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February 2026
Port of Hueneme North Terminal Berth Deepening and Wharf 2
Improvements Project



Initial Study/Mitigated Negative Declaration

Prepared for Oxnard Harbor District

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Prepared for

Oxnard Harbor District
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Port Hueneme, California 93041

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ABBREVIATIONS

AB	Assembly Bill
AQMP	Air Quality Management Plan
BMP	best management practice
CAA	Clean Air Act
CAD	Confined Aquatic Disposal
CAL FIRE	California Department of Forestry and Fire Protection
CAL/OSHA	California Division of Occupational Safety and Health
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCC	California Coastal Commission
CCR	California Code of Regulations
CBC	California Building Standards Code
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFC	chlorofluorocarbon
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CGS	California Geological Survey
CH ₄	methane
CHRIS	California Historical Resources Information System
City	City of Port Hueneme
CNDDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	CO ₂ equivalence
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CSLC	California State Lands Commission
cy	cubic yard
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel

District	Oxnard Harbor District
DMMT	Dredged Material Management Team
DPM	diesel particulate matter
EFH	Essential Fish Habitat
EIR	environmental impact report
EOP	Emergency Operations Plan
FEMA	Federal Emergency Management Agency
FESA	federal Endangered Species Act
FHSZ	Fire Hazard Severity Zone
FRA	Federal Responsibility Area
FTA	Federal Transit Administration
GHG	greenhouse gas
GWP	global warming potential
HCHC	hydrochlorofluorocarbon
HFC	hydrofluorocarbon
HP	horsepower
HSC	California Health and Safety Code
in/sec	inches per second
IPaC	Information for Planning and Consultation
IS/MND	Initial Study/Mitigated Negative Declaration
LARWQCB	Los Angeles Regional Water Quality Control Board
LCP	Local Coastal Program
L _{dn}	day/night average sound level
L _{eq}	equivalent sound level
L _n	statistical sound levels
L _{max}	maximum sound level
LRA	Local Responsibility Area
MBTA	Migratory Bird Treaty Act
MLLW	mean lower low water
MMPA	Marine Mammal Protection Act
MPO	metropolitan planning organization
MRZ	mineral resource zone
MT/year	metric tons per year
N ₂ O	nitrous oxide
NBVC	Naval Base Ventura County
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration

NO _x	nitrogen oxide
NRHP	National Register of Historic Places
OPR	Governor's Office of Planning and Research
OSHA	Occupational Safety and Health Administration
PACED	Port Action, Climate, and Environment Development
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
PHMC	Port Hueneme Municipal Code
PM	particulate matter
PM _{2.5}	particulate matter 2.5 microns or smaller in diameter
PM ₁₀	particulate matter 10 microns or smaller in diameter
Port	Port of Hueneme
PPV	peak particle velocity
PRC	Public Resources Code
proposed project	Port of Hueneme North Terminal Berth Deepening and Wharf 2 Improvements Project
ROG	reactive organic gas
ro-ro	roll-on/roll-off
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCCAB	South Central Coast Air Basin
SGMA	Sustainable Groundwater Management Act
SHMA	Seismic Hazards Mapping Act
SO ₂	sulfur dioxide
SRA	State Responsibility Area
SSC	state species of special concern
State	State of California
US-101	U.S. Highway 101
USACE	U.S. Army Corps of Engineers
USC	United States Code
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
VCAPCD	Ventura County Air Pollution Control District
VMT	vehicle miles traveled
WDR	Waste Discharge Requirements

1 Introduction

1.1 California Environmental Quality Act Process

This Initial Study/Mitigated Negative Declaration (IS/MND) was prepared by the Oxnard Harbor District (District) to evaluate the potential environmental impacts of the Port of Hueneme (Port) North Terminal Berth Deepening and Wharf 2 Improvements Project (proposed project) under the California Environmental Quality Act (CEQA; Public Resources Code [PRC] 21000 et seq.) and the CEQA Guidelines (California Code of Regulations [CCR] Title 14, Section 15000 et seq.).

As part of the proposed project, the District would deepen Berths 4 and 5, adjacent to Wharf 2, and the southern end of Wharf 3 where it joins Wharf 2 and would make improvements to Wharf 2 as part of an overall effort to modernize and deepen the Port's North Terminal. Dredged material from deepening activities would be placed at one of the following locations: as beach nourishment along Hueneme Beach or in the nearshore environment at Hueneme Beach; in an unconfined aquatic trench excavated in Channel A; or in an already-permitted Confined Aquatic Disposal (CAD) site within the harbor.

CEQA, enacted by the California Legislature in 1970, requires public agency decision-makers to consider the environmental effects of their actions. One of the main objectives of CEQA is to disclose the potential environmental effects of proposed activities to the public and decision-makers. CEQA requires that the potential environmental effects of a project be evaluated prior to implementation. This IS/MND includes a discussion of the proposed project's impacts to the existing environment, including the identification of avoidance, minimization, and mitigation measures for potentially significant impacts.

The District has directed the preparation of an environmental document that complies with CEQA and will consider the information in this document when determining whether to approve the proposed project. The preparation of this Initial Study is guided by Section 15063 of the CEQA Guidelines, whereas Sections 15070 through 15075 guide the process for the preparation of the Negative or Mitigated Negative Declaration. Where appropriate and supportive of an understanding of the issues, reference will be made to the statute, the CEQA Guidelines, or appropriate case law.

This IS/MND meets CEQA content requirements by including a project description; descriptions of the environmental setting, potential environmental impacts, and mitigation measures for any potentially significant impacts; and a discussion of the proposed project's consistency with plans and policies.

1.2 Lead, Responsible, and Trustee Agencies

The CEQA Guidelines identify "the lead agency as the public agency which has the principal responsibility for carrying out or approving a project" (14 CCR Section 15367). The District is the

CEQA lead agency for the proposed project and has the primary responsibility for carrying out the proposed project.

Projects undertaken may also require subsequent oversight, approvals, or permits from other public agencies. Other such agencies are referred to as responsible agencies and trustee agencies. Pursuant to CEQA Guidelines Sections 15381 and 15386, as amended, responsible and trustee agencies are defined as follows:

1. A **responsible agency** is “a public agency which proposes to carry out or approve a project, for which a Lead Agency is preparing or has prepared an EIR or Negative Declaration. For the purposes of CEQA, the term ‘Responsible Agency’ includes all public agencies other than the Lead Agency which have discretionary approval authority over the project” (CEQA Guidelines Section 15381).
2. A **trustee agency** is “a state agency having jurisdiction by law over natural resources affected by a project which are held in trust for the people of the State of California” (CEQA Guidelines Section 15386). Trustee agencies have jurisdiction over natural resources held in trust for the people of California but do not have legal authority over approving or carrying out a project.

Table 1 summarizes the anticipated relevant regulatory agencies, their jurisdiction (i.e., trustee and/or responsible agency), and their statutory authority as related to the proposed project. The jurisdiction of these agencies will be confirmed through subsequent coordination.

Table 1
Regulatory Agencies and Authority

Regulatory Agency	Jurisdiction	Statutory Authority/Implementing Regulations
California Department of Fish and Wildlife	Trustee Agency	• CDFW reviews and submits recommendations in accordance with CEQA.
California State Lands Commission (CSLC)	Trustee agency Responsible agency	• The CSLC reviews and approves projects on sovereign lands under its jurisdiction and requires lease authorization for use of State of California (State)-owned tidal land. • The dredge material placement may require a Tidelands Lease Agreement depending on placement site.
California Coastal Commission (CCC)	Responsible agency	• The CCC reviews projects in the coastal zone as mandated by the California Coastal Act. • The dredge material placement may require a Coastal Development Permit and a Coastal Zone Management Act consistency certification depending on placement site.

Regulatory Agency	Jurisdiction	Statutory Authority/Implementing Regulations
Los Angeles Regional Water Quality Control Board (RWQCB)	Responsible agency	- The Los Angeles RWQCB reviews projects for authorization under the Porter-Cologne Water Quality Control Act and Clean Water Act (CWA) Section 401 Water Quality Certification. - The proposed project is expected to require a CWA Section 401 Water Quality Certification and Porter-Cologne Water Quality Control Act Waste Discharge Requirements (WDR).
U.S. Army Corps of Engineers (USACE), Los Angeles District	Responsible agency	- The USACE reviews and authorizes projects that involve work in navigable waters or the discharge of dredge or fill material into waters of the United States. - The proposed project is expected to require a CWA Section 404 and Rivers and Harbors Act Section 10 Individual Permit due to the placement of fill material in waters of the United States and for work in navigable waters.
City of Port Hueneme (City)	Responsible agency	The City has development review and permit authority within the District.

1.3 Public Participation, Consultation, and Coordination

Public participation is an integral part of the CEQA process. Public participation facilitates two-way communication between the public and the lead agency (the District) decision-makers, ensuring that public concerns and input are considered in the final decision. The District's public participation process ensures that interested persons are informed about discretionary decisions and have the opportunity to provide input. The District also consults with public agencies in a variety of ways when developing CEQA documents, including direct agency outreach and distribution of documents.

This draft IS/MND will be posted on the District/Port CEQA website at:

<https://www.portofhueneme.org/ceqa-wharf2-dredging-project/>.

1.3.1 *Regulatory Guidance Related to Public Outreach and Coordination*

1.3.1.1 **Assembly Bill 52**

Assembly Bill (AB) 52 became effective on July 1, 2015, requiring lead agencies to consider the effects of projects on Tribal cultural resources and to conduct notification and consultation, as requested, with federally and non-federally recognized Native American Tribes early in the environmental review process.

AB 52 also requires notification of Tribes that have formally requested notice from the lead agency. Seven Native American Tribes, including Barbareño/Ventureño Band of Mission Indians, Chumash Council of Bakersfield, Coastal Band of the Chumash Nation, Northern Chumash Tribal Council,

San Luis Obispo County Chumash Council, yak tit̕u tit̕u yak tiłhini – Northern Chumash Tribe, and the Santa Ynez Band of Chumash Indians, have requested to be notified of CEQA documents prepared by the District. The District notified these Tribes on January 29, 2026.

1.4 Incorporation by Reference

As permitted by Section 15150 of the CEQA Guidelines, CEQA lead agencies may reference all or portions of another document that is a matter of public record or is generally available to the public. Information from documents that have been incorporated by reference is briefly summarized in the appropriate sections of this IS/MND, along with a description of how the public may obtain and review these documents.

The documents incorporated by reference in this IS/MND are summarized in Sections 1.4.1 through 1.4.3. Documents that are incorporated by reference are available for review at the internet links provided in these sections.

1.4.1 *The Port of Hueneme 2020 Strategic Plan*

The Port of Hueneme 2020 Strategic Plan (District 2015a; available at:

[https://www.portofhueneme.org/wp-](https://www.portofhueneme.org/wp-content/uploads/2015/06/Port_of_Hueneme_2020_Strategic_Plan_FINAL.pdf)

[content/uploads/2015/06/Port of Hueneme 2020 Strategic Plan FINAL.pdf](https://www.portofhueneme.org/wp-content/uploads/2015/06/Port_of_Hueneme_2020_Strategic_Plan_FINAL.pdf)) is appropriate to incorporate by reference because the Port's berth deepening program and structural improvements are outlined in the 2020 Strategic Plan. The 2020 Strategic Plan calls for modernizing the Port's wharf infrastructure to complement the USACE channel deepening efforts that have established a 40-foot-deep harbor. The 2020 Strategic Plan was adopted by the Board of Harbor Commissioners in October 2015.

1.4.2 *The Port of Hueneme Port Action, Climate, and Environment Development Project*

The Port Action, Climate, and Environment Development (PACED) Project is the Port's overarching strategic modernization plan, which consists of multiple project components aimed at improving the Port's economic viability, environmental performance, and operational sustainability (District 2026). The 15 subprojects that make up the PACED Project address infrastructure upgrades, berth dredging, safety, reduced emissions, and efficiency improvements (District 2026).

1.4.3 *The Port of Hueneme Environmental Management Framework*

The Environmental Management Framework Strategic Implementation Plans (Port 2013) help guide the integration of sustainability into the Port's day-to-day operations and set strategic action plans in the core areas of Air Quality Management, Marine Resources Management, Soil and Sediment Management, Water Quality Management, Energy Management, and Climate Change Adaptation.

2 Project Description

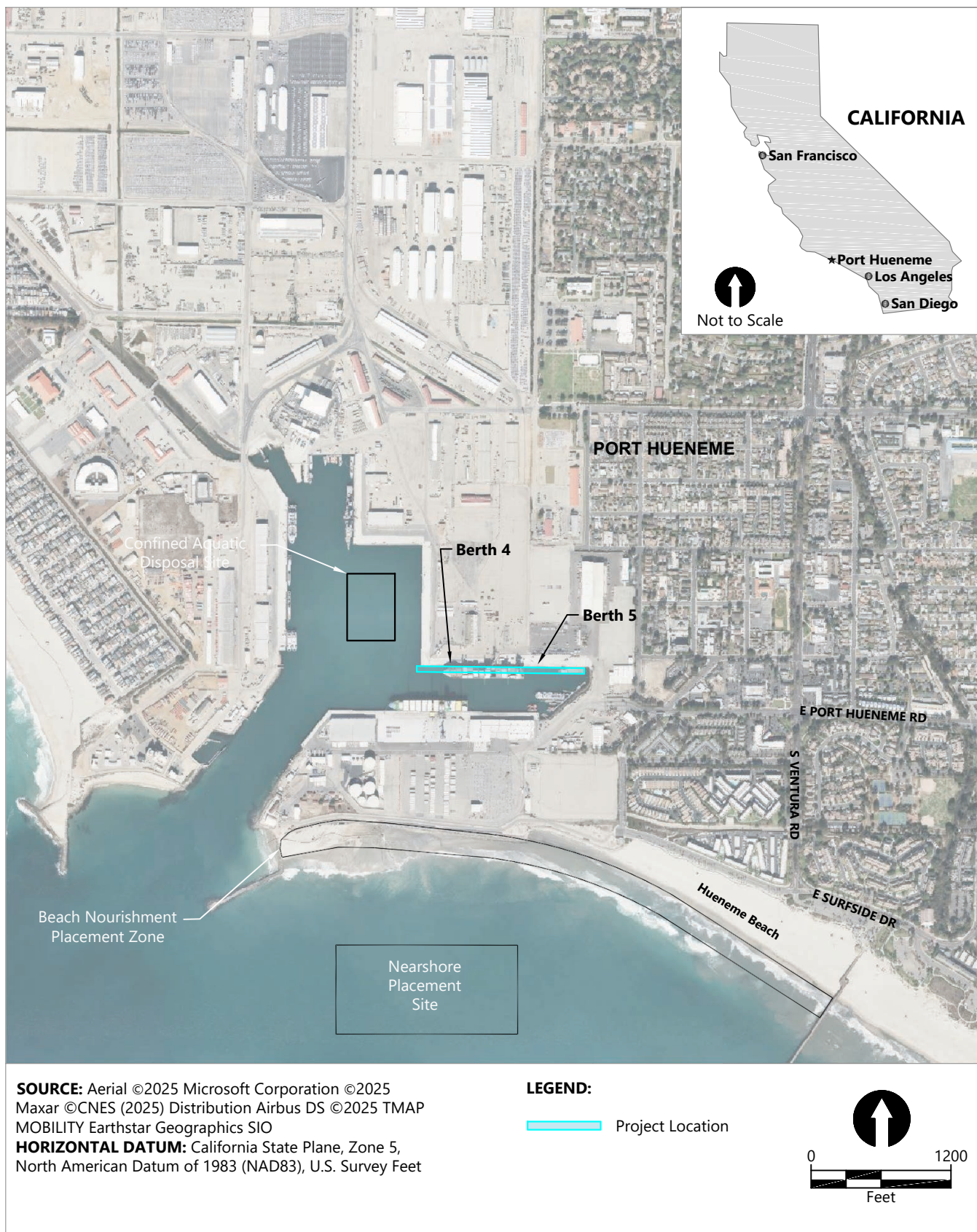
As part of its 2020 Strategic Plan, the District has developed a capital planning program to upgrade and modernize Port facilities to address aging infrastructure, accommodate future shore power and electrification, and address current and future sea level rise. Capital projects are developed and funded through the Port's PACED Program, which provides a strategic approach to modernizing the Port while maintaining operations. The proposed project is a key element of the infrastructure development envisioned in the OHD's 2020 Strategic Plan and is Item C12 of the PACED Program to modernize and deepen the North Terminal.

Under the proposed project, the District proposes to dredge Berths 4 and 5 along Wharf 2 to approximately -40 feet mean lower low water (MLLW). This improvement would make the depth at the berths consistent with the adjacent navigation channel and Turning Basin, and it would improve the depth under keel for vessels accessing the berths. To accommodate the deeper berths, the District would also implement structural improvements to Wharf 2 to ensure stability of the wharf with the deeper depths.

As part of the proposed project, sediment dredged and removed from the berths may be beneficially used to nourish Hueneme Beach, either by beach placement or nearshore placement, subject to meeting applicable physical and chemical criteria. If dredged sediment is found unsuitable for beach nourishment activities, it will be placed in a trench to be excavated in Channel A or at an existing, permitted CAD site in the harbor.

2.1 Project Location and Environmental Setting

CEQA Guidelines Section 15063(d)(1) and (2) require that an IS/MND provide a description of the project, including the location of the project, and identify the environmental setting as a basis for evaluating environmental impacts. Additional details on the environmental setting as it relates to individual resource topics is presented in Section 3. The project location is presented in Figure 1.



Publish Date: 2025/10/23 2:27 PM | User: mpratschner
 Filepath: K:\Projects\0677-Oxnard Harbor Dist\Wharf 2 Deepening\0677-RP 001 VICINITY_Wh2.dwg Figure 1



Figure 1
Vicinity Map

Initial Study/Mitigated Negative Declaration
 Port of Hueneme North Terminal Berth Deepening and Wharf 2 Improvements Project

2.1.1 *Regional Setting*

The Port is located on the Pacific Ocean in Ventura County, approximately 60 miles northwest of Los Angeles and 27 miles south of the City of Ventura. The Port is a multi-use port that includes a portion owned by the U.S. Navy that is part of Naval Base Ventura County (NBVC) and a commercial portion. The Port provides the only deep-water harbor between Los Angeles and the San Francisco Bay Area. Surrounding land uses include the U.S. Navy Construction Battalion Center to the north, residential land uses in the City of Port Hueneme (City) to the east and in unincorporated Ventura County to the west, and coastline to the south. The Pacific Ocean and Hueneme Beach, in the City, are directly south of the Port. The Port is zoned "Port Related" (M-PR) according to the City municipal code.

2.1.2 *Project Setting*

The Port encompasses approximately 165 acres of maritime land and 210 acres of industrial land. The Port has a total of five deep-draft berths, with approximately 4,250 linear feet of deep-draft ocean-going vessel berth capacity. The South Terminal has three berths totaling 1,800 linear feet and primarily serves refrigerated cargo, heavy lift cargo, general cargo, and liquid fertilizer. The North Terminal has two berths totaling approximately 1,350 linear feet and handles the majority of roll-on/roll-off (ro-ro) cargo, primarily automobiles, as well as break bulk cargo.

The District also includes a 320-linear-foot shallow draft berth and four floats that provide approximately 600 feet of floating docking for small craft. The District and the U.S. Navy share one berth (Wharf 3) measuring approximately 1,000 linear feet, which is used by ro-ro vessels calling at the Port.

The Turning Basin, Channel A, the Entrance Channel, and Berths 1 and 2 are maintained at -40 feet MLLW. The Approach Channel is maintained at -44 feet MLLW. Berth 3 has been approved for deepening to -40 feet MLLW. Berths 4 and 5 are currently maintained at -35 feet MLLW. The federal channels within the harbor (Approach, Entrance, Turning Basin, and Channel A) are dredged by the USACE on a biennial basis for maintenance purposes. The District and the U.S. Navy maintain their respective berths.

The proposed dredging and Wharf 2 improvements would occur entirely within the District's North Terminal, as shown in Figure 1. Wharf 2 is one of the primary marine cargo-handling structures within the District and is located along the northern edge of Channel A. This wharf is positioned parallel to the harbor edge and provides direct access to upland Port facilities, including staging areas, warehouses, and transportation corridors used for cargo movement.

The wharf is composed of a 20-inch-thick cast-in-place concrete deck supported by precast concrete piles with a timber and composite fender system, as shown in Figures 2 through 5. Wharf 2 serves as

a key operational area for the Port's import and export activities, accommodating a range of commercial vessels such as ro-ro ships, general cargo vessels, and specialty carriers. Its proximity to the Port's central operating areas makes it an integral component of terminal logistics, supporting efficient cargo-handling and vessel-turnaround times.

Figure 2
Wharf 2: Berth 4 (Background) and Berth 5 (Foreground)



Figure 3
Typical Wharf 2, Berth 4, Fender Pile System



Figure 4
Corner Where Wharf 2, Berth 4 (Right) Meets Wharf 3 (Left)



Figure 5
Typical Condition Underneath Wharf 2



As noted, there are several potential proposed locations for dredged material placement either within the harbor or at Hueneme Beach. Hueneme Beach is a sandy shoreline located immediately south and southeast of the Port in the City. The beach is subject to chronic erosion and is nourished regularly with dredged sand from USACE projects west of the Port. It forms the primary coastal interface for the City community and is a prominent recreational and shoreline protection feature along the Ventura County coast. The public Port Hueneme Beach Park is located directly east of the proposed beach nourishment area.

2.2 Project Background

The Port is one of the busiest commercial ports on the West Coast and serves as a critical link in the regional, state, and national goods movement network. The Port is the 4th largest container port in California and the 6th largest container port on the West Coast. The Port moves over \$13.5 billion in goods each year and serves as the only West Coast distribution hub for companies such as BMW, Del Monte, and Chiquita. The Port is a top 10 importer of automobiles in the United States. The Port is also a shared Naval Port in a strategic partnership with NBVC, USACE, Ventura County

Transportation Commission, Cities of Oxnard and Port Hueneme, and California Department of Transportation (Caltrans).

The Port is dedicated to sustainability and is an important link in California's electric vehicle supply chain, which accounts for approximately 23% of the Port's annual automobile volumes. Investments in automobile handling and staging facilities as well as further modernization of the Port's terminal infrastructure to support shore power and other emissions-reduction technologies for cargo-handling equipment, container and ro-ro vessels are among the key strategic initiatives in line with the State of California's (State's) goal of fast-tracked decarbonization in the transportation and maritime sectors.

As detailed in the Port of Hueneme 2020 Strategic Plan (District 2015a), the District has developed a framework to modernize the Port to accommodate existing vessels and cargo, incorporate infrastructure upgrades to support decarbonization, and address seismic and climate change issues associated with aging infrastructure. The PACED Program serves as the overarching long-term capital development program for the Port. As both a California Port of Entry and a U.S. Department of Defense Strategic Port, improvements to the Port have both statewide and national significance. PACED consists of multiple components with the goal of modernizing Port infrastructure while maintaining operations. The proposed project is a key infrastructure improvement envisioned in the Port of Hueneme 2020 Strategic Plan and is Item C12 of the PACED Program.

Ships that are over 300 gross registered tons are piloted both upon entering and exiting the harbor. Under the current pilot regulations, ships calling the Port's terminals must meet specific requirements for under-keel clearance to safely navigate the channel. In 2021, the Port and USACE completed a separate project to deepen the Turning Basin and Channel A from -35 feet MLLW to -40 feet MLLW and the Approach Channel from -40 feet MLLW to -44 feet MLLW (USACE 2021). However, this separate project terminates at the federal channel limit and does not extend to the berths where vessels are moored for cargo loading or unloading. As a result, the berth is shallower than the surrounding harbor (at a depth of -35 feet MLLW), which presents navigational constraints and limits access to Berths 4 and 5 for some deep-draft vessels during low tides. These vessels may be required to time their calls based on tides or anchor offshore and wait for higher water levels. The proposed dredging would allow vessels to berth without tidal delays, reducing vessel queuing and improving navigational safety and operational reliability. Without the proposed project, constraints and delays would increase as vessels get larger.

Wharf 2's fender system is aging and requires replacement to support continued safe berthing operations and planned berth depths. In addition, the mooring bollards (vertical posts on docks used to secure heavy mooring lines and hold the vessel in place) will be replaced from the existing 60-ton capacity to a 100-ton capacity to better support vessels and increase margins of safety. As a result, the wharf deck in the areas of the mooring bollards would be upgraded to support the new bollards and repair degraded concrete. The existing 40-ton mooring cleats will remain in place and will not be

modified as part of the proposed project. Without the proposed project, the aging fender system, wharf deck, and mooring hardware would be repaired and replaced as needed as part of regular maintenance activities.

2.3 Project Purpose

The purpose of the proposed project is to realize key infrastructure improvements outlined in the Port of Hueneme 2020 Strategic Plan and Item C12 of the PACED Program by deepening Berths 4 and 5 and making structural improvements to Wharf 2 in the North Terminal.

The key objectives of the proposed project include the following:

- Support the goals and objectives of the PACED Program and the Port of Hueneme 2020 Strategic Plan through completion of identified construction projects.
- Deepen Berths 4 and 5 to provide consistent berth depths that match the adjacent navigation channel and eliminate vessel delays from insufficient under-keel clearance during certain tidal conditions.
- Modernize Port infrastructure.
- Allow for the beneficial use of the dredged sediment from Berths 4 and 5 at Hueneme Beach, where sediment quality is suitable.

2.4 Proposed Project Construction

As part of the project, the existing fender system will be removed, and a new sheet pile toe wall will be installed, followed by a new fender system. Sediment would then be dredged from Berths 4 and 5, with material either beneficially reused to nourish Hueneme Beach or placed within a trench excavated in Channel A or in a CAD site in the Port.

2.4.1 *Proposed Dredging Activities*

The current authorized depth of Berths 4 and 5 is -35 feet MLLW. Dredging is proposed to deepen the berths to a maximum depth of -40 feet MLLW, plus up to 2 feet of allowable overdredge.

Dredging would occur within an approximately 2.7-acre dredge boundary. The total volume of material proposed for dredging is estimated to be 25,300 cubic yards (cy), consisting of 18,800 cy above design depth and 6,500 cy of allowable overdredge. Table 2 summarizes the proposed dredging volumes. Dredging is intended to occur in a single mobilization.

Table 2
Proposed Dredging Volumes at Berths 4 and 5

Berth	Design Depth	Estimated Volume to Design Depth (cy)	Estimated 2-Foot Overdredge Volume (cy)	Total Dredging Volume (cy)	Dredge Footprint (acres)
Berth 4	-40 feet MLLW with 2 feet of overdredge	9,500	3,600	13,100	1.4
Berth 5	-40 feet MLLW with 2 feet of overdredge	9,300	2,900	12,200	1.3
Berths 4 and 5 (Total)	--	18,800	6,500	25,300	2.7

2.4.1.1 Proposed Dredging Methodologies

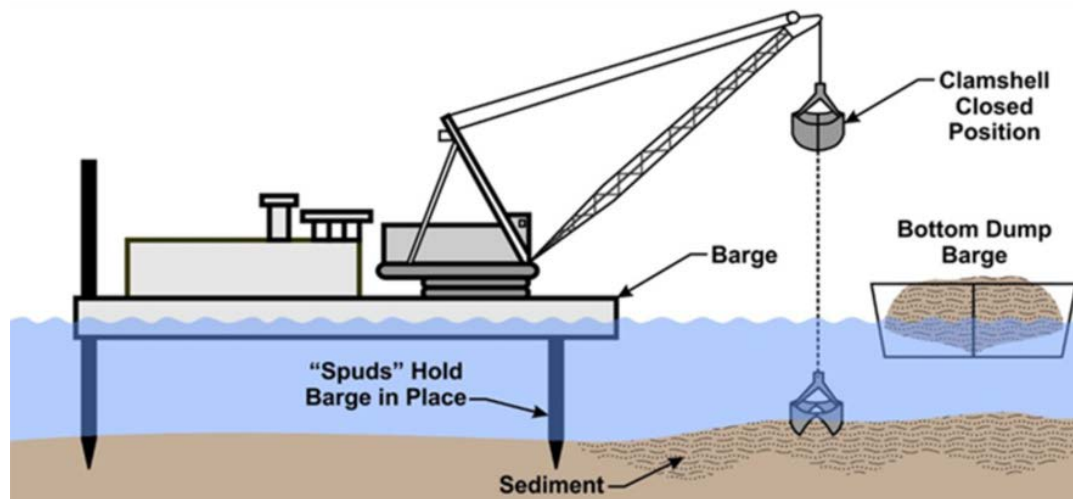
Sediment within the dredging footprint would most likely be mechanically dredged. If mechanically dredged, a barge-based clamshell would be used to dredge and load the sediment into adjacent barges, as described in Section 2.4.1.1.1. Although mechanical dredging is likely because of the proximity to wharf structures, hydraulic dredging may also be used depending on contractor selection and sediment conditions. If hydraulically dredged, a hydraulic suction cutterhead dredge would be used, with sediment conveyed via pipeline to the placement site, as described in Section 2.4.1.1.2.

Dredges are not generally self-powered; therefore, it is assumed for purposes of this analysis that tugboats would operate throughout dredging activities to position dredging equipment, to move barges of dredged sediment between the berths and the placement sites, and to serve as tenders to move personnel and equipment during dredging operations. All construction equipment would use the cleanest available engines, with the goal of using Tier 3 or Tier 4 engines where available.

2.4.1.1.1 Mechanical Dredging

A mechanical dredge consists of a crane mounted on a floating deck barge, with a clamshell bucket on the end of the crane boom (Figure 6). A tugboat would likely be used to position the dredge. Once positioned, two to four spud piles are lowered to anchor the barge. The clamshell bucket removes sediment from within the dredge footprint and deposits it into an adjacent bottom-dump barge for transport to the placement site. Full barges would be transported by tugboat to the placement site and offloaded, and then they would be returned to the dredging site.

Figure 6
Mechanical Clamshell Dredger



Source: Adapted from FRTR 2023

2.4.1.1.2 Hydraulic Dredging

If hydraulic dredging is employed, a 200- to 1,000-horsepower hydraulic suction cutterhead dredge would be used. The dredge consists of onboard pumps, spud piles and anchors, and a toothed cutterhead mounted on a ladder that can be raised, lowered, and angled to control dredging depth and alignment (Figure 7). The dredged sediment is transported through a pipeline to the placement site.

Once the dredge is positioned, the cutterhead is lowered to the bottom of the channel, where it slowly rotates and breaks up sediment along the seafloor, continuing from side to side in a sweeping arc using the swing anchor. The sediment is entrained in water as a slurry that is discharged through a pipeline from the stern of the dredge to the placement site. The dredge slurry (a mixture of sediment and water) is expected to consist of approximately 85% to 90% water and 10% to 15% solids. The dredge slurry would be pumped via pipeline directly to the placement site.

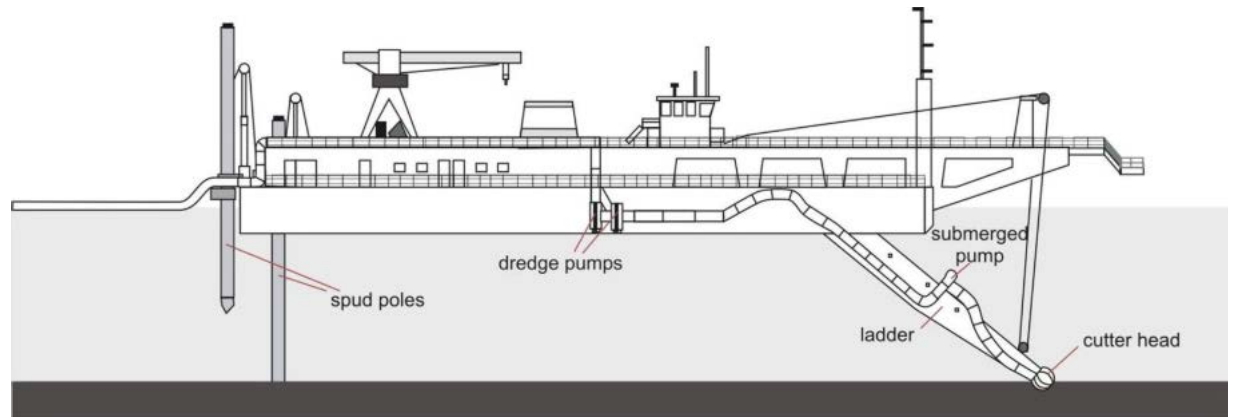
The dredge pipeline would be made of durable plastic and be capable of floating on the water surface when filled with water or air, or being anchored to the bottom during dredging operations. The dredge pipeline would connect the dredging area to the placement site.

The contractor would be responsible for determining the preferred pipeline route from the dredging area to the placement site, in coordination with the District and the U.S. Navy, and buoys would be positioned to warn vessels of the pipeline's presence.

The dredge would move along the channel with assistance from a tugboat, and a crew would maintain and operate the dredging equipment at all times. Skiffs and a tugboat would be used for

crew transport, maintenance, and other operations associated with dredging activities, such as positioning the pipeline.

Figure 7
Hydraulic Cutterhead Dredge



Source: Kemps 2017

2.4.1.2 Proposed Sediment Placement

The proposed project considers four potential locations for the placement or disposal of dredged material generated from deepening activities. The final placement location would be determined based on sediment characterization results evaluating the suitability of sediment from Berths 4 and 5 for the following: 1) beach nourishment at Hueneme Beach; 2) nearshore placement offshore of Hueneme Beach; 3) unconfined aquatic placement in a trench to be excavated in Channel A; or 4) placement in the already-permitted CAD site.

All sediment to be dredged would be characterized prior to placement to determine the appropriate placement location. The Sampling and Analysis Plan (Anchor QEA 2025) documents the procedures and methods used in the sampling and testing of proposed dredged material. Results of the testing would be submitted to the Southern California Dredged Material Management Team (DMMT) for approval of sediment placement locations. Beach nourishment through direct or offshore placement is the preferred placement option, where sediment quality is suitable. Each potential placement location is described in Sections 2.4.1.2.1 through 2.4.1.2.4.

2.4.1.2.1 Option 1: Hueneme Beach Placement

Under Option 1, dredged sediment found to be physically and chemically suitable by the DMMT would be placed directly on Hueneme Beach for beach nourishment. The beach placement zone is situated directly along the active shoreline of Hueneme Beach, adjacent to the entrance to the Port. If beach placement is approved by the DMMT, dredged sediment would be placed directly onto the

dry or intertidal beach to nourish eroded areas and widen the beach. Material placed at this location would help offset chronic erosion associated with longshore sediment transport interruptions related to the Port's jetties and Channel Islands and Ventura Harbors.

2.4.1.2.2 Option 2: Hueneme Beach Nearshore Placement

If the DMMT does not approve direct beach placement but determines that sediment is suitable for nearshore placement, dredged material would be placed at a location offshore of Hueneme Beach. The nearshore placement site is a submerged area designated for the placement of compatible dredged material in shallow waters just seaward of the active surf zone. The site is shown in Figure 1 as an offshore area south of the Port entrance. Sediment placed in this zone would naturally migrate landward through wave action and currents, contributing to the beach's sediment supply without requiring direct placement. This placement method supports shoreline stability while minimizing temporary construction impacts along the beach.

2.4.1.2.3 Option 3: Trench in Channel A

In case Options 1 or 2 are not available, the District is evaluating the potential excavation of a trench in Channel A adjacent to the berths within the federal channel that could serve as a placement site for dredged material under Option 3 if needed. Sediment excavated to create the trench would be evaluated for suitability for beach or nearshore placement at Hueneme Beach, and dredged material from Berths 4 and 5 would be evaluated for unconfined aquatic placement within the trench.

Excavation of the trench in Channel A is proposed to a depth of approximately -48 feet MLLW, plus up to 2 feet of overdredge allowance. The conceptual layout of the trench is conservative to provide sufficient capacity for the proposed berth dredging volumes. The trench design would be refined as berth dredging design advances to align trench capacity with dredging volumes, while allowing contingency to ensure that placed sediment remains below the authorized federal channel navigation depth.

Based on the current conceptual design, the total volume of material proposed for excavation from the Channel A trench is estimated to be 36,100 cy, consisting of 25,500 cy above design depth and 10,600 cy of allowable overdredge. Table 3 summarizes the proposed excavation volumes.

Table 3
Proposed Excavation Volumes at Channel A Trench

Design Depth	Estimated Volume to Design Depth (cy)	Estimated 2-foot Overdredge Volume (cy)	Total Volume (cy)	Dredge Footprint (acres)
-48 feet MLLW with 2 feet of overdredge	25,500	10,600	36,100	3.3

2.4.1.2.4 Option 4: Existing CAD Site

Under Option 4, dredged material would be placed into the existing, permitted CAD facility (USACE 2008, CCC 2008, LARWQCB 2008) by bottom-dump barge. Based on preliminary sediment chemistry and toxicity testing results, capping is not anticipated, and sediment would be placed in conformance with the approved CAD site design. Placement activities would not increase the elevation of the CAD above the authorized depth of the Turning Basin.

2.4.2 Proposed Wharf 2 Improvements

Deepening Berths 4 and 5 to a continuous -40 feet MLLW would require modifications to the existing Wharf 2 structures to ensure long-term stability and to maintain safe navigation and berthing conditions. Wharf improvements would include the following:

- Removal of the existing fender pile system and replacement with composite fender piles, upgraded rubber fenders, and timber walers
 - Proper off-site disposal of creosote-treated piles and demolition debris
- Replacement of under-dock grouted riprap where necessary to accommodate berth deepening and wharf improvements
- Repairs of concrete soffit and fascia,¹ curbs, and full deck resurfacing and sealing
- Installation of new snubbing bars² and replacement of existing mooring bollards with new mooring bollards

All construction debris, including the existing creosoted piling, timber walers, rubber fenders, and other components, would be removed and properly disposed of off site at an appropriate facility. The removed sheet piles would be salvaged to the extent possible for potential off-site reuse.

Prior to dredging, the existing fender system would be fully removed at both Berths 4 and 5, including composite or timber piles, walers, and rubber fender units. Pile removal would be conducted using a vibratory hammer or by direct mechanical lifting where feasible.

The existing Berth 4 does not have a sheet pile toe wall, and one would need to be installed to support the deeper berth depth. Following removal of the fender system at Berth 4, a new submerged steel sheet pile toe wall will be installed near the toe of the rock slope at Berth 4. The new sheet piles would be installed using a combination of vibratory and impact hammer driving from a floating barge or from the existing wharf. The vibratory hammer would be used to advance piles

¹ Concrete soffit and fascia are structural and protective components typically found on the underside and edges of the dock's concrete deck or elevated structure.

² Snubbing bars are heavy-duty vertical steel bars or posts installed along the edge of a pier, wharf, or quay to absorb and control the forces from mooring lines of vessels.

through most of the substrate, and an impact hammer would be used as needed to achieve final tip elevation and embedment.

Berth 5 does have an existing sheet pile wall, but it may not be adequate to support the proposed deeper depth at the berth. If it is determined that the existing submerged sheet pile toe wall at Berth 5 is adequate to allow dredging to -40 feet MLLW, dredging to that depth would occur without installation of a new sheet pile toe wall. If the existing submerged toe wall at Berth 5 is determined to be insufficient to support dredging to -40 feet MLLW, the existing sheet pile toe wall would be strengthened by installing either a new king pile system or a secondary sheet pile wall waterward of the existing structure. Steel king piles or sheet piles would be driven using vibratory hammers for initial advancement and using impact hammers to achieve final embedment. Construction would occur from a floating barge equipped with cranes and pile-driving equipment or from the existing wharf.

After installation of the sheet pile wall at Berths 4 and 5 (if needed), a replacement fender system consisting of composite fender piles, new timber walers, and upgraded rubber fenders would be installed. These fender piles would be driven using vibratory or impact hammers, as necessary. The proposed project would also include concrete rehabilitation activities at both berths, including soffit and fascia repairs, deck resurfacing and sealing, installation of 100-ton mooring bollards, installing snubbing bars to prevent line snagging, and repairing grouted riprap.

2.4.3 Construction Staging, Access, and Schedule

Construction staging would likely be located north of Wharf 2. Access to the project site would be via the Port's main gate off of Hueneme Road. Staging, storage, fueling, and maintenance of land-based equipment and vehicles would occur in upland areas and at locations separated from harbor waters.

The proposed project is scheduled to commence in January 2028 and would last approximately 12 months. Dredging for Berths 4 and 5 would occur after removal of the existing fender pile system and installation of the new sheet pile toe wall. Dredging for Berths 4 and 5, including sediment removal and disposal, would take approximately 1 month.

After dredging is complete, the new fender system and concrete deck improvements would be installed to complete wharf improvements. Alternatively, the new fender system and concrete deck improvements could be installed prior to dredging activities, depending on construction sequencing and schedule needs.

Table 4 provides estimated construction equipment use by phase and duration. Most daily construction activities, including pile driving, material deliveries and hauling debris removal on City streets, would occur between 8:00 a.m. and 6:00 p.m., Monday through Saturday; however, dredging activities may occur 24 hours per day, 7 days per week until completed to reduce the overall duration of dredging's effect on navigation and to prevent the secondary accumulation material from

stopping and starting dredging activities. Dredging happens periodically in the Port and has a similar noise profile to background port activities. No holiday work would be permitted, unless approved in advance by the District.

Table 4
Proposed Construction Phasing and Equipment

Sequence	Construction Phase	Approximate Construction Year	Construction Equipment	Quantity	Duration	Approximate Start Date	Approximate End Date
1	Mobilization	2028	Forklifts	1	5 days	January 2028	January 2028
			Generators	1			
			Welders	1			
2	Demolition of Fenders from Stations 0+00 to 5+00	2028	Crane barge	1	20 days	January 2028	January 2028
			Flat barge	1			
			Tug boat	1			
			Forklift	1			
3	Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade, and Riprap Repair from Stations 0+00 to 5+00	2028	Crane barge	1	100 days	January 2028	May 2028
			Flat barge	1			
			Tug boat	1			
			Pile driving	1			
			Forklift	1			
4	Deck Repair from Stations 0+00 to 5+00	2028	Jack hammer	3	28 days	May 2028	June 2028
			Sandblaster	1			
			Concrete pump	1			
			Dump truck	1			
5	Demolition of Fenders from Stations 13+40 to 10+00	2028	Crane barge	1	30 days	June 2028	July 2028
			Flat barge	1			
			Tug boat	1			
			Forklift	1			

Sequence	Construction Phase	Approximate Construction Year	Construction Equipment	Quantity	Duration	Approximate Start Date	Approximate End Date
6	Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade, and Riprap Repair from Stations 13+40 to 10+00	2028	Crane barge	1	80 days	July 2028	September 2028
			Flat barge	1			
			Tugboat	1			
			Pile driving	1			
			Forklift	1			
7	Deck Repair from Stations 13+40 to 10+00	2028	Jack hammer	3	28 days	September 2028	October 2028
			Sandblaster	1			
			Concrete pump	1			
			Dump truck	1			
8	Demolition of Fenders from Stations 5+00 to 10+00	2028	Crane barge	1	30 days	October 2028	November 2028
			Flat barge	1			
			Tugboat	1			
			Forklift	1			
9	Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade, and Riprap Repair from Stations 5+00 to 10+00	2028/2029	Crane barge	1	100 days	November 2028	March 2029
			Flat barge	1			
			Tugboat	1			
			Pile driving	1			
			Forklift	1			
10	Deck Repair from Stations 5+00 to 10+00	2029	Jack hammer	3	28 days	March 2029	April 2029
			Sandblaster	1			
			Concrete pump	1			
			Dump truck	1			
11	Dredging from Stations 0+00 to 13+40	2029	Dredging barge	1	21 days	March 2029	March 2029
			Scow barge	2			
			Tugboat	1			

2.5 Operations

The proposed project would not result in any new vessel calls or increased cargo throughput at the Port. However, the proposed project would allow existing deep-draft vessels to access Berths 4 and 5 more efficiently and with greater margins of safety without the need to wait for optimal tidal conditions. Improved berth depths would reduce tidal delays and associated vessel queuing within or outside the harbor.

