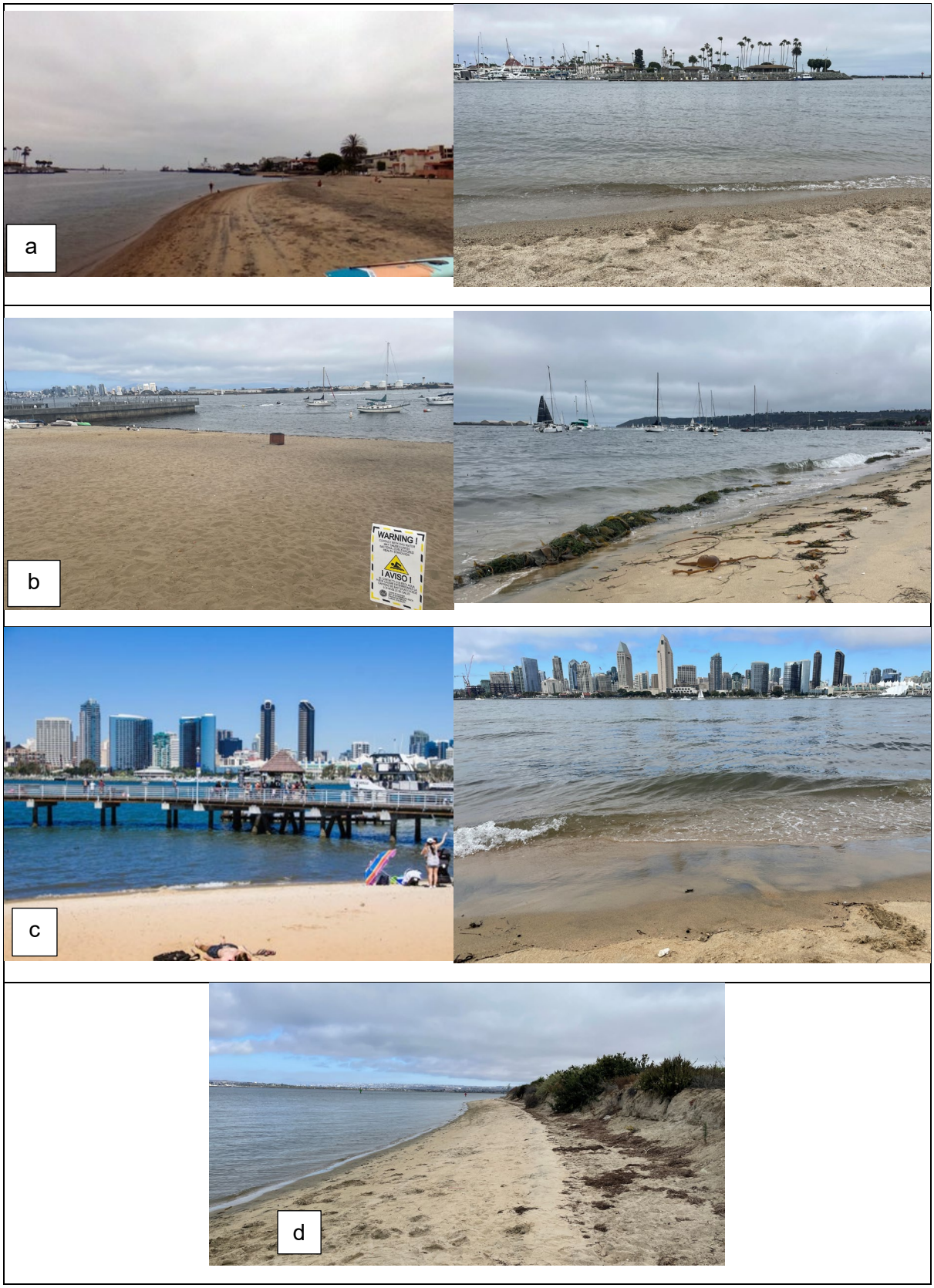


Figure 3-2. Study Beach Photos. Kellogg Beach (a), Shoreline Park Beach (b), Coronado Ferry Landing Beach (c), and Grand Caribe Shoreline Park (d); Silver Strand Beach

(Source: KPBS, 2021; California Beaches, 2022; Port of San Diego, 2022)

4. Vessel Wake Generation Overview

As a vessel travels through a body of water, two different waves are produced, diverging waves and transverse waves. Divergent waves follow the vessel and propagate from the centerline, while transverse waves originate at the stern of the vessel and propagate in the opposing direction of travel, as shown in Figure 4-1. The characteristics of each of these waves is dependent on vessel specifications, such length, speed, hull type/displacement, and depth.

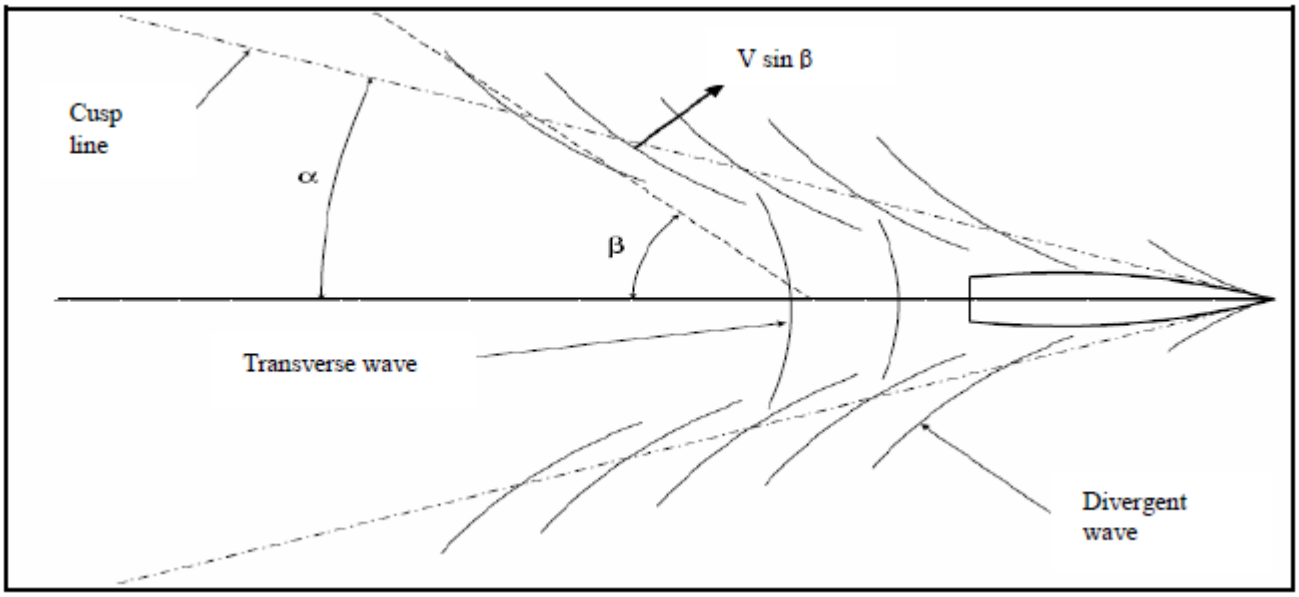


Figure 4-1. Vessel generated wave schematic (Ghani, Pauzi & Rahim, M., 2008)

However, estimating wake wave characteristics is complex as there are several other influential factors. Due to differences in a vessel's overall design, increasing speed does not always result in greater wave heights. In general, recreational vessels may reach a critical speed, in which a vessel begins to plane atop the surface of the water. A planing vessel's wave height will increase with speed until the planing speed is reached. Once planing the wave height will decrease with speed. A typical speed versus wave height curve is shown below in Figure 4-2 for a planing vessel. However, some vessels are not capable of planing and wave height may continue to increase with speed. This is the case for large commercial vessels.

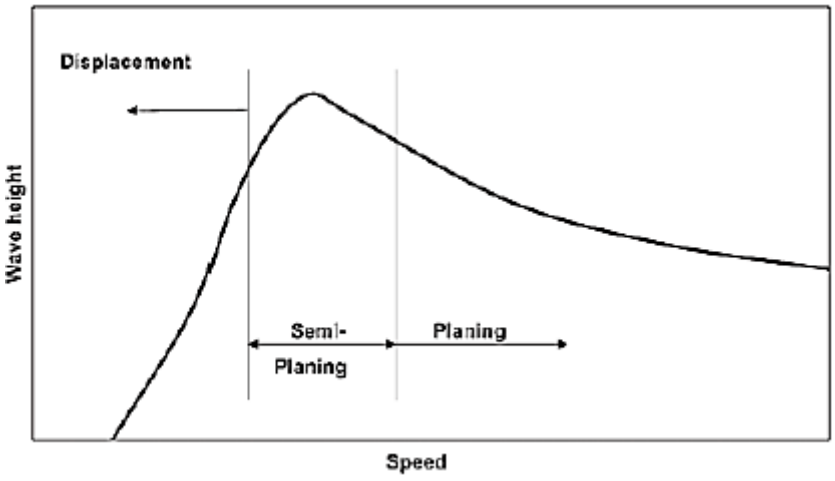


Figure 4-2. Wave height versus speed for a planing vessel (Maynord, 2005)

According to Sorensen (1973), a typical passing vessel creates a wave train (or series of waves) of about 13 waves of varying heights. A typical vessel's generated wave train is shown in Figure 4-3.

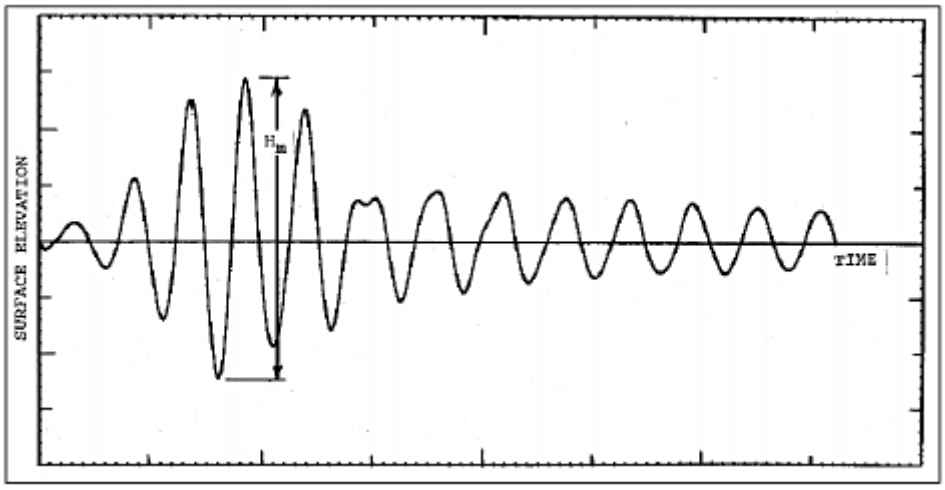


Figure 4-3. Typical wave train for a passing vessel (Sorensen, 1973; Tan, 2012)

Once generated, the dissipation of the waves is largely governed by wave properties (wavelength, height and period), distance to shoreline, and bathymetry. The process of estimating wave transformation and dissipation from the vessel to the shoreline/channel bank is complex and numerical modeling tools are commonly used.

5. Sea Level Rise

Sea level rise has the potential to increase the frequency and severity of coastal flooding and erosion along shorelines worldwide. Sea level rise projections along the west coast of California are provided in the State of California Sea Level Rise Guidance document (OPC, 2018) for 12 active tide gauges; including La Jolla and San Diego. The California Coastal Commission Sea Level Rise Policy Guidance, updated in 2018, refers to the OPC study as the "best available science" regarding SLR projections in California.

The Port recently completed a SLR Vulnerability Assessment and Coastal Resiliency Report to assess the various Planning Districts within the Bay. This report considered the OPC 2018 5% Probability projections for years 2030 and 2050, and the 50% probability projections for year 2100.

Since the changes in boat slips for the Port's PMPU full buildout scenario corresponds to 2050, this report considered SLR projections to be aligned with this horizon year. Consistent with the SLR Vulnerability Assessment, the 5% Probability projection of 1.4 feet (2050) was used for this study.

Table 5-1. Sea Level Rise Projections for San Diego[1] (OPC, 2018)

Year	Median (50% Exceedance Probability)	Likely Range (67% Probability SLR is between…)	1-in-20 Chance (5% Exceedance Probability)	1-in-200 Chance (0.5% Exceedance Probability)
2030	-	0.4 – 0.6	0.7	0.9
2050	0.9	0.7 – 1.2	1.4	2.0
2070 (RCP 8.5)	1.5	1.1 – 2.0	2.5	3.6
2100 (RCP 8.5)	2.6	1.8 – 3.6	4.5	7.0

[1] *All elevations are measured in feet.*

6. Maximum Wave Generation Scenario

Vessel wake height is primarily a function of vessel characteristics (i.e. speed, weight, hull type, etc.), however, the energy dissipation at the shoreline is largely affected by factors such as the depth and distance from the shoreline. Thus, it is necessary to compare potential wakes of recreational and commercial vessels at varying positions (i.e. distance from the shoreline). The purpose of this task is to define a probable scenario in which a vessel generates the maximum, plausible wave height at the shoreline from a passing vessel.

Vessel wake height was examined using the U.S. Army Corps of Engineers (USACE) Vessel Wake Prediction Tool (VWPT) (v3.13). VWPT is a publicly available program that calculates vessel wake height using the best-available empirical models. This program outputs various wave parameters, including wave height at the source (H_{max}) and the shoreline (H_{shore}). The VWPT applies several different empirical models to estimate wave height. Each of these models was validated under specific circumstances and have different limitations. For instance, model results validated for a recreational vessel should not be applied to a model that was fit to a commercial vessel in deep water. To account for this, the VWPT selects the most applicable models based on the vessel specifications.

6.1 Assumptions

As comprehensive vessel traffic data within the Bay is not available, it is necessary to make some assumptions to help define realistic scenarios which represent the passage of recreational and commercial craft. To compare the wake waves generated by recreational and commercial vessels, this analysis first makes assumptions in regard to the following boat traffic elements:

- Type of vessel: Size and dimensions (length, beam, draft, etc.)
- Typical routes in the open Bay (i.e., distance from shoreline)
- Vessel Speed

There are characteristic differences between recreational and commercial vessels, which allow them to generate differing wakes. These differences may include hull type, length of the vessel, draft and beam, all of which affect the vessel's wake in some manner. There is limited formal documentation regarding the different types of recreational vessels within the Bay, so this analysis will examine vessels that could feasibly be in the Bay.

In addition, recreational and commercial vessels follow different routes within the Bay. In general, recreational vessels are smaller and can safely travel closer to the shoreline, while larger commercial vessels are primarily constrained to the navigation channel. In other words, a wave generated by a commercial vessel in the navigation channel will have to travel a greater distance to shore, in which the greater the distance a wake wave travels, the more wave dissipation will occur.

The speed that a commercial vessel travels within the Bay is better documented and is generally limited in comparison to smaller recreational vessels. However, there is little regulation of recreational vessel speed in the open Bay, so this analysis will examine a range of speeds for a given vessel to determine a speed that generates the largest wave at the shoreline.

6.1.1 Vessel Distance to the Shoreline & Water Depth

For the purposes of this analysis, it is assumed that recreational vessels can safely travel closer to the shoreline than that of commercial vessels. Per California Law (655.2 Harbors and Navigation Code), vessels must follow a 5 mph speed limit within 200 feet of a beach frequented by swimmers. Thus, 200 feet was used as a minimum offset distance for vessels from the study beaches. In addition, the navigation markers and depth shown in the National Oceanic and Atmospheric Administration (NOAA) maritime chart for the Bay was used to further justify a position along the shoreline. The position of recreational vessels in the channel is as follows (as measured from the mean sea level shoreline):

- Kellogg Beach: 1,830 feet
- Shoreline Park Beach: 350 feet
- Coronado Ferry Landing Beach: 350 feet
- Silver Strand Beach: 200 feet

In the case of Kellogg Beach, which is largely embayed behind Shelter Island and along an established navigational route to several marinas, it is understood that recreational vessels will travel past the beach much closer than 1,830 feet as they travel in and out of the Shelter Island embayment. However, the embayment and beach is located within a “no wake zone”. Thus, for this study it was assumed that larger vessel wakes will be generated from the extraction point in the main Bay navigational channel where vessels are moving a faster speed and creating larger wakes. These wakes were used as a conservative assumption for waves approaching Kellogg Beach in this study.

Commercial vessels have a larger draft and require a greater water depth than that of recreational vessels. Thus, they are generally be confined to the navigation channel. The path of commercial vessels will be considered the landward boundary of navigation channel, these assumed vessel distances from shore are as follows:

- Kellogg Beach: 2,650 feet
- Shoreline Park Beach: 1,150 feet

The assumed vessel positioning in the Bay / channel for each study beach is displayed in Figure 6-1 through Figure 6-3.

