

Notice of Determination

Appendix D

To:

☒ Office of Planning and Research
 U.S. Mail: Street Address:
 P.O. Box 3044 1400 Tenth St., Rm 113
 Sacramento, CA 95812-3044 Sacramento, CA 95814

☒ County Clerk

County of: Ventura
 Address: Hall of Administration, Main Plaza
 800 S. Victoria Avenue, Ventura, CA 93009

From:

Public Agency: Oxnard Harbor District
 Address: 333 Ponomo Avenue
 Port Hueneme, California 93044
 Contact: Christina Birdsey
 Phone: 805-488-3677

Lead Agency (if different from above):
 Same as above.

Address:

Contact:

Phone:

SUBJECT: Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.

State Clearinghouse Number (if submitted to State Clearinghouse): 2017011049

Project Title: Port of Hueneme Berth Deepening and Wharf Improvement Project

Project Applicant: Oxnard Harbor District

Project Location (include county): Port of Hueneme, Ventura County

Project Description:

The Proposed Project's berth deepening effort would include dredging activities to deepen Berths 1 and 2 along Wharf 1 to approximately -40 feet MLLW, to provide deep draft vessel continuity from the harbor through to Berths 1 and 2 along Wharf 1. Dredged sediment would be placed using one of two options. Under Option 1, dredged sediment found to meet applicable physical and chemical thresholds would be placed on Hueneme Beach for beach nourishment or in the near-shore zone adjacent to Hueneme Beach. Under Option 2, the USACE would over dredge portions of Channel A to a depth of approximately -48 feet MLLW to create trenches for wharf sediment disposal.

This is to advise that the Oxnard Harbor District
☒ Lead Agency or ☐ Responsible Agency) has approved the above

described project on March 13, 2017 and has made the following determinations regarding the above
 (date)
 described project.

1. The project ☐ will ☒ will not have a significant effect on the environment.
2. ☐ An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.
☒ A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures ☒ were ☐ were not made a condition of the approval of the project.
4. A mitigation reporting or monitoring plan ☒ was ☐ was not adopted for this project.
5. A statement of Overriding Considerations ☐ was ☒ was not adopted for this project.
6. Findings ☒ were ☐ were not made pursuant to the provisions of CEQA.

This is to certify that the final EIR with comments and responses and record of project approval, or the negative Declaration, is available to the General Public at:

Oxnard Harbor District, 333 Ponomo Avenue, Port Hueneme, CA 93041

Signature (Public Agency):  Title: Chief Operations Officer

Date: March 15, 2017

Date Received for filing at OPR:

Notice of Completion & Environmental Document Transmittal

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

SCH #2017011049

Project Title: Port of Hueneme Berth Deepening and Wharf Improvement ProjectLead Agency: Oxnard Harbor DistrictContact Person: Christina BirdseyMailing Address: 333 Ponomo AvenuePhone: 805-488-3677City: Port HuenemeZip: 93044County: Ventura**Project Location:** County: VenturaCity/Nearest Community: Port HuenemeCross Streets: East Port Hueneme Road and Market StreetZip Code: 93044Longitude/Latitude (degrees, minutes and seconds): 34 ° 8 ' 49.75" N / 119 ° 12 ' 24.34" W Total Acres: 55.01Assessor's Parcel No.: N/A

Section: _____

Twp.: _____

Range: _____

Base: _____

Within 2 Miles: State Hwy #: _____

Waterways: Pacific Ocean

Airports: _____

Railways: VC Railroad CompanySchools: Port Hueneme Elem Sch**Document Type:**

CEQA: ☐ NOP
☐ Early Cons
☐ Neg Dec
☐ Mit Neg Dec

☐ Draft EIR
☐ Supplement/Subsequent EIR
 (Prior SCH No.) _____
 Other: Notice of Determination

NEPA:

☐ NOI
☐ EA
☐ Draft EIS
☐ FONSI

Other:

☐ Joint Document
☐ Final Document
☐ Other: _____

Local Action Type:

☐ General Plan Update
☐ General Plan Amendment
☐ General Plan Element
☐ Community Plan

☐ Specific Plan
☐ Master Plan
☐ Planned Unit Development
☐ Site Plan

☐ Rezone
☐ Prezone
☐ Use Permit
☐ Land Division (Subdivision, etc.)

☐ Annexation
☐ Redevelopment
☐ Coastal Permit
☒ Other: Dredge Project

Development Type:

☐ Residential: Units _____ Acres _____
☐ Office: Sq.ft. _____ Acres _____ Employees _____
☐ Commercial: Sq.ft. _____ Acres _____ Employees _____
☐ Industrial: Sq.ft. _____ Acres _____ Employees _____
☐ Educational: _____
☐ Recreational: _____
☐ Water Facilities: Type _____ MGD _____

☐ Transportation: Type _____
☐ Mining: Mineral _____
☐ Power: Type _____ MW _____
☐ Waste Treatment: Type _____ MGD _____
☐ Hazardous Waste: Type _____
☒ Other: Berth deepening and wharf improvements for deepdraft

Project Issues Discussed in Document:

☒ Aesthetic/Visual
☒ Agricultural Land
☒ Air Quality
☒ Archeological/Historical
☒ Biological Resources
☒ Coastal Zone
☒ Drainage/Absorption
☐ Economic/Jobs

☐ Fiscal
☒ Flood Plain/Flooding
☒ Forest Land/Fire Hazard
☒ Geologic/Seismic
☒ Minerals
☒ Noise
☒ Population/Housing Balance
☒ Public Services/Facilities

☒ Recreation/Parks
☒ Schools/Universities
☒ Septic Systems
☒ Sewer Capacity
☒ Soil Erosion/Compaction/Grading
☒ Solid Waste
☒ Toxic/Hazardous
☒ Traffic/Circulation

☒ Vegetation
☒ Water Quality
☒ Water Supply/Groundwater
☒ Wetland/Riparian
☒ Growth Inducement
☒ Land Use
☒ Cumulative Effects
☐ Other: _____

Present Land Use/Zoning/General Plan Designation:

Surrounded by Port Related (M-PR) uses to the west and south and Naval Construction Battalion Center to the north and east

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

The Proposed Project's berth deepening effort would include dredging activities to deepen Berths 1 and 2 along Wharf 1 to approximately -40 feet MLLW, to provide deep draft vessel continuity from the harbor, through the channel and to Berths 1 and 2 along Wharf 1. Dredged sediment would be placed using one of two options. Under Option 1, dredged sediment found to meet applicable physical and chemical thresholds would be placed on Hueneme Beach for beach nourishment or in the near-shore zone adjacent to Hueneme Beach. Under Option 2, the USACE would over dredge portions of Channel A to a depth of approximately -48 feet MLLW to create trenches for wharf sediment disposal. Since the desired option has not been determined at this time, both options were analyzed in the Initial Study.

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

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with an "X".
If you have already sent your document to the agency please denote that with an "S".

<input type="checkbox"/> Air Resources Board	<input type="checkbox"/> Office of Historic Preservation
<input type="checkbox"/> Boating & Waterways, Department of	<input type="checkbox"/> Office of Public School Construction
<input type="checkbox"/> California Emergency Management Agency	<input type="checkbox"/> Parks & Recreation, Department of
<input type="checkbox"/> California Highway Patrol	<input type="checkbox"/> Pesticide Regulation, Department of
<input type="checkbox"/> Caltrans District # _____	<input type="checkbox"/> Public Utilities Commission
<input type="checkbox"/> Caltrans Division of Aeronautics	<input type="checkbox"/> Regional WQCB # _____
<input type="checkbox"/> Caltrans Planning	<input type="checkbox"/> Resources Agency
<input type="checkbox"/> Central Valley Flood Protection Board	<input type="checkbox"/> Resources Recycling and Recovery, Department of
<input type="checkbox"/> Coachella Valley Mtns. Conservancy	<input type="checkbox"/> S.F. Bay Conservation & Development Comm.
<input type="checkbox"/> Coastal Commission	<input type="checkbox"/> San Gabriel & Lower L.A. Rivers & Mtns. Conservancy
<input type="checkbox"/> Colorado River Board	<input type="checkbox"/> San Joaquin River Conservancy
<input type="checkbox"/> Conservation, Department of	<input type="checkbox"/> Santa Monica Mtns. Conservancy
<input type="checkbox"/> Corrections, Department of	<input type="checkbox"/> State Lands Commission
<input type="checkbox"/> Delta Protection Commission	<input type="checkbox"/> SWRCB: Clean Water Grants
<input type="checkbox"/> Education, Department of	<input type="checkbox"/> SWRCB: Water Quality
<input type="checkbox"/> Energy Commission	<input type="checkbox"/> SWRCB: Water Rights
<input type="checkbox"/> Fish & Game Region # _____	<input type="checkbox"/> Tahoe Regional Planning Agency
<input type="checkbox"/> Food & Agriculture, Department of	<input type="checkbox"/> Toxic Substances Control, Department of
<input type="checkbox"/> Forestry and Fire Protection, Department of	<input type="checkbox"/> Water Resources, Department of
<input type="checkbox"/> General Services, Department of	
<input type="checkbox"/> Health Services, Department of	<input type="checkbox"/> Other: _____
<input type="checkbox"/> Housing & Community Development	<input type="checkbox"/> Other: _____
<input type="checkbox"/> Native American Heritage Commission	

Local Public Review Period (to be filled in by lead agency)

Starting Date Friday, January 20, 2017

Ending Date Sunday, February 19, 2017

Lead Agency (Complete if applicable):

Consulting Firm: Rincon Consultants

Address: 449 15th Street, Suite 303

City/State/Zip: Oakland, CA 94612

Contact: Matthew Long

Phone: 510-834-4455

Applicant: Oxnard Harbor District

Address: 333 Ponomo Avenue

City/State/Zip: Port Hueneme, California, 93044

Phone: 805-488-3677

Signature of Lead Agency Representative: _____

Date: 15 March 2017

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.



Port of Hueneme Berth Deepening and Wharf Improvement Project

Subsequent Initial Study – Mitigated Negative Declaration

prepared by

Oxnard Harbor District

333 Ponomo Ave

Port Hueneme, California 93041

prepared with the assistance of

Rincon Consultants, Inc.

180 N. Ashwood Ave

Ventura, California 93003

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Table of Contents

Initial Study.....	1
1 Project Title	1
2 Lead Agency Name and Address.....	1
3 Contact Person and Phone Number	1
4 Project Location	1
5 Project Sponsor's Name and Address	1
6 Existing Setting	4
7 General Plan Designation.....	4
8 Regulatory and Project Background	4
9 Zoning.....	6
10 Project Description.....	6
11 Required Approvals.....	9
12 Surrounding Land Uses and Setting	9
13 Other Public Agencies Whose Approval is Required.....	9
Environmental Checklist.....	13
1 Aesthetics.....	13
2 Agriculture and Forest Resources	15
3 Air Quality	17
4 Biological Resources.....	25
5 Cultural Resources	43
6 Geology and Soils	45
7 Greenhouse Gas Emissions	49
8 Hazards and Hazardous Materials	55
9 Hydrology and Water Quality	59
10 Land Use and Planning.....	65
11 Mineral Resources.....	67
12 Noise	69
13 Population and Housing.....	79
14 Public Services.....	81
15 Recreation	85
16 Transportation	87
17 Utilities and Service Systems.....	91
18 Tribal Cultural Resources	95
19 Mandatory Findings of Significance	97

References	101
Bibliography.....	101
List of Preparers.....	104

Tables

Table 1	Project Summary and Comparison	5
Table 2	Project Summary	9
Table 3	Maximum Daily Construction Emissions (pounds/day) under Option 1.....	22
Table 4	Maximum Daily Construction Emissions (pounds/day) under Option 2.....	23
Table 5	Special Status Species Potentially Occurring in the Project Area	34
Table 6	Estimated Construction GHG Emissions for Option 1.....	51
Table 7	Estimated Construction GHG Emissions for Option 2.....	52
Table 8	Proximity of Receptors to Project Construction Activity	71
Table 9	Noise Monitoring Results	71
Table 10	City of Port Hueneme Exterior Noise Level Limits	73
Table 11	Typical Maximum Noise Levels from Construction Equipment	74
Table 12	Noise Levels During Construction Phases	75
Table 13	Vibration Source Levels for Construction Equipment.....	76
Table 14	Estimated Project Traffic Trip Generation	88

Figures

Figure 1	Regional Location	2
Figure 2	Project Location	3
Figure 3	Noise Measurement and Sensitive Receptor Locations	72

Appendices

Appendix A	Air Quality and Greenhouse Gas Emissions Modeling Results
Appendix B	Noise Data Sheets and Calculations
Appendix C	Mitigation Monitoring and Reporting Program

Initial Study

1 Project Title

Port of Hueneme Berth Deepening and Wharf Improvement Project

2 Lead Agency Name and Address

Oxnard Harbor District
333 Ponomo Street
Port Hueneme, California 93041

3 Contact Person and Phone Number

Christina Birdsey
Director of Operations and Engineering

4 Project Location

The project site is located inside the Port of Hueneme (Port) along Wharf 1 adjacent to Channel A (for dredging and wharf improvements), and at Hueneme Beach (for sediment disposal).

Figure 1 shows the location of the site in the region and Figure 2 shows the project site in its neighborhood context.

Dredging and Wharf Improvements

Sediment would be dredged from areas adjacent to Channel A, alongside Berths 1 and 2, and alongside Berth 3 as necessary to maintain target depths for Berths 1 and 2. Wharf improvements would occur at the existing Wharf 1 along Berths 1 and 2, and along Berth 3 as necessary to facilitate a safe transition between Berth 2 and Berth 3. As shown in Figure 2, all dredging and wharf improvements would take place inside the Port boundary.

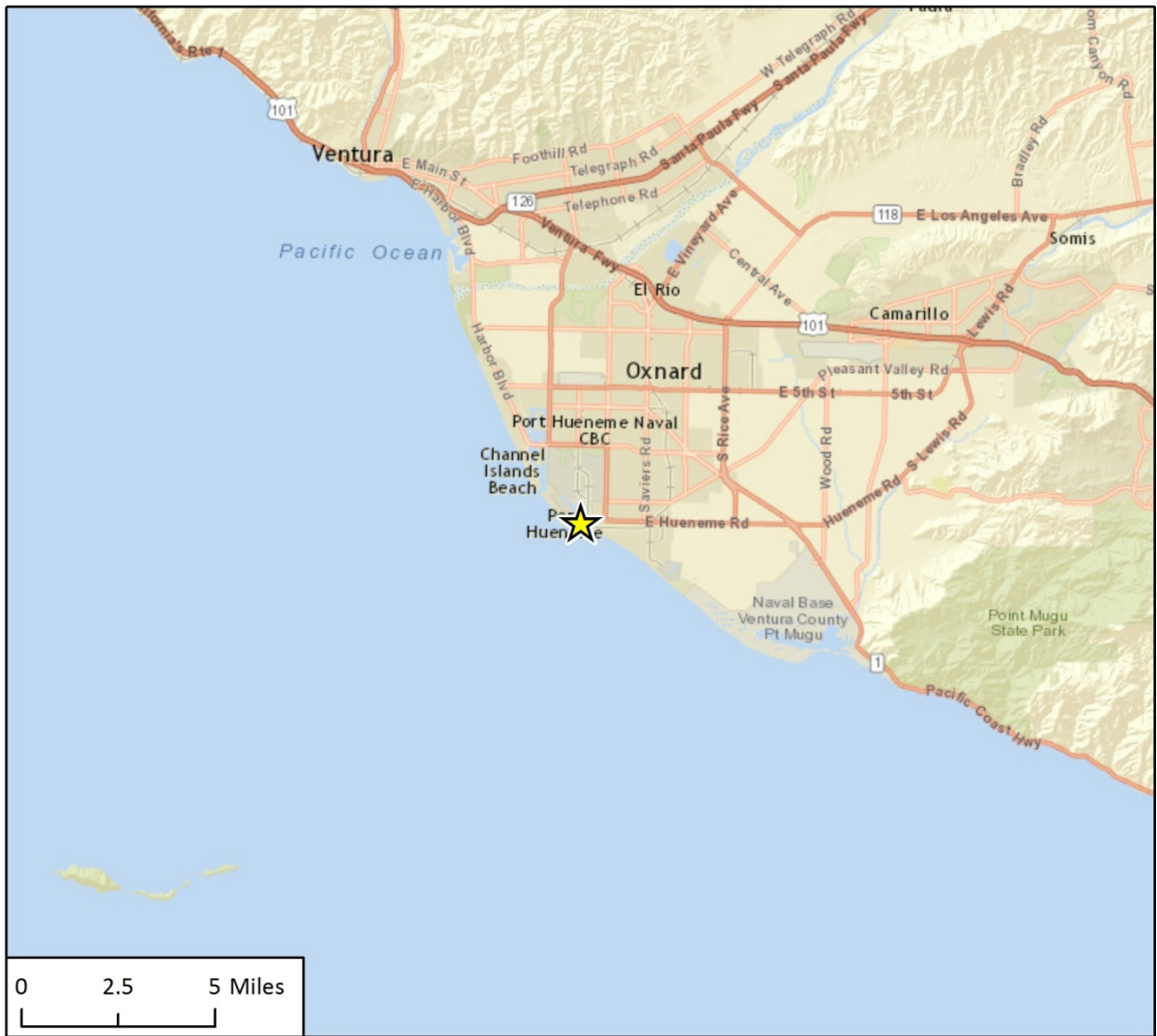
Beach Nourishment

As part of the project, dredged sediment would be placed along Hueneme Beach as part of a beach nourishment process. This area is located outside the Port and is part of the City of Port Hueneme.

5 Project Sponsor's Name and Address

Applicant (same as Lead Agency)
Oxnard Harbor District
333 Ponomo Street
Port Hueneme, California 93041

Figure 1 Regional Location



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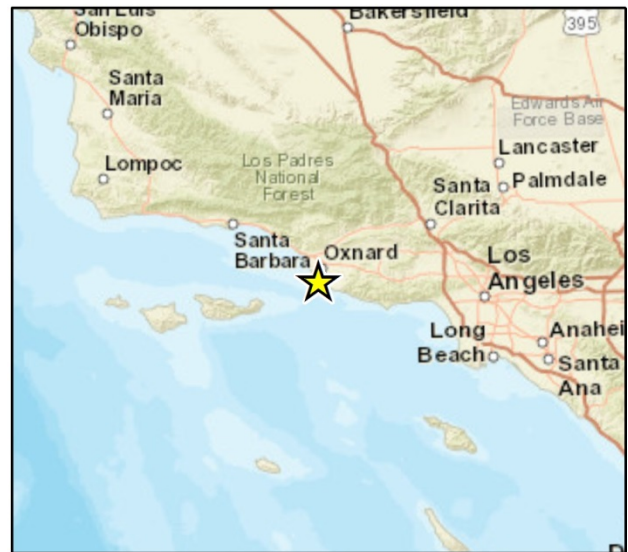
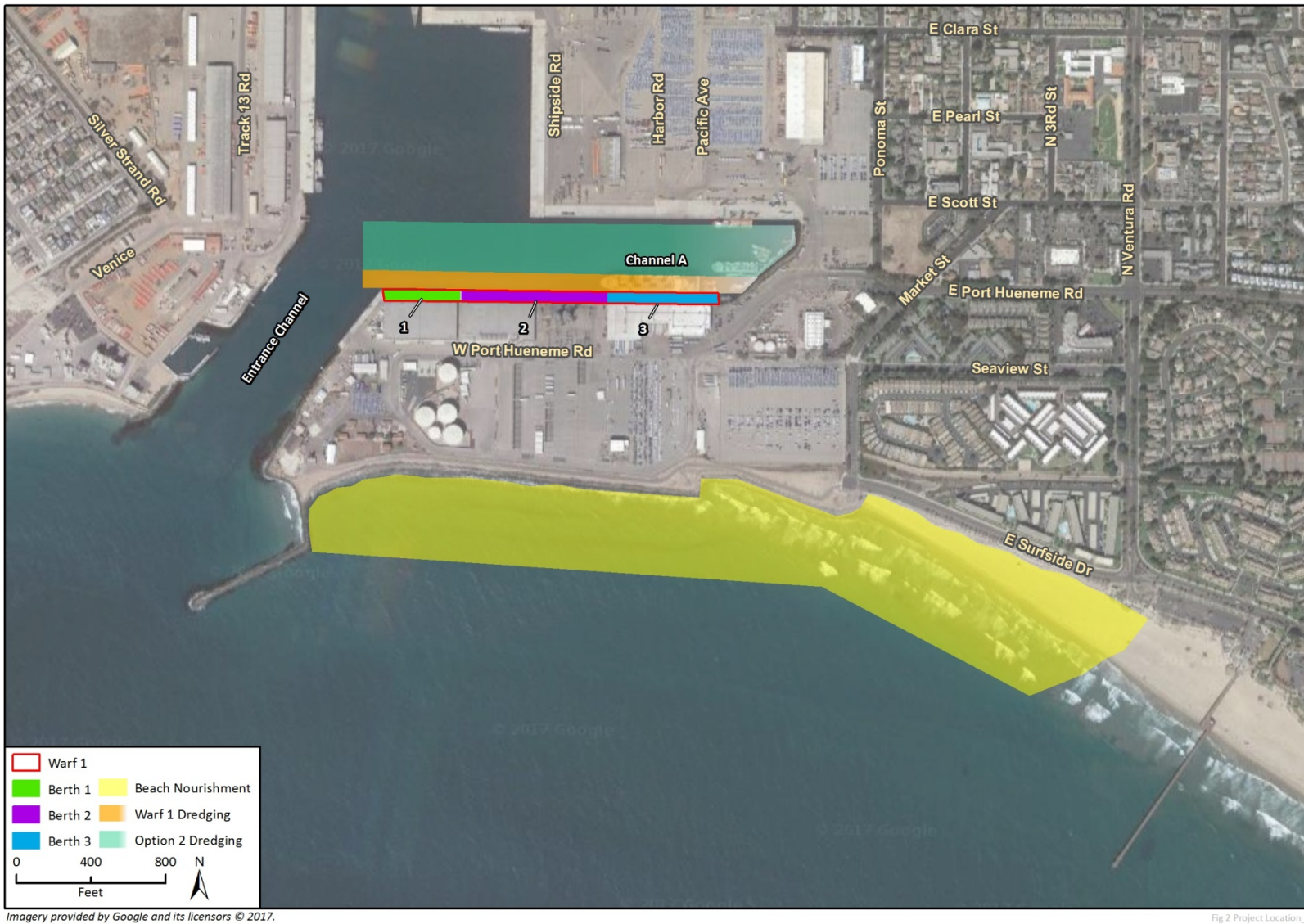


Fig 1 Regional Location

Figure 2 Project Location



6 Existing Setting

Currently, the Turning Basin, Channel A, the Entrance Channel, and berths at the Port of Hueneme are maintained at -35 feet Mean Lower Low Water (MLLW) and the Approach Channel is maintained at -40 feet MLLW. The harbor is dredged biennially for maintenance purposes. The 35-foot channels have a sea floor consisting of silt and sand and require ships that are over 300 gross registered tons to be piloted both upon entering and exiting the Entrance Channel. Under the current pilot regulations, ships calling the Port's terminals require 10 percent under keel draft to safely navigate the channel. With this requirement, the typical 10 percent under keel maximum draft of a vessel calling at the Port is 32 feet, and this depth can change depending on the tides.

Under current conditions, liquid bulk tankers often need to wait for high tide to berth, incurring costly delays. In a separate and independent project, the Port of Hueneme and the United States Army Corp of Engineers (USACE) have signed an agreement to deepen the Turning Basin and Channel A from -35 to -40 feet MLLW and the Approach Channel to -43.3 feet MLLW (the "USACE Project"). The USACE Project, at a total cost of \$8 million, is scheduled to be completed in the first half of 2018. With the USACE Project, ocean carriers would be able to utilize a deeper draft, which would allow carriers to more fully utilize the cargo capacity of the vessel and carry additional tonnage per call, which could increase operational efficiency. However, the USACE Project ends at the federal channel line and does not extend to the berths, where vessels are tied to the wharf to discharge or load cargo. The Proposed Project would not involve a change in use on the project site, but would modernize the wharf and deepen the berths to provide deep-draft vessel continuity from the harbor through the channel and to Berths 1 and 2 along Wharf 1. These deep-draft vessels already access the berths, but they are required to wait for higher tide to transit the channel and come to berth. Although additional tonnage per call would be possible, the project would not result in additional throughput because the throughput is currently limited by a throughput threshold (Agreement between City of Port Hueneme and Oxnard Harbor District, 1987).

Hueneme Beach, also known as Port Hueneme Beach Park, is located southeast of the entrance to Port Hueneme. The beach includes recreational amenities such as a fishing pier, picnic areas, and volleyball nets. Sand on the beach is supplied mainly from a bi-annual dredging operation by the USACE. Without that imported sand the extent of the beach diminishes due to erosion, which could interfere with recreational opportunities.

7 General Plan Designation

The harbor is surrounded by Port land use to the west, east, and south, and by military use to the north and east.

8 Regulatory and Project Background

The Port of Hueneme deepening project was originally proposed in 1999 and analyzed in the 1999 Final Environmental Assessment and Mitigated Negative Declaration (EA/MND) (LADCE 1999). The project was modified in 2004 and reanalyzed in a Supplemental EA (LADCE 2004). The project was modified again, and the results are currently being analyzed as the Proposed Project in this Initial Study. Therefore, analysis of the Proposed Project builds on and references, where applicable, the 1999 EA/MND and the 2004 Supplemental EA. However, because the 2004 Supplemental EA was completed solely for the purpose of National Environmental Policy Act (NEPA) analysis, the conclusions are incorporated as reference and are not relied upon for this analysis. For comparison

purposes, Table 1 provides a summary of the project previously proposed and approved in 1999 and the currently proposed project.

Table 1 Project Summary and Comparison

Project Component	1999 Approved Project	Currently Proposed Project
Project Description	Deepen the Port of Hueneme Harbor's Main Approach Channel, Entrance Channel, Turn Basin, Channel A, and Channel A berthing areas (Berths 1 through 5 along Wharfs 1 and 2). Under the Recommended Plan, the Main Approach Channel would be dredged to -13.2 m MLLW, and the Entrance Channel, Turn Basin, Channel A, and Berthing Area would be dredged to -12.2 m MLLW	Deepen Berths 1 and 2 along Wharf 1 to approximately -40 feet (12.2 meters) MLLW, to provide deep-draft vessel continuity from the harbor, through the channel and to Berths 1 and 2 along Wharf 1
Sediment to be Dredged	485,000 m ³ (approximately 634,356 cubic yards)	Option 1 and 2: 29,000 cubic yards (an additional 85,000 cubic yards to be dredged over 10 days under Option 2)
Dredge	Hydraulic cutterhead, clamshell, and/or hopper dredge to remove material	Clamshell dredge
Sediment Disposal Location	Dredged material disposed onshore or nearshore at Hueneme Beach for beach nourishment	Option 1: Hueneme Beach for beach nourishment or in the near-shore zone adjacent to Hueneme Beach. Option 2: USACE would over-dredge portions of Channel A to a depth of approximately -48 feet MLLW to create trenches, and sediment from the Proposed Project's berths would be placed directly into the over-dredged trenches
Berth and Wharf Modifications	Berth modifications/wharf improvements for Berths 1-5, including removal of existing timber fender, installation of new timber fender, and addition of new sheet pile toe wall	Berth modifications/wharf improvements for Berths 1-3, including removal of existing timber fender, installation of new timber fender, and addition of new sheet pile toe wall

Table 1 shows the 1999 EA/MND analyzed a larger project that included the federal and Oxnard Harbor District (OHD) components of the currently proposed project, which is discussed in each of the individual resource areas below. Based on the USACE's *2016 Sediment Sampling and Analysis Plan*, approximately 514,000 cubic yards (cy) (400,000 cy Federal, 29,000 cy Berths 1-3, and 85,000 cy trenches), of material would be dredged under Option 2, which is approximately 120,000 cy less sediment than was analyzed in the 1999 EA/MND.

Additionally, the Port of Hueneme Environmental Management Framework (EMF), which outlines a set of environmental work plans intended to provide a roadmap for the implementation of projects and programs, was also used to provide background and information regarding existing Port operations and general environmental initiatives. The framework outlines a series of six strategic implementation plans that have been developed and are consistent with the focus areas previously identified in the Port's Environmental Management Policy Statement and Guiding Principles (E2 ManageTech, 2013).

9 Zoning

The harbor is surrounded by Port Related (M-PR) uses to the west and south, and utilized by the Naval Construction Battalion Center to the north and east.

10 Project Description

The Proposed Project's berth deepening effort would include dredging activities to deepen Berths 1 and 2 along Wharf 1 to approximately -40 feet MLLW, to provide deep-draft vessel continuity from the harbor, through the channel and to Berths 1 and 2 along Wharf 1. Through implementation of the project, vessels would no longer need to wait for higher tide to transit the channel and come to berth, increasing operational efficiencies. The dredging activities for Berths 1 and 2, including sediment removal and disposal, are anticipated to last approximately one month. Dredging activities for Berths 1 and 2 would most likely be accomplished using a clamshell dredge, and approximately 25,000 cubic yards of sediment would be dredged. An additional 4,000 cy of sediment could also be dredged from Berth 3, resulting in a total of 29,000 cy of dredged sediment. This was included in the impact analysis. Dredges are not generally self-powered, therefore, it is assumed for the purposes of this analysis that the tug would operate throughout dredging to power the dredge and cutting equipment. All construction equipment would use the cleanest available engines, with the goal of using Tier 3 or Tier 4 engines where available. Additionally, construction equipment (including dredges) with the ability to utilize electric power through existing shore power connections would be preferentially included in the construction fleet for the Proposed Project. Sediment testing would be performed for all proposed dredging sites before commencement of dredging activities.

Dredged sediment would be placed using one of two options, as described below. Since the desired option has not been determined at this time, both options are analyzed in this Initial Study.

Option 1

Under Option 1, dredged sediment found to meet applicable physical and chemical thresholds would be placed on Hueneme Beach for beach nourishment or in the near-shore zone adjacent to Hueneme Beach. Sediment dredged from the Oxnard Harbor District berths may be used to nourish Hueneme Beach through direct placement on the beach or by placement in the nearshore zone. Direct placement on the beach would be accomplished using an hydraulic dredge and pipeline to pump sediment as a slurry onto the beach. The slurry would be allowed to dewater and then it would be spread to achieve the desired beach slope and elevations. Additional lengths of pipe would be added to advance the pipeline along the beach as additional sediment is placed. Nearshore placement of sediment would be accomplished using a clamshell dredge to place dredged sediment into a split hull barge. Once the barge is full, it would be transported to the nearshore zone by a small tug and opened to allow the sediment to fall into the shallow subtidal zone.

A multiagency group called the Southern California Dredged Material Management Team (DMMT) will review the results of the sediment characterization to determine its suitability for beneficial use to nourish Hueneme Beach. The DMMT is composed of State and Federal regulatory and resource agencies including the EPA, USACE, CCC, RWQCB, NOAA, USFWS, and CDFW. The DMMT evaluates sediment suitability on a project-specific basis addressing compatibility with the placement sites proposed for each project. The DMMT does not rely on a standard set of suitability criteria for beach nourishment, but evaluates each project individually. Since the 1999 EA and the 2004 SEA,

the Oxnard Harbor District, US Navy, and USACE implemented a harbor-wide maintenance dredging project. The project was analyzed in an IS/MND in 2008.

Because of its orientation and the disruption of sediment flow down the coast due to the presence of harbors, Hueneme Beach experiences a high rate of erosion and has been nourished by the USACE every 1 to 2 years since 1969. Each nourishment episode typically deposits over 1,000,000 cubic yards of sediment at the site. The sediment proposed for dredging and placement at Hueneme Beach, while small compared to the typical volume of sediment placed by the USACE, will provide much needed sediment to the eroding beach. This sediment will create negligible local changes in currents and circulation patterns, because it will be applied to the upper portion of the currently eroded beach or shallow subtidal zone. A general goal of both nearshore and beach placement of dredged material is to place the sediment so that the material remains available to the littoral system as beach replenishment. The Port Hueneme coastal region is exposed to high energy, turbulent flow due to its exposure to local wind, waves, and long-period swell. Sediments placed in this area tend to be highly dispersive and transitory and subject to significant movement from wave action, as indicated by the large degree of erosion observed at Hueneme Beach. Placement of dredged material will directly enhance Hueneme Beach. Material placed in the nearshore will move with currents and wave action, either to adjacent or downcast beaches.

Option 2

Under Option 2, as part of the USACE Project, the USACE would over-dredge portions of Channel A to a depth of approximately -48 feet MLLW to create trenches, and sediment from the Proposed Project's berths would be placed directly into the over-dredged trenches, such that the final elevation of the trenches is consistent with the -40 feet MLLW depth authorized for Channel A under the USACE Project. Approximately 85,000 cy of sediment would be dredged using a hydraulic dredge. If the material that is dredged under Option 2 meets applicable physical and chemical thresholds, sediment excavated by the USACE to create the trenches would be placed on Hueneme Beach or in the near-shore zone at Hueneme Beach for beach nourishment. The over-dredging of Channel A would require a separate agreement with the USACE. The over-dredging is considered part of the Proposed Project from a CEQA perspective and is analyzed in this Initial Study to ensure that all potential environmental effects are analyzed.

The sediment proposed for dredging to create the trenches has been characterized and requires the same DMMT review as the sediment proposed for dredging from the berths. A scenario in which the trenches may be used to accommodate sediment dredged from the berths is if the berth sediment is chemically compatible with the proposed receiver beach but does not match the receiver beach's grain size profile.

Wharf Improvements

The Proposed Project's wharf improvement component would modernize the existing wharves to accommodate deeper-draft vessels, incorporate existing shore power infrastructure investments, and ultimately improve cargo handling efficiencies. However, as mentioned in the Existing Setting, the project would not involve a change in use on the project site. Rather, the project would modernize the wharf and deepen the berths to provide deep-draft vessel continuity from the harbor, through the channel and to Berths 1 and 2 along Wharf 1. There is currently a cargo throughput threshold. Therefore, throughput would not increase as part of the project. Wharf improvements would improve the berthing capacity for Wharf 1, which includes Berths 1, 2, and 3 (approximately 1,800 linear feet). Wharf improvements to Berth 3 would occur, as necessary, to provide a safe and structurally sound transition from the improved Berths 1 and 2 to the existing Berth 3. The Berth 3 wharf improvement transition area may include up to the entire length of

Berth 3. The potential environmental effects of wharf improvement along Berth 3 are analyzed in this Initial Study to ensure that all potential environmental effects are analyzed.

The wharf improvements would entirely remove the existing fender pile system to allow a new coated-steel sheet piling toe wall to be installed. A replacement fender system would be installed alongside the new toe wall. Eco-friendly composite fender piles would be used in the reconstruction, as current regulations do not allow for exposed treated timber piles to be installed in the marine environment. Other fender components would be replaced with more robust timber walers and rubber fenders. All of the existing creosoted piling, timber walers, rubber fenders, and other components would be removed and properly disposed of offsite. Concrete deck improvements are required for Berths 1 and 2, and would include soffit, fascia, and curb repairs, installation of bollard foundations and new deck chipping, resurfacing the deck from the bulkhead face to the buildings, and sealing the deck with a protective coating. Ship's stations would be outfitted with snubbing bars to preclude snagging or damaging ship's lines. Construction debris would be removed and disposed of at an appropriate disposal site.

The new coated-steel sheet piling toe wall would be driven underwater near the toe of the slope at Berths 1 and 2. Recycled steel would be used for the new sheet pile wall. A non-toxic steel coating, along with a passive cathodic protection system (if needed), would protect the steel from corrosion and provide an estimated 50-year service life. The embedded portion of the sheet pile wall would maintain the stability of the underwater sloped embankment. With the installation of the toe wall, the sediment in front of the wall can be safely dredged, providing a continuous 40-foot depth alongside the berths.

The Proposed Project is scheduled to commence in the first quarter of 2018 and would last approximately nine months. Dredging for Berths 1 and 2 likely would occur after removal of the existing fender pile system and installation of the new sheet pile toe wall. After the dredging is complete, the new fender system and concrete deck improvements would be installed and implemented to complete the wharf improvements. However, the new fender system and concrete deck improvements could be installed and implemented before dredging activities, depending on schedule needs.

Table 2 Project Summary

Sediment Dredged	
Amount of Sediment from Berths (Option 1 and 2)	Approximately 29,000 cy
Additional Trench Dredging Associated with Option 2	Approximately 85,000 cy
Anticipated Demolition for Berths 1-3	(in pounds)
Composite Piles	711,776
Timber Piles	1,110
Rubber Fenders	14,720
Timber Wales	75,600
Timber Chocks	54,775
Chain Assemblies	1,109
Rip Rap	3,380,000
Ladders	248
Double Bitts	73,408
Cleats	8,500
Concrete	3,000,000
Total	7,321,246

11 Required Approvals

The following approvals are required for the Proposed Project:

- United States Army Corps of Engineers (CWA Section 404 and RHA Section 10 permits)
- California Coastal Commission (Coastal Development Permit and CMZA consistency certification)
- Los Angeles Regional Water Quality Control Board (CWA Section 401 and Porter-Cologne Waste Discharge Requirements)
- California State Lands Commission (Tidelands Lease Agreement)

12 Surrounding Land Uses and Setting

The Port of Hueneme is entered from the Pacific Ocean, and is located in the southeast quadrant of the City of Port Hueneme. Land uses that surround the Port include the Oxnard Harbor District and the US Navy Construction Battalion Center. Single- and multi-family land uses border the Port of Hueneme to the east.

13 Other Public Agencies Whose Approval is Required

The Oxnard Harbor District is the Lead Agency with responsibility for approving the Proposed Project. Approval from other public agencies beyond the permit requirements described above is not required.

New Significant Environmental Effects or Substantially More Severe Significant Environmental Effects

The subject areas checked below were determined to be new significant environmental effects or to be previously identified effects that have a substantial increase in severity either due to a change in the project, a change in circumstances, or new information of substantial importance, as indicated by the checklist and discussion on the following pages.

- | | | |
|-------------------------------------------------------------|-----------------------------------------------------------|----------------------------------------------------|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forest Resources | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology and Soils |
| <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards and Hazardous Materials | <input type="checkbox"/> Hydrology/Water Quality |
| <input type="checkbox"/> Land Use/Planning | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise |
| <input type="checkbox"/> Population/Housing | <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Transportation/Traffic | <input type="checkbox"/> Tribal Cultural Resources | <input type="checkbox"/> Utilities/Service Systems |
| <input type="checkbox"/> Mandatory Findings of Significance | | |

Determination

Based on this initial evaluation:

- ☐ I find no substantial changes are proposed in the project and there are no substantial changes in the circumstances under which the project will be undertaken that will require major revisions to the previous approved ND or MND or certified EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects. Also, there is no “new information of substantial importance” as that term is used in CEQA Guidelines Section 15162(a)(3). Therefore, the previously adopted ND or MND or previously certified EIR adequately discusses the potential impacts of the project without modification.
- ☐ I find no substantial changes are proposed in the project and there are no substantial changes in the circumstances under which the project will be undertaken that will require major revisions to the previous approved ND or MND or certified EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects. Also, there is no “new information of substantial importance” as that term is used in CEQA Guidelines Section 15162(a)(3). Therefore, the previously adopted ND, MND or previously certified EIR adequately discusses the potential impacts of the project. However, minor changes require the preparation of an ADDENDUM.
- ☒ I find substantial changes are proposed in the project or there are substantial changes in the circumstances under which the project will be undertaken that will require major revisions to the previous ND, MND or EIR due to the involvement of significant new environmental effects or a substantial increase in the severity of previously identified significant effects. Or, there is “new information of substantial importance,” as that term is used in CEQA Guidelines Section 15162(a)(3). However, all new potentially significant environmental effects or substantial

increases in the severity of previously identified significant effects are clearly reduced to below a level of significance through the incorporation of mitigation measures agreed to by the project applicant. Therefore, a SUBSEQUENT MND is required.

- ☐ I find substantial changes are proposed in the project or there are substantial changes in the circumstances under which the project will be undertaken that will require major revisions to the previous environmental document due to the involvement of significant new environmental effects or a substantial increase in the severity of previously identified significant effects. Or, there is “new information of substantial importance,” as that term is used in CEQA Guidelines Section 15162(a)(3). However, only minor changes or additions or changes would be necessary to make the previous EIR adequate for the project in the changed situation. Therefore, a SUPPLEMENTAL EIR is required.
- ☐ I find that although the Proposed Project could have a significant effect on the environment, because all potential 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.

 Signature

 Date

 Printed Name

 Title

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Environmental Checklist

1 Aesthetics

	New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
Would the project have any of the following impacts?				
a. Substantial adverse effect on a scenic vista	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Substantial damage to scenic resources, including but not limited to trees, rock outcroppings, and historic buildings along a state scenic highway	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Substantially degrade the existing visual character or quality of the site and its surroundings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The 1999 EA/MND and 2004 Supplemental EA for the previously approved, larger-scale project identified less than significant impacts to scenic vistas and visual character or quality of the site and its surroundings. Based on the analysis completed for the currently Proposed Project, impacts to scenic resources and visual character or quality of the site and its surroundings were found to result in a reduced impact when compared to the previously approved projects. There were no new impacts found to be associated with substantial damage to scenic resources, including but not limited to trees, rock outcroppings, and historic buildings along a state scenic highway. Additionally, it was found that the Proposed Project would not create a new source of substantial light or glare.

- a. *Would the project have a substantial adverse effect on a scenic vista?*
- c. *Would the project substantially degrade the existing visual character or quality of the site and its surroundings?*

Option 1 and Option 2

The Proposed Project involves berth deepening and structural berth improvements at the Port of Hueneme and beach nourishment in the City of Port Hueneme. The visual character of the project area is predominantly industrial and related to the maritime industry. The Port of Hueneme Master Plan and Environmental Management Framework do not mention any protection of aesthetic resources such as scenic resources, scenic vistas, visual character, or visual quality. The project would be consistent with the maritime industrial activity and visual quality of the site and its surroundings.

Additionally, berth deepening and improvements would not be visible from the City of Port Hueneme to the east or the unincorporated county area to the west. Beach nourishment would increase the amount of sand on Hueneme Beach and would improve the visual quality of the site.

Lastly, the 1999 EA/MND and 2004 Supplemental EA for the previously approved, larger-scale project identified less than significant impacts to scenic vistas and visual character or quality of the site and its surroundings. Since this project involves the same actions but on a smaller scale and a smaller footprint, this project would result in reduced impacts compared to the previous project.

REDUCED IMPACT

- b. Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings in a state scenic highway?
- d. *Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?*

Option 1 and Option 2

According to the Port of Hueneme Master Plan and Environmental Management Framework, there are no scenic resources on site or in the surrounding area. The 1999 EA/MND and 2004 Supplemental EA for the previously approved, larger-scale project identified no impacts to scenic resources and light and glare effects on the project site and surrounding area. Since this project involves similar actions as the previously approved project, but on a smaller scale and a smaller footprint, this project would also result in no impacts. Therefore, no new impacts have been identified and no mitigation is required.

NO NEW IMPACT/NO IMPACT

2 Agriculture and Forest Resources

	New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
Would the project have any of the following impacts?				
a. Convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with existing zoning for agricultural use or a Williamson Act contract	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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))	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Result in the loss of forest land or conversion of forest land to non-forest use	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

In determining whether impacts to agricultural resources would be 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. This includes the Forest and Range Assessment Project and the Forest Legacy Assessment Project, along with the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

The 1999 EA/MND concluded that there would be no impact to Agricultural Resources. The 2004 Supplemental EA did not address Agricultural Resources. Based on the analysis completed for the currently Proposed Project, impacts to Agriculture and Forest Resources were found to have no new impacts.

- a. *Would the project convert Prime Farmland, Unique Farmland, 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. Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?*
- 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))?*
- d. Would the project result in the loss of forest land or conversion of forest land to non-forest use?*
- 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?*

Option 1 and Option 2

The Proposed Project would deepen berths in the Port of Hueneme and improve existing wharves. The entire Port is developed, and the dredging and beach nourishment takes place in the coastal zone.

Surrounding land uses in the port are developed and paved. Current zoning around the port is listed as Port Related (M-PR) use to the east and south, and utilized by the Naval Construction Battalion Center to the north and west. There are no agricultural zoned uses in the Port of Hueneme (1998), and thus no impacts are associated with conversion of agriculture, farmland, or forested land.

NO NEW IMPACT/NO IMPACT

3 Air Quality

	New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
Would the project have any of the following impacts?				
a. Conflict with or obstruct implementation of the applicable air quality plan	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. 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 (including releasing emissions that exceed quantitative thresholds for ozone precursors)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Expose sensitive receptors to substantial pollutant concentrations	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Create objectionable odors affecting a substantial number of people	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The project site is located in the South Central Coast Air Basin (SCCAB), which covers San Luis Obispo, Santa Barbara, and Ventura Counties. The Ventura County Air Pollution Control District (VCAPCD) monitors and regulates the local air quality in Ventura County and manages the Air Quality Management Plan (AQMP). Air quality is affected by stationary sources (e.g., industrial uses and oil and gas operations) and mobile sources (e.g., motor vehicles). Air quality at a given location is a function of several factors, including the quantity and type of pollutants emitted locally and regionally, and the dispersion rates of pollutants in the region. Primary factors affecting pollutant dispersion are wind speed and direction, atmospheric stability, temperature, the presence or absence of inversions, and topography. The project site is located in the eastern portion of the Basin, which has moderate variability in temperatures, tempered by coastal processes. The air quality within the Basin is influenced by a wide range of emission sources, such as dense population centers, heavy vehicular traffic, industry, and weather.