3 Environmental Checklist

Project Title:	Port of Hueneme North Terminal Berth Deepening and Wharf 2 Improvements Project
Lead Agency:	Oxnard Harbor District 333 Ponomo Street Port Hueneme, California 93041
Contact Person:	Susim Gedam
Project Location:	Port of Hueneme Berths 4 and 5, adjacent to Wharf 2, and the southern end of Wharf 3 where it joins Wharf 2; Hueneme Beach, Ventura County, California.
Project Sponsor:	Oxnard Harbor District
General Plan Designation:	Port (west, east, and south); Military (north)
Zoning:	Port Related (M-PR) (west and south); Naval Construction Battalion Center (north and east)
Description of Project:	• Sediment dredging and removal to deepen Berths 4 and 5 along Wharf 2 to approximately -40 feet MLLW to provide deep-draft vessel continuity from the harbor, through the channel and to Berths 4 and 5. • Improvements at Wharf 2 would improve the capacity at Berths 4 and 5 by accommodating deeper-draft vessels and ultimately increase cargo-handling efficiency. • Sediment dredged and removed from the berths may be beneficially used to nourish Hueneme Beach.
Surrounding Land Uses and Setting:	The Port is entered from the Pacific Ocean. Surrounding land uses are the Oxnard Harbor District and the U.S. Navy Construction Battalion Center. Single- and multi-family land uses border the Port to the east. Hueneme Beach is directly south of the Port.
Other Public Agencies Whose Approval Is Required:	California Coastal Commission, California State Lands Commission, Los Angeles Regional Water Quality Control Board, U.S. Army Corps of Engineers, Los Angeles District, City of Port Hueneme
Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code Section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?	As of the release of this Draft IS/MND, no California Native American Tribes have requested consultation pursuant to Public Resources Code Section 21080.3.1. Should a Tribe request consultation, the District would engage in government-to-government consultation consistent with AB 52 to address potential tribal cultural resources and confidentiality.

3.1 Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by the proposed project, involving at least one impact that is potentially significant (before incorporation of mitigation measures) as indicated by the checklist.

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

3.2 Determination

On the basis of this initial evaluation:

- ☐ I find that the proposed subsequent activity 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 a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, 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 EIR or NEGATIVE DECLARATION pursuant to applicable standards; and b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.


Susim Gedam (Jan 30, 2026 13:32:36 PST)

Signature

Susim Gedam

Printed Name

01/30/2026

Date

Oxnard Harbor District

For

3.3 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 like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where 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, then 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 with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "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 (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross referenced).
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other 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 they 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 Measures Incorporated," describe the mitigation measures which 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, where 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 less than significance.

3.3.1 Aesthetics

Except as provided in Public Resources Code Section 21099, would the project:		Potentially Significant Impact	Less-Than-Significant Impact After Mitigation	Less-Than-Significant Impact	No Impact
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 within a state scenic highway?	☐	☐	☐	☒
c.	In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d.	Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

3.3.1.1 Affected Environment

The proposed project is located within the City's urban core. The project area is characterized by a mix of heavy industrial and military land uses with limited landscaped features within the Port. Surrounding land uses include recreational marinas, residential neighborhoods, neighborhood commercial shopping centers, and recreational parks, including shoreline beach areas.

Dredging and Wharf 2 upgrades would occur within a highly developed and industrialized area of the Port and would be surrounded by existing marine cargo-handling structures, staging areas, warehouses, paved upland areas, and transportation corridors used for cargo movement. Figures 8 and 9 are representative of views within the immediate vicinity of the proposed dredging and Wharf 2 improvements. Two of the potential dredged material placement locations—the Channel A trench and the existing CAD site—are also located within the Port's harbor waters that are surrounded by areas characterized by industrial and developed visual conditions.

Figure 8
View of Berth 4



Figure 9
View of Berth 5



Placement of dredged material could also occur at Hueneme Beach or in the nearshore area offshore of Hueneme Beach. Hueneme Beach is a recreational beach located immediately south and southeast of the Port. Primary scenic vistas in this portion of the project area occur from the shoreline, particularly along portions of Surfside Drive, from the beach itself, and from Hueneme Beach Park. Figure 10 is representative of shoreline views from Hueneme Beach in areas where beach nourishment could occur. Views of Port operations from inland portions of the City are largely obstructed by the Port's infrastructure and facilities associated with NBVC (City 2021, 2022a).

Figure 10
View of Hueneme Beach



Several highways within Ventura County are eligible for or designated as State Scenic Highways (Caltrans 2018), including State Route 101 and State Route 1 within the City of Oxnard. The project area is not visible from these highways.

3.3.1.1.1 Applicable Regulations

3.3.1.1.1.1 California Scenic Highway Program

California's Scenic Highway Program was established in 1963 to protect and enhance scenic qualities along designated highways corridors. The program is governed by Streets and Highways Code, Sections 260 through 284.

3.3.1.1.1.2 California Coastal Act

The California Coastal Act of 1976 requires that development within the coastal zone be sited and designed to protect scenic and visual qualities as resources of public importance. California Coastal Act Section 30251 specifies that development shall protect views to and along the ocean and scenic coastal areas and be subordinate to the character of its setting.

3.3.1.1.1.3 2045 Port Hueneme General Plan

The following goal in the existing General Plan (City 2022b) applies to visual resources:

- **Goal 7:** Create an aesthetically pleasing and efficiently organized city.

3.3.1.1.1.4 Local Coastal Program

The Port Hueneme's Local Coastal Program (LCP), adopted in 1984 and last amended in 2006 (City 2006), establishes policies governing development within the coastal zone. The LCP includes the following objective relevant to visual resources:

- **LCP-3** To accommodate expansion of the Port of Hueneme in a manner which is compatible with the policies and land use designations of the LCP.

3.3.1.2 Impact Evaluation

a. Would the project have a substantial adverse effect on a scenic vista?

Less-Than-Significant Impact. There are no scenic vistas in the area of the Wharf 2 improvements, as the improvements would occur within the Port's industrial setting. Scenic vistas are present from the shoreline, including views from Hueneme Beach and Hueneme Beach Park. Sediment placement activities at Hueneme Beach, if implemented, would be visible from the beach and adjacent public areas during placement activities. These visual effects would be temporary, localized, and consistent with periodic beach nourishment activities that occur along this shoreline.

Operational changes would be minimal. By improving under-keel clearance, the proposed project may reduce the need for vessels to wait offshore for sufficient tidal depth, which could slightly reduce the presence or duration of anchored vessels visible from the shoreline. Therefore, the proposed project would not result in a substantial adverse effect on scenic vistas, and impacts would be less than significant.

b. Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact. The proposed project would not affect trees, rock outcroppings, historic buildings, or other scenic resources. Although there are State Scenic Highways eligible for or designated within the City of Oxnard, the proposed project area is not visible from these highways. In addition, the industrial visual character of the Port is consistent with the nature of the proposed project. Therefore, there would be no impact to scenic resources.

c. In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Less-Than-Significant Impact. The proposed dredging and Wharf 2 improvements would be located within urbanized areas zoned for Port-related uses and would be consistent with the existing industrial visual character of the Port. The proposed project would not result in substantial visual changes at the project site.

Proposed sediment placement would occur either within open water areas of the Port, which would not result in visual changes to public views, or at Hueneme Beach. If sediment placement occurs at Hueneme Beach, the activity would be temporary and the placed material would be consistent in appearance with existing beach sand and shoreline conditions. The proposed project would be consistent with applicable zoning and other regulations governing scenic quality.

Operational changes associated with the proposed project would be minimal and would not result in new visual elements or long-term changes to public views. Therefore, the proposed project would not substantially degrade the visual character or quality of public views, and impacts would be less than significant.

d. Would the project create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?

Less-Than-Significant Impact. With the exception of dredging activities, construction would occur during daylight hours and would not create substantial light or glare. Dredging activities may occur during nighttime hours and would require temporary lighting for safety and operational purposes. Such lighting would be limited in duration, localized to the active work area, and consistent with existing Port safety and security lighting.

Placement of dredged material at Hueneme Beach would not occur at night. Operation of the proposed project would not introduce new permanent sources of light or glare. Accordingly, impacts related to light and glare would be less than significant.

3.3.2 Agricultural and Forestry Resources

In determining whether impacts to 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 to 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 forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project, and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:		Potentially Significant Impact	Less-Than-Significant Impact After Mitigation	Less-Than-Significant Impact	No Impact
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 non-agricultural use?	☐	☐	☐	☒
b.	Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☐	☐	☒
c.	Conflict with existing zoning for, or cause rezoning of, forest land (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 forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e.	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

3.3.2.1 Affected Environment

3.3.2.1.1 Environmental Setting

There are no agricultural lands or lands zoned for agriculture use located within the vicinity of the proposed project (City 2022b). There are no forested lands or timberlands in the project area.

3.3.2.1.2 *Applicable Regulations*

No regulations related to agricultural or forestry resources are applicable to the proposed project due to the absence of agricultural lands or forested lands in the project area.

3.3.2.2 **Impact Evaluation**

a. Would the project 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 non-agricultural use?

No Impact. There are no active farmlands or lands designated for agricultural uses in the vicinity of the proposed project, and the proposed project would not result in the conversion of any farmland. Therefore, there would be no impact.

b. Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. There is no land zoned for agricultural use or under a Williamson Act contract in the project area. Therefore, there would be no impact.

c. Would the project conflict with existing zoning for, or cause rezoning of, forest land (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. There are no forest lands or timberlands in the vicinity of the proposed project. Therefore, there would be no impact.

d. Would the project result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. There are no forest lands in the vicinity of the proposed project, and the proposed project would not result in the conversion of any forest land. Therefore, there would be no impact.

e. Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

No Impact. There are no farmlands or forest lands in the vicinity of the proposed project, and the proposed project would not result in the conversion of any farmlands or forest lands. Therefore, there would be no impact.

3.3.3 Air Quality

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:		Potentially Significant Impact	Less-Than-Significant Impact After Mitigation	Less-Than-Significant Impact	No Impact
a.	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b.	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☒	☐	☐
c.	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d.	Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

3.3.3.1 Affected Environment

This section describes existing air quality conditions in the project area and evaluates the potential for the proposed project to affect air quality. For the purposes of the air quality analysis, the area of evaluation includes the project site and surrounding areas, including adjacent roadways and marine waters.

3.3.3.1.1 Environmental Setting

The proposed project is located at the Port of Hueneme in the City of Port Hueneme, Ventura County. The project site lies within the South Central Coast Air Basin (SCCAB), as defined by the California Air Resources Board (CARB). The SCCAB includes Ventura County and portions of Santa Barbara and San Luis Obispo Counties. The climate in the SCCAB is typical of the California coast and is characterized by mild temperatures year-round; cool, wet winters; and warm, dry summers. The coastal marine environment influences moderate temperature extremes and promotes relatively consistent wind patterns. Prevailing winds in the project vicinity generally originate from the west due to onshore sea breezes, with secondary winds from the northeast. These coastal wind patterns typically enhance the dispersion of air pollutants.

Air quality in the SCCAB is influenced by a combination of local emission sources, including marine vessels, port and naval operations, on-road traffic, and industrial activities, as well as regional transport of pollutants from upwind air basins. Ozone formation in the basin occurs through photochemical reactions involving reactive organic gases (ROGs) and nitrogen oxide (NO_x) in the presence of sunlight. Tiny particles of solids or liquids (excluding pure water) that are suspended in the atmosphere are known as particulate matter (PM) and are classified according to their diameter

in microns as either particulate matter 2.5 microns or smaller in diameter (PM_{2.5}) or particulate matter 10 microns or smaller in diameter (PM₁₀). PM can be emitted directly (primary PM, such as dust or soot) or formed in the atmosphere through chemical reactions involving gaseous precursors (secondary PM).

The closest sensitive receptors in the vicinity of Wharf 2 include nearby recreational areas (650 feet east), residential uses (approximately 800 feet east), and schools (approximately 1,800 feet east). Nearby sensitive receptors in the vicinity of the beach nourishment zone include recreational uses (immediately adjacent) and residential uses (approximately 800 feet north).

3.3.3.2 Applicable Regulations

Air quality regulations are governed by federal, state, and local agencies. At the federal level, the U.S. Environmental Protection Agency (USEPA) administers the Clean Air Act (CAA). In California, the CARB implements the federal CAA and the California Clean Air Act (CCAA). The Ventura County Air Pollution Control District (VCAPCD) is the local air quality agency with jurisdiction over the project area and is responsible for air quality planning, permitting stationary sources, and establishing CEQA significance thresholds.

3.3.3.2.1 *Clean Air Act*

The federal CAA establishes ambient air quality standards and a regulatory framework for controlling emissions from stationary and mobile sources. In California, implementation of the CAA is carried out by the CARB in coordination with local air districts, including the VCAPCD.

3.3.3.2.2 *California Clean Air Act*

The CCAA establishes state ambient air quality standards and assigns CARB and local air districts responsibility for attaining those standards. For CEQA purposes, air quality significance determinations typically rely on local air district guidance and thresholds.

The SCCAB is currently designated nonattainment for ozone and PM₁₀ (VCAPCD 2022).

3.3.3.2.3 *Local Air Districts*

VCAPCD provides CEQA guidance for evaluating air quality impacts, including recommended significance thresholds and standard mitigation measures (VCAPCD 2003). For this analysis, VCAPCD construction and operational thresholds were used to assess the significance of project-related air quality impacts, as described in Section 3.3.3.3.

3.3.3.3 Impact Evaluation

Construction: Under the proposed project, construction-related air emissions would be generated by a combination of land-based and marine-based construction activities. Emission sources would include diesel-powered off-road construction equipment; marine vessels such as dredges, tugboats,

and barges; on-road haul trucks transporting materials to and from the project site; and worker commute vehicles.

Construction of the proposed project is anticipated to occur over a period of approximately 15 months, beginning in 2028. Construction activities would generally occur in the following phases, which may overlap to a limited extent:

- Mobilization
- Fender demolition
- Sheet pile wall and fender pile installation
- Deck repair
- Dredging

Demolition, sheet pile wall and fender pile installation, and deck repair would each occur in three subphases based on the location of the work vessels.

Construction-related air emissions would primarily result from combustion of diesel fuel in off-road construction equipment and marine vessels. Land-based construction emissions would be generated by equipment such as forklifts, generators, jackhammers, and welders, while marine-based emissions would be generated by barges and tugboats operating in navigable waters adjacent to the wharf. Fugitive dust emissions are conservatively included for dredging operations, though the high moisture content of the material would minimize emissions. As noted in the project description, construction equipment with the ability to utilize electric power would be preferentially included in the construction fleet for the proposed project. However, to be conservative, no controls beyond standard CARB regulations were assumed. It is assumed that the dredger used in construction is the dredger used in the harbor by the USACE, which is permitted by the VCAPCD.

Maximum daily construction emissions were calculated based on the anticipated construction schedule and equipment usage. Construction emissions were estimated using the California Emissions Estimator Model (CalEEMod), version 2022.1.1.37, supplemented with emission factors for marine construction equipment derived from CARB's 2021 Update to the Emission Inventory for Commercial Harbor Craft (CARB 2021) and the USEPA's Port Emissions Inventory Guidance (USEPA 2022). A detailed description of construction assumptions, including equipment types, horsepower ratings, load factors, operating hours, and vessel activity, is provided in Appendix A.

Estimated maximum daily construction emissions of criteria air pollutants, including NO_x, ROG, carbon monoxide (CO), PM₁₀, and PM_{2.5}, are summarized in Table 5.

Table 5
Maximum Daily Construction Emissions (Pounds per Day)

Year	Source Category	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
2028	Landside Equipment	1.5	6.4	7.6	0.014	0.20	0.13
	Landside Trucks	0.16	0.35	2.1	0.0011	0.57	0.14
	Marine-Side Vessels	1.7	33	5.4	0.037	0.87	0.85
2029	Landside Equipment	1.4	6.3	7.6	0.014	0.12	0.11
	Landside Trucks	0.26	0.64	3.6	0.0019	1.1	0.27
	Marine-Side Vessels	9.4	180	29	0.20	4.7	4.6

Notes:

The maximum daily construction emissions for 2029 include the overlap between the final phase of wharf repair and dredging.

Operations: The proposed project would not result in any new operations at the Port. The only operational change would be that existing vessels that are currently not able to access Wharf 2 efficiently or during low tides would be able to do so after construction, reducing the need for vessels to maneuver or wait within or outside the harbor.

a. Would the project conflict with or obstruct implementation of the applicable air quality plan?

Less-Than-Significant Impact. VCAPCD CEQA Guidelines state that project consistency with the applicable Air Quality Management Plan (AQMP) can be evaluated by comparing the actual population growth associated with a project to the population growth assumptions used in development of the AQMP (VCAPCD 2003). Projects that are consistent with adopted land use plans and do not result in population growth beyond that anticipated in the AQMP are generally considered consistent with air quality planning efforts.

The proposed project does not include land uses or activities that would result in population growth. The project consists solely of temporary construction activities and does not include an operational component or changes in land use intensity. The proposed project is consistent with existing land use and zoning designations for the Port of Hueneme.

Because the proposed project would not result in population growth beyond that assumed in the AQMP and would not introduce new long-term emission sources, it would not conflict with or obstruct implementation of local or regional air quality plans. Therefore, this impact would be less than significant.

b. Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a non-attainment under an applicable federal or state ambient air quality standard?

Less-Than-Significant Impact After Mitigation. VCAPCD CEQA Guidelines indicate that construction-related emissions are temporary and would cease upon completion of construction activities and, as such, are not directly evaluated against numeric significance thresholds. Instead, VCAPCD recommends implementation of mitigation for construction projects that generate ROG or NO_x emissions from heavy-duty construction equipment exceeding 25 pounds per day in most areas of Ventura County. VCAPCD also recommends fugitive dust control requirements for all construction projects. The proposed project would be subject to VCAPCD rules Rule 55 (Fugitive Dust Control) and 74.2 (architectural coatings).

Project construction would generate temporary emissions of criteria pollutants from diesel-powered land-based and marine-based construction equipment, tugboats, barges, and haul trucks. As shown in Table 5, estimated daily construction emissions of ROG and NO_x are above the threshold of 25 pounds per day, resulting in a potentially significant impact.

In addition, fugitive dust emissions generated during construction have the potential to contribute to airborne PM, which is associated with Valley fever (coccidioidomycosis). Although construction-related fugitive dust can be associated with Valley fever, the project site is a coastal, developed port environment dominated by paved surfaces and wet sediments. Dredging and beach placement materials would be wet and not conducive to airborne dust generation. Compliance with VCAPCD Rule 55 and standard dust control measures would further minimize fugitive dust emissions.

As noted above, daily construction emissions of ROG and NO_x are above the threshold of 25 pounds per day, which would result in a potentially significant impact. Mitigation measures MM-AQ-1 and MM-AQ-2 would be implemented to reduce the impact to below a level of significance:

- ***MM-AQ-1: Construction Idling Reductions.*** *The Port will require construction contractors to minimize heavy-duty construction idling time to 2 minutes where feasible. Exceptions include vehicles that need to idle to perform work (such as a crane providing hydraulic power to the boom), vehicles being serviced, or vehicles in a queue waiting for work. This requirement will be included as a specification in construction contracts.*
- ***MM-AQ-2: Use of Clean Equipment and Clean Trucks During Construction.*** *All off-road engines less than 50 horsepower used to construct the proposed project will be equipped with Tier 2 engines, except for specialized equipment or when Tier 2 engines are not available. All off-road diesel-powered heavy equipment exceeding 50 horsepower used to construct the proposed project will be equipped with Tier 4 engines, except for specialized equipment or when Tier 4 engines are not available. In place of Tier 4 engines for equipment exceeding 50 horsepower, off-road diesel-powered heavy equipment will incorporate retrofits such that*

emission reductions achieved equal or exceed that of a Tier 4 engine. In addition, all heavy-duty on-road trucks used during construction shall be model year 2014 or newer, with a preference for zero-emission trucks where available. These requirements will be included as specifications in construction contracts.

Given the temporary nature of construction emissions, with implementation of mitigation measures MM-AQ-1 and MM-AQ-2 and applicable emission and dust control measures, and due to the limited potential for dust generation at the project site, the proposed project would not result in a cumulatively considerable net increase of criteria pollutants. Accordingly, impacts would be less than significant with mitigation.

c. Would the project expose sensitive receptors to substantial pollutant concentrations?

Less-Than-Significant Impact. Construction of the proposed project would involve the temporary and episodic use of diesel-powered construction equipment and marine vessels, which would generate emissions of diesel particulate matter (DPM), a toxic air contaminant. Construction activities would occur over a limited duration and would not result in continuous emissions at any one location. Exhaust emissions from construction equipment and vessels dissipate rapidly, particularly in the open, coastal port environment where prevailing winds promote dispersion.

Current methodologies for evaluating health risks from toxic air contaminants are based on long-term exposure durations, typically assuming exposure periods of 9, 30, or 70 years. The short-term and intermittent nature of construction-related emissions associated with the proposed project does not correspond to these long-term exposure assumptions. As a result, construction-related DPM emissions would not be expected to result in significant cancer or non-cancer health risks.

In addition, construction activities would be subject to and would comply with applicable California regulations limiting idling of heavy-duty diesel equipment, which further reduces the potential for DPM emissions. Marine construction activities would occur primarily over water, increasing the distance between emission sources and nearby land-based sensitive receptors.

Given the temporary duration of construction, the intermittent operation of diesel-powered equipment, the rapid dispersion of exhaust emissions, and compliance with applicable idling regulations, construction-related DPM emissions would not expose sensitive receptors to substantial concentrations of toxic air contaminants. Therefore, this impact would be less than significant.

d. Would the project result in other emissions (such as those leading to odors) affecting a substantial number of people?

Less-Than-Significant Impact. Construction activities associated with the proposed project could generate temporary odors related to diesel exhaust from construction equipment and marine

vessels. Dredging activities may also generate localized odors if organic material in sediments is disturbed; however, any such odors would be temporary, localized, and rapidly dispersed in the open marine environment.

VCAPCD CEQA Guidelines identify land uses that may generate significant odor impacts (VCAPCD 2003). Ports, dredging activities, and construction activities are not identified as land uses that typically generate substantial odor impacts. Construction equipment and marine vessels would operate intermittently and over a broad area, and prevailing onshore winds would promote the dispersion of odors.

Sensitive receptors are located at distances of approximately 650 to 2,000 feet from the project site, and exposure to construction-related odors would be temporary and infrequent. Therefore, construction-related odors, including any localized dredging-related odors, would not affect a substantial number of people, and this impact would be less than significant.

3.3.4 Biological Resources

Would the project:		Potentially Significant Impact	Less-Than-Significant Impact After Mitigation	Less-Than-Significant Impact	No Impact
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 state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, 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 protecting 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?	☐	☐	☐	☒

3.3.4.1 Affected Environment

The proposed project occurs in areas of marine and shoreline environments. Biological conditions in the project area were evaluated by a qualified biologist during a reconnaissance survey conducted on November 7, 2025, to characterize existing habitat conditions and assess the potential presence of special-status species and sensitive habitats. Information regarding federally listed aquatic special-status species, designated critical habitat, and Essential Fish Habitat (EFH) occurring or potentially occurring within the project area were identified from the following sources:

- Species observation records in the California Natural Diversity Database (CNDDDB) for the 7.5 minute U.S. Geological Survey quadrangle for the project area and adjacent quadrangles,

including Ventura, Saticoy, Santa Paula, Camarillo, Point Mugu, and Oxnard (CDFW CNDDDB 2025)

- U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) report (USFWS 2025a)
- Eelgrass distribution in California dataset (CDFW 2025)
- The National Marine Fisheries Service's (NMFS's) EFH Mapper (NMFS 2025a)
- NMFS Critical Habitat Mapper (NMFS 2025b)

3.3.4.1.1 *Marine Habitat*

The Wharf 2 project site is located within a highly developed and industrialized area characterized by marine cargo-handling structures, staging areas, warehouses, and transportation corridors used for cargo movement. The eastern shoreline adjacent to Wharf 2 has a mix of vertical bulkheads and riprap armoring associated with overwater structures and docks. Due to the industrial and developed landscape, there is no riparian vegetation present within the Port, including the project site at Wharf 2. The marine substrate in the Wharf 2 project area is dominated by sand and silt. No eelgrass has been reported within the harbor, including the Wharf 2 area or any of the proposed dredged material placement locations (CDFW 2025). In addition, overwater decking associated with bulkheads and riprap limits light penetration and is not conducive to the establishment of submerged aquatic vegetation.

Located offshore of Hueneme Beach, the nearshore placement site is a subtidal area designated for the placement of compatible dredged material in shallow waters just seaward of the active surf zone. Substrate at Hueneme Beach is dominated by sand. Sediment placed in this zone is expected to migrate landward through natural wave action and currents, contributing to the beach's sediment supply without the need for direct mechanical placement.

Channel A is a routinely dredged federal navigation channel located south of Wharf 2. The channel is oriented east-west parallel to Wharf 2. Shoreline conditions include Wharves 1 and 2, with the easternmost shoreline consisting of a floating dock and riprap armoring. Substrate conditions within Channel A are similar to those at Wharf 2 and are dominated by sand and silt.

The CAD site is an existing, engineered underwater containment area located within the Turning Basin of the harbor. The CAD site serves as a confined dredged-material repository designed to isolate unsuitable sediments beneath an engineered cap. Material is placed within a designated depression or excavated pit, where it is contained and, if appropriate, later capped with clean sediment to prevent resuspension and minimize ecological exposure. Its placement within the protected harbor basin reduces the influence of tidal currents and wave action, providing a stable environment for long-term containment. Surface substrate in the existing CAD site consists of clean sediment, primarily dominated by sand. A portion of the CAD is covered by a layer of rock for scour protection.

3.3.4.1.2 *Terrestrial Habitat*

The Wharf 2 project site does not contain natural terrestrial habitat, as it is completely developed and covered in impervious surfaces.

Beach nourishment activities at Hueneme Beach may affect terrestrial habitat. Hueneme Beach is a sandy shoreline located immediately south and southeast of the Port. It forms the primary coastal interface for the community of Port Hueneme and is a prominent recreational and protective shoreline feature along the Ventura County coast. Hueneme Beach is subject to chronic erosion due to upcoast development that disrupts coastal sediment transport and loss of sediment to Hueneme Canyon, offshore of the port. Beach nourishment regularly occurs at Hueneme Beach. When sand is present on the beach, it is used by visitors for coastal recreation. Wildlife, including shorebirds and marine mammals, may be present along the shoreline of Hueneme Beach. While there is potential for vegetation communities, the sandy substrate along the active shoreline does not generally support native vegetation communities due to frequent erosion and beach nourishment.

Dredged sediment may be placed directly along the active shoreline of Hueneme Beach as part of a beach nourishment process to supplement eroded areas, widen the beach profile, enhance coastal storm protection, and increase habitat for species that rely on sandy beaches. This area is located outside and directly south of the Port, within the City.

3.3.4.1.3 *Wetlands and Jurisdictional Waters*

Project activities would occur directly within the Port, a navigable water of the United States and of the State. Additionally, Hueneme Beach, which is also a navigable water of the United States and of the State, may be selected as the direct beach or nearshore placement location of dredged material from the proposed project. While there are no known wetlands within the Wharf 2 project site, Hueneme Beach is classified as an estuarine and marine wetland (USFWS 2025b).

3.3.4.1.4 *Special-Status Wildlife Species*

The CNDDDB identifies 22 special-status wildlife (candidate, threatened, or endangered under the federal Endangered Species Act [FESA] or California Endangered Species Act [CESA]; state species of special concern [SSC]; or California Department of Fish and Wildlife [CDFW] fully protected) species that have been documented within the study area, as identified through a search of the proposed project U.S. Geological Survey quadrangle and five surrounding quadrangles (Appendix B; CDFW CNDDDB 2025). An additional search of USFWS's IPaC tool and the NMFS Online Essential Fish Habitat Mapper (NMFS 2025a) showed that the known ranges or areas of influence of five additional wildlife species overlap with the study area (USFWS 2025a). Of the 27 species identified as occurring in the study area, only 8 have the potential to occur in the project area based on habitat requirements, existing on-site conditions, and historic species observations as identified in Table 6.

Hueneme Beach is within federally designated critical habitat for western snowy plover (*Anarhynchus nivosus nivosus*). Waters within the project area and associated dredged material placement sites are considered EFH for coastal pelagic species and Pacific groundfish species (NMFS 2025a). California grunion, steelhead, and marine mammals also have the potential to occur within the Wharf 2 project area and associated dredged material placement sites.

The project site's developed condition and location within a highly industrial and urban area precludes the presence of most terrestrial special-status species, although habitat adjacent to the project site at Hueneme Beach may be marginally suitable for some transitory species adapted to disturbance areas and may have a low to moderate potential for occurrence in or around the project area. This includes western snowy plover, California least tern (*Sternula antillarum browni*), and other species protected under the Migratory Bird Treaty Act (MBTA). These species are described in Table 6 and in Sections 3.3.4.1.4.1 through 3.3.4.1.4.3.

Table 6
Special-Status Wildlife Species with Potential to Occur within the Project Area

Species	Status ¹
Fish	
California grunion (<i>Leuresthes tenuis</i>)	SSC
Birds	
Western snowy plover (<i>Anarhynchus nivosus nivosus</i>)	FT, CH
California least tern (<i>Sternula antillarum browni</i>)	FE, SE
Marine Mammals	
California sea lion (<i>Zalophus californianus</i>)	MMPA
Harbor seal (<i>Phoca vitulina</i>)	MMPA
Coastal bottlenose dolphin (<i>Tursiops truncatus</i>)	MMPA
California gray whale (<i>Eschrichtius robustus</i>)	MMPA

Notes:

Sources: CNDDDB CDFW 2025, NMFS 2025b, USFWS 2025.

1. Explanation of state, federal, and other listing codes:

CH	Critical Habitat (Proposed or Final) is designated and present in the project area
FE	Federally listed as Endangered
FT	Federally listed as Threatened
MMPA	Marine Mammal Protection Act
SSC	California Species of Special Concern
SE	State-listed as Endangered

3.3.4.1.4.1 Fish

California grunion. California grunion (*Leuresthes tenuis*) is a member of the New World silversides family, Atheriniopsidae. Their usual range extends from Point Conception, California, to Point Abreojos, Baja California. Occasionally, they are found farther north, to Monterey Bay, California, and south to

San Juanico Bay, Baja California. They inhabit the nearshore waters from the surf to a depth of 60 feet. Tagging studies indicate that they do not migrate. Grunion feeding habits are not well-known. They have no teeth, so they are presumed to feed on very small organisms. Grunion beach themselves at night to spawn on beaches during the spring and summer months (March through August). Spawning occurs for 4 consecutive nights after the highest tide associated with each full or new moon.

Although the Wharf 2 project area does not contain suitable spawning habitat for California grunion, this species may be present at the Hueneme Beach dredged material placement site during spawning seasons. However, due to chronic erosion and frequent sediment reworking, suitable spawning substrate may be limited or absent at the site.

3.3.4.1.4.2 Birds

Western snowy plover. The western snowy plover forages on invertebrates in the wet sand and among the surf cast kelp within the intertidal zone; in the dry, sandy areas above the high tide; on salt pans; and along the edges of salt marshes and salt ponds. They typically forage in areas with little or no human activity and generally avoids areas of high activity, especially where human use is relatively high. The nesting season for western snowy plovers is from early March through September. Nests are typically made of shallow scrapes along sandy substrate where there is little debris washed up. Both nests and the eggs in incubation are highly camouflaged.

Although Hueneme Beach is included within the mapped federally designated habitat for western snowy plover, this species is not known to nest or regularly forage on Hueneme Beach. The most recent sightings occurred in 2025 at Ormond Beach, approximately 1.5 miles southwest of Hueneme Beach (Ventura Audubon Society 2025).

California least tern. California least tern (*Sternula antillarum browni*), a subspecies of the colonially nesting seabird the least tern, is listed as federally endangered. California least terns use open sandy or gravelly shores with light-colored substrates, little vegetation, and nearby fishing waters for nesting. California least terns are known to exhibit a high degree of fidelity to their nest sites, often returning to breed where they bred successfully or to where they were hatched. Least terns feed on small, slender-bodied fish directly under the water surface in estuaries, bays, and shallow, nearshore waters, particularly at or near estuaries and river mouths. They are opportunistic foragers, so food availability will often determine foraging location.

Although the Wharf 2 project area does not contain suitable habitat for California least terns, Hueneme Beach has a low potential for nesting habitat. Additionally, the Wharf 2 project site and associated in-water dredged material placement sites offer foraging opportunities for this species.

3.3.4.1.4.3 Marine Mammals

California sea lion. The California sea lion (*Zalophus californianus*) is a coastal, eared seal native to western North America, with a range from southeast Alaska to central Mexico. It lives in coastal waters and on beaches, docks, buoys, and jetties. California sea lions feed mainly offshore in coastal areas, eating a variety of prey such as squid, anchovies, mackerel, rockfish, and sardines. The California sea lion is gregarious and could be expected to occur within the nearshore waters of the Ventura County coastline throughout the year.

While no rookeries are known within the sandy beach habitat within the project area, California sea lions are likely to forage in Port waters and to haul out on floating structures or the breakwater and jetties. They have been observed around the Navy's small boat facility near the harbor entrance and at the small beach within the harbor at the entrance on the north side.

Harbor seal. Harbor seals (*Phoca vitulina*) are true seals, meaning they do not have visible ear flaps. They are found along temperate and Arctic marine coastlines of the Northern Hemisphere and are known for their adaptability to various environments. Harbor seals are opportunistic feeders, primarily hunting for fish, cephalopods, and other invertebrates during high tide. Harbor seals are site-faithful, spending their lives along the same stretch of coastline and using familiar resting, haul-out, and birthing sites.

Harbor seals are likely to forage in Port waters and may haul out on floating structures, breakwaters, or jetties within the harbor and adjacent coastal areas. They have been observed around the Navy's small boat facility near the harbor entrance and at the small beach within the harbor at the entrance on the north side.

Coastal bottlenose dolphin. Coastal bottlenose dolphins (*Tursiops truncatus*) are highly adaptable and social marine mammal species found in tropical and warm-temperate waters worldwide. They are known for their intelligence, complex behaviors, and remarkable cognitive abilities. This species inhabits a variety of marine and coastal ecosystems, from shallow estuaries and bays to open waters. They are opportunistic feeders, adapting their diet based on local prey availability and environmental conditions, and use echolocation to hunt. Common food sources within their diet include mackerel, herring, sardines, squid, octopus, shrimp, and crabs.

The bottlenose dolphin is a transient species known to frequent the surf zone of sandy beaches. While breeding is unlikely within the project area, coastal bottlenose dolphins have the potential to use the surrounding waters for foraging, resting, and/or migration.

California gray whale. The California gray whale (*Eschrichtius robustus*) is known for its extraordinary migration, as it spends its summers in the Bering and Chukchi Seas and calves in the lagoons of Baja, California. The gray whale is occasionally observed offshore during its seasonal migrations. The

whales travel south between the last week in November and the first week in January, and they travel north between the second week of January and the first week of May. Gray whales forage within the benthos, with their diet primarily consisting of small invertebrates. Their main food source is amphipods, but they also consume other benthic organisms such as marine worms, small crustaceans, and mollusk larvae.

While the California gray whale would not utilize the project site as breeding grounds, there is potential for this species to use the surrounding waters for foraging, resting, and migration.

3.3.4.1.5 Special-Status Plant Species

There are 25 plant species considered rare, threatened, or endangered by the California Native Plant Society (a California Rare Plant Rank 1 or 2 species) with recorded occurrences in the vicinity of the project site, as identified through a search of the proposed project quadrangle and eight surrounding quadrangles (Appendix B; CDFW CNDDDB 2025). An additional search of USFWS' IPaC tool showed that the known ranges or areas of influence of five additional plant species overlap with the project area (Appendix B; USFWS 2025). Due to the lack of suitable habitat within the project area, none of the special-status plant species with recorded occurrences within the vicinity of the study area have the potential to occur within the project site.

3.3.4.1.6 Migratory Bird Treaty Act Protected Birds and Raptors

The MBTA makes it illegal for anyone to take, possess, import, export, transport, sell, purchase, barter, or offer for sale, purchase, or barter, any migratory bird, or the parts, nests, or eggs of such a bird except under the terms of a valid permit issued pursuant to federal regulations. The project area is located in an industrial environment, subject to constant anthropogenic disturbance, and does not provide suitable nesting habitat, but it may provide limited foraging habitat for migratory bird species. Habitat adjacent to the project site along the shoreline of Hueneme Beach could provide nesting and foraging opportunities for some migratory bird species. Other species protected under the MBTA may occur transiently throughout the year.

3.3.4.1.7 Wildlife Movement Corridors

The developed areas along the shoreline in the project area are geographically isolated from other potential terrestrial wildlife habitat areas, with no direct land-based corridors or connectivity. Nearshore and offshore waters within and adjacent to the project site are corridors for fish and marine mammals.

3.3.4.2 Applicable Regulations

3.3.4.2.1 *Federal Endangered Species Act*

Under the FESA, the Secretary of the Interior and the Secretary of Commerce have the joint authority to list a species as threatened or endangered (16 United States Code [USC] 1533[c]). Pursuant to the requirements of the FESA, an agency reviewing a proposed project within its jurisdiction must determine whether any federally listed threatened or endangered species may be present in the project area and determine whether the proposed project may affect or “take” such species. Per the FESA, take means “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct” (16 USC 1532[19]). Section 7 of the FESA requires the USACE to consult with the USFWS and/or NMFS to determine whether the proposed project is likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of designated critical habitat or habitat proposed to be designated for such species (16 USC 1536[a][3]).

3.3.4.2.2 *Marine Mammal Protection Act*

Special-status marine species off the coast of California are protected by the Marine Mammal Protection Act (MMPA), which protects all marine mammals within waters of the United States. Specifically, the MMPA prohibits the take of marine mammals, including killing, injury, or harassment.

3.3.4.2.3 *Migratory Bird Treaty Act*

The MBTA of 1918 (16 USC 703–712) is the primary legislation in the United States to conserve migratory birds. It implements the United States’ commitment to four bilateral treaties, or conventions, for the protection of a shared migratory bird resource. The MBTA prohibits the taking, killing, trading, or possessing of migratory birds. This includes disturbance that causes nest abandonment or loss of reproductive effort (e.g., killing or abandonment of eggs or young).

3.3.4.2.4 *Magnuson-Stevens Fishery Conservation and Management Act*

The Magnuson-Stevens Fishery Conservation and Management Act requires federal agencies to consult with NMFS regarding potential effects on EFH. The proposed project area is located within EFH for coastal pelagic species and Pacific groundfish (NMFS 2025a).

3.3.4.2.5 *California Endangered Species Act*

Under the CESA, the CDFW is responsible for maintaining a list of threatened, endangered, and candidate species (California Fish and Game Code [CFG] 2070). The CDFW also designates “fully protected” or “protected” species as those that may not be taken or possessed. Species designated as fully protected or protected may or may not be listed as endangered or threatened. The CDFW also tracks species of special concern, which are animal species whose populations have diminished and may be considered for listing if declines continue. Pursuant to the requirements of the CESA, an

agency reviewing a proposed project within its jurisdiction must determine whether any state-listed endangered or threatened species may be present in the project area and determine whether the proposed project would have a potentially significant impact on such species. "Take" of a species, under the CESA, means to "hunt, pursue, catch, capture, kill, or attempt to hunt, pursue, catch, capture, or kill" (CFGC 86). The CESA definition of "take" does not include "harm" or "harass," as is included in the FESA. As a result, the threshold for a take under the CESA may be higher than under FESA because take is not defined to include habitat modification under the CESA. The CDFW may issue incidental take permits when adequate minimization measures are met and issuance of the permit would not jeopardize the continued existence of a state-listed species. Should the project applicant receive authorization to take federally listed species under FESA, take authorization may also be sought as a "consistency determination" from the CDFW under CFGC 2080.1.

3.3.4.2.6 *California Native Plant Protection Act*

The California Native Plant Protection Act and related statutes provide guidance for the protection of rare and sensitive plant species. Based on the absence of suitable habitat, no special-status plant species have the potential to occur within the project area.

3.3.4.2.7 *California Fish and Game Codes 3503, 3511, 3513, 4700, 5050, and 5515*

Provisions of the MBTA are adopted through the CFGC. Under CFGC 3503, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or related regulations. CFGC 3513 prohibits take or possession of any designated migratory non-game bird or any part of such migratory non-game bird. The state code offers no mechanism for obtaining an incidental take permit for the loss of non-game migratory birds.

The CFGC strictly prohibits the incidental or deliberate take of fully protected species. The CDFW cannot issue a take permit for fully protected species, except under narrow conditions for scientific research or the protection of livestock; therefore, avoidance measures may be required to avoid a take (CFGC 3511 for birds, 4700 for mammals, 5050 for reptiles and amphibians, and 5515 for fish).

3.3.4.3 **Impact Evaluation**

a. Would the project 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?

Less-Than-Significant Impact After Mitigation. The proposed project includes dredging, wharf improvements, and placement of sediment within Channel A, within the existing CAD site, or in the nearshore/beach environment at Hueneme Beach. The following paragraphs discuss of the potential effects of the proposed project on special-status species.

Although Hueneme Beach includes federally designated critical habitat for western snowy plover, no documented nesting or foraging by western snowy plover has been reported at Hueneme Beach, based on available records. The beach is characterized by frequent human use and chronic erosion and nourishment, which reduces its suitability for western snowy plover nesting and foraging habitat. Based on prior environmental review, western snowy plovers have not been documented at the Hueneme Beach placement location and are not expected to occur at the site during project activities. In general, beach nourishment can temporarily alter beach surface conditions (e.g., flattening hummocks and burial of wrack); however, given the absence of western snowy plovers at the placement site, these changes would not affect the species. Avoidance and survey measures are included as a precautionary approach consistent with prior environmental review and agency coordination. .