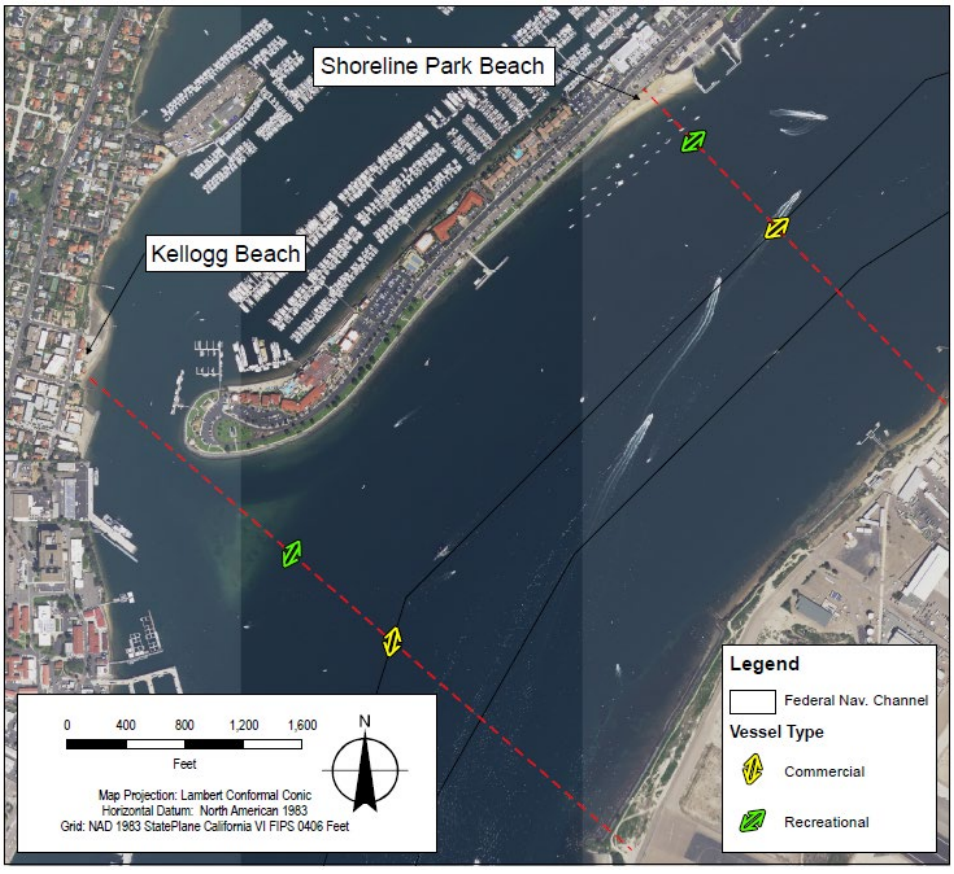


Figure 6-1. Assumed nearest cross-shore positioning of commercial and recreational vessels at Kellogg and Shoreline Park Beach

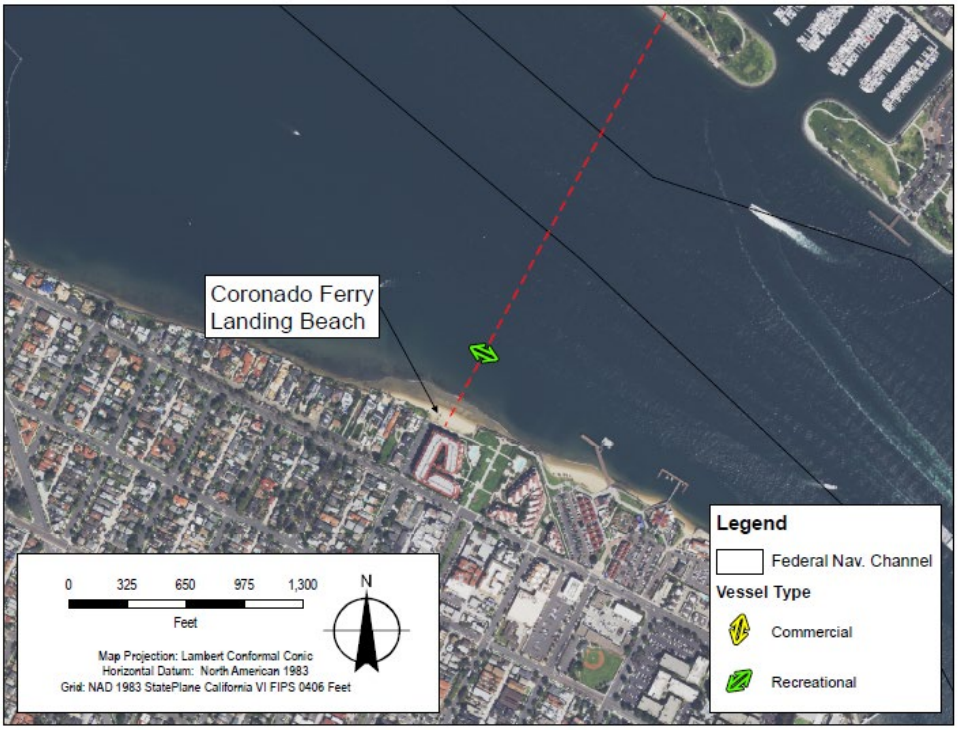


Figure 6-2. Assumed nearest cross ross-shore positioning of recreational vessels at Coronado Ferry Landing Beach

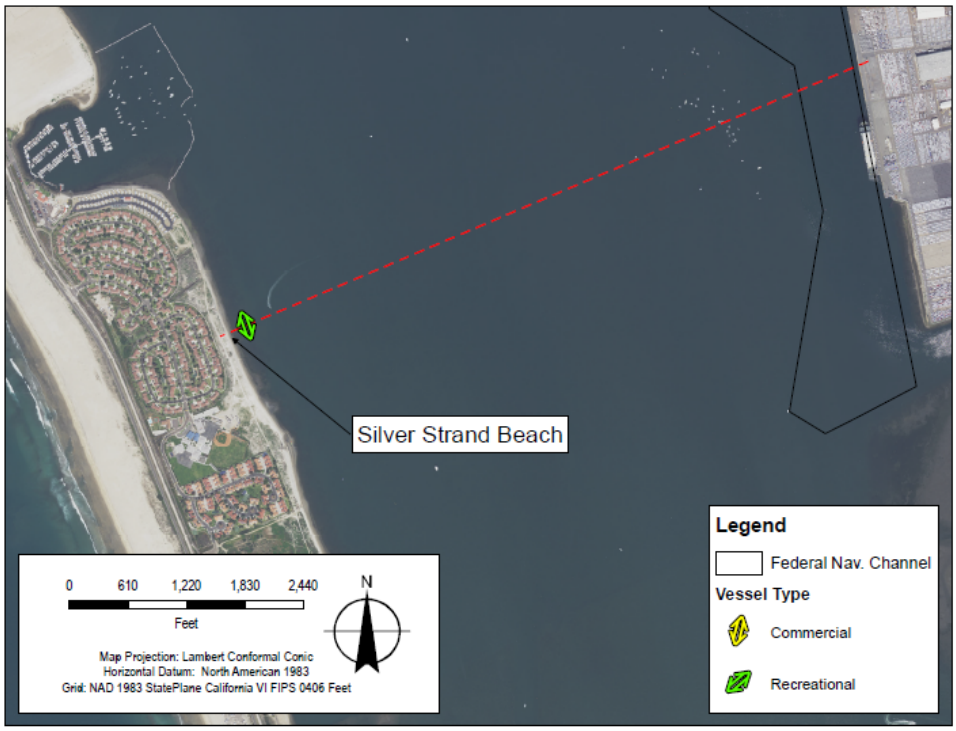


Figure 6-3. Assumed nearest cross ross-shore positioning of recreational vessels at Silver Strand Beach

6.1.2 Vessel Size and Specifications

Based on empirical data, the District estimates that recreational vessel length within the PMPU area range between 20 feet and 250 feet. However, based on observations, the District expects that the average recreational vessel length is between 35 feet and 38 feet. For this analysis, a 35-foot center-console vessel was selected as a representative typical recreational vessel (Figure 6-4).

This study anticipated that in the future, the PMPU's plans for additional commercial fishing slips would moor vessels of the same or similar sizes currently seen at Tuna Harbor. The slips within the Tuna Harbor Basin range from 30 feet to 80 feet, with the largest vessels being trawlers and longliners. This analysis utilized specifications for a 63-foot long trawler, as a representative typical commercial fishing vessel operating in the Bay (Figure 6-5). The specifications (i.e., length, beam, draft) for each vessel type were determined from manufacturer specifications sheets and are shown below in Table 6-1.

Table 6-1. Study Recreational and Commercial Vessel Specifications (feet, unless otherwise specified)

Specification	Recreational Vessel (35-Foot Center-Console)	Commercial Vessel (63-Foot Trawler)
Length	35.0	63.0
Beam	10.7	20.1
Weight/Displacement	8,261 lbs	321,875 lbs
Loaded weight*	10,557 lbs	-
Draft	2	10.2
Hull Type*	V-Hull	-

*Variables not included in the VWPT model for commercially sized vessels

Figure 6-4. Assumed Typical Recreational Vessel Analog – 35-foot HFC Seachaser (Carolina Skiff, LLC, 2022)

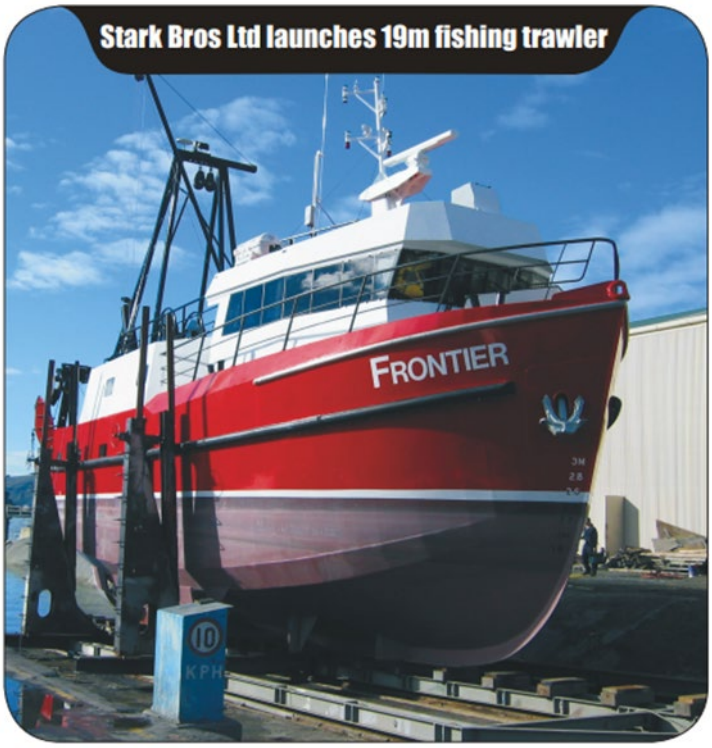


Figure 6-5. Assumed Typical Commercial Vessel Analog - 63-Foot Trawler (Stark Bros LTD, 2022)

6.1.3 Vessel Speed

Vessel speed is one of the dominant variables that influences a boat's wake. Boats are designed for different purposes, so a boat's maximum speed and the influence of speed on a boat's wake will vary by vessel. However, there are general trends that many recreational vessels will align with. As described earlier in Section 3, a boat will eventually reach a critical speed and begin to plane atop of the surface of the water, which greatly influences the size and characteristics of the resulting boat wake. Sorensen (1973) found that the maximum wave height will generally occur during a Froude-length number between 0.4 and 1.0, which is essentially a unitless ratio of the vessel length and speed that is typically used to evaluate the vessel-wake relationship (Tan, 2012). The maximum wave height for the recreational vessel was found to occur at a speed of 7.5 knots, when the Froude-length number is approximately 0.4.

Commercial vessels are larger and travel at slower speeds through the Bay. It is unlikely that these vessels will reach a speed great enough to plane, so wake height will generally increase with speed. The free-running speed of the 63 foot trawler will be used for this analysis and is 10.6 knots.

6.2 Results

The VWPT model results were averaged to determine a shoreline wave height for each study beach. Model averages, as well as the maximum and minimum shoreline wave heights, are shown in Table 6-2. The model maximum and minimum values are presented to display the range of empirical model results for each beach.

Table 6-2. Modeled vessel wave heights at study beaches

	Shoreline Park Beach Wave Heights (feet)		Kellogg Beach Wave Heights (feet)		Ferry Landing Beach Wave Heights (feet)	Silver Strand Beach Wave Heights (feet)
	Rec.	Comm.	Rec.	Comm.	Rec.	Rec.
Max. Wave Height, H_{shore}	0.69	0.91	0.41	0.77	0.69	0.86
Min. Wave Height, H_{shore}	0.46	0.01	0.23	0.01	0.46	0.61
Average Wave Height, H_{shore}	0.57	0.35	0.32	0.29	0.58	0.73

Results indicate that a recreational vessel, traveling at a higher speed closer to shore, will generate a wake wave that is larger than or equal to the commercial vessel wake at the shoreline. For recreational vessels, the results ranged from 0.3 feet to at Kellogg Beach to 0.7 feet at Silver Strand Beach. The commercial fishing trawler yielded a shoreline wave height of 0.3 feet at Kellogg Beach and 0.4 feet at Shoreline Park Beach. For the recreational vessel, the wave period was 2.0 seconds and the wave period for the commercial vessel was 5.3 seconds. As the recreational vessel (traveling at a higher speed closer to shore) generated a larger wave at the shoreline, the recreational wave height will be applied to the net number of baseline and proposed trips, for all study beaches as a conservative assumption. More details will be discussed in the following section.

7. Wave Loading

The results from the VWPT were used in conjunction with the total number of existing boat slips in the Bay to reasonably estimate vessel traffic conditions, for each study beach. The vessel traffic conditions, or total vessels passing a given beach, will dictate the total number of waves at the shoreline. Two vessel traffic scenarios were developed for this study:

- Baseline boat traffic scenario, and the
- Proposed boat traffic conditions scenario.

The baseline boat traffic scenario was developed based on 2023 survey data collected and provided by the Port of San Diego, which was meant to provide a reasonable estimate of vessel traffic for the existing conditions. The survey included 13 marinas within the Bay and provided insight into variables such as total slip occupation and general usage frequency and patterns. For recreational vessels, the survey data suggests that a reasonable vessel traffic scenario is that 10% of docked vessels leave the slip once per month, and 90% of docked vessels leave the slip annually (once per year).

It is understood that commercial vessel traffic patterns will differ from recreational in that commercial vessels largely operate on a seasonal basis, with the majority of vessel traffic occurring during “peak” season. This was reflected in the Port Survey data, which suggested that a reasonable scenario for commercial vessels is as follows:

20% of vessels operate daily 5 months of the year,

50% of vessels operate daily 2 months out of the year, and

100% of vessels operate daily the remaining 5 months out of the year.

Following these assumptions, a total number of vessel trips were derived from the total number of existing vessel slips within the Bay. The proposed boat traffic scenario assumes this baseline vessel traffic, plus the proposed increase in traffic associated with the PMPU’s plans for increases in boat slips, within the PMPU’s 2050 planning horizon. This section will describe the baseline and proposed vessel traffic scenarios for each study beach.

7.1 Vessel Traffic Scenarios

Using the scenario assumptions for recreational and commercial vessels from the 2023 survey data provided by the Port, an annual vessel traffic scenario was estimated for a baseline and proposed scenario. It is assumed that each vessel will travel from the slip of origin to out to the ocean and back through the Bay to the slip. For example, vessels traveling from the Coronado Planning District, to the ocean, may generate vessel waves at Kellogg and Shoreline Park Beach but will not travel past Silver Strand Beach. The potentially impacted beaches relative to the proposed additional boat slips for each Port Planning District are shown in Table 7-1.

Table 7-1. Proposed PMPU Boat Slips and Potentially Impacted Beaches

PMPU Planning District	Additional PMPU Boat Slips		Potentially Impacted Study Beaches
	Recreational	Commercial	
Shelter Island	35	65	Shoreline Park Beach, Kellogg Beach
Harbor Island	225	-	Shoreline Park Beach, Kellogg Beach
Embarcadero	150	-	Shoreline Park Beach, Kellogg Beach
Coronado Bayfront	55	-	Ferry Landing, Shoreline Park Beach, Silver Strand
Silver Strand	20	-	Silver Strand, Ferry Landing, Shoreline Park Beach, Kellogg Beach
Total	**485**	**65**	

Under the assumptions that 10% of recreational vessels operate monthly and 90% operate annually, and commercial vessels operate at 100% during peak season (5 months), 50% for 2 months, and 20% during the remaining 5 months, the additional boat trips applied to each study beach under these scenarios are shown in Table 7-2. The impacted study beaches for the proposed vessel traffic scenario are shown in Figure 7-1.

Table 7-2. Proposed PMPU Daily and Annual Vessel Traffic

	*Additional PMPU Vessel Slips		*Additional Annual Trips	
	Recreational	Commercial	Recreational	Commercial
Silver Strand Beach	20	-	84	-
Coronado Ferry Landing	75	-	315	-
Kellogg Beach	485	65	2,037	27,679
Shoreline Park Beach	485	65	2,037	27,679

*Daily and annual proposed trips do not include the existing San Diego Bay vessel traffic

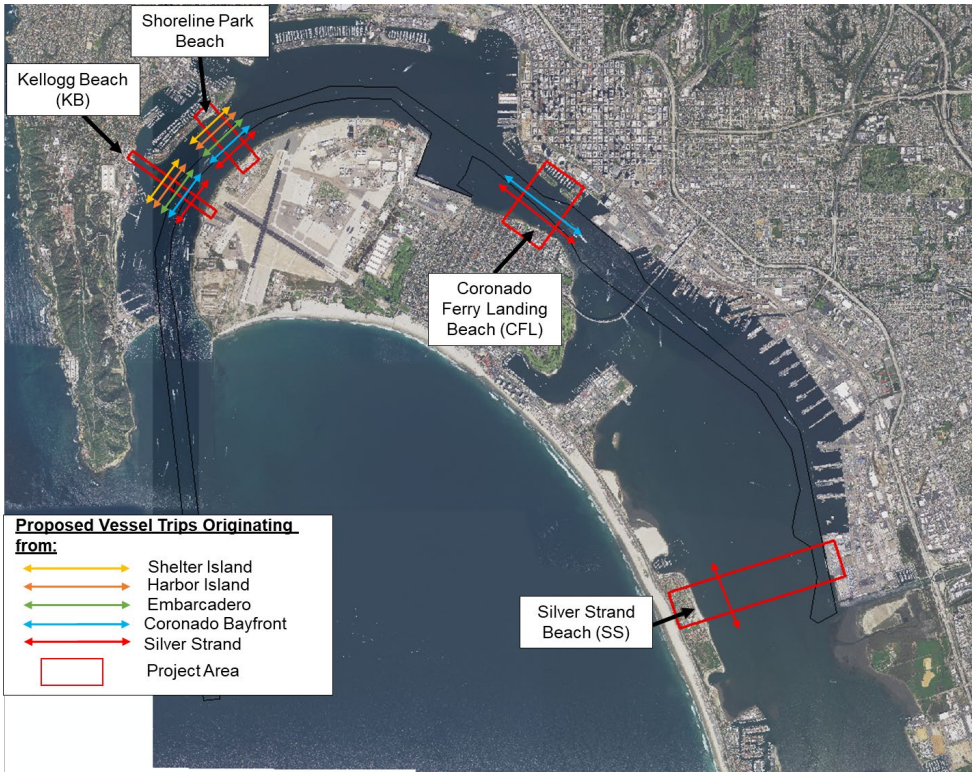


Figure 7-1. Proposed PMPU vessel traffic scenario

7.1.1 Baseline Vessel Traffic Conditions

Baseline conditions refers to the estimated vessel traffic scenario tied to the total number of recreational and commercial boat slips that are currently in the Bay. Presently, the total number of boat slips in the Bay is 7,075. Assuming 10% of recreational vessels operate monthly and 90% operate annually, and commercial vessels operate at 100% during peak season (5 months), 50% for 2 months, and 20% during the remaining 5 months, the total annual baseline trips is approximately 154,000 (Table 7-3). This will be used as the baseline for existing vessel traffic.