To protect public health and welfare, the federal and state governments under direction of the United States Environmental Protection Agency (EPA) have identified six criteria air pollutants and a host of air toxics, and established ambient air quality standards through the federal Clean Air Act and the California Clean Air Act. Federal and state criteria air pollutants include carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO₂), ozone (O₃), particulate matter less than 10 microns in diameter (PM₁₀), fine particulate matter less than 2.5 microns in diameter (PM_{2.5}), and sulfur dioxide (SO₂). Air quality impacts are assessed by comparing impacts to baseline air quality levels and applicable ambient air quality standards. Standards are levels of air quality considered safe from a regulatory perspective, including an adequate margin of safety, to protect public health and welfare.

The most recent VCAPCD comprehensive publication regarding air quality assessment is the Ventura County Air Quality Assessment Guidelines (Guidelines) (2003). The Guidelines recommend significance thresholds for projects proposed in Ventura County. As outlined in the Guidelines, impacts are considered significant if a project would:

- Generate daily emissions exceeding 25 pounds of reactive organic compounds (ROG) or nitrogen oxides (NO_x).
- Be inconsistent with goals and policies of the Ventura County AQMP.
- Create a human health hazard by exposing sensitive receptors to toxic air emissions.
- Create objectionable odors affecting a substantial number of people.
- Cause an exceedance or make a substantial contribution to an exceedance of an ambient air quality standard.
- Directly or indirectly cause the existing population to exceed the population forecasts in the most recently adopted AQMP.

According to the Guidelines, projects that generate more than 25 pounds per day of ROG and NO_x may jeopardize attainment of the federal and state ozone standard, resulting in a significant impact on air quality. The 25 pounds per day threshold for ROG and NO_x are not intended to be applied to construction emissions since such emissions are temporary.

The VCAPCD has not established quantitative thresholds for particulate matter for either operation or construction. However, the VCAPCD indicates that a project that may generate fugitive dust emissions in such quantities as to cause injury, detriment, nuisance, or annoyance to any considerable number of persons, or which may endanger the comfort, repose, health, or safety of any such person, or which may cause or have a natural tendency to cause injury or damage to business or property would have a significant air quality impact. This threshold is particularly applicable to the generation of fugitive dust during construction grading operations. To determine whether a regional air quality impact would occur, the project-generated emissions are compared to the VCAPD's recommended regional thresholds for operational emissions.

Additionally, the VCAPCD implements rules and regulations for emission that may be generated by various uses and activities. The rules and regulations detail pollution-reduction measures that must be implemented during construction and operation of projects. VCAPCD rules and regulations that would apply to the project include the following:

- **Rule 50 (Opacity):** This rule sets opacity standards on the discharge from sources of air contaminants.
- **Rule 51 (Nuisance):** This rule prohibits any person from discharging air contaminants or any other material from a source that would cause injury, detriment, nuisance, or annoyance to any considerable number of persons or the public or which endangers the comfort, health, safety, or repose to any considerable number of persons or the public.
- **Rule 55 (Fugitive Dust):** This rule requires fugitive dust generators to implement control measures to limit the amount of dust from vehicle track-out, earth moving, bulk material handling, and truck hauling activities.
- **Rule 55.1 (Paved Roads and Public Unpaved Roads):** This rule requires fugitive dust generators to begin the removal of visible roadway accumulation within 72 hours of any written notification from the VCAPCD. The use of blowers is expressly prohibited under any circumstances. This rule also requires controls to limit the amount of dust from any construction activity or any earthmoving activity on a public unpaved road.
- **Rule 55.2 (Street Sweeping Equipment):** This rule requires the use of PM₁₀ efficient street sweepers for routine street sweeping and for removing vehicle track-out pursuant to Rule 55.

- **74.2 (Architectural Coatings):** This rule sets limits on the VOC content for architectural coatings. The project would be required to comply with the type VOC content standards set forth in this rule for any architectural coatings.
- **Rule 74.4 (Cutback Asphalt):** This rule sets limits on the type of application and VOC content of cutback and emulsified asphalt.

Methodology and Significance Thresholds

The following subsection outlines the methodology and significance thresholds used for the project.

Construction Methodology

As mentioned, in the Project Description, included in the introduction, the proposed berth deepening effort would include dredging activities to deepen Berths 1 and 2 along Wharf 1 to approximately -40 feet MLLW to provide deep-draft vessel continuity from the harbor, through the channel and to Berths 1 and 2 along Wharf 1. The project would also include associated Wharf improvements, described in the Project Description. Although not a component of the Berth Deepening and Wharf Improvement Project, the Port will continue to utilize the existing shore power infrastructure (which went online in April of 2014) to significantly reduce annual emissions from refrigerated cargo vessels at berth. Anticipated continual reductions over the lifetime of the existing shore power system (30 years), include a 92 percent reduction in Particulate Matter, a 98 percent reduction in NO_x, and a 55 percent reduction in greenhouse gas emissions from refrigerated cargo vessels. Also, although not a component of this project, a shore power extension cable that will allow for greater flexibility in mooring position while using shore power has been ordered for use at the port and will be available in the first half of 2017. As mentioned in the Project Description, approximately 29,000 cy of sediment would be dredged. The project would require use of off-road construction equipment, including cranes, air compressors, front end loader/backhoe, jackhammers, and concrete mixer trucks; in-water construction equipment, including dredgers, tugboats, and work/supply barges; and on-road delivery and worker trucks. These sources would primarily use diesel fuel and would generate emissions of diesel exhaust and other pollutants associated with diesel fuel combustion. Additionally, worker trips would also generate vehicle exhaust and paved road dust emissions. On-road construction vehicles, such as delivery and worker trucks, would use 2010 model year engines or better. All off-road construction equipment would be in compliance with the California Air Resources Board In-Use Off-Road Diesel-Fueled Fleets Regulation. All construction equipment would use the cleanest available technology, with the goal of using Tier 3 or Tier 4 engines. Additionally, construction equipment (including dredges) with the ability to utilize electric power through existing shore power connections would be preferentially included in the construction fleet for the Proposed Project. The equipment utilization and scheduling data used to calculate emissions for the proposed construction activities were obtained from the project applicant and project applicant's engineers. The general construction would take approximately nine months, and be completed during eight phases, as outlined below with the approximate durations:

- Phase 1: Procurement – 2 months
- Phase 2: Mobilization – 1 month
- Phase 3: Demolition – 1 month
- Phase 4: Toe Wall Installation – 5 months
- Phase 5: Fender Installation – 2.5 months
- Phase 6: Concrete Repairs and Bollard Install – 1 month
- Phase 7: Dredging – 1 month
- Phase 8: Demobilization – 2 weeks

The phases outlined above would overlap slightly during Phases 3 and 4; Phases 3, 4, and 5; and Phases 5 and 7. Phase 7, the dredging phase, would include disposal of dredged sediment either under Option 1 or

2 as outlined in the Project Description. Under Option 1, the dredged sediment found to meet applicable physical and chemical thresholds would be placed on Hueneme Beach for beach nourishment or in the near-shore zone adjacent to Hueneme Beach. Under Option 2, the USACE would over-dredge portions of Channel A to a depth of -48 feet MLLW to create trenches, and sediment from the berths would be placed directly into the over-dredged trenches, such that the final elevation of the trenches is consistent with the -40 feet MLLW depth authorized for Channel A under the USACE Project. Emissions from both Option 1 and 2 associated with the Port's component of the project are analyzed below. The USACE dredging, completed in accordance with Option 2, including the trenches, would occur prior to the OHD component of the project (Phase 1 through 8 outlined above) and there would be no phase overlap during this period. As mentioned in the Project Description, the over-dredging component of Option 2 would be completed by the USACE, with associated environmental impacts analyzed by the USACE in a subsequent environmental document. Nevertheless, the over-dredging is considered part of the Proposed Project from a CEQA perspective and is analyzed in this Initial Study to ensure that all potential environmental effects are evaluated.

The Port of Hueneme Dredging project analyzed in the 1999 EA/MND included dredging approximately 634,356 cy of sediment over a three month period of time, including one month of mobilization/demobilization (ACOE, 1999). In the 1999 project, all dredged material would be disposed of on or nearshore of Hueneme Beach with use of a cutterhead, hopper, or clamshell dredge or a combination thereof. Because of the high moisture content of the dredged sediment, and the techniques in which the material will be dredged and transported, fugitive dust emissions were not addressed in the 1999 EA. However, fugitive dust emissions are included in this analysis to provide a conservative estimate of emissions. In the 1999 EA/MND for the Port of Hueneme Deep Draft Navigation Study (ACOE, 1999), impacts to air quality were found to be less than significant or have no impact. In the 2004 Supplemental EA, it was found that impacts to air quality for dredging would be less than described in the EA/MND because approximately 90,000 cubic meters (m^3) of sediments, or about 18 percent of the total, would be dredged with a clamshell. A clamshell dredging operation emits lower levels of pollutants than a hydraulic cutterhead dredge (USACE, 2004). However, the 2004 EA analyzed the emissions associated with hauling contaminated dredged material to Toland Road Landfill. Under the Proposed Project, sediment would not be hauled offsite, which would reduce emissions further. According to the project applicant's engineer, the Proposed Project would likely be completed with a clamshell dredge similar to the project analyzed in 2004.

Air pollutant emissions associated with the project were estimated using the California Emissions Estimator Model (CalEEMod) (version 2016.3.1) for the landside equipment. CalEEMod was developed by SCAQMD and is used by jurisdictions throughout the state to quantify criteria pollutant emissions. The CalEEMod results for the project can be found in Appendix A. Emissions from oceangoing tugboats were calculated based on hours of operation, days of use, horsepower, and emission factors. These results can also be found in Appendix A. For completion of the project, it was assumed that one tugboat would be operational for two hours per day during Phase 3, four hours per day during Phases 4-6, and six hours per day during Phase 7, based on the construction schedule provided by the project applicant's engineer. When there was phase overlap, the phase with the greatest daily use (and subsequently maximum daily emissions) was used in the equation to provide a conservative estimate of project-generated emissions. The maximum daily emissions associated with the land-side construction equipment were combined with the maximum daily tugboat emissions to extrapolate the total daily maximum emissions generated during project construction during each phase as well as the overlapping phases.

Operational Methodology

As mentioned, in the Project Description, the berth deepening effort would include dredging activities to deepen Berths 1 and 2 along Wharf 1 and associated wharf improvements. The project would not result in new direct operational emissions. As mentioned in the Existing Setting, the Proposed Project would

not involve a change in use on the project site, but would modernize the wharf and deepen the berths to provide deep-draft vessel continuity from the harbor, through the channel and to Berths 1 and 2 along Wharf 1. Deep-draft vessels already access the berths, but they are required to wait for higher tide to transit the channel and come to berth. Although additional tonnage per call would be possible, the project would not result in additional throughput because the throughput is currently limited by a throughput threshold (Agreement between City of Port Hueneme and Oxnard Harbor District, 1987). The Proposed Project would not worsen existing operational air quality at the Port. Rather, it is anticipated that implementation of the Proposed Project would increase operational efficiency at the Port. Therefore, this analysis focuses on the project's air quality impacts from construction activities and haul trips.

Carbon Monoxide Hotspots

A CO hotspot is a localized concentration of CO that is above the state or national one-hour or eight-hour CO ambient air standards. Localized CO "hotspots" can occur at intersections with heavy peak hour traffic. Specifically, hotspots can be created at intersections where traffic levels are sufficiently high such that the local CO concentration exceeds the federal AAQS of 35.0 parts per million (ppm) or the state AAQS of 20.0 ppm.

According to the VCAPCD Ventura County Air Quality Assessment Guidelines, a CO screening analysis should be conducted for intersections that would be significantly affected by a project and that experience, or are anticipated to experience, level of service (LOS) E or F. "Hot spots" are defined as locations where local ambient CO concentrations exceed the state or federal ambient air quality standards (SCAQMD 1993).

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

Option 1 and Option 2

As mentioned, the project site is located within the SCCAB, which includes all of Ventura County, and is within the jurisdiction of the VCAPCD. Ventura County is designated under the federal and state standards as nonattainment for ozone and state standards for particulate matter (PM₁₀) (CARB 2016). The VCACD 2016 AQMP is currently available for public review and comment, and presents a combined state and local strategy for attaining the 2008 federal 8-hour ambient air quality standard for ozone, the only federal clean air standard Ventura County does not meet, by the statutory compliance deadline of July 20, 2021. The current AQMP, adopted in 2007, includes the county's strategy for attaining ozone standards. Based on the VCAPCD Guidelines, project consistency with the AQMP can be determined by comparing the actual population growth in Ventura County with the projected growth rates used in the AQMP.

Vehicle use, energy consumption, and associated air pollutant emissions are directly related to population growth. A project may be inconsistent with the AQMP if it would generate population exceeding the forecasts used in the development of the AQMP. The project would not involve adding any additional residential units or people. Therefore, it would be consistent with the population forecasts contained in the AQMP. Vehicle use, energy consumption, and associated air pollution emissions within the City would be comparable to existing conditions. No new impacts have been identified.

NO NEW IMPACT/NO IMPACT

- b. *Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?*
- c. *Would the project 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 (including releasing emissions that exceed quantitative thresholds for ozone precursors)?*

Option 1 and Option 2

As discussed above, the VCAPD has not adopted any thresholds of significance for construction emissions; therefore, the potential significance of temporary construction emissions is determined based on a consideration of the control measures to be implemented during construction activity. The project would generate short-term air pollutant emissions associated with construction. These deep-draft vessels already access the berths, but they are required to wait for higher tide to transit the channel and come to berth. Because the deep-draft vessels already access the berths, but are required to wait for higher tide to transit the channel and come to berth, and there is currently a throughput threshold, there would be no direct long-term operational emissions generated by the project and no cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard.

Project construction would generate temporary air pollutant emissions. These emissions are associated with fugitive dust (PM₁₀ and PM_{2.5}) and exhaust from heavy construction vehicles and equipment. The project would be required to comply with all SCCAB rules and regulations regarding construction emission control measures. Additionally, all off-road construction equipment would be in compliance with the California Air Resources Board In-Use Off-Road Diesel-Fueled Fleets Regulation. Construction would occur during eight phases over approximately nine months, as outlined above, in subsection 1.2.1, Methodology and Significance Thresholds. As mentioned, because of the high moisture content of the dredged sediment, and the techniques in which the material will be dredged and transported, fugitive dust emissions were not addressed in the 1999 EA/MND. However, fugitive dust emissions are included in this analysis. Therefore, the emissions shown in the tables represent a conservative estimate. Table 3 summarizes the estimated unmitigated emissions from construction of the proposed improvements under Option 1 and Table 4 summarizes the estimated unmitigated emissions from construction of the proposed improvements under Option 2.

Table 3 Maximum Daily Construction Emissions (pounds/day) under Option 1

Phase	Pollutants					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Phase 3: Demolition	9.9	84.4	73.8	0.1	8.4	4.7
Phase 4: Toe Wall Installation	11.6	82.8	100.7	0.1	4.7	4.3
Phase 3 + Phase 4	17.4	141.0	134.6	0.2	11.1	7.9
Phase 5: Fender Installation	11.6	82.8	100.7	0.1	4.7	4.3
Phase 6: Concrete Repairs and Bollard Installation	11.8	89.8	106.2	0.1	4.9	4.5
Phase 4 + Phase 5 + Phase 6	18.8	150.6	148.0	0.2	8.5	7.9
Phase 7: Dredging	20.9	165.9	181.7	0.2	17.0	11.3
Phase 5 + Phase 7	24.4	196.3	202.6	0.2	18.8	13.0

Notes: Emissions associated with transporting construction equipment to and from the project site in Phases 1, 2, and 8: Procurement, Mobilization, and Demobilization, are calculated and included as part of Phases 3-7. These emissions are captured as vendor trips and included in the CalEEMod output.

See Appendix A for CalEEMod worksheets and emissions calculations spreadsheets. Numbers are approximations and have been rounded.

The over-dredging associated with Option 2 would be completed by the USACE, and would be considered in a separate environmental analysis prepared by USACE. Nevertheless, to ensure that all potential environmental impacts of the project are analyzed, the estimated emissions associated with the additional days of dredging are included as *Phase A1: Dredging Associated with Option 2*, in Table 4.

Table 4 Maximum Daily Construction Emissions (pounds/day) under Option 2

Phase	Pollutants					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Phase A1: Dredging Associated with Option 2	20.9	165.9	181.7	0.2	17.0	11.3
Phase 3: Demolition	9.9	84.4	73.8	0.1	8.4	4.7
Phase 4: Toe Wall Installation	11.6	82.8	100.7	0.1	4.7	4.3
Phase 3 + Phase 4	17.4	141.0	134.6	0.2	11.1	7.9
Phase 5: Fender Installation	11.6	82.8	100.7	0.1	4.7	4.3
Phase 6: Concrete Repairs and Bollard Installation	11.8	89.8	106.2	0.1	4.9	4.5
Phase 4 + Phase 5 + Phase 6	18.8	150.6	148.0	0.2	8.5	7.9
Phase 7: Dredging	20.9	165.9	181.7	0.2	17.0	11.3
Phase 5 + Phase 7	24.4	196.3	202.6	0.2	18.8	13.0

Notes: Emissions associated with transporting construction equipment to and from the project site in Phases 1, 2, and 8: Procurement, Mobilization, and Demobilization, are calculated and included as part of Phases 3-7. These emissions are captured as vendor trips and included in the CalEEMod output.
See Appendix A for CalEEMod worksheets and emissions calculations spreadsheets. Numbers are approximations and have been rounded.

Under Option 2, the additional dredging phase would take approximately 10 work days to complete. As mentioned, this additional work would occur prior to the OHD component of the project (Phase 1 through 8 outlined above) and there would be no phase overlap during this period, as shown in Table 4.

The VCAPCD's 25 pounds per day thresholds for ROG and NOX are not intended to be applied to construction emissions since such emissions are temporary. Nevertheless, for construction impacts, the VCAPCD recommends minimizing fugitive dust through dust control measures. As mentioned, similar to the 1999 EA/MND, because of the high moisture content of the dredged sediment, and the techniques in which the material will be dredged and transported fugitive dust emissions represented above are conservative. Nonetheless, fugitive dust control measures are required by VCAPCD Rule 55. Rule 55 includes fugitive dust reduction measures such as securing tarps over truck loads and watering to treat bulk material to minimize fugitive dust. For architectural coating VCAPCD requires VOC content limits under Rule 74.2 for specific coating categories. Compliance with Rule 55 and Rule 74.2 would ensure that construction emissions would not be generated in such quantities as to cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which may endanger the comfort, repose, health, or safety of any such person or the public. No new impacts have been identified under Option 1 or 2 and no new mitigation is required.

NO NEW IMPACT/NO IMPACT

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

Option 1 and 2

Certain population groups, such as children, the elderly, and people with health problems, are particularly sensitive to air pollution. Sensitive receptors are defined as land uses that are more likely to be used by these population groups and include health care facilities, retirement homes, school and

playground facilities, and residential areas. The sensitive receptors nearest to the project site include the residential units east of the Port, along Market Street, which are approximately 860 feet away from Berth 3 where there would be demolition, and approximately 1,370 feet from the closest edge of the dredge site. Additionally, there are sensitive receptors located along Hueneme Beach, approximately 1,500 feet away from the approximate portion of the beach where sediment replenishment associated with Option 1 would take place. No sensitive receptors exist within the Port boundaries.

Traffic-congested roadways and intersections have the potential for the generation of localized CO levels (i.e., CO hotspots). In general, CO hotspots occur in areas with poor circulation or areas with heavy traffic. As further discussed within Section 16, *Transportation*, the proposed berth deepening effort is not expected to explicitly increase current Port use or trips to the Port. Therefore, the dredging project would not result in CO hotspots on adjacent roadways.

As discussed under items (b) and (c) above, compliance with Rule 55 and Rule 74.2 would ensure that construction emissions would not be generated in such quantities as to expose sensitive receptors to substantial pollutant concentrations. The 1999 EA/MND and 2004 Supplemental EA identified no impacts associated with exposing sensitive receptors to substantial pollutant concentrations. No new impacts have been identified and no new mitigation is required.

NO NEW IMPACT/NO IMPACT

d. Would the project create objectionable odors affecting a substantial number of people?

Option 1 and Option 2

The existing use may generate some odors from idling vessels. However, the Port of Hueneme has installed an onshore power system that enables retrofit ships to plug in to a shore side electrical cord for power so the engines can be turned off, reducing emissions and associated odors. Odors would be similar to those associated with the existing Port operations. Ports are not identified in Table 6-3 of the 2003 Ventura County Air Quality Assessment Guidelines, which identifies local land uses that may generate significant levels of odors. Additionally, ports are not identified in Table 1-4 of the California Air Resource Board (CARB) Air Quality and Land Use Handbook, which also identifies land uses that may generate significant levels of odors. The Port could generate diesel odors, but odors would not be expected to increase in comparison to existing operations. This project would not result in any new impacts associated with objectionable odors and no new mitigation is required.

NO NEW IMPACT/NO IMPACT

4 Biological Resources

	New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
Would the project have any of the following impacts?				
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	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, and coastal) through direct removal, filling, hydrological interruption, or other means	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Data used for this analysis included the Final EA/MND for the Port of Hueneme Deep Draft Navigation Study (USACE 1999), Draft Supplemental EA for Modifications to the Port of Hueneme Harbor Deep Draft Navigation Project (USACE 2004), aerial photographs, topographic maps, the California Natural Diversity Database(CNDDDB), accepted scientific texts to identify species, and a field survey conducted November

3, 2016. The purpose of the field visit was to generally characterize habitats and the potential for special-status species to be located on the site.

The 1999 EA/MND found that the project may have a potentially significant impact either directly or through habitat modifications, on species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service, unless mitigation was incorporated. The analysis also found that impacts to any endangered, rare, or threatened species, as listed in Title 14 of the California Code of Regulations (sections 670.2 or 670.5) or in Title 50, Code of Federal Regulations (section 17.11 or 17.12) would be less than significant. Similarly, the analysis completed for the 1999 EA/MND found that the project's impacts to movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors would also be less than significant. The 1999 EA/MND found no additional impacts related to biological resources. Sediment testing conducted subsequent to the final EA, and included in the 2004 EA indicates that beach or nearshore placement of approximately 90,000 m³ of the sediments dredged from three areas could pose an unacceptable ecological risk to aquatic organisms. The OHD, Navy, and USACE's 2009 dredging project removed sediment deemed unsuitable for beach placement from channels and berths and sequestered it in the CAD cell in the Turning Basin. Additionally, the USACE and OHD are characterizing the sediment to be dredged in the proposed project. Nonetheless, based on the additional analysis completed for the currently Proposed Project, new mitigation is required based on the potential impacts associated with the 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. No other new impacts were discovered related to Biological Resources based on the additional analysis.

Chapter 1, Section 21001 of CEQA states that it is the policy of the state of California to: "Prevent the elimination of fish and wildlife species due to man's activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities." Environmental impacts relative to biological resources may be assessed using impact significance criteria encompassing the federal, state, and local plans, regulations, and ordinances. Project impacts to flora and fauna may be determined to be significant even if they do not directly affect rare, threatened, or endangered species. The project would have a significant impact if it were found to:

- 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 Game or U.S. Fish and Wildlife Service
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, and coastal) through direct removal, filling, hydrological interruption, or other means
- 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
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan

- a. *Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as candidate, sensitive, or special status in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?*

Special-status species are those plants and animals 1) listed, proposed for listing, or candidates for listing as Threatened or Endangered by the USFWS and National Marine Fisheries Service (NMFS) under the Federal Endangered Species Act (FESAC); 2) listed or proposed for listing as Rare, Threatened, or Endangered by the CDFW under the California Endangered Species Act (CESA); 3) recognized as Species of Special Concern (SSC) by the CDFW; 4) afforded protection under Migratory Bird Treaty Act (MBTA) and/or California Fish and Game Code (CFGC); and 5) occurring on lists 1 and 2 of the CDFW California Rare Plant Rank (CRPR) system per the following definitions:

- List 1A = Plants presumed extinct in California
- List 1B.1 = Rare or endangered in California and elsewhere; seriously endangered in California (over 80 percent of occurrences threatened/high degree and immediacy of threat)
- List 1B.2 = Rare or endangered in California and elsewhere; fairly endangered in California (20-80 percent occurrences threatened)
- List 1B.3 = Rare or endangered in California and elsewhere, not very endangered in California (<20 percent of occurrences threatened or no current threats known)
- List 2 = Rare, threatened or endangered in California, but more common elsewhere

In addition, special-status species are ranked globally (G) and subnationally (S) 1 through 5 based on NatureServe's (2010) methodologies:

- G1 or S1 - Critically Imperiled Globally or Subnationally (state)
- G2 or S2 - Imperiled Globally or Subnationally (state)
- G3 or S3 - Vulnerable to extirpation or extinction Globally or Subnationally (state)
- G4 or S4 - Apparently secure Globally or Subnationally (state)
- G5 or S5 - Secure Globally or Subnationally (state)
- ? - Inexact Numeric Rank
- T - Intraspecific Taxon (subspecies, varieties, and other designations below the level of species)
- Q – Questionable taxonomy that may reduce conservation priority

The marine environment within and around the Harbor, while affected by industrial and commercial uses, supports numerous flora and fauna, including federally listed species such as California least tern (*Sterna antillarum browni*) and western snowy plover (*Charadrius nivosus nivosus*), species of special concern, such as California grunion (*Leuresthes tenuis*) and Pismo clam (*Tivela stultorum*), and Essential Fish Habitat (EFH). The biological resources of the Proposed Project area are described below.

Invertebrates

Macroinvertebrates and benthic infauna have well-established communities within the project area on wharf structures and inhabiting underlying sediments based on November 2016 observations and a review of previous dredge reports. Sediments within the project area and associated dredge footprint range from fine-grained silty/sand within the Port and wharf areas to fine-grained sand along the beaches and nearshore habitat where beach replenishment is proposed. In both cases the invertebrate communities are subject to physical disturbance and displacement from wave energy, episodic changes in water quality and sediment deposition and erosion from seasonal longshore transport. Overall, invertebrate populations are expected to be similar to those in the adjacent open coast, shallow, soft bottom, subtidal habitats.

The nearshore coastal areas and the sandy beaches are expected to support typical soft-bottom communities including various worms, bivalves, echinoderms and gastropods (snails). In the nearshore, coastal environment, species diversity and density increases with depth. In the shallower, shoreward zone, the physical environment is rigorous and species diversity is low. Subtidal invertebrates are likely to include bivalves, tube worms, and clams (Dames and Moore 1980). Seastars, sand dollars, and different species of crabs may be present also. Common sandy intertidal and shallow subtidal organisms occurring in this zone must cope with a rigorous environment of constantly shifting sands. Common species are likely to include bean (*Donax* sp.) and Pismo clams (Marine Biological Consultants [MBC] 1975, Blunt 1980, Ricketts, Calvin, and Hedgpeth 1985). Among the invertebrates known to occur within the project area, only Pismo clams are a state-listed sensitive species. The California Department of Fish & Wildlife (CDFW) regulates recreational catch and prohibits commercial harvest. Pismo clams are unique to the local and regional area. The Pismo clam has historically been found on Hueneme Beach. If the sediment material is dumped directly on them, portions of the population may die by suffocation. Pismo clams are typically found between +3 feet (+0.9 m) MLLW and -10 feet (-3 m) MLLW.

Common pier piling invertebrates are likely to include different species of mussels, barnacles, worms, sponges, tunicates, and anemones. Invertebrate species populating the hardened structures proposed to be removed by the proposed action are similar in species composition and density to those found throughout Port Hueneme harbor. The removal of the headwall, pilling and underlying rock rip rap associated with the exiting wharf structures will result in direct impacts to attached invertebrate communities. The impacts will be short-term and less than significant to the greater population within the Port.

Within the dredge footprint, the entire soft-bottom invertebrate community will be removed by dredging operations. Significant decreases of benthic infauna abundance after dredging have been found to extend at least 100 m from the site of actual dredging (McCauley, Parr, and Hancock 1977). Benthic organisms will be susceptible to turbidity. Mechanical or abrasive action of suspended silt and detritus can negatively impact filter-feeding organisms by clogging their gills and impairing proper respiratory and excretory functioning and feeding activity (Snyder 1976). While potential water column impacts at the site will include increased turbidity, resuspension of contaminants is not expected. The loss of invertebrates will be short term with recolonization beginning in a few weeks and a dynamic community in 2 to 3 years (McCauley, Parr, and Hancock 1977; Oliver et al 1977; Rosenberg 1977, and MEC 1988). Most benthic populations in the shallow water, soft bottom habitat, consist of broadly distributed species. Species composition following recolonization is expected to be similar to the existing community. The potential differences in benthic infauna community structure are expected to be minor, and dredging impacts associated with species burial, turbidity, and sedimentation on the benthic communities are expected to be short term and not significant. The potential movement of new invasive species from the dredge area to the beach nourishment location, from the proposed action, is relatively low considering the project area has been frequently dredged over the last several decades and the two areas are very close in proximity (100's of meters). Considering the cyclic nature of the dredging and beach nourishment, proximity of the two areas and the fact that distribution of benthic infauna during reproduction is subject to tidal exchange, the distribution of potential invasive species between the two areas has likely already occurred. Regulatory agencies typically implement some invasive species requirements during the permitting process but no specific benthic infauna provisions are typically incorporated. Potential impacts from invasive species from the proposed action would be less than significant.

Under Option 1 and 2, dredged sediment found to meet applicable physical and chemical thresholds would be placed on Hueneme Beach for beach nourishment or in the near-shore zone adjacent to Hueneme Beach. Characteristic sandy beach organisms are likely to include sand crabs, bloodworms, and beach hoppers (Dames and Moore 1980, MBC 1975). If beach material is placed in the nearshore zone, it will likely be placed in a slurry form in the shallow subtidal just offshore of the beach and allowed to

migrate shoreward. Alternatively, beach replenishment will involve the pumping of the sediment slurry on the upper beach, and material will be allowed to migrate seaward from wave and tidal action. In both cases sediment placement is expected to minimize possible suffocation effects to invertebrate species including the Pismo clam population by the gradual and natural redistribution of sediments within the intertidal and shallow subtidal habitat. In the past, Pismo clam populations have recovered from local beach nourishment events, and it is expected that invertebrate populations, which routinely fluctuate on a yearly basis, will recover from the proposed sediment placement options event. Sediment placement between +0.9 m and 0 m MLLW would likely have an adverse, but not significant, impact to benthic infauna invertebrate populations. Therefore, the existing supratidal to subtidal beach community within the footprint of the proposed Hueneme Beach nourishment site will experience temporary, localized, adverse effects as a result of burial.

The 1999 EA/MND and 2004 Supplemental EA identified similar types of impacts for invertebrates. This project would result in similar impacts but those impacts would be less severe and would disturb a smaller geographic area. No new impacts have been identified and no new mitigation is required for invertebrates. Implementation of Mitigation Measure B-4 will reduce impacts to Pismo clam to less than significant.

Fishes

There are no native nursery sites in the project area, and project implementation will not affect the movement of any native resident or migratory fish or impede the use of native nursery sites. The Proposed Project likewise does not conflict with any local policies or ordinances protecting biological resources or any adopted Habitat Conservation Plan, Natural Community Conservation Plan, Integrated Natural Resource Management Plan, or other approved local, regional, or state habitat conservation plans.

Typical of many Southern California harbor complexes the predominant fish assemblages within Port of Hueneme Harbor (PoHH) and adjacent nearshore habitat including Port Hueneme beach are characterized by fish species from multiple habitats including nearshore soft-bottom, coastal pelagic, surf zone, kelp bed and rocky reef, bay-estuary, and macrophyte associated species. The bottom fishes of harbors include most of the common species of the inner shelf as represented by the inclusion of harbors and nearshore soft bottom into one type of habitat by Allen (1985). PoHH and the adjacent nearshore habitat also contain various hard substrates including rock jetties, concrete headwalls and pier pilings that support a broad range of fish species. Multiple ichthyofaunal studies of southern California harbor habitats have found that harbor habitats generally contain relatively diverse and abundant fish assemblages compared to equivalent, undeveloped, nearshore habitats (Allen et al. 2006) Considering PoHH was not previously a natural estuary and does not have notable watershed contributions its fish assemblages are expected to be similar to those of Channel Islands Harbor and contain mostly nearshore soft-bottom, coastal pelagic and kelp bed and rocky reef species. Common fishes recorded in shallow offshore environments near Channel Islands Harbor and likely to exist in the Port of Hueneme Harbor (PoHH) and adjacent coastal waters include thornback rays (*Raja clavata*), lizard fish (*Synodus lucioceps*, Dames and Moore 1980), speckled sanddab (*Citharichthys stigmaeus*), northern anchovy (*Engraulis mordax*), white croaker (*Genyonemus lineatus*) and walleye surfperch (*Hyperprosopon argenteum*) (MBC 1975). The breakwater and jetties support additional foraging opportunities for the following fishes: Garibaldi (*Hypsypops rubicundus*), sargo (*Anisotremus davidsonii*), opaleye (*Girella nigricans*), black perch (*Embiotoca jacksoni*), rock wrasse (*Halichoeres semicinctus*), seniorita (*Oxyjulis californica*), halfmoons (*Medialuna californiensis*) and kelp bass (*Paralabrax clathratus*). Commercially and recreationally important migratory species, such as California corbina (*Menticirrhus undulatus*), California halibut (*Paralichthys californicus*), white seabass (*Atractoscion nobilis*), and beach spawner California grunion (*Leuresthes tenuis*), are common within waters less than 30 feet MLLW during certain times of the year.

All of these are well adapted to the physical rigors of the surf zone habitat and take advantage of suspended material for foraging.

The various proposed actions of the project will affect the various fish habitats and associated species to different degrees. Nearshore soft-bottom and coastal pelagic species will be affected by dredging activities. Most nearshore soft-bottom species will be displaced or avoid the dredge area during dredging due to bottom disturbance and noise, resulting in a temporary loss of habitat. Coastal pelagic species will likely be displaced during some portions of dredging and impacts from increased turbidity will likely limit visibility for sight feeding fish while other species will be attracted to the site to forage on benthic organisms suspended by the dredging. Noise generated during dredging will have negligible effects on fish species because the proposed project is not expected to generate high intensity noise that can cause startle response in fish. Dredging is proposed to be conducted incrementally and potential impacts will be restricted to relatively small areas around the dredge. Nearshore soft bottom species are expected to move to adjacent undisturbed areas and the habitat will recover gradually through the recolonization of benthic infauna after dredging is completed. Therefore, impacts to fish species from dredging activities are not expected to be significant.

Dredge material excavated from the proposed action will be placed within the over-dredged main channel within PoHH or at Port Hueneme Beach as a beach nourishment. For dredge material placed in the main channel, impacts to fish are similar to those caused from the dredging activity and will not have significant impacts to fishes. For dredge material placed on Port Hueneme Beach surf zone fishes will be subjected to increased turbidity, noise, and sediment deposition. Beach nourishment typically involves placement of material on the beach or nearshore environment using a hydraulic pump or discharge from a split-hull barge. Significant noise impacts to fish in terms of injury are documented to occur at greater than 206 dB, typically associated with pile driving or explosions. Noise or vibration impacts to fish from beach nourishment activities would be less than significant based on predicted sound source levels associated with pumping or barge operation. Moreover, fishes living in the surf zone contend with a high energy environment that is daily and seasonal variable with respect to habitat conditions. Species inhabiting the surf zone potentially temporally displaced from foraging also typically occur in other coastal habitats and are opportunistic with respect to feeding strategies, reproduction, and prey items. The most notable fish species in surf zone is the California grunion. California grunion use the upper intertidal habitat of beaches for spawning from late February to early September. Grunion activity is expected to be concentrated from late March to early June. Their eggs are buried in the sand and hatch when the next spring tide occurs, approximately two weeks later. Grunion, like Pismo clams, is a sensitive species, and catch is regulated by CDFW. Within the last decade, grunion have been documented on Hueneme Beach (Dr. Karen Martin, Pepperdine University, pers. comm. November 25, 2013), and are generally known to be distributed from Point Conception to the Mexican border (Larry Fukuhara, Program Director, Cabrillo Aquarium, pers comm. November 22, 2013).

Under both Option 1 and 2, beach nourishment activities are planned to occur in the period between October and January, which is outside of the grunion spawning season. In addition, the proposed beach nourishment activities would occur down current of the East Jetty, where currently no sandy beach exists. As a result of the beach nourishment, new sandy beach and surf zone habitat suitable for surf zone fishes including grunion spawning would be created. Therefore, beach nourishment activities related to the Proposed Project would have no significant impact to fishes.

The 1999 EA/MND and 2004 Supplemental EA identified similar types of impacts for fish species. This project would result in similar impacts but impacts would be less severe and would disturb a smaller geographic area. No new impacts have been identified and no new mitigation is required for fish species.

Birds

The harbor and coastal waters and neighboring rocky structures provide perching, foraging, and roosting areas for a variety of shorebirds and waterfowl, including loons (*Gavia sp.*), Bonaparte's gull (*Chroicocephalus philadelphia*), western gull (*Larus occidentalis*), Brandt's (*Phalacrocorax penicillatus*), pelagic (*Phalacrocorax pelagicus*) and double-crested (*Phalacrocorax auritus*) cormorants, grebes (*Podicipedidae sp.*), surf scoters (*Melanitta perspicillata*), ruddy ducks (*Oxyura jamaicensis*), black turnstones (*Arenaria melanocephala*), black oystercatchers (*Haematopus bachmani*), wandering tattlers (*Tringa incana*), and California brown pelicans (*Pelecanus occidentalis*). The beach environment provides foraging and roosting opportunities for a variety of shorebirds, including black-bellied plover (*Pluvialis squatarola*), willet (*Tringa semipalmata*), whimbrel (*Numenius phaeopus*), long-billed curlew (*Numenius americanus*), marbled godwit (*Limosa fedoa*), sanderling (*Calidris alba*), western sandpiper (*Calidris mauri*) and gulls. Dredging activities conducted during the daytime will cause some seabirds to avoid the immediate disturbance area due to increased noise, while scavenger species such as gulls may be attracted to the site. Dredging activities will not occur in the immediate vicinity of any important seabird breeding areas. Beach nourishment activities, primarily placement of material, would be conducted in conjunction with dredging. Placement of the beach nourishment material uses a hydraulic pump or barge. The pump is located at the pickup location near the dredging location thus noise or vibrations from beach nourishment activities would not be sufficient to disturb avian species utilizing the beach or nearshore areas. Additionally, considering beach nourishment activities would be seasonally constrained in conjunction with dredging, impacts to birds associated with beach or nearshore areas from noise or vibrations would be less than significant. In 2007, a group of Brandt's cormorants (*Phalacrocorax penicillatus*) began nesting on the Navy property near Wharf Delta adjacent to the entrance channel. However, it is unknown whether they have continued to utilize this area in more recent years (personal communications, OHD). No other colonial waterbird rookeries are known to occur within the project area or in the immediate vicinity. Following the completion of construction activities, birds will be expected to return to use the area for foraging and roosting; therefore turbidity and noise impacts are not expected to be adverse and any impacts would be less than significant.

The federally listed Endangered California least tern may intermittently utilize the surface waters of project area. However, construction will not affect foraging, nesting, or roosting opportunities. The California least tern usually forms colonies on bare or sparsely vegetated sand or dried mudflats along coasts or rivers, but also on sandy or shell islands and gravel and sand pits with a dependable food supply (Thompson et al. 1997, U.S. Fish and Wildlife Service 1985). The California least tern migrates to southern and central California in the spring to breed, arriving in small numbers in early to mid-April. The terns generally depart for their wintering grounds in August. Within Ventura County, four tern nesting colonies are historically known: Ormond Beach, Santa Clara River/McGrath State Beach, Hollywood Beach, and Naval Air Base Ventura County (NBVC) Point Mugu, which consists of four areas known as Holiday Beach, Holiday Salt Panne, Eastern Arm, and Ormond Beach East (N. Frost, pers. comm., 2015). Of the four tern colonies in the region, the closest one is located at Ormond Beach, approximately 1.6 km downcoast from Hueneme Beach. The next closest colony is located at Hollywood Beach, approximately 6.5 km upcoast of the project area. Terns are not expected to nest or roost in the area due to the developed nature of the project site. The terns nest in coastal areas adjacent to shallow marine and estuarine habitats, where they can forage on fish at the water's surface by diving into the water. Human activity on beaches has forced this species from nesting on beaches to mud and sand flats back from the ocean, and other man-made structures such as airports and landfills (U.S. Fish and Wildlife Service 1985). Most foraging (80 percent) occurs within 4.8 km of the nesting site in waters less than 6 m deep (USFWS 1995 in Corps 1996). Primary prey items of the California least tern are the northern anchovy, topsmelt (*Atherinops affinis*), and jacksmelt (*Atherinopsis californiensis*) (Massey and Atwood 1984). Turbidity in the water column caused during dredging and installation of sheet piling prior to making wharf improvements may preclude foraging in a small area. However, forage fish will be available for capture

elsewhere. Because turbidity will likely remain in the surf zone, this method may not impact foraging opportunities. Consequently, potential impacts will be completely avoided by constructing the project between September 1 and March 15. Under these conditions, the Proposed Project will not affect this species.

Federally listed Threatened western snowy plover has not been known to use Hueneme Beach for foraging or nesting (FWS 1997). The species has been known to forage and nest just southwest of the southern tip of J Street Drain/Ormond Lagoon in 2013, approximately 1.6 km southeast of the project area (Fox-Fernandez, et al, 2013). The species nests in the dunes, in flat, open areas with sandy or saline substrates, where vegetation and driftwood are usually sparse or absent. Nesting occurs between March and July. Nest site selection and pair bond formation occur from early to mid-March, and eggs of the first clutch are usually laid by early April. Snowy plovers forage on invertebrates in wet, sandy areas among surf-cast kelp; in dry, sandy areas above the high tide; on salt pans; and along the edges of salt marshes and salt ponds. Studies in California, Oregon, and Washington indicate that coastal breeding populations have declined significantly in recent years (Page and Stenzel 1978). Fewer than 1,500 birds, and 28 nesting sites, remain in the three states. The western snowy plover has disappeared as a breeding bird from most of California beaches south of Los Angeles. Evidence suggests that human activity (i.e., development, recreation, dune stabilization, beach cleaning) and domestic predation are responsible for the sharp decline of this species. The species is known to occur on Ormond Beach and McGrath Beach, 1.6 km downcoast and 9.7 km upcoast of the beach nourishment location on Hueneme Beach, respectively. The species is not known to nest, roost, or forage on Hueneme Beach. Hueneme Beach is routinely groomed and subject to human disturbances. The species is not expected to occur on Hueneme Beach due to the lack of suitable habitat, predatory pressure, and human disturbances, in addition to lack of food sources available as a result of beach grooming activities. Humans also bring their dogs to the beach and frequently allow the dogs to run off leash. Given the level of disturbance at Hueneme Beach, the species is not expected to occur during construction. However, given the proximity of the project to known nesting areas on Ormond Beach, construction will occur during the plovers' non-nesting season, between September 1 and March 15 to avoid potential impacts on this species.

The 1999 EA/MND and 2004 Supplemental EA identified similar types of impacts for bird species. This project would result in similar impacts. However, given the proximity of the project to known nesting areas on Ormond Beach, new mitigation is required for bird species. In addition to implementing a construction avoidance period, as outlined in Mitigation Measure B-1, Workers Educational Training will be provided prior to the initiation of any in-water project activities, to all personnel associated with the Proposed Project. The content of the worker education training program (program) will be developed by a qualified biologist and will discuss the sensitive avian species including but not limited to the California least tern and western snowy plover their habitat preference(s), law and regulations, as well as potential impacts and protection measures, and Action Area limits, as outlined in Mitigation Measure B-5. Protections and regulations federally-listed species will also be included in the program. Lastly, To ensure that no impacts to wintering/ roosting or nesting western snowy plover and California least tern, a qualified biologist familiar with these species shall be present on site prior to and, if necessary, during beach nourishment activities. The biologist will perform a pre-construction clearance survey to ensure that no sensitive wildlife is within the project area. Monitoring during placement of sand will be performed at the discretion of the biologist, and dependent upon the presence of the species and the location of the construction activity being performed, as outlined in Mitigation Measure B-2. Lastly, relocation of kelp rack material at the disposal site to outside of the disposal area will further ensure less than significant impacts to shore birds, as outlined in Mitigation Measure B-3. With implementation of these mitigation measures, the Proposed Project will not affect the western snowy plover or California least tern populations.

Marine Mammals

Special status marine species off the coast of California are protected by the Endangered Species Act (ESA) of 1973 (Section 9 and implementing regulations 50 Code of Federal Regulations Part 17). The U.S. Fish and Wildlife Service (USFWS) and National Oceanic and Atmospheric Administration (NOAA) Fisheries Service are responsible for implementation of the federal ESA. In addition to administering the federal ESA, NOAA Fisheries Service is also responsible for enforcing the Marine Mammal Protection Act of 1972 (MMPA), which protects all marine mammals within U.S. waters. Specifically, the MMPA prohibits the intentional killing or harassment of these marine mammals.

While several species of cetaceans (whales, dolphins and porpoises) and pinnipeds (seals and sea lions) are frequently seen offshore, only the California sea lion (*Zalophus californianus*), harbor seal (*Phoca vitulina*), and coastal bottlenose dolphin (*Tursiops truncatus*) are likely to forage in the harbor waters and/or haul-out on floating structures (including the Navy's small boat docks at Wharf Delta), or the breakwater and jetties. The harbor seal and California sea lion are gregarious and could be expected to occur within the nearshore waters of the Santa Barbara Channel throughout the year. No rookeries are known within the sandy beach habitat within the project area. The bottlenose dolphin is a transient cetacean known to frequent the surfzone of sandy beaches.