Due to the lack of suitable habitat, California least tern are not expected to nest or occur in the Wharf 2 project area or in adjacent shoreline areas within the project area. However, placement of dredged material in the nearshore placement site or directly on Hueneme Beach may cause minor, localized increases in suspended sediments and turbidity, which could affect foraging species' ability to see food normally visible just under the surface of the water. These effects would be extremely minor and, given the size of continuous nearshore habitat comprising the proposed placement area, it is unlikely that foraging would be significantly impacted by discrete disposal locations and activities. If California least terns are present, vehicle and equipment activity associated with beach nourishment could result in temporary disturbance.

The lack of suitable sandy beach habitat and limited wave action within the Port does not facilitate beach access for California grunion spawning or returning to the water after hatching. Therefore, grunion spawning is not known to occur in the Port and dredging and pile-driving activities under the proposed project would result in no impact to this species. However, disturbance of Hueneme Beach as a result of direct sediment placement has the potential to reduce grunion egg survival if eggs are present on the beach, constituting a potentially significant impact.

Specific to potential impacts on EFH and consistent with the fish impact analysis above, coastal pelagic species could be temporarily displaced from localized areas during some portions of dredging. Impacts from increased turbidity will likely limit visibility for sight feeding fish, whereas other species will be attracted to the site to forage on benthic organisms suspended by the dredging. Noise generated during dredging would not be expected to result in adverse effects on fish species because the proposed project is not expected to generate high-intensity noise that can cause a startle response in fish.

Dredged material placement impacts to fish are similar to those caused from the dredging activity and would not have significant impacts on fish. For dredged material placed on Hueneme Beach, surf zone fish would be subjected to increased turbidity and sediment deposition. Fish in the surf zone

contend with a high energy environment that is daily and seasonally variable with respect to habitat conditions. Overall, dredged material placement at all proposed placement sites is likely to have minimal disturbance due to increased turbidity and suspended sediment. Dredged material placement is not anticipated to cover any sensitive marine habitats, and is unlikely to affect EFH as a whole. Accordingly, impacts to EFH would be temporary and localized, and they would not adversely affect EFH functions for spawning, feeding, or growth to maturity.

The proposed project could result in temporary effects on marine mammals from localized increases in suspended sediment, disturbance of benthic habitat, and underwater noise during dredging and pile driving. These effects would be short-term and limited to the immediate vicinity of active in-water work. Marine mammals are highly mobile and would have access to extensive alternative habitat within the harbor and adjacent coastal waters; therefore, any effects on foraging or movement would be temporary. Gray whales are not anticipated to occur within the inner harbor where dredging and pile driving would occur; if present in nearby coastal waters, potential effects would most likely be limited to short-term avoidance of the active work area.

Underwater noise is the primary mechanism by which the proposed project could affect marine mammals. Marine mammals may temporarily avoid areas of active dredging or pile driving, which could result in short-term behavioral disturbance (e.g., avoidance of the immediate work area, reduced foraging efficiency in the immediate vicinity, or brief interruption of resting behavior). The MMPA regulates “take” of marine mammals, including take that may occur through exposure to elevated underwater sound. Consistent with typical in-water construction effects, the most likely potential effect would be Level B take (behavioral disturbance) if marine mammals are present near the active work area. Injury-level effects (Level A take) are not anticipated due to the limited duration and spatial extent of pile driving, the use of soft-start procedures, and implementation of biological monitoring and exclusion/avoidance measures consistent with regulatory permit requirements.

Based on this discussion, construction activities —particularly beach and nearshore placement and pile driving—could result in adverse effects on special-status species through temporary disturbance, elevated underwater noise, and localized turbidity and sediment deposition. The following mitigation measures (MM-BIO-1 through MM-BIO-5) would be implemented to reduce potential impacts to biological resources:

- **MM-BIO-1: Nesting Bird Survey.** *To avoid potential impacts on nesting marine-dependent birds during direct placement of sediment on Hueneme Beach between February 15th and September 15th, a qualified biologist shall perform a marine-dependent nesting bird survey within 500 feet of the noise-generating activity 1 week prior to the start of construction utilizing heavy equipment. If the survey identifies nesting birds within 500 feet of the noise-generating activity, qualified biologists shall notify the construction manager and monitor active nests. If, based on the judgment of the biologist, construction activities may result in impacts to nesting*

marine-dependent birds, construction activities will be modified or temporarily paused until fledging has occurred.

- **MM-BIO-2: Worker Environmental Awareness Program.** *Prior to the initiation of any in-water project activities, all personnel associated with the proposed project shall attend a worker environmental awareness training program (program) with content developed by a qualified biologist regarding sensitive marine and avian species in the project area, including but not limited to California least tern and western snowy plover, their habitat preference(s), law and regulations, as well as potential impacts and protection measures, and project work area limits. Protections and regulations for federally-listed species will be included in the program. A copy of the training program will be distributed to all contractors, employers, and other personnel involved during in-water construction activities. Specifically, the program will include:*

 1. *Measures to prevent indirect impacts to biological resources during in-water construction activities, including dredging, demolition, and pile driving as they relate to the protection of adjacent aquatic habitat.*
 2. *Training materials shall include laws and regulations that protect federally-listed species and their habitats, the consequences of non-compliance with laws and regulations, and a contact person (i.e. biological monitor and District project manager) in the event that protected biological resources are affected.*
 3. *The District or its contractors should notify the qualified biologist in advance of the kick-off meeting and any subsequent meetings that may take place if additional contractors are employed during additional in-water construction activities. A sign-in sheet will be circulated for signatures to all personnel that attend the workers' educational training to confirm that program materials were received and that they understand information presented.*
- **MM-BIO-3: On-site Qualified Monitor.** *Prior to and during in-water construction activities, a qualified professional shall monitor dredging and pile driving activities to avoid potential impacts on marine mammals and avian species in the project area. The monitor must observe an impact radius around the project construction areas to ensure that sensitive marine species (i.e., marine mammals, birds, fish) are not present. The monitor must have experience in the Southern California marine environment and be adequately trained. The impact radius shall be established by determining the largest zone of influence associated with in-water construction activities occurring that workday.*
- **MM-BIO-4: Employ "Soft-Start" Techniques During Impact Pile Driving.** *During construction, the Port will implement soft start techniques for impact pile driving, which is industry standard and will be required per regulatory permits.*
- **MM-BIO-5: California Grunion Spawning Survey.** *Prior to initiating direct placement of sand at Hueneme Beach, the proposed placement area will be surveyed to determine whether*

California grunion are present and spawning during predicted run and egg incubation periods identified by CDFW.

Implementation of Mitigation Measures MM-BIO-1 through MM-BIO-5 would reduce the potentially significant impacts identified above by restricting work from occurring when special-status species are present and minimizing exposure to elevated noise, turbidity, and habitat disturbance. Nesting bird surveys, agency coordination, and work restrictions would avoid direct and indirect impacts to beach-nesting and foraging bird species associated with beach nourishment and nearshore placement activities. Pre-construction grunion surveys and work postponement during active spawning or egg incubation periods would avoid disturbance or burial of grunion eggs. Biological monitoring, establishment of daily impact radii, and implementation of soft-start pile-driving techniques would minimize the potential for injury or behavioral disturbance to fish and marine mammals by allowing individuals to detect and avoid construction-related noise and turbidity. Given the temporary and localized nature of construction effects, the limited spatial extent of in-water work, and the mobility of the affected species, implementation of these mitigation measures would reduce potential impacts to special-status species to less-than-significant levels.

b. Would the project 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?

Less-Than-Significant Impact After Mitigation. There are no riparian habitats or other sensitive natural communities within or directly adjacent to the Wharf 2 project site, which is fully developed. Although the Hueneme Beach dredged material placement site does not contain riparian habitat, sandy beach habitat at Hueneme Beach, when present, may be considered a sensitive natural community due to its unique physical characteristics and the biological resources it supports.

Sandy beach habitat at Hueneme Beach may provide spawning or foraging habitat for California grunion. In addition, harbor seal and California sea lion may occasionally haul out on sandy beach habitat in the vicinity of the project area. Project-related activities associated with nearshore or beach placement of dredged material could result in temporary disturbance to sandy beach habitat through short-term alteration of surface conditions, increased human activity, and elevated noise levels during active construction.

Implementation of Mitigation Measures MM-BIO-1 through MM-BIO-3 and MM-BIO-5 would avoid or minimize potential impacts to sandy beach habitat and associated biological resources. Nesting bird surveys, coordination with wildlife agencies, and work restrictions would avoid direct and indirect impacts to beach-nesting and foraging bird species. Pre-construction California grunion spawning surveys and postponement of placement activities during active spawning or egg incubation periods would avoid disturbance or burial of grunion eggs. Biological monitoring and

establishment of daily impact radii would minimize the potential for disturbance to marine mammals by allowing individuals to detect and avoid construction-related noise and activity.

Given the temporary and localized nature of project activities, the limited spatial extent of beach and nearshore disturbance, and the mobility of species associated with sandy beach habitat, implementation of these mitigation measures would reduce potential impacts to sensitive natural communities to less than significant levels. With implementation of Mitigation Measures MM-BIO-1 through MM-BIO-3 and MM-BIO-5, the proposed project would not 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 CDFW or USFWS.

c. Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means?

Less-Than-Significant Impact. There are no known wetlands within the Wharf 2 project site, which is fully developed and consists of existing port and harbor infrastructure. However, Hueneme Beach is classified as an estuarine and marine wetland (USFWS 2025b). Dredged material from various projects conducted within Port Hueneme has been placed on Hueneme Beach in 1990, 1991, 1999, 2020, and 2021. These past beach nourishment activities have not resulted in substantial adverse effects to the classified wetland at Hueneme Beach. The proposed project would involve similar nearshore or beach placement activities and would not result in permanent loss of wetland area, long-term alteration of wetland hydrology, or conversion of wetland habitat to non-wetland uses.

Beach nourishment is a dynamic process that mimics natural sediment transport and redistribution along coastal shorelines. Placement of compatible dredged material would temporarily alter surface conditions but is expected to be reworked by natural wave action over time. As a result, project-related beach nourishment would not substantially interfere with the physical or biological functions of the estuarine and marine wetland at Hueneme Beach.

Accordingly, the proposed project would not result in a substantial adverse effect on state or federally protected wetlands, and impacts would be less than significant.

d. Would the project 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?

Less-Than-Significant Impact After Mitigation. The project area is located within an active, developed port environment and does not contain established terrestrial wildlife movement corridors or native wildlife nursery sites. Nearshore and offshore waters within and adjacent to the project area function as movement corridors for fish and marine mammals.

Temporary displacement of fish, including species covered under the Pacific Fishery Management Council's fishery management plans, may occur during dredging, placement, and pile installation or removal activities associated with Wharf 2 improvements. Increases in turbidity, suspended sediment, and underwater noise would be localized and temporary. Fish present in the immediate work area may temporarily avoid active construction zones, resulting in short-term displacement; however, no long-term interference with regional fish movement patterns or migratory pathways would occur. No net loss of rocky intertidal, rocky subtidal, or soft-bottom fish habitat would result from the proposed project, and no long-term effects on fish foraging or spawning habitat are anticipated.

Noise associated with dredging and pile driving would be limited in spatial extent and duration and is not expected to generate short, high-intensity sound levels that could cause startle responses over a broad area. Turbidity plumes would be temporary and confined to the immediate vicinity of active work areas. While some fish may avoid these conditions, others may be attracted to the area to forage on benthic organisms suspended during dredging. These responses would not constitute a substantial barrier to fish movement or migration.

There are no native wildlife nursery sites within the project area, and project activities would not impede access to or use of nursery habitats. With implementation of Mitigation Measures MM-BIO-3 (On-Site Qualified Biologist) and MM-BIO-4 (Soft-Start Techniques), potential effects on fish and marine mammal movement would be minimized by allowing individuals to detect and avoid active construction areas. Implementation of mitigation would reduce the proposed project's impacts to less-than-significant levels.

e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No Impact. The proposed project would not require tree removal and would not affect any locally protected biological resources. No local policies or ordinances protecting biological resources, including tree preservation ordinances, would be triggered by project implementation. Therefore, the proposed project would not conflict with local policies or ordinances protecting biological resources, and no impact would occur.

f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. There are no adopted Habitat Conservation Plans, Natural Community Conservation Plans, or other approved local, regional, or state habitat conservation plans that apply to the proposed project area. As a result, the proposed project would not conflict with the provisions of any such plans, and no impact would occur.

3.3.5 Cultural Resources

Would the project:		Potentially Significant Impact	Less-Than-Significant Impact After Mitigation	Less-Than-Significant Impact	No Impact
a.	Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	☐	☐	☒	☐
b.	Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☒	☐	☐
c.	Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

3.3.5.1 Affected Environment

The Wharf 2 project area is located within a highly disturbed, industrialized setting that has undergone extensive dredging and development since the onset of non-Native settlement. The project area is surrounded by marine cargo facilities, warehouses, and harbor navigation routes, with the wharf including existing bulkheads and riprap armoring along the eastern shoreline. The nearshore placement site at Hueneme Beach has also been subject to repeated disturbance by past dredged material placement activities. Prior to modern development, natural coastal and deltaic alluvial processes likely reworked sediments in the area, thereby reducing the preservation potential of early archaeological resources.

According to a search of the California Historical Resources Information System (CHRIS) conducted in 2015, there is one recorded cultural resource within the project area, several shipwrecks with unknown locations, and one historic built environment resource. Twenty-eight cultural resource surveys have been conducted within 0.5 mile of the project area, with two including surveys within the project area. In 2008, the USACE in conjunction with the U.S. Navy conducted a cultural resources assessment for maintenance dredging within the project area (USACE and Navy 2008). Prior to that in 1994, the USACE undertook an underwater remote sensing survey associated with dredged material redistribution (USACE 1994).

The only archaeological site (CA-VEN-663) within the project area was reported by Van Valkenberg in 1933, prior to the initial construction of the harbor, and revisited in 1979, when it was described as a prehistoric habitation debris site; other sources characterize the site as a shell midden (Trinomial CA-VEN-663; Pumphrey 2010). Subsequent investigations and reports indicate that the site was substantially disturbed or destroyed during dredge work in the project area (William Self Associates 1995; Grossgold 2003).

There are several historic properties immediately surrounding the project area that are not within the project area and would not be affected by proposed project activities. The Point Hueneme Lighthouse (Ventura County Historical Landmark #57), constructed in 1874, is listed or eligible for listing in the National Register of Historic Places (NRHP; Garner 1991). An updated CHRIS search has been requested and will be incorporated upon receipt.

3.3.5.2 Applicable Regulations

3.3.5.2.1 National Historic Preservation Act

The National Historic Preservation Act of 1966 (54 USC 300101 et seq.) establishes federal policy for the protection of historic and archaeological resources. Section 106 of the National Historic Preservation Act (54 USC 306108) requires federal agencies, or applicants requiring federal permits or approvals, to consider the effects of their undertakings on historic properties listed in or eligible for listing in the NRHP and to consult with the State Historic Preservation Officer, Tribal Historic Preservation Officers, and other interested parties, as appropriate.

3.3.5.2.2 Archaeological Resources Protection Act

The Archaeological Resources Protection Act of 1979 protects archaeological resources located on public and Native American lands and establishes permitting requirements for excavation or removal of such resources.

3.3.5.2.3 Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act establishes procedures for the treatment, repatriation, and disposition of Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony discovered on federal or Tribal lands.

3.3.5.2.4 California Environmental Quality Act

The following guidelines determine if a resource is considered historical or significant under CEQA:

- A resource may be considered a historical resource if it is listed in, or eligible for listing in, the California Register of Historical Resources (CRHR), included in a local register, or determined significant by a lead agency (PRC 5024.1; CEQA Guidelines Section 15064.5[a]).
- An archaeological resource is considered significant if it meets the criteria for listing in the CRHR or if it is a unique archaeological resource (PRC 21083.2).

3.3.5.2.5 California Register of Historical Resources

The CRHR is the authoritative guide to the State's significant historical and archaeological resources and is administered by the California Office of Historic Preservation.

3.3.5.2.6 *Human Remains Statutes*

California Health and Safety Code Section 7050.5 requires that work cease immediately if human remains are discovered and that the County Coroner be notified. If remains are determined to be Native American, the Coroner must notify the Native American Heritage Commission.

3.3.5.2.7 *Native American Heritage Commission and Most Likely Descendant Process*

PRC 5097.98 outlines procedures for the identification and respectful treatment of Native American human remains and associated grave goods, including consultation with a Most Likely Descendant designated by the Native American Heritage Commission.

3.3.5.2.8 *Ventura County General Plan and Local Policies*

The Ventura County General Plan includes policies intended to identify, protect, and preserve significant archaeological, historical, and Tribal cultural resources. Projects requiring discretionary approval must be evaluated for potential impacts to cultural resources and must incorporate avoidance or mitigation measures, as appropriate, to reduce impacts to less-than-significant levels.

3.3.5.3 **Impact Evaluation**

a. Would the project cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?

Less-Than-Significant Impact. There are no recorded historical resources that retain integrity or significance located in the project area. Historic-era development (development performed in the last 50 years) within the project area consists of modern port and harbor infrastructure constructed after extensive dredging and shoreline modification. There are no structures in the upland area that would be modified or destroyed, and any potential in-water historic structures were previously identified as destroyed or substantially disturbed during previous dredging activities, as documented in prior cultural resources investigations conducted by the USACE and U.S. Navy (USACE and Navy 2008).

The only identified historic resource in the vicinity, the Point Hueneme Lighthouse, is located outside the project footprint and would not be physically altered, visually affected, or otherwise impacted by the proposed project. Based on the absence of intact historical resources within the project area, the highly disturbed condition of in-water sediments, and the lack of project activities affecting adjacent historic properties, the proposed project would not cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5. Impacts would be less than significant.

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

Less-Than-Significant Impact After Mitigation. The project site contains a single previously recorded archaeological resource (CA-VEN-663) within the in-water portion of the project area that was documented as destroyed during earlier dredging activities. There are no recorded archaeological resources in the upland portion of the project area that would be modified or destroyed, and previous investigations indicate that additional intact archaeological resources are unlikely to be present due to extensive dredging, sediment reworking, and industrial development.

Based on the results of prior cultural resources investigations, underwater remote sensing surveys, and the highly disturbed condition of in-water sediments, the potential to encounter intact archaeological resources is low. However, in-water construction activities have the potential to encounter previously unidentified archaeological materials, and the disturbance of such resources would constitute a potentially significant impact. Implementation of the following mitigation measure would be required to reduce impacts:

- ***MM-CUL-1: Cultural and Tribal Cultural Resources Inadvertent Discovery Procedures.*** *In the event that previously unidentified cultural resources, Tribal Cultural Resources (as defined in Public Resources Code Section 21074), or human remains are encountered during ground-disturbing or in-water construction activities, all work shall cease immediately within 10 meters (30 feet) of the discovery. Construction may continue in other areas away from the discovery location.*

A qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards shall be retained by the Port to evaluate the discovery and determine its significance pursuant to CEQA Guidelines Section 15064.5.

If the resource is determined to be a Tribal Cultural Resource, the Port shall notify the appropriate California Native American Tribe(s) and engage in consultation in accordance with Assembly Bill 52. Consultation shall be conducted for the purpose of determining appropriate treatment measures, which may include avoidance, preservation in place, or other culturally appropriate measures identified in consultation with the Tribe(s).

If human remains are discovered, the Ventura County Coroner shall be notified immediately in accordance with California Health and Safety Code Section 7050.5. If the Coroner determines that the remains are Native American, the Coroner shall notify the Native American Heritage Commission (NAHC), which shall designate a Most Likely Descendant (MLD). Treatment of the remains and any associated grave goods shall be carried out in accordance with the recommendations of the MLD pursuant to Public Resources Code Section 5097.98.

Construction activities within the discovery area shall not resume until the evaluation is complete and any required treatment measures have been implemented.

With implementation of Mitigation Measure MM-CUL-1, potential impacts to previously unidentified archaeological resources would be reduced to less-than-significant levels.

c. Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

Less-Than-Significant Impact After Mitigation. There is no evidence that human remains or associated burial materials are present within the project area. Based on prior cultural resources investigations, the extensive history of dredging and sediment disturbance within the in-water portions of the project area, and the absence of known burial sites, the potential to encounter human remains during project implementation is low. No human remains have been identified in previous investigations conducted within or adjacent to the project area.

However, ground-disturbing and in-water construction activities have the potential to encounter previously unidentified human remains, and disturbance of such remains would constitute a potentially significant impact. Implementation of Mitigation Measure MM-CUL-1 (Cultural and Tribal Cultural Resources Inadvertent Discovery Procedures) would be required to ensure compliance with applicable state laws and to reduce potential impacts.

Implementation of Mitigation Measure MM-CUL-1 (Cultural and Tribal Cultural Resources Inadvertent Discovery Procedures) would ensure that any previously unidentified human remains encountered during construction are appropriately handled in consultation with California Native American Tribes and applicable state laws. With implementation of this mitigation measure, potential impacts would be reduced to less-than-significant levels.

3.3.6 Energy

Would the project:		Potentially Significant Impact	Less-Than-Significant Impact After Mitigation	Less-Than-Significant Impact	No Impact
a.	Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b.	Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

3.3.6.1 Affected Environment

This section addresses energy resources that would be used during construction of the proposed project. Energy use associated with construction would consist primarily of transportation-related fuels and electricity. No use of natural gas is proposed. The proposed project would not introduce new Port operations or long-term operational energy demand as existing vessels, and cargo activities at the Port of Hueneme would remain unchanged. The primary operational change would be improved vessel access to Wharf 2, which would reduce the need for vessels to maneuver or wait within or outside the harbor.

3.3.6.1.1 Environmental Setting

Due to the size of its population, California's energy consumption ranks as the second highest in the United States, with an estimated total consumption of 6,015 trillion British thermal units in 2023. The state's energy consumption per capita, however, ranks as the second lowest in the country because of its mild climate and policies related to energy efficiency (USEIA 2025). California ranks as 12th in the country as a producer of energy, producing 1,642 trillion British thermal units in 2023. In 2024, California was the highest producer of electricity from solar and geothermal energy in the country and the second-highest producer of biomass energy and hydroelectric power generation (USEIA 2025). California was the eighth-largest producer of crude oil among the 50 states, and, as of January 2024, it ranked third in crude oil refining capacity (USEIA 2025).

Electricity. Electricity demand, usage, and production in the state is projected to increase in the near future due to population growth and other factors, including climate change (CEC 2025a). The latest data from the California Energy Commission shows that in 2023, approximately 42.9% of California's retail electricity sales were served by Renewables Portfolio Standard-certified renewable energy sources such as solar, wind, geothermal, biomass, and small hydroelectric—up from more than 37% in 2021. Together with large hydroelectric and nuclear power, approximately 67% of the state's electricity came from zero-carbon, clean energy sources in 2023 (CEC 2023, CEC 2025b).

In California, utilities must procure adequate capacity (through generation contracts, storage, and demand response) to serve customers' peak loads and are monitored by the California Public Utilities Commission (CPUC) and the California Independent System Operator for planning adequacy.

Electric service at the Port of Hueneme is provided by Southern California Edison. Southern California Edison has undertaken infrastructure upgrades specifically to increase capacity and maintain reliable service in Ventura County. Investments also include energy storage and grid enhancements that help meet peak demand and integrate renewable energy (CPUC 2024). Demand at the Port is driven primarily by existing maritime and cargo-handling operations.

Transportation. Transportation accounts for the largest share of energy consumption in California, representing approximately 42% of total end-use energy consumption (USEIA 2025). Petroleum-based fuels continue to dominate California's transportation energy use, notwithstanding growth in alternative fuels and electrification efforts (CEC 2024). Although gasoline powered cars are still predominant, as of 2025, California had over 2 million registered electric vehicles, representing approximately 25% of the total fleet.

3.3.6.2 Applicable Regulations

Energy use in California is regulated through a combination of statutes, regulations, and policies intended to promote energy conservation, efficiency, and the use of renewable energy resources.

3.3.6.2.1 *Senate Bill 350: Clean Energy and Pollution Reduction Act*

The Clean Energy and Pollution Reduction Act (Senate Bill [SB] 350), enacted in 2015, established clean energy, clean air, and greenhouse gas (GHG) reduction goals, including reducing GHG to 40% below 1990 levels by 2030 and to 80% below 1990 levels by 2050. The California Energy Commission is working with other state agencies to implement the bill. The bill increases California's renewable electricity procurement goal from 33% by 2020 to 50% by 2030. In addition, SB 350 requires California to double statewide energy efficiency savings in electricity and natural gas end use by 2030.

3.3.6.2.2 *California Air Resources Board In-Use Off-Road Diesel Vehicle Rule*

The CARB In-Use Off-Road Diesel Regulation limits emissions from diesel construction equipment through engine standards, idling limits, and fleet requirements. Compliance with this regulation would reduce construction-related emissions and energy consumption.

3.3.6.2.3 *Port of Hueneme 2020 Strategic Plan and PACED Program*

The proposed project is part of the Port of Hueneme's capital improvement and modernization efforts under the Port's 2020 Strategic Plan and PACED Program, which emphasize infrastructure resilience, future electrification readiness, and energy efficiency. Although these long-term initiatives are not directly attributable to construction activities, the proposed project would be consistent with the Port's energy efficiency and sustainability goals.

3.3.6.3 Impact Evaluation

a. Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less-Than-Significant Impact. Construction of the proposed project would require the use of energy in the form of fossil fuels and electricity. As described in Section 3.3.6.1, the proposed project would improve operational efficiency by reducing vessel queuing and idling associated with tidal constraints at Wharf 2, which would reduce overall operational energy use.

Construction activities would occur over an approximately 15-month period, with dredging activities occurring over a shorter duration of approximately 1 month. Fuel consumption would primarily occur from diesel-powered land-based construction equipment, marine construction equipment and vessels (including dredges, tugboats, and barges), on-road haul trucks, and worker commute vehicles. Limited electricity use may also occur during construction for lighting and support equipment, and, where feasible, for select pieces of electric equipment. Where feasible, the proposed project would incorporate the use of newer, more efficient equipment, including Tier 3 or Tier 4 engines, and would utilize existing electric connections for construction equipment capable of electric operation; however, for purposes of this analysis, no energy controls beyond compliance with applicable CARB regulations were assumed.

The construction equipment and marine vessels proposed for use are typical for Port dredging and wharf rehabilitation projects and would not involve unusual, excessive, or inefficient construction practices. Equipment selection and sequencing are driven by engineering, navigational safety, and operational constraints inherent to marine construction, rather than discretionary energy use. As noted above, where feasible, the proposed project would utilize existing electric connections for construction equipment capable of electric operation. Although this would increase electricity use, electrical equipment is generally more efficient than diesel-powered equipment, and available grid-based electricity is sufficient to support such use. Construction staging, access, and phasing would be designed to minimize unnecessary equipment movement and idling.

Given the temporary nature of construction activities, the use of standard and efficient construction equipment, and the absence of long-term energy demand, the proposed project would not result in wasteful, inefficient, or unnecessary consumption of energy resources. Therefore, impacts related to energy consumption would be less than significant.

b. Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Less-Than-Significant Impact. The proposed project does not include new operational facilities, new buildings, or changes in land use that would result in long-term energy demand. Construction-related energy use would be temporary and would not result in ongoing energy consumption following completion of the proposed project.

The proposed project would not conflict with applicable state or local renewable energy or energy efficiency plans, including California's energy conservation policies, because it does not introduce new operational energy demands or reduce the availability of renewable energy resources. To the extent feasible, the proposed project would be consistent with energy efficiency goals through the use of newer, more efficient construction equipment, and minimization of unnecessary idling.

In addition, the proposed project is part of the Port of Hueneme's broader capital improvement and modernization efforts, which are intended to support long-term infrastructure resilience, future electrification, and emissions-reduction initiatives at the Port. While these benefits are realized over the long term and are not directly attributable to construction activities, the proposed project would not interfere with state or local energy efficiency or renewable energy planning efforts.

Accordingly, the proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency, and impacts would be less than significant.

3.3.7 Geology and Soils

Would the project:		Potentially Significant Impact	Less-Than-Significant Impact After Mitigation	Less-Than-Significant Impact	No Impact
a.	Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i.	Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii.	Strong seismic ground shaking?	☐	☐	☒	☐
iii.	Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv.	Landslides?	☐	☐	☐	☒
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 on- 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 direct or indirect risks to life or property?	☐	☐	☐	☒
e.	Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f.	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

3.3.7.1 Affected Environment

3.3.7.1.1 Geology and Soils

The Port is located along the coast of Ventura County on lands that have been extensively modified through historical dredging, filling, and port construction activities and underlain by artificial fill and young Quaternary alluvial and marine sediments. Materials consist of Hueneme loamy fine sand (0% to 2% slope), fill, and Hueneme sandy loam (0% to 2% slope), with subsurface materials generally consisting of sands, silts, and clays. Soils are largely fine-grained, poorly drained, exhibit moderate to high plasticity at depth, and have slow infiltration rates, with variable suitability for engineering and

infrastructure purposes (NRCS 2026). Groundwater is shallow and tidally influenced, consistent with coastal port conditions.

3.3.7.1.2 Faults and Seismicity

Surface fault ruptures are defined as slip on a fault plane that has spread to the Earth's surface and caused a rupture or disturbance. Fault rupture almost always follows pre-existing faults, which represent zones of crustal weakness. The Southern California region is seismically active and influenced by several regional fault systems. There are no Alquist-Priolo Earthquake Fault Zones mapped within the City of Port Hueneme; therefore, the potential for surface fault rupture within the Port is minimal (City 2022b). The nearest mapped faults are located approximately 8 miles southeast near Point Mugu in the Santa Monica Mountains and approximately 10 miles northwest near the base of the Santa Ynez Mountains.

3.3.7.1.3 Liquefaction

Soil liquefaction is a phenomenon in which saturated granular soils temporarily lose strength and stiffness during seismic shaking due to increased pore water pressure. Liquefaction typically occurs in loose, saturated sands and silty sands under moderate to strong ground shaking. Primary factors contributing to liquefaction include seismic ground shaking, soil composition, relative density, and shallow groundwater conditions. Earthquakes generating Modified Mercalli Intensity VII or greater may result in liquefaction (City 2022b). Liquefaction is a known regional hazard within coastal port environments due to saturated sediments and shallow groundwater conditions, where groundwater levels are generally within 50 feet of the ground surface (CGS 2025; City 2022b).

3.3.7.1.4 Slope Failure and Slope Stability

Earthquakes can induce slope instability and landslides, particularly in areas characterized by steep slopes, weak geologic materials, or elevated groundwater conditions. Other factors influencing slope stability include site geology, climate, and anthropogenic modification. The project site is entirely flat or near-flat and lacks natural or engineered slopes. As a result, the site is not susceptible to seismic-induced slope failure. The California Geological Survey (CGS) has not mapped landslide hazard zones within the project area or its immediate vicinity (CGS 2025).

3.3.7.1.5 Soil Expansion and Subsidence

Expansive soils are characterized by high clay content and undergo volume changes in response to variations in moisture content, which can exert stress on structures and infrastructure. Such soils are common in California and can damage foundations unless properly addressed through design and construction practices. Site preparation, excavation, and engineered backfill can substantially reduce expansion potential.

Subsidence refers to the gradual settling or sudden sinking of the ground surface and may result from natural processes or human activities, including consolidation of compressible soils, groundwater withdrawal, or seismic shaking. Areas underlain by artificial fill or unconsolidated sediments are more susceptible to differential settlement. Ground shaking during earthquakes may exacerbate settlement by reducing inter-particle contact stresses.

The project site is mapped as containing Hueneme loamy fine sand and Hueneme sandy loam soil units, which exhibit low to moderate shrink-swell potential (linear extensibility of approximately 0.9% to 5.7%, depending on depth; NRCS 2026). However, given the flat topography, prior disturbance, and engineered nature of existing port facilities, the potential for expansive soil-related damage or earthquake-related settlement is considered low.

3.3.7.1.6 *Erosion*

Erosion is the detachment and transport of soil by wind, water, or human activity. The project site lies within a Mediterranean climate characterized by wet winters and dry summers. As a result, soils may be more susceptible to water erosion during winter storm events and wind erosion during dry periods.

Soil survey data indicate that project site soils have moderate water-erosion potential (K-factors of approximately 0.28 to 0.49) and moderate to very high wind-erosion potential, particularly in sandy soil units such as Hueneme loamy fine sand, which has a wind erodibility index of approximately 134 (NRCS 2026). Disturbed soils could be susceptible to erosion in the absence of standard erosion and sediment control measures. However, the project site within the Port is flat or near-flat, is largely paved or armored, and does not exhibit evidence of substantial or active erosion. The part of Hueneme Beach that is closest to the Port experiences continuous erosion and is nourished periodically with dredged materials.

3.3.7.1.7 *Paleontology*

The proposed project is located within an extensively disturbed and frequently dredged port environment. The Bureau of Land Management classifies geologic units based on their paleontological sensitivity, which reflects the likelihood of encountering scientifically significant fossil resources (BLM 2007, 2008). Geologic formations with potential to contain vertebrate fossils are considered highly sensitive, whereas formations containing only invertebrate fossils are generally considered to have low sensitivity.

The project site is underlain by artificial fill and Holocene-age alluvial and marine sediments associated with the coastal plain near the Port. Holocene deposits in coastal Ventura County are young, unconsolidated, and, if fossiliferous, typically contain sparse, reworked invertebrate remains that lack primary depositional context and have low scientific significance (BLM 2007). As a result, the paleontological sensitivity of the project area is considered low.

3.3.7.2 Applicable Regulations

3.3.7.2.1.1 Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was passed following the 1971 San Fernando earthquake. The Act regulates development in California near known active faults due to hazards associated with surface fault ruptures. Alquist-Priolo maps are distributed to affected cities, counties, and state agencies for their use in planning and controlling new construction. Areas within an Alquist-Priolo Earthquake Fault Zone require special studies to evaluate the potential for surface rupture to ensure that no structures intended for human occupancy are constructed across an active fault.

3.3.7.2.1.2 Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act (SHMA) was passed in 1990 following the 1989 Loma Prieta earthquake. The SHMA directs the CGS to identify and map areas prone to liquefaction, earthquake-induced landslides, and amplified ground shaking. CGS has completed seismic hazard mapping for the portions of California most susceptible to liquefaction, landslides, and ground shaking. The SHMA requires that agencies only approve projects in seismic hazard zones following site-specific geotechnical investigations to determine if the seismic hazard is present and identify measures to reduce earthquake-related hazards. Staff geologists in the Seismic Hazard Zonation Program gather existing geological, geophysical, and geotechnical data from numerous sources to produce the Seismic Hazard Zone Maps. They integrate and interpret these data regionally to evaluate the severity of the seismic hazards and designate those areas prone to liquefaction and earthquake-induced landslides as Zones of Required Investigation. Cities and counties are then required to use the Seismic Hazard Zone Maps in their land use planning and building permit processes. The SHMA requires that site-specific geotechnical investigations be conducted within the Zones of Required Investigation to identify and evaluate seismic hazards (i.e., liquefaction and earthquake-induced landslides) and formulate mitigation measures prior to permitting most developments designed for human occupancy.

3.3.7.2.1.3 California Building Code

The 2019 California Building Standards Code (CBC) was published on July 1, 2019, with an effective date of January 1, 2020. The CBC, which applies to all applications for building permits, consists of 11 parts that contain administrative regulations for the California Building Standards Commission and for all State agencies that implement or enforce building standards. Local agencies must ensure that development complies with the CBC guidelines. Cities and counties can adopt additional building standards beyond the CBC. Part 2 of the CBC is based on the 2019 International Building Code.

3.3.7.2.1.4 Soil Investigation Requirements

California Health and Safety Code Sections 17953 to 17955 and Section 1802 of the CBC identify requirements for soils investigations for subdivisions requiring tentative and final maps, and for other

specified types of structures. Testing of samples from subsurface investigations is required, such as from borings or test pits. Studies must evaluate slope stability, soil strength, position and adequacy of load-bearing soils, the effect of moisture variation on load-bearing capacity, compressibility, liquefaction, differential settlement, and expansiveness.

3.3.7.2.1.5 City of Port Hueneme General Plan

The City's General Plan (City 2022b) includes policies related to geologic hazards and paleontological resources. The following policy is relevant to the proposed project:

- Policy PSF 1-8: Ensure that existing critical and semi-critical structures throughout the City meet seismic safety standards and that new facilities are developed in accordance with updated standards and standard of service studies.

3.3.7.3 Impact Evaluation

a. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i) rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (refer to Division of Mines and Geology Special Publication 42); ii) strong seismic ground shaking; iii) seismic-related ground failure, including liquefaction; or iv) landslides?

i) and ii) **Less-Than-Significant Impact.** The entire Southern California region is seismically active and influenced by several regional fault systems. However, there are no Alquist-Priolo Earthquake Fault Zones mapped within the City; therefore, the potential for surface fault rupture at the project site is minimal. Strong seismic shaking is a regional hazard. The proposed project would be subject to applicable seismic design and construction requirements under the CBC as adopted by the City. The proposed project would not expose people to increased risk of injury or death because it does not involve construction of habitable buildings or permanent occupied structures. Dredging, wharf improvements, and sediment placement would be conducted in accordance with standard engineering practices and construction safety protocols to minimize risk to workers and the public. Therefore, impacts would be less than significant.

iii) **Less-Than-Significant Impact.** The project site is underlain by artificial fill and young marine and alluvial sediments typical of developed port environments. Although such materials can be susceptible to settlement or liquefaction under seismic loading, the proposed wharf improvements and associated in-water structures would be supported by engineered foundations designed to accommodate site-specific geotechnical conditions. Furthermore, dredging and sediment placement activities would not alter subsurface geologic conditions or increase liquefaction susceptibility beyond existing conditions.

With compliance with applicable engineering design criteria and construction standards, the proposed project would not result in substantial seismic-related ground failure, including liquefaction, and impacts would be less than significant.

iv) **No Impact.** As previously discussed, the project site is flat and not located within a mapped landslide hazard zone. The proposed project would not create slopes or modify topography in a manner that could induce slope instability. Therefore, the proposed project would have no impact related to landslides.

b. Would the project result in substantial soil erosion or the loss of topsoil?

Less-Than-Significant Impact. The proposed project would occur entirely within an existing developed port facility, nearshore waters, and beach placement areas. Project activities would be limited to in-water dredging, wharf improvements, and nearshore or beach sediment placement.

The proposed project would not involve grading of native soils or disturbance of natural topsoil horizons. The potential for erosion during construction is low due to the flat topography and predominance of paved, armored, or submerged surfaces. Temporary construction activities would be subject to standard construction best management practices (BMPs), including erosion and sediment control measures, as required by applicable permits. Therefore, impacts related to soil erosion or loss of topsoil would be less than significant.

If beach nourishment is selected, the proposed project would help address existing erosion at Hueneme Beach, resulting in a beneficial impact.

c. Would the project 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- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Less-Than-Significant Impact. The project site is underlain by fill and young marine and alluvial sediments found in typical port environments. While such materials can be susceptible to settlement or liquefaction, project design would incorporate appropriate geotechnical recommendations to address site-specific soil conditions. With implementation of engineered foundation systems and compliance with applicable geotechnical and construction standards, the proposed project would not result in substantial geologic instability, including lateral spreading, subsidence, or collapse.

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

No Impact. Although site soils may exhibit low to moderate shrink-swell potential, the proposed project does not include construction of habitable buildings or conventional foundations sensitive to expansive soils.

The proposed project would require construction of submerged structural elements, including steel sheet pile structures, which would be engineered to accommodate soil movement, expansion, contraction, and seismic forces. Therefore, the proposed project would not create substantial risks to life or property related to expansive soils.

e. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact. The proposed project would not generate wastewater and would not involve installation or modification of septic tanks or alternative wastewater disposal systems. Therefore, no impact would occur.

f. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less-Than-Significant Impact. The project area is a highly disturbed harbor and coastal environment that has been subject to repeated dredging, sediment reworking, and port operations over many decades. Underlying sediments consist primarily of Holocene-age alluvial and marine deposits, which have low paleontological sensitivity and are not typically associated with unique or scientifically significant fossil resources.

Given the disturbed nature of the site and the low potential for intact or scientifically significant fossil resources within the geologic units present, the likelihood of encountering intact or unique paleontological resources is low; therefore, impacts would be less than significant.

3.3.8 Greenhouse Gas Emissions

Would the project:		Potentially Significant Impact	Less-Than-Significant Impact After Mitigation	Less-Than-Significant Impact	No Impact
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?	☐	☐	☒	☐

3.3.8.1 Affected Environment

This section describes existing GHG conditions relevant to the proposed project and the regulatory framework applicable to GHG emissions. The project does not include an operational component that would result in long-term or ongoing GHG emissions; therefore, the analysis focuses on temporary construction-related emissions only.

3.3.8.1.1 Environmental Setting

Global climate change results from GHG emissions caused by several activities, including fossil fuel combustion, deforestation, and land use change. GHGs trap infrared radiation emitted from the Earth's surface, which otherwise escapes to space. The most prominent GHGs contributing to this process include carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). Certain refrigerants, including chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), and hydrofluorocarbons (HFCs), also contribute to climate change. The greenhouse effect keeps the Earth's atmosphere near the surface warmer than it would be otherwise and allows for successful habitation by humans and other forms of life.

Fossil fuel combustion removes carbon stored underground and releases it into the atmosphere. Emissions of GHGs are responsible for the enhancement of the greenhouse effect and contribute to what is termed "global warming," a trend of unnatural warming of the Earth's natural climate. Increased concentrations of GHGs in the Earth's atmosphere increase the absorption of radiation and further warm the lower atmosphere. This process increases evaporation rates and temperatures near the surface. Climate change is a global problem, and GHGs are global pollutants, unlike criteria pollutants (such as ozone, CO, and PM) and toxic air contaminants, which are pollutants of regional and local concern (see Section 3.3.3).

Global warming potential (GWP) is a measure of how much a given mass of GHG contributes to global warming. A relative scale is used to compare the gas in question to CO₂ (which has a GWP of 1). In this analysis, CH₄ is assumed to have a GWP of 25, and N₂O is assumed to have a GWP of

298, consistent with CalEEMod methodology (CalEEMod 2022). Refrigerants have a GWP ranging from 76 to 12,240. Consequently, using each pollutant's GWP, emissions of CO₂, CH₄, N₂O, CFCs, HCFCs, and HFCs can be converted into CO₂ equivalence (CO₂e). Recent environmental changes linked to global warming include rising temperatures, shrinking glaciers, thawing permafrost, a lengthened growing season, and shifts in plant and animal ranges (IPCC 2021, CCCC 2018, USGCRP 2014). In California, an assessment of climate change impacts predicts that temperatures will increase between 5.6°F to 8.8°F by 2100, based on low and high global GHG emission scenarios (CNRA 2018). Predictions of long-term negative environmental impacts in California include worsening of air quality problems, a reduction in municipal water supply from the Sierra snowpack, sea level rise, an increase in wildfires, damage to marine and terrestrial ecosystems, and an increase in the incidence of infectious diseases, asthma, and other human health problems (CNRA 2018).

3.3.8.2 Applicable Regulations

Energy use and GHG emissions in California are regulated through a combination of statutes, regulations, and policies intended to promote energy conservation, efficiency, and the use of renewable energy resources and to reduce GHG emissions and address climate change.