Table 7-3. Vessel Slip Breakdown for the San Diego Bay (source: Port of San Diego, 2022)

Slip Type	Slip Count	Annual Trips
Recreational	6,780	28,476
Commercial	295	125,621
Total	**7,075**	**154,097**

A comprehensive breakdown regarding the distribution of existing boat slips in the Bay is not available at this time. Consistent with the vessel traffic scenario being considered in this study, not all traffic will pass each study beach. That is, vessels will travel from the harbor/marina out to the Pacific Ocean and then back to the respective harbor/marina. So, it is necessary to make assumptions regarding the overall distribution of existing boat slips in the Bay. In this study, one-half of the total existing slips will be applied for Ferry Landing Beach and one-third of the total existing slips will be applied for Silver Strand. In other words, it is assumed that one-half of the total boat slips are located south of the Ferry Landing Beach and one-third of the total boat slips are located south of the Silver Strand Beach, as depicted in Figure 7-2. For instance, out of the total 6,780 recreational slips that reside in the Bay, a total of 2,260 recreational slips are assumed to apply to Silver Strand or south of Silver Strand.

Figure 7-2. Baseline Conditions Vessel Traffic Scenario

7.1.2 Proposed Vessel Traffic Conditions

Proposed conditions refers to the baseline vessel traffic plus the traffic that would be associated with an increase in boat slips from the PMPU. The additional slips from the PMPU equates to an approximate 0.2% percent increase in traffic passing Silver Strand Beach, 0.4% percent increase in traffic passing Coronado Ferry Landing Beach, and a 19.3% percent increase in traffic for Kellogg and Shoreline Park Beaches. The total proposed trips for each study beach are shown below in Table 7-4.

Table 7-4. Total proposed annual trips for each study beach

Study Beach	Annual Trips			
	Additional PMPU Vessel Trips		Existing*	Net New* (Proposed)
	Recreational	Commercial		
Silver Strand Beach	84	-	51,366	51,450 (0.2% increase)
Coronado Ferry Landing	315	-	77,048	77,363 (0.4% increase)
Kellogg Beach	2,037	27,679	154,097	183,813 (19.3% increase)
Shoreline Park Beach	2,037	27,679	154,097	183,813 (19.3% increase)

*Total trips include recreational and commercial

8. Shoreline Response Modeling

The potential for shoreline change at study beaches, as a result of increased boat traffic, was examined using the USACE-derived, CShore model. This model is a one-dimensional, cross-shore evolution model that predicts beach profile change (Johnson and Sanderson, 2020). The CShore model was run for four scenarios at each study beach:

- Baseline Boat Traffic Conditions
- Proposed Boat Traffic Conditions
- Baseline Boat Traffic Conditions with 1.4 feet SLR
- Proposed Boat Traffic Conditions with 1.4 feet SLR

The shoreline change associated with an increase in vessel traffic was examined through a comparative analysis of the baseline boat traffic conditions scenario versus the proposed boat traffic conditions scenario.

8.1 Key Assumptions

In addition to shoreline evolution, the CShore model results provide insight to the cross-shore and longshore transport at each location. Cross shore transport can be estimated using the output profiles, while longshore transport can be computed for each time step. For this analysis, longshore transport resulting from vessel traffic is assumed to be zero. This is because the ingress and egress of a vessel trip would produce equal and opposite forcing in the longshore direction. However, actual longshore transport patterns may vary depending on other contributing environmental conditions such as the tidal currents, wind driven currents and wind waves, and the shoreline's orientation relative to these environmental factors. These additional factors were not included in the model, in order to isolate the potential effects of increased vessel traffic from the PMPU.

Another key assumption relates to the wave train produced by a single vessel. As described in Section 4, a vessel will produce wave train, where the maximum wave height is preceded and followed by a series of smaller waves. The waves following the peak wave will typically be in a dissipative state. Because of the large number of trips and the largest waves being the most significant in terms of potential to result in shoreline change, the wave train was simplified into the three maximum waves instead of including the entire series of waves.

Numerical modeling of shoreline evolution is imprecise due to the complexity of mathematically describing intricate dynamics of coastal processes. Modern computation does not allow for complete resolution of the fundamental physics driving coastal processes, thus parametrization and assumptions around nearshore sediment dynamics must be made to efficiently predict these processes. The accuracy of shoreline models will generally increase with an abundance of accurate site-specific data that captures the variability of an environment over sufficient temporal scales. Such site-specific data is not readily available for the shorelines of the San Diego Bay, though the available data and information was leveraged to the extent feasible within the scope of this Project. While the CShore model assumptions still fit the Project area reasonably well, inherent error in coastal modeling remains. The model results are intended to predict the long-term shoreline trends, not precise movement at specific locations. Numerical modeling allows for simplified calculations of complex physical processes that yield seemingly precise results, but these should not be mistaken as accurate predictions. Vessel waves are only one of several factors that can potentially contribute to shoreline change. Based on the results presented herein, vessel wakes are unlikely to be the dominant factor driving shoreline change at the Study beaches.

In the context of this report, values that are reasonably below the vertical threshold of typical land surveying methods will be reported as no change or negligible. Although vertical surveying accuracy depends on several factors and can be complex, a highly precise land survey device will have a vertical accuracy of 2 centimeters, or about 0.8 inches, though a more typical vertical accuracy ranges from 0.8 to 5.9 inch (2 centimeter to 15 centimeter) (Mitchell & Forte, 2021). Furthermore, coastal environments can often be difficult to survey due to the dynamic nature surrounding coastal processes, especially when surveying below the water surface. For example, beach profile monitoring performed on a bi-annual basis in San Diego with bathymetric soundings has a vertical accuracy of 0.5 feet (Coastal Frontiers Corporation, 2021).

8.2 Model Setup

A total of four scenarios were developed for each study beach to be used as the wave climate input for the CShore model:

- Baseline Boat Traffic Conditions
- Proposed Boat Traffic Conditions
- Baseline Boat Traffic Conditions with 1.4 ft SLR
- Proposed Boat Traffic Conditions with 1.4 ft SLR

The baseline boat traffic conditions refers to the predicted vessel traffic corresponding to the existing boat slips within the Bay. The proposed boat traffic conditions refers to the baseline vessel traffic plus the additional trips associated with the new boat slips proposed in the Port's PMPU. Sea level rise (SLR) was also incorporated into the vessel scenarios, in which 1.4' of SLR was chosen to remain consistent with the PMPU and planning horizon. The shoreline change associated with an increase in vessel traffic was examined through a comparative analysis of the baseline boat traffic conditions scenario versus the proposed boat traffic conditions scenario.

8.2.1 Wave Climate

In order to model the wave climate for each scenario, the total number of trips was converted to total number of annual waves. A constant wave height and period was used for each scenario and the total number of waves at the shoreline in the model was estimated based on the frequency and speed of the applied wave. For example, a wave with a period of 2 seconds has a frequency of 0.5 Hz (waves per second), which equates to about 2.6 Million waves over the course of a month.

For each study beach, the total number of annual trips was converted to number of waves under the assumption that each vessel will generate three waves at the maximum shoreline wave height. The model duration was then estimated using the wave frequency to match the number of waves for each scenario (Table 8-1).

Table 8-1. CShore model duration for each study beach (annual trips converted to annual waves and model duration)

	Baseline Conditions Scenario			Proposed Conditions Scenario		
	Annual Trips	Annual Waves	Model Duration (days)	Annual Trips	Annual Waves	Model Duration (days)
Silver Strand Beach	51,366	154,097	3.64	51,450	154,349	3.64
Coronado Ferry Landing	77,048	231,145	5.46	77,363	232,090	5.48

	Baseline Conditions Scenario			Proposed Conditions Scenario		
	Annual Trips	Annual Waves	Model Duration (days)	Annual Trips	Annual Waves	Model Duration (days)
Kellogg Beach	154,097	462,291	10.92	183,813	551,439	13.02
Shoreline Park Beach	154,097	462,291	10.92	183,813	551,439	13.02

8.2.2 Model Inputs

The CShore input parameters included:

- Initial shoreline profile (cross-section)
- Time series of wave height and period
- The median grain size of the beach
- Tidal hydrograph

8.2.2.1 Initial Shoreline Profiles

The initial shoreline profiles from each study beach were derived from the 2016 U.S. Geological Survey (USGS) Coastal National Elevation Database (CoNED) Topobathymetric Model (TBDEM). This elevation model integrates the best-available topographic and bathymetric data at the time into a single one-meter resolution dataset. This was the most complete dataset available on the public domain for the study beaches.

A representative shore-perpendicular profile was generated for each study beach. Although this dataset is the best available for each study beach, it should be noted that actual conditions may differ. Differences between the TBDEM data and actual conditions may result from factors such as coastal management activities (i.e., beach nourishment) or erosion. Minor differences between actual conditions and the TBDEM data are insignificant given the goal of the study, which is focused on the potential for shoreline change, as a result of increased vessel traffic.

8.2.2.2 Waves

A wave time series was created for each scenario at all of the study beaches. The time series included date / time at hourly intervals, wave height, wave period, and sea level rise (applied as storm surge within the model).

8.2.2.3 Study Beach Sediment Characteristics

Representative sediment samples were collected for each study beaches. Sediment grab samples were collected within the foreshore of each study beach. The median grain size for each site is shown below in Table 8-2. Grain size was found to be relatively consistent across Shoreline Park, Silver Strand, and Ferry Landing beaches, as the material was classified as a fine grain sand. At Kellogg Beach, the material was much coarser, it is classified as a medium grained sand.

Table 8-2. Study Beach Sediment Gradation Characteristics

Study Beach	Median Grain Size, D_{50} (mm)
Shoreline Park Beach	0.26

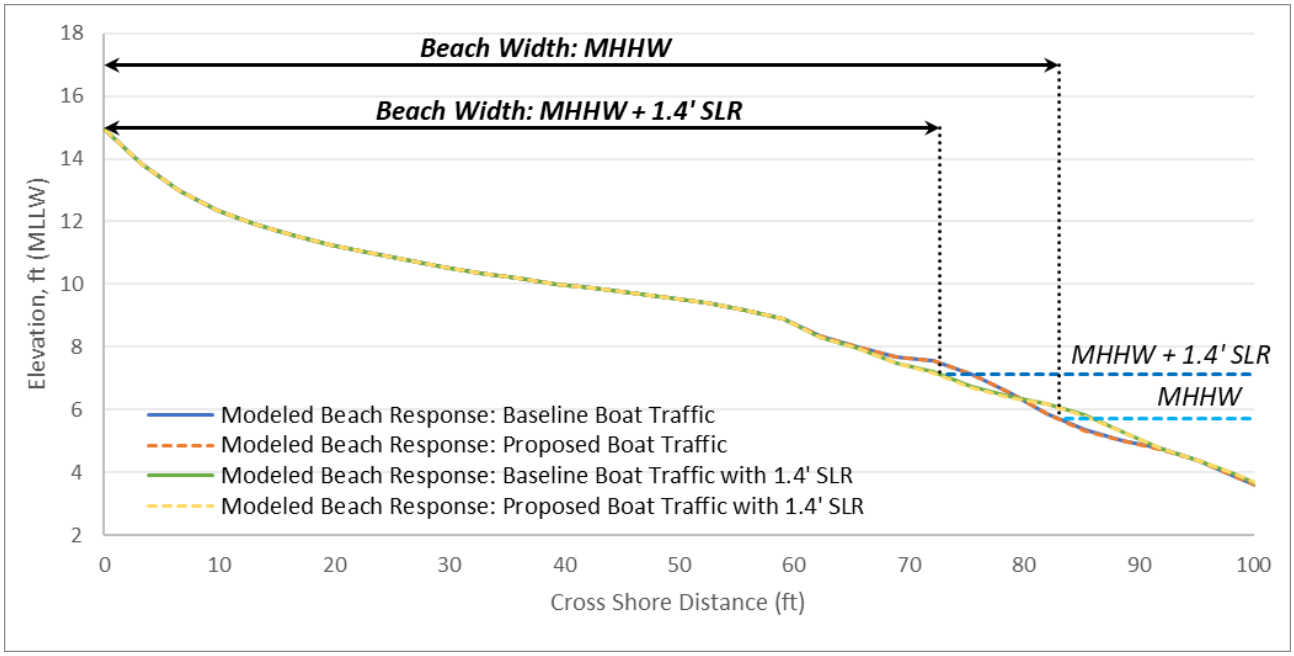
Study Beach	Median Grain Size, D_{50} (mm)
Kellogg Beach	0.97
Silver Strand Beach	0.26
Ferry Landing Beach	0.26

8.2.2.4 Tidal Hydrographs

Water levels were generated in the model as semi-diurnal to match the amplitude of the MHHW datum for the San Diego Bay, oscillating around mean sea level. SLR was applied to the tidal hydrograph as storm surge in the time series, as a constant.

8.3 Shoreline Response Results

The model results are presented as profiles relative to the Mean Lower Low Water (MLLW) tidal datum, as well as the position of the Mean Higher High Water (MHHW), as a beach width proxy, in tabular format for each modeled scenario. The MHHW proxy was chosen to evaluate shoreline movement as it represents the upper limit of tidal range for a typical day, and the beach contained landward of the MHHW shoreline is generally considered to be the dry beach, or available space for recreation. The existing MHHW water shoreline elevation is 5.72 feet relative to the MLLW datum for the San Diego Bay (NOAA Tide Station 9410170). It should be noted that the MHHW position for the modeled SLR scenarios accounts for 1.4 feet of SLR, meaning that the assumed MHHW position with 1.4 feet of SLR will be 7.12 feet. An example of how beach width change was measured for a specific study site is shown below in Figure 8-1.



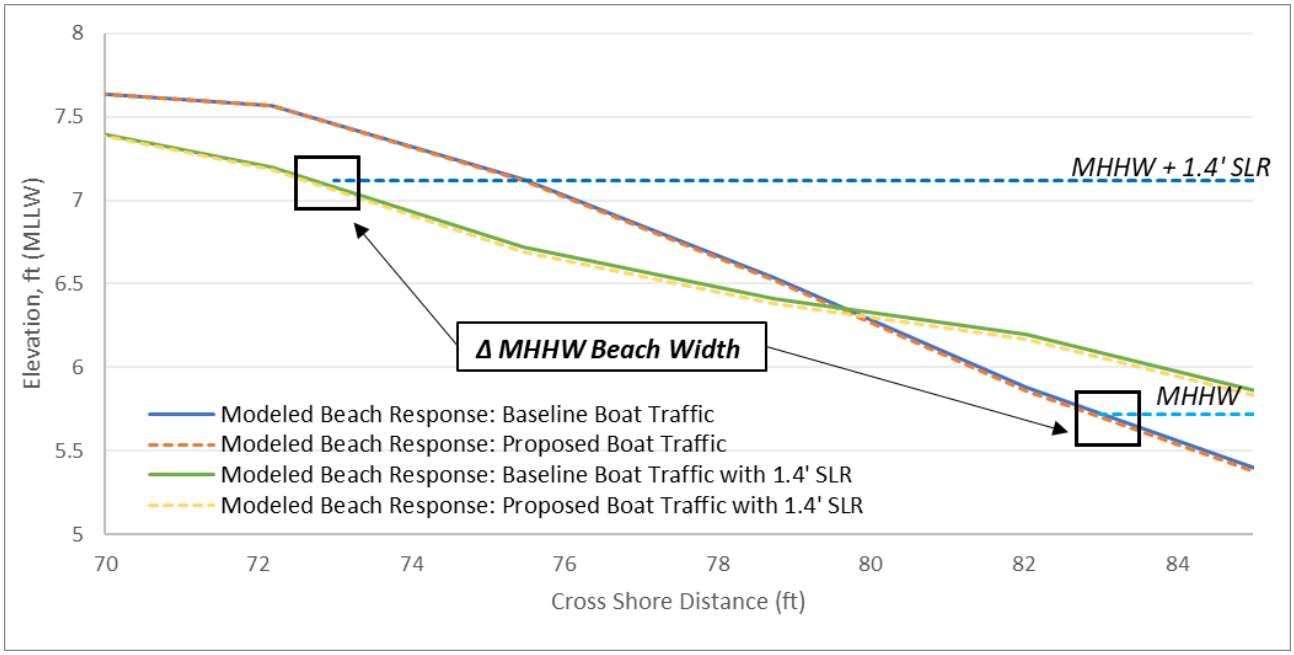


Figure 8-1. Beach Width Measurement Comparisons. MHHW beach width and MHHW + SLR compared to transect origin (top). Baseline compared to Proposed Vessel Traffic with and without SLR (below).