The California gray whale (*Eschrichtius robustus*) was recently removed from the Endangered Species List. The gray whale 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. There is also evidence suggesting that resident populations may exist in southern California. Overall marine mammal densities within PoHH are low compared to adjacent offshore habitat and the majority of marine mammal use of PoHH is expected to be concentrated around the jetty entrance and along the wharf supporting squid fishery processing.

The 1999 EA/MND and 2004 Supplemental EA identified similar types of impacts for marine mammal species. Dredging actions and sediment disposal for this project are not expected to have significant impacts on marine mammals. Sound pressure levels resulting from proposed demolition of existing wharf structures and installation of sheet pile, using vibratory an impact pile driving equipment, are not expected to reach Level A harassment (injury) levels but sound pressure levels generate during for wharf modifications and dredging activities may reach Level B harassment (behavioral) of marine mammals. Although, marine mammals may be occasionally be present (e.g., harbor seals and sea lions) in the project area noted species would likely avoid the disturbed area due to noise impacts. However, since marine mammals are occasionally present in the project area, prior to and during of in-water construction activities, an OHD-approved qualified biologist shall monitor dredging, demolition and pile driving activities to avoid potential impacts to marine mammals in the project area, as outlined in Mitigation Measure B-6. Since no important foraging, haulout or breeding areas will be affected by the project, impacts to marine mammals from the proposed actions are predicted to be less than significant with mitigation incorporated.

Plankton

Planktonic organisms drift with the currents and include phytoplankton and zooplankton. Phytoplankton (i.e., the plants) are the primary producers in the pelagic food web. Zooplankton are the animal component of the plankton. Many species, including invertebrates and fishes important to commercial and recreational fisheries, spend the early stages of their life histories in the plankton. Planktonic communities are characterized by patchiness in distribution, composition, and abundance.

Plankton populations can be impacted by turbidity as it lowers the total light available for phytoplankton photosynthesis and clogs the filter feeding mechanisms of zooplankton. Turbidity can have short-term

effects on plankton in the immediate vicinity of the dredging operation. No significant impacts are expected to occur due to the relatively small area affected by the turbidity plume and the rapid dissipation of suspended material (USACE, 1994)

The 1999 EA/MND and 2004 Supplemental EA identified similar types of impacts for plankton. This project would result in similar impacts but those impacts would be less severe and would disturb a smaller geographic area. No new impacts have been identified and no new mitigation is required for planktonic organisms.

A search and review of the California Natural Diversity Data Base (CNDDDB), existing survey information and existing environmental documents for projects nearby were used to determine if any recorded observations of special-status species are on or in the vicinity of the project site. The following table (Table 5) lists the species of special concern known or expected to occur in the project area, federal status, and information on occurrence.

Table 5 Special Status Species Potentially Occurring in the Project Area

Species	Status	Remarks (Nearest Occurrences)	PoO
Birds			
Double-crested cormorant <i>Phalacrocorax auritus</i>	SSC	Large colonies roost in the uplands immediately adjacent to the coastal freshwater/brackish marsh dominated by <i>Schoenoplectus</i> , <i>Typha</i> , and <i>Distichlis</i> . Not observed in PA.	C
Brown pelican <i>Pelicanus occidentalis</i>	FP (State)	Colonial nester on coastal islands just outside the surf line. Nests on coastal islands of small to moderate size which afford immunity from attack by ground-dwelling predators. Roosts communally. Not observed in PA.	U
Elegant tern <i>Sterna elegans</i>	WL (State)	Only 3 known breeding colonies: San Diego Bay, Los Angeles Harbor and Bolsa Chica Ecological Reserve. Nests on open, sandy, undisturbed beaches and on salt-evaporating pond dikes (San Diego) in association with Caspian tern. Ormond Beach/ McGrath Beach State Park. Not observed in PA.	C
Forster's tern <i>Sterna forsteri</i>	SSC	Nests on salt-pond levees and islands in lakes, salt ponds, lagoons, bays. Nests < 330 ft from open water. Isolation of colony is important for protection. Need abandoned pilings, low boardwalks or exposed beaches for roosting. Ormond Beach/ McGrath Beach State Park. Not observed in PA.	C
Black skimmer <i>Rynchops niger</i>	SSC	Nests on gravel bars, low islets, and sandy beaches, in unvegetated sites. Nesting colonies usually less than 200 pairs. Ormond Beach/ McGrath Beach State Park. Not observed in PA.	C
California gull <i>Larus californica</i>	WL	Littoral waters, sandy beaches, waters and shorelines of bays, tidal mud-flats, marshes, lakes, etc. Colonial nester on islets in large interior lakes, either fresh or strongly alkaline. Observed in PA.	C
California least tern <i>Sterna antillarum browni</i>	E (Federal & State)	Nests along the coast from San Francisco Bay south to northern Baja California. Colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, landfills, or paved areas. Forages in nearshore waters. Observed on Ormond Beach, Santa Clara River/McGrath State Beach, Hollywood Beach,	C

Species	Status	Remarks (Nearest Occurrences)	PoO
		and Naval Air Base Ventura County (NBVC) Point Mugu Not observed in PA.	
Belding's savannah sparrow <i>Passerculus sandwichensis beldingi</i>	E (State)	Inhabits coastal salt marshes, from Santa Barbara south through San Diego County. Nests in Salicornia on and about margins of tidal flats. Known to occur in wetlands at Ormond Beach/ McGrath Beach State Park. Not observed in PA. No suitable habitat present within the PA.	R
Western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	T (Federal) E (State)	Observed within ½ mile of the project site in Port Hueneme. The species nests in riparian jungles of willow, often mixed with cottonwoods, w/ lower story of blackberry, nettles, or wild grape. No suitable habitat present within the PA.	R
Western snowy plover <i>Charadrius alexandrinus nivosus</i>	T (Federal)	Observed on Ormond Beach/McGrath Beach State Park. Needs sandy, gravelly or friable soils for nesting. Requires wet, sandy areas for foraging for invertebrates in surf-cast kelp. No suitable habitat present within the PA.	U
Long-billed curlew <i>Numenius americanus</i>	WL	Observed foraging along the shoreline at Ormond Beach and in the open, dry ponds and on McGrath Beach State Park. Suitable habitat in PA.	C
Least Bell's vireo <i>Vireo bellii pusillus</i>	E (Federal & State)	Santa Clara River, south of Highway 101 bridge. Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms below 2000 ft. Not observed in PA.	R
Reptiles			
Silvery legless lizard <i>Anniella pulchra pulchra</i>	SSC	Sandy or loose loamy soils under sparse vegetation. Soil moisture is essential. They prefer soils with high moisture content. Known to occur east of McGrath Lake and west of Harbor Boulevard. Not observed in PA.	R
Fish			
Tidewater goby <i>Eucyclogobius newbenyi</i>	E (Federal)	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego Co. to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water & high oxygen levels. Known to occur in Mugu Lagoon/Santa Clara River Estuary. Not observed in PA.	R
California grunion <i>Leuresthes tenuis</i>	SSC	Portions of Hueneme Beach have recorded sightings of California grunion runs (Marten, personal communication 2008). Grunion lay their eggs on sandy beaches at the MHHW line during nighttime spring tides. Not observed in PA.	C
Invertebrates			
Mimic tryonia (=California brackishwater snail) <i>Tryonia imitator</i>	SSC	Inhabits coastal lagoons, estuaries and salt marshes, from Sonoma County south to San Diego County. Found only in permanently submerged areas in a variety of sediment types; able to withstand a wide range of salinities. Known to occur in Oxnard Drain (J Street Canal), Ormond Beach area, SE of Port	R

City of Port Hueneme
Port of Hueneme Berth Deepening and Wharf Improvement Project

Species	Status	Remarks (Nearest Occurrences)	PoO
		Hueneme. Not observed in PA.	
Pismo clam <i>Tivela stultorum</i>	SSC	The Pismo clam has historically been found on Hueneme Beach. Pismo clams are typically found between +3 feet (+0.9 m) MLLW and -10 feet (-3m) MLLW	C
Marine Mammals			
California sea lion <i>Zalophus californianus</i>	MMPA	California sea lions reside in the Eastern North Pacific Ocean from mainland Mexico to Vancouver Island, Canada. Occasionally observed in the PA but no resident or breeding populations	C
Harbor seal <i>Phoca vitulina</i>	MMPA	The harbor seal live in temperate coastal habitats from central Baja California, Mexico to Alaska. Occasionally observed in PA but no resident or breeding populations.	C
Coastal bottlenose dolphin <i>Tursiops truncatus</i>	MMPA	Coastal Bottlenose dolphin reside in temperate and tropical waters around the world. Coastal populations migrate into bays, estuaries, and river mouths as well as offshore along the continental shelf. Occasionally observed in the PA but no resident or breeding populations.	C
California gray whale ¹ <i>Eschrichtius robustus</i>	MMPA	California gray whales are found mainly in shallow coastal water in the North Pacific Ocean. Not observed in the PA.	R
Plants			
Saltmarsh bird's beak <i>Cordylanthus maritimus</i> spp. <i>maritimus</i>	E (Federal & State)	Coastal salt marsh, coastal dunes. Limited to the higher zones of the salt marsh habitat. 0-30 m. Occurs at salt marsh at McGrath Beach State Park and Silver Strand Beach. Not observed in PA.	R
Ventura Marsh milk-vetch <i>Astragalus pycnostachyus</i> var. <i>lanosissimus</i>	E (Federal & State)	Coastal salt marsh. Within reach of high tide or protected by barrier beaches, more rarely near seeps on sandy bluffs. 1-35 m. Occurs on McGrath Beach State Park marsh habitat. Not observed in PA.	R
<p>1. E = Endangered; T = Threatened; SSC = Species of Special Concern; WL = Watch Listed; FP = Fully Protected; MMPA = Marine Mammal Protection Act</p> <p>2. PoO = Estimated Probability of Occurrence in PA C = Common U = Uncommon R = Rare</p> <p>3. PA= Project Area</p> <p>¹ NMFS delisted the California population (Eastern North Pacific DPS), while keeping the Western North Pacific DPS as Endangered</p>			

Mitigation Measures

In addition to compliance with MBTA and CFGC requirements, the following mitigation measures would be required to reduce impacts to biological resources to a less than significant level.

- B-1** To avoid potential biological impacts, construction activities shall occur during the time when grunion and federally listed least terns and snowy plovers are not onsite, between September 1 and March 15.

- B-2** To ensure that no impacts to wintering/ roosting western snowy plover and California least tern, a qualified biologist familiar with these species shall be present on site prior to and, if necessary, during beach nourishment activities. The biologist shall perform a pre-construction clearance survey to ensure that no sensitive wildlife is within the project area. Monitoring during construction activities shall be performed at the discretion of the biologist, and dependent upon the presence of the species and the location of the construction activity being performed.

The area where construction is occurring, plus an approximately 50-foot buffer from equipment activity where machinery may turn around, shall be established. Although the exact location of this area is expected to change as construction progresses, it shall be considered the "active construction zone." In the event that western snowy plover, California least tern, or other sensitive wildlife are found to be foraging within 100 feet or roosting within 200 feet of the active construction zone, the biologist shall notify the operator or construction manager. If, based on the judgment of the biological monitor, the western snowy plover, California least tern or other sensitive wildlife could be impacted by construction equipment, construction shall cease until the western snowy plover and California least tern have left the area and are not in danger of being impacted by construction activities.

- B-3** Kelp wrack refers to stranded kelp (large brown seaweed) on the beach. Prior to construction, if on-shore disposal is to be used, and if substantial kelp wrack material (estimated to be at least 2 cy in volume) is present on the disposal site, the material shall be collected and relocated to a downcoast beach area outside the disposal area. The wrack material shall be placed near the inter-/supra-tidal boundary, or at approximately the same elevation as where it was collected. The purpose of this measure is to maintain the invertebrate population which the kelp wrack supports, which also provides an important food source for shore birds.

- B-4** To avoid the potential impacts to the Pismo clam, onshore dredged material placement shall be above the mean lower low-water elevation and nearshore placement shall be below minus 10 feet, mean lower low-water. If it is necessary to place the dredged material on-shore below +0.9 ft MLLW, the OHD shall conduct transect surveys, in coordination with the CDFW and other resource agencies, to determine if Pismo clams are present on Hueneme Beach, prior to disposal of dredged material. If a population of Pismo clams is present, the OHD shall coordinate with CDFW and other resource agencies to develop appropriate mitigation, which may involve relocation of Pismo clams. If a population of Pismo clams is present within the onshore disposal area between 0.9 and -10.0 ft. MLLW then the OHD shall coordinate with CDFW and other resource agencies to relocate a portion of the population to adjacent habitat. With implementation of the above plan, significant impacts to the local Pismo clam population are not expected to occur. For Onshore Placement, a hydraulic cutter pipeline dredge with pumpout capability shall be used to place material between 0 and +4.9 M MLLW, then material shall be graded to match the existing beach profile. For Nearshore Placement, a bottom dump scow or barge shall be used to place sediment in a mound parallel to the shore in the littoral zone, at depths ranging from -6.1 to -10.6 M MLLW. Therefore, impacts on sensitive species are not anticipated.

- B-5** Workers Educational Training. Prior to the initiation of any in-water project activities, all personnel associated with the Proposed Project shall attend a worker education training program (program) with content developed by a qualified biologist. The program shall discuss the sensitive marine and avian species including but not limited to the California least tern and western snowy plover their habitat preference(s), law and regulations, as well as

potential impacts and protection measures, and Action Area limits. Protections and regulations federally-listed species shall also be included in the program. A copy of the training program shall be distributed to all contractors, employers and other personnel involved during in-water construction activities. Specifically, the program shall also include:

- a. Measures to prevent indirect impacts during in-water construction activities, including dredging, demolition and pile driving as they relate to the protection of adjacent aquatic habitat.
- b. Training materials that 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 OHD Project manager) in the event that protected biological resources are affected.
- c. The OHD or its contractors shall 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 shall 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.

B-6 Prior to and during in-water construction activities, an OHD-approved qualified biologist shall monitor dredging, demolition and pile driving activities to avoid potential impacts to marine mammals or avian species in the project area. The OHD-approved qualified biologist would monitor and record the occurrence of marine mammals and avian species with the ability to stop construction. The OHD-approved qualified biologist will have authority to shutdown non-pile driving construction activities if marine mammals, sea turtle or avian species come within 10 m (32.8 ft). If a whale, dolphin, or porpoise (collectively referred to as cetaceans) are observed in the harbor and maintenance activities proceed, a OHD-approved biologist shall be present within the project area to observe cetacean location and behaviors, and ensure all working vessels maintains a 100 m (328 ft.) distance separation. If the cetacean exhibits any adverse^[1] behaviors (evasive or defensive), the biologist will direct the vessel to decrease speed and change direction and increase distance from the cetacean until the cetacean has either left the area or until the distance is sufficient to reduce the resulting stress response. If approached by a cetacean, the biologist will direct the boat operator to put the engine in neutral and allow the cetacean to pass. During pile driving activities the shutdown distance would be 100 m (328 ft.).

[1] For the purposes of this measure, “adverse behaviors” are defined as a change in swim rate, change in inter-breath interval, abrupt change in direction, abandonment of an important activity (i.e., feeding, nursing), or breaching.

NEW MITIGATION IS REQUIRED

- 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?*

No habitat of quality to support native riparian plant/wildlife species is present. Plant communities are considered sensitive biological resources if they have limited distributions, have high wildlife value, include sensitive species, or are particularly susceptible to disturbance. CDFW ranks sensitive communities as “threatened” or “very threatened” and keeps records of their occurrences in CNDDDB. Similar to special-status plant and wildlife species, vegetation alliances are ranked 1 through 5 based on NatureServe's (2010) methodology, with those alliances ranked globally (G) or statewide (S) as 1 through 3 considered sensitive. Subtidal habitats consist of unconsolidated, fine-grained silt and sands, which

typically support limited vegetation opportunities. No hard substrate or submerged aquatic habitat exists inside the project dredge area or is likely to develop considering the harbor is dredged biennially for maintenance purposes. The overall conditions in the PoHH, most notably depth, support limited opportunities for subaquatic vegetation (eelgrass). The neighboring breakwaters, jetties, and pier pilings are expected to support algal growth typical of rip-rap communities. Studies at the Port of Hueneme and Mandalay Beach Generating Station jetties found several species of green and red algae (Dames and Moore 1980). A small bed of giant kelp and feather boa kelp is persistent at the southern jetty near the entrance to the harbor but is well outside the dredge footprint

Hueneme Beach has little or no plant growth due to seasonal erosion processes, beach nourishment projects, and high recreation use. Therefore, the project will have no effect on riparian habitat or other sensitive natural communities.

The 1999 EA/MND and 2004 Supplemental EA gave a similar analysis of impacts to riparian habitat and sensitive natural communities. No new impacts have been identified and no new mitigation is required for impacts to riparian and sensitive natural communities.

NO NEW IMPACT/NO IMPACT

- c. Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, and coastal) through direct removal, filling, hydrological interruption, or other means?*

The OHD is required to obtain a permit from the Corps Regulatory Branch for the non-federal portions of this project, consisting of the wharf improvements, dredging, and sediment placement. The Section 404 permit applies to the discharge of dredged or fill material, such as the rock that will be used for revetment the dredging of the berths, and the placement of dredged material at Hueneme Beach or in the harbor trenches. Section 10 applies to all structures placed in navigable waters, and would include the new fender system and any other structures associated with the wharf improvements. A single permit would be issued for both Section 10 and Section 404. The dredging and disposal are required to comply with Section 404(b)(1) guidelines, but no permit is required for the Corps' dredging of the Federal Channel..

Impacts on water quality are expected to be intermittent over construction, localized to the vicinity of the dredge, and not significant. Turbidity levels will be in compliance with Section 404(b)(1) of the Clean Water Act and all project Regional Water Quality Control Boards (RWQCB) Section 401 Certification/Waiver stipulations. The 1999 EA/MND and 2004 Supplemental EA gave a similar analysis of impacts to federally protected wetlands. No new impacts have been identified and no new mitigation is required.

NO NEW IMPACT/NO IMPACT

- 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?*

The 1996 amendments to the Magnuson-Stevens Fishery Management and Conservation Act set forth a number of new mandates for the National Marine Fisheries Service (NMFS), regional fishery management councils, and other federal agencies to identify and protect important marine and anadromous fish habitat. The Councils, with assistance from NMFS, are required to delineate essential fish habitat (EFH) for all managed species. The Act defines EFH as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." Federal action agencies that fund, permit, or carry out activities that may adversely impact EFH are required to consult with NMFS regarding the potential effects of their actions on EFH, and to respond in writing to their

recommendations. Subsequent to completion of the Final EA (USACE, 1999), NMFS provided the Corps with updated information regarding requirements to assess EFH.

In the Pacific region, EFH has been identified for a total of 89 species covered by three fishery management plans (FMPs) under the auspices of the Pacific Fishery Management Council. Port Hueneme Harbor and surrounding waters provide habitat for several of these species, including the northern anchovy, Pacific sanddab (*Citharichthys sordidus*), and several species of rockfishes (*Sebastes* spp.) The harbor and adjacent habitats are not identified as important fish breeding or nursery areas.

Temporary displacement of fish, including some species covered under the Pacific Fishery Management Council's fishery management plans (FMPs), would occur during harbor deepening and construction of wharf modifications. Turbidity effects will be localized and temporary. No net loss of rocky intertidal, rocky subtidal, or soft-bottom fish habitat will occur. No significant long-term effects to fish foraging or spawning habitat will occur.

Dredging, disposal, and wharf improvement construction activities are expected to have adverse, but not significant impacts to fish covered under the FMPs. Impacts will include noise, turbidity and physical removal of soft bottom and hard structure habitat. At the disposal site, impacts will be primarily limited to increased levels of turbidity and some burial of soft bottom sand habitat. Noise will have temporary and localized impacts to fishes during dredging and harbor improvement construction activities.

Fish populations in the local area will be marginally affected in several ways. Dredging will disperse benthic fish resting or feeding in the immediate dredge area. In some cases fish may be directly impacted by the dredge bucket or cutterhead mechanism of the dredge. Most fish will avoid the dredge area due to turbidity and noise, resulting in a temporary loss of habitat. Turbidity will limit visibility for sight-feeding fish, and these species will likely avoid the turbidity plume. Other species will be attracted to the site to forage on benthic organisms suspended by the dredging. Noise effects may be indirectly beneficial, causing fish to avoid the direct mechanical effects of the dredge. Noise will affect a relatively small area because short, high-intensity noises that can cause startle responses in fish are not expected to result from the Proposed Project.

There are no native nursery sites in the project area and project implementation will not affect the movement of any native resident or migratory fish or impeded the use of native nursery sites. The project would not have a significant, adverse impact on EFH. The Proposed Project likewise does not conflict with any local policies or ordinances protecting biological resources or any adopted Habitat Conservation Plan, Natural Community Conservation Plan, Integrated Natural Resource Management Plan, or other approved local, regional, or state habitat conservation plans.

The 1999 EA/MND and 2004 Supplemental EA gave a similar analysis of impacts to migratory fish species. No new impacts have been identified and no new mitigation is required.

NO NEW IMPACT/NO IMPACT

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

The project site is in the city of Port Hueneme, Ventura County, California. The project is located at the Port of Hueneme (Harbor). As mentioned in the Project Description, the over-dredging component of Option 2 would be completed by the USACE, with associated environmental impacts analyzed by the USACE in a subsequent environmental document. Nevertheless, the over-dredging is considered part of the Proposed Project from a CEQA perspective and is analyzed in this Initial Study to ensure that all potential environmental effects are evaluated. The OHD, U.S. Navy (USN), and USACE are all responsible for dredging to maintain authorized navigation depths in their respective portions of the Harbor.

Port modifications involve dredging activities to deepen Berths 1 and 2 along Wharf 1 to approximately - 40 feet MLLW, to provide deep-draft vessel continuity from the harbor, through the channel and to Berths 1 and 2 along Wharf 1, and placing the material at an onshore, nearshore, or inland site. Regulatory authority over biological resources is shared by federal, state, and local authorities under a variety of statutes and guidelines. Primary regulatory authority with respect to general biological resources lies within the land use control and planning authority of local jurisdictions (in this instance, the County of Ventura and the City of Port Hueneme). The CDFW is a trustee agency for biological resources through the state under CEQA and also has direct jurisdiction under the Fish and Game Code of California. Under the state and federal Endangered Species Act, the CDFW and the U.S. Fish and Wildlife Service (USFWS) also have direct regulatory authority over species formally listed as Threatened or Endangered. The USACE has regulatory authority over specific biological resources, namely wetlands and waters of the United States, under Section 404 of the federal Clean Water Act. Statutes in the Clean Water Act and California Fish and Game Code protect wetlands and riparian habitat, and are administered by the RWQCB and CDFW, respectively. The Proposed Project does not conflict with any local policies or ordinances protecting biological resources or any adopted Habitat Conservation Plan, Natural Community Conservation Plan, Integrated Natural Resource Management Plan, or other approved local, regional, or state habitat conservation plans.

The 1999 EA/MND and 2004 Supplemental EA found that the project did not conflict with any local policies or ordinances protecting biological resources. No new impacts have been identified and no new mitigation is required.

NO NEW IMPACT/NO IMPACT

- 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?*

The project would not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. The proposed Project would be consistent with the Port Master Plan, Port Environmental Management Framework and the agreement between the City of Port Hueneme and the OHD. The 1999 EA/MND and 2004 Supplemental EA found that the project did not 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 new impacts have been identified and no new mitigation is required.

NO NEW IMPACT/NO IMPACT

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5 Cultural Resources

	New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
Would the project have any of the following impacts?				
a. Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Disturb any human remains, including those interred outside of dedicated cemeteries	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The 1999 EA/MND concluded that there were no impacts to cultural resources. The 2004 Supplemental EA also determined that there were no cultural resources on site, and therefore would have no impact. Likewise, based on the analysis completed for the current Proposed Project, no impacts to cultural resources are anticipated.

In the late 1930s a wooden wharf was constructed at the current project site. However, most of the wharf was removed in the 1970s, and any remaining piles were removed after the preparation of the 1999 EA/MND. Given that the project includes dredging the port, consideration was given to the possibility of disturbing underwater resources within the port. A review of existing documentation was conducted to address this matter. An Environmental Assessment and Initial Study completed in 2008 for the Port Hueneme Sediment Dredging and CAD Site examined the possibility of cultural resources (including shipwrecks) in the port. The study concluded that no resources would be impacted by the dredging of the port. A letter sent by Captain C. B. Connors of the U.S. Navy to the State Historic Preservation Office (SHPO) in 2008 states that the potential for ground disturbance within the Port of Hueneme is unlikely to affect archaeological resources because of the development history within the Port. Several ships are known to have wrecked in the vicinity of Port of Hueneme, though their precise locations are unknown, including the *Caroline E. Foote* in 1871, the *Caesar Bruns* in 1889, the *Yaquina* in 1897, the *James H. Higgins* in 1916, *Chris C.* in 1937, the *Aloha* in 1952, the *Kopco Star* in 1963, and the *La Janelle* in 1970 (White 2014). However, because of previous dredging activities it is unlikely that any shipwreck remains are present within the project site. The Port of Hueneme has been dredged eight times since 1940 and was deepened from 32 to 35 feet in 1975, after the most recent shipwreck and disturbing any other cultural resources that may have been present. The letter sent to the SHPO further states that the majority of the nearby shipwrecks are not within the Port, but within Hueneme Canyon.

Based on a review of historic topographic maps provided by United States Geologic Survey (USGS) depicting the project site, no other unknown historical resources are likely to exist in the project site (USGS 2016). The project site has been dredged and filled eight times and is highly disturbed, thus it is unlikely that archaeological or paleontological resources or human remains exist in the project site. The discovery of archaeological, historical, and paleontological resources recovered at the project site must

be reported to the Commission, and legal title to any such archaeological, historical, and paleontological resources must be determined prior to their final disposition.

- a. *Would the project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?*
- b. *Would the project cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?*
- c. *Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*
- d. *Would the project disturb any human remains, including those interred outside of dedicated cemeteries?*

Option 1 and Option 2

According to the Port of Hueneme Master Plan and Environmental Management Framework, there are no historical resources, archaeological resources, or human remains on site. The 1999 EA/MND and 2004 Supplemental EA for the previously approved, larger-scale project identified no impacts to cultural resources such as historical resources, archaeological resources, and human remains. Since this project involves the same actions as the previous project, but on a smaller scale and a smaller footprint, this project would also result in no impacts. The project site has been heavily disturbed by past dredging and fill activities, thus archaeological and paleontological resources and human remains are not expected to exist in the project site. Therefore, no new impacts have been identified, and no mitigation is required.

NO NEW IMPACT/NO IMPACT

6 Geology and Soils

	New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
Would the project have any of the following impacts?				
a. Expose people or structures to potentially substantial adverse effects, including the risk of loss, injury, or death involving:				
1. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Strong seismic ground shaking	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Seismic-related ground failure, including liquefaction	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. Landslides	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Result in substantial soil erosion or the loss of topsoil	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Be located on a geologic unit or soil that is made unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Be located on expansive soil, as defined in Table 1-B of the <i>Uniform Building Code</i> , creating substantial risks to life or property	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The 1999 EA/MND concluded that the project would have either no impact or a less than significant impact for each of the Geology and Soils checklist questions. Specifically, the 1999 EA/MND found no impacts related to exposure of people or structures to potentially substantial adverse effects; substantial soil erosion or loss of topsoil; loss of a unique geologic feature; expansive soil creating substantial risks to life or property; or septic tanks or alternative waste water disposal systems. The potential for an on or offsite landslide, lateral spreading, subsidence, liquefaction, and collapse due to the project location resulted in a less than significant impact based on the analysis completed for the 1999 EA/MND. The

Supplemental 2004 EA does not include or outline any effects related to Geology or Soils. However, based on the analysis completed for the currently Proposed Project, there would be no new impacts associated with Geology or Soils.

- a.1. *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving 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?*
- a.2. *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?*

Option 1 and Option 2

The Proposed Project involves the deepening of berths in the Port of Hueneme, as well as the construction and improvement of the existing wharves. The Port of Hueneme is located in the Oxnard quadrangle of regulatory maps provided by the California Geological Survey. The project area is not located in an earthquake sensitive area as delineated on the Alquist-Priolo Zoning Maps.

While no faults have been mapped across the project site, seismic events caused by active and potentially active faults in the region could result in seismic ground shaking onsite. The City of Port Hueneme, along with all of Southern California and the Central Coast, is in Seismic Zone 4 and subject to seismic ground shaking from faults in the region. Therefore, a seismic hazard cannot be completely avoided. However, its effect can be minimized by implementing seismic requirements specified by the California Building Code (CBC), which include design and construction requirements related to fire and life safety and structural safety. Regardless, the Project, which involves berth deepening and improvements to an existing wharf, does not include any structures that would be exposed to substantial adverse effects from an earthquake. Implementation of the Proposed Project would result in no new impacts compared to the project as analyzed in the 1999 EA/MND.

NO NEW IMPACT/NO IMPACT

- a.3. *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?*
- a.4. *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?*

Option 1 and Option 2

Liquefaction is a condition that occurs when unconsolidated, saturated soils change to a near-liquid state during groundshaking. The Proposed Project involves the deepening of berths in the Port of Hueneme and improvement of the existing wharves, but nevertheless would comply with applicable provisions of the most recently adopted version of the CBC and any applicable city building regulations.

The Port is located in an area of known liquefaction potential as indicated in the Seismic Hazard Zone Report (2002). However, implementation of the project would not expose people or structures to substantial adverse effects, therefore impacts would be less than significant. As indicated in the same Seismic Hazard Zone Report, the project is not located in an area designated for investigation of earthquake induced landslides. Implementation of the Proposed Project would result in no new impacts compared to the project as analyzed in the 1999 EA/MND.

NO NEW IMPACT/NO IMPACT

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

Option 1 and Option 2

Erosion is a composite of all processes by which earth or rock materials are loosened or dissolved and moved from place to place. Natural erosion activity depends on the steepness of slopes, amount, and intensity of rainfall and soil types.

The Proposed Project involves the deepening of berths in the Port of Hueneme and improvement of the existing wharves. The Proposed Project would require minimal ground-disturbing construction activity. As a result, the potential for substantial erosion to occur over the site during construction is low. During operation, the toe wall constructed by the project along the berth protects the berth from erosion. Project construction associated with deepening the berths and wharf improvements would not disturb any topsoil or result in any soil erosion. The Proposed Project would not affect or alter the rock revetment. Additionally, the dredged sediment would be used to replace sediment that has eroded from the beach as part of the beach nourishment process. There would be no new impacts compared to the project as analyzed in the 1999 MND.

NO NEW IMPACT/NO IMPACT

- c. *Would the project be located on a geologic unit or soil that is unstable as a result of the project, and potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?*
- d. *Would the project be located on expansive soil, as defined in Table 1-B of the Uniform Building Code, creating substantial risks to life or property?*

Option 1 and Option 2

The Proposed Project involves the deepening of berths in the Port of Hueneme and improvement of the existing wharves. The project locations are located on flat, sea level areas in the Port of Hueneme. As indicated in questions a.3 and a.4, the project would have less than significant impacts related to landslides and liquefaction. There is a possibility of lateral spreading in areas of liquefaction potential. However, using appropriate techniques during excavation would minimize this potential impact (2002). There would be no new impacts compared to the project as analyzed in the 1999 MND.

NO NEW IMPACT/NO IMPACT

- 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?*

Option 1 and Option 2

The City of Port Hueneme's wastewater system transports sewer flows from the Naval Base Ventura County Construction Battalion Center, OHD and the City of Port Hueneme. Sewer flows total approximately 2 million gallons per day. These flows are transported through a series of pumped force mains and gravity lines ranging from 6" to 36" in diameter. The collected wastewater flows to the regional wastewater treatment facility located in, and operated by, the City of Oxnard. Once there, it is treated, tested for compliance, and discharged into the Pacific Ocean through an outfall that extends 5 miles from the coastline (City of Port Hueneme 2016).

The Proposed Project involves the deepening of berths in the Port of Hueneme and improvement of the existing wharves. The project would not require the need for any septic tanks or wastewater disposal systems. Therefore, there would be no impact.

NO NEW IMPACT/NO IMPACT

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7 Greenhouse Gas Emissions

	New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
Would the project have any of the following impacts?				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with any applicable plan, policy, or regulation adopted to reduce the emissions of greenhouse gases	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Climate change is the observed increase in the average temperature of the earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period. Climate change is the result of numerous, cumulative sources of greenhouse gases (GHG) that contribute to the "greenhouse effect," a natural occurrence that helps regulate the temperature of the planet. The majority of radiation from the sun hits the earth's surface and warms it. The surface in turn radiates heat back towards the atmosphere, known as infrared radiation. Gases and clouds in the atmosphere trap and prevent some of this heat from escaping into space and re-radiate it in all directions. This process is essential to support life on Earth because it warms the planet by approximately 60° Fahrenheit. Emissions from human activities since the beginning of the industrial revolution (approximately 250 years ago) are adding to the natural greenhouse effect by increasing the gases in the atmosphere that trap heat and contribute to an average increase in Earth's temperature.

GHGs occur naturally and from human activities. Human activities that produce GHGs include fossil fuel burning (coal, oil, and natural gas for heating and electricity, gasoline and diesel for transportation); methane generated by landfill wastes and raising livestock; deforestation activities; and some agricultural practices. GHGs produced by human activities include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFC), perfluorocarbons (PFC), and sulfur hexafluoride (SF₆). Since 1750, estimated concentrations of CO₂, CH₄, and N₂O in the atmosphere have increased by over 36 percent, 148 percent, and 18 percent respectively, primarily due to human activity. Emissions of GHGs affect the atmosphere directly by changing its chemical composition. Changes to the land surface indirectly affect the atmosphere by changing the way the Earth absorbs gases from the atmosphere. Potential impacts in California of global warming may include loss of snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years (California Energy Commission [CEC] 2009).

Based on the location of the Port of Hueneme, sea level rise is one of the greatest potential impacts associated with climate change that the Port faces. The Port of Hueneme EMF includes strategies to reduce the impacts of climate change, including those associated with sea level rise. Specifically, the EMF includes Strategies CC 1, CC 2, and CC 6 that address the impacts of sea level rise associated with the changing climate. In addition, the wharf improvement portion of the project would include removal of existing timber fender, installation of new timber fender, and addition of new sheet pile toe wall that would enhance the existing wharf. As mentioned in the Initial Study Introduction, Subsection 10: *Project Description*, a non-toxic steel coating, along with a passive cathodic protection system (if needed), would protect the steel from corrosion and provide an estimated 50-year service life. Additionally, the

embedded portion of the sheet pile wall would maintain the stability of the underwater sloped embankment. This would increase the Port of Hueneme's sea level preparedness.

CEQA Guidelines provide regulatory direction for the analysis and mitigation of GHG emissions appearing in CEQA documents, while giving lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts. Neither VCAPCD nor the OHD have adopted GHG emissions thresholds, and no GHG emissions reduction plan with established GHG emissions reduction strategies has been adopted locally. However, at its September 13, 2011 board meeting, the VCAPCB requested that VCAPCD staff report back on possible GHG significance thresholds for evaluating GHG impacts of land use projects in Ventura County under CEQA. At the November 8, 2011 board meeting, VCAPCD staff submitted the Greenhouse Gas Thresholds of Significance Options for Land Use Development Projects in Ventura County report to the board. The report presented a number of options for setting GHG significance thresholds and analyzed some of the adopted thresholds as well as others that were currently under consideration by other air districts in California. The report concluded that establishing local CEQA significance thresholds for global-scale environmental concerns is a major challenge, and that each of the numerous approaches and options that have been put forth to assess GHG emissions from land use development projects for CEQA purposes has their own set of advantages and disadvantages. While the report did not establish a specific approach that would be used by the VCAPCD to analyze GHG impacts under CEQA, it indicated that because Ventura County is adjacent to the SCAQMD's jurisdiction and is a part of the SCAG region, it would be most desirable for the VCAPCD to set local GHG emission thresholds of significance for land use development projects at levels consistent with those set by the SCAQMD (VCAPCD, 2011). Therefore, based on the report recommendations, the VCAPCD would continue to evaluate and develop suitable interim GHG threshold options for Ventura County with preference for GHG threshold consistency with the SCAQMD and the SCAG region.

As an interim method of determining significance under CEQA until statewide significance thresholds are established, the SCAQMD developed a tiered flowchart in 2008 to determine GHG significance thresholds. The SCAQMD flowchart uses a tiered approach in which a Proposed Project is deemed to have a less than significant impact related to GHG emissions when specific conditions are met. Tier 1 consists of evaluating whether or not the project qualifies for any applicable exemption under CEQA. Tier 2 consists of determining whether or not the project is consistent with a GHG reduction plan, including a Climate Action Plan (CAP). Neither the VCAPCD nor the OHD have adopted a CAP or any other adopted plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Therefore, for the purpose of this analysis, a significant GHG emissions impact would occur if the project-generated emissions would exceed 3,000 MT CO₂e (SCAQMD, Proposed Tier 3 Threshold, September 2010).

Methodology

Calculations of CO₂, CH₄, and N₂O emissions are provided to identify the magnitude of potential project impacts. The analysis focuses on CO₂, CH₄, and N₂O because these make up 98.9 percent of all GHG emissions by volume (IPCC, 2007) and are the GHG emissions that the project would emit in the largest quantities. Fluorinated gases, such as HFCs, PFCs, and SF₆, were also considered for the analysis. However, emissions of fluorinated gases are primarily associated with industrial processes. Because the project involves dredging and associated modernization of the Wharf, the quantity of fluorinated gases would be minimal. Emissions of all GHGs are converted into their CO₂e. Minimal amounts of other main GHGs (such as chlorofluorocarbons [CFCs]) would be emitted, and these other GHG emissions would not substantially add to the calculated CO₂e amounts. Calculations are based on the methodologies discussed in the California Air Pollution Control Officers Association (CAPCOA) CEQA and Climate Change white paper (2008) and included the use of the California Climate Action Registry (CCAR) General Reporting Protocol (2009). This analysis takes into account current state and federal measures that are intended to reduce GHG emissions. state and federal measures that are built into the emissions model

calculation include Title 24 Energy Standards, Pavley (Clean Car Standards) and Low Carbon Fuel Standards. Impacts from GHG emissions were not analyzed in the 1999 Final EA/MND or 2004 Supplemental EA. Emissions associated with the project were estimated using the California Emissions Estimator Model (CalEEMod) version 2016.3.1. Complete CalEEMod results and assumptions can be viewed in Appendix A.

Construction Emissions

Although construction activity is addressed in this analysis, CAPCOA does not discuss whether any of the suggested threshold approaches adequately address impacts from temporary construction activity. As stated in the CEQA and Climate Change white paper, “more study is needed to make this assessment or to develop separate thresholds for construction activity” (CAPCOA, 2008). As discussed above, following VCAPCD’s guidance this analysis follows SCAQMD’s recommended GHG thresholds. Therefore, construction-related emissions are amortized over a 30-year period, which is recommended by SCAQMD as a reasonable operational lifetime for development projects (2010).

Operational Emissions

CalEEMod provides estimates for operational emissions of CO₂, N₂O, and CH₄. The project would not involve a change in use on the project site, but would modernize the wharf and deepen the berths to provide deep-draft vessel continuity from the harbor, through the channel and to Berths 1 and 2 along Wharf 1 and would not result in new direct operational emissions. These deep-draft vessels already access the berths, but they are required to wait for higher tide to transit the channel and come to berth. Therefore, the project would not change existing operational GHG emissions at the Port and this analysis focuses on the project’s GHG impacts from construction activities and haul trips.

- a. *Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?*
- b. *Would the project conflict with any applicable plan, policy, or regulation adopted to reduce the emissions of greenhouse gases*

The project’s proposed construction activities would generate GHG emissions. CalEEMod was used to calculate emissions resulting from project. Project-related construction emissions are confined to a relatively short period of time in relation to the overall operational lifetime of the project. Therefore, construction-related GHG emissions were amortized over a 30-year period to determine the annual construction-related GHG emissions over the operational lifetime of the project. Table 6 shows the emissions associated with the construction of the project.

Table 6 Estimated Construction GHG Emissions for Option 1

Year	Project Emissions MT/yr CO ₂ e
Landside Construction Equipment	2,434.1
Tugboat	510.8
Total	2,944.9
Total Amortized over 30 Years	98.2

See Appendix A for CalEEMod worksheets and internal calculation spreadsheet.

As shown in Table 6, under Option 1, the project construction would result in approximately 2,943 MT of CO₂e during the entire construction period, or an average of approximately 98 MT of CO₂e per year, which is less than the 3,000 MT CO₂e threshold.

Table 7 Estimated Construction GHG Emissions for Option 2

Year	Project Emissions MT/yr CO ₂ e
Landside Construction Equipment	2,470.5
Tugboat	729.7
Total	3,200.2
Total Amortized over 30 Years	106.7

See Appendix A for CalEEMod worksheets and internal calculation spreadsheet.

As shown in Table 7, under Option 2, the project construction would result in approximately 3,200 MT of CO₂e during the entire construction period, or an average of approximately 107 MT of CO₂e per year, which is less than the 3,000 MT CO₂e threshold.

Neither the VCAPCD nor the OHD have an adopted CAP or any other adopted plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Senate Bill 375, signed in August 2008, requires the inclusion of sustainable communities' strategies (SCS) in regional transportation plans (RTPs) for the purpose of reducing GHG emissions. In April 2012, the Southern California Association of Government (SCAG) adopted the 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Then, in April 2016, the SCAG adopted the 2016 – 2040 RTP/SCS. However, the general planning strategies have not changed substantially from the 2012 SCS. SCAG's RTP/SCS includes a commitment to reduce emissions from transportation sources by promoting compact and infill development to comply with SB 375. The project would not conflict with the RTP/SCS.

Executive Order (EO) S-3-05 was issued by the Governor in June 2005. EO S-3-05 sets a GHG emission reduction target of 1990 levels by 2020. Assembly Bill 32, the "California Global Warming Solutions Act of 2006," was signed into law in the fall of 2006. This bill also requires achievement of a statewide GHG emissions limit equivalent to 1990 emissions by 2020 (essentially a 25 percent reduction below 2005 emission levels) and the adoption of rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions reductions. On September 8, 2016, the governor signed Senate Bill 32 (SB 32) into law, which requires the state to further reduce GHGs to 40 percent below 1990 levels by 2030. SB 32 extends AB 32, directing ARB to ensure that GHGs are reduced to 40 percent below the 1990 level by 2030. CARB is currently working to update the Scoping Plan to provide a framework for achieving the 2030 target. The updated Scoping Plan is expected to be completed and adopted by CARB in 2016 (CARB 2015). The Proposed Project would be completed before the SB 32 horizon, and would not conflict with or otherwise inhibit the state's ability to meet the statewide emissions reduction goal for 2030 established by SB 32.

In response to EO S-3-05, CalEPA created the Climate Action Team (CAT), which in March 2006, published the Climate Action Team Report (CAT Report) (CalEPA, 2006). The 2006 CAT Report identified a recommended list of strategies that the state could pursue to reduce GHG emissions. The strategies include a variety of techniques aimed at the reduction of passenger and light duty truck emissions, reduction of energy and water use and increased recycling. In addition, in 2008 the California Attorney General published The California Environmental Quality Act Addressing Global Warming Impacts at the Local Agency Level (Office of the California Attorney General, Global Warming Measures Updated May 21, 2008). This document provides information that may be helpful to local agencies in carrying out their

duties under CEQA as they relate to global warming. Included in this document are various measures that may reduce the global warming related impacts of a project such as reducing water use and encouraging smart land use. The project is located adjacent to existing roadways and near commercial and retail. The project would not conflict with applicable CAT strategies or 2008 Attorney General Greenhouse Gas Reduction Measures.

The project would result in approximately 2,943 MT CO₂e during the entire length of construction, or approximately 98 MT CO₂e during each year of the SCAQMD proposed 30-year operational lifetime of the project, which is less than the 3,000 MT CO₂e threshold. Additionally, the project would not conflict with applicable plans, policies, or regulations adopted for the purpose of reducing the emissions of GHGs and would be consistent with the objectives of the RTP/SCS, AB 32, SB 32, SB 97, and SB 375. Therefore there are no impacts related to greenhouse gas emissions.

NO NEW IMPACT/NO IMPACT

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8 Hazards and Hazardous Materials

	New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
Would the project have any of the following impacts?				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Be located on a site that is included on a list of hazardous material 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	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. For a project located in 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 for people residing or working in the project area	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. For a project near a private airstrip, would it result in a safety hazard for people residing or working in the project area	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h. Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The 1999 EA/MND concluded that the project would result in a less than significant impact related to the routine transport, use, or disposal of hazardous materials. No impacts would result from the remaining hazard and hazardous materials checklist questions. Hazards and hazardous materials were not further analyzed in the 2004 Supplemental EA. Based on the additional analysis completed for the currently Proposed Project, no new impacts were found.

As stated in the Agreement between the OHD and the City of Port Hueneme, the storage and transportation of fissionable or radioactive materials, and storage and transportation of explosive materials, as defined by the Secretary of Commerce, shall be prohibited.

Prior to beach nourishment, and removal of existing creosoted pilings, all sediment and existing wharf material that has the potential to be contaminated will be analyzed. Lab Analysis for the removed sand is currently underway.

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

Option 1

Under Option 1, dredged sediment found to meet applicable physical and chemical thresholds would be placed on Hueneme Beach for beach nourishment or in the near-shore zone adjacent to Hueneme Beach. There is a possibility that some of the sand that would be placed on Hueneme Beach could be contaminated. However, sediment testing would occur prior to the beach nourishment, and no contaminated sand would reach the shore. Impacts would be less than significant.