3.3.8.2.1 Assembly Bill 32: California Global Warming Solutions Act of 2006 with Updates (2008, 2014, 2017, and 2022)

The California Global Warming Solutions Act of 2006, widely known as AB 32, required the CARB to develop and enforce regulations for the reporting and verification of statewide GHG emissions. The CARB was directed to set a GHG emission limit, based on 1990 levels, to be achieved by 2020.

AB 32 also required the CARB to adopt a Scoping Plan identifying measures to achieve GHG reductions in a technologically and economically feasible manner. On December 11, 2008, the CARB adopted the AB 32 Scoping Plan, which established the framework for meeting California's GHG reduction goals.

The CARB has periodically updated the Scoping Plan to reflect evolving state climate goals and regulatory programs. Most recently, the CARB adopted the 2022 Climate Change Scoping Plan, which establishes the state's strategy to achieve economy-wide carbon neutrality by 2045 and reduce GHG emissions by at least 85% below 1990 levels (CARB 2022).

3.3.8.2.2 Senate Bill 32 (2016)

SB 32 codified California's 2030 GHG reduction target, requiring statewide GHG emissions to be reduced to 40% below 1990 levels by 2030. SB 32 builds upon AB 32 and directs the CARB to ensure that GHG reduction programs continue beyond 2020.

3.3.8.2.3 Executive Orders Addressing Climate Change

California's long-term climate goals are established through statutes and executive actions directing the State to achieve substantial GHG reductions and carbon neutrality by 2045, as implemented through CARB's Climate Change Scoping Plan.

3.3.8.2.4 Low Carbon Fuel Standard

The Low Carbon Fuel Standard, adopted by the CARB pursuant to Executive Order S-01-07, requires a reduction in the carbon intensity of California's transportation fuels by at least 20% by 2030. The Low Carbon Fuel Standard applies to transportation fuels supplied for use in California, including diesel used by construction equipment and marine vessels operating in California.

3.3.8.2.5 California's Renewables Portfolio Standard

The Renewables Portfolio Standard requires that retail electricity providers procure increasing percentages of electricity from renewable and zero-carbon resources, reaching 60% by 2030 and 100% clean electricity by 2045 pursuant to SB 100.

3.3.8.2.6 Senate Bill 100

SB 100 established a statewide goal of providing 100% of retail electricity sales from renewable and zero-carbon resources by 2045, with an interim target of 60% renewable electricity by 2030. This policy supports long-term decarbonization of electricity supplies used by shore-powered and electrified equipment.

3.3.8.2.7 Local Policies

At the local level, the proposed project is consistent with the Port's 2020 Strategic Plan and PACED Program, which emphasize infrastructure modernization, operational efficiency, emissions reduction, and readiness for future electrification and shore power. While these initiatives primarily address long-term port operations, they provide context for minimizing energy use and GHG emissions where feasible during construction.

3.3.8.3 Methodology for Determining Impacts

In determining the significance of a project's impacts, the lead agency may consider a project's consistency, supported by substantial evidence, with the State's long-term climate goals or strategies, provided that substantial evidence supports the agency's analysis of how those goals or strategies address the project's incremental contribution to climate change and its conclusion that the project's incremental contribution is consistent with those plans, goals, or strategies (CEQA Guidelines Section 15064.4[b][3]).

In December 2018, the California Natural Resources Agency clarified several points regarding the method for determining GHG impacts in CEQA documents. CEQA Guidelines Section 15064.4

includes the following provisions as summarized by the Governor's Office of Planning and Research (OPR; OPR 2018):

- *Lead agencies must analyze the greenhouse gas emissions of proposed projects* (CEQA Guidelines Section 15064.4[a]).
- *The focus of the lead agency's analysis should be on the project's effect on climate change, rather than simply focusing on the quantity of emissions and how that quantity of emissions compares to statewide or global emissions* (CEQA Guidelines Section 15064.4[b]).
- *Lead agencies may rely on plans prepared pursuant to Section 15183.5 (Plans for the Reduction of Greenhouse Gases) in evaluating a project's greenhouse gas emissions* (CEQA Guidelines Section 15064.4[b][3]).

The CEQA Guidelines provide that, when available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make determinations of significance for GHG emissions. Neither the City of Port Hueneme nor the VCAPCD have adopted any specific thresholds of significance for construction or operational GHG emissions. Accordingly, the significance of GHG impacts for the proposed project is evaluated based on consistency with applicable state and local climate policies and the project's incremental contribution to climate change.

3.3.8.4 Impact Evaluation

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

Less-Than-Significant Impact. Construction-related GHG emissions associated with the proposed project would primarily result from combustion of fossil fuels in diesel-powered land-based and marine-based construction equipment, including dredges, tugboats, barges, crane barges, pile driving equipment, haul trucks, and support vehicles, as shown in Table 7. Construction-related GHG emissions were estimated based on the anticipated construction schedule and equipment usage using the methodologies described in Section 3.3.3. A detailed description of construction assumptions, including equipment types, horsepower ratings, load factors, operating hours, and vessel activity, is provided in Appendix A.

Table 7
Construction Greenhouse Gas Emissions

Year	Category	CO ₂ e (MT/year)
2028	Off-Road Equipment	65
	On-Road Trucks	82
	Marine Equipment	395

Year	Category	CO ₂ e (MT/year)
	Total	542
2029	Off-Road Equipment	18
	On-Road Trucks	25
	Marine Equipment	315
	Total	358

These emissions would be temporary, and would cease upon completion of construction activities.

Although construction-related GHG emissions would occur, the proposed project does not include long-term operational sources of GHG emissions and would not result in ongoing increases in GHG emissions following construction.

Based on the temporary nature of construction emissions, the absence of long-term operational emissions, and consistency with applicable state climate goals and regulatory programs, the proposed project would not result in a cumulatively considerable contribution to climate change. This impact would be less than significant.

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

Less-Than-Significant Impact. The City of Port Hueneme General Plan includes goals and policies addressing GHG emissions, climate change mitigation, and climate resilience through its Climate Action Plan framework. The Climate Action Plan is intended to reduce community-wide GHG emissions consistent with state targets established under AB 32 and SB 32, primarily through long-term strategies related to land use planning, transportation, energy efficiency, renewable energy, and waste reduction. The General Plan recognizes the Port of Hueneme as a critical industrial and transportation hub and supports continued Port operations and infrastructure improvements while encouraging modernization, efficiency, and emissions reductions where feasible. General Plan and Climate Action Plan policies are primarily directed at long-term operational activities, new development, and community-wide emissions reductions.

The District has a Zero Emissions Blueprint Decarbonization Plan, which is guiding the near-term electrification of the Port's cargo-handling equipment and light duty fleets as well as shore power for ocean-going vessels. In addition, the District is finalizing a Port Climate Action and Adaptation Plan, which addresses the Port's GHG contributions and pathways to reductions and climate change resilience.

The proposed project consists of temporary construction activities to improve existing Port infrastructure and does not include new development or operational changes that would result in

long-term GHG emissions. As discussed above, construction-related GHG emissions would be temporary and would cease upon completion of the project.

Although the City does not have jurisdictional authority over the District's planning, the proposed project would not conflict with or obstruct implementation of the City's Climate Action Plan. The project would also not conflict with the Port's Zero Emissions Blueprint Decarbonization Plan, development of a Port Climate Action Plan, sustainability initiatives, or applicable state GHG reduction policies because it does not introduce new operational sources of emissions or increase long-term energy demand. Therefore, impacts would be less than significant.

3.3.9 Hazards and Hazardous Materials

Would the project:		Potentially Significant Impact	Less-Than-Significant Impact After Mitigation	Less-Than-Significant Impact	No Impact
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 handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d.	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐
e.	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f.	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
g.	Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	☐	☒

3.3.9.1 Affected Environment

The project site is located within a developed harbor that has historically supported maritime and industrial activities typical of port environments. Historical use of creosote-treated timber pilings and other in-water structures has occurred within the Port. Creosote-treated wood contains polycyclic aromatic hydrocarbons (PAHs), which are regulated under applicable federal and state water quality and hazardous materials regulations. Where project components have similar hazards and hazardous materials considerations, they are evaluated together. Where relevant differences exist among project components or placement options, those differences are described.

3.3.9.1.1 *Emergency Response Plans*

The Cities of Port Hueneme and Oxnard have designated Tsunami Inundation Zone & Evacuation Routes Maps that apply to the project area (City Police Department 2006). The closest evacuation routes to the Port of Hueneme are North Ventura Road northbound, located approximately one mile northeast, and Pleasant Valley Road eastbound, located approximately 1.9 miles northeast (City Police Department 2006). The proposed project would not alter designated evacuation routes or impair access to emergency response facilities.

3.3.9.1.2 *Wildfire Hazards*

The Port is highly industrialized and paved. Per the California Department of Forestry and Fire Protection's (CAL FIRE's) Fire Hazard Severity Zone (FHSZ) map, the Port of Hueneme is not located within a mapped FHSZ and is not subject to wildland fire risk.

3.3.9.2 *Applicable Regulations*

3.3.9.2.1 *Resource Conservation and Recovery Act*

The federal Resource Conservation and Recovery Act regulates the generation, handling, transport, and disposal of hazardous waste. In California, the Department of Toxic Substances Control is authorized to implement the Resource Conservation and Recovery Act in lieu of the USEPA.

3.3.9.2.2 *U.S. Department of Transportation Hazardous Materials Regulations (49 Code of Federal Regulations 100–185)*

The U.S. Department of Transportation Hazardous Materials Regulations govern the transport of hazardous materials in commerce. Construction-related transport of fuels or hazardous materials would be subject to U.S. Department of Transportation requirements.

3.3.9.2.3 *Hazardous Waste Control Law*

The Hazardous Waste Control Law (California Health and Safety Code [HSC], Division 20, Chapter 6.5) implements hazardous waste management requirements in California, including standards that are more stringent than federal regulations. The program is administered by the Department of Toxic Substances Control.

3.3.9.2.4 *Porter-Cologne Water Quality Control Act*

The Porter-Cologne Water Quality Control Act (Division 7 of the California Water Code) regulates discharges of waste that could affect surface water or groundwater quality. The proposed project would comply with applicable waste discharge and water quality requirements issued by the RWQCB, as required.

3.3.9.2.5 Occupational Health and Safety, Including 29 Code of Federal Regulations

The California Division of Occupational Safety and Health (Cal/OSHA) and Occupational Safety and Health Administration (OSHA) establish and enforce worker safety requirements, including those related to hazardous materials handling. Construction activities would be conducted in compliance with applicable Cal/OSHA requirements, including hazard communication, training, and emergency response procedures.

3.3.9.3 Impact Evaluation

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

Less-Than-Significant Impact. The proposed project would involve removal and off-site disposal of creosote-treated timber pilings and management of dredged sediment. Dredged sediment would be characterized prior to removal and placement and managed in compliance with applicable regulations, including proper characterization, containment, transport, and disposal at approved facilities.

Based on sediment characterization results and regulatory review, dredged material would be directed to an appropriate management option, including trench placement, an existing CAD site, or beneficial reuse through beach nourishment or nearshore placement. Routine transport and disposal activities would be conducted using established BMPs, reducing the potential for hazardous materials exposure.

The proposed project would not result in new long-term hazardous materials use or storage, although small quantities of fuels, lubricants, and solvents would be used during construction for equipment operation and maintenance. The transport, use, and storage of hazardous materials during construction activities would be conducted in accordance with all applicable state and federal laws, such as the Hazardous Materials Transportation Act, Resource Conservation and Recovery Act, the California Hazardous Material Management Act, and the CCR, Title 22.

Sediment placed in beach or nearshore environments would be tested to ensure that physical and chemical characteristics are suitable for intended beneficial reuse scenarios, whether beach nourishment or nearshore placement at Hueneme Beach. Material proposed for beach/nearshore placement would be evaluated for grain-size compatibility and chemical suitability consistent with applicable testing and regulatory requirements. Because beneficial reuse scenarios may present greater potential for public exposure, these sediments are managed according to appropriate guidelines that ensure that hazards to the public are less than significant.

Sediment placed in a trench excavated from Channel A or within a CAD facility would have low risk of public exposure due to restricted public access to the Port facility and limited recreational use. Additionally, the CAD would include a 1-foot cap of clean material placed on top of the dredged

material to prevent sediment movement and exposure. Material managed for unconfined aquatic disposal and CAD placement would follow a tiered testing approach that includes physical and chemical tests, and, where applicable, water column and biological testing, depending on final placement and risks to environment and people. Sediments proposed for unconfined aquatic disposal and CAD placement would be managed in accordance with applicable federal and state requirements to ensure the protection of human health and the environment.

With compliance with applicable handling, transport, and disposal requirements, routine transport, use, and disposal of hazardous materials would not create a significant hazard, and impacts would be less than significant.

b. Would the project 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?

Less-Than-Significant Impact. Reasonably foreseeable upset conditions could include the release of creosote-treated wood debris or localized resuspension of contaminated sediment during pile removal, dredging, or material handling during pile removal or sediment handling. However, the proposed project would implement standard marine construction BMPs, including controlled pile extraction techniques, debris containment, spill prevention measures, and emergency response procedures to address accidental releases should they occur.

Additionally, sediment placement would only occur following regulatory review of sediment chemistry and approval of sediment management plans. Compliance with these requirements, combined with implementation of BMPs and spill response protocols, would minimize the likelihood and potential severity of accidental releases, and impacts would be less than significant.

c. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less-Than-Significant Impact. The proposed project would involve handling of hazardous materials such as creosote-treated timber pilings and dredged sediments within a Port setting. There are no existing or proposed schools located within 0.25 mile of the project area, and construction activities would be temporary and conducted in accordance with applicable safety regulations.

Hazardous materials would be handled using appropriate containment and transport procedures, and no long-term hazardous emissions would occur. The proposed project would not involve the routine use or storage of acutely hazardous materials. Impacts would be less than significant.

d. Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Less-Than-Significant Impact. The proposed project is located within or adjacent to areas identified on lists compiled pursuant to Government Code Section 65962.5 (Cortese List) due to historical port, maritime, and military-related activities. However, the proposed project would not increase existing contamination levels or alter existing remedial conditions.

Regulatory databases identify cleanup sites in the vicinity associated with historical port and military-related activities, with contaminants of concern that include chlordane, copper, DDX, polychlorinated biphenyls (PCBs), and PAHs in sediment and surface water. One site in the vicinity has been reported as remediated through sediment excavation and backfilling with clean material, with restoration activities reportedly completed in January 2015.

Implementation of the proposed project would not expose construction workers or port personnel to conditions substantially different from existing conditions. The proposed project would not interfere with existing remediation efforts, exacerbate known contamination, or create new exposure pathways. Accordingly, no significant hazard to the public or the environment would result, and impacts would be less than significant.

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

No Impact. The project site is not located within an airport land use plan or within 2 miles of a public or public-use airport. The proposed project would not introduce new sensitive receptors. Therefore, the proposed project would not result in aviation-related safety hazards or aircraft-related noise impacts.

f. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

No Impact. Construction activities would occur within a developed port area and would be coordinated with port operations and emergency response agencies. Temporary construction-related access restrictions would be managed to maintain emergency access routes.

The proposed project would not permanently obstruct emergency response or evacuation routes and would comply with the District and local emergency response planning requirements. The proposed project would not involve the development of structures that could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Accordingly, the proposed project would not impair emergency response or evacuation planning, and no impact would occur.

g. Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

No Impact. The project site is located in a fully developed harbor environment and is not adjacent to wildlands or areas subject to wildland fire risk. The proposed project would not introduce ignition sources or land use changes that could increase wildfire risk.

3.3.10 Hydrology and Water Quality

Would the project:		Potentially Significant Impact	Less-Than-Significant Impact After Mitigation	Less-Than-Significant Impact	No Impact
a.	Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
b.	Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i.	Result in a substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
ii.	Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	☐	☐	☒	☐
iii.	Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
iv.	Impede or redirect flood flows?	☐	☐	☒	☐
d.	In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e.	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

3.3.10.1 Affected Environment

The Port is located between Point Mugu and the mouth of the Santa Clara River on the Pacific Ocean. The project site is located within a fully developed coastal harbor environment subject to tidal influence. Surface waters in the project area include navigable marine waters within the harbor and adjacent nearshore coastal waters. Water quality in the project vicinity is influenced by tidal exchange, wave action, periodic dredging, and existing maritime and port-related activities. The project area has been routinely dredged to maintain navigation depths and berth access and represents a highly disturbed marine environment.

Ventura County includes low-lying coastal areas subject to coastal hazards and related hazards. Flood Insurance Rate Maps prepared by the Federal Emergency Management Agency (FEMA) identify flood hazard zones within the county (FEMA 2024). Wharf 2 is located in Zone A99, which

represents areas subject to a 1% annual chance of flooding that are protected by a federal flood control system meeting specified criteria. The Port is located within FEMA Flood Panel 06111C0914F and is generally outside areas subject to coastal wave action. Hueneme Beach is located within FEMA Flood Zone VE, which is subject to coastal flooding associated with storm surge and wave action (FEMA 2024).

The Port of Hueneme and Hueneme Beach are also located within the County of Ventura Floodplain Overlay Zone and Coastal Protection Overlay Zone and within a mapped tsunami hazard area (California Department of Conservation 2026; County of Ventura 2021). Tsunami hazard mapping represents areas that could be inundated during a large tsunami event and is based on modeled inundation limits for long-return-period events.

Groundwater resources in coastal Ventura County occur primarily within alluvial aquifers. Groundwater quality in coastal basins is influenced by geologic conditions, land use, groundwater pumping, and saline intrusion associated with proximity to the ocean. In coastal port environments, groundwater is often brackish or saline due to tidal influence and hydraulic connectivity between marine and groundwater systems. Several groundwater monitoring wells are located within approximately 0.5 mile of Wharf 2 (GAMA 2025). However, no groundwater recharge facilities, such as spreading basins or infiltration areas, are located within or adjacent to the project area, and groundwater recharge generally occurs inland rather than within the coastal zone (DWR [date unknown]).

3.3.10.1.1 Applicable Regulations

3.3.10.1.1.1 Clean Water Act

The federal CWA is the primary statute governing surface water quality in the United States. The CWA establishes water quality standards and regulatory programs to control pollutant discharges to waters of the United States. In California, implementation of the CWA is delegated by the USEPA to the State Water Resources Control Board and the nine RWQCBs.

Key provisions of the CWA applicable to the proposed project include the following:

- **Sections 303 and 304**, which establish water quality standards and criteria
- **Section 401**, which requires state certification that activities requiring a federal permit will comply with water quality standards
- **Section 404**, which regulates the discharge of dredged or fill material to waters of the United States and is administered by the USACE

3.3.10.1.1.2 Rivers and Harbors Act

Section 10 of the Rivers and Harbors Act of 1899 regulates work or structures in navigable waters of the United States, including dredging and placement of fill. In-water components of the proposed project would require authorization from the USACE under this Act, likely through an Individual Permit.

3.3.10.1.1.3 National Flood Insurance Program

The National Flood Insurance Program, administered by FEMA, requires local governments participating in the program to adopt and enforce floodplain management regulations for development within mapped flood hazard areas. FEMA is responsible for preparing Flood Insurance Rate Maps that delineate flood hazard zones.

3.3.10.1.1.4 Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act is California's primary water quality law and applies to both surface water and groundwater. Under this Act, the State Water Resources Control Board and RWQCBs regulate discharges of waste that could affect water quality. The project area is under the jurisdiction of the Los Angeles RWQCB. Activities associated with wharf improvements, dredging, and dredged material disposal would require water quality certification and/or WDR issued by the Los Angeles RWQCB.

3.3.10.1.1.5 California Fish and Game Code

Section 5650 of the CFGC prohibits the discharge of deleterious substances into waters of the State. Section 5655 requires responsible parties to cover costs associated with cleanup and damages resulting from such discharges.

Section 1602 of the CFGC requires notification to the CDFW for activities that may substantially divert or obstruct the natural flow of a river, stream, or lake; alter the bed, channel, or bank; or deposit material where it could enter State waters. If CDFW determines that a project may substantially adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement may be required.

3.3.10.1.1.6 Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act (SGMA) establishes a framework for sustainable management of groundwater resources in California's high- and medium-priority groundwater basins. SGMA requires local agencies to form Groundwater Sustainability Agencies and implement Groundwater Sustainability Plans to achieve long-term groundwater sustainability. The proposed project does not involve groundwater extraction or recharge and would not affect groundwater sustainability planning under SGMA.

3.3.10.1.1.7 Los Angeles Water Quality Control Plan

In California, the Los Angeles Regional Water Quality Control Board (LARWQCB) is responsible for protecting water quality within the Los Angeles Region, which includes Ventura County and the Port of Hueneme. The LARWQCB implements the Water Quality Control Plan for the Los Angeles Region (Basin Plan), which designates beneficial uses for surface waters and establishes water quality objectives and implementation measures to protect those uses (LARWQCB 1994, as amended). The Basin Plan provides regulatory standards applicable to harbor waters, nearshore ocean waters, and receiving waters that may be affected by dredging, sediment management, or construction-related discharges. The project would be required to comply with all applicable water quality regulations, including stormwater BMPs and permitting requirements, to ensure that water quality objectives are maintained during construction and operation.

3.3.10.2 Impact Evaluation

a. Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less-Than-Significant Impact. Dredging and sediment placement would result in temporary increases in turbidity due to sediment resuspension in the immediate vicinity of active dredging and placement operations. These effects would be localized and short-term and would be similar to conditions associated with routine maintenance dredging in the harbor. Turbidity plumes would dissipate rapidly due to tidal circulation, wave action, and settling of suspended material.

Sediment sampling and analysis would be conducted prior to dredging consistent with applicable federal and state requirements to characterize physical properties and chemical constituents, and to support regulatory review of placement options. Only sediment that meets applicable criteria for its approved management option would be dredged and placed. Based on sediment testing and regulatory review, sediment placement would not result in violations of applicable water quality objectives or WDR.

Construction-related activities, including equipment operation, staging, and material handling, could result in accidental discharges if not properly managed. However, project activities would be conducted in accordance with permit conditions and standard construction BMPs designed to prevent releases of pollutants to surface waters.

Dredged material would be directed to one or more approved placement options based on sediment characteristics and regulatory approval, including beneficial reuse through beach nourishment or nearshore placement, unconfined aquatic placement within a trench, or placement within an existing CAD facility.

Sediment placed in beach or nearshore environments would be limited to material meeting applicable physical and chemical suitability criteria, including grain-size compatibility and contaminant thresholds protective of water quality and biological resources. Temporary and localized increases in turbidity may occur during placement but would dissipate rapidly and would not result in long-term degradation of water quality.

Sediment placed in a trench or within a CAD facility would have limited exposure pathways due to restricted access and physical containment. Unconfined aquatic placement involves more comprehensive sediment testing, including chemical and biological analyses, to ensure compliance with CWA Section 404(b)(1) Guidelines and RWQCB requirements. Placement within a CAD facility would further minimize dispersion and exposure by isolating material within an engineered containment area.

Across all placement options, permit conditions and BMPs would be implemented to minimize turbidity and prevent contaminant release.

With compliance with applicable permits, sediment testing requirements, and construction BMPs, the proposed project would not violate water quality standards or WDR, and impacts would be less than significant.

b. Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less-Than-Significant Impact. The proposed project would not result in a measurable reduction in groundwater supplies or interfere with groundwater recharge. Project activities would occur entirely within marine and coastal environments and would not involve groundwater extraction, aquifer dewatering, or installation of groundwater wells. No long-term or short-term groundwater pumping would be required during construction or operation.

The project site and surrounding areas are highly developed and largely paved, and proposed construction, dredging, staging, and demobilization activities would not alter existing land surfaces in a manner that would affect groundwater recharge. In addition, the proposed project is not located within a designated groundwater recharge area and would not affect implementation of SGMA. Accordingly, impacts to groundwater supplies and recharge would be less than significant.

c. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: i) result in a substantial erosion or siltation on- or off-site; ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or iv) impede or redirect flood flows?

Less-Than-Significant Impact. The proposed project would not substantially alter existing drainage patterns. Project activities would occur within an existing developed harbor, beach, and nearshore environment and would not involve the creation of new impervious surfaces or modifications to upland drainage infrastructure.

Surface runoff within the project area is currently conveyed via sheet flow to the Port's existing stormwater system, which discharges to marine waters. There are no natural freshwater streams or rivers within the project area. Dredging and sediment placement activities would not alter upland drainage features, stormwater conveyance capacity, or flood flow paths.

Beach nourishment and nearshore sediment placement would be compatible with existing littoral processes and would not obstruct coastal drainage or redirect flows in a manner that would increase erosion, flooding risk, or siltation. Nearshore, trench, and CAD placement would occur in permanently or tidally inundated areas at approved design depths and would not affect surface drainage or flood conveyance.

Accordingly, the proposed project would not substantially increase erosion, runoff, flooding, or polluted runoff, and would not impede or redirect flood flows. Impacts would be less than significant.

d. Would the project, in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Less-Than-Significant Impact. The proposed project site is located within areas subject to coastal flooding and tsunami hazards; however, the proposed project would not result in the release of pollutants due to inundation. Dredging and dredged material placement would occur within marine, nearshore, and beach environments that are already subject to tidal action, storm surge, and periodic extreme events.

Dredged sediments would be characterized prior to removal and placement in accordance with applicable USEPA and USACE guidelines. Sediment testing includes physical and chemical analyses, and, where required, biological testing to ensure that material does not contain contaminants at

concentrations that could pose a risk to water quality or aquatic organisms. Only sediment meeting applicable criteria for its intended placement option would be dredged and placed.

Because sediment suitability is evaluated to be protective under normal and extreme hydrologic conditions, project inundation during flooding or tsunami events would not result in the mobilization or release of pollutants. Accordingly, impacts related to flood, tsunami, or seiche-related pollutant release would be less than significant.

e. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

No Impact. The proposed project would not conflict with or obstruct implementation of an applicable Water Quality Control Plan or a Sustainable Groundwater Management Plan. Project dredging and dredged material placement activities would be conducted in compliance with applicable federal, state, and regional water quality regulations, including the CWA and the Porter-Cologne Water Quality Control Act.

The proposed project would obtain and comply with permits and approvals issued by the RWQCB, USACE, and other relevant agencies. These permits are specifically intended to ensure consistency with Basin Plan (LARWQCB 1994) water quality objectives and protection of designated beneficial uses.

Sediment testing and characterization would be conducted in accordance with USEPA and USACE guidance to confirm suitability for the approved placement options. Compliance with permit conditions, including monitoring and BMPs, would ensure that project activities do not cause violations of water quality standards or interfere with Basin Plan implementation.

The proposed project would not conflict with SGMA because it does not involve groundwater extraction, recharge facilities, or alteration of groundwater conditions, and therefore would not affect implementation of any Groundwater Sustainability Plan.

3.3.11 Land Use and Planning

Would the project:		Potentially Significant Impact	Less-Than-Significant Impact After Mitigation	Less-Than-Significant Impact	No Impact
a.	Physically divide an established community?	☐	☐	☐	☒
b.	Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

3.3.11.1 Affected Environment

3.3.11.1.1 Environmental Setting

The project site and potential dredged material placement sites are located in the southern portion of the Port, west of the City, and south of NBVC. The project site is entirely within the Port's North Terminal, where existing land uses are limited to port-related operations at Berths 4 and 5, Wharf 2, and the southern end of Wharf 3. Surrounding land uses to the north, south, and east are also within the Port and consist of port-related industrial uses. The Pacific Ocean is located south of the project site.

Potential dredged material placement sites would be located either within the harbor or at Hueneme Beach, which is located within the City south of Berths 4 and 5. The City's General Plan designates the Wharf 2 and harbor areas as "Port," and the project site is zoned Port-Related Uses (M-PR). Hueneme Beach is zoned Park Reserve (P-R) and designated "Parks and Open Space" in the General Plan (City 2022b). The nearest residential uses are located approximately 800 feet east of Wharf 2 and less than 1,000 feet north of Hueneme Beach.

3.3.11.1.2 Applicable Regulations

3.3.11.1.2.1 Coastal Zone Management Act

The Coastal Zone Management Act of 1972 is a federal law that encourages coastal states to develop and implement coastal zone management programs to preserve, protect, develop, and, where possible, restore the resources of the coastal zone. It is administered by the National Oceanic and Atmospheric Administration (NOAA) through its Office for Coastal Management.

The Coastal Zone Management Act promotes coordination between federal, state, and local governments to manage land and water use in coastal areas. Within the designated coastal zone boundary, federal activities and federally permitted projects must be consistent with the approved state coastal management program, which includes enforceable policies to protect natural resources,

minimize environmental impacts, and address public access. Federal activities that affect the coastal zone must submit a Consistency Determination to certify compliance with the enforceable policies of the state's approved plan.

3.3.11.1.2.2 California Coastal Act

The California Coastal Act of 1976 was created to: 1) protect, maintain, and, where feasible, enhance and restore the overall quality of the coastal zone environment and its natural and artificial resources; 2) assure orderly, balanced utilization and conservation of coastal zone resources taking into account social and economic needs; 3) maximize public access to and along the coast and maximize public recreational opportunities in the coastal zone consistent with sound resources conservation principles and constitutionally protected rights of private property owners; 4) assure priority for coastal-dependent and coastal-related development over other development on the coast; and 5) encourage state and local initiatives and cooperation in preparing procedures to implement coordinated planning and development for mutually beneficial uses in the coastal zone.

The California Coastal Act requires all cities located within the coastal zone to adopt a LCP. The LCP is used by cities to regulate local land uses and development in a manner that is consistent with the goals of the California Coastal Act. Specifically, LCPs identify the location, type, intensity, and other land use policies for future development within the coastal zone of a city or jurisdiction.

3.3.11.1.2.3 California Coastal Commission

The CCC was established by voter initiative in 1972 (Proposition 20) and later made permanent by the Legislature through adoption of the California Coastal Act. The mission of the CCC is to protect, conserve, restore, and enhance environmental and human-based resources of the California coast and ocean for environmentally sustainable and prudent use by current and future generations. In coordination with coastal cities and counties, the CCC plans and regulates the use of land and water within the coastal Zone. The coastal zone includes all offshore islands and extends approximately 3 miles offshore. Development activities that generally require a Coastal Development Permit from either the CCC or the local government include the proposed construction of buildings, division of land, and activities that propose to change either the intensity of a land use or public access to coastal waters.

3.3.11.1.2.4 California State Lands Commission

Established in 1938, the CSLC manages approximately 4 million acres of tide and submerged lands and the beds of natural navigable waterways (rivers, streams, lakes, bays, estuaries, inlets, and straits) in California.

As trustee of the State's sovereign lands under the Public Trust Doctrine, the CSLC reviews and authorizes projects located on State-owned tide and submerged lands through the issuance of

leases or permits. The CSLC reviews projects within its jurisdiction and prepares a staff report and recommendation to approve or deny a proposed lease or permit based on consistency with the Public Trust, the State's best interest, and regulatory compliance as applicable.

3.3.11.1.2.5 2045 Port Hueneme General Plan

The City's General Plan (City 2022b) serves as a long-term blueprint for the City's economic and physical development, including specific policies for the Port.

The General Plan land use designation for the Wharf 2 project site is "Port," which applies to all property owned or leased by the District. Permitted uses within this designation include ship offloading facilities, warehouses, port-related offices, port-related public open space, recreation uses, and fuel storage. Port activity is buffered from nearby residential areas, and access is controlled to minimize impacts on City streets. Hueneme Beach is designated as "Parks and Open Space" in the General Plan and is a public beach park.

General Plan policies pertaining to land use that are applicable to the proposed project include the following:

- **Policy LU 1-5:** Work cooperatively to incorporate Port and NBVC strategic planning into the City's land use planning.
- **Policy LU 5-2:** Coordinate regularly with the Navy, Port, City of Oxnard, and Ventura County on significant land use changes or projects that have cross-jurisdictional effects. This includes proposed projects which may have a significant impact on military facilities and operations, particularly those which are within 1,000 feet of a military installation, beneath a low-level flight path, or are special use airspace.

3.3.11.1.2.6 City of Port Hueneme Municipal Code-Zoning Designation

The Port is zoned Port-Related Uses (M-PR) by the City. According to Chapter 4 (Zoning Classification) of the City's Port Hueneme Municipal Code (PHMC), the M-PR zone is intended for property contiguous to the Port and is intended to accommodate coastal-related and coastal-dependent development.

Hueneme Beach is zoned Park Reserve (P-R), where permitted uses include public parks, recreational buildings and facilities, and public parking.

3.3.11.1.2.7 Port of Hueneme 2020 Strategic Plan

The Port is an important commercial and industrial area within the City, occupying approximately 5% of City lands, and is under the jurisdiction of the District. The District's Port 2020 Strategic Plan (District 2015a) outlines goals and strategies to guide the operations, business retention, growth, and future investments of the Port, including planned improvements to land, water, and wharf areas within the harbor.

Although the District is the agency principally responsible for overall implementation of the Port Strategic Plan, the City retains development review and permit authority within the harbor to ensure consistency with the General Plan, LCP, and PHMC.

3.3.11.2 Impact Evaluation

a. Would the project physically divide an established community?

No Impact. The proposed project would not physically divide an established community. The project site and potential dredged material placement sites are located within the Port or on Hueneme Beach, where surrounding land uses consist of port-related industrial uses and public coastal recreation. The nearest residential uses are located approximately 800 feet east of Wharf 2 and less than 1,000 feet north of Hueneme Beach.

The proposed project would not introduce new land uses, roadways, barriers, or infrastructure that would divide or isolate an existing community. Placement of dredged material at Hueneme Beach would be integrated with the existing beach profile and would not impede public access or divide beach users. Therefore, the proposed project would not physically divide an established community, and no impact would occur.

b. Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact. The proposed project would involve berth deepening, structural improvements to Wharf 2, and placement of dredged material within the harbor or as beach nourishment at Hueneme Beach. These activities are consistent with the City of Port Hueneme General Plan land use designation for Port facilities and with zoning regulations applicable to Port-Related Uses (M-PR).

Placement of dredged material at Hueneme Beach (if selected) would be consistent with the City's Parks and Open Space designation and the existing agreement between the City and the District for beach nourishment using dredged material conveyed via pipeline.

Berth deepening and wharf improvements are identified priorities in the Port of Hueneme 2020 Strategic Plan and are consistent with long-term port operations and modernization goals. Placement of dredged material at Hueneme Beach is consistent with the City's General Plan designation of the area as Parks and Open Space and with the existing agreement between the City and the District, allowing for beach nourishment using dredged material conveyed via pipeline.

The proposed project would not conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating environmental effects, including the General Plan, LCP, or zoning ordinance. Therefore, no impact would occur.

3.3.12 Mineral Resources

Would the project:		Potentially Significant Impact	Less-Than-Significant Impact After Mitigation	Less-Than-Significant Impact	No Impact
a.	Result in the loss of availability of a known mineral resource that would be a 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?	☐	☐	☐	☒

3.3.12.1 Affected Environment

3.3.12.1.1 Environmental Setting

The project area is classified as a Mineral Resource Zone 1 (MRZ-1), meaning that adequate information indicates no significant mineral deposits are present, or that there is little likelihood of their presence (Ventura County 2020). Accordingly, the project site does not contain known mineral resources of regional or statewide significance.

3.3.12.1.2 Applicable Regulations

In 1975, the California Surface Mining and Reclamation Act was enacted to regulate surface mining operations, ensuring that environmental impacts are minimized and mined lands are reclaimed to a usable condition. The California Surface Mining and Reclamation Act requires that the State Geologist classify land into mineral resource zones (MRZs) according to the known or inferred mineral potential of the land.

MRZ classifications, prepared by the CGS (formerly the California Department of Mines and Geology), identify areas with known or potential mineral resources and are used by local agencies to inform land use planning decisions. MRZ categories defined by the CGS include the following:

- **MRZ-1:** Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence
- **MRZ-2:** Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood exists for their presence
- **MRZ-3:** Areas containing mineral deposits, the significance of which cannot be evaluated from available data
- **MRZ-4:** Areas where available information is inadequate for assignment to any other
- **MRZ-SZ:** Areas containing unique or rare occurrence of rocks, minerals, or fossils that are of outstanding scientific significance

3.3.12.2 Impact Evaluation

a. Would the project 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 project area is classified as MRZ-1, indicating that no significant mineral resources are present. The proposed project would not result in the loss of availability of a mineral resource of regional or statewide importance. Therefore, no impact would occur.

b. Would the project 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. No locally important mineral resource recovery sites are identified within the project area. The proposed project would not affect mineral resource availability, and no impact would occur.

3.3.13 Noise

Would the project result in:		Potentially Significant Impact	Less-Than-Significant Impact After Mitigation	Less-Than-Significant Impact	No Impact
a.	Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b.	Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c.	For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two 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?	☐	☐	☐	☒

3.3.13.1 Affected Environment

3.3.13.1.1 Fundamentals of Noise and Groundborne Vibration

Sound is what we hear and is defined as the energy of a vibrating object transmitted by pressure waves through a medium, such as air or water, to the human ear. Noise is most simply defined as unwanted sound. Whether sound is perceived as noise depends on the listener and the context in which it occurs. A given noise may be more or less tolerable depending on the duration of exposure, as well as the time of day when the noise occurs. For example, the sound of a distant train horn during the day may be considered background noise but could disrupt sleep at night.

Sound is measured in decibels (dB) using a logarithmic scale adjusted to the sensitivity of the human ear (referred to as the A-weighted decibel [dBA]). More specifically, the dBA measures sound in a way that is reflective of how the average human ear responds to sound; typical human hearing ranges from 0 dBA (the threshold of hearing) to approximately 140 dBA (the threshold for pain). Acceptable noise levels during the day are higher than during the night, and industrial land use in urban areas will have a higher limit than residential land use in rural areas.

Noise can be generated by both mobile (i.e., cars) and stationary (i.e., operational machinery) sources. Mobile sources typically attenuate at a rate of 3.0 to 4.5 dBA per doubling of distance, depending on the ground surface and obstructions between the noise source and the receiver. Hard, flat surfaces, such as concrete or asphalt, typically result in lower attenuation rates (approximately

3.0 dBA per doubling of distance). Soft surfaces, such as uneven or vegetated terrain, typically have an attenuation rate of 4.5 dBA per doubling of distance. Noise generated by stationary sources typically attenuates at a rate of 6.0 to 7.5 dBA per doubling of distance.

The community noise equivalent level (CNEL) measures the cumulative 24-hour noise exposure, considering variations in A-weighted noise levels, as well as the duration and the time of day of the noise. Various state and local agencies have adopted CNEL as the measure of community noise, including the Caltrans Division of Aeronautics and the California Commission on Housing and Community Development.

Noise is measured through the use of several measurements, including the following:

- **Equivalent Sound Level (L_{eq}):** The constant noise level that would result in the same total sound energy being produced over a given period. It is useful for representing a varying sound source over time as a single number.
- **Maximum Sound Level (L_{max}):** The highest instantaneous sound level measured during a specific noise event or measurement period.
- **Statistical Sound Levels (L_n ; e.g., L_{min} , L_{90} , L_{50} , L_{10}):** The percentile-exceeded noise level, designated as L_n , describes the noise level that is met or exceeded by a fluctuating sound level n -percent of a stated time period. For example, the L_{50} is the sound level that is equaled or exceeded for 50% of the time period (equivalent to 30 minutes in an hour), and the L_{10} is the sound level that is equaled or exceeded for 10% of the time period (equivalent to 6 minutes in an hour). L_{min} is the lowest instantaneous sound level measured during a specific noise event or measurement period.
- **Day/Night Average Sound Level (L_{dn}):** The average noise level over a 24-hour period. The noise level measurements between the hours of 10:00 p.m. and 7:00 a.m. are artificially increased by 10 dB before averaging.

Groundborne vibration is an oscillatory motion that can be described in terms of displacement, velocity, or acceleration. Each of these measures can be further described in terms of frequency and amplitude. Displacement is the easiest descriptor to understand; it is simply the distance that a vibrating point moves from its static position (i.e., its resting position when the vibration is not present). The velocity describes the instantaneous speed of the movement, and acceleration is the instantaneous rate of change of the speed. Vibrating objects can radiate their energy through the ground upon contact; if the object is large or close enough to an observer, ground vibrations can be perceived. As such, environmental impact analyses typically study vibration as it relates to building damage and human annoyance. However, because ground vibration generated by human activities typically attenuates rapidly from the source of vibration, human vibration issues are usually confined to short distances, such as 500 feet or less from the source (FHWA 2006a).

Although displacement is fundamentally easier to understand than velocity or acceleration, it is rarely used for describing groundborne vibration because: 1) human response to groundborne vibration correlates more accurately with velocity or acceleration; 2) the effect on buildings and sensitive equipment is more accurately described using velocity or acceleration; and 3) most transducers used in the measurement of groundborne vibration actually measure either velocity or acceleration. For this study, velocity was the fundamental measure used to evaluate the effects of groundborne vibration.

Vibration consists of rapidly fluctuating motions with an average motion of zero. The peak particle velocity (PPV) is defined as the maximum instantaneous positive or negative peak amplitude of the vibration velocity. The accepted unit for measuring PPV in the United States is inches per second (in/sec).

3.3.13.1.2 Project Area Setting

The project site is located within the Port, an active commercial and military port characterized by ongoing industrial and maritime operations. Existing noise levels in the project area are primarily influenced by routine port activities, including vessel berthing and unberthing, cargo-handling operations, operation of diesel-powered equipment, truck traffic within the Port, and marine vessel movements within the harbor. Additional noise sources include nearby roadway traffic, including car stereos; industrial activities within the Port; military operations associated with NBVC, and recreational activities on the nearby beach, including regular incidences of loud music (BSI 2021).

Marine-related noise sources include tugboats, pilot vessels, harbor craft, and vessel auxiliary engines operating while at berth. These activities contribute to a dynamic noise environment with intermittent increases in noise levels associated with vessel movements and cargo operations. Construction and maintenance activities periodically occur within the Port and represent an existing component of the ambient noise environment.

Noise-sensitive land uses are generally defined as uses in which noise exposure could result in health-related risks or where quiet is an essential element of the intended purpose. Noise-sensitive receptors in the vicinity of the proposed project include residential neighborhoods located east of the Port, recreational uses at Hueneme Beach and the Port Hueneme Beach Park, and other public coastal access areas. Table 8 summarizes the approximate distances between proposed construction activities and nearby noise-sensitive receptors in addition to background noise levels, where available. Wharf 2 is located within an area designated for Port-related industrial uses, where elevated noise levels associated with ongoing operations are anticipated and considered compatible.

Table 8
Proximity of Receptors to Project Construction Activity

Receptor	Receptor Type	Minimum Distance from Construction Activity (feet)	Background Noise Level L_{eq} (dBA)
Dewar Park	Park	650	--
Ponoma Street/E Scott Street Residences	Residential	800	55.4 dBA
East Surfside Drive Residences	Residential	1000	58.7 dBA
Hueneme Elementary School	School	1800	--

Notes:

1. The construction area is more than 1,000 feet long. Distances shown above are the minimum distances to the construction boundary.