An analysis of the MHHW position is shown below in Table 8-3, with negative values representing a landward shift and positive values representing a seaward shift. The predicted shoreline evolution results suggest that there will be no change of the MHHW position at Coronado Ferry Landing Beach or Silver Strand Beach, when comparing the baseline vessel traffic scenarios to the proposed PMPU vessel traffic scenarios, with or without SLR. At Kellogg Beach, the predicted shoreline evolution results predict an change of 0.86 inch and 1.24 inch for the baseline to proposed PMPU vessel traffic scenarios, and baseline to proposed with SLR scenarios; respectively. At Shoreline Park Beach, the predicted shoreline evolution results predict a change of -1.88 inch and -1.58 inch for the baseline to proposed, and baseline to proposed with SLR scenarios; respectively. These values are at such a scale that they are outside the confidence limits of the model results. Shoreline change at this scale would be undetectable with conventional survey grade equipment.

Table 8-3. Analysis of Beach Width Change at Study Sites

	Beach Width (feet)[1]				Change (Inches)[2]	
	Baseline	Proposed	Baseline + SLR	Proposed + SLR	Baseline to Proposed	SLR: Baseline to Proposed
Kellogg Beach	62.82	62.89	54.09	54.20	0.86	1.24
Shoreline Park Beach	83.03	82.87	72.73	72.59	-1.88	-1.58
CFL Beach	75.32	75.32	63.92	63.92	0.00	0.00
Silver Strand Beach	87.05	87.05	77.57	77.57	0.00	0.00

[1]A value of 0.00 does not necessarily indicate absolute zero, rather a value less than 1/100

[2]As measured from the transect origin to the MHHW elevation

The shoreline modeling results are presented below in Figure 8-2 through Figure 8-4 for Kellogg Beach, Figure 8-5 through Figure 8-7 for Shoreline Park Beach, Figure 8-8 through Figure 8-10 for Coronado Ferry Landing Beach, Figure 8-11 through Figure 8-13 for Silver Strand Beach. It should be noted that line types maybe be difficult to discern due to the lack of change among the model results.

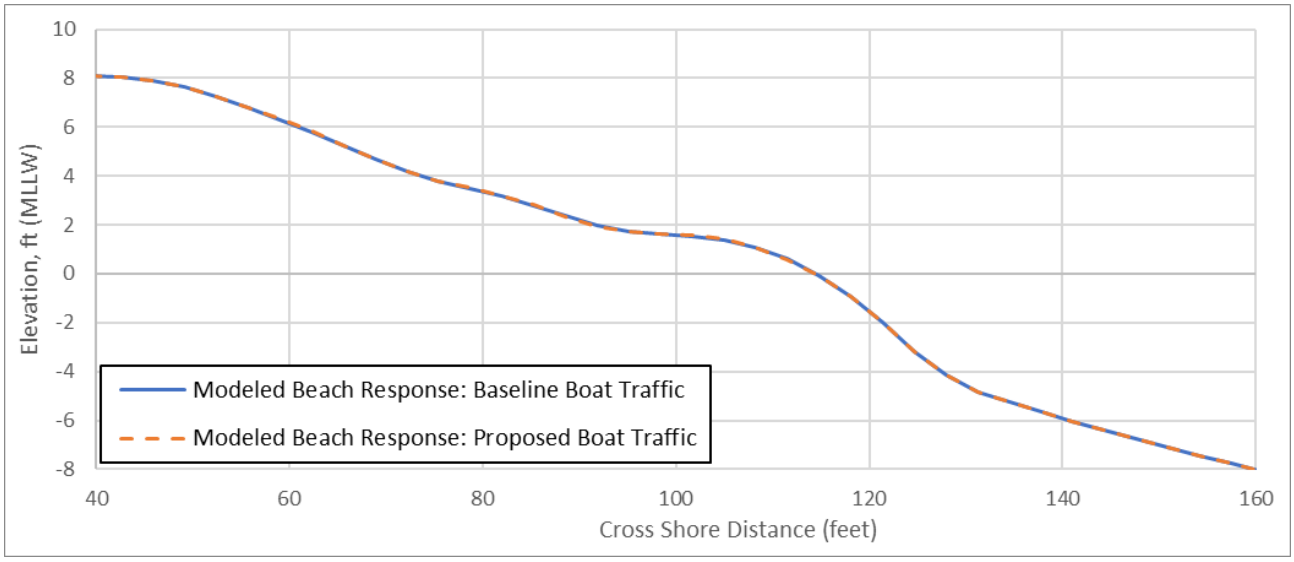


Figure 8-2. Modeled Shoreline Response: Baseline vs. Proposed Boat Traffic for Kellogg Beach

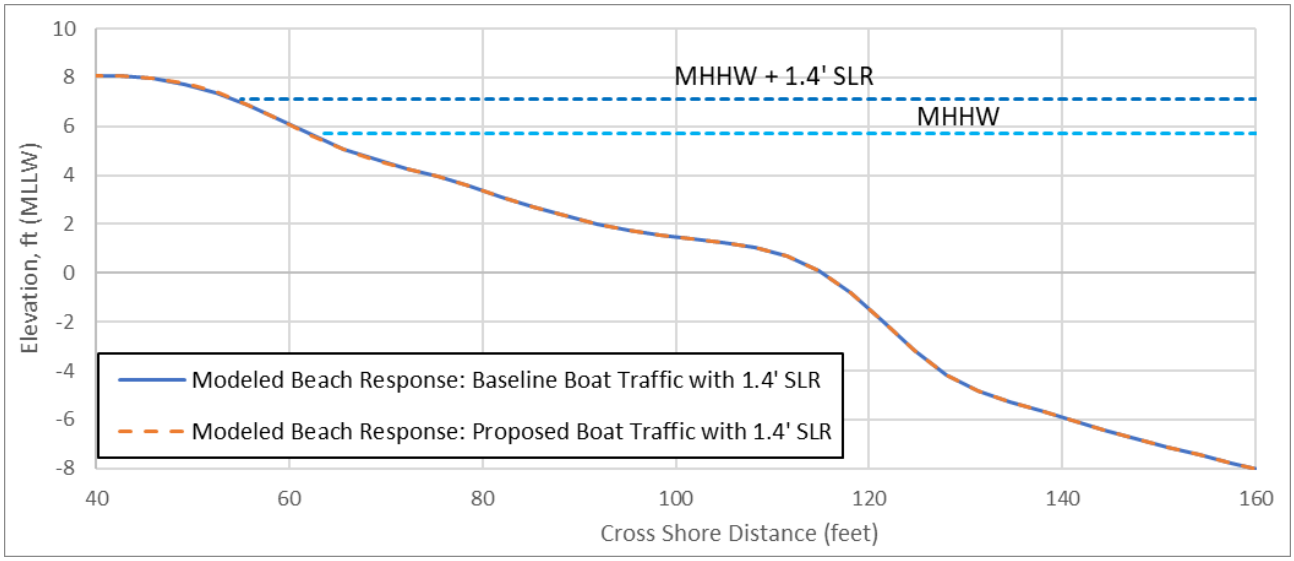


Figure 8-3. Modeled Shoreline Response: Baseline vs. Proposed Boat Traffic with 1.4 feet SLR for Kellogg Beach

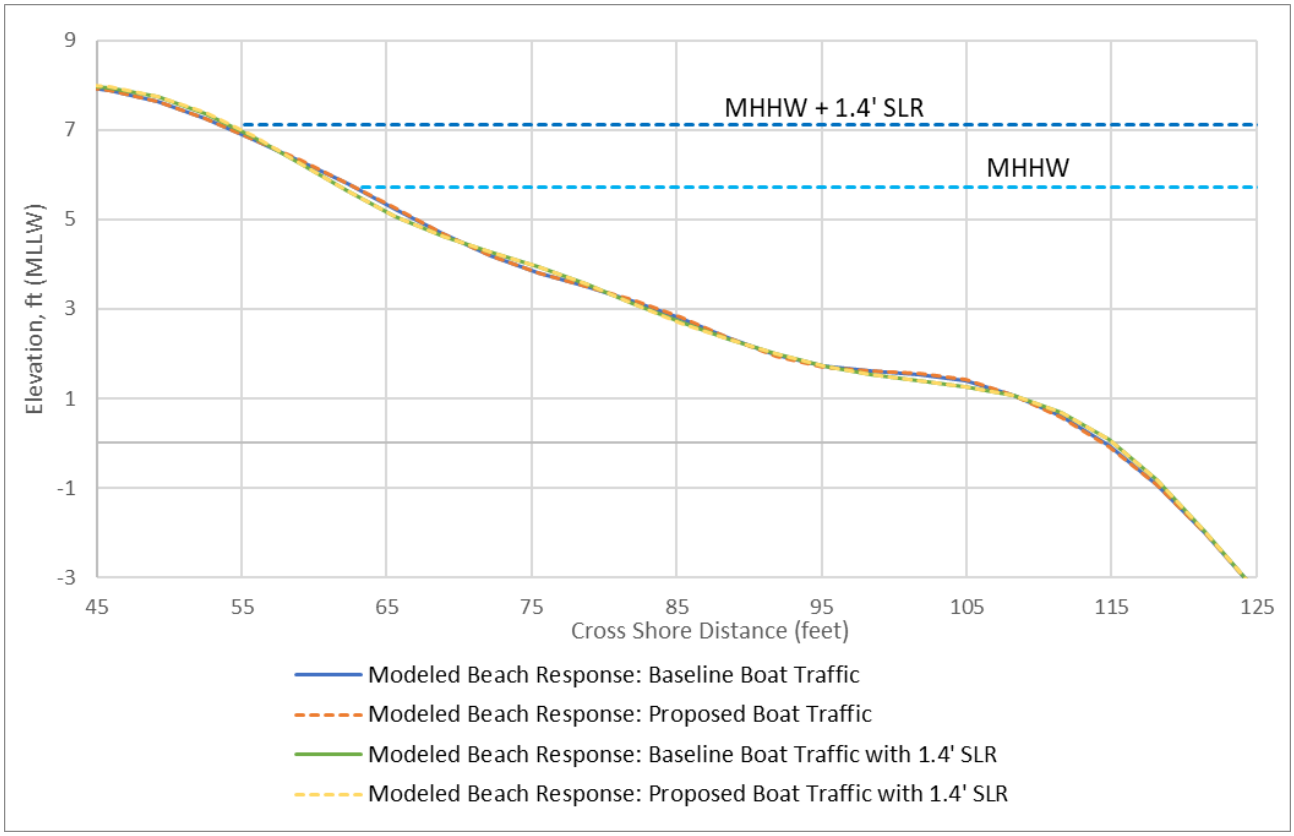


Figure 8-4. Modeled Shoreline Response at Kellogg Beach for all scenarios

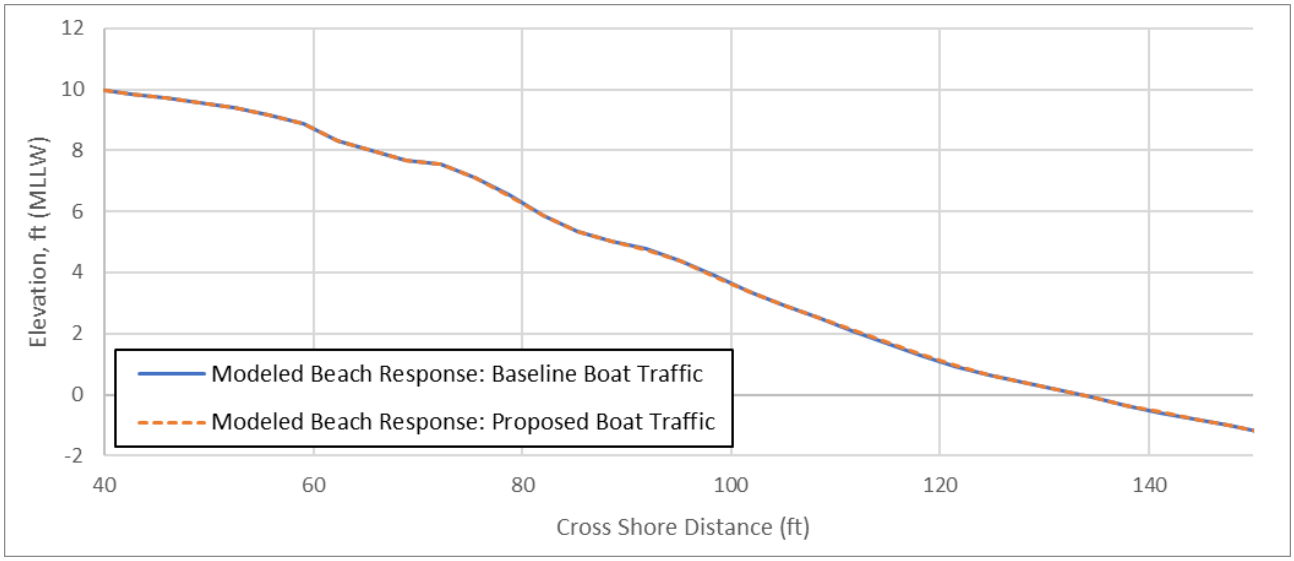


Figure 8-5. Modeled Shoreline Response: Baseline vs Proposed Boat Traffic Conditions for Shoreline Park Beach

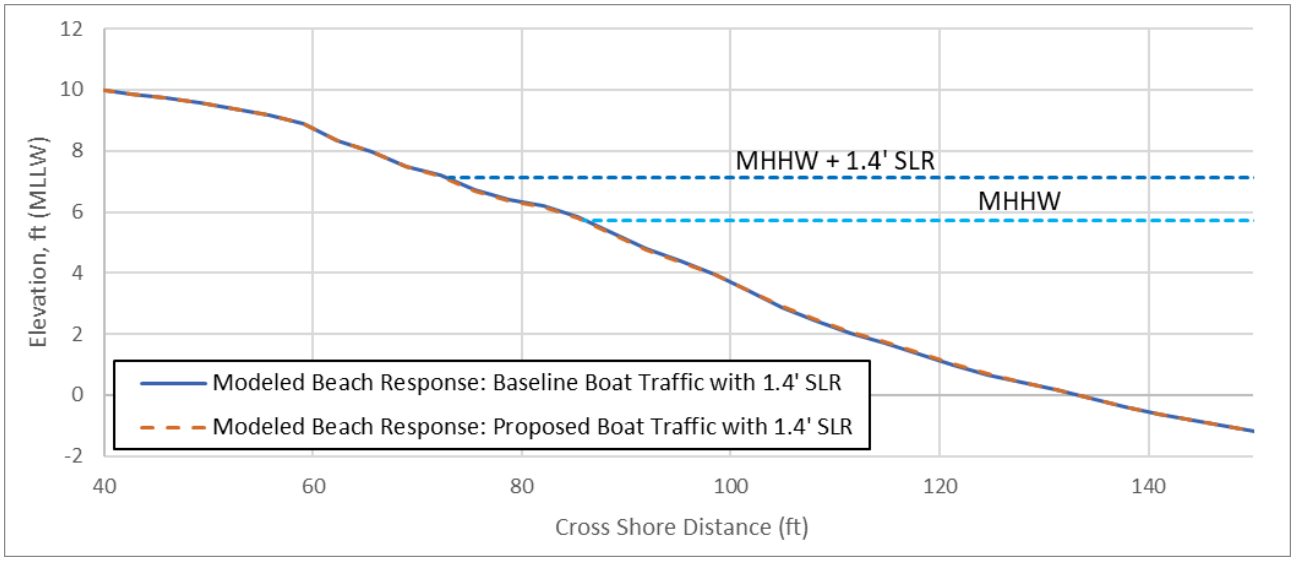


Figure 8-6. Modeled Shoreline Response: Baseline vs Proposed Boat Traffic Conditions with 1.4 feet SLR for Shoreline Park Beach