The Proposed Project would not use or store large quantities of hazardous materials during operation. Small quantities of potentially hazardous materials such as fuels, lubricants, and solvents would be used during construction of the project. However, the transport, use, and storage of hazardous materials during the construction of the project 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 California Code of Regulations, Title 22. Adherence to these requirements would reduce impacts to a less than significant level, and impacts would be the same as stated in the 1999 MND.

Option 2

Under Option 2, the USACE would over-dredge portions of Channel A to a depth of -48 feet MLLW to create trenches, and sediment from the berths would be placed directly into the over-dredged trenches, such that the final elevation of the trenches is consistent with the -40 feet MLLW depth authorized for Channel A under the USACE Project. Sediment excavated by the USACE to create the trenches would be placed on Hueneme Beach or in the near-shore zone at Hueneme Beach for beach nourishment. All soil would be tested prior to beach nourishment, and if contaminated, would not reach the beach or shore. Impacts would be less than significant.

The Proposed Project would not use or store large quantities of hazardous materials during operation. Small quantities of potentially hazardous materials such as fuels, lubricants, and solvents would be used during construction of the project. However, the transport, use, and storage of hazardous materials during the construction of the project 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 California Code of Regulations, Title 22.

There would be no new impacts that would require mitigation, and impacts would be the same as stated in the 1999 MND.

NO NEW IMPACT/NO IMPACT

- c. *Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?*

Option 1 and Option 2

The Proposed Project involves the deepening of berths in the Port of Hueneme, as well as the construction and improvement of the existing wharves. There are no private or public schools located in the Port of Hueneme. The closest school in the City of Port Hueneme is Hueneme Elementary School, which is located over a half mile to the northwest from all construction sites. Since there are no hazardous material being emitted, and no schools within a quarter mile, no impact would occur.

NO NEW IMPACT/NO IMPACT

- d. *Would the project be located on a site included on a list of hazardous material 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?*

Option 1 and Option 2

The following databases compiled pursuant to Government Code Section 65962.5 were checked (November 11, 2016) for known hazardous materials contamination at the project site:

- Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) database
- Geotracker search for leaking underground storage tanks (LUSTs) and clean up sites

The CERCLIS database showed evidence of some facilities located in the Port of Hueneme that are releasing contaminants. However, none of these sites are located inside the project boundaries.

Geotracker revealed a few sites located in the Port of Hueneme but not directly at the project site. A cleanup program site located at 141 Hueneme Road is underway that is currently open for remediation. Potential contaminants of concern include diesel and naphthalene that could infiltrate into groundwater resources. Remediation is underway, and would not affect the Proposed Project. Geotracker also identified a military clean-up site in a drainage ditch system. Potential contaminants of concern included chlordane, copper, DDT, and lead that are exposed in sediment and surface water. The site recently had 1,519 tons of sediment excavated and backfilled with a mixture of clean sand and gravel. The site restoration activities were completed on January 21st, 2015 and the site was restored to its original condition.

Implementation of the Proposed Project would not subject construction workers or port workers to conditions different than the existing environmental setting. Despite the hazardous material sites located near the site, there would be no impact from or to the Proposed Project. No new impacts related to existing hazardous materials would result from implementation of the Proposed Project and the conclusions made in the 1999 MND and 2004 Environmental Assessment remain valid.

NO NEW IMPACT/NO IMPACT

- e. *For a project located in 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 for people residing or working in the project area?*
- f. *For a project near a private airstrip, would it result in a safety hazard for people residing or working in the project area?*

Option 1 and Option 2

The Proposed Project involves the deepening of berths in the Port of Hueneme and improvement of the existing wharves. The site is not located in an airport land use plan and is not near a private air strip. There would be no new impact.

NO NEW IMPACT/NO IMPACT

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

Option 1 and Option 2

The proposed project involves the deepening of berths in the Port of Hueneme and improvement of the existing wharves. The Proposed Project would not involve the development of structures that could potentially impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The project would deepen the berths of the Port of Hueneme which would provide improved access for ships entering and leaving the harbor, therefore improving existing conditions. There would be no new impacts.

NO NEW IMPACT/NO IMPACT

- h. *Would the project expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?*

Option 1 and Option 2

The Proposed Project involves the deepening of berths in the Port of Hueneme and improvement of the existing wharves. The Port of Hueneme is completely developed, paved, and does not contain any wildlands. There would be no new impacts.

NO NEW IMPACT/NO IMPACT

9 Hydrology and Water Quality

	New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
Would the project have any of the following impacts?				
a. Violate any water quality standards or waste discharge requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (i.e., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on or offsite	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Substantially alter the existing drainage pattern of the site or area, including the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. Otherwise substantially degrade water quality	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. Place housing in a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary, Flood Insurance Rate Map, or other flood hazard delineation map	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h. Place structures in a 100-year flood hazard area that would impede or redirect flood flows	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
i. Expose people or structures to a significant risk of loss, injury, or death involving flooding, including that occurring as a result of the failure of a levee or dam	<input type="checkbox"/>	<input type="checkbox"/>	■	<input type="checkbox"/>
j. Result in inundation by seiche, tsunami, or mudflow	<input type="checkbox"/>	<input type="checkbox"/>	■	<input type="checkbox"/>

The following section discusses the potential impacts associated with the project related to hydrology and water quality. The 1999 EA/MND and 2004 Supplemental EA found no impacts related to hydrology and water quality. Similar to the 2004 Supplemental EA, based on the additional analysis, no additional impacts were found to be associated with the currently Proposed Project.

a. *Would the project violate any water quality standards or waste discharge requirements?*

Option 1 and 2

The project would involve temporary disturbance of the waters in the Port of Hueneme Harbor, as well as the water along Hueneme Beach under Option 1. Specifically, construction activities would create temporary increases in turbidity and associated reduction in water quality.

The project is subject to several state and federal regulations and permit requirements regarding impacts to water resources. The United States Army Corps of Engineers (USACE) regulates deposition of sediment and work inside navigable channels through the issuance of Clean Water Act Section 404 and Rivers and Harbors Act Section 10 permits. The California Coastal Commission regulates development in the coastal zone through issuance of a Coastal Development Permit and Coastal Zone Management Act consistency certification. The Los Angeles Regional Water Quality Control Board regulates potential water quality degradation through Clean Water Act Sections 401 and 404 and Porter-Cologne Waste Discharge Requirements. Finally, the California State Lands Commission regulates near-shore activities through a Tidelands Lease Agreement.

Section 10 of the Rivers and Harbors Act (33 U.S.C. 403) covers construction, excavation, or deposition of materials in, over, or under navigable water of the United States, or any work which would affect the course, location, condition or capacity of those waters. Actions requiring Section 10 permits include structures (e.g., piers, wharfs, breakwaters, bulkheads, jetties, weirs, transmission lines) and work such as dredging or disposal of dredged material, or excavation, filling or other modifications to the navigable waters of the United States. The project would require a Section 10 permit for construction and dredging activities. The Section 10 permit would require best management practices (BMPs) to reduce pollution and sedimentation from the project site into Harbor. Specific measures will be determined by the USACE during the permit application process and may include the following:

- No contamination by cement, concrete, asphalt, washings, paint, etc. is permitted. Hazardous materials shall not be placed where they may accidentally spill or run off into the Harbor.
- No debris, soil, construction materials, concrete wash water, fluids, etc. shall be placed where they may be washed by rainfall or runoff into the Harbor.
- Harbor water may not be used for any construction activity (e.g., dust control, concrete mix).
- Stationary equipment (motors, pumps, generators, welders) located adjacent to the Harbor must be positioned over drip pans (e.g., plastic with sand bags).

- Oil absorbent pads must be onsite at all times in case of a spill. Spills shall be cleaned up immediately.
- Equipment and vehicles should be regularly checked and properly maintained to prevent leaks.
- Staging, storage, fueling, and maintenance of equipment/vehicles shall occur as far away as possible from the Harbor water.
- Stockpiles must be covered during construction.

The SWRCB establishes requirements prescribing the quality of point sources of discharge and establishes water quality objectives. These objectives are established based on the designated beneficial uses (e.g., water supply, recreation, and habitat) for a particular surface water or groundwater. NPDES permits are issued pursuant to Water Code Chapter 5.5, which implements the federal Clean Water Act. Prohibited discharges are established locally by the Los Angeles Regional Water Quality Control Board. The NPDES Construction General Permit would apply to the Proposed Project because construction activities would disturb more than one acre of land surface (California General Construction Permit 2009-0009-DWQ as amended by 2010-0014-DWQ, Modified September 2011).

In addition, as discussed in the Regulatory and Project Background, the project would be subject to the applicable strategies and requirements outlined in the Port's Environmental Management Framework (EMF), which would ensure that the water-borne berthing of vessels at the Port would be managed in a manner that protects water quality. The EMF includes strategies regarding stormwater pollution prevention; spill prevention, control, and countermeasures; offsite stormwater; design and implementation of an Environmental Management System; harbor craft replacement; and oceangoing vessel ballast assessments. Continued implementation of the policies and strategies contained in the Environmental Management Framework would reduce the potential for pollutants to enter the harbor and affect water quality. With compliance with the regulations described above and ongoing implementation of the EMF, there would be no new impacts.

NO NEW IMPACT/NO IMPACT

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

Option 1 and 2

As described in Section XVII, *Utilities and Service Systems*, the project would not increase water demand. Water would be provided by the City of Port Hueneme, which receives 80 percent of its water from the water treatment plant, which uses reverse osmosis and nanofiltration to process and treat water and the other 20 percent from the Calleguas Municipal Water District (CMWD), which receives water from the California State Water Project (City of Port Hueneme website). Further, the project would not increase water demand. Thus, there would be no new impacts associated with groundwater supplies or groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. No new impacts have been identified and no new mitigation is required.

NO NEW IMPACT/NO IMPACT

- 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, in a manner that would result in substantial erosion or siltation onsite or offsite?*

Option 1 and 2

Within the project area, surface water is transported overland via sheet flow, which is directed to a system of catch basins located throughout the Port property to discharge into the Port of Hueneme which subsequently discharges to the Pacific Ocean. Run-on occurs onto the site from the adjacent Navy-occupied parcel to the north and from adjacent residential property to the north and east. The project would not alter the course of a stream or river and would not substantially alter the existing drainage pattern of the site. Therefore, the currently Proposed Project would not result in substantial erosion or siltation onsite or offsite and there would be no new impacts.

NO NEW IMPACT/NO IMPACT

- d. *Would the project substantially alter the existing drainage pattern of the site or area, including the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite?*

Option 1 and 2

The project site is currently developed. The project would involve deepening the berths and improving the wharf. This would not involve replacing pervious areas with impervious materials or otherwise interfering with groundwater recharge. Therefore, the Proposed Project would not alter the existing drainage pattern of the site such that flooding onsite or offsite would occur. No new impacts have been identified and no new mitigation is required.

NO NEW IMPACT/NO IMPACT

- e. *Would the project create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?*

Option 1 and 2

Currently, stormwater runoff is transported overland via sheet flow, which is directed to a system of catch basins located throughout the Port property to discharge into the Port of Hueneme which discharges subsequently to the Pacific Ocean. The portion of the project site on land is almost entirely covered with impervious surfaces. The Proposed Project would involve modernizing the existing wharf system. The project would not substantially increase the amount of runoff from the project site. Therefore, the Proposed Project would not generate stormwater volumes exceeding the capacity of stormwater drainage systems or provide substantial additional sources of polluted runoff.

NO NEW IMPACT/NO IMPACT

- f. *Would the project otherwise substantially degrade water quality?*

Option 1 and 2

Sources of water pollution at the Port of Hueneme may include: stormwater runoff from paved areas, which can contain hydrocarbons, sediments, pesticides, herbicides, toxic metals, and coliform bacteria; sediment from the rock revetment along the shoreline of the Harbor; and fuel leaks from boats or fuel docks in and adjacent to the Harbor. With adherence to applicable regulations and policies mentioned

above under part (a) during construction and operation, the project would not substantially degrade water quality. Therefore, there would be no new impacts associated with the existing drainage pattern of the site, including the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite.

NO NEW IMPACT/NO IMPACT

- g. Would the project place housing in a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary, Flood Insurance Rate Map, or other flood hazard delineation map?*

Option 1 and 2

The project site is located on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) panel number 06111C0914E, dated January 20, 2010. According to the map, the portions of the project site in the water are located in Zone A, while the land side portions of the project are located in Zone X. The project site does not currently contain any habitable structures and no habitable structures would be developed with the project. Therefore, no new impacts have been identified and no new mitigation is required.

NO NEW IMPACT/NO IMPACT

- h. Would the project place structures in a 100-year flood hazard area that would impede or redirect flood flows?*

Option 1 and 2

The project would involve deepening Berths 1 and 2 along Wharf 1 as well as associated wharf improvements. The project would not involve any new structures which would impede or redirect flood flows. Therefore, no new impacts have been identified and no new mitigation is required.

NO NEW IMPACT/NO IMPACT

- i. Would the project expose people or structures to a significant risk of loss, injury, or death involving flooding including that occurs as a result of the failure of a levee or dam?*

Option 1 and 2

The project site is in the potential dam inundation area for Santa Felicia Dam. The dam meets applicable safety requirements and is inspected by the Division of Dam Safety, California Department of Water Resources, once every three years to ensure they meet all safety requirements and that necessary maintenance is performed (2005 Ventura General Plan Final EIR, August 2005). The project site is not protected by any levees.

The Proposed Project does not involve any new habitable or other structures and would not expose additional people or structures to risk of loss, injury or death involving flooding as a result of the failure of a levee or dam. Therefore, no new impacts have been identified and no new mitigation is required.

NO NEW IMPACT/NO IMPACT

- j. Would the project result in inundation by seiche, tsunami, or mudflow?*

Option 1 and 2

The project site is not subject to inundation by seiche or mudflow due to the topography and location of the project site. The project site is located in the Port of Hueneme, adjacent to the shoreline of the

Pacific Ocean and is subject to inundation by tsunami. According to the Tsunami Inundation Map for Emergency Planning, Oxnard Quadrangle, the entire project site is located in the Tsunami Inundation Area (California Department of Conservation, 2009).

The project would involve deepening Berths 1 and 2 along Wharf 1 as well as associated wharf improvements. As part of the improvements to the wharf, the existing fender pile system would be removed to allow a new coated-steel sheet piling toe wall to be installed. Additionally, a replacement fender system would be installed alongside the new toe wall. Therefore, although the project site is subject to tsunami-related hazards, the Proposed Project would reduce hazards due to potential inundation by tsunami compared to existing conditions. Therefore, no new impacts have been identified and no new mitigation is required.

NO NEW IMPACT/NO IMPACT

10 Land Use and Planning

	New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
Would the project have any of the following impacts?				
a. Physically divide an established community	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Conflict with an applicable habitat conservation plan or natural community conservation plan	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The 1999 EA/MND and 2004 Supplemental EA found that the project did not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect. Based on the additional analysis completed for the currently Proposed Project, there would be no new impacts associated with land use and planning.

a. *Would the project physically divide an established community?*

Option 1 and Option 2

Berth deepening, structural berth improvements at the Port of Hueneme, and beach nourishment in the City of Port Hueneme would not involve the construction of a road or other facility that would physically divide an established community. The 1999 EA/MND and 2004 Supplemental EA for the previously approved, larger-scale project identified no impacts to established communities. This project involves the same actions, but on a smaller scale and a smaller footprint, therefore, this project would also result in no impacts to established communities. Consequently, no new impacts have been identified and no new mitigation is required.

NO NEW IMPACT/NO IMPACT

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

Option 1 and Option 2

The project would allow for berth deepening, structural berth improvements at the Port of Hueneme, and beach nourishment in the City of Port Hueneme. Berth deepening and structural improvements are

outlined in the Port Master Plan and do not to conflict with the plan. The City of Port Hueneme and the OHD have an agreement to allow for beach nourishment at Hueneme Beach since the beach experiences periodical erosion and therefore, local nourishment is beneficial to the beach and the city. The only stipulation in the agreement is that the transfer of dredge spoils to Hueneme Beach shall be accomplished by way of pipe and not by truck. Since the project would comply with this stipulation, no conflict with this agreement would occur.

Consequently, the Proposed Project would be consistent with the Port Master Plan, Port Environmental Management Framework and the agreement between the City of Port Hueneme and the OHD. The 1999 EA/MND and 2004 Supplemental EA found that the project did not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect. No new impacts have been identified and no new mitigation is required.

NO NEW IMPACT/NO IMPACT

- C. Would the project conflict with an applicable habitat conservation plan or natural community conservation plan?*

Option 1 and Option 2

As discussed in Section 5, *Biological Resources*, the project would not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. The 1999 EA/MND and 2004 Supplemental EA found that the project did not 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 new impacts have been identified and no new mitigation is required.

NO NEW IMPACT/NO IMPACT

11 Mineral Resources

	New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
Would the project have any of the following impacts?				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The 1999 EA/MND concluded that the project would not result in impacts to mineral resources. The Supplemental Environmental Assessment from 2004 does not further study mineral resources. No new impacts were found based on the analysis included for the currently Proposed Project

- 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?*
- 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?*

Option 1 and Option 2

According to the State of California Department of Conservation and Ventura County General Plan, the site is not located in an MRZ-2 or higher zone or area with significant PCC-Grade aggregate resources (CGS 2016; Resources Appendix 2011).

As the project is not located in an area of known mineral resources nor would implementation of the Proposed Project contribute to the loss of any minerals, no impact would occur. As stated in the previous 1999 MND and 2004 Environmental Assessment, the conclusion of no impact to mineral resources remains valid.

NO NEW IMPACT/NO IMPACT

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12 Noise

	New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
Would the project result in any of the following impacts?				
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. A substantial permanent increase in ambient noise levels above those existing prior to implementation of the project	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above those existing prior to implementation of the project	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. For a project located in 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	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. For a project near a private airstrip, would it expose people residing or working in the project area to excessive noise	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Previous Studies

The 1999 EA/MND concluded that mitigation was necessary in order to reach acceptable noise levels in the City of Port Hueneme. The EA/MND states that the contractor constructing the wharf improvements would be required to provide adequate sound barriers around the site and construction hours for wharf improvements would be restricted to between 7:00 a.m. and 10:00 p.m.. Doing so would maintain noise levels to the acceptable exterior noise standard of 55 dBA.

The 2004 Supplemental EA stated that dredging, disposal, and wharf improvement construction activity is expected to have adverse, but not significant noise impacts to fish because noise would be temporary and would affect a relatively small area, involving short, high intensity noises. The EA stated that most fish would avoid the dredge area due to turbidity and noise, resulting in a temporary loss of habitat. Further, the EA concluded that noise effects may be indirectly beneficial, as it causes the fish to avoid the

direct mechanical effects of the dredging. Based on the analysis completed for the currently Proposed Project, no new impacts were found.

Noise Background

Noise is unwanted sound that disturbs human activity and can disturb fish and seabirds in the project vicinity. Environmental noise levels typically fluctuate over time and different types of noise descriptors are used to account for this variability. Noise level measurements include, intensity, frequency, and duration, as well as time of occurrence. Noise level (or volume) is generally measured in decibels (dB) using the A-weighted sound pressure level (dBA). Sound pressure level is measured on a logarithmic scale with the 0 dB level based on the lowest detectable sound pressure level that people can perceive (an audible sound that is not zero sound pressure level). Based on the logarithmic scale, a doubling of sound energy is equivalent to an increase of 3 dBA and a sound that is 10 dBA less than the ambient sound level has no effect on ambient noise. Because of the way the human ear works, a sound must be about 10 dBA greater than the reference sound to be judged as twice as loud. In general, a 3 dBA change in community noise levels is noticeable, while 1-2 dBA changes generally are not perceived. Quiet suburban areas typically have noise levels in the range of 40-50 dBA, while arterial streets are in the 50-60+ dBA range. Normal conversational levels are in the 60-65 dBA range, and ambient noise levels greater than 65 dBA can interrupt conversations.

Noise levels typically attenuate (or drop off) at a rate of 6 dBA per doubling of distance from point sources (such as construction equipment). Noise from lightly traveled roads typically attenuates at a rate of about 4.5 dBA per doubling of distance. Noise from heavily traveled roads typically attenuates at about 3 dBA per doubling of distance; while noise from a point source typically attenuates at about 6 dBA per doubling of distance. Noise levels may also be reduced by the introduction of intervening structures. For example, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA, while a solid wall or berm that breaks the line-of-sight reduces noise levels by 5 to 10 dBA. The construction style for dwelling units in California generally provides a reduction of exterior-to-interior noise levels of about 25 dBA with closed windows (Federal Highway Administration [FHWA] 2006).

Vibration is a unique form of noise because its energy is carried through buildings, structures, and the ground, whereas sound is simply carried through the air. Thus, vibration is generally felt rather than heard. Some vibration effects can be caused by noise (e.g., the rattling of windows from passing trucks). This phenomenon is caused by the coupling of the acoustic energy at frequencies that are close to the resonant frequency of the material being vibrated. Typically, ground-borne vibration generated by manmade activities attenuates rapidly as distance from the source of the vibration increases. The ground motion caused by vibration is measured as particle velocity in inches per second and is measured in vibration decibels (VdB).

The vibration velocity level threshold of perception for humans is approximately 65 VdB. Most perceptible indoor vibration is caused by sources inside buildings such as the operation of mechanical equipment, movement of people, or the slamming of doors. Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads.

Sensitive Receptors

Some land uses are more sensitive to ambient noise levels than other uses due to the amount of noise exposure and the types of activities involved. For example, residences, motels, hotels, schools, libraries, churches, nursing homes, auditoriums, museums, cultural facilities, parks, and outdoor recreation areas are more sensitive to noise than commercial and industrial land uses. There are no surrounding sensitive receptors contained in the Port. However, nearby residences would be subject to construction related noise generated from the project. Nearby receptors are shown in Table 8. The nearest receptors that

have the potential to be impacted by the wharf and berth improvements are the residents along Market Street approximately 860 feet away. The same residences may potentially experience construction noise from the dredging, which would be 1,370 feet away. Residences along East Surfside Drive would be approximately 1,500 feet away from the proposed beach nourishment activities.

Table 8 Proximity of Receptors to Project Construction Activity

Receptor	Construction Activity	Distance from Activity (feet)
Market Street Residences	Dredging	1,370
	Berth/Wharf Improvement	860
	Beach Nourishment	2,000
East Surfside Drive Residences	Dredging	2,000
	Wharf Improvement	1,700
	Beach Nourishment	1,500

Existing Noise Setting

The major sources of noise at the site include port operations, beach recreation transportation (automobiles and light planes) and waves crashing at the beach. Noise measurements were taken at the Port and at nearby receptor locations where residents have the potential to be impacted from project related noise. The locations of these noise measurements are shown on Figure 3. The results of these measurements are shown in Table 9.

Table 9 Noise Monitoring Results

Measurement Number	Measurement Location	Distance from Port	Primary Noise Source	Sample Time	Leq (dBA)
1	Berth 1	On-Site	Port-related noise. Ship engines and beeping, birds	2:32 P.M. – 2:47 P.M.	65.5
2	East Surfside Drive	1000+ feet	Port-related noise. Ships beeping	3:15 P.M. – 3:30 P.M.	58.7
3	Ponoma St/ E Scott Street	200+ feet	Port-related noise. Vehicles on roadways.	3:46 P.M. – 4:01 P.M.	55.4

Source: Field visit using ANSI Type II Integrating sound level meter, November 3, 2016

Appendix B provides noise monitoring data sheets and monitoring locations.

Figure 3 Noise Measurement and Sensitive Receptor Locations



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Fig 3 Noise Measurement Location 20170118

- a. *Would the project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*
- d. *Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?*

Option 1 and Option 2

The Proposed Project involves the deepening of berths in the Port of Hueneme, as well as the construction and improvement of the existing wharves. The Proposed Project would not involve a change in use on the project site, but would modernize the wharf and deepen the berths to provide deep-draft vessel continuity from the harbor, through the channel and to Berths 1 and 2 along Wharf 1. These deep-draft vessels already access the berths, but they are required to wait for higher tide to transit the channel and come to berth. The Proposed Project would not change existing operational noise at the Port, therefore, this analysis focuses on the Project's noise impacts from construction activities and haul trips.

Since there are no sensitive receptors located in the Port, noise impacts are analyzed for the receptors in the City of Port Hueneme, with comparison the city's noise standards. The city's noise level limits are shown in Table 10.

Table 10 City of Port Hueneme Exterior Noise Level Limits

Land Use	Time Intervals	Interior Noise Level (dBA)	Exterior Noise Levels (dBA)
Zone II -Residential Properties	7 a.m. to 10 p.m.	45	55
	10 p.m. to 7 a.m.	45	50

Source: City of Port Hueneme Municipal Code Chapter 5, Noise Control.

Section 3439 of the City of Port Hueneme Municipal Code states that for construction of buildings and structures:

Between the hours of seven p.m. of one day and seven a.m. of the next, Monday through Saturday, and no earlier than 9 a.m. or later than 6 p.m. on Sunday and federal holidays, no person adjacent to or within any residential zone in the city shall operate power construction equipment or tools or perform any outside construction or repair work on buildings or structures, or operate any pile driver, steam shovel, pneumatic hammer, steam or electric hoist, or other construction device so as to create any noise which exceeds the noise level limits of this Article. The performance of emergency work is exempt from the provisions of this Section.

Consequently, the city's exterior noise level limits apply to construction activities, if those activities occur between 7 p.m. and 7 a.m. Monday through Saturday or earlier than 9 a.m. or after 6 PM on Sunday or federal holidays. The City of Port Hueneme and the Port have an agreement which states that all dredging and construction activities shall be conducted only between the hours of 8 a.m. and 6 p.m. on Mondays through Saturdays (1987). The transport of construction materials and dredge spoils over and on streets of the city shall also be limited to these days and hours. Therefore, project construction would comply with the noise restrictions established in Section 3439 of the Municipal Code and exterior noise level limits would not be applicable to construction.

Construction Activity Noise

Impacts would be considered significant if project construction would expose sensitive receptors to a substantial increase in noise levels. Project construction would begin in the first quarter of 2018 and last approximately 9 months (only during the months from (October 1 to March 1). During the construction phase of the project, the possibility exists of exposing people to noise levels from project construction equipment. As indicated above, sensitive receptors closest to the project are located outside of the Port boundaries, but are still susceptible to project related noise. Table 11 shows typical maximum noise levels produced by construction equipment at distances to the nearest sensitive receptors. Peak noise levels associated with the use of individual pieces of heavy equipment would range from about 50 to 64 dBA at 860 feet from the source (the distance to the nearest sensitive receptor), depending upon the types of equipment in operation at any given time and phase of construction.

Table 11 Typical Maximum Noise Levels from Construction Equipment

Equipment	Maximum Noise Levels (dBA)		
	860 feet	1,370 feet	2,000 feet
Air Compressors	56	52	49
Cement and Mortar Mixers	60	56	53
Concrete Saws	65	61	58
Cranes	63	59	56
Excavators	60	56	53
Forklifts	58	54	51
Generators	56	52	49
Graders	60	56	53
Pavers	64	60	57
Paving Equipment	60	56	53
Rollers	49	45	42
Rubber Tired Dozer	60	56	53
Scrapers	64	60	57
Tractor/Loader/Backhoe	60	56	53
Tugboat	65	61	58
Welders	48	44	41

Source: FTA 2006; FHWA 2006; Port of Los Angeles, accessed December 2016.

Table 12 shows the maximum expected noise levels at the residences nearest the project site during different phases of construction. This analysis is representative of worst case conditions, since it assumed that all the equipment contained on site would operate simultaneously and continuously for at least 70 percent of the work day. Peak construction noise levels could be up to 68 dBA Leq during the demolition and concrete pouring phases at the nearest sensitive receptor, located 860 feet from project construction. Existing noise levels at the nearest sensitive receptor was measured at 55.4 dBA Leq (noise measurement 3 in Table 9). Hourly construction noise would temporarily exceed existing noise levels by

up to 12.6 dBA during construction without mitigation. However, the 1999 MND requires that the contractor constructing the wharf improvements provide adequate sound barriers around construction activities. This mitigation measure is required for the Proposed Project, but is not considered new mitigation because it is already required per the 1999 EA/MND. Temporary sound barriers generally reduce noise levels from a source by 10 dBA (FTA 2006). Therefore, with the inclusion of sound barriers required by the 1999 MND, construction noise would temporarily exceed existing noise levels at the nearest receptor by approximately 2.6 dBA Leq. As discussed under Noise Setting above, a 3 dBA change in community noise levels is noticeable, while 1-2 dB changes generally are not perceived. Consequently, the increase in ambient noise levels at the nearest sensitive receptor due to project construction would be imperceptible and there would be no impact related to construction noise.

Table 12 Noise Levels During Construction Phases

Construction Phase	Distance Away from Phase (feet)	Total Leq (dBA)
Market Street Receptor		
Demolition	860	68
Toe Wall Installation	860	66
Fender Installation	860	66
Concrete	860	68
Dredging	1,370	64
Beach Nourishment	2,000	54
East Surfside Drive Receptor		
Demolition	1,700	62
Toe Wall Installation	1,700	60
Fender Installation	1,700	60
Concrete	1,700	62
Dredging	2,000	61
Beach Nourishment	1,500	56

See Appendix B for Calculations

Haul Trip Noise

For haul trip-related noise, impacts are considered significant if project-generated traffic results in exposure of sensitive receptors to a substantial increase in noise levels. Implementation of the Proposed Project would involve demolishing and hauling existing wharf and berth materials from the project. These materials would need to be taken by truck from the Port, through surface city streets, and to a nearby landfill.

The Port of Hueneme's Agreement with the City of Port Hueneme states that all vehicles associated with construction activities must enter/exit through the Main Gate and access the city streets using Port Hueneme Road. A Traffic Study done by Associate Transportation Engineers has documented the existing levels and amount of traffic going through the Main Gate (2016). The report states that roughly 3,015 average daily trips pass through the Main Gate, with approximately 605 of these trips from heavy trucks. Demolition activities would result in approximately 362 haul trips by heavy trucks over 20 days, or approximately 19 trips per day. This represents a three percent increase in existing heavy truck trips

leaving the Main Gate and travelling on Port Hueneme Road. As discussed in Noise Setting, due to the logarithmic nature of noise, a doubling of noise sources is required to increase noise levels by 3 dBA and a 3 dBA change in community noise levels is noticeable, while 1-2 dB changes generally are not perceived. Therefore, a doubling of heavy duty truck traffic would be necessary to increase noise by 3 dBA. As the project would temporarily increase noise by two percent, roadway noise would incrementally increase and would not be noticeable. Therefore, there would be no impact related to haul truck noise.

NO NEW IMPACT/NO IMPACT

- b. *Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?*

Option 1 and Option 2

The Federal Transit Administration (FTA) describes the general human response to different levels of groundborne vibration velocity levels as follows (2006):

- 75 VdB - Approximate dividing line between barely perceptible and distinctly perceptible
- 85 VdB - Vibration acceptable only if there are an infrequent number of events per day
- 90 VdB - Difficulty with tasks such as reading computer screens

This analysis uses the FTA's vibration impact thresholds to determine whether groundborne vibration would be "excessive." The FTA recommends an 80 VdB threshold for infrequent events at residences and buildings where people normally sleep. In terms of groundborne vibration impacts on structures, the FTA states that groundborne vibration levels in excess of 100 VdB would damage fragile buildings and levels in excess of 95 VdB would damage extremely fragile historic buildings.

Table 13 identifies various vibration velocity levels at various distances from the source for the types of construction equipment that generally generate high levels of vibration and would be expected to be used for project construction. A distance of 860 feet represents the distance to the nearest sensitive receptor. The primary sources of man-made vibration are blasting, grading, pavement breaking, and demolition. As shown in Table 8, vibratory rollers would generate the highest vibration levels. At a distance of 860 feet, rollers would generate a vibration level of 63 VdB, which is less than the 80 VdB threshold for infrequent events at residences recommended by FTA. Furthermore, 63 VdB is less than the approximate dividing line between barely perceptible and distinctly perceptible. Therefore, as concluded in the 1999 MND and 2004 Environmental Assessment, there would be no impact.

NO NEW IMPACT/NO IMPACT

Table 13 Vibration Source Levels for Construction Equipment

Equipment	Approximate VdB	
	25 Feet	860 Feet
Large Bulldozer	87	56
Loaded Truck	86	55
Vibratory Roller	94	63

Source: Federal Railroad Administration 2006

- c. *Would the project result in a substantial permanent increase in ambient noise levels above levels existing without the project?*

Option 1 and Option 2

The Proposed Project involves the deepening of berths in the Port of Hueneme, as well as the construction and improvement of the existing wharves. The Proposed Project would not involve a change in use on the project site, but would modernize the wharf and deepen the berths to provide deep-draft vessel continuity from the harbor, through the channel and to Berths 1 and 2 along Wharf 1. These deep-draft vessels already access the berths, but they are required to wait for higher tide to transit the channel and come to berth. Therefore, the Proposed Project would not result in a permanent increase in the existing noise environment. This would result in no new impacts as concluded in the 1999 MND and 2004 Environmental Assessment.

NO NEW IMPACT/NO IMPACT

- e. *For a project located in 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?*
- f. *For a project in the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise?*

Option 1 and Option 2

The closest public airport is Oxnard Airport, located about 3 miles north, while the closest private airport is the Point Mugu, about 4 miles east of the project site. The project site is not in an airport land use plan or in the vicinity of private airstrip (Oxnard Airport, accessed December 2016). As concluded in the 1999 MND and 2004 Environmental Assessment, there would be no impact.

NO NEW IMPACT/NO IMPACT

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13 Population and Housing

	New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
Would the project result in any of the following impacts?				
a. Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Displace substantial amounts of existing housing, necessitating the construction of replacement housing elsewhere	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The 1999 EA/MND and 2004 Supplemental EA for the previously approved, larger-scale project identified no impacts to population growth, housing or displacement of people. Similarly, no new impacts were found based on the analysis completed for the currently Proposed Project.

- Would the project induce substantial 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)?*
- Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?*
- Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?*

Option 1 and Option 2

The Proposed Project would not involve the demolition of any residential units. Thus, the project would not displace housing units or people, or necessitate the construction of replacement housing. The 1999 EA/MND and 2004 Supplemental EA for the previously approved, larger-scale project identified no impacts to population growth, housing or displacement of people. This project involves the same actions, but on a smaller scale and a smaller footprint, therefore, this project would also result in no impacts to population growth, housing or displacement of people. Consequently, no new impacts have been identified and no new mitigation is required.

NO NEW IMPACT/NO IMPACT

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14 Public Services

	New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
Would the project result in any of the following impacts?				
a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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:				
1. Fire protection	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Police protection	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Schools	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. Parks	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5. Other public facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The 1999 EA/MND concluded that the project would not result in any significant impacts towards public services. All checklist questions had no impact except for impacts to parks, which were considered to be less than significant. The 2004 Supplemental EA did not include any analysis pertaining to public services. Based on the analysis completed for the currently Proposed Project, no new impacts were found related to public services.

- a.1. *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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 fire protection?*

Option 1 and Option 2

Fire protection is provided by the Ventura County Fire Department (VCFD). The Fire Department provides medical, paramedic, and other first aid rescue service. The fire station closest to the site is VCFD Station 53, located at 304 Second Street, just over 500 feet east of the site. The site is in the existing service area of the VCFD. New fire protection facilities are not anticipated at this time, and the Proposed Project would not affect community fire protection services after work is completed. There would be no new anticipated impacts from the conclusions made in the 1999 MND.

NO NEW IMPACT/NO IMPACT

- a.2. *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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 police protection?*

Option 1 and Option 2

The City of Port Hueneme has its own police force composed of 24 sworn officers, and 8 full-time staff members. With a service area of less than 5 miles, the response times are generally within five minutes (City of Port Hueneme). Because the project site is in the Port Hueneme Police force service area, and the project does not include any buildings, it would not create the need for new or expanded police protection facilities. There would be no new anticipated impacts from the conclusions made in the 1999 MND.

NO NEW IMPACT/NO IMPACT

- a.3. *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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 schools?*

Option 1 and Option 2

The modified project does not include residences that would generate new students in the Hueneme or Oxnard School Districts. The modified project would not result in any new significant impacts with regard to schools.

NO NEW IMPACT/NO IMPACT

- a.4. *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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 parks?*

Option 1 and Option 2

The Proposed Project would not involve the addition of any buildings attributing to the creation of jobs, population growth or add residents to the city. Thus, it would not increase demand for recreational services or cause a decrease in the level of service provided by the city. The project would not result in new significant effects or a substantial increase in the severity of identified significant effects to recreation activities. Impacts towards Recreation are further discussed in Section XV (Recreation).

NO NEW IMPACT/NO IMPACT

- a.5. *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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 other public facilities?*

Option 1 and Option 2

The Proposed Project would not involve the addition of any buildings attributing to the creation of jobs, population growth or add residents to the city. Impacts to other public facilities (e.g., sewer, storm drains, and roadways) are discussed in Section 16 (Transportation/Traffic) and Section 17 (Utilities and Public Services) of this Initial Study.

NO NEW IMPACT/NO IMPACT

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15 Recreation

	New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
Would the project result in any of the following impacts?				
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	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The 1999 EA/MND concluded that there were no impacts to recreation. The 2004 Supplemental EA stated that a few adverse impacts would occur from the project. During the beach nourishment, the temporary closure of Hueneme Beach might be needed during the construction schedule. However, the EA concluded that the project would not result in any significant impacts because project construction is occurring during slow season for beach activity (October 1st to March 1st). Based on the analysis completed for the currently Proposed Project, there would be no new impacts.

- 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?*
- Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?*

Option 1 and Option 2

The City of Port Hueneme owns and operates 90 acres of park land and approximately 6 city parks that provide access a variety of different activities such as: children's play equipment, open grass areas, picnic tables, barbeque pits, hardball and softball fields, public restrooms, tennis courts, basketball courts, and walking and biking paths. The park closest to the Proposed Project is the Dewar Park, which is adjacent to the Port and 250 feet east of the site.

The city's estimated 2016 population is 22,702 (California Department of Finance, 2016). Therefore, the ratio of public parks to residents in the city is 4.1 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.

The Proposed Project would not add population and therefore would not affect any existing or planned parks. The parkland ratio would remain 4.1 acres per 1,000 residents after development of the Proposed Project. Therefore, the project would not alter citywide demand for parks.

As a recreational activity, the port provides public fishing opportunities. Impacts from the developed project are temporary, and would not affect fishing from the Pier J public fishing area.

Some of the suitable dredged sediment would be placed on Hueneme Beach or in the nearshore zone for beach nourishment. The placement of dredged sand and sediment would restrict beach access during

project development, but is only a temporary impact. Beach nourishment would be environmentally beneficial for both the coastal ecology of the beach, as well as provide more access to sandy beach area for recreational uses. The 1999 EA/MND and 2004 Supplemental EA identified no impacts related to recreational uses. Since this project involves similar actions as the previously approved project, this project would result in no new impacts.

NO NEW IMPACT/NO IMPACT

16 Transportation

	New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
Would the project result in any of the following impacts?				
a. Conflict with an applicable plan, ordinance or policy establishing a measure of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways, and freeways, pedestrian and bicycle paths, and mass transit	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. Conflict with adopted policies, plans, or programs regarding public transit, bikeways, or pedestrian facilities, or otherwise substantially decrease the performance or safety of such facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The following section discusses the potential impacts associated with the project related to transportation. The 1999 EA/MND and 2004 Supplemental EA found a less than significant impact for impact area a and no impact for impact areas b-f. Based on the analysis completed for the currently Proposed Project, there would be no new impacts related to transportation.

- a. *Would the project conflict with an applicable plan, ordinance or policy establishing a measure of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways, and freeways, pedestrian and bicycle paths, and mass transit?*
- b. *Would the project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?*

The Ventura County Congestion Management Program (CMP) road network includes the state highway system and principal arterials in Ventura County. The CMP outlines the Port of Hueneme Truck Access Corridor, which includes Hueneme Road-Rice Avenue. Although this corridor is designated for commercial operations and cargo transport, the same route would be utilized for vendors bringing and removing equipment from the site and hauling material to and from the site as well. As stated in the CMP, the Port generates an annual average of about 250 trucks per day that enter and exit through the main gate at Hueneme Road (CMP, 2009). The CMP also states that Port-related truck traffic represents a small percentage of the overall number of trucks traveling on roadways around Port Hueneme and Oxnard. For example, Port-related truck trips on Hueneme Road just east of Ventura Road was found to contribute about 25 percent of the total trucks traveling on this segment of roadway. This percentage diminishes rapidly further away from the Port's main gate as trucks disperse throughout the area (CMP, 2009).

Construction of the project would require worker, vendor, and hauling trips and associated vehicle miles traveled (VMT), which is shown in Table 14.

Table 14 Estimated Project Traffic Trip Generation

Phase	Worker		Vendor		Hauling		Total VMT
	# Trips	Distance ¹	# Trips	Distance ¹	# Trips	Distance ¹	
Mobilization ²	0	10.8	25	7.3	0	20	182.5
Demolition ¹	33	10.8	0	7.3	362	20	7,596.4
Toe Wall Installation ¹	1,006	10.8	393	7.3	0	20	13,733.7
Fender Installation ¹	1,006	10.8	393	7.3	0	20	13,733.7
Concrete Repairs and Bollard Installation ¹	33	10.8	0	7.3	0	20	356.4
Dredging ¹	33	10.8	0	7.3	0	20	365.4
Demobilization ¹	0	10.8	25	7.3	0	20	182.5
Total							36,142.0

¹ CalEEMod default

² Number of trips associated with Procurement, Mobilization, and Demobilization Phases calculated based on number of pieces of equipment estimated to be used onsite during construction of the Proposed Project.

Source: CalEEMod, Table 3.0: Construction Detail, See Appendix A for full CalEEMod results

As shown in Table 14, construction of the project would result in approximately 36,142 VMT. The additional VMT associated with the project would be temporary in nature, related only to the construction of the project and lasting approximately nine months. According to the CMP's Peak Period Network Performance Summary, operating speeds remain good with stable traffic flow at the two monitored intersections in the City of Port Hueneme on Ventura Road. Additionally, the CMP outlines the current level of service in the Cities of Port Hueneme and Oxnard. Based on Level of Service (LOS) data submitted by Caltrans and the City of Port Hueneme, the intersections of Pleasant Valley Road and Hueneme Road along Ventura Road experienced a level of service of A or B during both a.m. and p.m. peak hours during 2008. The only intersection currently experiencing LOS D along the Port of Hueneme Access Corridor is along Rice Avenue at the intersection of the Highway 101 southbound off-ramp. The VMT increases associated with construction of the project would be temporary, restricted to the construction period, and thereby dispersed over a nine month time period; as a result, although the project would temporarily increase VMT on area roadways and intersections (including along Rice Avenue at the intersection of the Highway 101 southbound off-ramp), conditions would remain unchanged during operation. Implementation of the project would therefore not conflict with an applicable plan, ordinance, or policy establishing a measure of effectiveness for the performance of the circulation system or an applicable congestion management program. The intersection of Rice Avenue and Hueneme Road currently operate at LOS A during the a.m. and p.m. peak. Therefore, there would be no new impacts associated with an applicable plan, ordinance, or policy establishing a measure of effectiveness for the performance of the circulation system or an applicable congestion management program.

NO NEW IMPACT/NO IMPACT

- c. *Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?*

Option 1 and 2

The airport closest to the project site is the Oxnard Airport located approximately 3.5 miles north of the project site. The project would not affect air traffic at this airport. Therefore, there would be no new impacts associated with the project that would result in a change in air traffic patterns.

NO NEW IMPACT/NO IMPACT

- d. *Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?*

Options 1 and 2

The project does not include any design features that would increase hazards. The project would not involve a change in use on the project site, nor would it involve the use of vehicles or equipment, such as farm equipment or tractors, that would be incompatible with the existing land uses surrounding the area.

The project would include deepening Berths 1 and 2 along Wharf 1 to approximately -40 feet MLLW to provide deep-draft vessel continuity from the harbor, through the channel and to Berths 1 and 2 along Wharf 1, to accommodate larger boats, and include associated wharf improvements. The new features would be built to current design standards and would not include any components that would create hazardous conditions. The project would not result in any new impacts associated with an increase in hazards due to a design feature or incompatible use.

NO NEW IMPACT/NO IMPACT

e. *Would the project result in inadequate emergency access?*

Options 1 and 2

Emergency vehicles can currently access the project site by land via existing roadways and by water in the Port of Hueneme Harbor. The project would not involve construction of new structures such that inadequate emergency access would occur. The site is located in the Harbor District boundaries and is not open to or accessible by the public. Nonetheless, the project would be required to conform to safety regulations that specify adequate emergency access measures. Additionally, the entrance roads to the Port of Hueneme and the project site, Ponomo Street, and East Hueneme Road, lack any identified significant safety hazards. Furthermore, the project would deepen the berths to provide more access to ships in and out of the harbor, which would improve existing conditions. The project would not hinder emergency access or evacuation and the project would not result in any new impacts.

NO NEW IMPACT/NO IMPACT

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

Options 1 and 2

The site is located inside the Harbor District boundaries and is not open to or accessible by the public. There are no applicable adopted plans or policies regarding public transit, bikeways, or pedestrian facilities as the project site is not accessible to public transit, bicyclists, or pedestrians, and does not include these amenities. Therefore, the project would not affect public transit or bikeway/pedestrian facilities and would not conflict with adopted public transit or bikeway/pedestrian policies, plans, or programs.

NO NEW IMPACT/NO IMPACT

17 Utilities and Service Systems

	New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
Would the project result in any of the following impacts?				
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. 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	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. Comply with federal, state, and local statutes and regulations related to solid waste	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The 1999 EA/MND concluded that the project would result in no impacts to each of the checklist questions. The 2004 Supplemental EA concluded that the project would not result in any significant impacts towards utilities and service systems. Likewise, based on the additional analysis completed for the currently Proposed Project, there would be no new impacts related to utilities and service systems.