2. Approximate distances were measured using Google Earth.

3. Noise sampling was conducted in 2016 as part of the Wharf 1 project at select locations in the area.

--: not applicable

3.3.13.1.3 Applicable Regulations

3.3.13.1.3.1 Federal

OSHA has established acceptable occupational noise exposure levels (29 Code of Federal Regulations [CFR] 1910.95). These regulations state that employees will not be exposed to occupational noise levels greater than 90 dB without adequate hearing protection. If occupational noise levels exceed 85 dB, the employer must establish a hearing conservation program as described under 29 CFR 1910.95(c–o). For occupational noise exposure levels greater than 90 dB, the daily period of noise exposure must be decreased from 8 hours, as described under 29 CFR 1910.95(b).

The USEPA Office of Noise Abatement and Control was established to coordinate federal noise control activities and issued the Noise Control Act of 1972 (42 USC 4901 et seq.), establishing programs and guidelines to identify and address the effects of noise on public health and welfare and the environment. USEPA determined in 1981 that subjective issues such as noise would be better addressed at lower levels of government, and responsibilities for regulating noise control policies were transferred to state and local governments in 1982.

3.3.13.1.3.2 State General Plan Guidelines

The State of California General Plan Guidelines, published by the OPR, provide guidance for the acceptability of projects within areas that are exposed to specific noise levels. For areas zoned for industrial, manufacturing, utilities, and agricultural land uses, the normally acceptable level of community noise exposure is less than 75 CNEL, with 70 to 80 CNEL considered conditionally acceptable (OPR 2017). The guidelines also present adjustment factors that may be used to arrive at noise

acceptability standards that reflect the noise control goals of the community, the particular community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution.

For the protection of fragile, historic, and residential structures from groundborne vibration, Caltrans recommends a threshold of 0.2 in/sec PPV for normal residential buildings and 0.08 in/sec PPV for old or historically significant structures (Caltrans 2020).

3.3.13.1.3.3 Local Policies

The City's 2045 General Plan (City 2022b) includes policies to minimize noise impacts on noise-sensitive land uses while recognizing and supporting ongoing industrial, port, and military activities that are integral to the community. The General Plan identifies residential uses, schools, parks, and other public facilities as noise-sensitive receptors and promotes land use compatibility between these uses and established noise-generating activities. The Port is designated for port-related industrial uses, and elevated noise levels associated with port operations and marine activities are anticipated and considered compatible within this area.

The City regulates noise through the PHMC, Article III, Chapter 5, which establishes community noise control standards consistent with or exceeding guidelines from state and federal agencies. PHMC Section 3427 prohibits unnecessary, excessive, or annoying noise, and PHMC Sections 3429 and 3430 establish allowable noise levels for properties within designated noise zones. PHMC Section 3432 allows for adjustment of the allowable noise levels due to existing ambient noise levels.

Construction noise is regulated through restrictions on hours of operation for noise-generating activities. The PHMC prohibits operation of power construction equipment, pile drivers, and other noise-generating construction devices between 7:00 p.m. and 7:00 a.m., Monday through Saturday, and between 6:00 p.m. and 9:00 a.m. on Sundays, except for emergency work. Temporary increases in noise associated with construction and maintenance activities are permitted, provided such activities comply with applicable noise standards and construction hour restrictions.

3.3.13.2 Impact Evaluation

a. Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less-Than-Significant Impact. Noise levels attenuate with increasing distance from the source and are further influenced by equipment type, duration of activity, and intervening land uses. Noise- and vibration-sensitive land uses are locations where people reside or where the presence of unwanted sound could adversely affect land use activities. Residences, schools, hospitals, and senior care facilities are considered noise- and vibration-sensitive and may warrant additional consideration for noise exposure.

The closest off-site sensitive receptor would be recreational users at a park located approximately 650 feet east of Wharf 2. Other sensitive receptors in the vicinity of Wharf 2 include a residential neighborhood located approximately 800 feet east, and a school approximately 1,800 feet east. The proposed project would not alter long-term operational noise levels at the Port; therefore, this analysis focuses on temporary construction-related noise impacts.

Construction activities typically require the use of multiple pieces of noise-generating equipment and would temporarily increase ambient noise levels on an intermittent basis. Noise levels would fluctuate depending on the construction phase, equipment type, duration of use, distance to receptors, and the presence or absence of noise attenuation barriers. Table 9 presents the typical noise level of proposed construction equipment anticipated for the proposed project and the reference noise levels that each equipment type would generate.

Table 9
Roadway Construction Noise Model Default Noise Emission Reference Level at 50 Feet

Major Equipment	Equipment Noise Profile	Reference Sound Level at 50 Feet (dBA)
Concrete Pump	Concrete Pump Truck	82
Crane Barge	Crane	85
Dredging Barge	Clamshell Dredge	85
Dump Truck	Dump Truck	84
Forklifts	All Other Equipment >5 HP	85
Generators	Generator	82
Jack Hammer	Jackhammer	85
Pile Driving (Impact)	Impact Pile Driver	95
Sandblaster	Sand Blasting	85
Scow Barge	Barge	87
Tugboat	Tugboat	87
Welders	Welder/Torch	73

Notes:

1. When provided in the model, the actual measured L_{max} value was used instead of the reference level.
2. Marine equipment parameters are from the Port of Los Angeles (Port of Los Angeles 2008) and represent conservative operating assumptions.

Because the Port is an industrial land use and the nearest sensitive receptors are off site, noise impacts were evaluated at off-site receptors within the City of Port Hueneme consistent with Section 3439 of the PHMC (Construction of Building and Structures). The City's exterior noise level L_{eq} limits are shown in Table 10. Section 3421 of the PHMC states that the noise level limit shall be increased in 5 dBA increments as appropriate to encompass ambient noise levels. As shown in Table 8, the ambient noise level at the nearby residential areas is above the exterior noise level limit

for a residential property and as such, a value of 60 dBA was used for this assessment for daytime construction. The noise limit for L_{max} was assumed to be 20 dBA higher than the noise level L_{eq} limits, consistent with Section 3431 of the PHMC for the exterior noise limit level for any period of time.

Table 10
City of Port Hueneme Exterior Noise Level Limits

Land Use	Time Intervals	Exterior Noise Levels (dBA)
Open Space: Parks	All	65
Residential Properties	7:00 a.m. to 10:00 p.m.	55
	10:00 p.m. to 7:00 a.m.	50

Notes:

Sources: PHMC Chapter 5, Noise Control and City 2022b

While nearby sensitive receptors may experience temporary increases in construction-related noise, the City does not establish numeric limits for daytime construction noise. Instead, construction noise is regulated through restrictions on allowable hours of operation to limit noise during more sensitive periods.

All construction activities, except dredging, would occur between 8:00 a.m. and 6:00 p.m., Monday through Saturday. Transport of construction materials and spoils on City streets would also be limited to these days and hours. Dredging, which is similar to background port noises from vessels, could occur up to 24 hours per day, 7 days per week. No work would occur on federal holidays unless approved in advance by the District.

To calculate proposed project construction noise impacts to sensitive receptors to the east of the project area, major construction equipment types, numbers, and characteristic of the loudest anticipated construction phases were evaluated using the methodology of the FHWA Roadway Construction Noise Model (FHWA 2006b). This analysis estimates construction noise levels at selected locations around the construction site based on a database of measured equipment noise generation and the application of source-receptor distance attenuation formulas. Shielding was included for both existing fence line wall along the Port boundary (3 dBA) and construction best practices (8 dBA), consistent with Roadway Construction Noise Model methodology (FHWA 2006a).

Table 11 shows that the model indicates that the highest combined construction noise levels would be a L_{max} of 68 dBA at 650 feet from the project site (the closest distance to a non-mobile sensitive receptor), with a corresponding L_{eq} of 61.7 dBA. These levels would occur during pile driving activities associated with the sheet pile wall and fender pile installation phases. These noise levels from wharf improvements would be temporary and intermittent, and they would occur during allowable daytime construction hours.

Table 11
Construction Noise Summary

Phase	L _{max} (dBA)			L _{eq} (dBA)		
	Location 1: Recreational Receptor	Location 2: Residential Receptor	Location 3: School Receptor	Location 1: Recreational Receptor	Location 2: Residential Receptor	Location 3: School Receptor
Mobilization	51.7	49.9	42.9	50.3	48.5	41.4
Demolition of Fenders	53.7	51.9	44.9	53.0	51.2	44.2
Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade, and Riprap Repair	68.0	66.2	59.2	61.7	59.9	52.8
Deck Repair	62.4	60.6	53.6	57.7	55.9	48.9
Dredging	53.7	51.9	44.9	56.3	54.5	47.5

Notes:

1. L_{eq} was calculated for each construction phase using Roadway Construction Noise Model methodology. This analysis assumes a shielding value of 3 dBA for an existing wall along the Port boundary, and an added value of 8 dBA for the sound barriers from the proposed mitigation.
2. Demolition of Fenders; Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade, and Riprap Repair; and Deck Repair phases would happen three times in different locations of the harbor. Each of the three occurrences would use the same equipment and as such, the maximum noise is only shown once.

As noted, dredging would occur at night, as is common within the Port (dredging happens regularly within the Port to maintain depths). As shown in Table 11, noise from dredging would be within the range of background ambient noise levels and typical of the noise from normal port operations, such as vessel movements, which occur throughout the night. If selected, beach nourishment activities would only occur during the day.

Based on this analysis, compliance with applicable construction hour restrictions, and the substantial distance between construction activities and nearby noise-sensitive receptors, the proposed project would result in a less-than-significant impact related to construction noise.

b. Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

Less-Than-Significant Impact. Unless heavy construction activities are conducted extremely close (within a few feet) to neighboring structures, vibrations from construction activities rarely reach levels that damage structures. Typical vibration levels associated with construction equipment are provided in Table 12. Impact pile drivers typically generate vibrations levels of 0.644 in/sec PPV at a distance of 25 feet.

Table 12
Vibration Velocities for Construction Equipment

Equipment	PPV at 25 feet (in/sec)	PPV at 125 feet (in/sec)
Loaded Trucks	0.076	0.0068
Jackhammer	0.035	0.0031
Pile Driver (Impact)	0.644	0.058

Notes:

The PPV at 125 feet was calculated using Equation 7-2 in the Federal Transit Administration's (FTA's) Transit Noise and Vibration Impact Assessment Manual.

Source: FTA 2018

The construction vibration damage criterion for buildings that are extremely susceptible to vibration damage is 0.12 in/sec PPV. This is the strictest PPV vibration threshold established by the FTA (FTA 2018). The nearest structure is approximately 125 feet north (on Port property), and the nearest residential structure is approximately 800 feet east of the Wharf 2 site. The typical vibration level from pile driving at 125 feet would be approximately 0.058 in/sec PPV, which would not exceed the FTA damage criteria.

Because the construction-related vibration levels would remain well below applicable FTA vibration damage thresholds at nearby structures and sensitive receptors, the proposed project would result in a less-than-significant impact related to construction vibration.

c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two 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?

No Impact. There are no public airports located within 2 miles of the project area. The nearest public airport is Oxnard Airport, approximately 3 miles north of the project site. NBVC (Point Mugu) is approximately 4 miles east. Given the distance from the nearest public airport and military airfield, the proposed project would not expose people residing or working in the project area to excessive noise levels. Therefore, the proposed project would result in no impact related to airport-related noise.

3.3.14 Population and Housing

Would the project:		Potentially Significant Impact	Less-Than-Significant Impact After Mitigation	Less-Than-Significant Impact	No Impact
a.	Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b.	Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

3.3.14.1 Affected Environment

3.3.14.1.1 Environmental Setting

The City's 2045 General Plan designates the project site for industrial use (City 2022b). The proposed dredging and Wharf 2 improvements, as well as potential dredged material placement sites within the harbor and at Hueneme Beach, are entirely within the District's North Terminal or within existing coastal recreational areas. The North Terminal includes staging areas, warehouses, and transportation corridors used for cargo movement and does not contain any housing. The nearest housing to the project site is approximately 800 feet east of Wharf 2 in the City of Port Hueneme. Hueneme Beach includes recreational amenities and does not contain any housing. The project area is located within a fully developed industrial port setting and does not include residential land uses.

3.3.14.1.2 Applicable Regulations

There are no specific federal, state, or local regulations applicable to population growth or housing displacement for the proposed project.

3.3.14.2 Impact Evaluation

a. Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

No Impact. The proposed project involves temporary construction activities within an existing port facility and would not include new residential development, permanent employment centers, or infrastructure extensions that could induce population growth. Any construction-related employment would be temporary and would not result in long-term population increases or increased demand for housing. Therefore, no impact would occur.

b. Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact. The project area does not contain housing, and project implementation would not require the removal of residential structures or displace residents. No indirect displacement of people or housing would occur. Therefore, no impact would occur.

3.3.15 Public Services

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

3.3.15.1 Affected Environment

3.3.15.1.1 Fire Protection

Ventura County Fire Department Fire Station 53 serves the City and the Port. Through mutual-aid agreements, the department coordinates with the Oxnard Fire Department and Federal Fire Ventura County. Personnel at Station 53 are trained, equipped, and staffed for ocean and beach rescue work and fire boat operation (VCFD 2025).

3.3.15.1.2 Police Protection

The Port is served by the Oxnard Police Department, Port Hueneme Police Department (Beat 3), and Ventura County Sheriff's Department. The Port Hueneme Police Department is the closest police department to the project site, located approximately 0.6 mile east from the harbor at 250 North Ventura Road.

3.3.15.1.3 Schools

The project site is located within the Hueneme School District and the Oxnard Union High School District. The closest Hueneme School District school is Richard Bard Elementary School, located approximately 1.2 miles northeast at 622 East Pleasant Valley Road. The closest Oxnard Union High School District school is Hueneme High School, located approximately 2.2 miles northeast of the project site at 500 West Bard Road in the City of Oxnard.

3.3.15.1.4 Parks

The City's Recreation and Community Services district provides parks and recreational services in the project area. The closest public park to the Harbor is Hueneme Beach Park (City 2025a), located

0.3 mile south of Wharf 2. Hueneme Beach is one of the proposed placement locations for dredged fill material and would remain available for public recreational use following placement activities.

3.3.15.1.5 *Other Public Facilities*

The closest public library to the project site is the Port Hueneme Ray D. Prueter Library, located approximately 1.2 miles northeast at 510 Park Avenue.

3.3.15.1.6 *Applicable Regulations*

3.3.15.1.6.1 California Fire Code

The 2022 California Fire Code (Title 24, Part 9 of the CCR) is the primary means for authorizing and enforcing procedures and mechanisms to ensure the safe handling and storage of any substance that may pose a threat to public health and safety. The California Fire Code includes regulations for emergency planning and response, fire service features, fire protection systems, hazardous materials, fire flow requirements, fire hydrant locations and distribution, fire safety during construction, and wildland-urban interface. The provisions of the Fire Code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure throughout California.

3.3.15.1.6.2 Oxnard Harbor District Facility Security Plan

The District's Facility Security Plan includes measures employed to protect against seizure, sabotage, piracy, pilferage, annoyance, and terrorism in the District and includes measures for training and responding to breeches in security. The plan mandates periodic drills and exercises to prepare District staff for an incident response (District 2014).

3.3.15.2 **Impact Evaluation**

a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services: fire protection, police protection, schools, parks, or other public facilities?

No Impact. The proposed project involves berth deepening, wharf improvements, and dredged material placement within an existing, fully developed port facility.

The proposed project would not introduce new land uses, permanent employees, residents, or public access that would increase demand for fire protection, police services, schools, parks, or other public facilities. Construction activities would be temporary and would occur within an active port

environment that is already served by existing public service providers. The proposed project would comply with applicable fire safety standards and port security requirements during construction.

Because the proposed project would not require new or expanded governmental facilities to maintain acceptable service ratios, response times, or performance objectives, no impact to public services would occur.

3.3.16 Recreation

Would the project:		Potentially Significant Impact	Less-Than-Significant Impact After Mitigation	Less-Than-Significant Impact	No Impact
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 which might have an adverse physical effect on the environment?	☐	☐	☐	☒

3.3.16.1 Affected Environment

3.3.16.1.1 Environmental Setting

The City of Port Hueneme owns and operates approximately 90 acres of park land and seven public parks that provide public access to a variety of recreational activities (City 2026), including Hueneme Beach Park. As part of the proposed project, placement of dredged material could occur at Hueneme Beach.

Hueneme Beach Park is an approximately 50-acre public beach and park that provides recreational facilities, including barbecue pits, picnic areas, and sand volleyball courts. Dewar Park is the park closest to the Wharf 2 project area and is located approximately 250 feet east of the project site, adjacent to the Port.

The City's estimated 2023-2024 population is approximately 21,325 (U.S. Census Bureau 2026). Therefore, the ratio of public parks to residents in the City is approximately 4.22 acres of parkland for every 1,000 residents, which is greater than the standard ratio of 3 acres of parkland for every 1,000 residents used by the Quimby Act.

3.3.16.1.2 Applicable Regulations

3.3.16.1.3 Quimby Act

California Government Code Section 66477, also known as the Quimby Act, was enacted by the California Legislature in 1965. The Quimby Act authorizes cities and counties to enact ordinances requiring the dedication of land, or the payment of in-lieu fees for park and recreational facilities, or both, by developers of residential subdivisions as a condition of subdivision approval. The Quimby Act does not apply to the proposed project, which does not include residential development.

3.3.16.2 Impact Evaluation

a. Would the project 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?

Less-Than-Significant Impact. Neither construction nor operation of the proposed project would increase long-term use of or demand for existing neighborhood or regional parks or other recreational facilities. The proposed project would not result in population growth or new residential development that would increase recreational demand.

If dredged material is placed at Hueneme Beach, temporary beach access restrictions or closures may be required during active placement activities. Dredging and placement activities are proposed to occur over a limited duration, with dredging anticipated to occur for approximately 30 days. Beach closures would be limited to the immediate placement area and to periods when active construction is occurring. Any closures would be short-term and temporary. A temporary closure could displace a small number of recreational users for a limited period. Nearby recreational facilities, including Dewar Park and other beaches, would be available to accommodate temporary shifts in recreational use.

Beach nourishment occurs periodically at Hueneme Beach and generally enhances long-term recreational value by increasing beach width and usability. Therefore, the proposed project would result in a less-than-significant impact related to temporary changes in recreational access.

b. Would the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

No Impact. The proposed project does not include the construction or expansion of recreational facilities. Placement of dredged material at Hueneme Beach for beach nourishment would not constitute construction of a recreational facility and would not result in adverse physical effects on the environment.

The proposed project would not induce population growth or increased recreational demand. Therefore, the proposed project would have no impact related to construction or expansion of recreational facilities.

3.3.17 Transportation

Would the project:		Potentially Significant Impact	Less-Than-Significant Impact After Mitigation	Less-Than-Significant Impact	No Impact
a.	Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☐	☐	☒	☐
b.	Conflict or be inconsistent with CEQA Guidelines Section 15064.3(b)?	☐	☐	☒	☐
c.	Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
d.	Result in inadequate emergency access?	☐	☐	☐	☒

3.3.17.1 Affected Environment

This section describes the existing transportation conditions in the project area, applicable transportation regulations, and evaluates potential transportation effects associated with the proposed project, based on available data and a transportation technical analysis. For the purposes of the transportation analysis, the project area is defined as the project site and the surrounding area, including roadways, railways, the Port harbor, and Hueneme Beach.

3.3.17.1.1 Environmental Setting

3.3.17.1.1.1 Regional and Local Roadway Network

The Port is served by a network of regional freeways, state highways, and local arterials that provide access to Port terminals, wharves, and adjacent industrial areas in Ventura County. Regional access to the Port is primarily provided by U.S. Highway 101 (US-101) and State Route 1, with local roadways such as Hueneme Road, Rice Avenue, Victoria Avenue, Channel Islands Boulevard, and Ventura Road serving port-related traffic. Rice Avenue, Victoria Avenue, and Ventura Road accommodate major north-south traffic movements in the project vicinity, while Hueneme Road and Channel Islands Boulevard provide east-west circulation.

3.3.17.1.1.2 Rail Network

Freight rail service in Ventura County is provided primarily by the Union Pacific Railroad, which operates the mainline rail corridor serving the region. BNSF Railway does not directly serve the Port.

The Union Pacific Railroad Coast Line Subdivision runs through Ventura County in a generally east-west direction and provides regional freight rail connectivity between the Los Angeles Basin and

Central Coast. This line also supports passenger rail services operated by Amtrak and Metrolink with connections to Los Angeles Union Station.

Direct rail access to the Port is provided by the Ventura County Railroad, a Class III short-line railroad operated by Genesee & Wyoming Railroad Services, Inc. The Ventura County Railroad connects the Port to the Union Pacific Railroad mainline near the City of Oxnard and provides local freight rail service between the Port and the Union Pacific Railroad rail network.

The Port maintains an internal rail system serving marine terminals and cargo-handling areas within the Port. The Ventura County Railroad provides all rail switching and local rail movements within the Port, including the delivery, staging, and removal of freight rail cars. Rail operations within the Port are coordinated with the Union Pacific Railroad.

3.3.17.1.1.3 Maritime Navigation

The Port is served by the Hueneme Harbor Entrance Channel and Harbor Channel, which provide access to the Port from the Pacific Ocean. Vessel traffic in the project area includes commercial deep-draft vessels, harbor tugs, service vessels, and recreational vessels transiting the nearshore coastal waters, as well as vessels supporting periodic maintenance dredging activities. Pilots guide all commercial deep-draft vessels calling at the Port. Pilots typically board vessels offshore near the designated pilot boarding area prior to transit through the Entrance Channel and into the Port.

3.3.17.1.1.4 Public Transit, Bicycle, and Pedestrian Facilities

Public transit service in the City is primarily provided by the Gold Coast Transit District, which operates fixed-route bus service connecting the City to surrounding communities, including Oxnard and Ventura. Several Gold Coast Transit District bus routes provide service near the Port and provide connectivity for employees and visitors traveling to and from the City. These routes include the following:

- Route 1: Port Hueneme Oxnard Transit Center, with a stop at Hueneme Road and Ventura Road.
- Route 3: J Street Centerpoint Mall Naval Base, with a stop at Channel Islands Boulevard and Ventura Road.
- Route 5: Hemlock Seabridge Wooley, with a stop at Hemlock Street and Patterson Road.

Bicycle facilities in the City include a combination of on-street bicycle lanes, shared roadways, and connections to regional bicycle routes. The City includes approximately 3.8 miles of on-street bicycle lanes located along several roadways throughout the City. Class I bicycle lanes are located along North Ventura Road between West Channel Islands Boulevard and East Pleasant Valley Road on the east side of the Port. Class II bicycle lanes are provided along several major and secondary arterial roadways within the City, including Victoria Avenue to the west and West Channel Islands Boulevard to the north of the project area.

Pedestrian facilities within the City generally consist of sidewalks, marked crosswalks, pedestrian signals, curb ramps, and shared-use paths. The City contains approximately 12 miles of pedestrian and bicycle pathways. Pedestrian activity within the City is generally concentrated in the Hueneme Beach Park area, which serves as a major recreational destination.

3.3.17.1.2 Applicable Regulations

3.3.17.1.3 California Department of Transportation

Caltrans has statewide authority over the planning, operation, and protection of the State Highway System. Through its legislatively mandated Local Development Review program, Caltrans evaluates land use proposals, general plans, and related actions that may affect the State Highway System, with the goal of avoiding or reducing significant impacts. The Safety Review Practitioner's Guidance (Caltrans 2024) establishes the recommended process for Caltrans and lead agencies to evaluate potential transportation safety impacts of proposed projects.

3.3.17.1.4 Senate Bill 743

SB 743, codified in California Public Resources Code Section 21099, created a shift in transportation impact analysis under CEQA from a focus on automobile delay, as measured by level of service and similar metrics, toward a focus on reducing vehicle miles traveled (VMT) and GHG emissions. The California Legislature required the OPR, now called the Office of Land Use and Climate Innovation, to propose new criteria for determining the significance of transportation impacts. The statute states that upon certification of the new criteria, automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion, shall not be considered a significant impact on the environment under CEQA, except in any locations specifically identified in the new criteria.

The new criteria, contained in State CEQA Guidelines Section 15064.3, were certified and adopted in December 2018. State CEQA Guidelines Section 15064.3 provides that VMT is the most appropriate metric to assess transportation impacts; with limited exceptions, a project's effect on automobile delay does not constitute a significant environmental impact. Other relevant considerations may include a project's effects on transit and nonmotorized travel. State CEQA Guidelines Section 15064.3 further provides that transportation projects that reduce VMT should be presumed to have a less-than-significant impact. For purposes of CEQA analysis under SB 743, VMT is generally evaluated based on automobile travel.

While the City has not adopted a formal transportation impact analysis methodology or thresholds of significance for VMT, the City uses VMT to analyze traffic impacts.

3.3.17.1.5 *California Public Utilities Commission*

The CPUC has legal regulatory authority over rail safety within California, including operations and grade crossings throughout the state. However, rail operations under the proposed project are not subject to approval or modification by the CPUC because no grade crossings would be added or modified.

3.3.17.1.6 *California Department of Boating and Waterways*

The California Harbors and Navigation Code vests authority with the California Department of Boating and Waterways to regulate matters of navigational safety for the state's boating public. The code establishes laws and regulations governing the equipment and operation of vessels on waters of the state, including within the project area.

3.3.17.1.7 *California Coastal Commission*

The CCC has regulatory authority under the California Coastal Act to oversee development within the California's coastal zone, including ports and harbor facilities. The CCC has purview over approval and certification of Port Master Plans, which establish policies and development standards for port operations and improvements, including transportation-related elements such as access, circulation, and mobility infrastructure. Projects within the coastal zone must be consistent with the certified Port Master Plan and applicable California Coastal Act policies and are subject to CCC review.

3.3.17.1.8 *Southern California Association of Governments*

The Southern California Association of Governments is the designated metropolitan planning organization (MPO) for the Southern California region, including Ventura County. The Southern California Association of Governments is responsible for preparing and adopting the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), the long-range transportation planning document that guides regional transportation investments over a 20- to 30-year planning horizon, with the most recent version projecting through 2050. The RTP/SCS integrates transportation, land use, and housing planning and provides the basis for demonstrating regional air quality conformity with state and federal CAA requirements. Transportation projects within the region must be consistent with the adopted RTP/SCS to support air quality conformity and eligibility for federal and state transportation funding.

3.3.17.1.9 *Ventura County Transportation Commission*

The Ventura County Transportation Commission is the designated regional transportation planning agency for Ventura County. The *Ventura County Comprehensive Transportation Plan* (Ventura County Transportation Commission 2025) is the long-range transportation planning document that guides transportation investments in Ventura County over a 20- to 30-year planning horizon. The *Ventura County Comprehensive Transportation Plan* is periodically updated to reflect changes in funding, land use, demographics, and transportation needs and supports consistency with the RTP/SCS.

3.3.17.1.10 *Port Hueneme 2045 General Plan*

The *Port Hueneme 2045 General Plan* (City 2022b) guides the maintenance, design, and operation of local transportation systems, including City streets, within the project area. The following transportation goals and policies are applicable to the proposed project:

- Circulation Goal CI-1: Provision of a comprehensive transportation system for the movement of persons and goods with maximum safety, efficiency, equity, and convenience.
- Policy CI-1-1: Achieve and maintain reasonable service levels at critical intersections, including Channel Islands Boulevard and Ventura Road, and Ventura Road and Bard Road.
- Policy CI-1-2: Continue to work closely with the Navy and the Oxnard Harbor District to ensure that circulation system improvements are implemented to the mutual benefits of the three entities.
- Policy CI-1-6: Use mobility metrics that address VMT in the CEQA environmental review of development projects.
- Policy CI-1-7: Incorporate travel demand management and intelligent transportation systems into local planning when feasible to reduce peak-hour traffic congestion and help reduce VMT.
- Circulation Goal CI-2: Provision of a balanced roadway system that will provide adequate accessibility to existing and future land uses with minimum impact on residential neighborhoods.
- Policy CI-2-1: Encourage the routing of through traffic to designated arterial streets and discourage through traffic in residential neighborhoods.
- Circulation Goal CI-3: Encouragement of alternative transportation modes to reduce the use of single passenger vehicles.
- Policy CI-3-1: Promote the use of alternative forms of transportation (other than single passenger cars) to reduce congestion, traffic, noise, GHG emissions, and air quality impacts.

3.3.17.2 **Project Trip Generation During Operation**

Completion of the proposed project would provide sufficient under-keel clearance in accordance with the Port's Harbor Safety Plan and U.S. Coast Guard requirements. Under current conditions, the Port must track tidal variations and carefully coordinate vessel movements and cargo loading or unloading activities to maintain adequate clearance. By improving under-keel clearance, the proposed project would reduce these operational constraints and enhance navigational safety. The proposed project would not change existing vehicle cargo throughput. Therefore, the proposed project would not result in an increase in operational vehicle trips or VMT.

3.3.17.3 **Project Trips During Construction**

Except for the initial mobilization and final demobilization of construction equipment at the start of construction and its removal at the end of construction, construction of the proposed project would result in limited temporary effects on local roadways to and from the Port. During the most intensive

construction phase, up to 20 construction workers are anticipated on site per day, resulting in approximately 40 daily vehicle trips (one inbound and one outbound trip per worker). On average, construction employment would be lower, with approximately 10 workers per day, or 20 daily vehicle trips. Sediment placement activities are included in these estimates and would not generate additional workers or vehicle trips beyond what is described herein. No trucks would be used to access Hueneme Beach if that location is selected for beach nourishment. Dredged placement would occur through direct or offshore placement either by scow or pipeline depending on the chosen dredging method.

Construction-related truck traffic would also be limited and intermittent. Material deliveries would include approximately 20 truck trips for Seaflex fender piles, 10 truck trips for steel walers and chocks, 17 truck trips for fender bumpers, and 10 truck trips for concrete deliveries, resulting in a total of approximately 57 material delivery truck trips over the duration of construction. In addition, debris removal is expected to average approximately one haul truck trip per week, with a peak of up to one haul truck per day during debris-intensive activities.

Construction workers would park on site north of Wharf 2, and no off-site parking or shuttle trips would be required. Most construction activities, including all transport of construction materials and spoils on City streets, would occur during standard daytime hours (8:00 a.m. to 6:00 p.m., Monday through Saturday), with a single phase (dredging and knockdown activities) requiring 24-hour operations, 7 days per week, excluding holidays, unless approved by the District. All construction haul trucks would access the project site via the designated haul route, approved by the District, connecting to US-101. Overall, construction-related traffic volumes would be temporary, low in intensity, and would not substantially affect roadway operations in the project vicinity.

3.3.17.4 Impact Evaluation

a: Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

Less-Than-Significant Impact. The proposed project is located within an industrial port area with roadways designed to accommodate truck traffic. Project trips would use City and District-designated truck routes (Victoria Avenue, Channel Islands Boulevard, and Ventura Road) to US-101 and internal Port roads and would not result in a substantial increase in vehicle trips or changes to existing circulation patterns.

Most bicycle, pedestrian, and transit facilities are located outside the secured Port area, and the proposed project would not interfere with them. However, pedestrian activities may be temporarily suspended or interrupted for a short duration at a portion of Hueneme Beach during dredged

materials placement, if that location is selected as part of the proposed project. Any interruption would be short-term and would not be significant.

Transportation impacts are evaluated using VMT, and the proposed project, including all sediment placement site options, would not result in a measurable increase in VMT compared to existing conditions. Accordingly, the proposed project would not conflict with applicable circulation-related programs, ordinances, plans, or policies. This impact is less than significant.

b: Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3(b)?

Less-Than-Significant Impact. As stated in the “Technical Advisory on Evaluating Transportation Impacts in CEQA” (OPR 2018) and the “Vehicle Miles Traveled – Focused Transportation Impact Study Guide” (Caltrans 2020), CEQA §15064.3(b) evaluates operational transportation impacts based on VMT. Consistent with standard practice, VMT analysis focuses on automobile travel; heavy truck trips are addressed under air quality, noise, and GHG emissions rather than VMT. For industrial facilities, VMT significance is applied case-by-case.

The proposed project would not introduce new land uses, increase operational throughput, or generate additional long-term operational vehicle trips beyond existing Port activities. As such, the proposed project would not result in an increase in operational VMT. Project-related vehicle activity would be limited to temporary construction trips, including haul trucks and worker vehicles, which would occur over an approximately 12-month construction period. Construction activity is anticipated to result in up to 40 daily automobile trips and an average of approximately two truck trips per day. These construction-related trips would be temporary and limited.

Consistent with CEQA Guidelines, construction traffic is temporary and does not constitute an operational VMT impact under Section 15064.3(b). Therefore, the proposed project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3(b), and this impact is less than significant.

c: Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No Impact. The proposed project would occur entirely within the Port and involves deepening the channel to improve navigational safety, renovations to Wharf 2 to improve safety and efficiency, and placement of dredged sediments, none of which would involve a geometric design feature. The proposed project would not alter or modify roadways providing access to or from the Port, and construction traffic would use established and designated truck routes. The proposed project does not involve rail facilities and would not affect rail operations or introduce new roadway-rail conflicts. The project site is located within a heavy-industrial maritime setting and does not introduce new land uses, permanent traffic, or incompatible circulation patterns. Likewise, the proposed locations for dredged materials placement would be consistent with the existing uses in those locations.

Therefore, the proposed project would not substantially increase hazards due to a geometric design feature or incompatible uses. There would be no impact.

d: Would the project result in inadequate emergency access?

No Impact. The proposed project does not propose new roadway design features or permanent alterations to any roadways. No road closures or detours are anticipated as part of the construction phase. The operational phase of the proposed project would have no effect on roadways or emergency access. Existing emergency access routes serving the Port would remain unchanged and fully operational during construction and operation. The proposed project would not increase traffic congestion, alter roadway geometry, or introduce new physical barriers that could affect emergency response times. Therefore, the proposed project would not result in inadequate emergency access, and there would be no impact.

3.3.18 Tribal Cultural Resources

Would the project:		Potentially Significant Impact	Less-Than-Significant Impact After Mitigation	Less-Than-Significant Impact	No Impact
a.	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:				
i.	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)?	☐	☒	☐	☐
ii.	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 Resources Code Section 5024.1, the lead agency will consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

3.3.18.1 Affected Environment

This section describes existing Tribal cultural resources within the project area and analyzes how the proposed project may affect those resources. Tribal cultural resources are defined in PRC 21074 as follows:

- 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 listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in PRC 5020.1(k)
- A resource determined by the lead agency to be significant pursuant, after considering the significance of the resource to a California Native American Tribe.

AB 52, enacted in 2016, establishes a formal role for California Native American Tribes in the CEQA process and promotes the involvement of California Native American Tribes in the decision-making process when it comes to identifying and developing mitigation for impacts to resources of importance to their culture. AB 52 requires consideration of Tribal cultural resources, which are defined as a property, landscape, or object that is of cultural value to a Tribe and is eligible for the CRHR or a local historic register (or is determined by the lead agency to be a Tribal cultural resource). Under the updated guidelines, Tribes requesting consultation under AB 52 must be notified of a

project when it is initiated and can request consultation within 30 days, after which the lead agency must begin consultation within 30 days of the request.

3.3.18.2 Federal Regulatory Context

3.3.18.2.1 Section 106 of the National Historic Preservation Act

The proposed project would require a permit from the USACE. Under Section 106 and its implementing regulations at 36 CFR 800, the USACE is required to consider the effects of the permitted activity on historic properties. A historic property is “any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places” (36 CFR 800.16(l)(1)). Traditional Cultural Properties and cultural landscapes may also be historic properties. Under the Section 106 process, the USACE must consult with interested and affected Indian Tribes, the State Historic Preservation Officer, and other interested parties about the Project’s potential impacts on historic properties, including both archaeological and historic resources.

To be eligible for inclusion in the NRHP, an historic property must have significance and retain integrity. Significant properties are those that meet one or more of the following criteria:

1. They have an association with events that have made a significant contribution to the broad patterns of our history.
2. They have an association with the lives of significant persons in our past.
3. They embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.
4. They have yielded or may be likely to yield information important in history or prehistory.

Integrity is an historic property’s ability to convey its historic significance; in other words, its historic appearance and setting (NPS 1995).

3.3.18.3 Impact Analysis

a (i). Would the proposed 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 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)?

Less-Than-Significant Impact After Mitigation. There are no known intact sites, features, places, sacred places, or cultural landscapes within the project area that are listed or eligible for listing in the

CRHR or are included in a local register of historical resources. The only previously recorded archaeological site within the project area (CA-VEN-663) has been documented as destroyed during prior dredging activities and does not retain integrity or significance. Extensive dredging, sediment reworking, and industrial development within the project area have substantially reduced the potential for intact Tribal cultural resources to be present.

Although the potential for intact resources is low, ground-disturbing and in-water construction activities could encounter previously unidentified archaeological materials or human remains that could qualify as Tribal cultural resources under PRC 21074. Disturbance of such resources would constitute a potentially significant impact.

Implementation of Mitigation Measure MM-CUL-1 (Cultural and Tribal Cultural Resources Inadvertent Discovery Procedures) would ensure that any previously unidentified Tribal cultural resources encountered during construction are appropriately evaluated and treated in consultation with California Native American Tribes, as required under AB 52. With implementation of this mitigation measure, potential impacts to Tribal cultural resources would be reduced to less-than-significant levels.

a (ii). Would the proposed 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 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 Resources Code Section 5024.1, the lead agency will consider the significance of the resource to a California Native American tribe.

Less-Than-Significant Impact After Mitigation. There are no known sites, features, places, sacred places, or cultural landscapes within the project area that have been determined by the lead agency, in its discretion and supported by substantial evidence, to be significant Tribal cultural resources pursuant to PRC 5024.1(c). Prior cultural resources investigations, extensive dredging, sediment reworking, and long-term industrial use of the project area have substantially reduced the potential for intact Tribal cultural resources to be present.

Although the potential is low, ground-disturbing and in-water construction activities could encounter previously unidentified archaeological materials or human remains that could be determined to be Tribal cultural resources based on their significance to a California Native American Tribe. Disturbance of such resources would constitute a potentially significant impact.

Implementation of Mitigation Measure MM-CUL-1 (Cultural and Tribal Cultural Resources Inadvertent Discovery Procedures) would ensure that any previously unidentified Tribal cultural

resources encountered during construction are appropriately evaluated and treated in consultation with California Native American Tribes, consistent with AB 52 and applicable state laws. With implementation of this mitigation measure, potential impacts to Tribal cultural resources would be reduced to less-than-significant levels.

3.3.19 Utilities and Service Systems

Would the project:		Potentially Significant Impact	Less-Than-Significant Impact After Mitigation	Less-Than-Significant Impact	No Impact
a.	Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☐	☒
b.	Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☐	☐	☐	☒
c.	Result in a determination by the wastewater treatment provider, which 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?	☐	☐	☐	☒
d.	Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e.	Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

3.3.19.1 Affected Environment

3.3.19.1.1 Water Supply Utilities and Service Systems

The Port and the City receive treated water from Port Hueneme Water Agency, which receives water supplies from the United Water Conservation District and Calleguas Municipal Water District. United Water Conservation District water comes from groundwater in the El Rio area of Ventura County. The Port Hueneme Water Agency and Calleguas Municipal Water District have arrangements for exchange and transfer of State Water Project supplies on a long-term basis to secure future supply reliability. Imported State Water Project supplies through the Metropolitan Water District of Southern California and Calleguas Municipal Water District help to ensure long-term reliability of quantity and quality for Port Hueneme Water Agency customers (City 2022b).

3.3.19.1.2 Wastewater Infrastructure

The City's Wastewater Division serves NBVC, the District, and the City. The collected wastewater flows to the regional wastewater treatment facility located in, and operated by, the City of Oxnard, where it is treated, tested, and eventually discharged into the Pacific Ocean (City 2025b).

3.3.19.1.3 Stormwater

Stormwater runoff generated by the Port is discharged into existing storm drains that are owned by the Port. Stormwater discharges from the Port are regulated under applicable stormwater permits.

3.3.19.1.4 Solid Waste

The City's Solid Waste Division manages all solid waste and recycling services for City residents, commercial businesses, and NBVC. Solid waste is then disposed of through Ventura Regional Sanitation District, which owns and operates the Toland Road Landfill, located off Highway 126 between Santa Paula and Fillmore. The Toland Road Landfill currently has available remaining permitted capacity (CalRecycle 2025).

3.3.19.1.5 Electricity, Natural Gas, and Telecommunications

Electricity is provided to the City by the Southern California Edison Company. Natural gas is provided to the City by the Southern California Gas Company. Telecommunications and technology services are provided by outside vendors and agencies. Telecommunications services are available in the project area (City 2022b).

3.3.19.1.6 Applicable Regulations

3.3.19.1.6.1 California Public Utilities Commission

The CPUC regulates and oversees services and utilities and assures California's access to safe and reliable utility infrastructure and services. CPUC regulates electricity, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies in California.

3.3.19.1.6.2 California Integrated Waste Management Act

The Integrated Waste Management Act of 1989 (PRC 40050 et seq.), as amended, requires each local agency to divert 50% of all solid waste generated within the local agency's jurisdiction through feasible source reduction, recycling, and composting options before using incineration of solid waste to produce heat or electricity or land disposal. CalRecycle was also created as a result of the Integrated Waste Management Act.

Under this act, local governments develop and implement integrated waste management programs consisting of several types of plans and policies, including local construction and demolition ordinances. The act also established a comprehensive statewide system of permitting, inspections,

and maintenance for solid waste facilities, and authorized local jurisdictions to impose fees based on the types and amounts of waste generated.

3.3.19.1.6.3 City of Port Hueneme Municipal Code

The PHMC (Chapter 3, Part B, Section 7216.2) specifies the requirements for the diversion of construction and demolition waste generated in the City. Prior to issuance of a building or demolition permit, a construction and demolition waste diversion plan must be submitted to and approved by the City, demonstrating solid waste diversion measures to the maximum extent practicable.

3.3.19.2 Impact Evaluation

a. Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

No Impact. The proposed project would not involve the use, relocation, or expansion of water, wastewater treatment, stormwater drainage, natural gas, or telecommunications facilities at the Port or at any of the potential dredged materials placement sites. The proposed project includes upgrades to modernize the electrical infrastructure at Wharf 2 to support at-berth emissions reduction. These upgrades would support the state and regulatory goals for emissions reduction in the maritime sectors. Therefore, there is no impact.

b. Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

No Impact. The proposed project would not involve the use of potable water or otherwise affect water supplies. Therefore, there is no impact.

c. Would the project result in a determination by the wastewater treatment provider, which 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?

No Impact. The proposed project would not require wastewater treatment. Therefore, there is no impact.

d. Would the project generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Less-Than-Significant Impact. Construction activities associated with the proposed project would generate solid waste in the form of demolition materials from the proposed wharf improvements, and dredged sediment from the proposed dredging activities.

All sediment dredged and removed from the berths may be beneficially used to nourish Hueneme Beach, either by beach placement or nearshore placement. If dredged sediment is found unsuitable for beach nourishment, it would be placed in a trench to be excavated in Channel A or at an existing, already-permitted CAD site in the harbor.