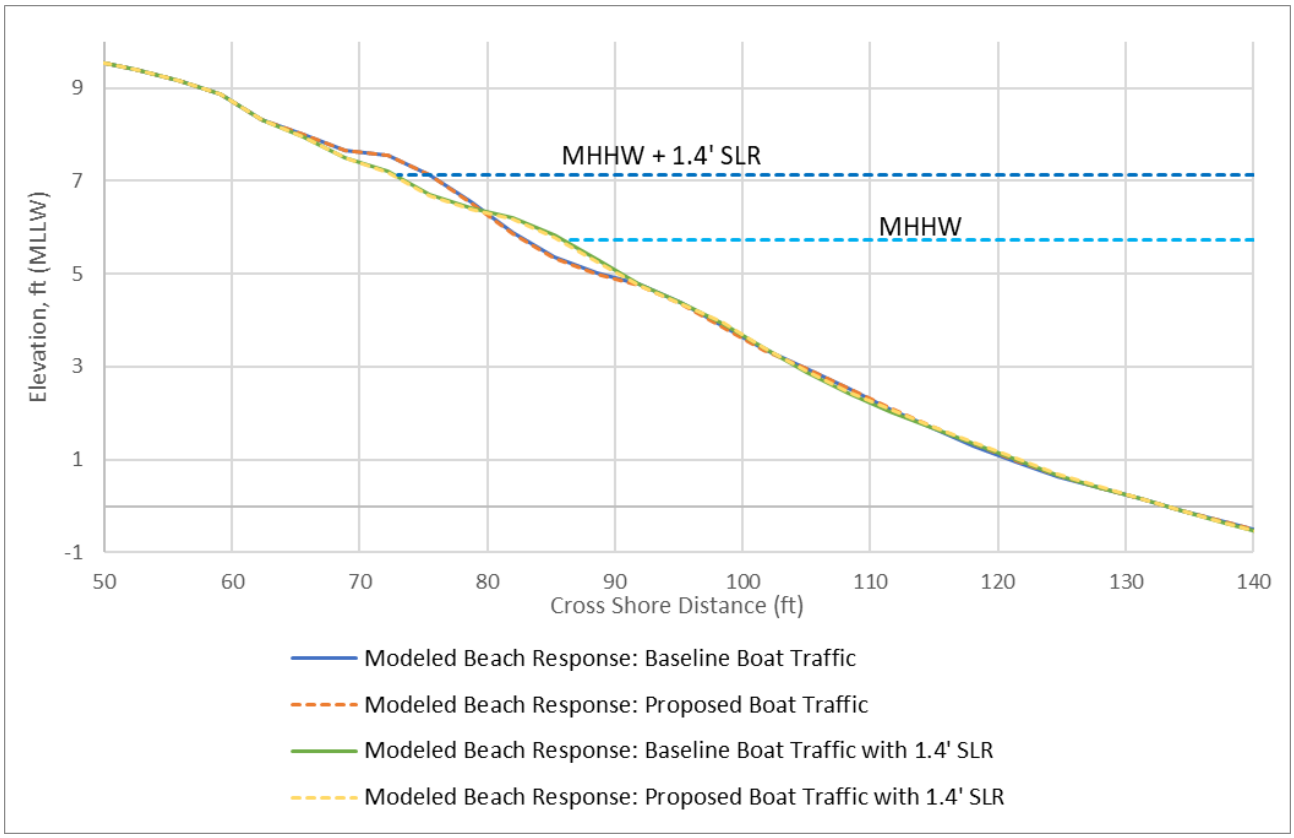


Figure 8-7. Modeled Shoreline Response at Shoreline Park Beach for all scenarios

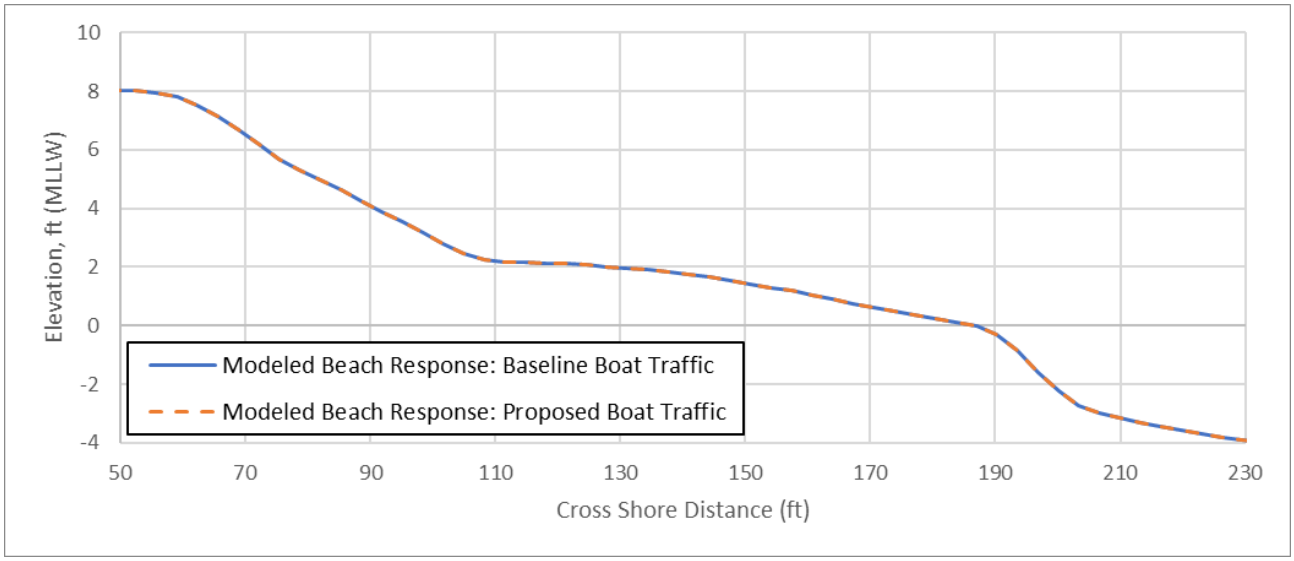


Figure 8-8. Modeled Shoreline Response: Baseline vs Proposed Boat Traffic Conditions for CFL Beach

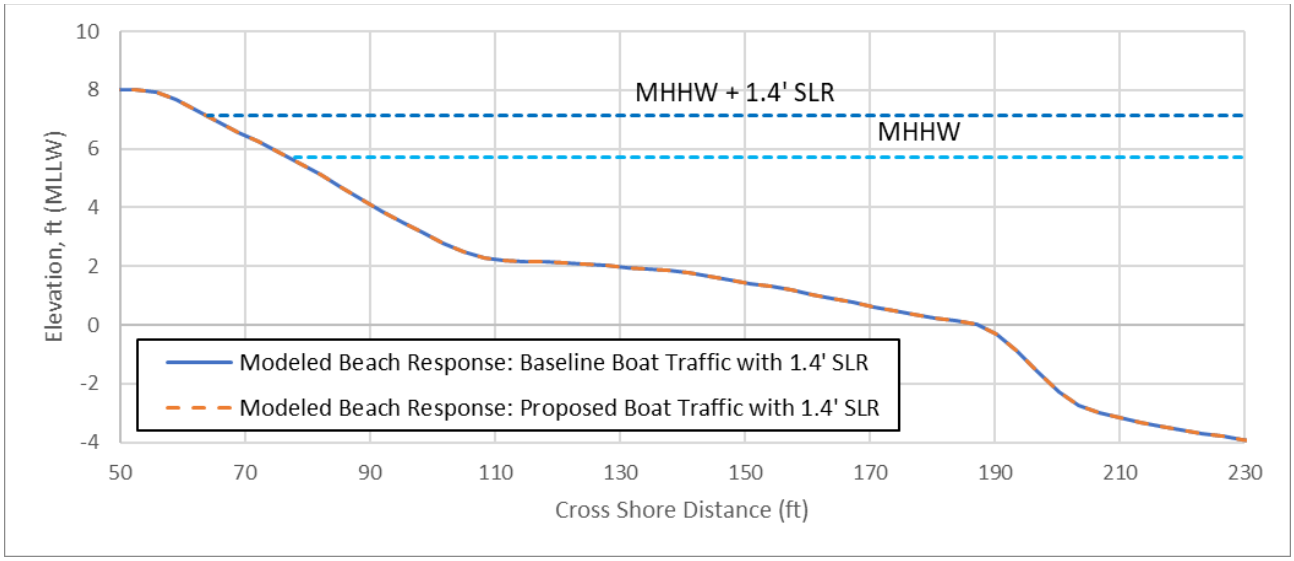


Figure 8-9. Modeled Shoreline Response: Baseline vs Proposed Boat Traffic Conditions with 1.4 feet SLR for CFL Beach

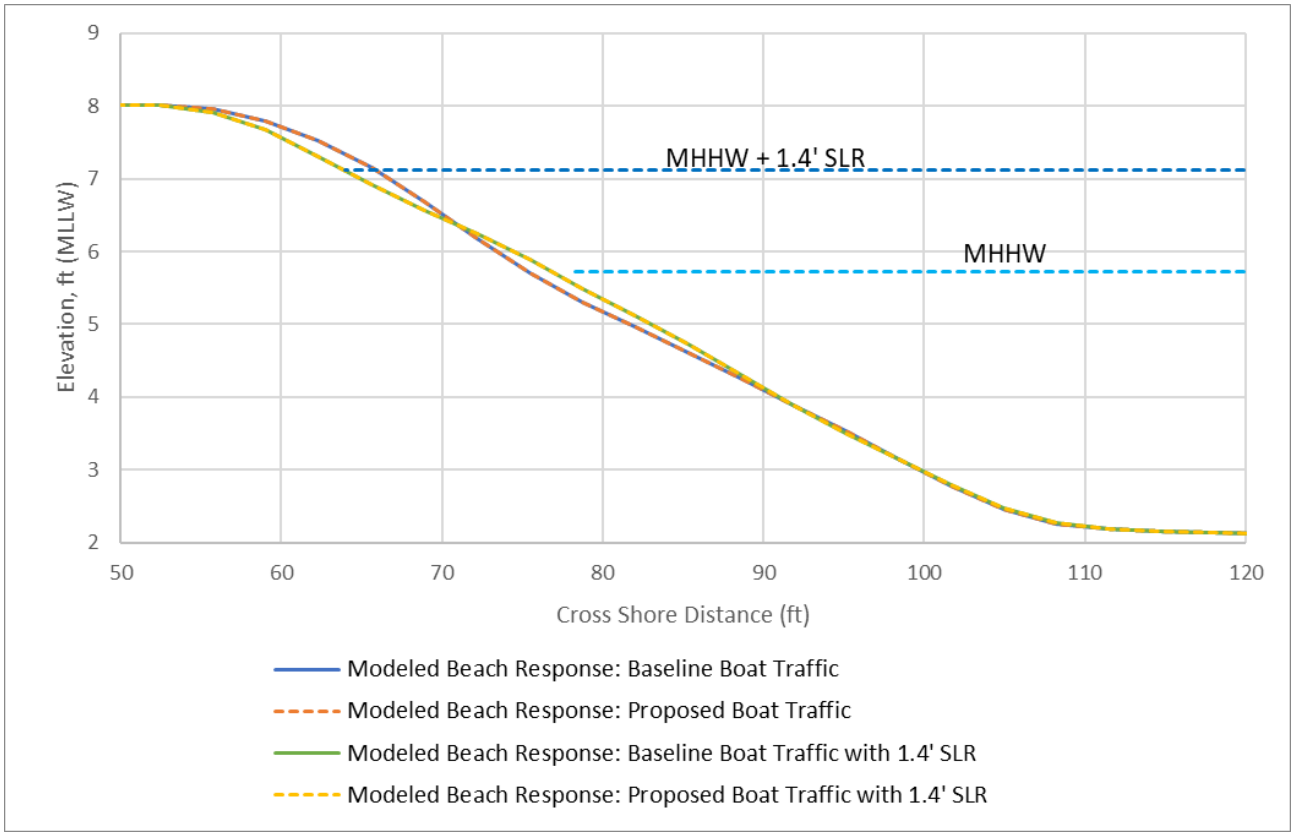


Figure 8-10. Modeled Shoreline Response at CFL Beach for all scenarios

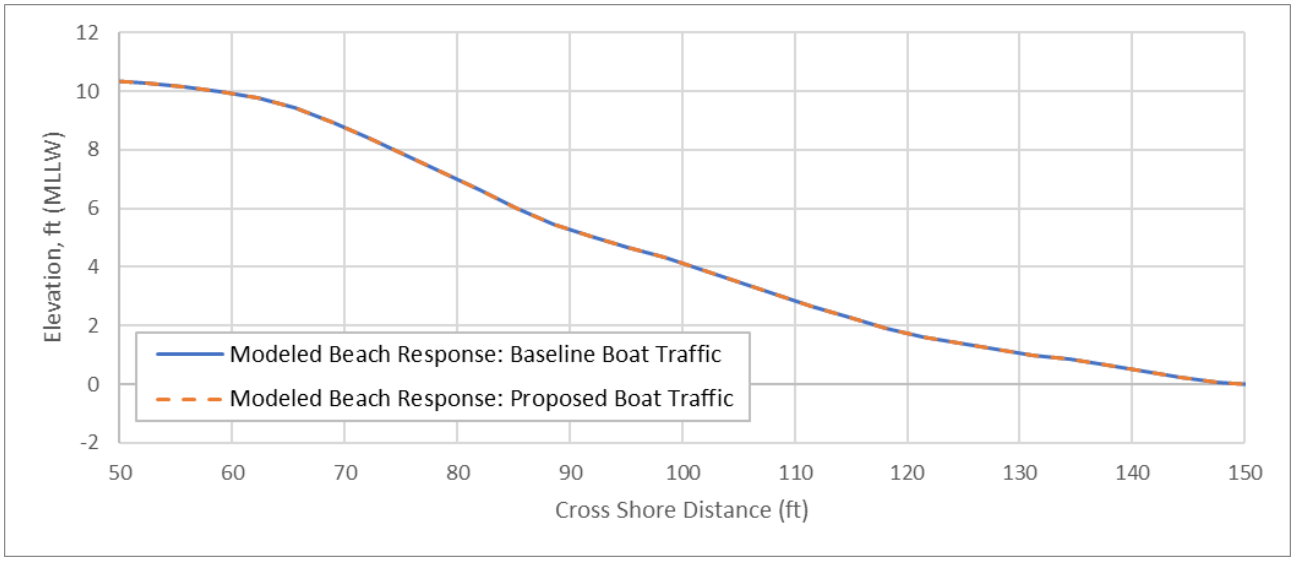


Figure 8-11. Modeled Shoreline Response: Baseline vs Proposed Boat Traffic Conditions for Silver Strand Beach.

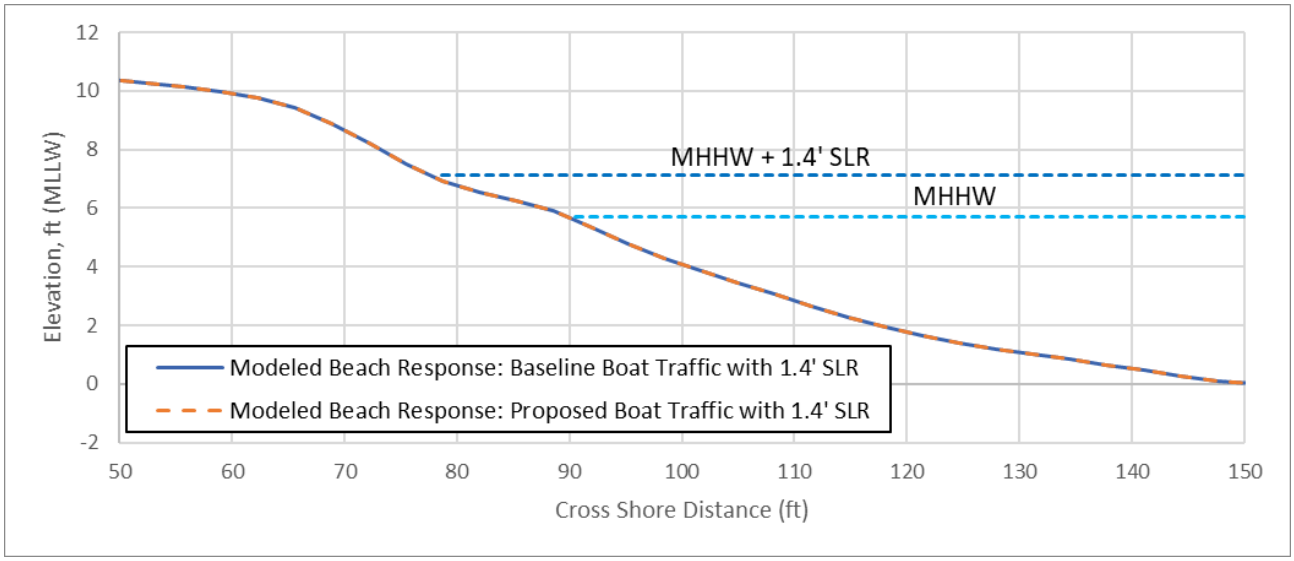


Figure 8-12. Modeled Shoreline Response: Baseline vs Proposed Boat Traffic Conditions with 1.4 feet SLR for Silver Strand Beach

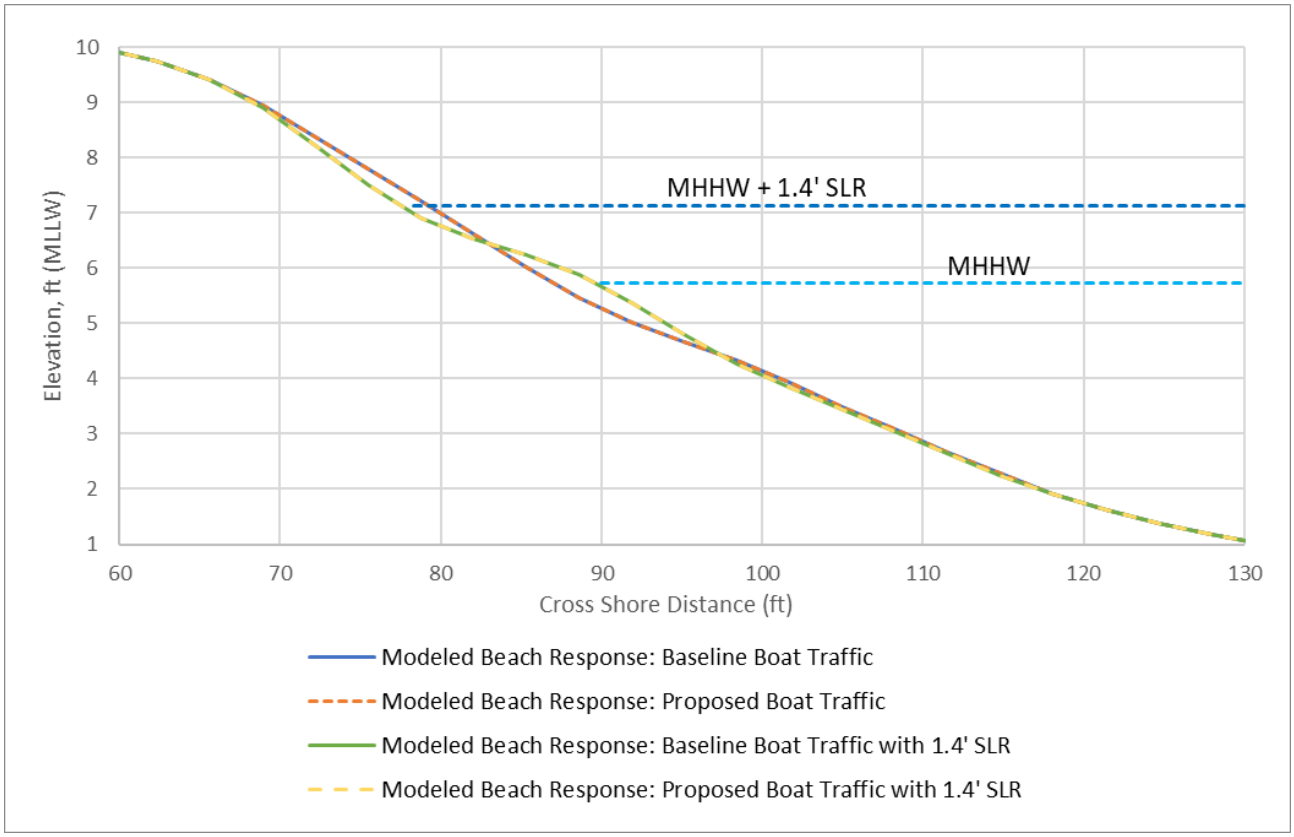


Figure 8-13. Modeled Shoreline Response at Silver Strand Beach for all scenarios

8.4 Summary

The predicted shoreline evolution for the baseline and proposed PMPU vessel traffic scenarios was examined by using the MHHW shoreline position as a proxy. The results of the shoreline modeling suggest that the predicted movement of the MHHW shoreline as a result in proposed PMPU vessel traffic is very slight at Kellogg Beach and Shoreline Park Beach, whereas there is no predicted movement of the MHHW shoreline at Coronado Ferry Landing Beach or Silver Strand Beach. At Kellogg Beach, the MHHW shoreline shifted seaward by 0.86 inches and 1.24 inches for the baseline to proposed scenarios, and baseline to proposed with SLR, respectively. The shoreline modeling results at Shoreline Park Beach exhibited the most change, predicting a change of -1.88 inches and -1.58 inches for the baseline to proposed scenarios, and baseline to proposed with SLR; respectively. These values are at such a scale that they are outside the confidence limits of the model results. Shoreline change at this scale would be undetectable with conventional survey grade equipment. Thus, based on the model results it is unlikely that the increase in boat wakes will result in measurable changes at the shoreline.