- a. *Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?*
- b. *Would the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

Option 1 and Option 2

The City of Port Hueneme's primary source of water is from the Port Hueneme Water Agency (PHWA). The PHWA is a Joint-Powers Agency that provides wholesale water to the city, Naval Base Ventura County Port Hueneme and Point Mugu, and the Channel Islands Beach Community Services District.

The City of Port Hueneme operates the water treatment plant on behalf of the PHWA. The treatment plant uses two proven desalination technologies, namely Reverse Osmosis (RO), and Nanofiltration (NF) to produce high quality drinking water. The United Water Conservation District (UWCD) delivers the source water for these processes from their El Rio water wells to the PHWA Brackish Water Reclamation Demonstration Facility (Treatment Plant). The treatment plant purifies and softens the well water by removing calcium salts (hardness) and other constituents. (City of Port Hueneme 2016).

The Proposed Project includes plans to dredge sediment and sand out of the Port of Hueneme. As a result, the project would not affect water treatment facilities or affect storm water drainage facilities. There are no impacts as concluded in the 1999 MND.

NO NEW IMPACT/NO IMPACT

- c. *Would the project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

Option 1 and Option 2

As discussed in Section IX(c), Hydrology and Water Quality, the Proposed Project would not increase the amount of impervious surfaces on the project site. Therefore, the Proposed Project would not increase stormwater runoff compared to existing conditions. Stormwater runoff levels would be comparable to existing conditions and stormwater would continue to flow to gutter facilities and catch basins alongside the Port. The Proposed Project would not require the construction of new storm water drainage facilities or expansion of existing facilities.

NO NEW IMPACT/NO IMPACT

- d. *Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?*
- e. *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?*

Option 1 and Option 2

The Proposed Project plans to dredge sediment and sand out of the Port of Hueneme. As a result, the project would not be affecting water treatment facilities, supplies or affect storm water drainage facilities.

Potable water would continue to be provided by the City of Port Hueneme. Implementation of the project would not result in any additional potable water use, therefore there are no impacts.

NO NEW IMPACT/NO IMPACT

- f. *Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?*
- g. *Would the project comply with federal, state, and local statutes and regulations related to solid waste?*

Option 1 and Option 2

Solid waste disposal is an issue of regional and statewide significance, especially as landfills are approaching and/or reaching their capacities. In addition, the ability to develop new landfills is complicated by numerous environmental, regulatory and political concerns. Recycling and reusing waste materials provides significant additional environmental benefits such as reducing resource and energy use, conserving water, and reducing pollution, but recycling and reusing waste materials has not eliminated the need to develop new landfills.

Assembly Bill 939, passed in 1989, required all jurisdictions in California to increase their landfill diversion to 50 percent by the year 2000. In addition, AB 341 passed in 2012, sets a new statewide goal of achieving 75 percent landfill diversion by 2020. The bill also requires businesses generating more than 4 cy of solid waste to recycle and requires owners of multi-family housing with 5 or more units to provide recycling for their tenants. New development projects in Ventura are required to implement site-specific source reduction, recycling, and re-use programs to comply with AB 939 and AB 341.

Construction and demolition projects can generate large amounts of waste. Based on the demolition estimates, approximately 7.3 million lbs (3,661 tons) of demolition debris would need to be disposed of, as outlined in Table 2. This includes all of the existing composite piles, timber piles, rubber fenders, timber wales, timber chocks, chain assemblies, rip rap, ladders, double bitts, cleats, and concrete from Berths 1-3 as well as from the wharf.

Most of the waste is recyclable, including concrete, wood, and metal. As of January 1, 2011, the new California Green Building Standards Code (California Code of Regulations, Title 24, Part II, available online at <http://www.bsc.ca.gov/Home/CALGreen.aspx>) went into effect. Section 5.408 of the California Green Building Standards Code requires all new construction projects to file and implement a construction and demolition Waste Management Plan (WMP). The WMP must be submitted and approved as part of the plan-check process before a building permit can be issued. Implementation of the WMP must result in diversion of at least 50 percent of the waste generated during a construction project. Additionally, city Municipal Code Section 7216.2 states that persons providing bins for the temporary accumulation of construction and demolition waste in the city shall implement measures to divert construction and demolition waste from landfilling and to recycle or reuse construction and demolition waste to the maximum extent practicable and each person applying for a building or demolition permit shall submit a construction and demolition waste diversion plan to the city as part of the application. Based on information provided by the applicant's engineer, over half of the rip rap stone (approximately 900 cy) would be salvaged.

The Toland Road Landfill (maximum permitted capacity of 1,500 tons per day) would be the presumed disposal location, as it is a public Class III landfill in Santa Paula, California, approximately 25 miles northeast of the Port (CalRecycle, 2016). Two other possible locations are the Del Norte Regional Recycling and Transfer Station located in Oxnard and the Simi Valley Landfill (SVLRC). The SVLRC is a fully permitted non-hazardous municipal solid waste landfill and recycling facility located 25 miles northeast of the Port. The SVLRC provides approximately 60 percent of Ventura County's daily waste disposal needs, and recycles approximately 25 percent of all tons accepted. With a maximum permitted capacity of 1,500 tons per day and a remaining capacity of 21,983,000 cy, the Toland Road Landfill would have sufficient permitted capacity to accommodate the project's solid waste disposal needs. Additionally, the

City of Port Hueneme

Port of Hueneme Berth Deepening and Wharf Improvement Project

project would comply with federal, state, and local statutes and regulations related to solid waste. There would be no new impacts associated with these checklist items.

NO NEW IMPACT/NO IMPACT

18 Tribal Cultural Resources

	New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in a Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 2024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The California Native American Heritage Commission (NAHC) was contacted and a review of the Sacred Lands File (SLF) requested on December 12, 2016. The NAHC response, received December 14, 2016, stated that the SLF search was completed with negative results. Rincon prepared and mailed informal outreach letters to 16 Native American individuals whose information is on file with Rincon's Ventura office on December 12, 2016. As of January 6, 2017, Rincon has received one response from Julie Tumamait-Stenslie of the Barbareno-Ventureño Band of Mission Indians, requesting additional information about project activities. Rincon responded, clarifying the scope of the project. Ms. Tumamait-Stenslie recommended that a Native American monitor be on hand during project ground-disturbance. As of January 6, 2017, no additional responses have been received.

One tribe, the San Gabriel Band of Mission Indians, has requested notification of projects by the Port under AB 52. The Port prepared and mailed a letter to the San Gabriel Band of Mission Indians on December 16, 2016. The Port placed a follow-up call to Chief Andrew Morales of the San Gabriel Band of Mission Indians on January 5, 2017. Chief Morales did not have any concerns with the Project and declined formal AB 52 consultation. Nevertheless, Chief Morales requested that the Port contact him if any tribal cultural resources were discovered during construction of the project. The Port of Hueneme

has completed their AB 52 consultation obligations with the decline of consultation by the San Gabriel Band of Mission Indians.

The Port of Hueneme Master Plan and Environmental Management Framework do not mention any tribal cultural resources, defined in Public Resources Code 21074, on site.

As of January 6, 2017, no tribal cultural resources have been identified in the project site. However, these results may change as responses from the NAHC and Native American contacts are received.

- a. *Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in a 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 § 5020.1 (k), or*
- b. *A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe.*

No tribal cultural resources have been identified in the project site at the time of this reporting. Because of the level of previous disturbance at the project site, no tribal cultural resources are expected to exist in the project site. However, this result may change upon receipt of SLF results and Native American consultation.

NO NEW IMPACT/NO IMPACT

19 Mandatory Findings of Significance

	New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
Does the project result in any of the following impacts?				
a. Have the potential to substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self- sustaining levels, eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. 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)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

Option 1 and Option 2

As discussed under Section IV, Biological Resources, and Section V, Cultural Resources, implementation of the Proposed Project would result in no new impacts on cultural resources and a less than significant impact with new mitigation incorporated to sensitive species and wildlife corridors. The 1999 EA/MND and 2004 Supplemental EA for the previously approved, larger-scale project identified less than significant impacts to cultural resources, sensitive species and wildlife corridors. However, new mitigation is required to reduce impacts to sensitive species to less than significant.

NEW MITIGATION IS REQUIRED

- 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)?*

Option 1 and Option 2

As described in the discussion of environmental checklist Sections 1 through 18, the project would have a reduced impact or no new impact/no impact, with respect to all environmental issues, excluding Biological Resources. Mitigation Measure B-1 through B-6 would reduce impacts associated with Biological Resources to a less than significant level.

Twelve resource areas (Aesthetics, Agricultural and Forest Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Mineral Resources, Population and Housing, Public Services, Recreation, and Tribal Cultural Resources) were determined to have no impact in comparison to existing conditions and therefore would not contribute to cumulative impacts.

With respect to GHG emissions, impacts are cumulative in nature as climate change is related to the accumulation of GHG's in the global atmosphere. GHG emissions associated with the Proposed Project were found have no impact/no new impact. Although cumulative increases in atmospheric GHG's may be significant, the Proposed Project's contribution to cumulative levels of GHG's would not be considerable since emissions associated with the Project would not exceed quantitative thresholds and proposed development would comply with and implement applicable plans and policies pertaining to GHG reduction.

According to the VCAPCD's Air Quality Assessment Guidelines, air quality impacts would be cumulatively considerable if a project is inconsistent with the AQMP. The project would have no impact/no new impact with respect to AQMP consistency, as the Project involves only temporary construction emissions and would not generate population growth or operational emissions. Therefore, the Project's air quality impacts would not be cumulatively considerable.

Cumulative impacts of several resource areas are addressed here, including: Biological Resources, Noise, Transportation, and Utilities and Service Systems (See CEQA Guidelines Section 15064(h)(3)). The cumulative analysis is based on the cumulative projects currently proposed in the City of Port Hueneme, and surrounding areas, including the following:

- Army Corps of Engineers Channel Deepening Project
- Port of Hueneme Shoreside Power Project
- Port of Hueneme Confined Aquatic Disposal Project
- City of Port Hueneme, Port Hueneme Beach Park Shore Protection Project
- City of Port Hueneme, Emergency Shoreline Stabilization
- City of Oxnard, Hueneme Road Widening
- CalTrans Highway 101/Highway 23 Widening Program
- Victoria Mixed-Use
- Surfside Motel

The Army Corps of Engineers Channel Deepening Project, Port of Hueneme Shoreside Power Project, and Port of Hueneme Confined Aquatic Disposal Project are in the harbor or limits of the OHD. All other projects are located in the City of Port Hueneme, surrounding Cities, or unincorporated Ventura County, such as the CalTrans Highway 101/Highway 23 Widening Program.

The geographic extent for the land disturbances is the project site, including the Wharf, Berth 1, 2, and 3, and Hueneme Beach. The geographic extent for noise impacts encompasses the Port of Hueneme and surrounding sensitive receptors, which includes residences located as close as 860 feet away from Berth 3, where demolition would take place. The geographic extent for solid waste analysis is the surrounding community and applicable landfill that would serve the project.

As noted in Section 4, *Biological Resources*, impacts to biological resources require new mitigation. Therefore, mitigation measures B-1 through B-6 have been included to reduce potential impacts. Incorporation of these mitigation measures would reduce impacts to wildlife to a less than significant level. With respect to Noise, Transportation, and Utilities and Service Systems, potential impacts would be temporary in nature and would not result in cumulative impacts. Adherence to the city's construction hour limits would ensure that all cumulative construction projects in the area of the Port would have less than significant impacts related to noise. As the project only involves temporary construction noise and it would adhere to the construction hour limits, noise impacts would not be cumulatively considerable. With respect to Utilities and Service Systems, and specifically solid waste accumulation, Municipal Code Section 7216.2 states that persons providing bins for the temporary accumulation of construction and demolition waste in the city shall implement measures to divert construction and demolition waste from landfilling and to recycle or reuse construction and demolition waste to the maximum extent practicable. Additionally, each person applying for a building or demolition permit shall submit a construction and demolition waste diversion plan to the city as part of the application. Thus, the project demolition debris would be recycled as feasible. During the demolition phase haul trucks would increase heavy duty truck traffic on Port Hueneme Road by three percent and would increase total traffic by <1 percent. This increase would not be substantial or long term, so it isn't cumulatively considerable. Therefore, with adherence to existing regulations and implementation of standard mitigation there would be no cumulative impacts. As such, cumulative impacts would be less than significant (not cumulatively considerable).

The 1999 EA/MND and 2004 Supplemental EA for the previously approved, larger-scale project also identified less than significant cumulative impacts. Therefore, no new impacts have been identified and no mitigation is required.

NO NEW IMPACT/NO IMPACT

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

Option 1 and Option 2

In general, impacts to human beings are associated with air quality, hazards and hazardous materials, and noise impacts. As detailed in the preceding sections, the Proposed Project would not result, either directly or indirectly, in adverse hazards related to air quality, hazardous materials or noise. Compliance with applicable rules and regulations would reduce potential impacts on human beings to a less than significant level. The 1999 EA/MND and 2004 Supplemental EA for the previously approved, larger-scale project identified less than significant cumulative impacts. Therefore, no new impacts have been identified and no mitigation is required.

NO NEW IMPACT/NO IMPACT

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List of Preparers

Rincon Consultants, Inc. prepared this IS-MND under contract to the Oxnard Harbor District. Christina Birdsey is the project contact from the Oxnard Harbor District. Rincon personnel involved in data gathering analysis, project management, and quality control include the following.

RINCON CONSULTANTS

Joe Power, AICP CEP, Vice President/Principal
Erik Feldman, MS, LEED AP, CARB Accredited Greenhouse Gas Verifier Senior Program Manager
Matthew Long, MESC, MPP, Project Manager
Derek Lerma, Marine Resources Manager/Health and Safety Officer
Lindsay Griffin, CISEC, QSP, Biologist/Project Manager
Lindsey Sarquilla, MESM, Associate Environmental Planner
Hannah Mize, Associate Environmental Planner
Lexi Journey, MESM, Associate Environmental Planner
Nik Kilpelainen, Associate Environmental Planner
Hannah Haas, Archaeologist & Assistant Project Manager

Valerie Salazar, Technical Editor / Production Department Manager
Debra Jane Seltzer, Document Production Specialist
Allysen Valencia, GIS Analyst

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Appendix A

Air Quality and Greenhouse Gas

POH Dredge - Ventura County, Annual

POH Dredge
Ventura County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	2,396.07	1000sqft	55.01	2,396,069.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	31
Climate Zone	8			Operational Year	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

POH Dredge - Ventura County, Annual

Project Characteristics -

Land Use - approx area of B1, B2, B3, Dredge area, and Beach

Construction Phase - Construction schedule provided by client and construction engineer

Off-road Equipment - Construction equipment provided by client and construction engineer

Off-road Equipment - Construction equipment provided by client and construction engineer

Off-road Equipment - Construction equipment provided by client and construction engineer

Off-road Equipment - Construction equipment provided by client and construction engineer

Off-road Equipment - Construction equipment provided by client and construction engineer

Off-road Equipment - Construction equipment provided by client and construction engineer

Trips and VMT -

Demolition - Based on client/construction engineer provided information

Grading -

POH Dredge - Ventura County, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	1,110.00	110.00
tblConstructionPhase	NumDays	1,110.00	60.00
tblConstructionPhase	NumDays	70.00	20.00
tblConstructionPhase	NumDays	110.00	20.00
tblConstructionPhase	NumDays	75.00	20.00
tblLandUse	BuildingSpaceSquareFeet	2,396,070.00	2,396,069.00
tblLandUse	LandUseSquareFeet	2,396,070.00	2,396,069.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2018	2020

2.0 Emissions Summary

POH Dredge - Ventura County, Annual

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	1.1758	10.5007	8.1994	0.0261	1.9043	0.2980	2.2022	0.5103	0.2823	0.7926	0.0000	2,428.3443	2,428.3443	0.2312	0.0000	2,434.1241
Maximum	1.1758	10.5007	8.1994	0.0261	1.9043	0.2980	2.2022	0.5103	0.2823	0.7926	0.0000	2,428.3443	2,428.3443	0.2312	0.0000	2,434.1241

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	1.1758	10.5007	8.1994	0.0261	1.9043	0.2980	2.2022	0.5103	0.2823	0.7926	0.0000	2,428.3438	2,428.3438	0.2312	0.0000	2,434.1236
Maximum	1.1758	10.5007	8.1994	0.0261	1.9043	0.2980	2.2022	0.5103	0.2823	0.7926	0.0000	2,428.3438	2,428.3438	0.2312	0.0000	2,434.1236

[illegible]

POH Dredge - Ventura County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	4-30-2018	7-29-2018	0.6503	0.6503
		Highest	0.6503	0.6503

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	12.1364	2.0000e-004	0.0222	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0428	0.0428	1.1000e-004	0.0000	0.0457
Energy	0.2709	2.4630	2.0689	0.0148		0.1872	0.1872		0.1872	0.1872	0.0000	9,262.1383	9,262.1383	0.3231	0.1054	9,301.6150
Mobile	1.0633	4.6297	13.8643	0.0447	3.9692	0.0474	4.0165	1.0617	0.0445	1.1062	0.0000	4,101.9576	4,101.9576	0.1758	0.0000	4,106.3521
Waste						0.0000	0.0000		0.0000	0.0000	603.1125	0.0000	603.1125	35.6429	0.0000	1,494.1858
Water						0.0000	0.0000		0.0000	0.0000	175.7876	2,298.7967	2,474.5842	18.1500	0.4460	3,061.2281
Total	13.4706	7.0929	15.9554	0.0595	3.9692	0.2347	4.2038	1.0617	0.2317	1.2934	778.9001	15,662.9354	16,441.8355	54.2919	0.5513	17,963.4267

POH Dredge - Ventura County, Annual

2.2 Overall Operational**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	12.1364	2.0000e-004	0.0222	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0428	0.0428	1.1000e-004	0.0000	0.0457
Energy	0.2709	2.4630	2.0689	0.0148		0.1872	0.1872		0.1872	0.1872	0.0000	9,262.1383	9,262.1383	0.3231	0.1054	9,301.6150
Mobile	1.0633	4.6297	13.8643	0.0447	3.9692	0.0474	4.0165	1.0617	0.0445	1.1062	0.0000	4,101.9576	4,101.9576	0.1758	0.0000	4,106.3521
Waste						0.0000	0.0000		0.0000	0.0000	603.1125	0.0000	603.1125	35.6429	0.0000	1,494.1858
Water						0.0000	0.0000		0.0000	0.0000	175.7876	2,298.7967	2,474.5842	18.1500	0.4460	3,061.2281
Total	13.4706	7.0929	15.9554	0.0595	3.9692	0.2347	4.2038	1.0617	0.2317	1.2934	778.9001	15,662.9354	16,441.8355	54.2919	0.5513	17,963.4267

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail**Construction Phase**

POH Dredge - Ventura County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/30/2018	5/25/2018	5	20	
2	Toe Wall Installation	Building Construction	5/14/2018	10/12/2018	5	110	
3	Fender Installation	Building Construction	9/10/2018	11/30/2018	5	60	
4	Concrete Repairs & Bollard Installation	Paving	10/1/2018	10/26/2018	5	20	
5	Dredging	Grading	11/23/2018	12/20/2018	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Air Compressors	2	7.00	78	0.48
Demolition	Cement and Mortar Mixers	2	7.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Cranes	2	7.00	231	0.29
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Toe Wall Installation	Air Compressors	2	7.00	78	0.48
Toe Wall Installation	Cement and Mortar Mixers	2	7.00	9	0.56
Toe Wall Installation	Cranes	2	7.00	231	0.29
Toe Wall Installation	Forklifts	3	8.00	89	0.20

POH Dredge - Ventura County, Annual

Toe Wall Installation	Generator Sets	1	8.00	84	0.74
Toe Wall Installation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Toe Wall Installation	Welders	1	8.00	46	0.45
Fender Installation	Air Compressors	2	7.00	78	0.48
Fender Installation	Cement and Mortar Mixers	2	7.00	9	0.56
Fender Installation	Cranes	2	7.00	231	0.29
Fender Installation	Forklifts	3	8.00	89	0.20
Fender Installation	Generator Sets	1	8.00	84	0.74
Fender Installation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Fender Installation	Welders	1	8.00	46	0.45
Concrete Repairs & Bollard Installation	Air Compressors	2	7.00	78	0.48
Concrete Repairs & Bollard Installation	Cement and Mortar Mixers	2	7.00	9	0.56
Concrete Repairs & Bollard Installation	Cranes	2	7.00	231	0.29
Concrete Repairs & Bollard Installation	Pavers	2	8.00	130	0.42
Concrete Repairs & Bollard Installation	Paving Equipment	2	8.00	132	0.36
Concrete Repairs & Bollard Installation	Rollers	2	8.00	80	0.38
Concrete Repairs & Bollard Installation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Dredging	Air Compressors	2	7.00	78	0.48
Dredging	Cement and Mortar Mixers	2	7.00	9	0.56
Dredging	Cranes	2	7.00	231	0.29
Dredging	Excavators	2	8.00	158	0.38
Dredging	Graders	1	8.00	187	0.41
Dredging	Rubber Tired Dozers	1	8.00	247	0.40
Dredging	Scrapers	2	8.00	367	0.48
Dredging	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

POH Dredge - Ventura County, Annual

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	13	33.00	0.00	362.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Toe Wall Installation	12	1,006.00	393.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Fender Installation	12	1,006.00	393.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Fender Installation	12	1,006.00	393.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Concrete Repairs & Bollard Installation	13	33.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Dredging	13	33.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0397	0.0000	0.0397	6.0100e-003	0.0000	6.0100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0578	0.5821	0.3392	6.0000e-004		0.0302	0.0302		0.0283	0.0283	0.0000	53.9385	53.9385	0.0141	0.0000	54.2905
Total	0.0578	0.5821	0.3392	6.0000e-004	0.0397	0.0302	0.0698	6.0100e-003	0.0283	0.0343	0.0000	53.9385	53.9385	0.0141	0.0000	54.2905

POH Dredge - Ventura County, Annual

3.2 Demolition - 2018**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.5800e-003	0.0579	0.0114	1.4000e-004	3.1000e-003	3.1000e-004	3.4100e-003	8.5000e-004	3.0000e-004	1.1500e-003	0.0000	13.7339	13.7339	1.3500e-003	0.0000	13.7676
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4300e-003	1.0400e-003	0.0108	3.0000e-005	2.6600e-003	2.0000e-005	2.6800e-003	7.1000e-004	2.0000e-005	7.2000e-004	0.0000	2.4196	2.4196	8.0000e-005	0.0000	2.4215
Total	3.0100e-003	0.0590	0.0222	1.7000e-004	5.7600e-003	3.3000e-004	6.0900e-003	1.5600e-003	3.2000e-004	1.8700e-003	0.0000	16.1535	16.1535	1.4300e-003	0.0000	16.1892

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0397	0.0000	0.0397	6.0100e-003	0.0000	6.0100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0578	0.5821	0.3392	6.0000e-004		0.0302	0.0302		0.0283	0.0283	0.0000	53.9385	53.9385	0.0141	0.0000	54.2905
Total	0.0578	0.5821	0.3392	6.0000e-004	0.0397	0.0302	0.0698	6.0100e-003	0.0283	0.0343	0.0000	53.9385	53.9385	0.0141	0.0000	54.2905

POH Dredge - Ventura County, Annual

3.2 Demolition - 2018**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.5800e-003	0.0579	0.0114	1.4000e-004	3.1000e-003	3.1000e-004	3.4100e-003	8.5000e-004	3.0000e-004	1.1500e-003	0.0000	13.7339	13.7339	1.3500e-003	0.0000	13.7676
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4300e-003	1.0400e-003	0.0108	3.0000e-005	2.6600e-003	2.0000e-005	2.6800e-003	7.1000e-004	2.0000e-005	7.2000e-004	0.0000	2.4196	2.4196	8.0000e-005	0.0000	2.4215
Total	3.0100e-003	0.0590	0.0222	1.7000e-004	5.7600e-003	3.3000e-004	6.0900e-003	1.5600e-003	3.2000e-004	1.8700e-003	0.0000	16.1535	16.1535	1.4300e-003	0.0000	16.1892

3.3 Toe Wall Installation - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1950	1.6725	1.1471	1.9300e-003		0.1008	0.1008		0.0960	0.0960	0.0000	167.9378	167.9378	0.0356	0.0000	168.8280
Total	0.1950	1.6725	1.1471	1.9300e-003		0.1008	0.1008		0.0960	0.0960	0.0000	167.9378	167.9378	0.0356	0.0000	168.8280

POH Dredge - Ventura County, Annual

3.3 Toe Wall Installation - 2018**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0988	2.7706	0.7573	5.5900e-003	0.1439	0.0244	0.1683	0.0415	0.0233	0.0648	0.0000	543.3990	543.3990	0.0490	0.0000	544.6231
Worker	0.2395	0.1741	1.8059	4.4900e-003	0.4461	3.3000e-003	0.4494	0.1185	3.0400e-003	0.1215	0.0000	405.6899	405.6899	0.0129	0.0000	406.0124
Total	0.3383	2.9447	2.5631	0.0101	0.5900	0.0277	0.6177	0.1600	0.0264	0.1864	0.0000	949.0889	949.0889	0.0619	0.0000	950.6355

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1950	1.6725	1.1471	1.9300e-003		0.1008	0.1008		0.0960	0.0960	0.0000	167.9376	167.9376	0.0356	0.0000	168.8278
Total	0.1950	1.6725	1.1471	1.9300e-003		0.1008	0.1008		0.0960	0.0960	0.0000	167.9376	167.9376	0.0356	0.0000	168.8278

POH Dredge - Ventura County, Annual

3.3 Toe Wall Installation - 2018**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0988	2.7706	0.7573	5.5900e-003	0.1439	0.0244	0.1683	0.0415	0.0233	0.0648	0.0000	543.3990	543.3990	0.0490	0.0000	544.6231
Worker	0.2395	0.1741	1.8059	4.4900e-003	0.4461	3.3000e-003	0.4494	0.1185	3.0400e-003	0.1215	0.0000	405.6899	405.6899	0.0129	0.0000	406.0124
Total	0.3383	2.9447	2.5631	0.0101	0.5900	0.0277	0.6177	0.1600	0.0264	0.1864	0.0000	949.0889	949.0889	0.0619	0.0000	950.6355

3.4 Fender Installation - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1064	0.9123	0.6257	1.0500e-003		0.0550	0.0550		0.0524	0.0524	0.0000	91.6025	91.6025	0.0194	0.0000	92.0880
Total	0.1064	0.9123	0.6257	1.0500e-003		0.0550	0.0550		0.0524	0.0524	0.0000	91.6025	91.6025	0.0194	0.0000	92.0880

POH Dredge - Ventura County, Annual

3.4 Fender Installation - 2018**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1077	3.0225	0.8261	6.1000e-003	0.2683	0.0266	0.2949	0.0726	0.0255	0.0981	0.0000	592.7989	592.7989	0.0534	0.0000	594.1343
Worker	0.2613	0.1900	1.9700	4.9000e-003	0.9085	3.6000e-003	0.9121	0.2328	3.3200e-003	0.2361	0.0000	442.5708	442.5708	0.0141	0.0000	442.9226
Total	0.3690	3.2124	2.7961	0.0110	1.1768	0.0302	1.2070	0.3054	0.0288	0.3342	0.0000	1,035.3697	1,035.3697	0.0675	0.0000	1,037.0569

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1064	0.9123	0.6257	1.0500e-003		0.0550	0.0550		0.0524	0.0524	0.0000	91.6024	91.6024	0.0194	0.0000	92.0879
Total	0.1064	0.9123	0.6257	1.0500e-003		0.0550	0.0550		0.0524	0.0524	0.0000	91.6024	91.6024	0.0194	0.0000	92.0879

POH Dredge - Ventura County, Annual

3.4 Fender Installation - 2018**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1077	3.0225	0.8261	6.1000e-003	0.2683	0.0266	0.2949	0.0726	0.0255	0.0981	0.0000	592.7989	592.7989	0.0534	0.0000	594.1343
Worker	0.2613	0.1900	1.9700	4.9000e-003	0.9085	3.6000e-003	0.9121	0.2328	3.3200e-003	0.2361	0.0000	442.5708	442.5708	0.0141	0.0000	442.9226
Total	0.3690	3.2124	2.7961	0.0110	1.1768	0.0302	1.2070	0.3054	0.0288	0.3342	0.0000	1,035.3697	1,035.3697	0.0675	0.0000	1,037.0569

3.5 Concrete Repairs & Bollard Installation - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0371	0.3741	0.2641	4.4000e-004		0.0204	0.0204		0.0190	0.0190	0.0000	39.6261	39.6261	0.0109	0.0000	39.8981
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0371	0.3741	0.2641	4.4000e-004		0.0204	0.0204		0.0190	0.0190	0.0000	39.6261	39.6261	0.0109	0.0000	39.8981

POH Dredge - Ventura County, Annual

3.5 Concrete Repairs & Bollard Installation - 2018**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4300e-003	1.0400e-003	0.0108	3.0000e-005	2.6600e-003	2.0000e-005	2.6800e-003	7.1000e-004	2.0000e-005	7.2000e-004	0.0000	2.4196	2.4196	8.0000e-005	0.0000	2.4215
Total	1.4300e-003	1.0400e-003	0.0108	3.0000e-005	2.6600e-003	2.0000e-005	2.6800e-003	7.1000e-004	2.0000e-005	7.2000e-004	0.0000	2.4196	2.4196	8.0000e-005	0.0000	2.4215

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0371	0.3741	0.2641	4.4000e-004		0.0204	0.0204		0.0190	0.0190	0.0000	39.6260	39.6260	0.0109	0.0000	39.8981
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0371	0.3741	0.2641	4.4000e-004		0.0204	0.0204		0.0190	0.0190	0.0000	39.6260	39.6260	0.0109	0.0000	39.8981

POH Dredge - Ventura County, Annual

3.5 Concrete Repairs & Bollard Installation - 2018**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4300e-003	1.0400e-003	0.0108	3.0000e-005	2.6600e-003	2.0000e-005	2.6800e-003	7.1000e-004	2.0000e-005	7.2000e-004	0.0000	2.4196	2.4196	8.0000e-005	0.0000	2.4215
Total	1.4300e-003	1.0400e-003	0.0108	3.0000e-005	2.6600e-003	2.0000e-005	2.6800e-003	7.1000e-004	2.0000e-005	7.2000e-004	0.0000	2.4196	2.4196	8.0000e-005	0.0000	2.4215

3.6 Dredging - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0867	0.0000	0.0867	0.0360	0.0000	0.0360	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0662	0.7415	0.4203	7.7000e-004		0.0334	0.0334		0.0310	0.0310	0.0000	69.7881	69.7881	0.0203	0.0000	70.2948
Total	0.0662	0.7415	0.4203	7.7000e-004	0.0867	0.0334	0.1201	0.0360	0.0310	0.0670	0.0000	69.7881	69.7881	0.0203	0.0000	70.2948

POH Dredge - Ventura County, Annual

3.6 Dredging - 2018**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4300e-003	1.0400e-003	0.0108	3.0000e-005	2.6600e-003	2.0000e-005	2.6800e-003	7.1000e-004	2.0000e-005	7.2000e-004	0.0000	2.4196	2.4196	8.0000e-005	0.0000	2.4215
Total	1.4300e-003	1.0400e-003	0.0108	3.0000e-005	2.6600e-003	2.0000e-005	2.6800e-003	7.1000e-004	2.0000e-005	7.2000e-004	0.0000	2.4196	2.4196	8.0000e-005	0.0000	2.4215

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0867	0.0000	0.0867	0.0360	0.0000	0.0360	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0662	0.7415	0.4203	7.7000e-004		0.0334	0.0334		0.0310	0.0310	0.0000	69.7880	69.7880	0.0203	0.0000	70.2947
Total	0.0662	0.7415	0.4203	7.7000e-004	0.0867	0.0334	0.1201	0.0360	0.0310	0.0670	0.0000	69.7880	69.7880	0.0203	0.0000	70.2947

POH Dredge - Ventura County, Annual

3.6 Dredging - 2018**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4300e-003	1.0400e-003	0.0108	3.0000e-005	2.6600e-003	2.0000e-005	2.6800e-003	7.1000e-004	2.0000e-005	7.2000e-004	0.0000	2.4196	2.4196	8.0000e-005	0.0000	2.4215
Total	1.4300e-003	1.0400e-003	0.0108	3.0000e-005	2.6600e-003	2.0000e-005	2.6800e-003	7.1000e-004	2.0000e-005	7.2000e-004	0.0000	2.4196	2.4196	8.0000e-005	0.0000	2.4215

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

POH Dredge - Ventura County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.0633	4.6297	13.8643	0.0447	3.9692	0.0474	4.0165	1.0617	0.0445	1.1062	0.0000	4,101.9576	4,101.9576	0.1758	0.0000	4,106.3521
Unmitigated	1.0633	4.6297	13.8643	0.0447	3.9692	0.0474	4.0165	1.0617	0.0445	1.1062	0.0000	4,101.9576	4,101.9576	0.1758	0.0000	4,106.3521

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	3,594.11	3,594.11	3,594.11	10,493,030	10,493,030
Total	3,594.11	3,594.11	3,594.11	10,493,030	10,493,030

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.577012	0.042942	0.189872	0.117495	0.021422	0.006664	0.019052	0.017336	0.001134	0.000976	0.004002	0.000371	0.001721

5.0 Energy Detail

Historical Energy Use: N

POH Dredge - Ventura County, Annual

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	6,580.8435	6,580.8435	0.2717	0.0562	6,604.3866
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	6,580.8435	6,580.8435	0.2717	0.0562	6,604.3866
NaturalGas Mitigated	0.2709	2.4630	2.0689	0.0148		0.1872	0.1872		0.1872	0.1872	0.0000	2,681.2948	2,681.2948	0.0514	0.0492	2,697.2284
NaturalGas Unmitigated	0.2709	2.4630	2.0689	0.0148		0.1872	0.1872		0.1872	0.1872	0.0000	2,681.2948	2,681.2948	0.0514	0.0492	2,697.2284

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Heavy Industry	5.02456e+007	0.2709	2.4630	2.0689	0.0148		0.1872	0.1872		0.1872	0.1872	0.0000	2,681.2948	2,681.2948	0.0514	0.0492	2,697.2284
Total		0.2709	2.4630	2.0689	0.0148		0.1872	0.1872		0.1872	0.1872	0.0000	2,681.2948	2,681.2948	0.0514	0.0492	2,697.2284

POH Dredge - Ventura County, Annual

5.2 Energy by Land Use - NaturalGas**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Heavy Industry	5.02456e+007	0.2709	2.4630	2.0689	0.0148		0.1872	0.1872		0.1872	0.1872	0.0000	2,681.2948	2,681.2948	0.0514	0.0492	2,697.2284
Total		0.2709	2.4630	2.0689	0.0148		0.1872	0.1872		0.1872	0.1872	0.0000	2,681.2948	2,681.2948	0.0514	0.0492	2,697.2284

5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	2.06541e+007	6,580.8435	0.2717	0.0562	6,604.3866
Total		6,580.8435	0.2717	0.0562	6,604.3866

POH Dredge - Ventura County, Annual

5.3 Energy by Land Use - Electricity**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	2.06541e+007	6,580.8435	0.2717	0.0562	6,604.3866
Total		6,580.8435	0.2717	0.0562	6,604.3866

6.0 Area Detail**6.1 Mitigation Measures Area**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	12.1364	2.0000e-004	0.0222	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0428	0.0428	1.1000e-004	0.0000	0.0457
Unmitigated	12.1364	2.0000e-004	0.0222	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0428	0.0428	1.1000e-004	0.0000	0.0457

POH Dredge - Ventura County, Annual

6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.7765					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	9.3579					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0800e-003	2.0000e-004	0.0222	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0428	0.0428	1.1000e-004	0.0000	0.0457
Total	12.1364	2.0000e-004	0.0222	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0428	0.0428	1.1000e-004	0.0000	0.0457

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.7765					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	9.3579					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0800e-003	2.0000e-004	0.0222	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0428	0.0428	1.1000e-004	0.0000	0.0457
Total	12.1364	2.0000e-004	0.0222	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0428	0.0428	1.1000e-004	0.0000	0.0457

7.0 Water Detail

POH Dredge - Ventura County, Annual

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2,474.584 2	18.1500	0.4460	3,061.228 1
Unmitigated	2,474.584 2	18.1500	0.4460	3,061.228 1

7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	554.091 / 0	2,474.584 2	18.1500	0.4460	3,061.228 1
Total		2,474.584 2	18.1500	0.4460	3,061.228 1

POH Dredge - Ventura County, Annual

7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	554.091 / 0	2,474.584 2	18.1500	0.4460	3,061.228 1
Total		2,474.584 2	18.1500	0.4460	3,061.228 1

8.0 Waste Detail**8.1 Mitigation Measures Waste****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	603.1125	35.6429	0.0000	1,494.185 8
Unmitigated	603.1125	35.6429	0.0000	1,494.185 8

POH Dredge - Ventura County, Annual

8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	2971.13	603.1125	35.6429	0.0000	1,494.1858
Total		603.1125	35.6429	0.0000	1,494.1858

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	2971.13	603.1125	35.6429	0.0000	1,494.1858
Total		603.1125	35.6429	0.0000	1,494.1858

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

POH Dredge - Ventura County, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

POH Dredge - Ventura County, Winter

POH Dredge
Ventura County, Winter**1.0 Project Characteristics**

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	2,396.07	1000sqft	55.01	2,396,069.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	31
Climate Zone	8			Operational Year	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	702.44	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

POH Dredge - Ventura County, Winter

Project Characteristics -

Land Use - approx area of B1, B2, B3, Dredge area, and Beach

Construction Phase - Construction schedule provided by client and construction engineer

Off-road Equipment - Construction equipment provided by client and construction engineer

Off-road Equipment - Construction equipment provided by client and construction engineer

Off-road Equipment - Construction equipment provided by client and construction engineer

Off-road Equipment - Construction equipment provided by client and construction engineer

Off-road Equipment - Construction equipment provided by client and construction engineer

Off-road Equipment - Construction equipment provided by client and construction engineer

Trips and VMT -

Demolition - Based on client/construction engineer provided information

Grading -

POH Dredge - Ventura County, Winter

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	1,110.00	110.00
tblConstructionPhase	NumDays	1,110.00	60.00
tblConstructionPhase	NumDays	70.00	20.00
tblConstructionPhase	NumDays	110.00	20.00
tblConstructionPhase	NumDays	75.00	20.00
tblLandUse	BuildingSpaceSquareFeet	2,396,070.00	2,396,069.00
tblLandUse	LandUseSquareFeet	2,396,070.00	2,396,069.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2018	2020

2.0 Emissions Summary

POH Dredge - Ventura County, Winter

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	31.1595	257.4417	212.9160	0.6612	51.1890	7.2310	58.4200	14.0378	6.8528	20.2504	0.0000	67,782.9386	67,782.9386	6.4653	0.0000	67,944.5716
Maximum	31.1595	257.4417	212.9160	0.6612	51.1890	7.2310	58.4200	14.0378	6.8528	20.2504	0.0000	67,782.9386	67,782.9386	6.4653	0.0000	67,944.5716

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	31.1595	257.4417	212.9160	0.6612	51.1890	7.2310	58.4200	14.0378	6.8528	20.2504	0.0000	67,782.9386	67,782.9386	6.4653	0.0000	67,944.5716
Maximum	31.1595	257.4417	212.9160	0.6612	51.1890	7.2310	58.4200	14.0378	6.8528	20.2504	0.0000	67,782.9386	67,782.9386	6.4653	0.0000	67,944.5716

[illegible]

POH Dredge - Ventura County, Winter

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	66.5124	2.2700e-003	0.2462	2.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004		0.5244	0.5244	1.4100e-003		0.5595
Energy	1.4846	13.4960	11.3366	0.0810		1.0257	1.0257		1.0257	1.0257		16,195.1868	16,195.1868	0.3104	0.2969	16,291.4267
Mobile	5.9102	25.5069	77.8837	0.2441	22.2132	0.2619	22.4751	5.9328	0.2458	6.1785		24,667.5930	24,667.5930	1.0793		24,694.5762
Total	73.9072	39.0052	89.4666	0.3251	22.2132	1.2885	23.5017	5.9328	1.2724	7.2051		40,863.3042	40,863.3042	1.3912	0.2969	40,986.5624

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	66.5124	2.2700e-003	0.2462	2.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004		0.5244	0.5244	1.4100e-003		0.5595
Energy	1.4846	13.4960	11.3366	0.0810		1.0257	1.0257		1.0257	1.0257		16,195.1868	16,195.1868	0.3104	0.2969	16,291.4267
Mobile	5.9102	25.5069	77.8837	0.2441	22.2132	0.2619	22.4751	5.9328	0.2458	6.1785		24,667.5930	24,667.5930	1.0793		24,694.5762
Total	73.9072	39.0052	89.4666	0.3251	22.2132	1.2885	23.5017	5.9328	1.2724	7.2051		40,863.3042	40,863.3042	1.3912	0.2969	40,986.5624

POH Dredge - Ventura County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/30/2018	5/25/2018	5	20	
2	Toe Wall Installation	Building Construction	5/14/2018	10/12/2018	5	110	
3	Fender Installation	Building Construction	9/10/2018	11/30/2018	5	60	
4	Concrete Repairs & Bollard Installation	Paving	10/1/2018	10/26/2018	5	20	
5	Dredging	Grading	11/23/2018	12/20/2018	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Air Compressors	2	7.00	78	0.48
Demolition	Cement and Mortar Mixers	2	7.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Cranes	2	7.00	231	0.29
Demolition	Excavators	3	8.00	158	0.38

POH Dredge - Ventura County, Winter

Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Toe Wall Installation	Air Compressors	2	7.00	78	0.48
Toe Wall Installation	Cement and Mortar Mixers	2	7.00	9	0.56
Toe Wall Installation	Cranes	2	7.00	231	0.29
Toe Wall Installation	Forklifts	3	8.00	89	0.20
Toe Wall Installation	Generator Sets	1	8.00	84	0.74
Toe Wall Installation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Toe Wall Installation	Welders	1	8.00	46	0.45
Fender Installation	Air Compressors	2	7.00	78	0.48
Fender Installation	Cement and Mortar Mixers	2	7.00	9	0.56
Fender Installation	Cranes	2	7.00	231	0.29
Fender Installation	Forklifts	3	8.00	89	0.20
Fender Installation	Generator Sets	1	8.00	84	0.74
Fender Installation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Fender Installation	Welders	1	8.00	46	0.45
Concrete Repairs & Bollard Installation	Air Compressors	2	7.00	78	0.48
Concrete Repairs & Bollard Installation	Cement and Mortar Mixers	2	7.00	9	0.56
Concrete Repairs & Bollard Installation	Cranes	2	7.00	231	0.29
Concrete Repairs & Bollard Installation	Pavers	2	8.00	130	0.42
Concrete Repairs & Bollard Installation	Paving Equipment	2	8.00	132	0.36
Concrete Repairs & Bollard Installation	Rollers	2	8.00	80	0.38
Concrete Repairs & Bollard Installation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Dredging	Air Compressors	2	7.00	78	0.48
Dredging	Cement and Mortar Mixers	2	7.00	9	0.56
Dredging	Cranes	2	7.00	231	0.29
Dredging	Excavators	2	8.00	158	0.38

POH Dredge - Ventura County, Winter

Dredging	Graders	1	8.00	187	0.41
Dredging	Rubber Tired Dozers	1	8.00	247	0.40
Dredging	Scrapers	2	8.00	367	0.48
Dredging	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	13	33.00	0.00	362.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Toe Wall Installation	12	1,006.00	393.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Fender Installation	12	1,006.00	393.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Fender Installation	12	1,006.00	393.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Concrete Repairs & Bollard Installation	13	33.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Dredging	13	33.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

POH Dredge - Ventura County, Winter

3.2 Demolition - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.9660	0.0000	3.9660	0.6006	0.0000	0.6006			0.0000			0.0000
Off-Road	5.7835	58.2130	33.9201	0.0602		3.0181	3.0181		2.8282	2.8282		5,945.7056	5,945.7056	1.5520		5,984.5050
Total	5.7835	58.2130	33.9201	0.0602	3.9660	3.0181	6.9841	0.6006	2.8282	3.4288		5,945.7056	5,945.7056	1.5520		5,984.5050

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1612	5.7266	1.1983	0.0138	0.3152	0.0315	0.3467	0.0863	0.0301	0.1164		1,500.5660	1,500.5660	0.1520		1,504.3646
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1601	0.1075	1.0910	2.6600e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		264.5748	264.5748	8.4800e-003		264.7867
Total	0.3213	5.8341	2.2893	0.0165	0.5863	0.0335	0.6197	0.1582	0.0319	0.1901		1,765.1407	1,765.1407	0.1604		1,769.1514

POH Dredge - Ventura County, Winter

3.2 Demolition - 2018**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.9660	0.0000	3.9660	0.6006	0.0000	0.6006			0.0000			0.0000
Off-Road	5.7835	58.2130	33.9201	0.0602		3.0181	3.0181		2.8282	2.8282	0.0000	5,945.7056	5,945.7056	1.5520		5,984.5050
Total	5.7835	58.2130	33.9201	0.0602	3.9660	3.0181	6.9841	0.6006	2.8282	3.4288	0.0000	5,945.7056	5,945.7056	1.5520		5,984.5050

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1612	5.7266	1.1983	0.0138	0.3152	0.0315	0.3467	0.0863	0.0301	0.1164		1,500.5660	1,500.5660	0.1520		1,504.3646
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1601	0.1075	1.0910	2.6600e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		264.5748	264.5748	8.4800e-003		264.7867
Total	0.3213	5.8341	2.2893	0.0165	0.5863	0.0335	0.6197	0.1582	0.0319	0.1901		1,765.1407	1,765.1407	0.1604		1,769.1514