The proposed project would comply with all state and local solid waste diversion and disposal requirements, including approval of a construction and demolition waste diversion plan by the City. All construction debris, including the existing creosoted piling, timber walers, rubber fenders, and other components generated from the proposed wharf improvements, would be removed and properly disposed of off site at an appropriate facility. The removed sheet piles would be salvaged to the extent feasible for potential reuse off-site. As such, the proposed project would have a less-than-significant impact regarding the generation of solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.

e. Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less-Than-Significant Impact. The proposed project would comply with all applicable federal, state, and local management and reduction statutes and regulations related to solid waste, including approval of a construction and demolition waste diversion plan by the City. Disposal and placement of dredged material would occur in accordance with applicable permits and approvals. As such, the proposed project would have a less-than-significant impact regarding compliance with federal, state, and local management and reduction statutes and regulations related to solid waste.

3.3.20 Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:		Potentially Significant Impact	Less-Than-Significant Impact After Mitigation	Less-Than-Significant Impact	No Impact
a.	Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
b.	Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒
c.	Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
d.	Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

3.3.20.1 Affected Environment

3.3.20.1.1 Environmental Setting

The project site is within the developed area of the Port and is currently surrounded by commercial and Port-related uses and waters of the harbor. According to the CAL FIRE Fire Hazard Severity Zone Viewer, the project site is not located in or near a State Responsibility Area (SRA) and is not designated as being within a very high fire severity zone in a Local Responsibility Area (LRA; CAL FIRE 2024a). Similarly, Hueneme Beach is not located in or near a SRA and is not designated as being within a very high fire severity zone in a LRA (CAL FIRE 2024a).

3.3.20.1.2 Applicable Regulations

3.3.20.1.2.1 California Department of Forestry and Fire Protection

CAL FIRE is responsible for fire protection of over 31 million acres of the State's wildlands. CAL FIRE provides fire assessment and fire-fighting services for lands within SRAs, conducts educational and training programs, provides fire planning guidance and mapping, and reviews general plan safety elements to ensure compliance with State fire safety requirements.

3.3.20.1.2.2 Fire Hazard Severity Zones and Responsibility Areas

CAL FIRE designates FHSZs as authorized under California Government Code Sections 51175 et seq. CAL FIRE designates FHSZs within three types of areas depending on which level of government is financially responsible for fire protection:

- **Local Responsibility Area (LRA):** Incorporated communities are financially responsible for wildfire protection. There is one severity zone in the LRA, which is the Very High FHSZ.
- **State Responsibility Area (SRA):** CAL FIRE and contracted counties are financially responsible for wildfire protection. There are three hazard zones in SRAs: Moderate, High, and Very High.
- **Federal Responsibility Area (FRA):** Federal agencies, such as the U.S. Forest Service, National Park Service, Bureau of Land Management, U.S. Department of Defense, USFWS, and U.S. Department of the Interior are responsible for wildfire protection.

3.3.20.1.2.3 2024 Strategic Fire Plan for California

The 2024 Strategic Fire Plan for California contains goals, objectives, and policies to prepare for and mitigate the effects of fire on California's natural and built environments (CAL FIRE 2024b). It focuses on fire prevention and suppression activities to protect lives, properties, and ecosystems.

3.3.20.1.2.4 Oxnard Harbor District Operations Policies

Policy 209 – Fire Prevention Program (District 2015b), adopted January 12, 2015, states the requirements of the District fire protection program, including that fire-fighting apparatus should be inspected on a regular basis, be in the appropriate place, and in operating condition and that the methods for transport, handling, or storage of any hazardous materials and substances on District property shall comply with existing laws and regulations.

Policy 214 – Port Emergency Operations Plan (EOP) Policy (District 2025), adopted June 23, 2025, requires the District to develop and maintain an EOP for the Port in accordance with applicable federal, state, and local emergency management requirements, industry best practices, relevant maritime security, and environmental protection regulations and in accordance with National Incident Management System and the California Standardized Emergency Management System. The Port shall conduct regular training for relevant personnel and coordinate exercises to ensure readiness and familiarity with the EOP.

3.3.20.2 Impact Evaluation

a: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

No Impact. Proposed project improvements would occur within the Port and at Hueneme Beach. The project site and Hueneme Beach are not located in or near SRAs or lands classified as very high fire hazard severity zones. The proposed project would not impede the District's EOP or Fire Prevention Program and would not otherwise substantially impair an adopted emergency response plan or emergency evacuation plan. Therefore, there would be no impact.

b: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

No Impact. Proposed project improvements would occur within the Port and at Hueneme Beach. The project site and Hueneme Beach are not located in or near SRAs or lands classified as very high fire hazard severity zones. The proposed project involves upgrades and improvements within an existing developed port facility and does not include any new infrastructure that due to slope, prevailing winds, or other factors, would exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Therefore, there would be no impact.

c: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

No Impact. Proposed project improvements would occur within the Port and at Hueneme Beach. The project site and Hueneme Beach are not located in or near SRAs or lands classified as very high fire hazard severity zones. The proposed project does not include installation or maintenance of infrastructure such as roads, fuel breaks, emergency water sources, power lines, or utilities that would exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. Therefore, there would be no impact.

d: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

No Impact. Proposed project improvements would occur within the Port and at Hueneme Beach, both of which are flat and on the water. The project site and Hueneme Beach are not located in or near SRAs or lands classified as very high fire hazard severity zones. The proposed project, therefore, would not result in exposure of people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. Therefore, there would be no impact.

3.3.21 CEQA Mandatory Findings of Significance

		Potentially Significant Impact	Less-Than-Significant Impact After Mitigation	Less-Than-Significant Impact	No Impact
a.	Does the project have the potential to substantially 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 which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

3.3.21.1 Impact Evaluation

a. Does the project have the potential to substantially 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?

Less-Than-Significant Impact After Mitigation. Potentially significant effects identified in this IS/MND relate to air quality, biological resources, cultural resources, and Tribal cultural resources. As described in Section 3.3.3 (Air Quality), Section 3.3.4 (Biological Resources), and Sections 3.3.5 and 3.3.18 (Cultural Resources and Tribal Cultural Resources), implementation of applicable mitigation measures would avoid or reduce potential impacts to a less-than-significant level. With incorporation of mitigation, the proposed project would not substantially degrade environmental quality, substantially reduce habitat, cause wildlife populations to drop below self-sustaining levels, threaten elimination of a plant or animal community, substantially reduce the number or restrict the range of a special-status species, or eliminate important examples 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.)

Less-Than-Significant Impact After Mitigation. CEQA Guidelines Section 15064(i) requires consideration of whether a project's incremental effects are cumulatively considerable when viewed in connection with past, present, and probable future projects. The proposed project would result in temporary construction effects (e.g., air quality/GHG emissions, noise, and localized turbidity) and resource-related effects that would be addressed through regulatory compliance and, where applicable, mitigation identified in this IS/MND. With implementation of mitigation measures and adherence to applicable permits and requirements, the proposed project's incremental contribution to cumulative impacts would not be cumulatively considerable.

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

Less-Than-Significant Impact After Mitigation. Potential effects on human beings associated with construction air emissions, hazards and hazardous materials, water quality, and noise are evaluated in Sections 3.3.3, 3.3.9, 3.3.10, and 3.3.13, respectively. As described in those sections, compliance with applicable regulations, standard construction BMPs, and mitigation (Air Quality) would avoid substantial adverse effects on human beings. Therefore, the proposed project would not result in substantial adverse effects on human beings, either directly or indirectly.

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Appendix A

Air Quality, Greenhouse Gas, and Noise Calculations



February 2026

Port of Hueneme North Terminal Berth Deepening and Wharf 2 Improvements
Project



Air Quality, Greenhouse Gas, and Noise Calculations

Prepared for Oxnard Harbor District

February 2026

Port of Hueneme North Terminal Berth Deepening and Wharf 2 Improvements

Air Quality, Greenhouse Gas, and Noise Calculations

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ATTACHMENT

Attachment 1 CalEEMod Output File

ABBREVIATIONS

CalEEMod	California Emissions Estimator Model
CARB	California Air Resources Board
DPM	diesel particulate matter
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GHG	greenhouse gas
IS/MND	Initial Study/Mitigated Negative Declaration
L_{eq}	equivalent continuous sound level
L_{max}	maximum sound level
PPV	peak particle velocity
proposed project	Port of Hueneme North Terminal Berth Deepening and Wharf 2 Improvements Project
RCNM	Roadway Construction Noise Model
USEPA	U.S. Environmental Protection Agency

1 Introduction

This technical appendix provides detailed documentation supporting the air quality, greenhouse gas (GHG), and noise analyses presented in the Initial Study/Mitigated Negative Declaration (IS/MND) for the Port of Hueneme North Terminal Berth Deepening and Wharf 2 Improvements Project (proposed project). This appendix presents the analytical methodologies, assumptions, and quantitative results used to evaluate air emissions, GHG emissions, noise, and groundborne vibration associated with the proposed project. Regulatory context, significance thresholds, and impact determinations are presented in the IS/MND and are not repeated in this appendix.

2 Air Quality Technical Assessment

2.1 Overview

The air quality technical assessment evaluates temporary emissions associated with the construction of the proposed project. The analysis addresses criteria air pollutants and toxic air contaminants generated by land-based and marine-based construction activities. The proposed project does not include new or expanded operational emission sources; therefore, operational emissions are not quantified.

2.2 Construction Emission Sources and Methodology

Construction-related air pollutant emissions associated with the proposed project were evaluated for representative worst-case construction conditions. Emission sources include diesel-powered land-based construction equipment, on-road haul trucks, worker commute vehicles, and marine-based construction equipment and vessels such as dredges, tugboats, and barges operating within the Port of Hueneme harbor.

Land-based construction emissions and on-road vehicle emissions were estimated using the California Emissions Estimator Model (CalEEMod), Version 2022.1.1.37 (CalEEMod 2022). CalEEMod incorporates emission factors from the California Air Resources Board (CARB) EMFAC and OFFROAD models and is widely used to estimate construction emissions from off-road equipment, on-road vehicles, and worker commute trips. Equipment types, quantities, horsepower ratings, load factors, and hours of operation were developed based on the proposed project description and anticipated construction methods are summarized in Tables 1 through 3.

Marine construction emissions were estimated using emission factors and calculation methodologies consistent with CARB and U.S. Environmental Protection Agency (USEPA) guidance for port and marine construction activities, including published emission factors for harbor craft and construction vessels (CARB 2021, USEPA 2022). Marine equipment operating hours, vessel types, and engine characteristics were based on anticipated dredging and marine construction activities and represent conservative assumptions intended to capture worst-case daily emission conditions.

The analysis was conducted on a based on construction phase to reflect variations in construction activities and equipment usage over the course of construction. Conservative assumptions were applied throughout the analysis, including assumptions regarding simultaneous equipment operation and daily operating hours. Although construction equipment and vessels capable of utilizing existing shore power connections would be preferentially included in the construction fleet where feasible, no emission reductions beyond compliance with applicable CARB regulations were assumed for the purposes of this analysis.

2.3 Construction Emissions Summary

Maximum daily construction emissions of criteria pollutants, including nitrogen oxides, reactive organic gases, carbon monoxide, particulate matter less than 10 microns, and particulate matter less than 2.5 microns, were quantified for each construction phase. Diesel particulate matter (DPM) was evaluated qualitatively as a toxic air contaminant.

Quantified emissions represent conservative, worst-case construction conditions and are summarized in Tables 5 and 6 and in the CalEEMod output file (Attachment 1).

2.4 Toxic Air Contaminants and Health Risk Considerations

DPM generated by construction equipment and marine vessels is classified by CARB as a toxic air contaminant (CARB 2026). Construction-related DPM emissions would be temporary, intermittent, and limited to the construction period. Current quantitative health risk assessment methodologies are based on long-term exposure durations and are not applicable to short-term construction activities. Construction exhaust would dissipate rapidly in the coastal environment, and all construction activities would comply with California regulations limiting diesel engine idling. Therefore, construction-related DPM emissions would not be expected to expose sensitive receptors to substantial concentrations of toxic air contaminants.

3 Greenhouse Gas Technical Assessment

3.1 Overview

The GHG technical assessment evaluates temporary GHG emissions associated with construction of the proposed project. The analysis focuses on emissions from fuel combustion in construction equipment and vehicles. The proposed project does not include operational components that would result in ongoing increased GHG emissions.

3.2 Construction GHG Emission Sources and Methodology

GHG emissions associated with the proposed project construction were evaluated using the same construction phasing and equipment assumptions applied in the air quality analysis. GHG emission sources include diesel-powered land-based construction equipment, marine construction equipment and vessels (including dredges, tugboats, and barges), on-road vendor and haul trucks, and worker commute vehicles.

GHG emissions were quantified using CalEEMod, Version 2022.1.1.37, supplemented with marine vessel emission calculations consistent with CARB and USEPA guidance for port-related construction activities (CARB 2021, USEPA 2022). Emissions of carbon dioxide, methane, and nitrous oxide were estimated and converted to carbon dioxide equivalents using global warming potential values from the Intergovernmental Panel on Climate Change's Fourth Assessment report, consistent with CalEEMod methodology (CalEEMod 2022, IPCC 2008).

Construction phasing, equipment usage, and operating durations were incorporated to represent annual and total construction emissions. Conservative assumptions were applied throughout the analysis, and no credit was taken for potential operational efficiencies, reduced offshore anchoring time following project completion, or optional construction-related emission reduction measures such as shore power usage. GHG emissions were quantified to provide disclosure of the magnitude of temporary construction-related emissions.

3.3 Construction GHG Emissions Summary

Total construction-related GHG emissions were quantified in Tables 5 and 6 and CalEEMod output file (Attachment 1) to provide disclosure of the proposed project's temporary contribution to GHG emissions.

4 Noise and Vibration Technical Assessment

4.1 Overview

This section presents the construction noise and vibration assessment supporting the noise impact analysis in the IS/MND. The assessment evaluates temporary noise and groundborne vibration generated by construction activities under conservative, worst-case conditions at the nearest and most affected noise- and vibration-sensitive receptors. The proposed project is not anticipated to increase the operational noise at the Port.

4.2 Construction Noise Assessment Methodology

Background noise is presented in Table 7. Construction noise levels were estimated using calculation procedures consistent with Federal Transit Administration (FTA) and Federal Highway Administration (FHWA) guidance. A spreadsheet-based methodology was developed to apply published construction equipment noise emission levels and standard acoustical propagation formulas using the calculation procedures from the FHWA Roadway Construction Noise Model (RCNM).

The analysis was conducted on a phase-by-phase basis to reflect variations in equipment types, quantities, and operating characteristics. Equipment inventories were developed based on anticipated construction methods and represent worst-case daily conditions.

The analysis evaluated hourly equivalent continuous sound levels (L_{eq}) and maximum sound levels (L_{max}). Hourly L_{eq} values were calculated by logarithmically summing noise contributions from all equipment assumed to operate concurrently during a given hour, accounting for equipment usage factors and intermittent operation. L_{max} values were calculated based on the loudest single piece of equipment operating during each construction phase.

Receptor locations include the nearest recreational, residential, and school receptors. Sound propagation from construction equipment to receptors was calculated using geometric spreading to account for distance attenuation, consistent with RCNM guidance (FHWA 2006). Shielding is included for the existing plant wall at the port boundary (3 A-weighted decibels) and construction best practices (8 A-weighted decibels), consistent with Appendix A of the RCNM user guide (FHWA 2006).

Noise level limits are shown in Table 8 by receptor type and are based on the Exterior Noise Level Standards listed in the Port Hueneme General Plan Background Report for Noise associated with the 2045 General Plan (City 2022).

4.3 Construction Noise Summary

Inputs and modeled construction noise levels, including hourly L_{eq} and L_{max} values, are summarized in Tables 9 and 10 for each construction phase and sensitive receptor. Noise levels vary by phase

based on equipment types, quantities, and distances to receptors, with the highest levels associated with noise-intensive activities such as jackhammering, sandblasting, and pile installation. These increases would be temporary and intermittent.

As shown in Tables 9 and 10, predicted noise levels at the distance of the closest receptors are below applicable exterior noise level limits with shielding incorporated (on terminal structures and property-line fencing).

4.4 Construction Vibration Assessment Methodology

A quantitative construction vibration assessment was conducted using the prediction methodology outlined in Section 7.2 of the Federal Transit Administration's Transit Noise and Vibration Impact Assessment Manual (FTA 2018). The assessment evaluated potential groundborne vibration generated by vibration-intensive construction activities and compared predicted vibration levels to applicable criteria for structural damage.

Predicted vibration levels were calculated using the FTA-recommended vibration propagation equation, which estimates peak particle velocity (PPV) at a receptor as a function of reference source vibration levels, source-to-receptor distance, and geometric spreading. Construction equipment expected to generate notable vibration levels was identified for the overall duration of construction. Reference vibration source levels were obtained from FTA guidance tables (FTA 2018). Modeled distances include the nearest structure to the construction location.

Per FTA guidance, vibration impact criteria include a structural damage threshold of 0.20 inches per second PPV for non-engineered timber and masonry structures and 0.12 inches per second PPV for buildings extremely susceptible to vibration damage (FTA 2018).

4.5 Construction Vibration Summary

Predicted PPVs of typical construction equipment are summarized in Table 11. Results represent worst-case vibration exposure conditions based on vibration-intensive equipment and minimum source-to-receptor distances.

As shown in Table 11, predicted construction-related vibration levels at the distance of the closest structure are below applicable FTA vibration criteria for structural damage.

5 References

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Tables

Table 1. CalEEMod Information
Port of Hueneme
Wharf 2 Deepening
Port of Hueneme, California

Land Use

Type	Subtype	Size ¹	Units	Lot Acreage	Building Square Feet
Industrial	General Heavy Industry	2.75	1000 sqft	0.063	0

Notes

1. Size was estimated in Google Earth for entry into CalEEMod.

Demolition, Material Movement, Architectural Coatings¹

Parameter	Total	Station 0+00 to Sta 5+00	Station 13+40 to Sta 10+00	Station 5+00 to Sta 10+00	Units
Station Distance	1,340	500	340	500	--
Phase Split	100%	37%	25%	37%	%
Demolition					
Phase	Demolition	Station 0+00 to Sta 5+00 Demolition of Fenders	Station 13+40 to Sta 10+00 Demolition of Fenders	Station 5+00 to Sta 10+00 Demolition of Fenders	--
Amount	319	119	81	119	tons
Material Movement: Dredging					
Material Movement Phase	Station 0+00 to Sta 13+40 Dredging	--	--	--	--
Material Movement	937	--	--	--	yd ³
Architectural Coating					
Phase	--	Station 0+00 to Sta 5+00 Deck Repair	Station 13+40 to Sta 10+00 Deck Repair	Station 5+00 to Sta 10+00 Deck Repair	--
Amount	17,000	6,343	4,313	6,343	ft ²

Notes

1. Total amounts for demolition, material movement, and architectural coatings were provided by construction team and split by phase based on the length of the station.

Conversions

2000 lb/ton
27 ft³/yd³

Table 2. Construction Phasing and Trips
Port of Hueneme
Wharf 2 Deepening
Port of Hueneme, California

Sequence	Area	Construction Phase ¹	CalEEMod Phase Type	Construction Year	Start Date	End Date	Duration		Weekly Schedule Days/week	Worker Trips ^{2,4}		Vendor Trips ^{3,4}		Hauling Trips ^{4,5}	
							Calendar Days	Work Days		One-way trips/day	miles/trip	One-way trips/day	miles/trip	One-way trips/day	miles/trip
1	All	Mobilization	Site Preparation	2028	1-Jan-28	6-Jan-28	5	4	5	40	18.5	--	--	2	20
2	Station 0+00 to Sta 5+00	Station 0+00 to Sta 5+00 Demolition of Fenders	Demolition	2028	7-Jan-28	27-Jan-28	20	15	5	40	18.5	--	--	2	20
3		Station 0+00 to Sta 5+00 Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade. Riprap Repair.	Grading	2028	28-Jan-28	7-May-28	100	71	5	40	18.5	0.59	10.2	2	20
4		Station 0+00 to Sta 5+00 Deck Repair	Building Construction	2028	8-May-28	5-Jun-28	28	21	5	40	18.5	--	--	2	20
5	Station 13+40 to Sta 10+00	Station 13+40 to Sta 10+00 Demolition of Fenders	Demolition	2028	6-Jun-28	6-Jul-28	30	23	5	40	18.5	--	--	2	20
6		Station 13+40 to Sta 10+00 Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade. Riprap Repair.	Grading	2028	7-Jul-28	25-Sep-28	80	57	5	40	18.5	0.49	10.2	2	20
7		Station 13+40 to Sta 10+00 Deck Repair	Building Construction	2028	26-Sep-28	24-Oct-28	28	21	5	40	18.5	--	--	2	20
8	Station 5+00 to Sta 10+00	Station 5+00 to Sta 10+00 Demolition of Fenders	Demolition	2028	25-Oct-28	24-Nov-28	30	23	5	40	18.5	--	--	2	20
9		Station 5+00 to Sta 10+00 Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade. Riprap Repair.	Grading	2028/2029	25-Nov-28	5-Mar-29	100	71	5	40	18.5	0.59	10.2	2	20
10		Station 5+00 to Sta 10+00 Deck Repair	Building Construction	2029	6-Mar-29	3-Apr-29	28	21	5	40	18.5	--	--	2	20
11	All	Station 0+00 to Sta 13+40 Dredging	Grading	2029	6-Mar-29	27-Mar-29	21	21	7	40	18.5	--	--	2	20

Notes

1. Construction schedule and overall round trip count was provided by the construction team.
2. Worker trips were conservatively assumed to equal the peak worker count over the duration of the project.
3. Vendor trips were allocated to phases based on station length and converted to a daily trip rate using the number of workdays in that phase.
4. Trip lengths are CalEEMod defaults.
5. Haul truck trip count equal to number of dump truck in each phase. The onsite portion of haul trip analyzed as a dump truck in CalEEMod.

Table 3. Construction Equipment
Port of Hueneme
Wharf 2 Deepening
Port of Hueneme, California

Sequence	Construction Area	Construction Phase	Construction Equipment	Quantity	Hours/ Day	Analysis	Model Equipment	
1	All	Mobilization	Forklifts	1	8	CalEEMod - Offroad	Forklifts	
			Generators	1	8	CalEEMod - Offroad	Generator Sets	
			Welders	1	8	CalEEMod - Offroad	Welders	
2	Station 0+00 to Sta 5+00	Station 0+00 to Sta 5+00 Demolition of Fenders	Crane Barge	1	8	CARB/EPA - Harbor craft	Barge-Other	
			Flat Barge	1	8	CARB/EPA - Harbor craft	N/A - No Engine	
			Tugboat	1	8	CARB/EPA - Harbor craft	Tugboat-Push/Tow	
Forklifts			1	8	CalEEMod - Offroad	Forklifts		
Crane Barge			1	8	CARB/EPA - Harbor craft	Barge-Other		
3		Station 0+00 to Sta 5+00 Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade. Riprap Repair.	Flat Barge	1	8	CARB/EPA - Harbor craft	N/A - No Engine	
			Tugboat	1	8	CARB/EPA - Harbor craft	Tugboat-Push/Tow	
			Pile Driving	1	8	CalEEMod - Offroad	Bore/Drill Rigs	
Forklifts			1	8	CalEEMod - Offroad	Forklifts		
4			Station 0+00 to Sta 5+00 Deck Repair	Jack Hammer	3	8	CalEEMod - Offroad	Concrete/Industrial Saws
				Sandblaster	1	8	CalEEMod - Offroad	Air Compressors
				Concrete pump	1	8	CalEEMod - Offroad	Pumps
Dump Truck		1		8	CalEEMod - Offroad	Dumpers/Tenders		
5		Station 13+40 to Sta 10+00	Station 13+40 to Sta 10+00 Demolition of Fenders	Crane Barge	1	8	CARB/EPA - Harbor craft	Barge-Other
				Flat Barge	1	8	CARB/EPA - Harbor craft	N/A - No Engine
				Tugboat	1	8	CARB/EPA - Harbor craft	Tugboat-Push/Tow
				Forklifts	1	8	CalEEMod - Offroad	Forklifts
6			Station 13+40 to Sta 10+00 Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade. Riprap Repair.	Crane Barge	1	8	CARB/EPA - Harbor craft	Barge-Other
				Flat Barge	1	8	CARB/EPA - Harbor craft	N/A - No Engine
				Tugboat	1	8	CARB/EPA - Harbor craft	Tugboat-Push/Tow
				Pile Driving	1	8	CalEEMod - Offroad	Bore/Drill Rigs
Forklifts				1	8	CalEEMod - Offroad	Forklifts	
7			Station 13+40 to Sta 10+00 Deck Repair	Jack Hammer	3	8	CalEEMod - Offroad	Concrete/Industrial Saws
				Sandblaster	1	8	CalEEMod - Offroad	Air Compressors
				Concrete pump	1	8	CalEEMod - Offroad	Pumps
				Dump Truck	1	8	CalEEMod - Offroad	Dumpers/Tenders
8		Station 5+00 to Sta 10+00	Station 5+00 to Sta 10+00 Demolition of Fenders	Crane Barge	1	8	CARB/EPA - Harbor craft	Barge-Other
				Flat Barge	1	8	CARB/EPA - Harbor craft	N/A - No Engine
				Tugboat	1	8	CARB/EPA - Harbor craft	Tugboat-Push/Tow
				Forklifts	1	8	CalEEMod - Offroad	Forklifts
9			Station 5+00 to Sta 10+00 Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade. Riprap Repair.	Crane Barge	1	8	CARB/EPA - Harbor craft	Barge-Other
				Flat Barge	1	8	CARB/EPA - Harbor craft	N/A - No Engine
				Tugboat	1	8	CARB/EPA - Harbor craft	Tugboat-Push/Tow
				Pile Driving	1	8	CalEEMod - Offroad	Bore/Drill Rigs
Forklifts				1	8	CalEEMod - Offroad	Forklifts	
10			Station 5+00 to Sta 10+00 Deck Repair	Jack Hammer	3	8	CalEEMod - Offroad	Concrete/Industrial Saws
				Sandblaster	1	8	CalEEMod - Offroad	Air Compressors
				Concrete pump	1	8	CalEEMod - Offroad	Pumps
				Dump Truck	1	8	CalEEMod - Offroad	Dumpers/Tenders
11		All	Station 0+00 to Sta 13+40 Dredging	Dredging Barge	1	24	CARB/EPA - Harbor craft	Dredge
				Scow Barge	2	24	CARB/EPA - Harbor craft	Barge-Other
				Tugboat	1	24	CARB/EPA - Harbor craft	Tugboat-Push/Tow

Notes

- Equipment list provided by construction team.
- Dredging is assumed to occur 24 hours/day, 7 days/week. All other phases would occur between 8AM and 6PM Mondays through Saturdays.

Table 4. Construction Marine Emissions
Port of Hueneme
Wharf 2 Deepening
Port of Hueneme, California

Default Harbor Craft Parameters

Harbor Craft Classification	Main Engine ^{1,2}					Auxiliary Engine ^{1,2}				
	Engine Size		Load Factor	Number of Engines	Engine Tier ³	Engine Size		Load Factor	Number of Engines	Engine Tier ³
	Hp	kW				Hp	kW			
Barge-Other	--	--	--	--	--	224	167	0.31	2	Tier 2
Tugboat-Push/Tow	731	545	0.33	2	Tier 2	93	69	0.37	2	Tier 2
Dredge	--	--	--	--	--	390	291	0.57	1	Tier 2

Notes

1. Default parameters for various harbor craft are from CARB's 2021 Update to the Emission Inventory for Commercial Harbor Craft: Methodology and Results. Tables H-1 and H-9. Number of engines were calculated using the average engine count and the vessel count, rounded to the nearest integer.
2. Based on input from the construction team, the drage is not assumed to be self propelled.
3. The CARB Commercial Harbor Craft regulation required all commercial harbor craft to be upgraded to at least a Tier 2 engine by 2022. The 2022 amendment to the regulation requires further updates to Tier 4 engines by 2029-2031. This analysis conservatively analyzes commercial harbor craft as Tier 2, even though the equipment engines would likely be updated by the time of construction.

Emission Factors¹

	VOC	NOx	CO	SO2	PM10	PM2.5	CO2	CH4	N2O	CO2e
Engine Tier	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh
Tier 0	0.30	10	1.6	0.0062	0.26	0.25	679	0.0056	0.033	690
Tier 1	0.30	9.6	1.6	0.0062	0.26	0.25	679	0.0056	0.033	690
Tier 2	0.30	5.6	0.9	0.0062	0.15	0.14	679	0.0056	0.033	690
Tier 3	0.12	4.7	0.9	0.0062	0.08	0.08	679	0.0024	0.033	689
Tier 4	0.12	1.3	0.92	0.0062	0.03	0.03	679	0.0024	0.033	689
GWPP (IPCC AR4):							1	25	296	--

Notes

1. Emission factors are from the USEPA's Ports Emissions Inventory Guidance. SO2, CH4, N2O, CO2 emission factors are calculated using equations in sections 4.5.4-4.5.7. All others from Table H.7. The BSFC using in the calculations is from Table 4.3.

Factors Used in EF Calculations

BSFC	213 g/kWh	Sact (USLD)	0.000015
CCF	3.19 g CO2/ g fuel	FSC	0.97753
NCF	0.000156 g N2O/ g fuel	MWR	2

Construction Activity

Sequence	Construction Area	Construction Phase	Construction Equipment	Quantity	Activity ¹				Harbor Craft Type ²	Harbor Craft Parameters						2028 Energy Demand		2029 Energy Demand			
					Main Engine Daily Hours	Auxiliary Engine Daily Hours	2028	2029		Main Engine Size	Main Engine Load Factor	Number of Main Engines	Auxiliary Engine Size	Auxiliary Engine Load Factor	Number of Auxiliary Engines	Main Engine	Auxiliary Engine	Main Engine	Auxiliary Engine		
					Hours/ day	Hours/ day	Days	Days		kW	--	--	kW	--	--	kWh	kWh	kWh	kWh		
2	Station 0+00 to Sta 5+00	Station 0+00 to Sta 5+00 Demolition of Fenders	Crane Barge	1	--	8	15	--	Barge-Other	--	--	--	167	0.31	2	0	12,428	0	0		
			Flat Barge	1	--	8	15	--	N/A - No Engine	--	--	--	--	0	0	0	0				
3		Station 13+40 to Sta 10+00	Station 0+00 to Sta 5+00 Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade.	Tugboat	1	4	8	15	--	Tugboat-Push/Tow	545	0.33	2	69	0.37	2	21,586	6,158	0	0	
				Crane Barge	1	--	8	71	--	Barge-Other	--	--	--	167	0.31	2	0	58,824	0	0	
5			Station 5+00 to Sta 10+00	Station 13+40 to Sta 10+00 Demolition of Fenders	Flat Barge	1	--	8	71	--	N/A - No Engine	--	--	--	--	0	0	0	0		
					Tugboat	1	4	8	71	--	Tugboat-Push/Tow	545	0.33	2	69	0.37	2	102,175	29,149	0	0
6	Station 5+00 to Sta 10+00			Station 5+00 to Sta 10+00 Demolition of Fenders	Crane Barge	1	--	8	23	--	Barge-Other	--	--	--	167	0.31	2	0	19,056	0	0
					Flat Barge	1	--	8	23	--	N/A - No Engine	--	--	--	--	0	0	0	0		
8		Station 5+00 to Sta 10+00		Station 13+40 to Sta 10+00 Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade.	Tugboat	1	4	8	23	--	Tugboat-Push/Tow	545	0.33	2	69	0.37	2	33,099	9,443	0	0
					Crane Barge	1	--	8	57	--	Barge-Other	--	--	--	167	0.31	2	0	47,225	0	0
9			Station 5+00 to Sta 10+00	Station 5+00 to Sta 10+00 Demolition of Fenders	Flat Barge	1	--	8	57	--	N/A - No Engine	--	--	--	--	0	0	0	0		
					Tugboat	1	4	8	57	--	Tugboat-Push/Tow	545	0.33	2	69	0.37	2	82,028	23,401	0	0
11	All			Station 5+00 to Sta 10+00 Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade.	Crane Barge	1	--	8	23	--	Barge-Other	--	--	--	167	0.31	2	0	19,056	0	0
					Flat Barge	1	--	8	23	--	N/A - No Engine	--	--	--	--	0	0	0	0		
11		All		Station 5+00 to Sta 10+00 Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade.	Tugboat	1	4	8	23	--	Tugboat-Push/Tow	545	0.33	2	69	0.37	2	33,099	9,443	0	0
					Crane Barge	1	--	8	25	46	Barge-Other	--	--	--	167	0.31	2	0	20,713	0	38,111
11			All	Station 0+00 to Sta 13+40 Dredging	Flat Barge	1	--	8	25	67	N/A - No Engine	--	--	--	--	0	0	0	0		
					Tugboat	1	4	8	25	62	Tugboat-Push/Tow	545	0.33	2	69	0.37	2	35,977	10,264	89,223	25,454
11	All			Station 0+00 to Sta 13+40 Dredging	Dredging Barge	1	--	24	--	21	Dredge	--	--	--	291	0.57	1	0	0	0	83,548
					Scow Barge	2	--	24	--	21	Barge-Other	--	--	--	167	0.31	2	0	0	0	104,391
11		All		Station 0+00 to Sta 13+40 Dredging	Tugboat	1	12	24	--	21	Tugboat-Push/Tow	545	0.33	2	69	0.37	2	0	0	90,662	25,865

Notes

1. Per construction team, main engine of tug boats will be used 4 hours/day, while auxiliary engines of all equipment estimated at 8 hours/day for all phases except dredging. Dredging operations are assumed to occur 24 hours per day, 7 days per week and engine activity was scaled accordingly.
2. Proposed construction equipment was matched to a harbor craft category for emission calculations.

Table 4. Construction Marine Emissions
Port of Hueneme
Wharf 2 Deepening
Port of Hueneme, California

Annual Emissions																					
Sequence	Construction Area	Construction Phase	Harbor Craft Type	Engine	Year	Energy	Emission Factors							Annual Emissions							
						kWh	VOC	NOx	CO	SO2	PM10	PM2.5	CO2e	VOC	NOx	CO	SO2	PM10	PM2.5	CO2e	
							g/kWh							lb/year							
2	Sta 5+00	Station 0+00 to Sta 5+00 Demolition of Fenders	Barge-Other	Main Engine	2028	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
			Barge-Other	Auxiliary Engine	2028	12,428	0.30	5.6	0.92	0.0062	0.15	0.14	690	8.1	155	25	0.17	4.1	3.9	18,891	
			Tugboat-Push/Tow	Main Engine	2028	21,586	0.30	5.6	0.92	0.0062	0.15	0.14	690	14	269	44	0.30	7.0	6.8	32,814	
			Tugboat-Push/Tow	Auxiliary Engine	2028	6,158	0.30	5.6	0.92	0.0062	0.15	0.14	690	4.0	77	12	0.085	2.0	1.9	9,361	
3		Station 0+00 to Sta 5+00 Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade, Riprap Repair.	Barge-Other	Main Engine	2028	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
			Barge-Other	Auxiliary Engine	2028	58,824	0.30	5.6	0.92	0.0062	0.15	0.14	690	38	732	119	0.81	19	19	89,419	
			Tugboat-Push/Tow	Main Engine	2028	102,175	0.30	5.6	0.92	0.0062	0.15	0.14	690	67	1,271	207	1.4	33	32	155,317	
			Tugboat-Push/Tow	Auxiliary Engine	2028	29,149	0.30	5.6	0.92	0.0062	0.15	0.14	690	19	363	59	0.40	10	9.2	44,310	
5	Sta 10+00	Station 13+40 to Sta 10+00 Demolition of Fenders	Barge-Other	Main Engine	2028	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
			Barge-Other	Auxiliary Engine	2028	19,056	0.30	5.6	0.92	0.0062	0.15	0.14	690	12	237	39	0.26	6.2	6.0	28,967	
			Tugboat-Push/Tow	Main Engine	2028	33,099	0.30	5.6	0.92	0.0062	0.15	0.14	690	22	412	67	0.46	11	10	50,314	
			Tugboat-Push/Tow	Auxiliary Engine	2028	9,443	0.30	5.6	0.92	0.0062	0.15	0.14	690	6.2	117	19	0.13	3.1	3.0	14,354	
6		Station 13+40 to Sta 10+00 Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade, Riprap Repair.	Barge-Other	Main Engine	2028	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
			Barge-Other	Auxiliary Engine	2028	47,225	0.30	5.6	0.92	0.0062	0.15	0.14	690	31	587	96	0.65	15	15	71,787	
			Tugboat-Push/Tow	Main Engine	2028	82,028	0.30	5.6	0.92	0.0062	0.15	0.14	690	53	1,020	166	1.1	27	26	124,691	
			Tugboat-Push/Tow	Auxiliary Engine	2028	23,401	0.30	5.6	0.92	0.0062	0.15	0.14	690	15	291	47	0.32	7.6	7.4	35,573	
8	Sta 10+00	Station 5+00 to Sta 10+00 Demolition of Fenders	Barge-Other	Main Engine	2028	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
			Barge-Other	Auxiliary Engine	2028	19,056	0.30	5.6	0.92	0.0062	0.15	0.14	690	12	237	39	0.26	6.2	6.0	28,967	
			Tugboat-Push/Tow	Main Engine	2028	33,099	0.30	5.6	0.92	0.0062	0.15	0.14	690	22	412	67	0.46	11	10	50,314	
			Tugboat-Push/Tow	Auxiliary Engine	2028	9,443	0.30	5.6	0.92	0.0062	0.15	0.14	690	6.2	117	19	0.13	3.1	3.0	14,354	
9		Station 5+00 to Sta 10+00 Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade, Riprap Repair.	Barge-Other	Main Engine	2028	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
			Barge-Other	Auxiliary Engine	2028	20,713	0.30	5.6	0.92	0.0062	0.15	0.14	690	13	258	42	0.29	6.8	6.6	31,485	
			Tugboat-Push/Tow	Main Engine	2028	35,977	0.30	5.6	0.92	0.0062	0.15	0.14	690	23	448	73	0.50	12	11	54,689	
			Tugboat-Push/Tow	Auxiliary Engine	2028	10,264	0.30	5.6	0.92	0.0062	0.15	0.14	690	6.7	128	21	0.14	3.4	3.2	15,602	
			Barge-Other	Main Engine	2029	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
			Barge-Other	Auxiliary Engine	2029	38,111	0.30	5.6	0.92	0.0062	0.15	0.14	690	25	474	77	0.52	12	12	57,933	
			Tugboat-Push/Tow	Main Engine	2029	89,223	0.30	5.6	0.92	0.0062	0.15	0.14	690	58	1,110	181	1.2	29	28	135,629	
			Tugboat-Push/Tow	Auxiliary Engine	2029	25,454	0.30	5.6	0.92	0.0062	0.15	0.14	690	17	317	52	0.35	8.3	8.1	38,693	
11	All	Station 0+00 to Sta 13+40 Dredging	Dredge	Main Engine	2029	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
			Dredge	Auxiliary Engine	2029	83,548	0.30	5.6	0.92	0.0062	0.15	0.14	690	54	1,039	169	1.2	27	26	127,002	
			Barge-Other	Main Engine	2029	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
			Barge-Other	Auxiliary Engine	2029	104,391	0.30	5.6	0.92	0.0062	0.15	0.14	690	68	1,299	211	1.4	34	33	158,687	
			Tugboat-Push/Tow	Main Engine	2029	90,662	0.30	5.6	0.92	0.0062	0.15	0.14	690	59	1,128	184	1.2	30	29	137,817	
			Tugboat-Push/Tow	Auxiliary Engine	2029	25,865	0.30	5.6	0.92	0.0062	0.15	0.14	690	17	322	52	0.36	8.4	8.2	39,317	
													2028	374	7,129	1,161	7.9	187	181	871,210	
													2029	298	5,688	926	6.3	149	145	695,079	

Maximum Daily Emissions

Sequence	Construction Area	Construction Phase	Year	Work Days	Max Daily Emissions						
					VOC	NOx	CO	SO2	PM10	PM2.5	CO2e
					lb/day						
2	Station 0+00 to Sta 5+00	Station 0+00 to Sta 5+00 Demolition of Fenders	2028	15	1.7	33	5.4	0.037	0.87	0.85	4,071
3		Station 0+00 to Sta 5+00 Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade. Riprap Repair.	2028	71	1.7	33	5.4	0.037	0.87	0.85	4,071
5		Station 13+40 to Sta 10+00 Demolition of Fenders	2028	23	1.7	33	5.4	0.037	0.87	0.85	4,071
6	Station 13+40 to Sta 10+00	Station 13+40 to Sta 10+00 Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade. Riprap Repair.	2028	57	1.7	33	5.4	0.037	0.87	0.85	4,071
8		Station 5+00 to Sta 10+00 Demolition of Fenders	2028	23	1.7	33	5.4	0.037	0.87	0.85	4,071
9	Station 5+00 to Sta 10+00	Station 5+00 to Sta 10+00 Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade. Riprap Repair.	2028	25	1.7	33	5.4	0.037	0.87	0.85	4,071
				2029	46	2.2	41	6.7	0.046	1.1	1.1
11	All	Station 0+00 to Sta 13+40 Dredging	2029	21	9.4	180	29	0.20	4.7	4.6	22,039

Notes

1. Max daily emissions are calculated using the number of work days.

Conversions

453.59237 g/lb
0.745699872 kWh/tp

Table 5. Maximum Daily Construction Emissions
Port of Hueneme
Wharf 2 Deepening
Port of Hueneme, California

Sequence	Construction Area	Construction Phase	Year	Location	Daily Emissions (Maximum Pounds Per Day)						
					ROG	NOx	CO	SO2	PM10	PM2.5	CO2e
1	All	Mobilization	2028	Onsite	0.31	2.6	3.2	0.0055	0.077	0.071	465
			2028	Offsite	0.15	0.33	1.9	9.3E-04	0.56	0.13	625
			2028	Marine Equipment	--	--	--	--	--	--	--
2	Station 0+00 to Sta 5+00	Station 0+00 to Sta 5+00 Demolition of Fenders	2028	Onsite	0.062	0.59	1.0	0.0014	0.20	0.047	153
			2028	Offsite	0.15	0.33	1.9	9.3E-04	0.56	0.13	625
			2028	Marine Equipment	1.7	33	5.4	0.037	0.87	0.85	4,071
3		Station 0+00 to Sta 5+00 Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade. Riprap	2028	Onsite	0.16	1.8	3.4	0.0049	0.049	0.045	538
			2028	Offsite	0.15	0.35	1.9	0.0011	0.57	0.14	643
			2028	Marine Equipment	1.7	33	5.4	0.037	0.87	0.85	4,071
4		Station 0+00 to Sta 5+00 Deck Repair	2028	Onsite	1.5	6.4	7.6	0.014	0.14	0.13	1,057
			2028	Offsite	0.15	0.30	2.1	9.3E-04	0.56	0.13	649
			2028	Marine Equipment	--	--	--	--	--	--	--
5	Station 13+40 to Sta 10+00	Station 13+40 to Sta 10+00 Demolition of Fenders	2028	Onsite	0.062	0.59	1.0	0.0014	0.10	0.033	153
			2028	Offsite	0.15	0.30	2.1	9.3E-04	0.56	0.13	649
			2028	Marine Equipment	1.7	33	5.4	0.037	0.87	0.85	4,071
6		Station 13+40 to Sta 10+00 Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade. Riprap	2028	Onsite	0.16	1.8	3.4	0.0049	0.049	0.045	538
			2028	Offsite	0.16	0.32	2.1	0.0010	0.57	0.14	664
			2028	Marine Equipment	1.7	33	5.4	0.037	0.87	0.85	4,071
7		Station 13+40 to Sta 10+00 Deck Repair	2028	Onsite	1.2	6.4	7.6	0.014	0.14	0.13	1,057
			2028	Offsite	0.15	0.33	1.9	9.3E-04	0.56	0.13	625
			2028	Marine Equipment	--	--	--	--	--	--	--
8	Station 5+00 to Sta 10+00	Station 5+00 to Sta 10+00 Demolition of Fenders	2028	Onsite	0.062	0.59	1.0	0.0014	0.14	0.038	153
			2028	Offsite	0.15	0.33	1.9	9.3E-04	0.56	0.13	625
			2028	Marine Equipment	1.7	33	5.4	0.037	0.87	0.85	4,071
9		Station 5+00 to Sta 10+00 Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade. Riprap Repair.	2028	Onsite	0.10	1.2	2.4	0.0035	0.026	0.024	385
			2028	Offsite	0.15	0.35	1.9	0.0011	0.57	0.14	643
			2028	Marine Equipment	1.7	33	5.4	0.037	0.87	0.85	4,071
			2029	Onsite	0.10	1.2	2.4	0.0035	0.025	0.023	384
			2029	Offsite	0.13	0.34	1.8	0.0011	0.57	0.14	630
			2029	Marine Equipment	2.2	41	6.7	0.046	1.1	1.1	5,049
10		Station 5+00 to Sta 10+00 Deck Repair	2029	Onsite	1.4	6.3	7.6	0.014	0.12	0.11	1,057
			2029	Offsite	0.13	0.32	1.8	9.3E-04	0.56	0.13	613
			2029	Marine Equipment	--	--	--	--	--	--	--
11	All	Station 0+00 to Sta 13+40 Dredging	2029	Onsite	--	--	--	--	0.0032	4.9E-04	--
			2029	Offsite	0.13	0.32	1.8	9.3E-04	0.56	0.13	613
			2029	Marine Equipment	9.4	180	29	0.20	4.7	4.6	22,039

Maximum Daily Emissions by Type and Year								
Year	Location	ROG	NOx	CO	SO2	PM10	PM2.5	CO2e
		lb/day						
2028	Onsite	1.5	6.4	7.6	0.014	0.20	0.13	1,057
2028	Offsite	0.16	0.35	2.1	0.0011	0.57	0.14	664
2028	Marine Equipment	1.7	33	5.4	0.037	0.87	0.85	4,071
2029	Onsite	1.4	6.3	7.6	0.014	0.12	0.11	1,057
2029	Offsite	0.26	0.64	3.6	0.0019	1.1	0.27	1,226
2029	Marine Equipment	9.4	180	29	0.20	4.7	4.6	22,039
Maximum Daily Emissions by Year								
Year	Location	ROG	NOx	CO	SO2	PM10	PM2.5	CO2e
		lb/day						
2028	--	3.4	40	15	0.052	1.6	1.1	5,792
2029	--	11	187	41	0.22	6.0	5.0	24,322

Notes

1. The only phases that would overlap would be dredging and Station 5+00 to Sta 10+00 Deck Repair in 2029.
2. Onsite (offroad equipment) and offsite (onroad vehicles) emissions were calculated in CalEEMod. Marine equipment emissions are calculated in Table 4.