The lack of change predicted in the shoreline model results between the existing and proposed boat traffic scenarios may be attributed to the relatively low increase in boat traffic and the consistency of the hydrodynamic conditions. When compared to the baseline boat traffic conditions scenario, the percent increase in boat traffic from existing to proposed was less than one percent for Silver Strand Beach and Coronado Ferry Landing Beach, and about 19% for Kellogg and Shoreline Park Beaches.

8.5 Other Drivers of Shoreline Change

This study focused on the potential for shoreline change, as a result of the PMPU allowed for increase in boat slips that may translate to an increase in Bay wide boating activity. However, it should be noted there are many other factors that can affect and play a more significant role, in the evolution of the natural shoreline. Beaches are dynamic due to natural processes, such as wind waves, tidal currents, and rainfall (isolated erosion around outlets or discharges of sediment into the Bay), all of which can play a considerable role, as can waves generated from larger vessels in the Bay.

As an example that is unrelated to the PMPU effort, wind waves were estimated within the Bay from extreme winds in varying directions which found that a wave height of 2.3 feet (more than twice the height of the maximum wave height from a recreational vessel at the shoreline in this study) is possible near the Chula Vista Bayfront (Figure 8-14) (ESA, 2019).

It is also important to recognize that there is other maritime activity in the Bay, other than commercial fishing and recreational boating, that generate larger waves in the PMPU area. This includes naval and cargo/trade vessel activity utilize large vessels, such as aircraft carriers and cargo ships. In the Bay, aircraft carriers that be as long as 1,000 feet and cargo ships can be as long as 870 feet (Container ship *Lurline*). Traveling from the Pacific through the federal navigation channel in the Bay, these vessels pass by beaches, such as Kellogg Beach, Shoreline Park Beach and the Coronado Ferry Landing Beach. These vessels could produce waves larger and more energetic than the ones from recreational and commercial fishing vessels analyzed in this study.

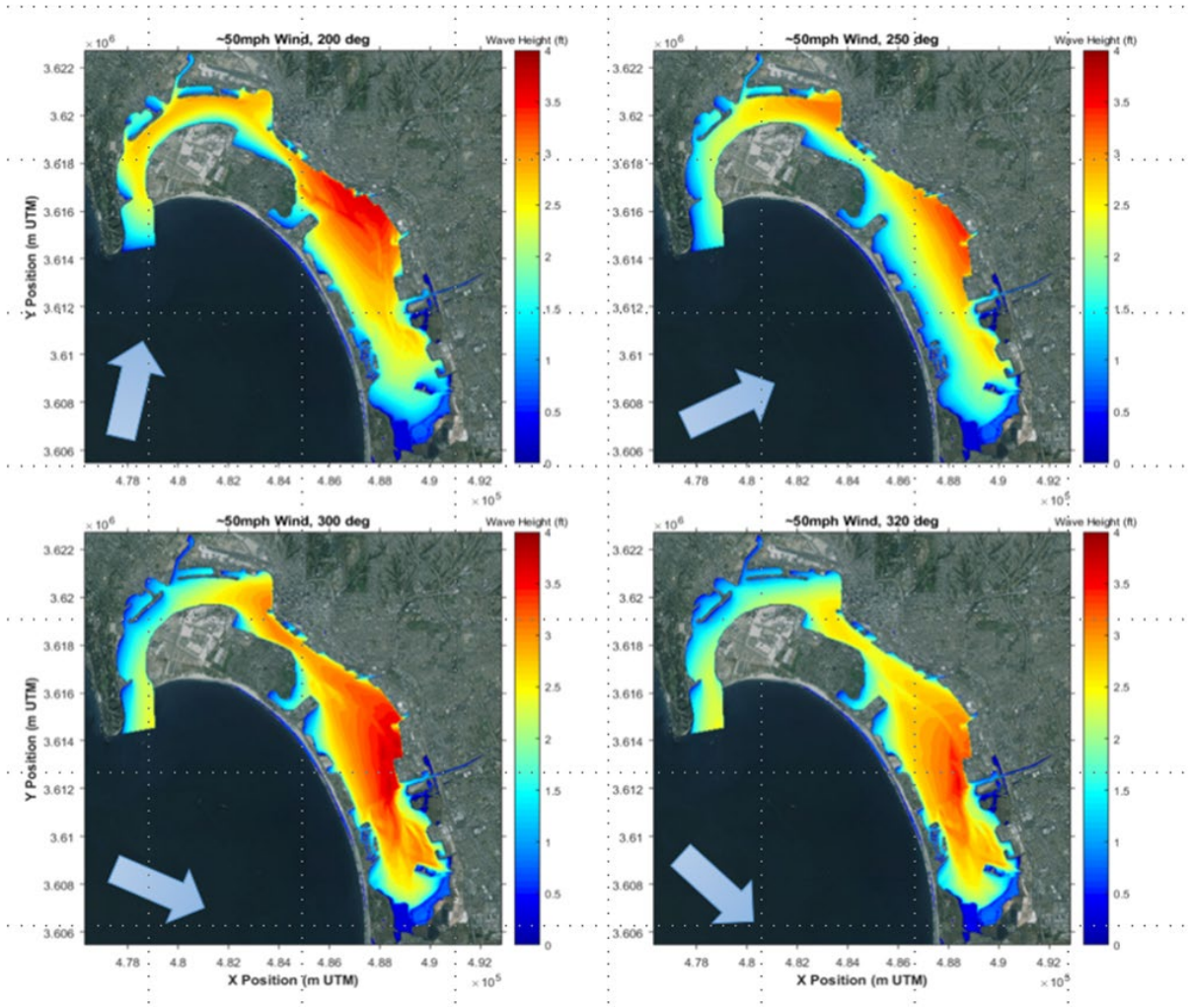


Figure 8-14. Modeled extreme wind waves in the San Diego Bay (ESA, 2019)

9. Eelgrass

Sediment eroded from study beaches has the potential to be transported offshore where eelgrass habitat may exist. This study examined the potential for sediment eroded from study beaches to be deposited offshore from the increase in vessel traffic from the PMPU. Eelgrass habitat impacts were examined using the bay-wide survey conducted in 2020 by Merkel & Associates and provided by the Port of San Diego. The 2020 eelgrass distribution in the Bay is shown below in Figure 9-1.

It is important to recognize that the 2020 survey data represents a point in time and eelgrass habitat changes on a seasonal basis. Variability and persistence of eelgrass habitat within the Bay was not investigated in this Study.

Figure 9-1. Eelgrass Bed distribution for San Diego Bay 2020 bay-wide survey (Merkel & Associates, 2020)

9.1 Impact Analysis

Eelgrass beds, as mapped, were identified along the shore-perpendicular beach profiles, for each of the study beaches. It should be noted that a horizontal buffer was not applied to the 2020 eelgrass beds. These mapped beds were presented relative to the modeled shoreline evolution profiles for the proposed boat traffic scenario with and without SLR to evaluate potential impacts. This section describes potential physical changes to eelgrass beds, in terms of vertical change along the profile within these habitat areas only, for each of the study beaches. This study did not evaluate other potential impacts to eelgrass beds from SLR such as increases in water depth.

9.1.1 Kellogg Beach

According to the 2020 Bay Eelgrass survey, there is no eelgrass habitat in the vicinity of Kellogg Beach. No further analysis was conducted at this location.

9.1.2 Shoreline Park Beach

Eelgrass distribution is shown below relative to the Shoreline Park Beach profile in Figure 9-2 and Figure 9-3. Based on the 2020 eelgrass data, eelgrass exists between approximate elevations of +0.5 feet to -10 feet MLLW. The landward extent of the 2020 eelgrass data is shown along the profile at a cross shore distance of approximately 126 feet. Modeled shoreline evolution for proposed conditions with and without SLR suggest the vertical change occurring through the 2020 eelgrass habitat to be less than 0.24 inches, and 0.26 inches for baseline to proposed, and baseline to proposed with SLR; respectively. There is negligible change below an elevation of approximately -3 feet. As described earlier, these values are at such a scale that they are outside the confidence limits of the model results and shoreline change at this scale would be undetectable with conventional survey grade equipment.

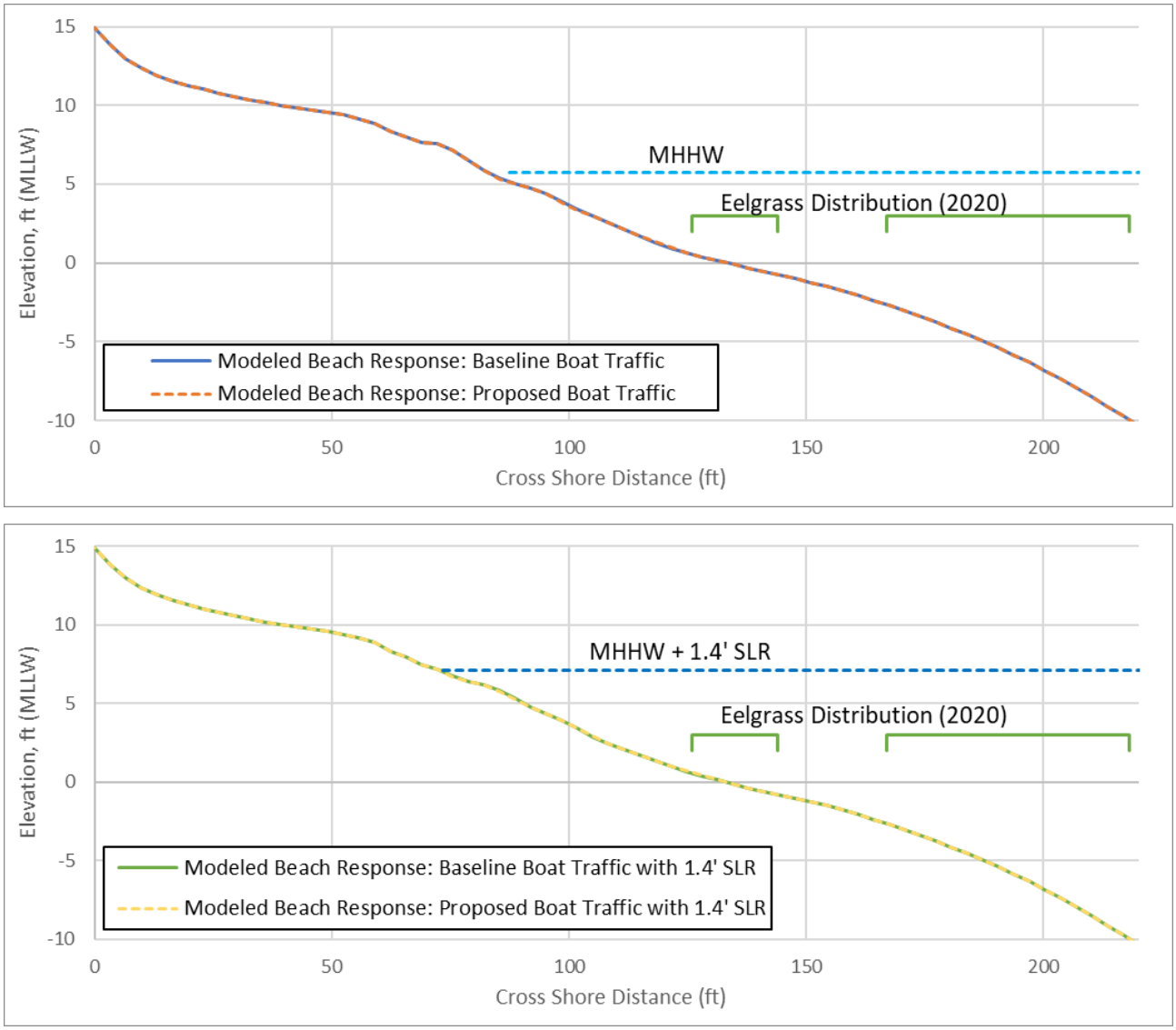


Figure 9-2. Eelgrass distribution for Shoreline Park Beach shown relative to the modeled shoreline response for the baseline and proposed boat traffic conditions (above); and the baseline and proposed boat traffic conditions with SLR (below)

Figure 9-3. Eelgrass distribution within the vicinity of Shoreline Park Beach

9.1.3 Coronado Ferry Landing Beach

Eelgrass distribution is shown below relative to the Coronado Ferry Landing Beach profile in Figure 9-4 and Figure 9-5. Eelgrass exists from an approximate elevation of -1 feet to -7 feet MLLW based on the 2020 survey data. Modeled shoreline evolution for proposed conditions with and without SLR suggest there is negligible vertical change occurring through the mapped eelgrass habitat for either scenarios.

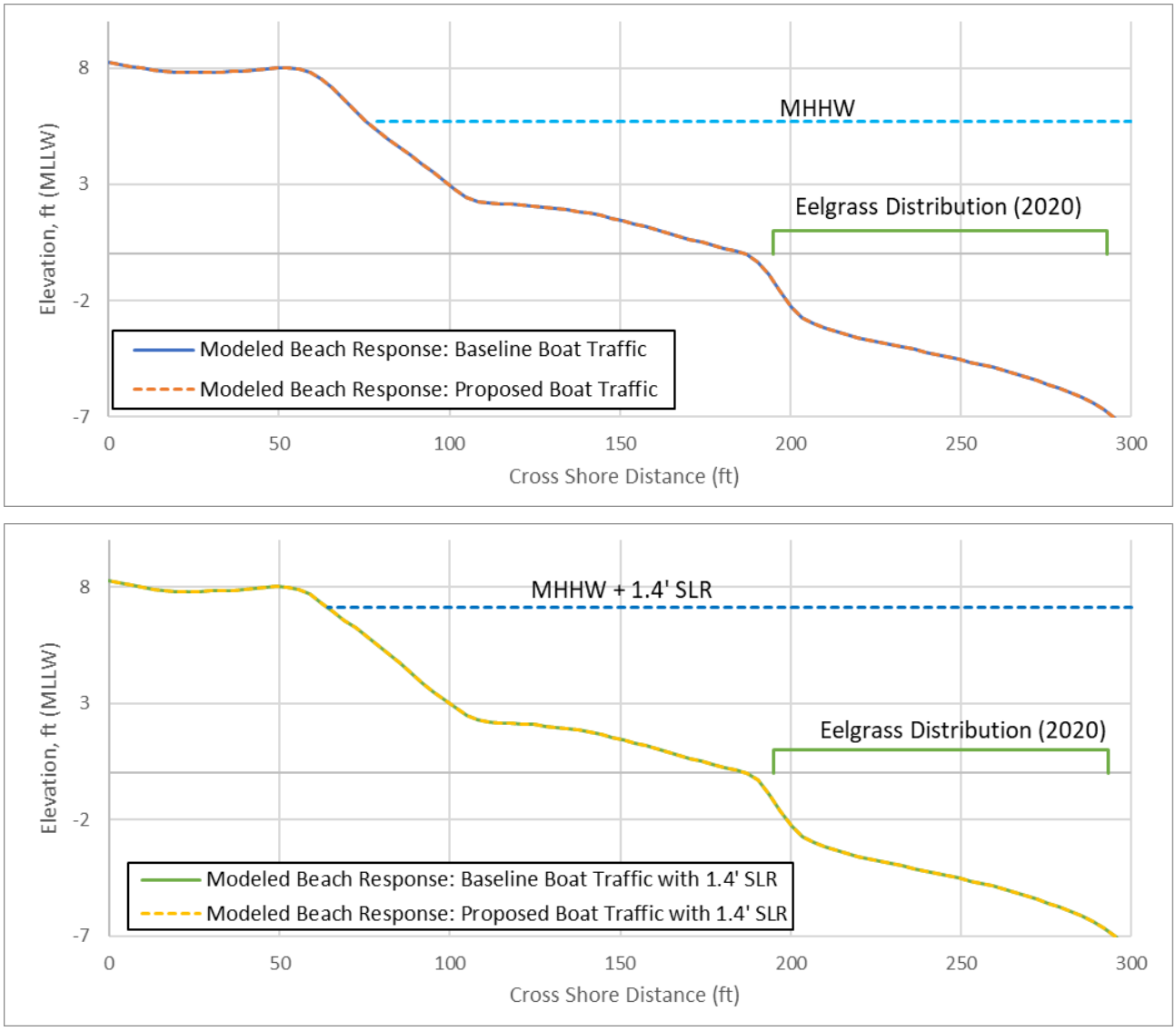


Figure 9-4. Eelgrass distribution for Coronado Ferry Landing Beach shown relative to the modeled shoreline response for the baseline and proposed boat traffic conditions (above); and the baseline and proposed boat traffic conditions with SLR (below)