POH Dredge - Ventura County, Winter

3.3 Toe Wall Installation - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.5461	30.4093	20.8560	0.0351		1.8321	1.8321		1.7457	1.7457		3,365.814 2	3,365.814 2	0.7136		3,383.655 0
Total	3.5461	30.4093	20.8560	0.0351		1.8321	1.8321		1.7457	1.7457		3,365.814 2	3,365.814 2	0.7136		3,383.655 0

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.8513	49.7579	14.6412	0.1004	2.6561	0.4497	3.1059	0.7643	0.4303	1.1945		10,740.71 39	10,740.71 39	1.0183		10,766.17 10
Worker	4.8817	3.2768	33.2590	0.0811	8.2641	0.0600	8.3240	2.1920	0.0553	2.2473		8,065.521 9	8,065.521 9	0.2584		8,071.982 7
Total	6.7330	53.0347	47.9002	0.1814	10.9202	0.5097	11.4299	2.9563	0.4855	3.4418		18,806.23 59	18,806.23 59	1.2767		18,838.15 37

POH Dredge - Ventura County, Winter

3.3 Toe Wall Installation - 2018**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.5461	30.4093	20.8560	0.0351		1.8321	1.8321		1.7457	1.7457	0.0000	3,365.814 2	3,365.814 2	0.7136		3,383.655 0
Total	3.5461	30.4093	20.8560	0.0351		1.8321	1.8321		1.7457	1.7457	0.0000	3,365.814 2	3,365.814 2	0.7136		3,383.655 0

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.8513	49.7579	14.6412	0.1004	2.6561	0.4497	3.1059	0.7643	0.4303	1.1945		10,740.71 39	10,740.71 39	1.0183		10,766.17 10
Worker	4.8817	3.2768	33.2590	0.0811	8.2641	0.0600	8.3240	2.1920	0.0553	2.2473		8,065.521 9	8,065.521 9	0.2584		8,071.982 7
Total	6.7330	53.0347	47.9002	0.1814	10.9202	0.5097	11.4299	2.9563	0.4855	3.4418		18,806.23 59	18,806.23 59	1.2767		18,838.15 37

POH Dredge - Ventura County, Winter

3.4 Fender Installation - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.5461	30.4093	20.8560	0.0351		1.8321	1.8321		1.7457	1.7457		3,365.814 2	3,365.814 2	0.7136		3,383.655 0
Total	3.5461	30.4093	20.8560	0.0351		1.8321	1.8321		1.7457	1.7457		3,365.814 2	3,365.814 2	0.7136		3,383.655 0

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.7026	99.5158	29.2824	0.2007	9.1052	0.8995	10.0047	2.4596	0.8605	3.3201		21,481.42 79	21,481.42 79	2.0366		21,532.34 20
Worker	9.7634	6.5537	66.5180	0.1621	30.8926	0.1199	31.0125	7.9099	0.1106	8.0204		16,131.04 39	16,131.04 39	0.5169		16,143.96 54
Total	13.4660	106.0695	95.8004	0.3628	39.9978	1.0194	41.0172	10.3694	0.9711	11.3405		37,612.47 18	37,612.47 18	2.5534		37,676.30 74

POH Dredge - Ventura County, Winter

3.4 Fender Installation - 2018**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.5461	30.4093	20.8560	0.0351		1.8321	1.8321		1.7457	1.7457	0.0000	3,365.814 2	3,365.814 2	0.7136		3,383.655 0
Total	3.5461	30.4093	20.8560	0.0351		1.8321	1.8321		1.7457	1.7457	0.0000	3,365.814 2	3,365.814 2	0.7136		3,383.655 0

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.7026	99.5158	29.2824	0.2007	9.1052	0.8995	10.0047	2.4596	0.8605	3.3201		21,481.42 79	21,481.42 79	2.0366		21,532.34 20
Worker	9.7634	6.5537	66.5180	0.1621	30.8926	0.1199	31.0125	7.9099	0.1106	8.0204		16,131.04 39	16,131.04 39	0.5169		16,143.96 54
Total	13.4660	106.0695	95.8004	0.3628	39.9978	1.0194	41.0172	10.3694	0.9711	11.3405		37,612.47 18	37,612.47 18	2.5534		37,676.30 74

POH Dredge - Ventura County, Winter

3.5 Concrete Repairs & Bollard Installation - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.7082	37.4114	26.4125	0.0442		2.0357	2.0357		1.9030	1.9030		4,368.0279	4,368.0279	1.1994		4,398.0139
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	3.7082	37.4114	26.4125	0.0442		2.0357	2.0357		1.9030	1.9030		4,368.0279	4,368.0279	1.1994		4,398.0139

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1601	0.1075	1.0910	2.6600e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		264.5748	264.5748	8.4800e-003		264.7867
Total	0.1601	0.1075	1.0910	2.6600e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		264.5748	264.5748	8.4800e-003		264.7867

POH Dredge - Ventura County, Winter

3.5 Concrete Repairs & Bollard Installation - 2018**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.7082	37.4114	26.4125	0.0442		2.0357	2.0357		1.9030	1.9030	0.0000	4,368.0279	4,368.0279	1.1994		4,398.0139
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	3.7082	37.4114	26.4125	0.0442		2.0357	2.0357		1.9030	1.9030	0.0000	4,368.0279	4,368.0279	1.1994		4,398.0139

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1601	0.1075	1.0910	2.6600e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		264.5748	264.5748	8.4800e-003		264.7867
Total	0.1601	0.1075	1.0910	2.6600e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		264.5748	264.5748	8.4800e-003		264.7867

POH Dredge - Ventura County, Winter

3.6 Dredging - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	6.6224	74.1528	42.0320	0.0772		3.3407	3.3407		3.1036	3.1036		7,692.8156	7,692.8156	2.2345		7,748.6779
Total	6.6224	74.1528	42.0320	0.0772	8.6733	3.3407	12.0141	3.5965	3.1036	6.7001		7,692.8156	7,692.8156	2.2345		7,748.6779

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1601	0.1075	1.0910	2.6600e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		264.5748	264.5748	8.4800e-003		264.7867
Total	0.1601	0.1075	1.0910	2.6600e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		264.5748	264.5748	8.4800e-003		264.7867

POH Dredge - Ventura County, Winter

3.6 Dredging - 2018**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	6.6224	74.1528	42.0320	0.0772		3.3407	3.3407		3.1036	3.1036	0.0000	7,692.8156	7,692.8156	2.2345		7,748.6779
Total	6.6224	74.1528	42.0320	0.0772	8.6733	3.3407	12.0141	3.5965	3.1036	6.7001	0.0000	7,692.8156	7,692.8156	2.2345		7,748.6779

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1601	0.1075	1.0910	2.6600e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		264.5748	264.5748	8.4800e-003		264.7867
Total	0.1601	0.1075	1.0910	2.6600e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		264.5748	264.5748	8.4800e-003		264.7867

4.0 Operational Detail - Mobile

POH Dredge - Ventura County, Winter

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	5.9102	25.5069	77.8837	0.2441	22.2132	0.2619	22.4751	5.9328	0.2458	6.1785		24,667.59 30	24,667.59 30	1.0793		24,694.57 62
Unmitigated	5.9102	25.5069	77.8837	0.2441	22.2132	0.2619	22.4751	5.9328	0.2458	6.1785		24,667.59 30	24,667.59 30	1.0793		24,694.57 62

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	3,594.11	3,594.11	3,594.11	10,493,030	10,493,030
Total	3,594.11	3,594.11	3,594.11	10,493,030	10,493,030

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.577012	0.042942	0.189872	0.117495	0.021422	0.006664	0.019052	0.017336	0.001134	0.000976	0.004002	0.000371	0.001721

POH Dredge - Ventura County, Winter

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.4846	13.4960	11.3366	0.0810		1.0257	1.0257		1.0257	1.0257		16,195.1868	16,195.1868	0.3104	0.2969	16,291.4267
NaturalGas Unmitigated	1.4846	13.4960	11.3366	0.0810		1.0257	1.0257		1.0257	1.0257		16,195.1868	16,195.1868	0.3104	0.2969	16,291.4267

POH Dredge - Ventura County, Winter

5.2 Energy by Land Use - NaturalGas**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Heavy Industry	137659	1.4846	13.4960	11.3366	0.0810		1.0257	1.0257		1.0257	1.0257		16,195.1868	16,195.1868	0.3104	0.2969	16,291.4267
Total		1.4846	13.4960	11.3366	0.0810		1.0257	1.0257		1.0257	1.0257		16,195.1868	16,195.1868	0.3104	0.2969	16,291.4267

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Heavy Industry	137.659	1.4846	13.4960	11.3366	0.0810		1.0257	1.0257		1.0257	1.0257		16,195.1868	16,195.1868	0.3104	0.2969	16,291.4267
Total		1.4846	13.4960	11.3366	0.0810		1.0257	1.0257		1.0257	1.0257		16,195.1868	16,195.1868	0.3104	0.2969	16,291.4267

6.0 Area Detail**6.1 Mitigation Measures Area**

POH Dredge - Ventura County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	66.5124	2.2700e-003	0.2462	2.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004		0.5244	0.5244	1.4100e-003		0.5595
Unmitigated	66.5124	2.2700e-003	0.2462	2.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004		0.5244	0.5244	1.4100e-003		0.5595

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	15.2134					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	51.2759					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0232	2.2700e-003	0.2462	2.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004		0.5244	0.5244	1.4100e-003		0.5595
Total	66.5124	2.2700e-003	0.2462	2.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004		0.5244	0.5244	1.4100e-003		0.5595

POH Dredge - Ventura County, Winter

6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	15.2134					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	51.2759					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0232	2.2700e-003	0.2462	2.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004		0.5244	0.5244	1.4100e-003		0.5595
Total	66.5124	2.2700e-003	0.2462	2.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004		0.5244	0.5244	1.4100e-003		0.5595

7.0 Water Detail**7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste****9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment**Fire Pumps and Emergency Generators**

POH Dredge - Ventura County, Winter

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

POH Dredge - Ventura County, Summer

POH Dredge
Ventura County, Summer**1.0 Project Characteristics**

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	2,396.07	1000sqft	55.01	2,396,069.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	31
Climate Zone	8			Operational Year	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	702.44	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

POH Dredge - Ventura County, Summer

Project Characteristics -

Land Use - approx area of B1, B2, B3, Dredge area, and Beach

Construction Phase - Construction schedule provided by client and construction engineer

Off-road Equipment - Construction equipment provided by client and construction engineer

Off-road Equipment - Construction equipment provided by client and construction engineer

Off-road Equipment - Construction equipment provided by client and construction engineer

Off-road Equipment - Construction equipment provided by client and construction engineer

Off-road Equipment - Construction equipment provided by client and construction engineer

Off-road Equipment - Construction equipment provided by client and construction engineer

Trips and VMT -

Demolition - Based on client/construction engineer provided information

Grading -

POH Dredge - Ventura County, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	1,110.00	110.00
tblConstructionPhase	NumDays	1,110.00	60.00
tblConstructionPhase	NumDays	70.00	20.00
tblConstructionPhase	NumDays	110.00	20.00
tblConstructionPhase	NumDays	75.00	20.00
tblLandUse	BuildingSpaceSquareFeet	2,396,070.00	2,396,069.00
tblLandUse	LandUseSquareFeet	2,396,070.00	2,396,069.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2018	2020

2.0 Emissions Summary

POH Dredge - Ventura County, Summer

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	29.1384	255.3569	209.7081	0.6808	51.1890	7.1994	58.3885	14.0378	6.8226	20.2203	0.0000	69,802.60 40	69,802.60 40	6.2905	0.0000	69,959.86 73
Maximum	29.1384	255.3569	209.7081	0.6808	51.1890	7.1994	58.3885	14.0378	6.8226	20.2203	0.0000	69,802.60 40	69,802.60 40	6.2905	0.0000	69,959.86 73

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	29.1384	255.3569	209.7081	0.6808	51.1890	7.1994	58.3885	14.0378	6.8226	20.2203	0.0000	69,802.6040	69,802.6040	6.2905	0.0000	69,959.8673
Maximum	29.1384	255.3569	209.7081	0.6808	51.1890	7.1994	58.3885	14.0378	6.8226	20.2203	0.0000	69,802.6040	69,802.6040	6.2905	0.0000	69,959.8673

[illegible]

POH Dredge - Ventura County, Summer

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	66.5124	2.2700e-003	0.2462	2.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004		0.5244	0.5244	1.4100e-003		0.5595
Energy	1.4846	13.4960	11.3366	0.0810		1.0257	1.0257		1.0257	1.0257		16,195.1868	16,195.1868	0.3104	0.2969	16,291.4267
Mobile	6.1927	24.3086	77.1789	0.2547	22.2132	0.2597	22.4729	5.9328	0.2437	6.1765		25,736.6078	25,736.6078	1.0666		25,763.2733
Total	74.1897	37.8068	88.7618	0.3357	22.2132	1.2863	23.4995	5.9328	1.2703	7.2030		41,932.3190	41,932.3190	1.3784	0.2969	42,055.2595

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	66.5124	2.2700e-003	0.2462	2.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004		0.5244	0.5244	1.4100e-003		0.5595
Energy	1.4846	13.4960	11.3366	0.0810		1.0257	1.0257		1.0257	1.0257		16,195.1868	16,195.1868	0.3104	0.2969	16,291.4267
Mobile	6.1927	24.3086	77.1789	0.2547	22.2132	0.2597	22.4729	5.9328	0.2437	6.1765		25,736.6078	25,736.6078	1.0666		25,763.2733
Total	74.1897	37.8068	88.7618	0.3357	22.2132	1.2863	23.4995	5.9328	1.2703	7.2030		41,932.3190	41,932.3190	1.3784	0.2969	42,055.2595

POH Dredge - Ventura County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/30/2018	5/25/2018	5	20	
2	Toe Wall Installation	Building Construction	5/14/2018	10/12/2018	5	110	
3	Fender Installation	Building Construction	9/10/2018	11/30/2018	5	60	
4	Concrete Repairs & Bollard Installation	Paving	10/1/2018	10/26/2018	5	20	
5	Dredging	Grading	11/23/2018	12/20/2018	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Air Compressors	2	7.00	78	0.48
Demolition	Cement and Mortar Mixers	2	7.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Cranes	2	7.00	231	0.29
Demolition	Excavators	3	8.00	158	0.38

POH Dredge - Ventura County, Summer

Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Toe Wall Installation	Air Compressors	2	7.00	78	0.48
Toe Wall Installation	Cement and Mortar Mixers	2	7.00	9	0.56
Toe Wall Installation	Cranes	2	7.00	231	0.29
Toe Wall Installation	Forklifts	3	8.00	89	0.20
Toe Wall Installation	Generator Sets	1	8.00	84	0.74
Toe Wall Installation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Toe Wall Installation	Welders	1	8.00	46	0.45
Fender Installation	Air Compressors	2	7.00	78	0.48
Fender Installation	Cement and Mortar Mixers	2	7.00	9	0.56
Fender Installation	Cranes	2	7.00	231	0.29
Fender Installation	Forklifts	3	8.00	89	0.20
Fender Installation	Generator Sets	1	8.00	84	0.74
Fender Installation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Fender Installation	Welders	1	8.00	46	0.45
Concrete Repairs & Bollard Installation	Air Compressors	2	7.00	78	0.48
Concrete Repairs & Bollard Installation	Cement and Mortar Mixers	2	7.00	9	0.56
Concrete Repairs & Bollard Installation	Cranes	2	7.00	231	0.29
Concrete Repairs & Bollard Installation	Pavers	2	8.00	130	0.42
Concrete Repairs & Bollard Installation	Paving Equipment	2	8.00	132	0.36
Concrete Repairs & Bollard Installation	Rollers	2	8.00	80	0.38
Concrete Repairs & Bollard Installation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Dredging	Air Compressors	2	7.00	78	0.48
Dredging	Cement and Mortar Mixers	2	7.00	9	0.56
Dredging	Cranes	2	7.00	231	0.29
Dredging	Excavators	2	8.00	158	0.38

POH Dredge - Ventura County, Summer

Dredging	Graders	1	8.00	187	0.41
Dredging	Rubber Tired Dozers	1	8.00	247	0.40
Dredging	Scrapers	2	8.00	367	0.48
Dredging	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	13	33.00	0.00	362.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Toe Wall Installation	12	1,006.00	393.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Fender Installation	12	1,006.00	393.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Fender Installation	12	1,006.00	393.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Concrete Repairs & Bollard Installation	13	33.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Dredging	13	33.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

POH Dredge - Ventura County, Summer

3.2 Demolition - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.9660	0.0000	3.9660	0.6006	0.0000	0.6006			0.0000			0.0000
Off-Road	5.7835	58.2130	33.9201	0.0602		3.0181	3.0181		2.8282	2.8282		5,945.7056	5,945.7056	1.5520		5,984.5050
Total	5.7835	58.2130	33.9201	0.0602	3.9660	3.0181	6.9841	0.6006	2.8282	3.4288		5,945.7056	5,945.7056	1.5520		5,984.5050

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1561	5.6503	1.1035	0.0140	0.3152	0.0306	0.3458	0.0863	0.0293	0.1156		1,523.5607	1,523.5607	0.1462		1,527.2166
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1414	0.0917	1.1099	2.7900e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		278.0224	278.0224	8.7200e-003		278.2404
Total	0.2975	5.7420	2.2134	0.0168	0.5863	0.0326	0.6189	0.1582	0.0311	0.1893		1,801.5831	1,801.5831	0.1550		1,805.4570

POH Dredge - Ventura County, Summer

3.2 Demolition - 2018**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.9660	0.0000	3.9660	0.6006	0.0000	0.6006			0.0000			0.0000
Off-Road	5.7835	58.2130	33.9201	0.0602		3.0181	3.0181		2.8282	2.8282	0.0000	5,945.7056	5,945.7056	1.5520		5,984.5050
Total	5.7835	58.2130	33.9201	0.0602	3.9660	3.0181	6.9841	0.6006	2.8282	3.4288	0.0000	5,945.7056	5,945.7056	1.5520		5,984.5050

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1561	5.6503	1.1035	0.0140	0.3152	0.0306	0.3458	0.0863	0.0293	0.1156		1,523.5607	1,523.5607	0.1462		1,527.2166
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1414	0.0917	1.1099	2.7900e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		278.0224	278.0224	8.7200e-003		278.2404
Total	0.2975	5.7420	2.2134	0.0168	0.5863	0.0326	0.6189	0.1582	0.0311	0.1893		1,801.5831	1,801.5831	0.1550		1,805.4570

POH Dredge - Ventura County, Summer

3.3 Toe Wall Installation - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.5461	30.4093	20.8560	0.0351		1.8321	1.8321		1.7457	1.7457		3,365.814 2	3,365.814 2	0.7136		3,383.655 0
Total	3.5461	30.4093	20.8560	0.0351		1.8321	1.8321		1.7457	1.7457		3,365.814 2	3,365.814 2	0.7136		3,383.655 0

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.7564	49.5495	12.9901	0.1027	2.6561	0.4392	3.0953	0.7643	0.4202	1.1845		10,999.50 60	10,999.50 60	0.9525		11,023.31 73
Worker	4.3091	2.7956	33.8345	0.0852	8.2641	0.0600	8.3240	2.1920	0.0553	2.2473		8,475.469 2	8,475.469 2	0.2659		8,482.117 0
Total	6.0655	52.3450	46.8246	0.1879	10.9202	0.4992	11.4194	2.9563	0.4755	3.4318		19,474.97 51	19,474.97 51	1.2184		19,505.43 44

POH Dredge - Ventura County, Summer

3.3 Toe Wall Installation - 2018**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.5461	30.4093	20.8560	0.0351		1.8321	1.8321		1.7457	1.7457	0.0000	3,365.814 2	3,365.814 2	0.7136		3,383.655 0
Total	3.5461	30.4093	20.8560	0.0351		1.8321	1.8321		1.7457	1.7457	0.0000	3,365.814 2	3,365.814 2	0.7136		3,383.655 0

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.7564	49.5495	12.9901	0.1027	2.6561	0.4392	3.0953	0.7643	0.4202	1.1845		10,999.50 60	10,999.50 60	0.9525		11,023.31 73
Worker	4.3091	2.7956	33.8345	0.0852	8.2641	0.0600	8.3240	2.1920	0.0553	2.2473		8,475.469 2	8,475.469 2	0.2659		8,482.117 0
Total	6.0655	52.3450	46.8246	0.1879	10.9202	0.4992	11.4194	2.9563	0.4755	3.4318		19,474.97 51	19,474.97 51	1.2184		19,505.43 44

POH Dredge - Ventura County, Summer

3.4 Fender Installation - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.5461	30.4093	20.8560	0.0351		1.8321	1.8321		1.7457	1.7457		3,365.814 2	3,365.814 2	0.7136		3,383.655 0
Total	3.5461	30.4093	20.8560	0.0351		1.8321	1.8321		1.7457	1.7457		3,365.814 2	3,365.814 2	0.7136		3,383.655 0

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.5128	99.0990	25.9801	0.2055	9.1052	0.8785	9.9837	2.4596	0.8404	3.3000		21,999.01 19	21,999.01 19	1.9049		22,046.63 46
Worker	8.6183	5.5911	67.6690	0.1703	30.8926	0.1199	31.0125	7.9099	0.1106	8.0204		16,950.93 83	16,950.93 83	0.5318		16,964.23 41
Total	12.1311	104.6901	93.6492	0.3758	39.9978	0.9984	40.9962	10.3694	0.9509	11.3204		38,949.95 03	38,949.95 03	2.4367		39,010.86 87

POH Dredge - Ventura County, Summer

3.4 Fender Installation - 2018**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.5461	30.4093	20.8560	0.0351		1.8321	1.8321		1.7457	1.7457	0.0000	3,365.814 2	3,365.814 2	0.7136		3,383.655 0
Total	3.5461	30.4093	20.8560	0.0351		1.8321	1.8321		1.7457	1.7457	0.0000	3,365.814 2	3,365.814 2	0.7136		3,383.655 0

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.5128	99.0990	25.9801	0.2055	9.1052	0.8785	9.9837	2.4596	0.8404	3.3000		21,999.01 19	21,999.01 19	1.9049		22,046.63 46
Worker	8.6183	5.5911	67.6690	0.1703	30.8926	0.1199	31.0125	7.9099	0.1106	8.0204		16,950.93 83	16,950.93 83	0.5318		16,964.23 41
Total	12.1311	104.6901	93.6492	0.3758	39.9978	0.9984	40.9962	10.3694	0.9509	11.3204		38,949.95 03	38,949.95 03	2.4367		39,010.86 87

POH Dredge - Ventura County, Summer

3.5 Concrete Repairs & Bollard Installation - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.7082	37.4114	26.4125	0.0442		2.0357	2.0357		1.9030	1.9030		4,368.0279	4,368.0279	1.1994		4,398.0139
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	3.7082	37.4114	26.4125	0.0442		2.0357	2.0357		1.9030	1.9030		4,368.0279	4,368.0279	1.1994		4,398.0139

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1414	0.0917	1.1099	2.7900e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		278.0224	278.0224	8.7200e-003		278.2404
Total	0.1414	0.0917	1.1099	2.7900e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		278.0224	278.0224	8.7200e-003		278.2404

POH Dredge - Ventura County, Summer

3.5 Concrete Repairs & Bollard Installation - 2018**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.7082	37.4114	26.4125	0.0442		2.0357	2.0357		1.9030	1.9030	0.0000	4,368.0279	4,368.0279	1.1994		4,398.0139
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	3.7082	37.4114	26.4125	0.0442		2.0357	2.0357		1.9030	1.9030	0.0000	4,368.0279	4,368.0279	1.1994		4,398.0139

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1414	0.0917	1.1099	2.7900e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		278.0224	278.0224	8.7200e-003		278.2404
Total	0.1414	0.0917	1.1099	2.7900e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		278.0224	278.0224	8.7200e-003		278.2404

POH Dredge - Ventura County, Summer

3.6 Dredging - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	6.6224	74.1528	42.0320	0.0772		3.3407	3.3407		3.1036	3.1036		7,692.8156	7,692.8156	2.2345		7,748.6779
Total	6.6224	74.1528	42.0320	0.0772	8.6733	3.3407	12.0141	3.5965	3.1036	6.7001		7,692.8156	7,692.8156	2.2345		7,748.6779

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1414	0.0917	1.1099	2.7900e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		278.0224	278.0224	8.7200e-003		278.2404
Total	0.1414	0.0917	1.1099	2.7900e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		278.0224	278.0224	8.7200e-003		278.2404

POH Dredge - Ventura County, Summer

3.6 Dredging - 2018**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	6.6224	74.1528	42.0320	0.0772		3.3407	3.3407		3.1036	3.1036	0.0000	7,692.8156	7,692.8156	2.2345		7,748.6779
Total	6.6224	74.1528	42.0320	0.0772	8.6733	3.3407	12.0141	3.5965	3.1036	6.7001	0.0000	7,692.8156	7,692.8156	2.2345		7,748.6779

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1414	0.0917	1.1099	2.7900e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		278.0224	278.0224	8.7200e-003		278.2404
Total	0.1414	0.0917	1.1099	2.7900e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		278.0224	278.0224	8.7200e-003		278.2404

4.0 Operational Detail - Mobile

POH Dredge - Ventura County, Summer

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.1927	24.3086	77.1789	0.2547	22.2132	0.2597	22.4729	5.9328	0.2437	6.1765		25,736.6078	25,736.6078	1.0666		25,763.2733
Unmitigated	6.1927	24.3086	77.1789	0.2547	22.2132	0.2597	22.4729	5.9328	0.2437	6.1765		25,736.6078	25,736.6078	1.0666		25,763.2733

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	3,594.11	3,594.11	3,594.11	10,493,030	10,493,030
Total	3,594.11	3,594.11	3,594.11	10,493,030	10,493,030

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.577012	0.042942	0.189872	0.117495	0.021422	0.006664	0.019052	0.017336	0.001134	0.000976	0.004002	0.000371	0.001721

POH Dredge - Ventura County, Summer

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.4846	13.4960	11.3366	0.0810		1.0257	1.0257		1.0257	1.0257		16,195.1868	16,195.1868	0.3104	0.2969	16,291.4267
NaturalGas Unmitigated	1.4846	13.4960	11.3366	0.0810		1.0257	1.0257		1.0257	1.0257		16,195.1868	16,195.1868	0.3104	0.2969	16,291.4267

POH Dredge - Ventura County, Summer

5.2 Energy by Land Use - NaturalGas**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Heavy Industry	137659	1.4846	13.4960	11.3366	0.0810		1.0257	1.0257		1.0257	1.0257		16,195.1868	16,195.1868	0.3104	0.2969	16,291.4267
Total		1.4846	13.4960	11.3366	0.0810		1.0257	1.0257		1.0257	1.0257		16,195.1868	16,195.1868	0.3104	0.2969	16,291.4267

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Heavy Industry	137.659	1.4846	13.4960	11.3366	0.0810		1.0257	1.0257		1.0257	1.0257		16,195.1868	16,195.1868	0.3104	0.2969	16,291.4267
Total		1.4846	13.4960	11.3366	0.0810		1.0257	1.0257		1.0257	1.0257		16,195.1868	16,195.1868	0.3104	0.2969	16,291.4267

6.0 Area Detail**6.1 Mitigation Measures Area**

POH Dredge - Ventura County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	66.5124	2.2700e-003	0.2462	2.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004		0.5244	0.5244	1.4100e-003		0.5595
Unmitigated	66.5124	2.2700e-003	0.2462	2.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004		0.5244	0.5244	1.4100e-003		0.5595

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	15.2134					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	51.2759					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0232	2.2700e-003	0.2462	2.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004		0.5244	0.5244	1.4100e-003		0.5595
Total	66.5124	2.2700e-003	0.2462	2.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004		0.5244	0.5244	1.4100e-003		0.5595

POH Dredge - Ventura County, Summer

6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	15.2134					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	51.2759					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0232	2.2700e-003	0.2462	2.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004		0.5244	0.5244	1.4100e-003		0.5595
Total	66.5124	2.2700e-003	0.2462	2.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004		0.5244	0.5244	1.4100e-003		0.5595

7.0 Water Detail**7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste****9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment**Fire Pumps and Emergency Generators**

POH Dredge - Ventura County, Summer

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

POH Dredge - Option 2 - Ventura County, Winter

POH Dredge - Option 2

Ventura County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	2,396.07	1000sqft	55.01	2,396,069.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	31
Climate Zone	8			Operational Year	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	702.44	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

POH Dredge - Option 2 - Ventura County, Winter

Project Characteristics - Source: project applicant engineer and site plans

Land Use - approx area of B1, B2, B3, Dredge area, and Beach

Construction Phase - Construction schedule provided by client and construction engineer

Off-road Equipment - Construction equipment provided by client and construction engineer

Off-road Equipment - Construction equipment provided by client and construction engineer

Off-road Equipment - Construction equipment provided by client and construction engineer

Off-road Equipment - Construction equipment provided by client and construction engineer

Off-road Equipment - Construction equipment provided by client and construction engineer

Off-road Equipment - Construction equipment provided by client and construction engineer

Off-road Equipment - Construction equipment provided by client and construction engineer

Trips and VMT -

Demolition - Based on client/construction engineer provided information

Grading -

Energy Use -

POH Dredge - Option 2 - Ventura County, Winter

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	1,110.00	110.00
tblConstructionPhase	NumDays	1,110.00	60.00
tblConstructionPhase	NumDays	70.00	20.00
tblConstructionPhase	NumDays	110.00	10.00
tblConstructionPhase	NumDays	110.00	20.00
tblConstructionPhase	NumDays	75.00	20.00
tblLandUse	BuildingSpaceSquareFeet	2,396,070.00	2,396,069.00
tblLandUse	LandUseSquareFeet	2,396,070.00	2,396,069.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2018	2020

2.0 Emissions Summary

POH Dredge - Option 2 - Ventura County, Winter

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	31.1595	257.4417	212.9160	0.6612	51.1890	7.2310	58.4200	14.0378	6.8528	20.2504	0.0000	67,782.9386	67,782.9386	6.4653	0.0000	67,944.5716
Maximum	31.1595	257.4417	212.9160	0.6612	51.1890	7.2310	58.4200	14.0378	6.8528	20.2504	0.0000	67,782.9386	67,782.9386	6.4653	0.0000	67,944.5716

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	31.1595	257.4417	212.9160	0.6612	51.1890	7.2310	58.4200	14.0378	6.8528	20.2504	0.0000	67,782.9386	67,782.9386	6.4653	0.0000	67,944.5716
Maximum	31.1595	257.4417	212.9160	0.6612	51.1890	7.2310	58.4200	14.0378	6.8528	20.2504	0.0000	67,782.9386	67,782.9386	6.4653	0.0000	67,944.5716

[illegible]

POH Dredge - Option 2 - Ventura County, Winter

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	66.5124	2.2700e-003	0.2462	2.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004		0.5244	0.5244	1.4100e-003		0.5595
Energy	1.4846	13.4960	11.3366	0.0810		1.0257	1.0257		1.0257	1.0257		16,195.1868	16,195.1868	0.3104	0.2969	16,291.4267
Mobile	5.9102	25.5069	77.8837	0.2441	22.2132	0.2619	22.4751	5.9328	0.2458	6.1785		24,667.5930	24,667.5930	1.0793		24,694.5762
Total	73.9072	39.0052	89.4666	0.3251	22.2132	1.2885	23.5017	5.9328	1.2724	7.2051		40,863.3042	40,863.3042	1.3912	0.2969	40,986.5624

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	66.5124	2.2700e-003	0.2462	2.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004		0.5244	0.5244	1.4100e-003		0.5595
Energy	1.4846	13.4960	11.3366	0.0810		1.0257	1.0257		1.0257	1.0257		16,195.1868	16,195.1868	0.3104	0.2969	16,291.4267
Mobile	5.9102	25.5069	77.8837	0.2441	22.2132	0.2619	22.4751	5.9328	0.2458	6.1785		24,667.5930	24,667.5930	1.0793		24,694.5762
Total	73.9072	39.0052	89.4666	0.3251	22.2132	1.2885	23.5017	5.9328	1.2724	7.2051		40,863.3042	40,863.3042	1.3912	0.2969	40,986.5624

POH Dredge - Option 2 - Ventura County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Dredging Option 2	Grading	4/16/2018	4/27/2018	5	10	
2	Demolition	Demolition	4/30/2018	5/25/2018	5	20	
3	Toe Wall Installation	Building Construction	5/14/2018	10/12/2018	5	110	
4	Fender Installation	Building Construction	9/10/2018	11/30/2018	5	60	
5	Concrete Repairs & Bollard Installation	Paving	10/1/2018	10/26/2018	5	20	
6	Dredging	Grading	11/23/2018	12/20/2018	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Dredging Option 2	Air Compressors	2	7.00	78	0.48
Dredging Option 2	Cement and Mortar Mixers	2	7.00	9	0.56
Dredging Option 2	Cranes	2	7.00	231	0.29
Dredging Option 2	Excavators	2	8.00	158	0.38

POH Dredge - Option 2 - Ventura County, Winter

Dredging Option 2	Graders	1	8.00	187	0.41
Dredging Option 2	Rubber Tired Dozers	1	8.00	247	0.40
Dredging Option 2	Scrapers	2	8.00	367	0.48
Dredging Option 2	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Demolition	Air Compressors	2	7.00	78	0.48
Demolition	Cement and Mortar Mixers	2	7.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Cranes	2	7.00	231	0.29
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Toe Wall Installation	Air Compressors	2	7.00	78	0.48
Toe Wall Installation	Cement and Mortar Mixers	2	7.00	9	0.56
Toe Wall Installation	Cranes	2	7.00	231	0.29
Toe Wall Installation	Forklifts	3	8.00	89	0.20
Toe Wall Installation	Generator Sets	1	8.00	84	0.74
Toe Wall Installation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Toe Wall Installation	Welders	1	8.00	46	0.45
Fender Installation	Air Compressors	2	7.00	78	0.48
Fender Installation	Cement and Mortar Mixers	2	7.00	9	0.56
Fender Installation	Cranes	2	7.00	231	0.29
Fender Installation	Forklifts	3	8.00	89	0.20
Fender Installation	Generator Sets	1	8.00	84	0.74
Fender Installation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Fender Installation	Welders	1	8.00	46	0.45
Concrete Repairs & Bollard Installation	Air Compressors	2	7.00	78	0.48
Concrete Repairs & Bollard Installation	Cement and Mortar Mixers	2	7.00	9	0.56

POH Dredge - Option 2 - Ventura County, Winter

Concrete Repairs & Bollard Installation	Cranes	2	7.00	231	0.29
Concrete Repairs & Bollard Installation	Pavers	2	8.00	130	0.42
Concrete Repairs & Bollard Installation	Paving Equipment	2	8.00	132	0.36
Concrete Repairs & Bollard Installation	Rollers	2	8.00	80	0.38
Concrete Repairs & Bollard Installation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Dredging	Air Compressors	2	7.00	78	0.48
Dredging	Cement and Mortar Mixers	2	7.00	9	0.56
Dredging	Cranes	2	7.00	231	0.29
Dredging	Excavators	2	8.00	158	0.38
Dredging	Graders	1	8.00	187	0.41
Dredging	Rubber Tired Dozers	1	8.00	247	0.40
Dredging	Scrapers	2	8.00	367	0.48
Dredging	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Dredging Option 2	13	33.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	13	33.00	0.00	362.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Toe Wall Installation	12	1,006.00	393.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Fender Installation	12	1,006.00	393.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Fender Installation	12	1,006.00	393.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Concrete Repairs & Bollard Installation	13	33.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Dredging	13	33.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

POH Dredge - Option 2 - Ventura County, Winter

3.2 Dredging Option 2 - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	6.6224	74.1528	42.0320	0.0772		3.3407	3.3407		3.1036	3.1036		7,692.8156	7,692.8156	2.2345		7,748.6779
Total	6.6224	74.1528	42.0320	0.0772	8.6733	3.3407	12.0141	3.5965	3.1036	6.7001		7,692.8156	7,692.8156	2.2345		7,748.6779

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1601	0.1075	1.0910	2.6600e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		264.5748	264.5748	8.4800e-003		264.7867
Total	0.1601	0.1075	1.0910	2.6600e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		264.5748	264.5748	8.4800e-003		264.7867

POH Dredge - Option 2 - Ventura County, Winter

3.2 Dredging Option 2 - 2018**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	6.6224	74.1528	42.0320	0.0772		3.3407	3.3407		3.1036	3.1036	0.0000	7,692.8156	7,692.8156	2.2345		7,748.6779
Total	6.6224	74.1528	42.0320	0.0772	8.6733	3.3407	12.0141	3.5965	3.1036	6.7001	0.0000	7,692.8156	7,692.8156	2.2345		7,748.6779

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1601	0.1075	1.0910	2.6600e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		264.5748	264.5748	8.4800e-003		264.7867
Total	0.1601	0.1075	1.0910	2.6600e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		264.5748	264.5748	8.4800e-003		264.7867

POH Dredge - Option 2 - Ventura County, Winter

3.3 Demolition - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.9660	0.0000	3.9660	0.6006	0.0000	0.6006			0.0000			0.0000
Off-Road	5.7835	58.2130	33.9201	0.0602		3.0181	3.0181		2.8282	2.8282		5,945.7056	5,945.7056	1.5520		5,984.5050
Total	5.7835	58.2130	33.9201	0.0602	3.9660	3.0181	6.9841	0.6006	2.8282	3.4288		5,945.7056	5,945.7056	1.5520		5,984.5050

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1612	5.7266	1.1983	0.0138	0.3152	0.0315	0.3467	0.0863	0.0301	0.1164		1,500.5660	1,500.5660	0.1520		1,504.3646
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1601	0.1075	1.0910	2.6600e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		264.5748	264.5748	8.4800e-003		264.7867
Total	0.3213	5.8341	2.2893	0.0165	0.5863	0.0335	0.6197	0.1582	0.0319	0.1901		1,765.1407	1,765.1407	0.1604		1,769.1514

POH Dredge - Option 2 - Ventura County, Winter

3.3 Demolition - 2018**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.9660	0.0000	3.9660	0.6006	0.0000	0.6006			0.0000			0.0000
Off-Road	5.7835	58.2130	33.9201	0.0602		3.0181	3.0181		2.8282	2.8282	0.0000	5,945.7056	5,945.7056	1.5520		5,984.5050
Total	5.7835	58.2130	33.9201	0.0602	3.9660	3.0181	6.9841	0.6006	2.8282	3.4288	0.0000	5,945.7056	5,945.7056	1.5520		5,984.5050

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1612	5.7266	1.1983	0.0138	0.3152	0.0315	0.3467	0.0863	0.0301	0.1164		1,500.5660	1,500.5660	0.1520		1,504.3646
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1601	0.1075	1.0910	2.6600e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		264.5748	264.5748	8.4800e-003		264.7867
Total	0.3213	5.8341	2.2893	0.0165	0.5863	0.0335	0.6197	0.1582	0.0319	0.1901		1,765.1407	1,765.1407	0.1604		1,769.1514

POH Dredge - Option 2 - Ventura County, Winter

3.4 Toe Wall Installation - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.5461	30.4093	20.8560	0.0351		1.8321	1.8321		1.7457	1.7457		3,365.814 2	3,365.814 2	0.7136		3,383.655 0
Total	3.5461	30.4093	20.8560	0.0351		1.8321	1.8321		1.7457	1.7457		3,365.814 2	3,365.814 2	0.7136		3,383.655 0

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.8513	49.7579	14.6412	0.1004	2.6561	0.4497	3.1059	0.7643	0.4303	1.1945		10,740.71 39	10,740.71 39	1.0183		10,766.17 10
Worker	4.8817	3.2768	33.2590	0.0811	8.2641	0.0600	8.3240	2.1920	0.0553	2.2473		8,065.521 9	8,065.521 9	0.2584		8,071.982 7
Total	6.7330	53.0347	47.9002	0.1814	10.9202	0.5097	11.4299	2.9563	0.4855	3.4418		18,806.23 59	18,806.23 59	1.2767		18,838.15 37

POH Dredge - Option 2 - Ventura County, Winter

3.4 Toe Wall Installation - 2018**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.5461	30.4093	20.8560	0.0351		1.8321	1.8321		1.7457	1.7457	0.0000	3,365.814 2	3,365.814 2	0.7136		3,383.655 0
Total	3.5461	30.4093	20.8560	0.0351		1.8321	1.8321		1.7457	1.7457	0.0000	3,365.814 2	3,365.814 2	0.7136		3,383.655 0

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.8513	49.7579	14.6412	0.1004	2.6561	0.4497	3.1059	0.7643	0.4303	1.1945		10,740.71 39	10,740.71 39	1.0183		10,766.17 10
Worker	4.8817	3.2768	33.2590	0.0811	8.2641	0.0600	8.3240	2.1920	0.0553	2.2473		8,065.521 9	8,065.521 9	0.2584		8,071.982 7
Total	6.7330	53.0347	47.9002	0.1814	10.9202	0.5097	11.4299	2.9563	0.4855	3.4418		18,806.23 59	18,806.23 59	1.2767		18,838.15 37

POH Dredge - Option 2 - Ventura County, Winter

3.5 Fender Installation - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.5461	30.4093	20.8560	0.0351		1.8321	1.8321		1.7457	1.7457		3,365.814 2	3,365.814 2	0.7136		3,383.655 0
Total	3.5461	30.4093	20.8560	0.0351		1.8321	1.8321		1.7457	1.7457		3,365.814 2	3,365.814 2	0.7136		3,383.655 0

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.7026	99.5158	29.2824	0.2007	9.1052	0.8995	10.0047	2.4596	0.8605	3.3201		21,481.42 79	21,481.42 79	2.0366		21,532.34 20
Worker	9.7634	6.5537	66.5180	0.1621	30.8926	0.1199	31.0125	7.9099	0.1106	8.0204		16,131.04 39	16,131.04 39	0.5169		16,143.96 54
Total	13.4660	106.0695	95.8004	0.3628	39.9978	1.0194	41.0172	10.3694	0.9711	11.3405		37,612.47 18	37,612.47 18	2.5534		37,676.30 74

POH Dredge - Option 2 - Ventura County, Winter

3.5 Fender Installation - 2018**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.5461	30.4093	20.8560	0.0351		1.8321	1.8321		1.7457	1.7457	0.0000	3,365.814 2	3,365.814 2	0.7136		3,383.655 0
Total	3.5461	30.4093	20.8560	0.0351		1.8321	1.8321		1.7457	1.7457	0.0000	3,365.814 2	3,365.814 2	0.7136		3,383.655 0

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.7026	99.5158	29.2824	0.2007	9.1052	0.8995	10.0047	2.4596	0.8605	3.3201		21,481.42 79	21,481.42 79	2.0366		21,532.34 20
Worker	9.7634	6.5537	66.5180	0.1621	30.8926	0.1199	31.0125	7.9099	0.1106	8.0204		16,131.04 39	16,131.04 39	0.5169		16,143.96 54
Total	13.4660	106.0695	95.8004	0.3628	39.9978	1.0194	41.0172	10.3694	0.9711	11.3405		37,612.47 18	37,612.47 18	2.5534		37,676.30 74

POH Dredge - Option 2 - Ventura County, Winter

3.6 Concrete Repairs & Bollard Installation - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.7082	37.4114	26.4125	0.0442		2.0357	2.0357		1.9030	1.9030		4,368.0279	4,368.0279	1.1994		4,398.0139
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	3.7082	37.4114	26.4125	0.0442		2.0357	2.0357		1.9030	1.9030		4,368.0279	4,368.0279	1.1994		4,398.0139

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1601	0.1075	1.0910	2.6600e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		264.5748	264.5748	8.4800e-003		264.7867
Total	0.1601	0.1075	1.0910	2.6600e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		264.5748	264.5748	8.4800e-003		264.7867

POH Dredge - Option 2 - Ventura County, Winter

3.6 Concrete Repairs & Bollard Installation - 2018**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.7082	37.4114	26.4125	0.0442		2.0357	2.0357		1.9030	1.9030	0.0000	4,368.0279	4,368.0279	1.1994		4,398.0139
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	3.7082	37.4114	26.4125	0.0442		2.0357	2.0357		1.9030	1.9030	0.0000	4,368.0279	4,368.0279	1.1994		4,398.0139

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1601	0.1075	1.0910	2.6600e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		264.5748	264.5748	8.4800e-003		264.7867
Total	0.1601	0.1075	1.0910	2.6600e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		264.5748	264.5748	8.4800e-003		264.7867

POH Dredge - Option 2 - Ventura County, Winter

3.7 Dredging - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	6.6224	74.1528	42.0320	0.0772		3.3407	3.3407		3.1036	3.1036		7,692.8156	7,692.8156	2.2345		7,748.6779
Total	6.6224	74.1528	42.0320	0.0772	8.6733	3.3407	12.0141	3.5965	3.1036	6.7001		7,692.8156	7,692.8156	2.2345		7,748.6779

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1601	0.1075	1.0910	2.6600e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		264.5748	264.5748	8.4800e-003		264.7867
Total	0.1601	0.1075	1.0910	2.6600e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		264.5748	264.5748	8.4800e-003		264.7867

POH Dredge - Option 2 - Ventura County, Winter

3.7 Dredging - 2018**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	6.6224	74.1528	42.0320	0.0772		3.3407	3.3407		3.1036	3.1036	0.0000	7,692.8156	7,692.8156	2.2345		7,748.6779
Total	6.6224	74.1528	42.0320	0.0772	8.6733	3.3407	12.0141	3.5965	3.1036	6.7001	0.0000	7,692.8156	7,692.8156	2.2345		7,748.6779