Table 6. Annual Construction Emissions
Port of Hueneme
Wharf 2 Deepening
Port of Hueneme, California

Sequence	Construction Area	Construction Phase	Year	Location	Annual Emissions						
					ROG	NOx	CO	SO2	PM10	PM2.5	CO2e
					ton/year						MT/year
1	All	Mobilization	2028	Onsite	6.2E-04	0.0052	0.0063	1.1E-05	1.5E-04	1.4E-04	0.84
			2028	Offsite	3.1E-04	6.5E-04	0.0038	1.9E-06	0.0011	2.7E-04	1.1
			2028	Marine Equipment	--	--	--	--	--	--	--
2		Station 0+00 to Sta 5+00 Demolition of Fenders	2028	Onsite	4.7E-04	0.0044	0.0077	1.1E-05	0.0015	3.6E-04	1.0
			2028	Offsite	0.0012	0.0024	0.014	6.9E-06	0.0042	0.0010	4.3
			2028	Marine Equipment	0.013	0.25	0.041	2.8E-04	0.0066	0.0064	28
3	Station 0+00 to Sta 5+00	Station 0+00 to Sta 5+00 Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade, Riprap	2028	Onsite	0.0057	0.062	0.12	1.8E-04	0.0017	0.0016	17
			2028	Offsite	0.0055	0.012	0.068	3.8E-05	0.020	0.0048	21
			2028	Marine Equipment	0.062	1.2	0.19	0.0013	0.031	0.030	131
4		Station 0+00 to Sta 5+00 Deck Repair	2028	Onsite	0.015	0.067	0.080	1.4E-04	0.0014	0.0013	10
			2028	Offsite	0.0016	0.0034	0.020	9.7E-06	0.0058	0.0014	6.0
			2028	Marine Equipment	--	--	--	--	--	--	--
5		Station 13+40 to Sta 10+00 Demolition of Fenders	2028	Onsite	7.2E-04	0.0068	0.012	1.6E-05	0.0012	3.8E-04	1.6
			2028	Offsite	0.0018	0.0037	0.022	1.1E-05	0.0064	0.0015	6.6
			2028	Marine Equipment	0.020	0.38	0.062	4.2E-04	0.010	0.010	42
6	Station 13+40 to Sta 10+00	Station 13+40 to Sta 10+00 Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade, Riprap	2028	Onsite	0.0045	0.050	0.10	1.4E-04	0.0014	0.0013	14
			2028	Offsite	0.0044	0.010	0.055	3.0E-05	0.016	0.0038	17
			2028	Marine Equipment	0.050	0.95	0.15	0.0011	0.025	0.024	105
7		Station 13+40 to Sta 10+00 Deck Repair	2028	Onsite	0.013	0.067	0.080	1.4E-04	0.0014	0.0013	10
			2028	Offsite	0.0016	0.0034	0.020	9.7E-06	0.0058	0.0014	6.0
			2028	Marine Equipment	--	--	--	--	--	--	--
8		Station 5+00 to Sta 10+00 Demolition of Fenders	2028	Onsite	7.2E-04	0.0068	0.012	1.6E-05	0.0016	4.4E-04	1.6
			2028	Offsite	0.0018	0.0037	0.022	1.1E-05	0.0064	0.0015	6.6
			2028	Marine Equipment	0.020	0.38	0.062	4.2E-04	0.010	0.010	42
9	Station 5+00 to Sta 10+00	Station 5+00 to Sta 10+00 Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade, Riprap Repair.	2028	Onsite	0.0024	0.028	0.058	8.6E-05	6.3E-04	5.8E-04	8.5
			2028	Offsite	0.0037	0.0084	0.047	2.6E-05	0.014	0.0033	14
			2028	Marine Equipment	0.022	0.42	0.068	4.6E-04	0.011	0.011	46
			2029	Onsite	0.0022	0.026	0.055	8.1E-05	5.8E-04	5.3E-04	8.0
			2029	Offsite	0.0030	0.0073	0.041	2.4E-05	0.013	0.0031	13
			2029	Marine Equipment	0.050	1.0	0.15	0.0011	0.025	0.024	105
10		Station 5+00 to Sta 10+00 Deck Repair	2029	Onsite	0.015	0.067	0.080	1.4E-04	0.0013	0.0012	10
			2029	Offsite	0.0014	0.0032	0.019	9.7E-06	0.0058	0.0014	5.9
			2029	Marine Equipment	--	--	--	--	--	--	--
11	All	Station 0+00 to Sta 13+40 Dredging	2029	Onsite	--	--	--	--	3.4E-05	5.2E-06	--
			2029	Offsite	0.0014	0.0032	0.019	9.7E-06	0.0058	0.0014	5.9
			2029	Marine Equipment	0.10	1.9	0.31	0.0021	0.050	0.048	210

By Year & Source Category								
Year	Location	ROG	NOx	CO	SO2	PM10	PM2.5	CO2e
		ton/year						MT/year
2028	Onsite	0.043	0.30	0.48	7.4E-04	0.011	0.0074	65
2028	Offsite	0.022	0.048	0.27	1.4E-04	0.079	0.019	82
2028	Marine Equipment	0.19	3.6	0.58	0.0039	0.094	0.091	395
2029	Onsite	0.017	0.093	0.13	2.2E-04	0.0019	0.0017	18
2029	Offsite	0.0057	0.014	0.079	4.4E-05	0.024	0.0059	25
2029	Marine Equipment	0.15	2.8	0.46	0.0031	0.075	0.072	315
By Year								
Year	Location	ROG	NOx	CO	SO2	PM10	PM2.5	CO2e
		ton/year						MT/year
2028	--	0.25	3.9	1.3	0.0048	0.18	0.12	542
2029	--	0.17	3.0	0.68	0.0034	0.10	0.080	358

Notes

1. Onsite (offroad equipment) and offsite (onroad vehicles) emissions were calculated in CalEEMod. Marine equipment emissions are calculated in Table 4.

Conversions

2000 lb/ton
2204.6226 lb/MT

Table 7. Background Noise Data
Port of Hueneme
Wharf 2 Deepening
Port of Hueneme, California

Measurement Location	Location Classification	Approximate Distance to Construction	Decibels (dBA)		Observations
		ft	L _{eq}	L _{max}	
Berth 1	Industrial	On-site	65.5	81.3	Port-related noise, ship engines and beeping, birds
East Surfside Drive	Residential	1000+ feet	58.7	80.7	Port-related noise, ships beeping
Ponoma St/ E Scott Street	Residential	800+ feet	55.4	75.6	Port-related noise, vehicles on roadways

Notes

1. Background values from Port of Hueneme Berth Deepening and Wharf Improvement Project Noise Monitoring Results (November 3, 2016).
2. Approximate distance to construction was estimated using Google Earth.

Table 8. Construction Equipment Noise Profiles
Port of Hueneme
Wharf 2 Deepening
Port of Hueneme, California

Equipment Name		Noise Profile ^{1,2}				
Equipment	Equipment Noise Match ^{1,2}	Impact Device?	Default Usage Factor	Reference Sound Level at 50 feet	Actual Measured Lmax	Lmax
			%	dBA	dBA	dBA
Concrete pump	Concrete Pump Truck	No	20	82	81.4	81.4
Crane Barge	Crane	No	16	85	80.6	80.6
Dredging Barge	Clamshell Dredge	No	50	85	-- N/A --	85
Dump Truck	Dump Truck	No	40	84	76.5	76.5
Flat Barge	N/A - No Engine	--	--	--	--	--
Forklifts	All Other Equipment > 5 HP	No	50	85	-- N/A --	85
Generators	Generator	No	50	82	80.6	80.6
Jack Hammer	Jackhammer	Yes	20	85	88.9	88.9
Pile Driving	Impact Pile Driver	Yes	20	95	101.3	101.3
Sandblaster	Sand Blasting	No	20	85	95.7	95.7
Scow Barge	Barge	No	50	87	-- N/A --	87
Tugboat	Tugboat	No	50	87	-- N/A --	87
Welders	Welder / Torch	No	40	73	74	74

Notes

1. Equipment list was provided by the construction team. Equipment types were matched with the RCNM Equipment list for closest noise profile. Default parameters were used based on RCNM equipment.
2. Noise parameters for a dredging barge, barge, and tugboat are from the Port of Los Angeles Channel Deepening Project. The default usage factor is conservatively estimated to be 50%.
3. The Lmax used in the analysis is equal to the actual measured Lmax when available, consistent with RCNM.

Table 9. Construction Equipment Noise Calculations

Port of Huenueme
Wharf 2 Deepening
Port of Huenueme, California

Receptor distances (ft): 650 800 1800

Construction Area	Construction Phase	Equipment Used	RCNM Matching	Equipment Quantity	RCNM Defaults			Shielding	LmaxCalc			Leq		
					Impact Device?	Usage (%)	Lmax		Location 1: Recreational Receptor	Location 2: Residential Receptor	Location 3: School Receptor	Location 1: Recreational Receptor	Location 2: Residential Receptor	Location 3: School Receptor
All	Mobilization	Forklifts	All Other Equipment > 5 HP	1	No	50	85	11	51.7	49.9	42.9	48.7	46.9	39.9
	Mobilization	Generators	Generator	1	No	50	80.6	11	47.3	45.5	38.5	44.3	42.5	35.5
	Mobilization	Welders	Welder / Torch	1	No	40	74	11	40.7	38.9	31.9	36.7	34.9	27.9
Station 0+00 to Sta 5+00	Station 0+00 to Sta 5+00 Demolition of Fenders	Crane Barge	Crane	1	No	16	80.6	11	47.3	45.5	38.5	39.4	37.6	30.5
	Station 0+00 to Sta 5+00 Demolition of Fenders	Flat Barge	N/A - No Engine	1	--	--	--	11	--	--	--	--	--	--
	Station 0+00 to Sta 5+00 Demolition of Fenders	Tugboat	Tugboat	1	No	50	87	11	53.7	51.9	44.9	50.7	48.9	41.9
	Station 0+00 to Sta 5+00 Demolition of Fenders	Forklifts	All Other Equipment > 5 HP	1	No	50	85	11	51.7	49.9	42.9	48.7	46.9	39.9
	Station 0+00 to Sta 5+00 Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade, Riprap Repair.	Crane Barge	Crane	1	No	16	80.6	11	47.3	45.5	38.5	39.4	37.6	30.5
	Station 0+00 to Sta 5+00 Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade, Riprap Repair.	Flat Barge	N/A - No Engine	1	--	--	--	11	--	--	--	--	--	--
	Station 0+00 to Sta 5+00 Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade, Riprap Repair.	Tugboat	Tugboat	1	No	50	87	11	53.7	51.9	44.9	50.7	48.9	41.9
	Station 0+00 to Sta 5+00 Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade, Riprap Repair.	Pile Driving	Impact Pile Driver	1	Yes	20	101.3	11	68.0	66.2	59.2	61.0	59.2	52.2
	Station 0+00 to Sta 5+00 Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade, Riprap Repair.	Forklifts	All Other Equipment > 5 HP	1	No	50	85	11	51.7	49.9	42.9	48.7	46.9	39.9
	Station 0+00 to Sta 5+00 Deck Repair	Jack Hammer	Jackhammer	3	Yes	20	88.9	11	55.6	53.8	46.8	48.6	46.8	39.8
	Station 0+00 to Sta 5+00 Deck Repair	Sandblaster	Sand Blasting	1	No	20	95.7	11	62.4	60.6	53.6	55.4	53.6	46.6
	Station 0+00 to Sta 5+00 Deck Repair	Concrete pump	Concrete Pump Truck	1	No	20	81.4	11	48.1	46.3	39.3	41.1	39.3	32.3
	Station 0+00 to Sta 5+00 Deck Repair	Dump Truck	Dump Truck	1	No	40	76.5	11	43.2	41.4	34.4	39.2	37.4	30.4
	Station 0+00 to Sta 5+00 Deck Repair	Crane Barge	Crane	1	No	16	80.6	11	47.3	45.5	38.5	39.4	37.6	30.5
	Station 0+00 to Sta 5+00 Deck Repair	Flat Barge	N/A - No Engine	1	--	--	--	11	--	--	--	--	--	--
Station 13+40 to Sta 10+00	Station 13+40 to Sta 10+00 Demolition of Fenders	Tugboat	Tugboat	1	No	50	87	11	53.7	51.9	44.9	50.7	48.9	41.9
	Station 13+40 to Sta 10+00 Demolition of Fenders	Forklifts	All Other Equipment > 5 HP	1	No	50	85	11	51.7	49.9	42.9	48.7	46.9	39.9
	Station 13+40 to Sta 10+00 Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade, Riprap Repair.	Crane Barge	Crane	1	No	16	80.6	11	47.3	45.5	38.5	39.4	37.6	30.5
	Station 13+40 to Sta 10+00 Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade, Riprap Repair.	Flat Barge	N/A - No Engine	1	--	--	--	11	--	--	--	--	--	--
	Station 13+40 to Sta 10+00 Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade, Riprap Repair.	Tugboat	Tugboat	1	No	50	87	11	53.7	51.9	44.9	50.7	48.9	41.9
	Station 13+40 to Sta 10+00 Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade, Riprap Repair.	Pile Driving	Impact Pile Driver	1	Yes	20	101.3	11	68.0	66.2	59.2	61.0	59.2	52.2
	Station 13+40 to Sta 10+00 Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade, Riprap Repair.	Forklifts	All Other Equipment > 5 HP	1	No	50	85	11	51.7	49.9	42.9	48.7	46.9	39.9
	Station 13+40 to Sta 10+00 Deck Repair	Jack Hammer	Jackhammer	3	Yes	20	88.9	11	55.6	53.8	46.8	48.6	46.8	39.8
	Station 13+40 to Sta 10+00 Deck Repair	Sandblaster	Sand Blasting	1	No	20	95.7	11	62.4	60.6	53.6	55.4	53.6	46.6
	Station 13+40 to Sta 10+00 Deck Repair	Concrete pump	Concrete Pump Truck	1	No	20	81.4	11	48.1	46.3	39.3	41.1	39.3	32.3
	Station 13+40 to Sta 10+00 Deck Repair	Dump Truck	Dump Truck	1	No	40	76.5	11	43.2	41.4	34.4	39.2	37.4	30.4
	Station 5+00 to Sta 10+00 Demolition of Fenders	Crane Barge	Crane	1	No	16	80.6	11	47.3	45.5	38.5	39.4	37.6	30.5
	Station 5+00 to Sta 10+00 Demolition of Fenders	Flat Barge	N/A - No Engine	1	--	--	--	11	--	--	--	--	--	--
	Station 5+00 to Sta 10+00 Demolition of Fenders	Tugboat	Tugboat	1	No	50	87	11	53.7	51.9	44.9	50.7	48.9	41.9
	Station 5+00 to Sta 10+00 Demolition of Fenders	Forklifts	All Other Equipment > 5 HP	1	No	50	85	11	51.7	49.9	42.9	48.7	46.9	39.9
Station 5+00 to Sta 10+00	Station 5+00 to Sta 10+00 Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade, Riprap Repair.	Crane Barge	Crane	1	No	16	80.6	11	47.3	45.5	38.5	39.4	37.6	30.5
	Station 5+00 to Sta 10+00 Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade, Riprap Repair.	Flat Barge	N/A - No Engine	1	--	--	--	11	--	--	--	--	--	--
	Station 5+00 to Sta 10+00 Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade, Riprap Repair.	Tugboat	Tugboat	1	No	50	87	11	53.7	51.9	44.9	50.7	48.9	41.9
	Station 5+00 to Sta 10+00 Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade, Riprap Repair.	Pile Driving	Impact Pile Driver	1	Yes	20	101.3	11	68.0	66.2	59.2	61.0	59.2	52.2
	Station 5+00 to Sta 10+00 Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade, Riprap Repair.	Forklifts	All Other Equipment > 5 HP	1	No	50	85	11	51.7	49.9	42.9	48.7	46.9	39.9
	Station 5+00 to Sta 10+00 Deck Repair	Jack Hammer	Jackhammer	3	Yes	20	88.9	11	55.6	53.8	46.8	48.6	46.8	39.8
	Station 5+00 to Sta 10+00 Deck Repair	Sandblaster	Sand Blasting	1	No	20	95.7	11	62.4	60.6	53.6	55.4	53.6	46.6
	Station 5+00 to Sta 10+00 Deck Repair	Concrete pump	Concrete Pump Truck	1	No	20	81.4	11	48.1	46.3	39.3	41.1	39.3	32.3
	Station 5+00 to Sta 10+00 Deck Repair	Dump Truck	Dump Truck	1	No	40	76.5	11	43.2	41.4	34.4	39.2	37.4	30.4
	Station 0+00 to Sta 13+40 Dredging	Dredging Barge	Clamshell Dredge	1	No	50	85	11	51.7	49.9	42.9	48.7	46.9	39.9
	Station 0+00 to Sta 13+40 Dredging	Scow Barge	Barge	2	No	50	87	11	53.7	51.9	44.9	50.7	48.9	41.9
	Station 0+00 to Sta 13+40 Dredging	Tugboat	Tugboat	1	No	50	87	11	53.7	51.9	44.9	50.7	48.9	41.9

Notes

- Equipment list was provided by construction team and equipment was matched to a standard RCNM equipment based on the closest noise profile. Defaults were pulled in from RCNM for usage and Lmax where available. The noise profile for marine specific equipment is from the Port of Los Angeles.
- Lmax and Leq were calculated for each equipment type using RCNM methodology. Lmaxcalc incorporates the distance from source, the utilization, and any shielding. The equipment quantity is incorporated when summing the noise profiles for the overall noise levels for the phase.
- A shielding value of 3 dBA was used for the existing plant wall between the Port and Pomona St, consistent with Appendix A of the RCNM User Guide. An additional 8 dBA was included due to construction best practices.

Table 10. Construction Noise Summary
Port of Hueneme
Wharf 2 Deepening
Port of Hueneme, California

Noise Limits

Sensitive Receptor Location	Location 1: Recreational Receptor		Location 2: Residential Receptor		Location 3: School Receptor	
	L _{max}	L _{eq}	L _{max}	L _{eq}	L _{max}	L _{eq}
Noise Limits	85	65	80	60	75	55

Notes

1. Leq values were chosen based on Tables 7-5 (Interior and Exterior Noise Standards) and 7-6 (Exterior Noise Level Standards) of the Port Hueneme General Plan Background Report (Noise) for a park, resident, and school. Background noise monitoring at location 2 showed an ambient noise level of 55.4 dBA which is above the exterior noise level of 55 dBA. Per PHMC 3432, the exterior noise level limit was increased in 5 dB increments to encompass said ambient noise level.
2. Lmax values were based on PHMC 3431 (e): The Exterior Noise Levels plus 20 dB for any period of time.

Construction Noise

Construction Area	Construction Phase	Location 1: Recreational Receptor		Location 2: Residential Receptor		Location 3: School Receptor	
		L _{max}	L _{eq}	L _{max}	L _{eq}	L _{max}	L _{eq}
All	Mobilization	51.7	50.3	49.9	48.5	42.9	41.4
Station 0+00 to Sta 5+00	Station 0+00 to Sta 5+00 Demolition of Fenders	53.7	53.0	51.9	51.2	44.9	44.2
	Station 0+00 to Sta 5+00 Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade, Riprap Repair.	68.0	61.7	66.2	59.9	59.2	52.8
	Station 0+00 to Sta 5+00 Deck Repair	62.4	57.7	60.6	55.9	53.6	48.9
Station 13+40 to Sta 10+00	Station 13+40 to Sta 10+00 Demolition of Fenders	53.7	53.0	51.9	51.2	44.9	44.2
	Station 13+40 to Sta 10+00 Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade, Riprap Repair.	68.0	61.7	66.2	59.9	59.2	52.8
	Station 13+40 to Sta 10+00 Deck Repair	62.4	57.7	60.6	55.9	53.6	48.9
Station 5+00 to Sta 10+00	Station 5+00 to Sta 10+00 Demolition of Fenders	53.7	53.0	51.9	51.2	44.9	44.2
	Station 5+00 to Sta 10+00 Sheet Pile Wall and Fender Pile Installation, Bollard Upgrade, Riprap Repair.	68.0	61.7	66.2	59.9	59.2	52.8
	Station 5+00 to Sta 10+00 Deck Repair	62.4	57.7	60.6	55.9	53.6	48.9
All	Station 0+00 to Sta 13+40 Dredging	53.7	56.3	51.9	54.5	44.9	47.5

Notes

1. Lmax is equal to the equipment with the highest Lmax in the phase. For sheet pile wall and fender upgrade phases, this is due to pile driving activities. For deck repair phases, this is due to sandblasting.
2. Leq was calculated using RCNM methodology for all equipment in the construction phase.

Table 11. Vibration Source Levels for Construction Equipment
Port of Hueneme
Wharf 2 Deepening
Port of Hueneme, California

Equipment	PPV at 25 feet	PPV at 125 ft
	inches/second	
Loaded Trucks	0.076	0.0068
Jackhammer	0.035	0.0031
Small Bulldozer/Backhoe	0.003	2.7E-04
Large Bulldozer	0.089	0.0080
Pile Driver (impact)	0.644	0.058
Clam Shovel Drop (Slurry Wall)	0.202	0.018

Notes

1. PPV was calculated for a building 125 feet from the source for typical equipment using equation 7-2 from FTA's Transit Noise and Vibration Impact Assessment Manual.

Attachment 1

CalEEMod Output File

Port of Hueneme - Wharf 2 Deepening Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Port of Hueneme - Wharf 2 Deepening
Construction Start Date	1/1/2028
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.20000
Precipitation (days)	16.0000
Location	34.14867243718487, -119.20550962232772
County	Ventura
City	Port Hueneme
Air District	Ventura County APCD
Air Basin	South Central Coast
TAZ	3418
EDFZ	8
Electric Utility	—
Gas Utility	Southern California Gas
App Version	2022.1.1.37

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Heavy Industry	2.75000	1000sqft	0.06313	0.00000	0.00000	0.00000	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.77767	1.61184	6.72041	9.72399	0.01464	0.13775	1.20004	1.27513	0.12687	0.27834	0.34771	—	1,972.36	1,972.36	0.05123	0.08710	3.75358	2,003.19
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.89401	1.69441	6.97218	11.1522	0.01556	0.13775	1.29833	1.37344	0.12687	0.29334	0.38070	—	2,254.68	2,254.68	0.06142	0.08937	0.09742	2,282.53
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.39582	0.35699	1.89939	4.09743	0.00486	0.04224	0.45151	0.49375	0.03898	0.10555	0.14453	—	877.170	877.170	0.02324	0.03520	0.63113	888.872
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.07224	0.06515	0.34664	0.74778	0.00089	0.00771	0.08240	0.09011	0.00711	0.01926	0.02638	—	145.226	145.226	0.00385	0.00583	0.10449	147.163

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2028	1.77767	1.61184	6.72041	9.72399	0.01464	0.13775	1.20004	1.27513	0.12687	0.27834	0.34771	—	1,972.36	1,972.36	0.05123	0.08710	3.75358	2,003.19

2029	1.73982	1.58052	6.61031	9.56443	0.01464	0.12271	0.55904	0.68175	0.11304	0.13270	0.24574	—	1,675.76	1,675.76	0.05123	0.04739	1.67826	1,692.84
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2028	1.55164	1.38586	6.74775	9.51966	0.01464	0.13775	1.29833	1.37344	0.12687	0.29334	0.36273	—	1,930.71	1,930.71	0.05299	0.08937	0.09742	1,958.66
2029	1.89401	1.69441	6.97218	11.1522	0.01556	0.12447	1.12131	1.24579	0.11480	0.26590	0.38070	—	2,254.68	2,254.68	0.06142	0.08800	0.08700	2,282.53
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2028	0.39582	0.35699	1.89939	4.09743	0.00486	0.04224	0.45151	0.49375	0.03898	0.10555	0.14453	—	877.170	877.170	0.02324	0.03520	0.63113	888.872
2029	0.14245	0.12573	0.58397	1.16909	0.00147	0.01055	0.13380	0.14435	0.00974	0.03175	0.04150	—	255.846	255.846	0.00668	0.01053	0.17574	259.326
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2028	0.07224	0.06515	0.34664	0.74778	0.00089	0.00771	0.08240	0.09011	0.00711	0.01926	0.02638	—	145.226	145.226	0.00385	0.00583	0.10449	147.163
2029	0.02600	0.02295	0.10657	0.21336	0.00027	0.00193	0.02442	0.02634	0.00178	0.00579	0.00757	—	42.3583	42.3583	0.00111	0.00174	0.02910	42.9344

3. Construction Emissions Details

3.1. Station 0+00 to Sta 5+00 Demolition (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07432	0.06245	0.58780	1.03129	0.00141	0.02278	—	0.02278	0.02096	—	0.02096	—	152.440	152.440	0.00618	0.00124	—	152.963
Demolition	—	—	—	—	—	—	0.17521	0.17521	—	0.02653	0.02653	—	—	—	—	—	—	—

Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	0.00305	0.00257	0.02416	0.04238	0.00006	0.00094	—	0.00094	0.00086	—	0.00086	—	6.26466	6.26466	0.00025	0.00005	—	6.28616
Demoliti on	—	—	—	—	—	—	0.00720	0.00720	—	0.00109	0.00109	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	0.00056	0.00047	0.00441	0.00773	0.00001	0.00017	—	0.00017	0.00016	—	0.00016	—	1.03719	1.03719	0.00004	0.00001	—	1.04075
Demoliti on	—	—	—	—	—	—	0.00131	0.00131	—	0.00020	0.00020	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15432	0.15080	0.15961	1.86070	0.00000	0.00000	0.52284	0.52284	0.00000	0.12255	0.12255	—	483.422	483.422	0.00794	0.01984	0.04176	489.575
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00534	0.00203	0.16782	0.04281	0.00093	0.00176	0.03620	0.03796	0.00176	0.01015	0.01192	—	129.301	129.301	0.00234	0.02081	0.00648	135.568
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00634	0.00623	0.00649	0.07681	0.00000	0.00000	0.02127	0.02127	0.00000	0.00498	0.00498	—	20.0111	20.0111	0.00029	0.00078	0.02857	20.2791
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Hauling	0.00022	0.00009	0.00690	0.00174	0.00004	0.00007	0.00148	0.00155	0.00007	0.00041	0.00049	—	5.31267	5.31267	0.00010	0.00086	0.00444	5.57437
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00116	0.00114	0.00118	0.01402	0.00000	0.00000	0.00388	0.00388	0.00000	0.00091	0.00091	—	3.31307	3.31307	0.00005	0.00013	0.00473	3.35744
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00004	0.00002	0.00126	0.00032	0.00001	0.00001	0.00027	0.00028	0.00001	0.00008	0.00009	—	0.87957	0.87957	0.00002	0.00014	0.00073	0.92290

3.3. Station 13+40 to Sta 10+00 Demolition (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07432	0.06245	0.58780	1.03129	0.00141	0.02278	—	0.02278	0.02096	—	0.02096	—	152.440	152.440	0.00618	0.00124	—	152.963
Demolition	—	—	—	—	—	—	0.07778	0.07778	—	0.01178	0.01178	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00468	0.00394	0.03704	0.06499	0.00009	0.00144	—	0.00144	0.00132	—	0.00132	—	9.60582	9.60582	0.00039	0.00008	—	9.63878
Demolition	—	—	—	—	—	—	0.00490	0.00490	—	0.00074	0.00074	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00085	0.00072	0.00676	0.01186	0.00002	0.00026	—	0.00026	0.00024	—	0.00024	—	1.59035	1.59035	0.00006	0.00001	—	1.59581
Demolition	—	—	—	—	—	—	0.00089	0.00089	—	0.00014	0.00014	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15609	0.15256	0.13889	2.06573	0.00000	0.00000	0.52284	0.52284	0.00000	0.12255	0.12255	—	505.743	505.743	0.00617	0.01896	1.61206	513.159
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00551	0.00216	0.16120	0.04211	0.00093	0.00176	0.03620	0.03796	0.00176	0.01015	0.01192	—	129.256	129.256	0.00234	0.02077	0.24969	135.753
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00972	0.00956	0.00995	0.11778	0.00000	0.00000	0.03261	0.03261	0.00000	0.00764	0.00764	—	30.6837	30.6837	0.00044	0.00119	0.04381	31.0946
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00034	0.00013	0.01058	0.00267	0.00006	0.00011	0.00226	0.00237	0.00011	0.00064	0.00075	—	8.14609	8.14609	0.00015	0.00131	0.00680	8.54737
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00177	0.00174	0.00182	0.02149	0.00000	0.00000	0.00595	0.00595	0.00000	0.00139	0.00139	—	5.08003	5.08003	0.00007	0.00020	0.00725	5.14807
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00006	0.00002	0.00193	0.00049	0.00001	0.00002	0.00041	0.00043	0.00002	0.00012	0.00014	—	1.34868	1.34868	0.00002	0.00022	0.00113	1.41512

3.5. Station 5+00 to Sta 10+00 Demolition (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
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Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07432	0.06245	0.58780	1.03129	0.00141	0.02278	—	0.02278	0.02096	—	0.02096	—	152.440	152.440	0.00618	0.00124	—	152.963
Demolition	—	—	—	—	—	—	0.11427	0.11427	—	0.01730	0.01730	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00468	0.00394	0.03704	0.06499	0.00009	0.00144	—	0.00144	0.00132	—	0.00132	—	9.60582	9.60582	0.00039	0.00008	—	9.63878
Demolition	—	—	—	—	—	—	0.00720	0.00720	—	0.00109	0.00109	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00085	0.00072	0.00676	0.01186	0.00002	0.00026	—	0.00026	0.00024	—	0.00024	—	1.59035	1.59035	0.00006	0.00001	—	1.59581
Demolition	—	—	—	—	—	—	0.00131	0.00131	—	0.00020	0.00020	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15432	0.15080	0.15961	1.86070	0.00000	0.00000	0.52284	0.52284	0.00000	0.12255	0.12255	—	483.422	483.422	0.00794	0.01984	0.04176	489.575
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00534	0.00203	0.16782	0.04281	0.00093	0.00176	0.03620	0.03796	0.00176	0.01015	0.01192	—	129.301	129.301	0.00234	0.02081	0.00648	135.568
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00972	0.00956	0.00995	0.11778	0.00000	0.00000	0.03261	0.03261	0.00000	0.00764	0.00764	—	30.6837	30.6837	0.00044	0.00119	0.04381	31.0946
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00034	0.00013	0.01058	0.00267	0.00006	0.00011	0.00226	0.00237	0.00011	0.00064	0.00075	—	8.14609	8.14609	0.00015	0.00131	0.00680	8.54737
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00177	0.00174	0.00182	0.02149	0.00000	0.00000	0.00595	0.00595	0.00000	0.00139	0.00139	—	5.08003	5.08003	0.00007	0.00020	0.00725	5.14807
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00006	0.00002	0.00193	0.00049	0.00001	0.00002	0.00041	0.00043	0.00002	0.00012	0.00014	—	1.34868	1.34868	0.00002	0.00022	0.00113	1.41512

3.7. Mobilization (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm ent	0.37357	0.30977	2.60206	3.16924	0.00554	0.07707	—	0.07707	0.07090	—	0.07090	—	463.760	463.760	0.01881	0.00376	—	465.352
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	0.00409	0.00339	0.02852	0.03473	0.00006	0.00084	—	0.00084	0.00078	—	0.00078	—	5.08230	5.08230	0.00021	0.00004	—	5.09974
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	0.00075	0.00062	0.00520	0.00634	0.00001	0.00015	—	0.00015	0.00014	—	0.00014	—	0.84143	0.84143	0.00003	0.00001	—	0.84432
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15432	0.15080	0.15961	1.86070	0.00000	0.00000	0.52284	0.52284	0.00000	0.12255	0.12255	—	483.422	483.422	0.00794	0.01984	0.04176	489.575
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00534	0.00203	0.16782	0.04281	0.00093	0.00176	0.03620	0.03796	0.00176	0.01015	0.01192	—	129.301	129.301	0.00234	0.02081	0.00648	135.568
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00169	0.00166	0.00173	0.02048	0.00000	0.00000	0.00567	0.00567	0.00000	0.00133	0.00133	—	5.33629	5.33629	0.00008	0.00021	0.00762	5.40776
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Hauling	0.00006	0.00002	0.00184	0.00046	0.00001	0.00002	0.00039	0.00041	0.00002	0.00011	0.00013	—	1.41671	1.41671	0.00003	0.00023	0.00118	1.48650
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00031	0.00030	0.00032	0.00374	0.00000	0.00000	0.00103	0.00103	0.00000	0.00024	0.00024	—	0.88348	0.88348	0.00001	0.00003	0.00126	0.89532
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00001	< 0.000005	0.00034	0.00008	< 0.000005	< 0.000005	0.00007	0.00008	< 0.000005	0.00002	0.00002	—	0.23455	0.23455	< 0.000005	0.00004	0.00020	0.24611

3.9. Station 0+00 to Sta 5+00 Installation and Upgrade (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18952	0.15925	1.75666	3.43813	0.00495	0.04867	—	0.04867	0.04477	—	0.04477	—	535.709	535.709	0.02173	0.00435	—	537.548
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18952	0.15925	1.75666	3.43813	0.00495	0.04867	—	0.04867	0.04477	—	0.04477	—	535.709	535.709	0.02173	0.00435	—	537.548
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Off-Road Equipment	0.03686	0.03098	0.34171	0.66879	0.00096	0.00947	—	0.00947	0.00871	—	0.00871	—	104.206	104.206	0.00423	0.00085	—	104.564
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00673	0.00565	0.06236	0.12205	0.00018	0.00173	—	0.00173	0.00159	—	0.00159	—	17.2526	17.2526	0.00070	0.00014	—	17.3118
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15609	0.15256	0.13889	2.06573	0.00000	0.00000	0.52284	0.52284	0.00000	0.12255	0.12255	—	505.743	505.743	0.00617	0.01896	1.61206	513.159
Vendor	0.00076	0.00039	0.01949	0.00631	0.00013	0.00013	0.00505	0.00518	0.00013	0.00139	0.00153	—	17.1110	17.1110	0.00022	0.00248	0.03624	17.8917
Hauling	0.00551	0.00216	0.16120	0.04211	0.00093	0.00176	0.03620	0.03796	0.00176	0.01015	0.01192	—	129.256	129.256	0.00234	0.02077	0.24969	135.753
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15432	0.15080	0.15961	1.86070	0.00000	0.00000	0.52284	0.52284	0.00000	0.12255	0.12255	—	483.422	483.422	0.00794	0.01984	0.04176	489.575
Vendor	0.00074	0.00037	0.02027	0.00652	0.00013	0.00013	0.00505	0.00518	0.00013	0.00139	0.00153	—	17.1200	17.1200	0.00021	0.00248	0.00094	17.8650
Hauling	0.00534	0.00203	0.16782	0.04281	0.00093	0.00176	0.03620	0.03796	0.00176	0.01015	0.01192	—	129.301	129.301	0.00234	0.02081	0.00648	135.568
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03002	0.02950	0.03071	0.36357	0.00000	0.00000	0.10066	0.10066	0.00000	0.02358	0.02358	—	94.7192	94.7192	0.00137	0.00369	0.13523	95.9878
Vendor	0.00015	0.00007	0.00392	0.00124	0.00003	0.00003	0.00097	0.00100	0.00003	0.00027	0.00029	—	3.32918	3.32918	0.00004	0.00048	0.00304	3.47696
Hauling	0.00105	0.00041	0.03266	0.00825	0.00018	0.00034	0.00698	0.00733	0.00034	0.00196	0.00230	—	25.1466	25.1466	0.00045	0.00405	0.02100	26.3854
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00548	0.00538	0.00560	0.06635	0.00000	0.00000	0.01837	0.01837	0.00000	0.00430	0.00430	—	15.6818	15.6818	0.00023	0.00061	0.02239	15.8919

Vendor	0.00003	0.00001	0.00071	0.00023	< 0.000005	< 0.000005	0.00018	0.00018	< 0.000005	0.00005	0.00005	—	0.55118	0.55118	0.00001	0.00008	0.00050	0.57565
Hauling	0.00019	0.00008	0.00596	0.00151	0.00003	0.00006	0.00127	0.00134	0.00006	0.00036	0.00042	—	4.16331	4.16331	0.00008	0.00067	0.00348	4.36840

3.11. Station 13+40 to Sta 10+00 Installation and Upgrade (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18952	0.15925	1.75666	3.43813	0.00495	0.04867	—	0.04867	0.04477	—	0.04477	—	535.709	535.709	0.02173	0.00435	—	537.548
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02960	0.02487	0.27433	0.53691	0.00077	0.00760	—	0.00760	0.00699	—	0.00699	—	83.6587	83.6587	0.00339	0.00068	—	83.9458
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00540	0.00454	0.05006	0.09799	0.00014	0.00139	—	0.00139	0.00128	—	0.00128	—	13.8507	13.8507	0.00056	0.00011	—	13.8982
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15609	0.15256	0.13889	2.06573	0.00000	0.00000	0.52284	0.52284	0.00000	0.12255	0.12255	—	505.743	505.743	0.00617	0.01896	1.61206	513.159
Vendor	0.00063	0.00033	0.01619	0.00524	0.00011	0.00011	0.00419	0.00430	0.00011	0.00116	0.00127	—	14.2109	14.2109	0.00019	0.00206	0.03010	14.8592
Hauling	0.00551	0.00216	0.16120	0.04211	0.00093	0.00176	0.03620	0.03796	0.00176	0.01015	0.01192	—	129.256	129.256	0.00234	0.02077	0.24969	135.753
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02410	0.02369	0.02465	0.29188	0.00000	0.00000	0.08081	0.08081	0.00000	0.01893	0.01893	—	76.0422	76.0422	0.00110	0.00296	0.10857	77.0606
Vendor	0.00010	0.00005	0.00261	0.00083	0.00002	0.00002	0.00065	0.00067	0.00002	0.00018	0.00020	—	2.21972	2.21972	0.00003	0.00032	0.00203	2.31825
Hauling	0.00085	0.00033	0.02622	0.00662	0.00014	0.00028	0.00561	0.00588	0.00028	0.00157	0.00185	—	20.1881	20.1881	0.00036	0.00325	0.01686	21.1826
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00440	0.00432	0.00450	0.05327	0.00000	0.00000	0.01475	0.01475	0.00000	0.00345	0.00345	—	12.5897	12.5897	0.00018	0.00049	0.01797	12.7583
Vendor	0.00002	0.00001	0.00048	0.00015	< 0.000005	< 0.000005	0.00012	0.00012	< 0.000005	0.00003	0.00004	—	0.36750	0.36750	< 0.000005	0.00005	0.00034	0.38381
Hauling	0.00015	0.00006	0.00479	0.00121	0.00003	0.00005	0.00102	0.00107	0.00005	0.00029	0.00034	—	3.34238	3.34238	0.00006	0.00054	0.00279	3.50703