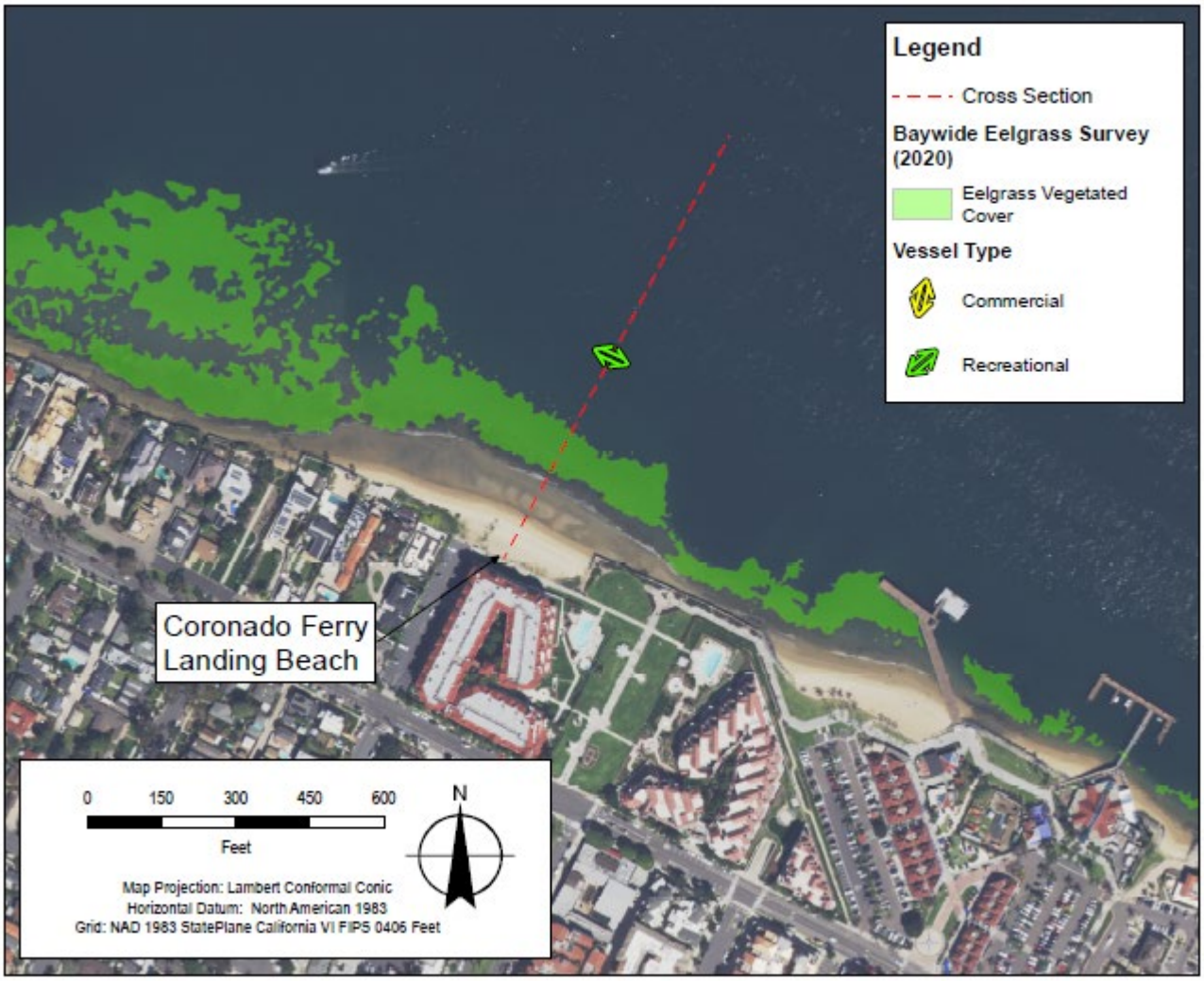


Figure 9-5. Eelgrass distribution within the vicinity of Ferry Landing Beach

9.1.4 Silver Strand Beach

Eelgrass distribution is shown below relative to the Silver Strand Beach profile in Figure 9-6 and Figure 9-7. Eelgrass exists between approximate elevations of +1 feet to -9 feet MLLW based on the 2020 data. The landward extent of eelgrass exists along the beach profile at a cross shore position of about 134 feet. Modeled shoreline evolution for proposed conditions with and without SLR suggest that there is no vertical change (0.00 inches) occurring through the 2020 eelgrass habitat.

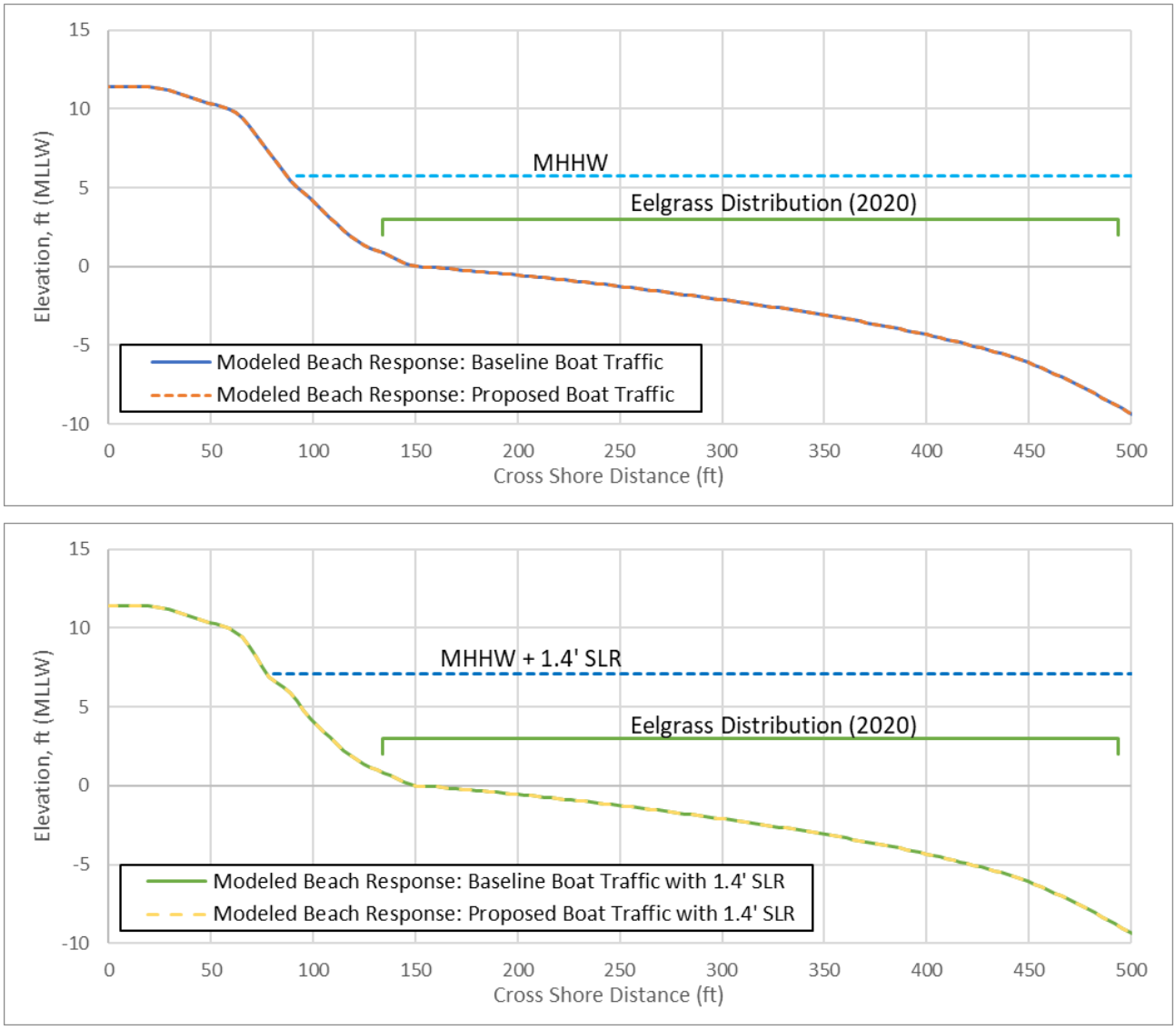


Figure 9-6. Eelgrass distribution for Silver Strand Beach shown relative to the modeled shoreline response for the baseline and proposed boat traffic conditions (above); and the baseline and proposed boat traffic conditions with SLR (below)

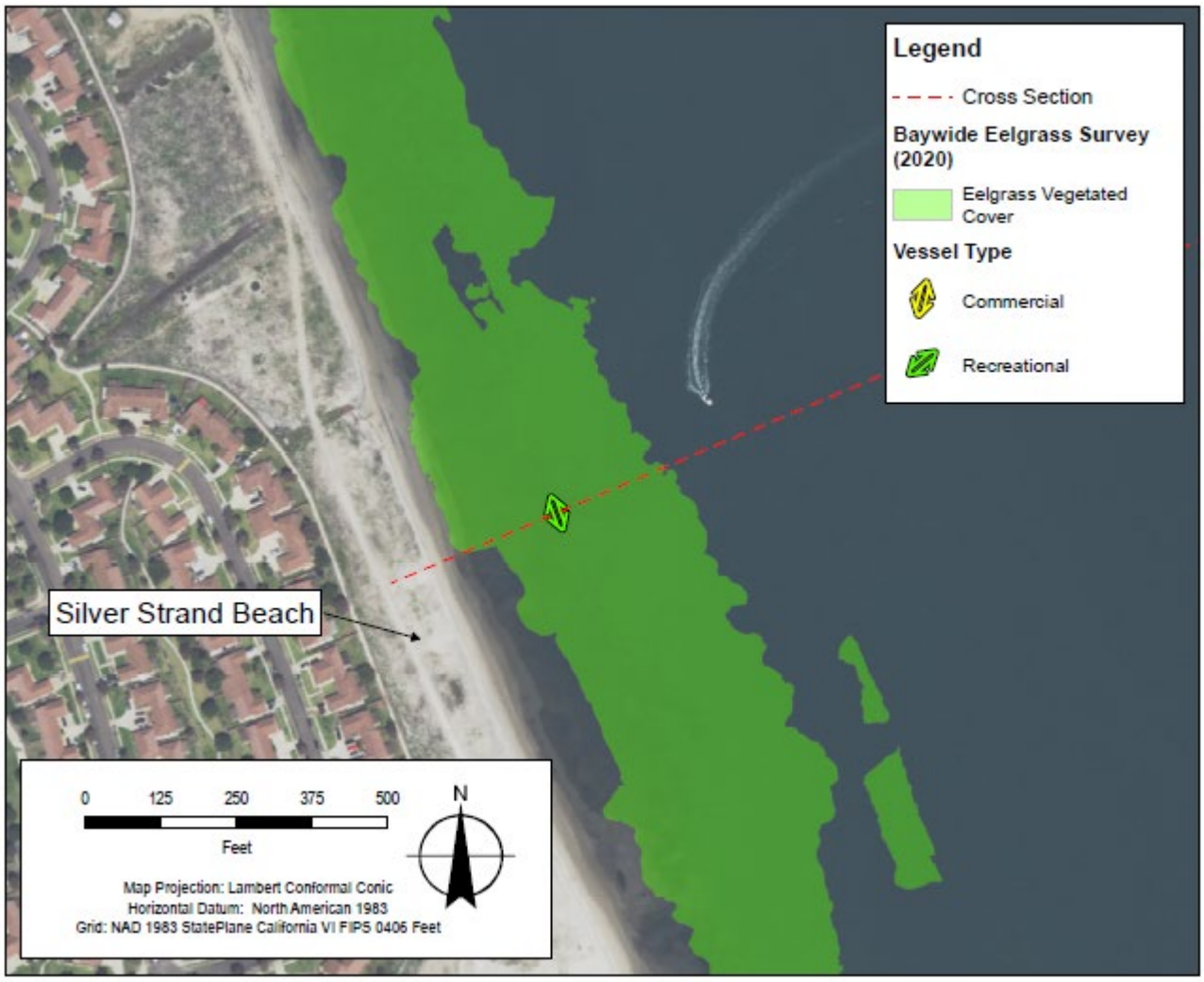


Figure 9-7. Eelgrass distribution within the vicinity of Silver Strand Beach

9.2 Summary

Eelgrass was evaluated comparing the shoreline modeling results with the cross-shore location of mapped eelgrass habitat. The 2020 bay wide eelgrass data shows that there is no eelgrass habitat at Kellogg Beach, though eelgrass habitat does front the beaches of Shoreline Park, Coronado Ferry Landing, and Silver Strand. The cross-shore position of the eelgrass was identified along the beach profile and used to examine the (modeled) vertical change along the beach profile between the vessel traffic with and without SLR scenarios. A comparison of the shoreline modeling results for the baseline to proposed, and baseline to proposed with SLR scenarios, suggests that there could potentially be very small vertical change occurring through the eelgrass habitat for Shoreline Park Beach. At Shoreline Park Beach, predicted vertical change was less than 0.24 inches, and 0.26 inches for baseline to proposed, and baseline to proposed with SLR; respectively, which is considered to be outside the confidence limits of the model results and shoreline change at this scale would be undetectable with conventional survey grade equipment. The results display negligible change below an elevation of approximately -3 feet at Shoreline Park Beach. At Coronado Ferry Landing Beach the predicted vertical change was negligible for the baseline to proposed (no SLR) scenario, and the results suggest no change for the baseline to proposed with SLR scenario. At Silver Strand Beach, the model results suggest that there is no vertical change occurring through the mapped eelgrass habitat for the baseline to proposed with and without SLR.

It should be noted that the biological effects/impacts of the physical beach profile changes and other potential changes due to SLR and climate change within these eelgrass beds is outside our expertise

and may require evaluation by a marine biologist or similarly credentialed individual with specialized knowledge in submerged aquatic vegetation.

10. Conclusion

This study examined the relationship between the proposed increase in recreational and commercial vessel trips associated with the PMPU buildout scenario and the potential for shoreline erosion from wakes generated from those trips along naturalized shoreline areas within the Port Planning Districts. The study also evaluates whether the potential natural shoreline changes would result in impacts to established eelgrass beds within subtidal waters in the bay. The potential for sea level rise (SLR) to result in exacerbation of beach profile change was also considered. A SLR scenario of 1.4 feet was selected to be consistent with the Port's SLR Vulnerability Assessment for year 2050, which is the full buildout horizon year for the PMPU.

Four vessel traffic scenarios were developed and modeled: a baseline scenario, a proposed PMPU vessel traffic scenario, a baseline scenario with 1.4 feet of SLR, and a proposed PMPU vessel traffic scenario with 1.4 feet of SLR. These scenarios were developed based on 2023 survey data provided by the Port of San Diego, with the purpose of providing a reasonable estimate of current and future vessel traffic within the San Diego Bay (Bay). These scenarios were used to analyze potential impacts at the four study beaches (i.e. Shoreline Park Beach, Kellogg Beach, Coronado Ferry Landing Beach, and Silver Strand Beach), which were identified as being representative of natural and potentially vulnerable shorelines within the Bay which receive varying vessel traffic.

A Vessel Wake Prediction Tool (VWPT) v3.13, as developed by the U.S. Army Corps of Engineers (USACE) was used to estimate the waves generated from recreational and commercial vessels. This data in combination with survey use patterns from proposed PMPU points of origin were then used to generate a wave climate for each study beach. A wave climate was estimated for a baseline vessel traffic scenario and proposed PMPU vessel traffic scenario. Shoreline evolution at the study beaches was then estimated using CSHORE, a USACE-derived one dimensional cross shore evolution model that predicts beach profile change based on a series of oceanographic inputs. The purpose of the shoreline modeling was to assess the potential effects of increased PMPU vessel traffic scenarios, and the waves they may produce, on sandy shorelines in the Bay.

A comparative analysis was undertaken to evaluate the beach change from a baseline vessel traffic condition to the proposed PMPU vessel traffic conditions. Predicted beach change from the baseline to proposed vessel traffic scenarios was quantified using the mean higher high water (MHHW) shoreline position as a proxy for beach width. At Kellogg Beach, the predicted shoreline evolution results display very small changes in beach width with increased vessel traffic – increase in beach width of 0.86 inch for the baseline to proposed condition and 1.24 inch from the baseline to proposed with SLR scenario. At Shoreline Park Beach, the predicted shoreline evolution results also display very small changes in beach width of -1.88 inch and -1.58 inch for the baseline to proposed, and baseline to proposed with SLR scenarios; respectively. No change, 0.00 inches of change was reported at the other two beaches (Coronado Ferry Landing and Silver Strand Beach) for both the proposed conditions and proposed conditions with SLR. These values are at such a scale that they are outside the confidence limits of the model results and shoreline change at this scale would be undetectable with conventional survey grade equipment. Thus, based on the model results it is unlikely that the increase in boat wakes will result in measurable changes at the shoreline.