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1601	0.1075	1.0910	2.6600e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		264.5748	264.5748	8.4800e-003		264.7867
Total	0.1601	0.1075	1.0910	2.6600e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		264.5748	264.5748	8.4800e-003		264.7867

4.0 Operational Detail - Mobile

POH Dredge - Option 2 - Ventura County, Winter

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	5.9102	25.5069	77.8837	0.2441	22.2132	0.2619	22.4751	5.9328	0.2458	6.1785		24,667.59 30	24,667.59 30	1.0793		24,694.57 62
Unmitigated	5.9102	25.5069	77.8837	0.2441	22.2132	0.2619	22.4751	5.9328	0.2458	6.1785		24,667.59 30	24,667.59 30	1.0793		24,694.57 62

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	3,594.11	3,594.11	3,594.11	10,493,030	10,493,030
Total	3,594.11	3,594.11	3,594.11	10,493,030	10,493,030

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.577012	0.042942	0.189872	0.117495	0.021422	0.006664	0.019052	0.017336	0.001134	0.000976	0.004002	0.000371	0.001721

POH Dredge - Option 2 - Ventura County, Winter

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.4846	13.4960	11.3366	0.0810		1.0257	1.0257		1.0257	1.0257		16,195.1868	16,195.1868	0.3104	0.2969	16,291.4267
NaturalGas Unmitigated	1.4846	13.4960	11.3366	0.0810		1.0257	1.0257		1.0257	1.0257		16,195.1868	16,195.1868	0.3104	0.2969	16,291.4267

POH Dredge - Option 2 - Ventura County, Winter

5.2 Energy by Land Use - NaturalGas**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Heavy Industry	137659	1.4846	13.4960	11.3366	0.0810		1.0257	1.0257		1.0257	1.0257		16,195.1868	16,195.1868	0.3104	0.2969	16,291.4267
Total		1.4846	13.4960	11.3366	0.0810		1.0257	1.0257		1.0257	1.0257		16,195.1868	16,195.1868	0.3104	0.2969	16,291.4267

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Heavy Industry	137.659	1.4846	13.4960	11.3366	0.0810		1.0257	1.0257		1.0257	1.0257		16,195.1868	16,195.1868	0.3104	0.2969	16,291.4267
Total		1.4846	13.4960	11.3366	0.0810		1.0257	1.0257		1.0257	1.0257		16,195.1868	16,195.1868	0.3104	0.2969	16,291.4267

6.0 Area Detail**6.1 Mitigation Measures Area**

POH Dredge - Option 2 - Ventura County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	66.5124	2.2700e-003	0.2462	2.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004		0.5244	0.5244	1.4100e-003		0.5595
Unmitigated	66.5124	2.2700e-003	0.2462	2.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004		0.5244	0.5244	1.4100e-003		0.5595

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	15.2134					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	51.2759					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0232	2.2700e-003	0.2462	2.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004		0.5244	0.5244	1.4100e-003		0.5595
Total	66.5124	2.2700e-003	0.2462	2.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004		0.5244	0.5244	1.4100e-003		0.5595

POH Dredge - Option 2 - Ventura County, Winter

6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	15.2134					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	51.2759					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0232	2.2700e-003	0.2462	2.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004		0.5244	0.5244	1.4100e-003		0.5595
Total	66.5124	2.2700e-003	0.2462	2.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004		0.5244	0.5244	1.4100e-003		0.5595

7.0 Water Detail**7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste****9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment**Fire Pumps and Emergency Generators**

POH Dredge - Option 2 - Ventura County, Winter

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

POH Dredge - Option 2 - Ventura County, Summer

POH Dredge - Option 2
Ventura County, Summer**1.0 Project Characteristics**

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	2,396.07	1000sqft	55.01	2,396,069.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	31
Climate Zone	8			Operational Year	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	702.44	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

POH Dredge - Option 2 - Ventura County, Summer

Project Characteristics - Source: project applicant engineer and site plans

Land Use - approx area of B1, B2, B3, Dredge area, and Beach

Construction Phase - Construction schedule provided by client and construction engineer

Off-road Equipment - Construction equipment provided by client and construction engineer

Off-road Equipment - Construction equipment provided by client and construction engineer

Off-road Equipment - Construction equipment provided by client and construction engineer

Off-road Equipment - Construction equipment provided by client and construction engineer

Off-road Equipment - Construction equipment provided by client and construction engineer

Off-road Equipment - Construction equipment provided by client and construction engineer

Off-road Equipment - Construction equipment provided by client and construction engineer

Trips and VMT -

Demolition - Based on client/construction engineer provided information

Grading -

Energy Use -

POH Dredge - Option 2 - Ventura County, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	1,110.00	110.00
tblConstructionPhase	NumDays	1,110.00	60.00
tblConstructionPhase	NumDays	70.00	20.00
tblConstructionPhase	NumDays	110.00	10.00
tblConstructionPhase	NumDays	110.00	20.00
tblConstructionPhase	NumDays	75.00	20.00
tblLandUse	BuildingSpaceSquareFeet	2,396,070.00	2,396,069.00
tblLandUse	LandUseSquareFeet	2,396,070.00	2,396,069.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2018	2020

2.0 Emissions Summary

Unmitigated Construction

Mitigated Construction

[illegible]

POH Dredge - Option 2 - Ventura County, Summer

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	66.5124	2.2700e-003	0.2462	2.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004		0.5244	0.5244	1.4100e-003		0.5595
Energy	1.4846	13.4960	11.3366	0.0810		1.0257	1.0257		1.0257	1.0257		16,195.1868	16,195.1868	0.3104	0.2969	16,291.4267
Mobile	6.1927	24.3086	77.1789	0.2547	22.2132	0.2597	22.4729	5.9328	0.2437	6.1765		25,736.6078	25,736.6078	1.0666		25,763.2733
Total	74.1897	37.8068	88.7618	0.3357	22.2132	1.2863	23.4995	5.9328	1.2703	7.2030		41,932.3190	41,932.3190	1.3784	0.2969	42,055.2595

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	66.5124	2.2700e-003	0.2462	2.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004		0.5244	0.5244	1.4100e-003		0.5595
Energy	1.4846	13.4960	11.3366	0.0810		1.0257	1.0257		1.0257	1.0257		16,195.1868	16,195.1868	0.3104	0.2969	16,291.4267
Mobile	6.1927	24.3086	77.1789	0.2547	22.2132	0.2597	22.4729	5.9328	0.2437	6.1765		25,736.6078	25,736.6078	1.0666		25,763.2733
Total	74.1897	37.8068	88.7618	0.3357	22.2132	1.2863	23.4995	5.9328	1.2703	7.2030		41,932.3190	41,932.3190	1.3784	0.2969	42,055.2595

POH Dredge - Option 2 - Ventura County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Dredging Option 2	Grading	4/16/2018	4/27/2018	5	10	
2	Demolition	Demolition	4/30/2018	5/25/2018	5	20	
3	Toe Wall Installation	Building Construction	5/14/2018	10/12/2018	5	110	
4	Fender Installation	Building Construction	9/10/2018	11/30/2018	5	60	
5	Concrete Repairs & Bollard Installation	Paving	10/1/2018	10/26/2018	5	20	
6	Dredging	Grading	11/23/2018	12/20/2018	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Dredging Option 2	Air Compressors	2	7.00	78	0.48
Dredging Option 2	Cement and Mortar Mixers	2	7.00	9	0.56
Dredging Option 2	Cranes	2	7.00	231	0.29
Dredging Option 2	Excavators	2	8.00	158	0.38

POH Dredge - Option 2 - Ventura County, Summer

Dredging Option 2	Graders	1	8.00	187	0.41
Dredging Option 2	Rubber Tired Dozers	1	8.00	247	0.40
Dredging Option 2	Scrapers	2	8.00	367	0.48
Dredging Option 2	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Demolition	Air Compressors	2	7.00	78	0.48
Demolition	Cement and Mortar Mixers	2	7.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Cranes	2	7.00	231	0.29
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Toe Wall Installation	Air Compressors	2	7.00	78	0.48
Toe Wall Installation	Cement and Mortar Mixers	2	7.00	9	0.56
Toe Wall Installation	Cranes	2	7.00	231	0.29
Toe Wall Installation	Forklifts	3	8.00	89	0.20
Toe Wall Installation	Generator Sets	1	8.00	84	0.74
Toe Wall Installation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Toe Wall Installation	Welders	1	8.00	46	0.45
Fender Installation	Air Compressors	2	7.00	78	0.48
Fender Installation	Cement and Mortar Mixers	2	7.00	9	0.56
Fender Installation	Cranes	2	7.00	231	0.29
Fender Installation	Forklifts	3	8.00	89	0.20
Fender Installation	Generator Sets	1	8.00	84	0.74
Fender Installation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Fender Installation	Welders	1	8.00	46	0.45
Concrete Repairs & Bollard Installation	Air Compressors	2	7.00	78	0.48
Concrete Repairs & Bollard Installation	Cement and Mortar Mixers	2	7.00	9	0.56

POH Dredge - Option 2 - Ventura County, Summer

Concrete Repairs & Bollard Installation	Cranes	2	7.00	231	0.29
Concrete Repairs & Bollard Installation	Pavers	2	8.00	130	0.42
Concrete Repairs & Bollard Installation	Paving Equipment	2	8.00	132	0.36
Concrete Repairs & Bollard Installation	Rollers	2	8.00	80	0.38
Concrete Repairs & Bollard Installation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Dredging	Air Compressors	2	7.00	78	0.48
Dredging	Cement and Mortar Mixers	2	7.00	9	0.56
Dredging	Cranes	2	7.00	231	0.29
Dredging	Excavators	2	8.00	158	0.38
Dredging	Graders	1	8.00	187	0.41
Dredging	Rubber Tired Dozers	1	8.00	247	0.40
Dredging	Scrapers	2	8.00	367	0.48
Dredging	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Dredging Option 2	13	33.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	13	33.00	0.00	362.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Toe Wall Installation	12	1,006.00	393.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Fender Installation	12	1,006.00	393.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Fender Installation	12	1,006.00	393.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Concrete Repairs & Bollard Installation	13	33.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Dredging	13	33.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

POH Dredge - Option 2 - Ventura County, Summer

3.2 Dredging Option 2 - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	6.6224	74.1528	42.0320	0.0772		3.3407	3.3407		3.1036	3.1036		7,692.8156	7,692.8156	2.2345		7,748.6779
Total	6.6224	74.1528	42.0320	0.0772	8.6733	3.3407	12.0141	3.5965	3.1036	6.7001		7,692.8156	7,692.8156	2.2345		7,748.6779

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1414	0.0917	1.1099	2.7900e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		278.0224	278.0224	8.7200e-003		278.2404
Total	0.1414	0.0917	1.1099	2.7900e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		278.0224	278.0224	8.7200e-003		278.2404

POH Dredge - Option 2 - Ventura County, Summer

3.2 Dredging Option 2 - 2018**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	6.6224	74.1528	42.0320	0.0772		3.3407	3.3407		3.1036	3.1036	0.0000	7,692.8156	7,692.8156	2.2345		7,748.6779
Total	6.6224	74.1528	42.0320	0.0772	8.6733	3.3407	12.0141	3.5965	3.1036	6.7001	0.0000	7,692.8156	7,692.8156	2.2345		7,748.6779

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1414	0.0917	1.1099	2.7900e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		278.0224	278.0224	8.7200e-003		278.2404
Total	0.1414	0.0917	1.1099	2.7900e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		278.0224	278.0224	8.7200e-003		278.2404

POH Dredge - Option 2 - Ventura County, Summer

3.3 Demolition - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.9660	0.0000	3.9660	0.6006	0.0000	0.6006			0.0000			0.0000
Off-Road	5.7835	58.2130	33.9201	0.0602		3.0181	3.0181		2.8282	2.8282		5,945.7056	5,945.7056	1.5520		5,984.5050
Total	5.7835	58.2130	33.9201	0.0602	3.9660	3.0181	6.9841	0.6006	2.8282	3.4288		5,945.7056	5,945.7056	1.5520		5,984.5050

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1561	5.6503	1.1035	0.0140	0.3152	0.0306	0.3458	0.0863	0.0293	0.1156		1,523.5607	1,523.5607	0.1462		1,527.2166
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1414	0.0917	1.1099	2.7900e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		278.0224	278.0224	8.7200e-003		278.2404
Total	0.2975	5.7420	2.2134	0.0168	0.5863	0.0326	0.6189	0.1582	0.0311	0.1893		1,801.5831	1,801.5831	0.1550		1,805.4570

POH Dredge - Option 2 - Ventura County, Summer

3.3 Demolition - 2018**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.9660	0.0000	3.9660	0.6006	0.0000	0.6006			0.0000			0.0000
Off-Road	5.7835	58.2130	33.9201	0.0602		3.0181	3.0181		2.8282	2.8282	0.0000	5,945.7056	5,945.7056	1.5520		5,984.5050
Total	5.7835	58.2130	33.9201	0.0602	3.9660	3.0181	6.9841	0.6006	2.8282	3.4288	0.0000	5,945.7056	5,945.7056	1.5520		5,984.5050

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1561	5.6503	1.1035	0.0140	0.3152	0.0306	0.3458	0.0863	0.0293	0.1156		1,523.5607	1,523.5607	0.1462		1,527.2166
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1414	0.0917	1.1099	2.7900e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		278.0224	278.0224	8.7200e-003		278.2404
Total	0.2975	5.7420	2.2134	0.0168	0.5863	0.0326	0.6189	0.1582	0.0311	0.1893		1,801.5831	1,801.5831	0.1550		1,805.4570

POH Dredge - Option 2 - Ventura County, Summer

3.4 Toe Wall Installation - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.5461	30.4093	20.8560	0.0351		1.8321	1.8321		1.7457	1.7457		3,365.814 2	3,365.814 2	0.7136		3,383.655 0
Total	3.5461	30.4093	20.8560	0.0351		1.8321	1.8321		1.7457	1.7457		3,365.814 2	3,365.814 2	0.7136		3,383.655 0

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.7564	49.5495	12.9901	0.1027	2.6561	0.4392	3.0953	0.7643	0.4202	1.1845		10,999.50 60	10,999.50 60	0.9525		11,023.31 73
Worker	4.3091	2.7956	33.8345	0.0852	8.2641	0.0600	8.3240	2.1920	0.0553	2.2473		8,475.469 2	8,475.469 2	0.2659		8,482.117 0
Total	6.0655	52.3450	46.8246	0.1879	10.9202	0.4992	11.4194	2.9563	0.4755	3.4318		19,474.97 51	19,474.97 51	1.2184		19,505.43 44

POH Dredge - Option 2 - Ventura County, Summer

3.4 Toe Wall Installation - 2018**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.5461	30.4093	20.8560	0.0351		1.8321	1.8321		1.7457	1.7457	0.0000	3,365.814 2	3,365.814 2	0.7136		3,383.655 0
Total	3.5461	30.4093	20.8560	0.0351		1.8321	1.8321		1.7457	1.7457	0.0000	3,365.814 2	3,365.814 2	0.7136		3,383.655 0

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.7564	49.5495	12.9901	0.1027	2.6561	0.4392	3.0953	0.7643	0.4202	1.1845		10,999.50 60	10,999.50 60	0.9525		11,023.31 73
Worker	4.3091	2.7956	33.8345	0.0852	8.2641	0.0600	8.3240	2.1920	0.0553	2.2473		8,475.469 2	8,475.469 2	0.2659		8,482.117 0
Total	6.0655	52.3450	46.8246	0.1879	10.9202	0.4992	11.4194	2.9563	0.4755	3.4318		19,474.97 51	19,474.97 51	1.2184		19,505.43 44

POH Dredge - Option 2 - Ventura County, Summer

3.5 Fender Installation - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.5461	30.4093	20.8560	0.0351		1.8321	1.8321		1.7457	1.7457		3,365.814 2	3,365.814 2	0.7136		3,383.655 0
Total	3.5461	30.4093	20.8560	0.0351		1.8321	1.8321		1.7457	1.7457		3,365.814 2	3,365.814 2	0.7136		3,383.655 0

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.5128	99.0990	25.9801	0.2055	9.1052	0.8785	9.9837	2.4596	0.8404	3.3000		21,999.01 19	21,999.01 19	1.9049		22,046.63 46
Worker	8.6183	5.5911	67.6690	0.1703	30.8926	0.1199	31.0125	7.9099	0.1106	8.0204		16,950.93 83	16,950.93 83	0.5318		16,964.23 41
Total	12.1311	104.6901	93.6492	0.3758	39.9978	0.9984	40.9962	10.3694	0.9509	11.3204		38,949.95 03	38,949.95 03	2.4367		39,010.86 87

POH Dredge - Option 2 - Ventura County, Summer

3.5 Fender Installation - 2018**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.5461	30.4093	20.8560	0.0351		1.8321	1.8321		1.7457	1.7457	0.0000	3,365.814 2	3,365.814 2	0.7136		3,383.655 0
Total	3.5461	30.4093	20.8560	0.0351		1.8321	1.8321		1.7457	1.7457	0.0000	3,365.814 2	3,365.814 2	0.7136		3,383.655 0

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.5128	99.0990	25.9801	0.2055	9.1052	0.8785	9.9837	2.4596	0.8404	3.3000		21,999.01 19	21,999.01 19	1.9049		22,046.63 46
Worker	8.6183	5.5911	67.6690	0.1703	30.8926	0.1199	31.0125	7.9099	0.1106	8.0204		16,950.93 83	16,950.93 83	0.5318		16,964.23 41
Total	12.1311	104.6901	93.6492	0.3758	39.9978	0.9984	40.9962	10.3694	0.9509	11.3204		38,949.95 03	38,949.95 03	2.4367		39,010.86 87

POH Dredge - Option 2 - Ventura County, Summer

3.6 Concrete Repairs & Bollard Installation - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.7082	37.4114	26.4125	0.0442		2.0357	2.0357		1.9030	1.9030		4,368.0279	4,368.0279	1.1994		4,398.0139
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	3.7082	37.4114	26.4125	0.0442		2.0357	2.0357		1.9030	1.9030		4,368.0279	4,368.0279	1.1994		4,398.0139

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1414	0.0917	1.1099	2.7900e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		278.0224	278.0224	8.7200e-003		278.2404
Total	0.1414	0.0917	1.1099	2.7900e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		278.0224	278.0224	8.7200e-003		278.2404

POH Dredge - Option 2 - Ventura County, Summer

3.6 Concrete Repairs & Bollard Installation - 2018**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.7082	37.4114	26.4125	0.0442		2.0357	2.0357		1.9030	1.9030	0.0000	4,368.0279	4,368.0279	1.1994		4,398.0139
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	3.7082	37.4114	26.4125	0.0442		2.0357	2.0357		1.9030	1.9030	0.0000	4,368.0279	4,368.0279	1.1994		4,398.0139

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1414	0.0917	1.1099	2.7900e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		278.0224	278.0224	8.7200e-003		278.2404
Total	0.1414	0.0917	1.1099	2.7900e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		278.0224	278.0224	8.7200e-003		278.2404

POH Dredge - Option 2 - Ventura County, Summer

3.7 Dredging - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	6.6224	74.1528	42.0320	0.0772		3.3407	3.3407		3.1036	3.1036		7,692.8156	7,692.8156	2.2345		7,748.6779
Total	6.6224	74.1528	42.0320	0.0772	8.6733	3.3407	12.0141	3.5965	3.1036	6.7001		7,692.8156	7,692.8156	2.2345		7,748.6779

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1414	0.0917	1.1099	2.7900e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		278.0224	278.0224	8.7200e-003		278.2404
Total	0.1414	0.0917	1.1099	2.7900e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		278.0224	278.0224	8.7200e-003		278.2404

POH Dredge - Option 2 - Ventura County, Summer

3.7 Dredging - 2018**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	6.6224	74.1528	42.0320	0.0772		3.3407	3.3407		3.1036	3.1036	0.0000	7,692.8156	7,692.8156	2.2345		7,748.6779
Total	6.6224	74.1528	42.0320	0.0772	8.6733	3.3407	12.0141	3.5965	3.1036	6.7001	0.0000	7,692.8156	7,692.8156	2.2345		7,748.6779

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1414	0.0917	1.1099	2.7900e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		278.0224	278.0224	8.7200e-003		278.2404
Total	0.1414	0.0917	1.1099	2.7900e-003	0.2711	1.9700e-003	0.2731	0.0719	1.8100e-003	0.0737		278.0224	278.0224	8.7200e-003		278.2404

4.0 Operational Detail - Mobile

POH Dredge - Option 2 - Ventura County, Summer

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.1927	24.3086	77.1789	0.2547	22.2132	0.2597	22.4729	5.9328	0.2437	6.1765		25,736.6078	25,736.6078	1.0666		25,763.2733
Unmitigated	6.1927	24.3086	77.1789	0.2547	22.2132	0.2597	22.4729	5.9328	0.2437	6.1765		25,736.6078	25,736.6078	1.0666		25,763.2733

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	3,594.11	3,594.11	3,594.11	10,493,030	10,493,030
Total	3,594.11	3,594.11	3,594.11	10,493,030	10,493,030

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.577012	0.042942	0.189872	0.117495	0.021422	0.006664	0.019052	0.017336	0.001134	0.000976	0.004002	0.000371	0.001721

POH Dredge - Option 2 - Ventura County, Summer

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.4846	13.4960	11.3366	0.0810		1.0257	1.0257		1.0257	1.0257		16,195.1868	16,195.1868	0.3104	0.2969	16,291.4267
NaturalGas Unmitigated	1.4846	13.4960	11.3366	0.0810		1.0257	1.0257		1.0257	1.0257		16,195.1868	16,195.1868	0.3104	0.2969	16,291.4267

POH Dredge - Option 2 - Ventura County, Summer

5.2 Energy by Land Use - NaturalGas**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Heavy Industry	137659	1.4846	13.4960	11.3366	0.0810		1.0257	1.0257		1.0257	1.0257		16,195.1868	16,195.1868	0.3104	0.2969	16,291.4267
Total		1.4846	13.4960	11.3366	0.0810		1.0257	1.0257		1.0257	1.0257		16,195.1868	16,195.1868	0.3104	0.2969	16,291.4267

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Heavy Industry	137.659	1.4846	13.4960	11.3366	0.0810		1.0257	1.0257		1.0257	1.0257		16,195.1868	16,195.1868	0.3104	0.2969	16,291.4267
Total		1.4846	13.4960	11.3366	0.0810		1.0257	1.0257		1.0257	1.0257		16,195.1868	16,195.1868	0.3104	0.2969	16,291.4267

6.0 Area Detail**6.1 Mitigation Measures Area**

POH Dredge - Option 2 - Ventura County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	66.5124	2.2700e-003	0.2462	2.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004		0.5244	0.5244	1.4100e-003		0.5595
Unmitigated	66.5124	2.2700e-003	0.2462	2.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004		0.5244	0.5244	1.4100e-003		0.5595

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	15.2134					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	51.2759					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0232	2.2700e-003	0.2462	2.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004		0.5244	0.5244	1.4100e-003		0.5595
Total	66.5124	2.2700e-003	0.2462	2.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004		0.5244	0.5244	1.4100e-003		0.5595

POH Dredge - Option 2 - Ventura County, Summer

6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	15.2134					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	51.2759					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0232	2.2700e-003	0.2462	2.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004		0.5244	0.5244	1.4100e-003		0.5595
Total	66.5124	2.2700e-003	0.2462	2.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004		0.5244	0.5244	1.4100e-003		0.5595

7.0 Water Detail**7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste****9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment**Fire Pumps and Emergency Generators**

POH Dredge - Option 2 - Ventura County, Summer

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

POH Dredge - Option 2 - Ventura County, Annual

POH Dredge - Option 2
Ventura County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	2,396.07	1000sqft	55.01	2,396,069.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	31
Climate Zone	8			Operational Year	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

POH Dredge - Option 2 - Ventura County, Annual

Project Characteristics - Source: project applicant engineer and site plans

Land Use - approx area of B1, B2, B3, Dredge area, and Beach

Construction Phase - Construction schedule provided by client and construction engineer

Off-road Equipment - Construction equipment provided by client and construction engineer

Off-road Equipment - Construction equipment provided by client and construction engineer

Off-road Equipment - Construction equipment provided by client and construction engineer

Off-road Equipment - Construction equipment provided by client and construction engineer

Off-road Equipment - Construction equipment provided by client and construction engineer

Off-road Equipment - Construction equipment provided by client and construction engineer

Off-road Equipment - Construction equipment provided by client and construction engineer

Trips and VMT -

Demolition - Based on client/construction engineer provided information

Grading -

Energy Use -

POH Dredge - Option 2 - Ventura County, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	1,110.00	110.00
tblConstructionPhase	NumDays	1,110.00	60.00
tblConstructionPhase	NumDays	70.00	20.00
tblConstructionPhase	NumDays	110.00	10.00
tblConstructionPhase	NumDays	110.00	20.00
tblConstructionPhase	NumDays	75.00	20.00
tblLandUse	BuildingSpaceSquareFeet	2,396,070.00	2,396,069.00
tblLandUse	LandUseSquareFeet	2,396,070.00	2,396,069.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2018	2020

2.0 Emissions Summary

POH Dredge - Option 2 - Ventura County, Annual

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	1.2096	10.8720	8.4149	0.0265	1.9490	0.3147	2.2637	0.5287	0.2978	0.8265	0.0000	2,464.448 1	2,464.448 1	0.2414	0.0000	2,470.482 3
Maximum	1.2096	10.8720	8.4149	0.0265	1.9490	0.3147	2.2637	0.5287	0.2978	0.8265	0.0000	2,464.448 1	2,464.448 1	0.2414	0.0000	2,470.482 3

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	1.2096	10.8720	8.4149	0.0265	1.9490	0.3147	2.2637	0.5287	0.2978	0.8265	0.0000	2,464.4476	2,464.4476	0.2414	0.0000	2,470.4818
Maximum	1.2096	10.8720	8.4149	0.0265	1.9490	0.3147	2.2637	0.5287	0.2978	0.8265	0.0000	2,464.4476	2,464.4476	0.2414	0.0000	2,470.4818

[illegible]

POH Dredge - Option 2 - Ventura County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	4-30-2018	7-29-2018	0.6503	0.6503
		Highest	0.6503	0.6503

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	12.1364	2.0000e-004	0.0222	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0428	0.0428	1.1000e-004	0.0000	0.0457
Energy	0.2709	2.4630	2.0689	0.0148		0.1872	0.1872		0.1872	0.1872	0.0000	9,262.1383	9,262.1383	0.3231	0.1054	9,301.6150
Mobile	1.0633	4.6297	13.8643	0.0447	3.9692	0.0474	4.0165	1.0617	0.0445	1.1062	0.0000	4,101.9576	4,101.9576	0.1758	0.0000	4,106.3521
Waste						0.0000	0.0000		0.0000	0.0000	603.1125	0.0000	603.1125	35.6429	0.0000	1,494.1858
Water						0.0000	0.0000		0.0000	0.0000	175.7876	2,298.7967	2,474.5842	18.1500	0.4460	3,061.2281
Total	13.4706	7.0929	15.9554	0.0595	3.9692	0.2347	4.2038	1.0617	0.2317	1.2934	778.9001	15,662.9354	16,441.8355	54.2919	0.5513	17,963.4267

POH Dredge - Option 2 - Ventura County, Annual

2.2 Overall Operational**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	12.1364	2.0000e-004	0.0222	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0428	0.0428	1.1000e-004	0.0000	0.0457
Energy	0.2709	2.4630	2.0689	0.0148		0.1872	0.1872		0.1872	0.1872	0.0000	9,262.1383	9,262.1383	0.3231	0.1054	9,301.6150
Mobile	1.0633	4.6297	13.8643	0.0447	3.9692	0.0474	4.0165	1.0617	0.0445	1.1062	0.0000	4,101.9576	4,101.9576	0.1758	0.0000	4,106.3521
Waste						0.0000	0.0000		0.0000	0.0000	603.1125	0.0000	603.1125	35.6429	0.0000	1,494.1858
Water						0.0000	0.0000		0.0000	0.0000	175.7876	2,298.7967	2,474.5842	18.1500	0.4460	3,061.2281
Total	13.4706	7.0929	15.9554	0.0595	3.9692	0.2347	4.2038	1.0617	0.2317	1.2934	778.9001	15,662.9354	16,441.8355	54.2919	0.5513	17,963.4267

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail**Construction Phase**

POH Dredge - Option 2 - Ventura County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Dredging Option 2	Grading	4/16/2018	4/27/2018	5	10	
2	Demolition	Demolition	4/30/2018	5/25/2018	5	20	
3	Toe Wall Installation	Building Construction	5/14/2018	10/12/2018	5	110	
4	Fender Installation	Building Construction	9/10/2018	11/30/2018	5	60	
5	Concrete Repairs & Bollard Installation	Paving	10/1/2018	10/26/2018	5	20	
6	Dredging	Grading	11/23/2018	12/20/2018	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Dredging Option 2	Air Compressors	2	7.00	78	0.48
Dredging Option 2	Cement and Mortar Mixers	2	7.00	9	0.56
Dredging Option 2	Cranes	2	7.00	231	0.29
Dredging Option 2	Excavators	2	8.00	158	0.38
Dredging Option 2	Graders	1	8.00	187	0.41
Dredging Option 2	Rubber Tired Dozers	1	8.00	247	0.40
Dredging Option 2	Scrapers	2	8.00	367	0.48
Dredging Option 2	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Demolition	Air Compressors	2	7.00	78	0.48
Demolition	Cement and Mortar Mixers	2	7.00	9	0.56

POH Dredge - Option 2 - Ventura County, Annual

Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Cranes	2	7.00	231	0.29
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Toe Wall Installation	Air Compressors	2	7.00	78	0.48
Toe Wall Installation	Cement and Mortar Mixers	2	7.00	9	0.56
Toe Wall Installation	Cranes	2	7.00	231	0.29
Toe Wall Installation	Forklifts	3	8.00	89	0.20
Toe Wall Installation	Generator Sets	1	8.00	84	0.74
Toe Wall Installation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Toe Wall Installation	Welders	1	8.00	46	0.45
Fender Installation	Air Compressors	2	7.00	78	0.48
Fender Installation	Cement and Mortar Mixers	2	7.00	9	0.56
Fender Installation	Cranes	2	7.00	231	0.29
Fender Installation	Forklifts	3	8.00	89	0.20
Fender Installation	Generator Sets	1	8.00	84	0.74
Fender Installation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Fender Installation	Welders	1	8.00	46	0.45
Concrete Repairs & Bollard Installation	Air Compressors	2	7.00	78	0.48
Concrete Repairs & Bollard Installation	Cement and Mortar Mixers	2	7.00	9	0.56
Concrete Repairs & Bollard Installation	Cranes	2	7.00	231	0.29
Concrete Repairs & Bollard Installation	Pavers	2	8.00	130	0.42
Concrete Repairs & Bollard Installation	Paving Equipment	2	8.00	132	0.36
Concrete Repairs & Bollard Installation	Rollers	2	8.00	80	0.38
Concrete Repairs & Bollard Installation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Dredging	Air Compressors	2	7.00	78	0.48

POH Dredge - Option 2 - Ventura County, Annual

Dredging	Cement and Mortar Mixers	2	7.00	9	0.56
Dredging	Cranes	2	7.00	231	0.29
Dredging	Excavators	2	8.00	158	0.38
Dredging	Graders	1	8.00	187	0.41
Dredging	Rubber Tired Dozers	1	8.00	247	0.40
Dredging	Scrapers	2	8.00	367	0.48
Dredging	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Dredging Option 2	13	33.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	13	33.00	0.00	362.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Toe Wall Installation	12	1,006.00	393.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Fender Installation	12	1,006.00	393.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Fender Installation	12	1,006.00	393.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Concrete Repairs & Bollard Installation	13	33.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Dredging	13	33.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

POH Dredge - Option 2 - Ventura County, Annual

3.2 Dredging Option 2 - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0434	0.0000	0.0434	0.0180	0.0000	0.0180	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0331	0.3708	0.2102	3.9000e-004		0.0167	0.0167		0.0155	0.0155	0.0000	34.8940	34.8940	0.0101	0.0000	35.1474
Total	0.0331	0.3708	0.2102	3.9000e-004	0.0434	0.0167	0.0601	0.0180	0.0155	0.0335	0.0000	34.8940	34.8940	0.0101	0.0000	35.1474

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.1000e-004	5.2000e-004	5.3900e-003	1.0000e-005	1.3300e-003	1.0000e-005	1.3400e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.2098	1.2098	4.0000e-005	0.0000	1.2108
Total	7.1000e-004	5.2000e-004	5.3900e-003	1.0000e-005	1.3300e-003	1.0000e-005	1.3400e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.2098	1.2098	4.0000e-005	0.0000	1.2108

POH Dredge - Option 2 - Ventura County, Annual

3.2 Dredging Option 2 - 2018**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0434	0.0000	0.0434	0.0180	0.0000	0.0180	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0331	0.3708	0.2102	3.9000e-004		0.0167	0.0167		0.0155	0.0155	0.0000	34.8940	34.8940	0.0101	0.0000	35.1474
Total	0.0331	0.3708	0.2102	3.9000e-004	0.0434	0.0167	0.0601	0.0180	0.0155	0.0335	0.0000	34.8940	34.8940	0.0101	0.0000	35.1474

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.1000e-004	5.2000e-004	5.3900e-003	1.0000e-005	1.3300e-003	1.0000e-005	1.3400e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.2098	1.2098	4.0000e-005	0.0000	1.2108
Total	7.1000e-004	5.2000e-004	5.3900e-003	1.0000e-005	1.3300e-003	1.0000e-005	1.3400e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.2098	1.2098	4.0000e-005	0.0000	1.2108

POH Dredge - Option 2 - Ventura County, Annual

3.3 Demolition - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0397	0.0000	0.0397	6.0100e-003	0.0000	6.0100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0578	0.5821	0.3392	6.0000e-004		0.0302	0.0302		0.0283	0.0283	0.0000	53.9385	53.9385	0.0141	0.0000	54.2905
Total	0.0578	0.5821	0.3392	6.0000e-004	0.0397	0.0302	0.0698	6.0100e-003	0.0283	0.0343	0.0000	53.9385	53.9385	0.0141	0.0000	54.2905

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.5800e-003	0.0579	0.0114	1.4000e-004	3.1000e-003	3.1000e-004	3.4100e-003	8.5000e-004	3.0000e-004	1.1500e-003	0.0000	13.7339	13.7339	1.3500e-003	0.0000	13.7676
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4300e-003	1.0400e-003	0.0108	3.0000e-005	2.6600e-003	2.0000e-005	2.6800e-003	7.1000e-004	2.0000e-005	7.2000e-004	0.0000	2.4196	2.4196	8.0000e-005	0.0000	2.4215
Total	3.0100e-003	0.0590	0.0222	1.7000e-004	5.7600e-003	3.3000e-004	6.0900e-003	1.5600e-003	3.2000e-004	1.8700e-003	0.0000	16.1535	16.1535	1.4300e-003	0.0000	16.1892

POH Dredge - Option 2 - Ventura County, Annual

3.3 Demolition - 2018**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0397	0.0000	0.0397	6.0100e-003	0.0000	6.0100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0578	0.5821	0.3392	6.0000e-004		0.0302	0.0302		0.0283	0.0283	0.0000	53.9385	53.9385	0.0141	0.0000	54.2905
Total	0.0578	0.5821	0.3392	6.0000e-004	0.0397	0.0302	0.0698	6.0100e-003	0.0283	0.0343	0.0000	53.9385	53.9385	0.0141	0.0000	54.2905

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.5800e-003	0.0579	0.0114	1.4000e-004	3.1000e-003	3.1000e-004	3.4100e-003	8.5000e-004	3.0000e-004	1.1500e-003	0.0000	13.7339	13.7339	1.3500e-003	0.0000	13.7676
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4300e-003	1.0400e-003	0.0108	3.0000e-005	2.6600e-003	2.0000e-005	2.6800e-003	7.1000e-004	2.0000e-005	7.2000e-004	0.0000	2.4196	2.4196	8.0000e-005	0.0000	2.4215
Total	3.0100e-003	0.0590	0.0222	1.7000e-004	5.7600e-003	3.3000e-004	6.0900e-003	1.5600e-003	3.2000e-004	1.8700e-003	0.0000	16.1535	16.1535	1.4300e-003	0.0000	16.1892

POH Dredge - Option 2 - Ventura County, Annual

3.4 Toe Wall Installation - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1950	1.6725	1.1471	1.9300e-003		0.1008	0.1008		0.0960	0.0960	0.0000	167.9378	167.9378	0.0356	0.0000	168.8280
Total	0.1950	1.6725	1.1471	1.9300e-003		0.1008	0.1008		0.0960	0.0960	0.0000	167.9378	167.9378	0.0356	0.0000	168.8280

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0988	2.7706	0.7573	5.5900e-003	0.1439	0.0244	0.1683	0.0415	0.0233	0.0648	0.0000	543.3990	543.3990	0.0490	0.0000	544.6231
Worker	0.2395	0.1741	1.8059	4.4900e-003	0.4461	3.3000e-003	0.4494	0.1185	3.0400e-003	0.1215	0.0000	405.6899	405.6899	0.0129	0.0000	406.0124
Total	0.3383	2.9447	2.5631	0.0101	0.5900	0.0277	0.6177	0.1600	0.0264	0.1864	0.0000	949.0889	949.0889	0.0619	0.0000	950.6355

POH Dredge - Option 2 - Ventura County, Annual

3.4 Toe Wall Installation - 2018**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1950	1.6725	1.1471	1.9300e-003		0.1008	0.1008		0.0960	0.0960	0.0000	167.9376	167.9376	0.0356	0.0000	168.8278
Total	0.1950	1.6725	1.1471	1.9300e-003		0.1008	0.1008		0.0960	0.0960	0.0000	167.9376	167.9376	0.0356	0.0000	168.8278

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0988	2.7706	0.7573	5.5900e-003	0.1439	0.0244	0.1683	0.0415	0.0233	0.0648	0.0000	543.3990	543.3990	0.0490	0.0000	544.6231
Worker	0.2395	0.1741	1.8059	4.4900e-003	0.4461	3.3000e-003	0.4494	0.1185	3.0400e-003	0.1215	0.0000	405.6899	405.6899	0.0129	0.0000	406.0124
Total	0.3383	2.9447	2.5631	0.0101	0.5900	0.0277	0.6177	0.1600	0.0264	0.1864	0.0000	949.0889	949.0889	0.0619	0.0000	950.6355

POH Dredge - Option 2 - Ventura County, Annual

3.5 Fender Installation - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1064	0.9123	0.6257	1.0500e-003		0.0550	0.0550		0.0524	0.0524	0.0000	91.6025	91.6025	0.0194	0.0000	92.0880
Total	0.1064	0.9123	0.6257	1.0500e-003		0.0550	0.0550		0.0524	0.0524	0.0000	91.6025	91.6025	0.0194	0.0000	92.0880

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1077	3.0225	0.8261	6.1000e-003	0.2683	0.0266	0.2949	0.0726	0.0255	0.0981	0.0000	592.7989	592.7989	0.0534	0.0000	594.1343
Worker	0.2613	0.1900	1.9700	4.9000e-003	0.9085	3.6000e-003	0.9121	0.2328	3.3200e-003	0.2361	0.0000	442.5708	442.5708	0.0141	0.0000	442.9226
Total	0.3690	3.2124	2.7961	0.0110	1.1768	0.0302	1.2070	0.3054	0.0288	0.3342	0.0000	1,035.3697	1,035.3697	0.0675	0.0000	1,037.0569

POH Dredge - Option 2 - Ventura County, Annual

3.5 Fender Installation - 2018**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1064	0.9123	0.6257	1.0500e-003		0.0550	0.0550		0.0524	0.0524	0.0000	91.6024	91.6024	0.0194	0.0000	92.0879
Total	0.1064	0.9123	0.6257	1.0500e-003		0.0550	0.0550		0.0524	0.0524	0.0000	91.6024	91.6024	0.0194	0.0000	92.0879

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1077	3.0225	0.8261	6.1000e-003	0.2683	0.0266	0.2949	0.0726	0.0255	0.0981	0.0000	592.7989	592.7989	0.0534	0.0000	594.1343
Worker	0.2613	0.1900	1.9700	4.9000e-003	0.9085	3.6000e-003	0.9121	0.2328	3.3200e-003	0.2361	0.0000	442.5708	442.5708	0.0141	0.0000	442.9226
Total	0.3690	3.2124	2.7961	0.0110	1.1768	0.0302	1.2070	0.3054	0.0288	0.3342	0.0000	1,035.3697	1,035.3697	0.0675	0.0000	1,037.0569

POH Dredge - Option 2 - Ventura County, Annual

3.6 Concrete Repairs & Bollard Installation - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0371	0.3741	0.2641	4.4000e-004		0.0204	0.0204		0.0190	0.0190	0.0000	39.6261	39.6261	0.0109	0.0000	39.8981
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0371	0.3741	0.2641	4.4000e-004		0.0204	0.0204		0.0190	0.0190	0.0000	39.6261	39.6261	0.0109	0.0000	39.8981

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4300e-003	1.0400e-003	0.0108	3.0000e-005	2.6600e-003	2.0000e-005	2.6800e-003	7.1000e-004	2.0000e-005	7.2000e-004	0.0000	2.4196	2.4196	8.0000e-005	0.0000	2.4215
Total	1.4300e-003	1.0400e-003	0.0108	3.0000e-005	2.6600e-003	2.0000e-005	2.6800e-003	7.1000e-004	2.0000e-005	7.2000e-004	0.0000	2.4196	2.4196	8.0000e-005	0.0000	2.4215

POH Dredge - Option 2 - Ventura County, Annual

3.6 Concrete Repairs & Bollard Installation - 2018**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0371	0.3741	0.2641	4.4000e-004		0.0204	0.0204		0.0190	0.0190	0.0000	39.6260	39.6260	0.0109	0.0000	39.8981
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0371	0.3741	0.2641	4.4000e-004		0.0204	0.0204		0.0190	0.0190	0.0000	39.6260	39.6260	0.0109	0.0000	39.8981

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4300e-003	1.0400e-003	0.0108	3.0000e-005	2.6600e-003	2.0000e-005	2.6800e-003	7.1000e-004	2.0000e-005	7.2000e-004	0.0000	2.4196	2.4196	8.0000e-005	0.0000	2.4215
Total	1.4300e-003	1.0400e-003	0.0108	3.0000e-005	2.6600e-003	2.0000e-005	2.6800e-003	7.1000e-004	2.0000e-005	7.2000e-004	0.0000	2.4196	2.4196	8.0000e-005	0.0000	2.4215

POH Dredge - Option 2 - Ventura County, Annual

3.7 Dredging - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0867	0.0000	0.0867	0.0360	0.0000	0.0360	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0662	0.7415	0.4203	7.7000e-004		0.0334	0.0334		0.0310	0.0310	0.0000	69.7881	69.7881	0.0203	0.0000	70.2948
Total	0.0662	0.7415	0.4203	7.7000e-004	0.0867	0.0334	0.1201	0.0360	0.0310	0.0670	0.0000	69.7881	69.7881	0.0203	0.0000	70.2948

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4300e-003	1.0400e-003	0.0108	3.0000e-005	2.6600e-003	2.0000e-005	2.6800e-003	7.1000e-004	2.0000e-005	7.2000e-004	0.0000	2.4196	2.4196	8.0000e-005	0.0000	2.4215
Total	1.4300e-003	1.0400e-003	0.0108	3.0000e-005	2.6600e-003	2.0000e-005	2.6800e-003	7.1000e-004	2.0000e-005	7.2000e-004	0.0000	2.4196	2.4196	8.0000e-005	0.0000	2.4215

POH Dredge - Option 2 - Ventura County, Annual

3.7 Dredging - 2018**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0867	0.0000	0.0867	0.0360	0.0000	0.0360	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0662	0.7415	0.4203	7.7000e-004		0.0334	0.0334		0.0310	0.0310	0.0000	69.7880	69.7880	0.0203	0.0000	70.2947
Total	0.0662	0.7415	0.4203	7.7000e-004	0.0867	0.0334	0.1201	0.0360	0.0310	0.0670	0.0000	69.7880	69.7880	0.0203	0.0000	70.2947

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4300e-003	1.0400e-003	0.0108	3.0000e-005	2.6600e-003	2.0000e-005	2.6800e-003	7.1000e-004	2.0000e-005	7.2000e-004	0.0000	2.4196	2.4196	8.0000e-005	0.0000	2.4215
Total	1.4300e-003	1.0400e-003	0.0108	3.0000e-005	2.6600e-003	2.0000e-005	2.6800e-003	7.1000e-004	2.0000e-005	7.2000e-004	0.0000	2.4196	2.4196	8.0000e-005	0.0000	2.4215

4.0 Operational Detail - Mobile

POH Dredge - Option 2 - Ventura County, Annual

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.0633	4.6297	13.8643	0.0447	3.9692	0.0474	4.0165	1.0617	0.0445	1.1062	0.0000	4,101.9576	4,101.9576	0.1758	0.0000	4,106.3521
Unmitigated	1.0633	4.6297	13.8643	0.0447	3.9692	0.0474	4.0165	1.0617	0.0445	1.1062	0.0000	4,101.9576	4,101.9576	0.1758	0.0000	4,106.3521

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	3,594.11	3,594.11	3,594.11	10,493,030	10,493,030
Total	3,594.11	3,594.11	3,594.11	10,493,030	10,493,030

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.577012	0.042942	0.189872	0.117495	0.021422	0.006664	0.019052	0.017336	0.001134	0.000976	0.004002	0.000371	0.001721

POH Dredge - Option 2 - Ventura County, Annual

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	6,580.8435	6,580.8435	0.2717	0.0562	6,604.3866
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	6,580.8435	6,580.8435	0.2717	0.0562	6,604.3866
NaturalGas Mitigated	0.2709	2.4630	2.0689	0.0148		0.1872	0.1872		0.1872	0.1872	0.0000	2,681.2948	2,681.2948	0.0514	0.0492	2,697.2284
NaturalGas Unmitigated	0.2709	2.4630	2.0689	0.0148		0.1872	0.1872		0.1872	0.1872	0.0000	2,681.2948	2,681.2948	0.0514	0.0492	2,697.2284

POH Dredge - Option 2 - Ventura County, Annual

5.2 Energy by Land Use - NaturalGas**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Heavy Industry	5.02456e+007	0.2709	2.4630	2.0689	0.0148		0.1872	0.1872		0.1872	0.1872	0.0000	2,681.2948	2,681.2948	0.0514	0.0492	2,697.2284
Total		0.2709	2.4630	2.0689	0.0148		0.1872	0.1872		0.1872	0.1872	0.0000	2,681.2948	2,681.2948	0.0514	0.0492	2,697.2284

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Heavy Industry	5.02456e+007	0.2709	2.4630	2.0689	0.0148		0.1872	0.1872		0.1872	0.1872	0.0000	2,681.2948	2,681.2948	0.0514	0.0492	2,697.2284
Total		0.2709	2.4630	2.0689	0.0148		0.1872	0.1872		0.1872	0.1872	0.0000	2,681.2948	2,681.2948	0.0514	0.0492	2,697.2284

POH Dredge - Option 2 - Ventura County, Annual

5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	2.06541e+007	6,580.8435	0.2717	0.0562	6,604.3866
Total		6,580.8435	0.2717	0.0562	6,604.3866

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	2.06541e+007	6,580.8435	0.2717	0.0562	6,604.3866
Total		6,580.8435	0.2717	0.0562	6,604.3866

6.0 Area Detail**6.1 Mitigation Measures Area**

POH Dredge - Option 2 - Ventura County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	12.1364	2.0000e-004	0.0222	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0428	0.0428	1.1000e-004	0.0000	0.0457
Unmitigated	12.1364	2.0000e-004	0.0222	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0428	0.0428	1.1000e-004	0.0000	0.0457

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.7765					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	9.3579					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0800e-003	2.0000e-004	0.0222	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0428	0.0428	1.1000e-004	0.0000	0.0457
Total	12.1364	2.0000e-004	0.0222	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0428	0.0428	1.1000e-004	0.0000	0.0457

POH Dredge - Option 2 - Ventura County, Annual

6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.7765					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	9.3579					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0800e-003	2.0000e-004	0.0222	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0428	0.0428	1.1000e-004	0.0000	0.0457
Total	12.1364	2.0000e-004	0.0222	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0428	0.0428	1.1000e-004	0.0000	0.0457

7.0 Water Detail**7.1 Mitigation Measures Water**

POH Dredge - Option 2 - Ventura County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2,474.584 2	18.1500	0.4460	3,061.228 1
Unmitigated	2,474.584 2	18.1500	0.4460	3,061.228 1

7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	554.091 / 0	2,474.584 2	18.1500	0.4460	3,061.228 1
Total		2,474.584 2	18.1500	0.4460	3,061.228 1

POH Dredge - Option 2 - Ventura County, Annual

7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	554.091 / 0	2,474.584 2	18.1500	0.4460	3,061.228 1
Total		2,474.584 2	18.1500	0.4460	3,061.228 1

8.0 Waste Detail**8.1 Mitigation Measures Waste****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	603.1125	35.6429	0.0000	1,494.185 8
Unmitigated	603.1125	35.6429	0.0000	1,494.185 8

POH Dredge - Option 2 - Ventura County, Annual

8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	2971.13	603.1125	35.6429	0.0000	1,494.1858
Total		603.1125	35.6429	0.0000	1,494.1858

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	2971.13	603.1125	35.6429	0.0000	1,494.1858
Total		603.1125	35.6429	0.0000	1,494.1858

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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POH Dredge - Option 2 - Ventura County, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Port of Hueneme Berth Deepening and Wharf Improvement Project - Option 1

On-Site Equipment Combustion Emissions

Phase 3 Phase Dates: 4/30/2018 - 5/25/2018											
Equipment	# of Units	Daily Hours	Days in Use	Total Hourly Usage (units*hours per day*days)	ROG lbs	CO lbs	NOX lbs	SOX lbs	PM10 lbs	PM2.5 lbs	CO2e lbs
Tugboat	1	2	20	40	4.07	26.21	39.92	0.04	1.44	1.32	3,217.23
MAX EXHAUST EMISSIONS PER DAY					4.07	26.21	39.92	0.04	1.44	1.32	3,217.23
TOTAL					81.44	524.24	798.48	0.76	28.79	26.48	64,344.70

Phases 4 - 6 Phase Dates: 5/14/18 - 11/30/18											
Equipment	# of Units	Daily Hours	Days in Use	Total Hourly Usage (units*hours per day*days)	ROG lbs	CO lbs	NOX lbs	SOX lbs	PM10 lbs	PM2.5 lbs	CO2e lbs
Tugboat	1	4	135	540	8.14	52.42	79.85	0.08	2.88	2.65	6,434.47
MAX EXHAUST EMISSIONS PER DAY					8.14	52.42	79.85	0.08	2.88	2.65	6,434.47
TOTAL					1,099.43	7,077.27	10,779.55	10.23	388.64	357.55	868,653.41

Phase 7 Phase Dates: 11/23/2018 -12/20/2018											
Equipment	# of Units	Daily Hours	Days in Use	Total Hourly Usage (units*hours per day*days)	ROG lbs	CO lbs	NOX lbs	SOX lbs	PM10 lbs	PM2.5 lbs	CO2e lbs
Tugboat	1	7	20	140	14.25	91.74	139.73	0.13	5.04	4.63	11,260.32
MAX EXHAUST EMISSIONS PER DAY					14.25	91.74	139.73	0.13	5.04	4.63	11,260.32
TOTAL					285.04	1,834.85	2,794.70	2.65	100.76	92.70	225,206.44

Equipment ¹	Fuel Type	MaxHP	ROG lbs/hr	CO lbs/hr	NOX lbs/hr	SOX lbs/hr	PM lbs/hr ²	PM2.5 lbs/hr ²	CO2e lbs/hr
Tugboat	diesel	3400	2.04E+00	1.31E+01	2.00E+01	1.89E-02	7.20E-01	6.62E-01	1.61E+03

CO2e
1,158,204.55
510.76

1. From the port of LA Inventory of Air Emissions CY2015 - Table 4.4, results divided by 15 assist tugs in harbor
2. For offroad diesel internal combustion, total particulate matter = PM₁₀, while PM_{2.5} is 0.92 (92%) of PM₁₀ (CARB, CEIDARS, 2007).