3.13. Station 5+00 to Sta 10+00 Installation and Upgrade (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Off-Road	0.11520	0.09680	1.16886	2.40684	0.00354	0.02589	—	0.02589	0.02382	—	0.02382	—	383.269	383.269	0.01555	0.00311	—	384.584
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01533	0.01288	0.15554	0.32028	0.00047	0.00344	—	0.00344	0.00317	—	0.00317	—	51.0025	51.0025	0.00207	0.00041	—	51.1776
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00280	0.00235	0.02839	0.05845	0.00009	0.00063	—	0.00063	0.00058	—	0.00058	—	8.44405	8.44405	0.00034	0.00007	—	8.47303
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15432	0.15080	0.15961	1.86070	0.00000	0.00000	0.52284	0.52284	0.00000	0.12255	0.12255	—	483.422	483.422	0.00794	0.01984	0.04176	489.575
Vendor	0.00074	0.00037	0.02027	0.00652	0.00013	0.00013	0.00505	0.00518	0.00013	0.00139	0.00153	—	17.1200	17.1200	0.00021	0.00248	0.00094	17.8650
Hauling	0.00534	0.00203	0.16782	0.04281	0.00093	0.00176	0.03620	0.03796	0.00176	0.01015	0.01192	—	129.301	129.301	0.00234	0.02081	0.00648	135.568
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02054	0.02018	0.02101	0.24872	0.00000	0.00000	0.06886	0.06886	0.00000	0.01613	0.01613	—	64.7978	64.7978	0.00094	0.00252	0.09251	65.6657
Vendor	0.00010	0.00005	0.00268	0.00085	0.00002	0.00002	0.00067	0.00068	0.00002	0.00018	0.00020	—	2.27751	2.27751	0.00003	0.00033	0.00208	2.37861
Hauling	0.00072	0.00028	0.02234	0.00564	0.00012	0.00023	0.00478	0.00501	0.00023	0.00134	0.00158	—	17.2029	17.2029	0.00031	0.00277	0.01436	18.0504

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00375	0.00368	0.00383	0.04539	0.00000	0.00000	0.01257	0.01257	0.00000	0.00294	0.00294	—	10.7280	10.7280	0.00016	0.00042	0.01532	10.8717
Vendor	0.00002	0.00001	0.00049	0.00016	< 0.000005	< 0.000005	0.00012	0.00012	< 0.000005	0.00003	0.00004	—	0.37707	0.37707	< 0.000005	0.00005	0.00034	0.39381
Hauling	0.00013	0.00005	0.00408	0.00103	0.00002	0.00004	0.00087	0.00091	0.00004	0.00024	0.00029	—	2.84814	2.84814	0.00005	0.00046	0.00238	2.98844

3.15. Station 5+00 to Sta 10+00 Installation and Upgrade (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11456	0.09627	1.15618	2.40302	0.00354	0.02519	—	0.02519	0.02317	—	0.02317	—	383.041	383.041	0.01554	0.00311	—	384.356
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01435	0.01206	0.14481	0.30097	0.00044	0.00315	—	0.00315	0.00290	—	0.00290	—	47.9739	47.9739	0.00195	0.00039	—	48.1385
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.00262	0.00220	0.02643	0.05493	0.00008	0.00058	—	0.00058	0.00053	—	0.00053	—	7.94262	7.94262	0.00032	0.00006	—	7.96988
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.14991	0.13007	0.15873	1.73989	0.00000	0.00000	0.52284	0.52284	0.00000	0.12255	0.12255	—	475.025	475.025	0.00705	0.01984	0.03756	481.151
Vendor	0.00074	0.00037	0.01922	0.00623	0.00013	0.00013	0.00505	0.00518	0.00013	0.00139	0.00153	—	16.6502	16.6502	0.00021	0.00248	0.00083	17.3951
Hauling	0.00534	0.00203	0.16032	0.04202	0.00093	0.00176	0.03620	0.03796	0.00176	0.01015	0.01192	—	125.742	125.742	0.00229	0.01989	0.00594	131.731
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01856	0.01607	0.01762	0.21929	0.00000	0.00000	0.06481	0.06481	0.00000	0.01518	0.01518	—	59.9269	59.9269	0.00088	0.00237	0.07831	60.7349
Vendor	0.00009	0.00005	0.00239	0.00077	0.00002	0.00002	0.00063	0.00064	0.00002	0.00017	0.00019	—	2.08465	2.08465	0.00003	0.00031	0.00173	2.17957
Hauling	0.00068	0.00027	0.02009	0.00521	0.00012	0.00022	0.00450	0.00472	0.00022	0.00126	0.00148	—	15.7451	15.7451	0.00029	0.00249	0.01238	16.5068
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00339	0.00293	0.00321	0.04002	0.00000	0.00000	0.01183	0.01183	0.00000	0.00277	0.00277	—	9.92158	9.92158	0.00015	0.00039	0.01296	10.0554
Vendor	0.00002	0.00001	0.00044	0.00014	< 0.000005	< 0.000005	0.00011	0.00012	< 0.000005	0.00003	0.00003	—	0.34514	0.34514	< 0.000005	0.00005	0.00029	0.36085
Hauling	0.00012	0.00005	0.00367	0.00095	0.00002	0.00004	0.00082	0.00086	0.00004	0.00023	0.00027	—	2.60677	2.60677	0.00005	0.00041	0.00205	2.73289

3.17. Station 0+00 to Sta 13+40 Dredging (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00324	0.00324	—	0.00049	0.00049	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00019	0.00019	—	0.00003	0.00003	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00003	0.00003	—	0.00001	0.00001	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.14991	0.13007	0.15873	1.73989	0.00000	0.00000	0.52284	0.52284	0.00000	0.12255	0.12255	—	475.025	475.025	0.00705	0.01984	0.03756	481.151
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Hauling	0.00534	0.00203	0.16032	0.04202	0.00093	0.00176	0.03620	0.03796	0.00176	0.01015	0.01192	—	125.742	125.742	0.00229	0.01989	0.00594	131.731
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00852	0.00738	0.00809	0.10074	0.00000	0.00000	0.02977	0.02977	0.00000	0.00697	0.00697	—	27.5289	27.5289	0.00041	0.00109	0.03597	27.9001
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00031	0.00012	0.00923	0.00239	0.00005	0.00010	0.00207	0.00217	0.00010	0.00058	0.00068	—	7.23288	7.23288	0.00013	0.00114	0.00569	7.58281
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00156	0.00135	0.00148	0.01838	0.00000	0.00000	0.00543	0.00543	0.00000	0.00127	0.00127	—	4.55773	4.55773	0.00007	0.00018	0.00596	4.61918
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00006	0.00002	0.00168	0.00044	0.00001	0.00002	0.00038	0.00040	0.00002	0.00011	0.00012	—	1.19749	1.19749	0.00002	0.00019	0.00094	1.25542

3.19. Station 0+00 to Sta 5+00 Deck Repair (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.91588	0.75692	6.42032	7.61615	0.01371	0.13599	—	0.13599	0.12511	—	0.12511	—	1,053.09	1,053.09	0.04272	0.00854	—	1,056.71
Architectural Coatings	0.70020	0.70020	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.05269	0.04355	0.36939	0.43819	0.00079	0.00782	—	0.00782	0.00720	—	0.00720	—	60.5888	60.5888	0.00246	0.00049	—	60.7968
Architectural Coatings	0.04029	0.04029	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00962	0.00795	0.06741	0.07997	0.00014	0.00143	—	0.00143	0.00131	—	0.00131	—	10.0312	10.0312	0.00041	0.00008	—	10.0656
Architectural Coatings	0.00735	0.00735	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15609	0.15256	0.13889	2.06573	0.00000	0.00000	0.52284	0.52284	0.00000	0.12255	0.12255	—	505.743	505.743	0.00617	0.01896	1.61206	513.159
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00551	0.00216	0.16120	0.04211	0.00093	0.00176	0.03620	0.03796	0.00176	0.01015	0.01192	—	129.256	129.256	0.00234	0.02077	0.24969	135.753
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00888	0.00873	0.00908	0.10754	0.00000	0.00000	0.02977	0.02977	0.00000	0.00697	0.00697	—	28.0155	28.0155	0.00041	0.00109	0.04000	28.3908
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00031	0.00012	0.00966	0.00244	0.00005	0.00010	0.00207	0.00217	0.00010	0.00058	0.00068	—	7.43773	7.43773	0.00013	0.00120	0.00621	7.80412
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.00162	0.00159	0.00166	0.01963	0.00000	0.00000	0.00543	0.00543	0.00000	0.00127	0.00127	—	4.63829	4.63829	0.00007	0.00018	0.00662	4.70041
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00006	0.00002	0.00176	0.00045	0.00001	0.00002	0.00038	0.00040	0.00002	0.00011	0.00012	—	1.23140	1.23140	0.00002	0.00020	0.00103	1.29206

3.21. Station 13+40 to Sta 10+00 Deck Repair (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.91588	0.75692	6.42032	7.61615	0.01371	0.13599	—	0.13599	0.12511	—	0.12511	—	1,053.09	1,053.09	0.04272	0.00854	—	1,056.71
Architectural Coatings	0.47611	0.47611	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.91588	0.75692	6.42032	7.61615	0.01371	0.13599	—	0.13599	0.12511	—	0.12511	—	1,053.09	1,053.09	0.04272	0.00854	—	1,056.71
Architectural Coatings	0.47611	0.47611	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05269	0.04355	0.36939	0.43819	0.00079	0.00782	—	0.00782	0.00720	—	0.00720	—	60.5888	60.5888	0.00246	0.00049	—	60.7968
Architectural Coatings	0.02739	0.02739	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00962	0.00795	0.06741	0.07997	0.00014	0.00143	—	0.00143	0.00131	—	0.00131	—	10.0312	10.0312	0.00041	0.00008	—	10.0656
Architectural Coatings	0.00500	0.00500	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15609	0.15256	0.13889	2.06573	0.00000	0.00000	0.52284	0.52284	0.00000	0.12255	0.12255	—	505.743	505.743	0.00617	0.01896	1.61206	513.159
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00551	0.00216	0.16120	0.04211	0.00093	0.00176	0.03620	0.03796	0.00176	0.01015	0.01192	—	129.256	129.256	0.00234	0.02077	0.24969	135.753
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15432	0.15080	0.15961	1.86070	0.00000	0.00000	0.52284	0.52284	0.00000	0.12255	0.12255	—	483.422	483.422	0.00794	0.01984	0.04176	489.575
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Hauling	0.00534	0.00203	0.16782	0.04281	0.00093	0.00176	0.03620	0.03796	0.00176	0.01015	0.01192	—	129.301	129.301	0.00234	0.02081	0.00648	135.568
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00888	0.00873	0.00908	0.10754	0.00000	0.00000	0.02977	0.02977	0.00000	0.00697	0.00697	—	28.0155	28.0155	0.00041	0.00109	0.04000	28.3908
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00031	0.00012	0.00966	0.00244	0.00005	0.00010	0.00207	0.00217	0.00010	0.00058	0.00068	—	7.43773	7.43773	0.00013	0.00120	0.00621	7.80412
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00162	0.00159	0.00166	0.01963	0.00000	0.00000	0.00543	0.00543	0.00000	0.00127	0.00127	—	4.63829	4.63829	0.00007	0.00018	0.00662	4.70041
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00006	0.00002	0.00176	0.00045	0.00001	0.00002	0.00038	0.00040	0.00002	0.00011	0.00012	—	1.23140	1.23140	0.00002	0.00020	0.00103	1.29206

3.23. Station 5+00 to Sta 10+00 Deck Repair (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.88331	0.73001	6.33407	7.58833	0.01371	0.12095	—	0.12095	0.11127	—	0.11127	—	1,053.15	1,053.15	0.04272	0.00854	—	1,056.77
Architectural Coatings	0.70020	0.70020	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	0.88331	0.73001	6.33407	7.58833	0.01371	0.12095	—	0.12095	0.11127	—	0.11127	—	1,053.15	1,053.15	0.04272	0.00854	—	1,056.77
Architectural Coatings	0.70020	0.70020	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05082	0.04200	0.36443	0.43659	0.00079	0.00696	—	0.00696	0.00640	—	0.00640	—	60.5923	60.5923	0.00246	0.00049	—	60.8002
Architectural Coatings	0.04029	0.04029	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00927	0.00767	0.06651	0.07968	0.00014	0.00127	—	0.00127	0.00117	—	0.00117	—	10.0317	10.0317	0.00041	0.00008	—	10.0662
Architectural Coatings	0.00735	0.00735	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15080	0.14815	0.12170	1.93478	0.00000	0.00000	0.52284	0.52284	0.00000	0.12255	0.12255	—	496.917	496.917	0.00617	0.01896	1.44875	504.170

Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00551	0.00216	0.15454	0.04131	0.00093	0.00176	0.03620	0.03796	0.00176	0.01015	0.01192	—	125.694	125.694	0.00234	0.01989	0.22951	131.908
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.14991	0.13007	0.15873	1.73989	0.00000	0.00000	0.52284	0.52284	0.00000	0.12255	0.12255	—	475.025	475.025	0.00705	0.01984	0.03756	481.151
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00534	0.00203	0.16032	0.04202	0.00093	0.00176	0.03620	0.03796	0.00176	0.01015	0.01192	—	125.742	125.742	0.00229	0.01989	0.00594	131.731
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00852	0.00738	0.00809	0.10074	0.00000	0.00000	0.02977	0.02977	0.00000	0.00697	0.00697	—	27.5289	27.5289	0.00041	0.00109	0.03597	27.9001
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00031	0.00012	0.00923	0.00239	0.00005	0.00010	0.00207	0.00217	0.00010	0.00058	0.00068	—	7.23288	7.23288	0.00013	0.00114	0.00569	7.58281
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00156	0.00135	0.00148	0.01838	0.00000	0.00000	0.00543	0.00543	0.00000	0.00127	0.00127	—	4.55773	4.55773	0.00007	0.00018	0.00596	4.61918
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00006	0.00002	0.00168	0.00044	0.00001	0.00002	0.00038	0.00040	0.00002	0.00011	0.00012	—	1.19749	1.19749	0.00002	0.00019	0.00094	1.25542

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Station 0+00 to Sta 5+00 Demolition	Demolition	1/7/2028	1/27/2028	5.00000	15.0000	—
Station 13+40 to Sta 10+00 Demolition	Demolition	6/6/2028	7/6/2028	5.00000	23.0000	—
Station 5+00 to Sta 10+00 Demolition	Demolition	10/25/2028	11/24/2028	5.00000	23.0000	—
Mobilization	Site Preparation	1/1/2028	1/6/2028	5.00000	4.00000	—
Station 0+00 to Sta 5+00 Installation and Upgrade	Grading	1/7/2028	5/7/2028	5.00000	71.0000	—
Station 13+40 to Sta 10+00 Installation and Upgrade	Grading	6/6/2028	9/25/2028	5.00000	57.0000	—
Station 5+00 to Sta 10+00 Installation and Upgrade	Grading	10/25/2028	3/5/2029	5.00000	71.0000	—
Station 0+00 to Sta 13+40 Dredging	Grading	3/6/2029	3/26/2029	7.00000	21.0000	—
Station 0+00 to Sta 5+00 Deck Repair	Building Construction	5/8/2028	6/5/2028	5.00000	21.0000	—
Station 13+40 to Sta 10+00 Deck Repair	Building Construction	9/26/2028	10/24/2028	5.00000	21.0000	—
Station 5+00 to Sta 10+00 Deck Repair	Building Construction	3/6/2029	4/3/2029	5.00000	21.0000	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Station 0+00 to Sta 5+00 Demolition	Forklifts	Diesel	Average	1.000000	8.00000	82.0000	0.20000

Station 13+40 to Sta 10+00 Demolition	Forklifts	Diesel	Average	1.000000	8.00000	82.0000	0.20000
Station 5+00 to Sta 10+00 Demolition	Forklifts	Diesel	Average	1.000000	8.00000	82.0000	0.20000
Mobilization	Forklifts	Diesel	Average	1.000000	8.00000	82.0000	0.20000
Mobilization	Generator Sets	Diesel	Average	1.000000	8.00000	14.0000	0.74000
Mobilization	Welders	Diesel	Average	1.000000	8.00000	46.0000	0.45000
Station 0+00 to Sta 5+00 Installation and Upgrade	Bore/Drill Rigs	Diesel	Average	1.000000	8.00000	83.0000	0.50000
Station 0+00 to Sta 5+00 Installation and Upgrade	Forklifts	Diesel	Average	1.000000	8.00000	82.0000	0.20000
Station 13+40 to Sta 10+00 Installation and Upgrade	Bore/Drill Rigs	Diesel	Average	1.000000	8.00000	83.0000	0.50000
Station 13+40 to Sta 10+00 Installation and Upgrade	Forklifts	Diesel	Average	1.000000	8.00000	82.0000	0.20000
Station 5+00 to Sta 10+00 Installation and Upgrade	Bore/Drill Rigs	Diesel	Average	1.000000	8.00000	83.0000	0.50000
Station 0+00 to Sta 5+00 Deck Repair	Concrete/Industrial Saws	Diesel	Average	3.00000	8.00000	33.0000	0.73000
Station 0+00 to Sta 5+00 Deck Repair	Air Compressors	Diesel	Average	1.000000	8.00000	37.0000	0.48000
Station 0+00 to Sta 5+00 Deck Repair	Pumps	Diesel	Average	1.000000	8.00000	11.0000	0.74000
Station 0+00 to Sta 5+00 Deck Repair	Dumpers/Tenders	Diesel	Average	1.000000	8.00000	16.0000	0.38000
Station 13+40 to Sta 10+00 Deck Repair	Concrete/Industrial Saws	Diesel	Average	3.00000	8.00000	33.0000	0.73000
Station 13+40 to Sta 10+00 Deck Repair	Air Compressors	Diesel	Average	1.000000	8.00000	37.0000	0.48000

Station 13+40 to Sta 10+00 Deck Repair	Pumps	Diesel	Average	1.000000	8.00000	11.0000	0.74000
Station 13+40 to Sta 10+00 Deck Repair	Dumpers/Tenders	Diesel	Average	1.000000	8.00000	16.0000	0.38000
Station 5+00 to Sta 10+00 Deck Repair	Concrete/Industrial Saws	Diesel	Average	3.00000	8.00000	33.0000	0.73000
Station 5+00 to Sta 10+00 Deck Repair	Air Compressors	Diesel	Average	1.000000	8.00000	37.0000	0.48000
Station 5+00 to Sta 10+00 Deck Repair	Pumps	Diesel	Average	1.000000	8.00000	11.0000	0.74000
Station 5+00 to Sta 10+00 Deck Repair	Dumpers/Tenders	Diesel	Average	1.000000	8.00000	16.0000	0.38000

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Station 0+00 to Sta 5+00 Demolition	Worker	40.0000	18.5000	LDA,LDT1,LDT2
Station 0+00 to Sta 5+00 Demolition	Vendor	—	10.2000	HHDT,MHDT
Station 0+00 to Sta 5+00 Demolition	Hauling	2.00000	20.0000	HHDT
Station 0+00 to Sta 5+00 Demolition	Onsite truck	—	—	HHDT
Station 13+40 to Sta 10+00 Demolition	Worker	40.0000	18.5000	LDA,LDT1,LDT2
Station 13+40 to Sta 10+00 Demolition	Vendor	—	10.2000	HHDT,MHDT
Station 13+40 to Sta 10+00 Demolition	Hauling	2.00000	20.0000	HHDT
Station 13+40 to Sta 10+00 Demolition	Onsite truck	—	—	HHDT
Station 5+00 to Sta 10+00 Demolition	Worker	40.0000	18.5000	LDA,LDT1,LDT2
Station 5+00 to Sta 10+00 Demolition	Vendor	—	10.2000	HHDT,MHDT

Station 5+00 to Sta 10+00 Demolition	Hauling	2.00000	20.0000	HHDT
Station 5+00 to Sta 10+00 Demolition	Onsite truck	—	—	HHDT
Mobilization	Worker	40.0000	18.5000	LDA,LDT1,LDT2
Mobilization	Vendor	—	10.2000	HHDT,MHDT
Mobilization	Hauling	2.00000	20.0000	HHDT
Mobilization	Onsite truck	—	—	HHDT
Station 0+00 to Sta 5+00 Installation and Upgrade	Worker	40.0000	18.5000	LDA,LDT1,LDT2
Station 0+00 to Sta 5+00 Installation and Upgrade	Vendor	0.59000	10.2000	HHDT,MHDT
Station 0+00 to Sta 5+00 Installation and Upgrade	Hauling	2.00000	20.0000	HHDT
Station 0+00 to Sta 5+00 Installation and Upgrade	Onsite truck	—	—	HHDT
Station 13+40 to Sta 10+00 Installation and Upgrade	Worker	40.0000	18.5000	LDA,LDT1,LDT2
Station 13+40 to Sta 10+00 Installation and Upgrade	Vendor	0.49000	10.2000	HHDT,MHDT
Station 13+40 to Sta 10+00 Installation and Upgrade	Hauling	2.00000	20.0000	HHDT
Station 13+40 to Sta 10+00 Installation and Upgrade	Onsite truck	—	—	HHDT
Station 5+00 to Sta 10+00 Installation and Upgrade	Worker	40.0000	18.5000	LDA,LDT1,LDT2
Station 5+00 to Sta 10+00 Installation and Upgrade	Vendor	0.59000	10.2000	HHDT,MHDT
Station 5+00 to Sta 10+00 Installation and Upgrade	Hauling	2.00000	20.0000	HHDT
Station 5+00 to Sta 10+00 Installation and Upgrade	Onsite truck	—	—	HHDT
Station 0+00 to Sta 13+40 Dredging	Worker	40.0000	18.5000	LDA,LDT1,LDT2
Station 0+00 to Sta 13+40 Dredging	Vendor	—	10.2000	HHDT,MHDT

Station 0+00 to Sta 13+40 Dredging	Hauling	2.00000	20.0000	HHDT
Station 0+00 to Sta 13+40 Dredging	Onsite truck	—	—	HHDT
Station 0+00 to Sta 5+00 Deck Repair	Worker	40.0000	18.5000	LDA,LDT1,LDT2
Station 0+00 to Sta 5+00 Deck Repair	Vendor	0.00000	10.2000	HHDT,MHDT
Station 0+00 to Sta 5+00 Deck Repair	Hauling	2.00000	20.0000	HHDT
Station 0+00 to Sta 5+00 Deck Repair	Onsite truck	—	—	HHDT
Station 13+40 to Sta 10+00 Deck Repair	Worker	40.0000	18.5000	LDA,LDT1,LDT2
Station 13+40 to Sta 10+00 Deck Repair	Vendor	0.00000	10.2000	HHDT,MHDT
Station 13+40 to Sta 10+00 Deck Repair	Hauling	2.00000	20.0000	HHDT
Station 13+40 to Sta 10+00 Deck Repair	Onsite truck	—	—	HHDT
Station 5+00 to Sta 10+00 Deck Repair	Worker	40.0000	18.5000	LDA,LDT1,LDT2
Station 5+00 to Sta 10+00 Deck Repair	Vendor	0.00000	10.2000	HHDT,MHDT
Station 5+00 to Sta 10+00 Deck Repair	Hauling	2.00000	20.0000	HHDT
Station 5+00 to Sta 10+00 Deck Repair	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Station 0+00 to Sta 5+00 Deck Repair	0.00000	0.00000	0.00000	6,343.00	—
Station 13+40 to Sta 10+00 Deck Repair	0.00000	0.00000	0.00000	4,313.00	—
Station 5+00 to Sta 10+00 Deck Repair	0.00000	0.00000	0.00000	6,343.00	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Station 0+00 to Sta 5+00 Demolition	0.00000	0.00000	0.00000	119.000	0.00000
Station 13+40 to Sta 10+00 Demolition	0.00000	0.00000	0.00000	81.0000	0.00000
Station 5+00 to Sta 10+00 Demolition	0.00000	0.00000	0.00000	119.000	0.00000
Station 0+00 to Sta 13+40 Dredging	0.00000	937.000	0.00000	0.00000	0.00000

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Phase Name	Land Use	Area Paved (acres)	% Asphalt
Station 13+40 to Sta 10+00 Demolition	General Heavy Industry	0.00000	0%

5.8. Construction Electricity Consumption and Emissions Factors

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
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5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	10.2800	annual days of extreme heat
Extreme Precipitation	4.65000	annual days with precipitation above 20 mm
Sea Level Rise	3.93417	meters of inundation depth
Wildfire	9.96000	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about $\frac{3}{4}$ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2

Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	24.8787
AQ-PM	32.4953
AQ-DPM	46.6584
Drinking Water	0.58699
Lead Risk Housing	51.8336
Pesticides	0.00000
Toxic Releases	75.9065
Traffic	53.2875
Effect Indicators	—
CleanUp Sites	89.3804
Groundwater	98.0076

Haz Waste Facilities/Generators	63.6003
Impaired Water Bodies	72.1546
Solid Waste	0.00000
Sensitive Population	—
Asthma	36.4282
Cardio-vascular	25.2119
Low Birth Weights	14.3829
Socioeconomic Factor Indicators	—
Education	2.30321
Housing	93.9924
Linguistic	—
Poverty	74.8744
Unemployment	17.1135

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	34.13319646
Employed	0.038496086
Median HI	34.60798152
Education	—
Bachelor's or higher	55.13922751
High school enrollment	100
Preschool enrollment	28.41011164
Transportation	—
Auto Access	94.58488387
Active commuting	94.90568459

Social	—
2-parent households	77.26164507
Voting	4.029257026
Neighborhood	—
Alcohol availability	76.81252406
Park access	23.09765174
Retail density	14.51302451
Supermarket access	17.96484024
Tree canopy	14.80816117
Housing	—
Homeownership	0.153984345
Housing habitability	18.06749647
Low-inc homeowner severe housing cost burden	5.042987296
Low-inc renter severe housing cost burden	40.84434749
Uncrowded housing	87.19363531
Health Outcomes	—
Insured adults	98.58847684
Arthritis	0.0
Asthma ER Admissions	90.8
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	81.3
Cognitively Disabled	85.7
Physically Disabled	98.7

Heart Attack ER Admissions	89.2
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	19.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	66.8
Children	1.0
Elderly	99.8
English Speaking	84.6
Foreign-born	4.0
Outdoor Workers	3.3
Climate Change Adaptive Capacity	—
Impervious Surface Cover	59.8
Traffic Density	19.7
Traffic Access	23.0
Other Indices	—
Hardship	20.3
Other Decision Support	—
2016 Voting	12.1

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	40.0000
Healthy Places Index Score for Project Location (b)	17.0000
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

8.1. Justifications

Screen	Justification
Land Use	Not building construction
Construction: Construction Phases	Project specific schedule
Construction: Off-Road Equipment	Project specific equipment list
Construction: Dust From Material Movement	Dredging material estimate
Construction: Trips and VMT	Project specific information assuming peak volumes for workers & hauling.
Construction: Architectural Coatings	coatings applied during deck repair phases

8.2. Project Characteristics

8.2.1. Project Details

Model Parameter	Default Value	New Value
Electric Utility	—	—

8.3. Land Use

Model Parameter	Units	Default Value	New Value
Building Area	sq. ft	2,750.00	0.00000
Landscape Area	sq. ft	—	0.00000
Special Landscape Area	sq. ft	—	0.00000

8.4. Construction

8.4.6. Trips and VMT

Phase Name	Trip Type	Model Parameter	Default Value	New Value
Station 0+00 to Sta 5+00 Demolition	Worker	One-Way Trips per Day	2.50000	40.0000
Station 13+40 to Sta 10+00 Demolition	Worker	One-Way Trips per Day	2.50000	40.0000
Station 13+40 to Sta 10+00 Demolition	Hauling	One-Way Trips per Day	0.91304	2.00000
Station 5+00 to Sta 10+00 Demolition	Worker	One-Way Trips per Day	2.50000	40.0000
Station 5+00 to Sta 10+00 Demolition	Hauling	One-Way Trips per Day	1.30435	2.00000
Mobilization	Worker	One-Way Trips per Day	7.50000	40.0000
Mobilization	Hauling	One-Way Trips per Day	0.00000	2.00000
Station 0+00 to Sta 5+00 Installation and Upgrade	Worker	One-Way Trips per Day	5.00000	40.0000

Station 0+00 to Sta 5+00 Installation and Upgrade	Hauling	One-Way Trips per Day	0.00000	2.00000
Station 13+40 to Sta 10+00 Installation and Upgrade	Worker	One-Way Trips per Day	5.00000	40.0000
Station 13+40 to Sta 10+00 Installation and Upgrade	Hauling	One-Way Trips per Day	0.00000	2.00000
Station 5+00 to Sta 10+00 Installation and Upgrade	Worker	One-Way Trips per Day	2.50000	40.0000
Station 5+00 to Sta 10+00 Installation and Upgrade	Hauling	One-Way Trips per Day	0.00000	2.00000
Station 0+00 to Sta 13+40 Dredging	Worker	One-Way Trips per Day	0.00000	40.0000
Station 0+00 to Sta 13+40 Dredging	Hauling	One-Way Trips per Day	5.61905	2.00000
Station 0+00 to Sta 5+00 Deck Repair	Worker	One-Way Trips per Day	0.00000	40.0000
Station 0+00 to Sta 5+00 Deck Repair	Hauling	One-Way Trips per Day	0.00000	2.00000
Station 13+40 to Sta 10+00 Deck Repair	Worker	One-Way Trips per Day	0.00000	40.0000
Station 13+40 to Sta 10+00 Deck Repair	Hauling	One-Way Trips per Day	0.00000	2.00000
Station 5+00 to Sta 10+00 Deck Repair	Worker	One-Way Trips per Day	0.00000	40.0000
Station 5+00 to Sta 10+00 Deck Repair	Hauling	One-Way Trips per Day	0.00000	2.00000

8.4.8. Architectural Coatings

Phase Name	Model Parameter	Units	Default Value	New Value
Station 0+00 to Sta 5+00 Deck Repair	Non-Residential Exterior Area	sq ft	0.00000	6,343.00
Station 13+40 to Sta 10+00 Deck Repair	Non-Residential Exterior Area	sq ft	0.00000	4,313.00
Station 5+00 to Sta 10+00 Deck Repair	Non-Residential Exterior Area	sq ft	0.00000	6,343.00

Appendix B

Special-Status Wildlife and Plant Species Lists

Table B-1**Special-Status Wildlife Species with Potential to Occur at the Project Site**

Species Name Common Name	Status¹	Habitat Association	Occurrence Potential
Crustaceans			
Riverside fairy shrimp <i>Lepidurus packardii</i>	FT	Inhabits vernal pools and swales containing clear to highly turbid water	No potential to occur; habitat not present.
Vernal pool tadpoleshrimp <i>Lepidurus packardii</i>	FE	Inhabits vernal pools and swales containing clear to highly turbid water	No potential to occur; habitat not present.
Insects			
Crotch bumblebee <i>Bombus crotchii</i>	SCE	From coastal California east to the Sierra-Cascade crest and south into Mexico in association with food plant genera, including Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum	No potential to occur; habitat not present.
Monarch Butterfly <i>Danaus plexippus</i>	FPT	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.	No potential to occur; habitat not present.
Fish			
Tidewater goby <i>Eucyclogobius newberryi</i>	FE	Aquatic; estuarine; south coast flowing waters	No potential to occur; habitat not present.
Unarmored threespine stickleback <i>Gasterosteus aculeatus williamsoni</i>	FE, SE	Aquatic; freshwater; south coast flowing waters	No potential to occur; habitat not present.
California Grunion <i>Leuresthes tenuis</i>	SSC	Aquatic; marine	Low potential to occur; spawning habitat present at Hueneme Beach dredged material placement site.
Steelhead – Southern California DPS <i>Oncorhynchus mykiss irideus</i>	FE, SE	Aquatic; marine and freshwater; south coast flowing waters	Moderate potential to occur; nearshore habitat present.
Santa Ana sucker <i>Pantosteus santaanae</i>	FT	Aquatic; freshwater; south coast flowing waters	No potential to occur; habitat not present.

Species Name Common Name	Status ¹	Habitat Association	Occurrence Potential
Amphibians			
Foothill yellow-legged frog – south coast DPS <i>Rana boylei</i>	FE, SE	Partly shaded shallow streams and riffles with a rocky substrate in a variety of habitats	No potential to occur; habitat not present.
California red-legged frog <i>Rana draytonii</i>	FT	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation.	No potential to occur; habitat not present.
Reptiles			
Southwestern pond turtle (<i>Actinemys pallida</i>)	FPT	Streams, rivers, ponds, and wetlands	No potential to occur; habitat not present.
Birds			
Tricolored blackbird <i>Agelaius tricolor</i>	ST	Freshwater marsh; marsh and swamp; swamp; wetland	No potential to occur; habitat not present.
Western snowy plover <i>Anarhynchus nivosus nivosus</i>	FT, CH	Sandy beaches, salt pond levees, and shores of large alkali lakes	Moderate potential for nesting and foraging at Hueneme Beach dredged material placement sites.
Burrowing owl <i>Athene cunicularia</i>	SCE	Open, dry annual or perennial grasslands, deserts, and scrublands	No potential to occur; habitat not present.
Western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	FT, SE	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems.	No potential to occur; habitat not present.
Southwestern willow flycatcher <i>Empidonax traillii eximius</i>	FE, SE	Riparian woodland	No potential to occur; habitat not present.
California black rail <i>Laterallus jamaicensis coturniculus</i>	ST	Freshwater marshes, wet meadows, and shallow margins of saltwater marshes bordering larger bays	No potential to occur; habitat not present.
Belding's savannah sparrow <i>Passerculus sandwichensis beldingi</i>	SE	Marsh, swamp, wetland	No potential to occur; habitat not present.
Coastal California gnatcatcher <i>Polioptila californica californica</i>	FT	Low, coastal sage scrub in arid washes and on mesas and slopes	No potential to occur; habitat not present.
Hawaiian Petrel <i>Pterodroma sandwichensis</i>	FE	Burrows or rock crevices at high elevations	No potential to occur; habitat not present.
Light-footed Ridgway's rail <i>Rallus obsoletus levipes</i>	FE, SE	Marsh, swamp, salt marsh, wetland	No potential to occur; habitat not present.

Species Name Common Name	Status ¹	Habitat Association	Occurrence Potential
Marbled Murrelet <i>Brachyramphus marmoratus</i>	FT	Coniferous forests or rocky talus slopes near the Pacific Ocean	No potential to occur; habitat not present.
Short-tailed albatross <i>Phoebastria albatrus</i>	FE	Isolated, windswept, offshore islands	No potential to occur; habitat not present.
Bank swallow <i>Riparia riparia</i>	ST	Riparian scrub and woodland	No potential to occur; habitat not present.
California least tern <i>Sternula antillarum browni</i>	FE, SE	Open sandy or gravelly shores with light-colored substrates, little vegetation, and nearby fishing waters for nesting	Moderate potential for nesting and foraging at Hueneme Beach dredged material placement sites. Moderate potential for foraging in the action area.
Least Bell's vireo <i>Vireo bellii pusillus</i>	FE, SE	Riparian scrub and woodland	No potential to occur; habitat not present.
Marine Mammals			
California Sea Lion <i>Zalophus californianus</i>	MMPA	Eastern North Pacific Ocean from mainland Mexico to Vancouver Island, Canada.	Moderate potential to occur in action area and Hueneme Beach dredged material placement sites.
Harbor Seal <i>Phoca vitulina</i>	MMPA	Temperate coastal habitats from central Baja California, Mexico to Alaska.	Moderate potential to occur in action area and Hueneme Beach dredged material placement sites.
Coastal Bottlenose Dolphin <i>Tursiops truncatus</i>	MMPA	Temperate and tropical waters around the world. Coastal populations migrate into bays, estuaries, and river mouths as well as offshore along the continental shelf.	Low potential to occur in action area and Hueneme Beach dredged material placement sites.
California Gray Whale <i>Eschrichtius robustus</i>	MMPA	Shallow coastal water in the North Pacific Ocean.	Low potential to occur nearshore by Hueneme Beach.

Notes:

Sources:

CDFW CNDDDB (California Department of Fish and Wildlife California Natural Diversity Database), 2025. California Natural Diversity Database search of proposed project area quadrangles (Ventura, Saticoy, Santa Paula, Camarillo, Point Mugu, and Oxnard). Accessed December 23, 2025. Available at: <https://apps.wildlife.ca.gov/rarefind/view/RareFind.aspx>.

USFWS (U.S. Fish and Wildlife Service), 2025a. IPaC Resource List for Ventura County, California. Accessed December 23, 2025.

1. Explanation of state, federal, and other listing codes:

CH Critical Habitat (Proposed or Final) is designated
FE Federally listed as Endangered
FPT Federally proposed for listing as Threatened
FT Federally listed as Threatened
MMPA Marine Mammal Protection Act
SCE State candidate for listing as Endangered
SE State-listed as Endangered
SSC California Species of Special Concern
ST State-listed as Threatened

Table B-2
Special-Status Plant Species Considered for Occurrence Within the Project Area

Common Name	Scientific Name	California Rare Plant Rank	Habitat	Potential to Occur
Aphanisma	<i>Aphanisma blitoides</i>	1B.2	Coastal bluff scrub, coastal dunes, coastal scrub	No potential to occur; habitat not present.
Marsh Sandwort	<i>Arenaria paludicola</i>	1B.1	Marshes and swamps	No potential to occur; habitat not present.
Braunton's milk-vetch	<i>Astragalus brauntonii</i>	1B.1	Chaparral, coastal scrub, valley and foothill grassland	No potential to occur; habitat not present.
Miles' milk-vetch	<i>Astragalus didymocarpus</i> var. <i>milesianus</i>	1B.2	Coastal scrub	No potential to occur; habitat not present.
Ventura Marsh milk-vetch	<i>Astragalus pycnostachyus</i> var. <i>lanosissimus</i>	1B.1	Marshes and swamps, coastal dunes, coastal scrub	No potential to occur; habitat not present.
Coulter's saltbush	<i>Atriplex coulteri</i>	1B.2	Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland	No potential to occur; habitat not present.
South coast saltscale	<i>Atriplex pacifica</i>	1B.2	Coastal scrub, coastal bluff scrub, playas, coastal dunes	No potential to occur; habitat not present.
Davidson's saltscale	<i>Atriplex serenana</i> var. <i>davidsonii</i>	1B.2	Coastal bluff scrub, coastal scrub	No potential to occur; habitat not present.
Slender mariposa-lily	<i>Calochortus clavatus</i> var. <i>gracilis</i>	1B.2	Chaparral, coastal scrub, valley and foothill grassland	No potential to occur; habitat not present.
Late-flowered mariposa-lily	<i>Calochortus fimbriatus</i>	1B.3	Chaparral, cismontane woodland, riparian woodland	No potential to occur; habitat not present.
Plummer's mariposa-lily	<i>Calochortus plummerae</i>	4.2	Coastal scrub, chaparral, valley and foothill grassland, cismontane woodland, lower montane coniferous forest	No potential to occur; habitat not present.
Orcutt's pincushion	<i>Chaenactis glabriuscula</i> var. <i>orcuttiana</i>	1B.1	Coastal bluff scrub, coastal dunes	No potential to occur; habitat not present.

Common Name	Scientific Name	California Rare Plant Rank	Habitat	Potential to Occur
Salt marsh bird's-beak	<i>Chloropyron maritimum ssp. maritimum</i>	1B.2	Marshes and swamps, coastal dunes	No potential to occur; habitat not present.
Blochman's dudleya	<i>Dudleya blochmaniae ssp. blochmaniae</i>	1B.1	Coastal scrub, coastal bluff scrub, chaparral, valley and foothill grassland	No potential to occur; habitat not present.
Verity's dudleya	<i>Dudleya verityi</i>	1B.1	Chaparral, cismontane woodland, coastal scrub	No potential to occur; habitat not present.
Conejo buckwheat	<i>Eriogonum crocatum</i>	1B.2	Chaparral, coastal scrub, valley and foothill grassland	No potential to occur; habitat not present.
Coulter's goldfields	<i>Lasthenia glabrata ssp. coulteri</i>	1B.1	Coastal salt marshes, playas, vernal pools	No potential to occur; habitat not present.
Mexican malacothrix	<i>Malacothrix similis</i>	2A	Coastal dunes	No potential to occur; habitat not present.
White-veined monardella	<i>Monardella hypoleuca ssp. hypoleuca</i>	1B.3	Chaparral, cismontane woodland	No potential to occur; habitat not present.
Gerry's curly-leaved monardella	<i>Monardella sinuata ssp. gerryi</i>	1B.1	Coastal scrub	No potential to occur; habitat not present.
Spreading Navarretia	<i>Navarretia fossalis</i>	1B.1	Vernal pools, chenopod scrub, marshes and swamps, playas	No potential to occur; habitat not present.
Ojai navarretia	<i>Navarretia ojaiensis</i>	1B.1	Chaparral, coastal scrub, valley and foothill grassland	No potential to occur; habitat not present.
California Orcutt Grass	<i>Orcuttia californica</i>	1B.1	Vernal pools	No potential to occur; habitat not present.
White rabbit-tobacco	<i>Pseudognaphalium leucocephalum</i>	2B.2	Riparian woodland, cismontane woodland, coastal scrub, chaparral	No potential to occur; habitat not present.
Gambel's Watercress	<i>Rorippa gambellii</i>	1B.1	Streams, marshes, lakes	No potential to occur; habitat not present.
Chaparral ragwort	<i>Senecio aphanactis</i>	1B.2	Chaparral, cismontane woodland, coastal scrub	No potential to occur; habitat not present.

Common Name	Scientific Name	California Rare Plant Rank	Habitat	Potential to Occur
Broadleaf pondweed	<i>Stuckenia striata</i>	2B.3	Marshes and swamps	No potential to occur; habitat not present.
Estuary seablite	<i>Suaeda esteroa</i>	1B.2	Marshes and swamps	No potential to occur; habitat not present.
Woven-spored lichen	<i>Texosporium sancti-jacobi</i>	3	Chaparral	No potential to occur; habitat not present.

Notes:

Rare Plant Rank 1B.1: rare, threatened, or endangered in California and elsewhere; seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat)

Rare Plant Rank 1B.2: rare, threatened, or endangered in California and elsewhere; fairly threatened in California (20-80% occurrences threatened/moderate degree and immediacy of threat)

Rare Plant Rank 2B.1: rare, threatened, or endangered in California, but more common elsewhere; seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat)

Rare Plant Rank 2B.2: rare, threatened, or endangered in California, but more common elsewhere; moderately threatened in California (20-80% occurrences threatened/moderate degree and immediacy of threat)

Rare Plant Rank 2B.3: rare, threatened, or endangered in California, but more common elsewhere; not very threatened in California (less than 20% of occurrences threatened/low degree and immediacy of threat or no current threats known)

Rare Plant Rank 3: Plants about which more information is needed (a review list)

Rare Plant Rank 4: Plants of limited distribution (a watch list)

Sources:

CDFW CNDDDB (California Department of Fish and Wildlife California Natural Diversity Database), 2025. California Natural Diversity Database search of proposed project area quadrangles (Ventura, Saticoy, Santa Paula, Camarillo, Point Mugu, and Oxnard). Accessed December 23, 2025. Available at: <https://apps.wildlife.ca.gov/rarefind/view/RareFind.aspx>.

USFWS (U.S. Fish and Wildlife Service), 2025a. IPaC Resource List for Ventura County, California. Accessed December 23, 2025.