An evaluation of the proposed PMPU vessel traffic increases on existing eelgrass beds within the Bay was conducted at all study beaches where eelgrass habitat exists. This included all study beaches except for Kellogg Beach. The cross-shore position of eelgrass was identified along each study beach profile based on a 2020 eelgrass survey conducted for the Port by Merkel & Associates. The potential for the beach profile to change along the mapped eelgrass beds was examined through a comparative analysis of the vertical profile change between the baseline to proposed PMPU vessel traffic scenario and the baseline to proposed PMPU vessel traffic scenario with SLR. The results suggests that there

could potentially be very small vertical change occurring through the eelgrass bed at Shoreline Park Beach as a result of increased vessel traffic. At Shoreline Park Beach, the predicted vertical change (i.e. negative indicating loss in elevation and positive values indicating gain in elevation) was -0.02 to 0.24 inches, and 0.00 to 0.26 inches for baseline to proposed, and baseline to proposed with SLR; respectively, which is considered to be outside the confidence limits of the model results and shoreline change at this scale would be undetectable with conventional survey grade equipment. The results display negligible change below an elevation of approximately -3 feet at Shoreline Park Beach. At Coronado Ferry Landing Beach, the predicted vertical change was negligible for the baseline to proposed (no SLR) scenario, and the results suggest no change (0.00 inch) for the baseline to proposed with SLR scenario. At Silver Strand Beach, the model results suggest that there is no vertical change (0.00 inch) occurring through the offshore eelgrass bed for the baseline to proposed with and without SLR.

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Attachment 1

Preparer Qualifications

Brian Leslie

Senior Coastal Scientist / Project Manager

Qualified: BS, Oceanography, Florida Institute of Technology, Melbourne, FL; Coastal Engineering Certificate, Old Dominion University, Norfolk, CA

Connected: ASCE Coasts, Oceans, Ports, and Rivers Institute; American Shore and Beach Preservation Association; Association of Environmental Professionals

Professional Summary: Brian serves as technical lead and project manager for projects that seek to understand or alleviate the impacts of coastal erosion and flooding. He is experienced in the planning and design of shoreline protection projects that aim to solve complex erosion and flooding issues and has recently been focused on the development and implementation of novel soft or living shoreline approaches. Brian's experience is exemplified in the recently constructed Cardiff Beach Living Shoreline Project and in the under development, West Trail Living Shoreline Project. He has 20 years of professional work experience within both the public and private sectors in the field coastal science and engineering.

USACE San Diego County Coastal Regional Sediment Management Plan, San Diego, California.

Mr. Leslie led a study to investigate existing USACE sediment management practices and regional sediment needs with the goal of identifying multi-benefit, beneficial reuse options. Prepared of a description of proposed action alternatives for the Programmatic EIS/EIR for the Coastal Regional Sediment Management Plan for the San Diego Region. Action alternatives included beach nourishment and sand retention alternatives for the region.

Tijuana Estuary Sediment Fate and Transport Science Study, City of Imperial Beach, CA.

Mr. Leslie managed a project whose goal was to beneficially reuse sediment from a coastal sediment detention basin for beach placement. The project piloted the use of materials fine-grained material for beach placement. A detailed scientific study, led by the USGS, was carried out to study the fate and impacts from the 60,000 cy placed on the beach.

USACE Humboldt Bay Coastal Regional Sediment Management Plan, Eureka, CA.

Mr. Leslie led a study to investigate existing USACE sediment management practices and regional sediment needs with the goal of identifying multi-benefit, beneficial reuse options. Beach nourishment, levee creation and marsh creation options were all recommended to supplement existing management activities.

USACE Galveston Bay Coastal Regional Sediment Management Plan, Galveston, CA.

Mr. Leslie led a study to investigate existing USACE sediment management practices and regional sediment needs with the goal of identifying multi-benefit, beneficial reuse options.

Coastal Erosion Study for Naval Amphibious Base, Naval Base San Diego, CA

Project Manager for the preparation of a feasibility study to resolve ongoing coastal flooding and erosion along 4,000 linear feet of oceanfront shoreline. Existing flood control practices were evaluated as well as historical shoreline performance to develop four alternative solutions. Applied coastal numerical models to evaluate shoreline planform evolution and downcoast impacts of the proposed solutions. Sea-level rise projections were evaluated in context to the design life of the proposed solutions. A long-term shoreline management strategy was presented based on the results of the study.

Coastal Erosion Study for Point Mugu, Naval Base Ventura County, Ventura, CA

Coastal Scientist that led an analysis of shoreline change within the Santa Barbara Littoral Cell. The study compiled historical aerial images, wave climate data, precipitation data, and dredging data from upcoast harbors to understand the coastal system and sedimentation patterns. The results of the study were used to design a shoreline protection plan for the Pt. Mugu installation.

Broad Beach Shoreline Protection Project | Malibu, CA

Conducted a GIS-based analysis of shoreline change for the entire Malibu Littoral Cell over a 70 year period through compilation of historic aerials. Beach width change rates were correlated with sand inputs and wave climate over various periods in order to understand the coastal system. The results of the analysis were used to design a beach nourishment program for a one mile shoreline reach within the littoral cell.

Coastal Erosion Study for Area 51, Naval Base Ventura County, Ventura, CA

Project Manager for the preparation of a feasibility study to resolve ongoing coastal flooding and erosion along 800 linear feet of navy shoreline in Point Hueneme Harbor. Historical shoreline evolution was analyzed from aerial

imagery to understand coastal processes and change in response to structural improvements of the harbor. Four feasible alternatives were developed that would reduce the base's vulnerability to erosion and flooding. Managed a coastal numerical modeling team to evaluate shoreline planform evolution for each of the options being considered. A recommended alternative was presented in the report based on analysis of performance, environmental impacts and costs.

Cabrillo Pavilion and Bathhouse Coastal Hazards Assessment, City of Santa Barbara, CA
Coastal scientist for the preparation of a project-scale coastal hazards assessment of a waterfront redevelopment project. Used a two-dimensional, numerical model to examine shoreline change and wave uprush over the next 100 years. The assessment was used to inform design of the redevelopment project and supporting facilities.

Regional Beach Sand Project II | SANDAG | San Diego County, CA
Coastal scientist for an approximately $25M project that nourished 10 beaches with one million cubic yards of sand from offshore sources in San Diego county. Contributed to shoreline evolution modeling, offshore investigation and environment approvals. The Project was constructed in 2012.

Oceanside Sand Retention Study | Oceanside, CA
Leading a study to evaluate the feasibility of various innovative sand retention options in the City. Leading a team to numerically model the performance of nourishment and sand retention options being considered. The study will rank alternatives against a multitude of criteria to aide in the selection of the preferred option.

Pillar Point Harbor West Trail Living Shoreline Project | El Granada, CA
Project Manager that led the planning, environmental approvals and final engineering design of a living shoreline to stabilize a chronically eroding shoreline and coastal trail that connects the community and emergency vehicles to Mavericks Beach. Led a numerical modeling team to test the fate of the proposed beach and dune system.

Cardiff State Beach Living Shoreline Project | Encinitas, CA.

Project Manager who acquired funding for and led the planning and design of a living shoreline project for the open coast. The project consists of a buried revetment and dune that serve to protect a vulnerable highway from existing and projected future coastal hazards. The project beneficially reused sand from a large-scale lagoon restoration to nourish the beach and build and maintain the dune over time.

USACE Oceanside Shoreline Feasibility Study, Oceanside, CA.
Mr. Leslie led an offshore investigation to determine the compatibility of a borrow site for large beach nourishment project in the City. Both the offshore and onshore (beach) were characterized for this study. Prepared a SAP, SAPR and performed the offshore sampling. Presented the results of the sampling to the SC-DMMT.

Naval Weapons Station Seal Beach Ammunition Pier and Turning Basin Project, NAVFAC Southwest, Seal Beach, CA.
Mr. Leslie was responsible managing environmental components of the Project, such as incorporating environment and dredge conditions into the construction documents being prepared internally. Mr. Leslie analyzed available sediment investigation data relative to placement options being considered (i.e. eelgrass habitat areas, onsite reuse, beach nourishment and offshore) and scoped additional sediment investigations.

Centerville Roadway Improvements Sea Level Rise Assessment and Revetment Design Report, Eureka, CA.

Task lead to prepare an assessment of existing and future coastal hazards to proposed roadway improvements to Centerville Road. The road is located adjacent to Centerville Beach, which is exposed to large waves from the open coast. Future scour depths and runup and overtopping elevations were estimated based on the results on a variety of coastal models. The proposed revetment rock size, toe and crest elevations were provided based on the findings of the study.

Petaluma Wastewater Treatment Plan Sea Level Rise Vulnerability Assessment, San Francisco, CA

Task lead to prepare an assessment of existing and future coastal hazards at the Petaluma wastewater treatment facility. Fluvial hazards were assessed assuming various downstream boundary conditions (tides plus sea level rise) to understand future water surface elevations. Water levels were compared to facility asset elevations.

Doolittle Drive Improvements Sea Level Rise Assessment San Francisco, CA

Task lead for the assessment of existing and projected future coastal hazards to roadway, pedestrian and boat access improvements along Doolittle Drive. Extreme still and dynamic water levels were calculated and impacts assessed in terms of risks associated with inundation and flooding frequencies to these improvements.

Braden Froble

Coastal Scientist

Location

San Diego, CA

Experience

3 years

Qualifications/Accreditations

– BS, Oceanography Major & Geology Minor, University of North Carolina, Wilmington, NC, 2019
– Certified Protected Species Observer, 2020
– Maryland Department of Natural Resources Boaters License, 2015 - Current
– Professional Association of Diving Instructors Scuba Certified, 2015 - Current

Key technical skills

– Geographic Information System (GIS)
– Metocean Data Analysis
– Coastal Hazards & Sea Level Rise Vulnerability
– Numerical Modeling

Memberships

– American Shore & Beach Preservation Association

Relevant experience summary

Braden Froble is a Coastal Scientist with over 3 years of experience for GHD's San Diego office. Braden is a technical resource, routinely performing a variety of coastal analysis that support the development of coastal resiliency projects related to shoreline geomorphology, flooding and sea level rise, and wetland restoration. Braden's technical expertise includes metocean data and coastal engineering analysis, site characterization, GIS, numerical shoreline and hydrodynamic modeling and coastal design.

Special Project Saltwater Fouling Root Cause Investigation Project

Coastal Scientist
Naval Facilities Engineering Systems Command (NAVFAC) | San Diego, CA | 2022

Developed and validated a Two-Dimensional (2D) DHI MIKE Flow Model FM for the San Diego Bay to support the investigation of potential causes for CVN overheating. The model was used to simulate hydrodynamic conditions at the Project Site during specific timeframes where CVN overheating was documented. Additional responsibilities included environmental data gathering and analysis, field investigations, and reporting.

Bayshore Bikeway Resiliency Project

Coastal Scientist
City of Imperial Beach | Imperial Beach, CA | 2021

Served as Coastal Scientist to support the development of a feasibility study of a living levee and stormwater improvements along a segment of the Bayshore Bikeway to provide coastal hazard resiliency for the City. The study evaluated coastal setting and hazards, infrastructure, hydrology, biological constraints, and various other opportunities / constraints. Concepts were modeled with the Sea Level Affecting Marshes Model (SLAMM) to understand wetland conversion and habitat transgression with sea level rise.

Preliminary Engineering Evaluation and Feasibility for Beach Sand Replenishment and Retention Device Project

Coastal Scientist
City of Oceanside, CA | Oceanside, CA | 2020

Served as a Coastal Scientist supporting a comprehensive feasibility study to evaluate various innovative sand retention/replenishment alternatives in the City. Several analyses were undertaken to support which included coastal setting characterization, a comprehensive literature review of existing studies and projects, and a GIS based shoreline analysis using aerial imagery to support the validation of a numerical shoreline model, which was used to evaluate the performance of each sand retention/replenishment

concept. Other responsibilities included preparation of the feasibility study report and concept drawings.

Chollas Creek Quaywall Upgrades

Coastal Scientist
Naval Facilities Engineering Systems Command (NAVFAC) | San Diego, CA | 2020

Coastal Scientist for the preparation of a Metocean and Environmental Factors Report. This included a Sea Level Rise Analysis to determine an adequate elevation for the quay wall. The Report included oceanographic data analysis for the San Diego Bay to determine wave characteristics, current velocities, and water level exceedance probabilities with sea level rise.

Pillar Point Harbor West Trail Living Shoreline

Coastal Scientist
County of San Mateo | Pillar Point, CA | 2020

Assisted in various analysis and studies which support the design and construction of the West trail Living Shoreline, a nature-based solution to stabilize a stretch of chronically eroding beach. Responsibilities included the preparation of a Sampling Analysis Plan and Report, characterization of sediment samples, creation of ecological constraints, and a dredge footprint and GIS-based shoreline analysis to support the long-term changes associated to dredging potential borrow sites.

Cardiff Beach Living Shoreline Monitoring

Coastal Scientist
City of Encinitas | Encinitas, CA | 2020 – *Ongoing*

Serving as a Coastal Scientist for the ongoing bi-annual monitoring of the Cardiff Living Shoreline, an artificial dune system with buried revetment to protect a vulnerable highway from existing and future coastal hazards. Monitoring activities include geomorphic analysis of the dune and beach volume using Unmanned Aerial Vehicle (UAV) data collected by UCLA, maintenance recommendations, oceanographic and meteorological data analysis, and extreme event assessments. Other responsibilities include the preparation of a Construction Closeout Report.

Preserving Public Access to Torrey Pines State Nature Reserve

Los Peñasquitos Lagoon Foundation
San Diego | San Diego, CA | 2021

Assisted the development of feasibility study that developed alternatives for managed retreat and redesign of the Torrey Pines North Lot using natured based adaptation strategies. Responsibilities included site characterization and metocean data analysis, sea level rise and flood analysis, development of alternatives reporting.

Carlsbad Desalination Plant: Proposed Intake Modifications

Coastal Scientist
Poseidon | San Diego, CA | 2022

Served as Coastal Scientist for the preparation of a coastal hazards and sea level rise analysis for the Carlsbad Desalination Plant. The analysis guided design elevations of proposed intake modifications and supported permit acquisition. The analysis included shoreline erosion, coastal flooding and sea level rise, wave runup, fluvial flooding, and tsunamis.

South Carlsbad Climate Adaptation Project

Coastal Scientist
City of Carlsbad | San Diego, CA | 2020

Served as Coastal Scientist for the preparation of a coastal hazards memorandum to be used as guidance for the Carlsbad Boulevard realignment design alternatives. Coastal hazards included bluff retreat, shoreline retreat and flooding. Hazard zones were developed in GIS for various sea level rise scenarios and guided placement of project features. Deployed and managed water level monitoring at two sites in Encinas Creek to aid the habitat restoration concepts. Additionally, assisted a benefit-cost analysis for the project area which included a return period analysis for historic wave and water level events that resulted in damage to South Carlsbad Boulevard.

I-5 Opportunistic Beach Fill Project

Coastal Scientist
City of Encinitas | Encinitas, CA | 2022

The project placed 68K CY of opportunistic material on Cardiff and Moonlight State Beaches in Encinitas. Served as a construction monitor during beach placement activities to ensure compliance with permits and document progress. Responsibilities included permit compliance, sediment sampling, and developing a post-construction monitoring report to submit to agencies.

Centerville Road Rock Slope Protection

Coastal Scientist
County of Humboldt | Ferndale, CA | 2020

Served as Coastal Scientist for the preparation of a Coastal Hazards Assessment and Rock Shoreline Protection Technical Design Memorandum. Responsibilities included a GIS based shoreline analysis using historic aerials to estimate shoreline retreat with sea level rise and a return period analysis for historic wave and water level events that resulted in damage to the project site.

Ellis Creek Water Recycling Facility Outfall

Coastal Scientist
County of Sonoma | Petaluma, CA | 2020

Coastal Scientist for the preparation of a sea level rise analysis memorandum for the Ellis Creek Water Recycling Facility. This analysis was to inform the re-design of the outfall hydraulics. Site specific flood mapping was undertaken using GIS for sea level rise scenarios coupled with a various water levels.

East Bonita Cove Sea Level Rise Assessment

Coastal Scientist
Schmidt Design Group | San Diego, CA | 2020

Served as Coastal Scientist for the preparation of a sea level rise assessment for a playground improvement project on a peninsula in located in Mission Bay, San Diego. This analysis was to inform the project design and support permitting efforts. Site specific flood mapping was undertaken in GIS to examine various water level scenarios with future sea level rise projections.

Little River Trail

Coastal Scientist
Redwood Community Action Agency | Humboldt County, CA | 2020

Developed a sea level rise vulnerability assessment and adaptation Study for the proposed Little River Trail alignment. The report examined sea level rise and relevant coastal hazards, extreme still water elevations, extreme total water elevations, and potential fluvial water levels. The Study provided coastal engineering criteria to inform the next phase of design.

Capistrano Beach Nourishment Route Preliminary Feasibility Study

Coastal Scientist
County of Orange | Capistrano Beach, CA | 2020

Served as Coastal Scientist for the preparation of a memorandum to evaluate the compatibility and feasibility of inland sand sources for beach nourishment. Responsible for characterizing the coastal setting of the project site, obtaining material / transportation costs of past projects, and discussing potential opportunities with quarries. Quarries were evaluated based on compatibility of material, transportation methods (truck and rail), and associated costs. Various offloading methods were considered, including conceptual rail spurs adjacent to the project site.

Career history

2020 - present	GHD, Scientist

ghd.com

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