Port of Hueneme Berth Deepening and Wharf Improvement Project - Option 2

On-Site Equipment Combustion Emissions

Phase 3		Phase Dates: 4/30/2018 - 5/25/2028									
Equipment	Number of Units	Daily Hours	Days in Use	Total Hourly Usage (units*hours per day*days)	ROG lbs	CO lbs	NOX lbs	SOX lbs	PM10 lbs	PM2.5 lbs	CO2e lbs
Tugboat	1	2	20	40	4.07	26.21	39.92	0.04	1.44	1.32	3,217.23
MAX EXHAUST EMISSIONS PER DAY					4.07	26.21	39.92	0.04	1.44	1.32	3,217.23
TOTAL					81.44	524.24	798.48	0.76	28.79	26.48	64,344.70

Phases 4 - 6		Phase Dates: 5/14/18 - 11/30/18									
Equipment	Number of Units	Daily Hours	Days in Use	Total Hourly Usage (units*hours per day*days)	ROG lbs	CO lbs	NOX lbs	SOX lbs	PM10 lbs	PM2.5 lbs	CO2e lbs
Tugboat	1	4	135	540	8.14	52.42	79.85	0.08	2.88	2.65	6,434.47
MAX EXHAUST EMISSIONS PER DAY					8.14	52.42	79.85	0.08	2.88	2.65	6,434.47
TOTAL					1,099.43	7,077.27	10,779.55	10.23	388.64	357.55	868,653.41

Phase 7		Phase Dates: 11/23/2018 -12/20/2018									
Equipment	Number of Units	Daily Hours	Days in Use	Total Hourly Usage (units*hours per day*days)	ROG lbs	CO lbs	NOX lbs	SOX lbs	PM10 lbs	PM2.5 lbs	CO2e lbs
Tugboat	1	7	20	140	14.25	91.74	139.73	0.13	5.04	4.63	11,260.32
MAX EXHAUST EMISSIONS PER DAY					14.25	91.74	139.73	0.13	5.04	4.63	11,260.32
TOTAL					285.04	1,834.85	2,794.70	2.65	100.76	92.70	225,206.44

Phase 1A		Phase Dates: PRE-OHD Construction									
Equipment	Number of Units	Daily Hours	Days in Use	Total Hourly Usage (units*hours per day*days)	ROG lbs	CO lbs	NOX lbs	SOX lbs	PM10 lbs	PM2.5 lbs	CO2e lbs
Tugboat	1	7	10	70	14.25	91.74	139.73	0.13	5.04	4.63	11,260.32
MAX EXHAUST EMISSIONS PER DAY					14.25	91.74	139.73	0.13	5.04	4.63	11,260.32
TOTAL					142.52	917.42	1,397.35	1.33	50.38	46.35	112,603.22

Equipment ¹	Fuel Type	MaxHP	OG lbs/hr	CO lbs/hr	NOX lbs/hr	SOX lbs/hr	PM lbs/hr ²	PM2.5 lbs/hr ²	CO2e lbs/hr
Tugboat	diesel	3400	#####	1.31E+01	2.00E+01	1.89E-02	7.20E-01	6.62E-01	1.61E+03

CO2e
lbs 1,608,617.42

1. From the port of LA Inventory of Air Emissions CY2015 - Table 4.4, results divided by 15 assist tugs in harbor metric tons 729.66

2. For offroad diesel internal combustion, total particulate matter = PM₁₀, while PM_{2.5} is 0.92 (92%) of PM₁₀ (CARB, CEIDARS, 2007).

Combined Phases															
Option 1							Option 2								
AQ							AQ								
Max Lbs/Day							Max Lbs/Day								
Phases	3 + 4						Phases	3 + 4							
Pollutant	ROG	NOX	CO	SO2	PM10	PM2.5	Pollutant	ROG	NOX	CO	SO2	PM10	PM2.5		
CalEEMod	9.3		88.6	54.8	0.1	8.8	5.1	CalEEMod	9.3		88.6	54.8	0.1	8.8	5.1
Tug Boat	8.1		52.4	79.8	0.1	2.9	2.6	Tug Boat	8.1		52.4	79.8	0.1	2.9	2.6
Total	17.4		141.0	134.6	0.2	11.7	7.7	Total	17.4		141.0	134.6	0.2	11.7	7.7
Phases	4 + 5 + 6						Phases	4 + 5 + 6							
Pollutant	ROG	NOX	CO	SO2	PM10	PM2.5	Pollutant	ROG	NOX	CO	SO2	PM10	PM2.5		
CalEEMod	10.7		98.2	68.2	0.1	5.6	5.3	CalEEMod	10.7		98.2	68.2	0.1	5.6	5.3
Tug Boat	8.1		52.4	79.8	0.1	2.9	2.6	Tug Boat	8.1		52.4	79.8	0.1	2.9	2.6
Total	18.8		150.6	148.0	0.2	8.5	7.9	Total	18.8		150.6	148.0	0.2	8.5	7.9
Phases	5 + 7						Phases	5 + 7							
Pollutant	ROG	NOX	CO	SO2	PM10	PM2.5	Pollutant	ROG	NOX	CO	SO2	PM10	PM2.5		
CalEEMod	10.1		104.6	62.9	0.1	13.8	8.4	CalEEMod	10.1		104.6	62.9	0.1	13.8	8.4
Tug Boat	14.3		91.7	139.7	0.1	5.0	4.6	Tug Boat	14.3		91.7	139.7	0.1	5.0	4.6
Total	24.4		196.3	202.6	0.2	18.8	13.0	Total	24.4		196.3	202.6	0.2	18.8	13.0

Appendix B

Noise

AMBIENT NOISE SURVEY DATA SHEET

Project: POH Dredging
 Date: November 3, 2006
 Operator: Hannah Miller

Job Number: 16-02923

Station: <u>1</u> Begin: <u>2:32 PM</u> Measurement No. <u>#11</u> Finish: <u>2:47 PM</u> Wind: <u>see below</u> mph Direction: <u>W</u> Temperature: <u>79°F</u> Cloud Cover Class <u>Berth 1</u> Daytime <input type="checkbox"/> 1 - Overcast >80% <input type="checkbox"/> 2 - Light 20-80% <input checked="" type="checkbox"/> 3 - Sunny <20% Nighttime <input type="checkbox"/> 4 - Clear <50% <input type="checkbox"/> 5 - Overcast >50% Primary Noise Source: <u>ship engine, beeping, birds</u> Distance: <u>50-100 ft</u> Secondary Noise Sources: <u>very windy (anemometer out of battery) phone says 12 mph west</u> Notes: <u>also - sediment core collecting samples</u> Traffic LDAT: <u></u> MDT: <u>1 @ 8:13 on Berth</u> HDT: <u>truck @ 9:20 approx backing up w/ beeping</u> Leq: <u>65.5</u> L(10): <u>67.3</u> Lmin: <u>59.4</u> L(33): <u></u> Lmax: <u>81.3</u> L(50): <u>62.8</u> Peak: <u></u> L(90): <u>61.3</u> Calibration Start: <u></u> dB End: <u></u> dB Response: <input type="checkbox"/> Slow <input checked="" type="checkbox"/> Fast <input type="checkbox"/> Peak <input type="checkbox"/> Impulse Weighting: <input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> Linear Octave Filter: <input checked="" type="checkbox"/> NA <input type="checkbox"/> <u></u> Hz	Station: <u>2</u> Begin: <u>3:15</u> Measurement No. <u>12</u> Finish: <u>3:30 PM</u> Wind: <u>see below</u> mph Direction: <u>to W</u> Temperature: <u>77°F</u> Cloud Cover Class <u></u> Daytime <input type="checkbox"/> 1 - Overcast >80% <input type="checkbox"/> 2 - Light 20-80% <input checked="" type="checkbox"/> 3 - Sunny <20% Nighttime <input type="checkbox"/> 4 - Clear <50% <input type="checkbox"/> 5 - Overcast >50% Primary Noise Source: <u>noise from port - beeping, clanging</u> Distance: <u>1000+ ft</u> Secondary Noise Sources: <u>cars on road, traffic, waves, pedestrian chatter</u> Notes: <u>windy - 10 mph W</u> Traffic LDAT: <u> </u> MDT: <u>school bus @ 8:15</u> HDT: <u>ped = </u> Car @ 13:58 - very loud exhaust Leq: <u>50.7</u> L(10): <u>60.0</u> Lmin: <u>51.8</u> L(33): <u></u> Lmax: <u>80.7</u> L(50): <u>55.6</u> Peak: <u></u> L(90): <u>53.7</u> Calibration Start: <u></u> dB End: <u></u> dB Response: <input type="checkbox"/> Slow <input checked="" type="checkbox"/> Fast <input type="checkbox"/> Peak <input type="checkbox"/> Impulse Weighting: <input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> Linear Octave Filter: <input checked="" type="checkbox"/> NA <input type="checkbox"/> <u></u> Hz
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Note: Provide Sketch of Location on Back.

AMBIENT NOISE SURVEY DATA SHEET

Project: _____
 Date: _____
 Operator: _____

Job Number: _____

Station: <u>3</u> Measurement No. <u>13</u> Wind: <u>subsonic</u> mph Temperature: <u>77°F</u> Cloud Cover Class Daytime <input type="checkbox"/> 1 - Overcast >80% <input type="checkbox"/> 2 - Light 20-80% <input checked="" type="checkbox"/> 3 - Sunny <20% Nighttime <input type="checkbox"/> 4 - Clear <50% <input type="checkbox"/> 5 - Overcast >50% Primary Noise Source: <u>port</u> Distance: <u>200-300ft</u> Secondary Noise Sources: <u>cars, windy, anometer batt dead - windy</u> Notes: <u>(phone says 10 mph w - wind)</u> Traffic LDA/T: <u> 11</u> MDT: _____ HDT: <u>1 @ 3:56</u> Leq: <u>55.4</u> L(10): <u>56.6</u> Lmin: _____ L(33): <u>53.0</u> Lmax: <u>75.6</u> L(50): _____ Peak: <u>48.0</u> L(90): <u>50.9</u> Calibration Start: _____ dB End: _____ dB Response: <input type="checkbox"/> Slow <input type="checkbox"/> Fast <input type="checkbox"/> Peak <input type="checkbox"/> Impulse Weighting: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> Linear Octave Filter: <input type="checkbox"/> NA <input type="checkbox"/> _____ Hz	Station: _____ Begin: _____ Measurement No. _____ Finish: _____ Wind: _____ mph Direction: _____ Temperature: _____ Cloud Cover Class Daytime <input type="checkbox"/> 1 - Overcast >80% <input type="checkbox"/> 2 - Light 20-80% <input type="checkbox"/> 3 - Sunny <20% Nighttime <input type="checkbox"/> 4 - Clear <50% <input type="checkbox"/> 5 - Overcast >50% Primary Noise Source: _____ Distance: _____ Secondary Noise Sources: _____ Notes: _____ Traffic LDA/T: _____ MDT: _____ HDT: _____ Leq: _____ L(10): _____ Lmin: _____ L(33): _____ Lmax: _____ L(50): _____ Peak: _____ L(90): _____ Calibration Start: _____ dB End: _____ dB Response: <input type="checkbox"/> Slow <input type="checkbox"/> Fast <input type="checkbox"/> Peak <input type="checkbox"/> Impulse Weighting: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> Linear Octave Filter: <input type="checkbox"/> NA <input type="checkbox"/> _____ Hz
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Note: Provide Sketch of Location on Back.

HEAVY EQUIPMENT NOISE IMPACT ESTIMATION PORT OF HUENEME

Scenario: Demo

Receptor Location: Market Street

Noise Source	Ave. Maximum SPL @ 50 ft., dBA	Number	Percentage of Workday Hours In Use	Effective Use Factor *	Distance, Ft.	Leq, dBA		
Air Compressor [2]	81	2	0.7	0.5	860	55	88124778.8	297879.864
Cement and Mortar Mixers [2]	85	2	0.7	0.5	860	59	221359436	748240.387
Concrete Industrial Saws [3]	90	1	0.8	0.5	860	61	400000000	1352082.21
Cranes [2]	88	2	0.7	0.5	860	62	441670141	1492935.85
Excavators[3]	85	3	0.8	0.5	860	61	379473319	1282697.81
Rubber Tired Dozers [2]	85	2	0.8	0.5	860	59	252982213	855131.871
Tractor/Loader/Backhoe [2]	85	1	0.8	0.5	860	56	126491106	427565.936

TOTAL Leq DURING NORMAL OPI **68** **dBA**

6456533.92

Daytime Ambient without Equipment 55 dBA

Nighttime Ambient without Equipmer 0 dBA

Daytime Hours Operating: 8

Evening Hours Operating: 0

Nighttime Hours Operating: 0

Combined Daytime Hourly Leq: 68 dBA

Combined Nighttime Hourly Leq: 0 dBA

ESTIMATED Ldn: **64** **dBA**

ESTIMATED CNEL: **64** **dBA**

Distance attenuation assumed at: 6 dBA per doubling of distance

Notes: #N/A = Not Applicable

* Assumed percentage of time that equipment is operating at near maximum sound level.

* Equipment type per applicant supplied information

Equipment Use Source:

[2] Federal Transit Administration (FTA) (2006), Transit Noise and Vibration Assessment

[3] Federal Highway Administration (FHWA) (2006), *Construction Noise Handbook*. Accessed at https://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/

HEAVY EQUIPMENT NOISE IMPACT ESTIMATION PORT OF HUENEME

Scenario: Toe Wall Install
Receptor Location: Market Street

Noise Source	Ave. Maximum SPL @ 50 ft., dBA	Number	Percentage of Workday Hours In Use	Effective Use Factor *	Distance, Ft.	Leq, dBA		
Air Compressor[2]	81	2	0.7	0.5	860	55	88124778.8	297879.864
Cement and Mortar Mixers[2]	85	2	0.7	0.5	860	59	221359436	748240.387
Cranes[2]	88	2	0.7	0.5	860	62	441670141	1492935.85
Forklifts[2]	83	3	0.8	0.5	860	59	239431478	809327.602
Generator Sets[2]	81	1	0.8	0.5	860	52	50357016.5	170217.065
Tractor/Loader/Backhoe[2]	85	1	0.8	0.5	860	56	126491106	427565.936
Welders[2]	85	1	0.8	0.5	860	56	126491106	427565.936

TOTAL Leq DURING NORMAL OPI **66** **dBA**

4373732.64

Daytime Ambient without Equipment 55 dBA
 Nighttime Ambient without Equipmer 0 dBA
 Daytime Hours Operating: 8
 Evening Hours Operating: 0
 Nighttime Hours Operating: 0
 Combined Daytime Hourly Leq: 67 dBA
 Combined Nighttime Hourly Leq: 0 dBA
ESTIMATED Ldn: **62** **dBA**
ESTIMATED CNEL: **62** **dBA**

Distance attenuation assumed at: 6 dBA per doubling of distance

Notes: #N/A = Not Applicable

- *Assumed scarifier for forklift noise level
- * Assumed percentage of time that equipment is operating at near maximum sound level.
- * Equipment type per applicant supplied information

Equipment Use Source:

[2] Federal Transit Administration (FTA) (2006), Transit Noise and Vibration Assessment

HEAVY EQUIPMENT NOISE IMPACT ESTIMATION PORT OF HUENEME

Scenario: Fender Install
Receptor Location: Market Street

Noise Source	Ave. Maximum SPL @ 50 ft., dBA	Number	Percentage of Workday Hours In Use	Effective Use Factor *	Distance, Ft.	Leq, dBA		
Air Compressor[2]	81	2	0.7	0.5	860	55	88124778.8	297879.864
Cement and Mortar Mixers[2]	85	2	0.7	0.5	860	59	221359436	748240.387
Cranes[2]	88	2	0.7	0.5	860	62	441670141	1492935.85
Forklifts[2]	83	3	0.8	0.5	860	59	239431478	809327.602
Generator Sets[2]	81	1	0.8	0.5	860	52	50357016.5	170217.065
Tractor/Loader/Backhoe[2]	85	1	0.8	0.5	860	56	126491106	427565.936
Welders[3]	73	1	0.8	0.5	860	44	7981049.26	26977.5867

TOTAL Leq DURING NORMAL OPI **66** **dBA**

3973144.29

Daytime Ambient without Equipment 55 dBA
 Nighttime Ambient without Equipmer 0 dBA
 Daytime Hours Operating: 8
 Evening Hours Operating: 0
 Nighttime Hours Operating: 0
 Combined Daytime Hourly Leq: 66 dBA
 Combined Nighttime Hourly Leq: 0 dBA
ESTIMATED Ldn: **62** **dBA**
ESTIMATED CNEL: **62** **dBA**

Distance attenuation assumed at: 6 dBA per doubling of distance

Notes: #N/A = Not Applicable

- *Assumed scarifier for forklift noise level
- * Assumed percentage of time that equipment is operating at near maximum sound level.
- * Equipment type per applicant supplied information

Equipment Use Source:

[2] Federal Transit Administration (FTA) (2006), Transit Noise and Vibration Assessment
 [3] Federal Highway Administration (FHWA) (2006), *Construction Noise Handbook*. Accessed at
https://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/

HEAVY EQUIPMENT NOISE IMPACT ESTIMATION PORT OF HUENEME

Scenario: Concrete

Receptor Location: Market Street

Noise Source	Ave. Maximum SPL @ 50 ft., dBA	Number	Percentage of Workday Hours In Use	Effective Use Factor ¹	Distance , Ft.	Leq, dBA		
Air Compressor[2]	81	2	0.7	0.5	860	55	88124778.8	297879.864
Cement and Mortar Mixers[2]	85	2	0.7	0.5	860	59	221359436	748240.387
Cranes[2]	88	2	0.7	0.5	860	62	441670141	1492935.85
Pavers[2]	89	2	0.8	0.5	860	63	635462588	2147994.14
Paving Equipment[3]	85	2	0.8	0.5	860	59	252982213	855131.871
Rollers[2]	74	2	0.8	0.5	860	48	20095091.5	67925.539
Tractor/Loader/Backhoe[2]	85	1	0.8	0.5	860	56	126491106	427565.936

TOTAL Leq DURING NORMAL OPE **68** **dBA**

6037673.59

Daytime Ambient without Equipment 55 dBA

Nighttime Ambient without Equipmen 0 dBA

Daytime Hours Operating: 8

Evening Hours Operating: 0

Nighttime Hours Operating: 0

Combined Daytime Hourly Leq: 68 dBA

Combined Nighttime Hourly Leq: 0 dBA

ESTIMATED Ldn: **63** **dBA**

ESTIMATED CNEL: **63** **dBA**

Distance attenuation assumed at: 6 dBA per doubling of distance

Notes: #N/A = Not Applicable

* Assumed percentage of time that equipment is operating at near maximum sound level.

* Equipment type per applicant supplied information

Equipment Use Source:

[2] Federal Transit Administration (FTA) (2006), Transit Noise and Vibration Assessment

[3] Federal Highway Administration (FHWA) (2006), *Construction Noise Handbook*.

Accessed at https://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/

HEAVY EQUIPMENT NOISE IMPACT ESTIMATION PORT OF HUENEME

Scenario: Dredging

Receptor Location: Market Street

Noise Source	Ave. Maximum SPL @ 50 ft., dBA	Percentage of Workday Number Hours In Use	Effective Use Factor *	Distance, Ft.	Leq, dBA		
Air Compressor[2]	81	2	0.7	0.5	1370	51	8.8E+07 117381
Cement and Mortar Mixers[2]	85	2	0.7	0.5	1370	55	2.2E+08 294847
Cranes[2]	88	2	0.7	0.5	1370	58	4.4E+08 588297
Excavators[3]	85	2	0.8	0.5	1370	55	2.5E+08 336968
Graders[2]	85	1	0.8	0.5	1370	52	1.3E+08 168484
Rubber Tired Dozers[2]	85	1	0.8	0.5	1370	52	1.3E+08 168484
Scrapers[2]	89	2	0.8	0.5	1370	59	6.4E+08 846426
Tractor/Loader/Backhoe[2]	85	1	0.8	0.5	1370	52	1.3E+08 168484

TOTAL Leq DURING NORMAL O **64** **dBA**

2689371

Daytime Ambient without Equipment 55 dBA

Nighttime Ambient without Equipment 0 dBA

Daytime Hours Operating: 8

Evening Hours Operating: 0

Nighttime Hours Operating: 0

Combined Daytime Hourly Leq: 65 dBA

Combined Nighttime Hourly Leq: 0 dBA

ESTIMATED Ldn: **60** **dBA**

ESTIMATED CNEL: **60** **dBA**

Distance attenuation assumed at: 6 dBA per doubling of distance

Notes: #N/A = Not Applicable

* Assumed percentage of time that equipment is operating at near maximum sound level.

* Equipment type per applicant supplied information

*Nighttime ambient noise level used from General Plan max allowable noise

Equipment Use Source:

[2] Federal Transit Administration (FTA) (2006), Transit Noise and Vibration Assessment

[3] Federal Highway Administration (FHWA) (2006), *Construction Noise Handbook*.

Accessed at https://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/

HEAVY EQUIPMENT NOISE IMPACT ESTIMATION PORT OF HUENEME

Scenario: Dredging

Receptor Location: Market Street

Noise Source	Ave. Maximum SPL @ 50 ft., dBA	Number	Percentage of Workday Hours In Use	Effective Use Factor *	Distance, Ft.	Leq, dBA		
TugBoat [1]	90	1	0.8	0.5	2000	54	4E+08	3E+05

TOTAL Leq DURING NORMAL OPE **54** **dBA**

3E+05

Daytime Ambient without Equipment 55 dBA

Nighttime Ambient without Equipmen 0 dBA

Daytime Hours Operating: 8

Evening Hours Operating: 0

Nighttime Hours Operating: 0

Combined Daytime Hourly Leq: 58 dBA

Combined Nighttime Hourly Leq: 0 dBA

ESTIMATED Ldn: **54** **dBA**

ESTIMATED CNEL: **54** **dBA**

Distance attenuation assumed at: 6 dBA per doubling of distance

Notes: #N/A = Not Applicable

* Assumed percentage of time that equipment is operating at near maximum sound level.

* Equipment type per applicant supplied information

Equipment Use Source:

[1] Port of Los Angeles Environmental Impact Report. Appendix N Noise. Available at:

https://www.portoflosangeles.org/EIR/TraPac/DEIR/Appendix_N_Noise.pdf

HEAVY EQUIPMENT NOISE IMPACT ESTIMATION PORT OF HUENEME

Scenario: Demo

Receptor Location: East Surfside Receptor

Noise Source	Ave. Maximum SPL @ 50 ft., dBA	Number	Percentage of Workday Hours In Use	Effective Use Factor *	Distance, Ft.	Leq, dBA		
Air Compressor [2]	81	2	0.7	0.5	1700	49	88124778.8	76232.5076
Cement and Mortar Mixers [2]	85	2	0.7	0.5	1700	53	221359436	191487.402
Concrete Industrial Saws [3]	90	1	0.8	0.5	1700	55	400000000	346020.761
Cranes [2]	88	2	0.7	0.5	1700	56	441670141	382067.596
Excavators[3]	85	3	0.8	0.5	1700	55	379473319	328264.117
Rubber Tired Dozers [2]	85	2	0.8	0.5	1700	53	252982213	218842.745
Tractor/Loader/Backhoe [2]	85	1	0.8	0.5	1700	50	126491106	109421.372

TOTAL Leq DURING NORMAL OPI **62** **dBA**

1652336.5

Daytime Ambient without Equipment 55 dBA

Nighttime Ambient without Equipmer 0 dBA

Daytime Hours Operating: 8

Evening Hours Operating: 0

Nighttime Hours Operating: 0

Combined Daytime Hourly Leq: 63 dBA

Combined Nighttime Hourly Leq: 0 dBA

ESTIMATED Ldn: **59** **dBA**

ESTIMATED CNEL: **59** **dBA**

Distance attenuation assumed at: 6 dBA per doubling of distance

Notes: #N/A = Not Applicable

* Assumed percentage of time that equipment is operating at near maximum sound level.

* Equipment type per applicant supplied information

Equipment Use Source:

[2] Federal Transit Administration (FTA) (2006), Transit Noise and Vibration Assessment

[3] Federal Highway Administration (FHWA) (2006), *Construction Noise Handbook*. Accessed at

https://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/

HEAVY EQUIPMENT NOISE IMPACT ESTIMATION PORT OF HUENEME

Scenario: Toe Wall Install

Receptor Location: East Surfside Receptor

Noise Source	Ave. Maximum SPL @ 50 ft., dBA	Number	Percentage of Workday Hours In Use	Effective Use Factor *	Distance, Ft.	Leq, dBA		
Air Compressor[2]	81	2	0.7	0.5	1700	49	88124778.8	76232.5076
Cement and Mortar Mixers[2]	85	2	0.7	0.5	1700	53	221359436	191487.402
Cranes[2]	88	2	0.7	0.5	1700	56	441670141	382067.596
Forklifts[2]	83	3	0.8	0.5	1700	53	239431478	207120.656
Generator Sets[2]	81	1	0.8	0.5	1700	46	50357016.5	43561.4329
Tractor/Loader/Backhoe[2]	85	1	0.8	0.5	1700	50	126491106	109421.372
Welders[2]	85	1	0.8	0.5	1700	50	126491106	109421.372

TOTAL Leq DURING NORMAL OPI **60** **dBA**

1119312.34

Daytime Ambient without Equipment 55 dBA

Nighttime Ambient without Equipmer 0 dBA

Daytime Hours Operating: 8

Evening Hours Operating: 0

Nighttime Hours Operating: 0

Combined Daytime Hourly Leq: 62 dBA

Combined Nighttime Hourly Leq: 0 dBA

ESTIMATED Ldn: **58** **dBA**

ESTIMATED CNEL: **58** **dBA**

Distance attenuation assumed at: 6 dBA per doubling of distance

Notes: #N/A = Not Applicable

*Assumed scarifier for forklift noise level

* Assumed percentage of time that equipment is operating at near maximum sound level.

* Equipment type per applicant supplied information

Equipment Use Source:

[2] Federal Transit Administration (FTA) (2006), Transit Noise and Vibration Assessment

HEAVY EQUIPMENT NOISE IMPACT ESTIMATION PORT OF HUENEME

Scenario: Fender Install
Receptor Location: East Surfside Receptor

Noise Source	Ave. Maximum SPL @ 50 ft., dBA	Number	Percentage of Workday Hours In Use	Effective Use Factor *	Distance, Ft.	Leq, dBA		
Air Compressor[2]	81	2	0.7	0.5	1700	49	88124778.8	76232.5076
Cement and Mortar Mixers[2]	85	2	0.7	0.5	1700	53	221359436	191487.402
Cranes[2]	88	2	0.7	0.5	1700	56	441670141	382067.596
Forklifts[2]	83	3	0.8	0.5	1700	53	239431478	207120.656
Generator Sets[2]	81	1	0.8	0.5	1700	46	50357016.5	43561.4329
Tractor/Loader/Backhoe[2]	85	1	0.8	0.5	1700	50	126491106	109421.372
Welders[3]	73	1	0.8	0.5	1700	38	7981049.26	6904.02185

TOTAL Leq DURING NORMAL OPI **60** **dBA**

1016794.99

Daytime Ambient without Equipment 55 dBA
 Nighttime Ambient without Equipmer 0 dBA
 Daytime Hours Operating: 8
 Evening Hours Operating: 0
 Nighttime Hours Operating: 0
 Combined Daytime Hourly Leq: 61 dBA
 Combined Nighttime Hourly Leq: 0 dBA
ESTIMATED Ldn: **57** **dBA**
ESTIMATED CNEL: **57** **dBA**

Distance attenuation assumed at: 6 dBA per doubling of distance

Notes: #N/A = Not Applicable

- *Assumed scarifier for forklift noise level
- * Assumed percentage of time that equipment is operating at near maximum sound level.
- * Equipment type per applicant supplied information

Equipment Use Source:

[2] Federal Transit Administration (FTA) (2006), Transit Noise and Vibration Assessment
 [3] Federal Highway Administration (FHWA) (2006), *Construction Noise Handbook*. Accessed at
https://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/

HEAVY EQUIPMENT NOISE IMPACT ESTIMATION PORT OF HUENEME

Scenario: Concrete

Receptor Location: East Surfside Receptor

Noise Source	Ave. Maximum SPL @ 50 ft., dBA	Number	Percentage of Workday Hours In Use	Effective Use Factor *	Distance, Ft.	Leq, dBA		
Air Compressor[2]	81	2	0.7	0.5	1700	49	88124778.8	76232.5076
Cement and Mortar Mixers[2]	85	2	0.7	0.5	1700	53	221359436	191487.402
Cranes[2]	88	2	0.7	0.5	1700	56	441670141	382067.596
Pavers[2]	89	2	0.8	0.5	1700	57	635462588	549708.121
Paving Equipment[3]	85	2	0.8	0.5	1700	53	252982213	218842.745
Rollers[2]	74	2	0.8	0.5	1700	42	20095091.5	17383.2971
Tractor/Loader/Backhoe[2]	85	1	0.8	0.5	1700	50	126491106	109421.372

TOTAL Leq DURING NORMAL OPE **62** **dBA**

1545143.04

Daytime Ambient without Equipment 55 dBA
 Nighttime Ambient without Equipmen 0 dBA
 Daytime Hours Operating: 8
 Evening Hours Operating: 0
 Nighttime Hours Operating: 0
 Combined Daytime Hourly Leq: 63 dBA
 Combined Nighttime Hourly Leq: 0 dBA
ESTIMATED Ldn: **59** **dBA**
ESTIMATED CNEL: **59** **dBA**

Distance attenuation assumed at: 6 dBA per doubling of distance

Notes: #N/A = Not Applicable

* Assumed percentage of time that equipment is operating at near maximum sound level.

* Equipment type per applicant supplied information

Equipment Use Source:

[2] Federal Transit Administration (FTA) (2006), Transit Noise and Vibration Assessment

[3] Federal Highway Administration (FHWA) (2006), *Construction Noise Handbook*. Accessed at https://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/

HEAVY EQUIPMENT NOISE IMPACT ESTIMATION PORT OF HUENEME

Scenario: Dredging

Receptor Location: East Surfside Receptor

Noise Source	Ave. Maximum SPL @ 50 ft., dBA	Number	Percentage of Workday Hours In Use	Effective Use Factor *	Distance, Ft.	Leq, dBA		
Air Compressor[2]	81	2	0.7	0.5	2000	47	88124778.8	55077.9868
Cement and Mortar Mixers[2]	85	2	0.7	0.5	2000	51	221359436	138349.648
Cranes[2]	88	2	0.7	0.5	2000	54	441670141	276043.838
Excavators[3]	85	2	0.8	0.5	2000	52	252982213	158113.883
Graders[2]	85	1	0.8	0.5	2000	49	126491106	79056.9415
Rubber Tired Dozers[2]	85	1	0.8	0.5	2000	49	126491106	79056.9415
Scrapers[2]	89	2	0.8	0.5	2000	56	635462588	397164.117
Tractor/Loader/Backhoe[2]	85	1	0.8	0.5	2000	49	126491106	79056.9415

TOTAL Leq DURING NORMAL OPERATION **61** **dBA**

1261920.3

Daytime Ambient without Equipment 55 dBA

Nighttime Ambient without Equipment 0 dBA

Daytime Hours Operating: 8

Evening Hours Operating: 0

Nighttime Hours Operating: 0

Combined Daytime Hourly Leq: 62 dBA

Combined Nighttime Hourly Leq: 0 dBA

ESTIMATED Ldn: **58** **dBA**

ESTIMATED CNEL: **58** **dBA**

Distance attenuation assumed at: 6 dBA per doubling of distance

Notes: #N/A = Not Applicable

* Assumed percentage of time that equipment is operating at near maximum sound level.

* Equipment type per applicant supplied information

Equipment Use Source:

[2] Federal Transit Administration (FTA) (2006), Transit Noise and Vibration Assessment

[3] Federal Highway Administration (FHWA) (2006), *Construction Noise Handbook*. Accessed at https://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/

HEAVY EQUIPMENT NOISE IMPACT ESTIMATION PORT OF HUENEME

Scenario: Dredging

Receptor Location: East Surfside Receptor

Noise Source	Ave. Maximum SPL @ 50 ft., dBA	Number	Percentage of Workday Hours In Use	Effective Use Factor *	Distance, Ft.	Leq, dBA		
TugBoat [1]	90	1	0.8	0.5	1500	56	400000000	444444.444

TOTAL Leq DURING NORMAL OPE **56** **dBA**

Daytime Ambient without Equipment 55 dBA

Nighttime Ambient without Equipmen 0 dBA

Daytime Hours Operating: 8

Evening Hours Operating: 0

Nighttime Hours Operating: 0

Combined Daytime Hourly Leq: 59 dBA

Combined Nighttime Hourly Leq: 0 dBA

ESTIMATED Ldn: **55** **dBA**

ESTIMATED CNEL: **55** **dBA**

Distance attenuation assumed at: 6 dBA per doubling of distance

Notes: #N/A = Not Applicable

* Assumed percentage of time that equipment is operating at near maximum sound level.

* Equipment type per applicant supplied information

Equipment Use Source:

[1] Port of Los Angeles Environmental Impact Report. Appendix N Noise. Available at:

https://www.portoflosangeles.org/EIR/TraPac/DEIR/Appendix_N_Noise.pdf

Appendix C

Mitigation Monitoring and Reporting Program

Mitigation Monitoring and Reporting Program

The Initial Study-Subsequent Mitigated Negative Declaration (MND) identifies the mitigation measures that will be implemented to reduce the impacts associated with the Port of Hueneme Berth Deepening and Wharf Improvement Project. In addition, the 1999 Final Environmental Assessment and Mitigated Negative Declaration (EA/MND) for the originally proposed project contained mitigation measures that are carried forward and implemented for the revised project as analyzed in the Final Subsequent MND. In the event that similar mitigation measures differ between the 1999 Final EA/MND and the Final Subsequent MND, the more protective mitigation measure shall control. The California Environmental Quality Act (CEQA) requires a public agency to adopt a monitoring and reporting program for assessing and ensuring compliance with any required mitigation measures applied to proposed development. As stated in section 21081.6(a)(1) of the Public Resources Code:

... the public agency shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment.

Section 21081.6 also provides general guidelines for implementing mitigation monitoring programs and indicates that specific reporting and/or monitoring requirements, to be enforced during project implementation, shall be defined as part of adopting a mitigated negative declaration.

The mitigation monitoring table lists those mitigation measures that may be included as conditions of approval for the project. To ensure that the mitigation measures are properly implemented, a monitoring program has been devised which identifies the timing and responsibility for monitoring each measure. The District will have the responsibility for implementing the measures and for monitoring and reporting the implementation of those mitigation measures.

City of Port Hueneme
Port of Hueneme Berth Deepening and Wharf Improvement Project

Mitigation Measure	Action Required	When Monitoring to Occur	Implementation Responsibility	Monitoring Responsibility	
Biological Resources					
B-1	Least Tern and Snowy Plover Avoidance. To avoid potential biological impacts, construction activities shall occur during the time when grunion and federally listed least terns and snowy plovers are not onsite, between September 1 and March 15.	Limit construction activities to between September 1 and March 15.	Prior to and during construction activities.	Construction contractor	Oxnard Harbor District
B-2	Least Tern and Snowy Plover Pre-Construction Surveys and Construction Monitoring. To ensure that no impacts to wintering/roosting western snowy plover and California least tern, a qualified biologist familiar with these species shall be present on site prior to and, if necessary, during beach nourishment activities. The biologist shall perform a pre-construction clearance survey to ensure that no sensitive wildlife is within the project area. Monitoring during construction activities shall be performed at the discretion of the biologist, and dependent upon the presence of the species and the location of the construction activity being performed. The area where construction is occurring, plus an approximately 50-foot buffer from equipment activity where machinery may turn around, shall be established. Although the exact location of this area is expected to change as construction progresses, it shall be considered the “active construction zone.” In the event that western snowy plover, California least tern, or other sensitive wildlife are found to be foraging within 100 feet or roosting within 200 feet of the active construction zone, the biologist shall notify the operator or construction manager. If, based on the judgment of the biological monitor, the western snowy plover, California least tern or other sensitive wildlife could be impacted by construction equipment, construction shall cease until the western snowy plover and California least tern have left the area and are not in danger of being impacted by construction activities.	Conduct pre-construction clearance survey and monitor for presence during construction. Cease construction activity if monitored species could be adversely impacted by construction activity.	Prior to and during construction activities.	Oxnard Harbor District	Oxnard Harbor District
B-3	Kelp Wrack Relocation. Kelp wrack refers to stranded kelp (large brown seaweed) on the beach. Prior to construction, if on-shore disposal is to be used, and if substantial kelp wrack material (estimated to be at least 2 cy in volume) is present on the disposal site, the material shall be collected and relocated to a downcoast beach area outside the disposal area. The wrack material shall be	Relocate kelp wrack downcoast as necessary.	Prior to construction activity and/or prior to sediment disposal.	Construction contractor	Oxnard Harbor District

Mitigation Measure	Action Required	When Monitoring to Occur	Implementation Responsibility	Monitoring Responsibility	
	placed near the inter-/supra-tidal boundary, or at approximately the same elevation as where it was collected. The purpose of this measure is to maintain the invertebrate population which the kelp wrack supports, which also provides an important food source for shore birds.				
B-4	Pismo Clam Avoidance. To avoid the potential impacts to the Pismo clam, onshore dredged material placement shall be above the mean lower low-water elevation and nearshore placement shall be below minus 10 feet, mean lower low-water. If it is necessary to place the dredged material on-shore below +0.9 ft MLLW, the OHD shall conduct transect surveys, in coordination with the CDFW and other resource agencies, to determine if Pismo clams are present on Hueneme Beach, prior to disposal of dredged material. If a population of Pismo clams is present, the OHD shall coordinate with CDFW and other resource agencies to develop appropriate mitigation, which may involve relocation of Pismo clams. If a population of Pismo clams is present within the onshore disposal area between 0.9 and -10.0 ft. MLLW then the OHD shall coordinate with CDFW and other resource agencies to relocate a portion of the population to adjacent habitat. With implementation of the above plan, significant impacts to the local Pismo clam population are not expected to occur. For Onshore Placement, a hydraulic cutter pipeline dredge with pumpout capability shall be used to place material between 0 and +4.9 M MLLW, then material shall be graded to match the existing beach profile. For Nearshore Placement, a bottom dump scow or barge shall be used to place sediment in a mound parallel to the shore in the littoral zone, at depths ranging from -6.1 to -10.6 M MLLW. Therefore, impacts on sensitive species are not anticipated.	Modify sediment placement location, as necessary, to avoid Pismo clams. If a population of Pismo clams is present at the disposal site, coordinate with CDFW and relocate Pismo clams, as necessary.	Prior to sediment disposal.	Construction contractor and Oxnard Harbor District	Oxnard Harbor District
B-5	Workers Educational Training. Prior to the initiation of any in-water project activities, all personnel associated with the Proposed Project shall attend a worker education training program (program) with content developed by a qualified biologist. The program shall discuss the sensitive marine and avian species including but not limited to the California least tern and western snowy plover their habitat preference(s), law and regulations, as well as potential impacts and protection measures, and Action Area limits. Protections and	All project personnel shall attend a worker education training program covering sensitive marine and avian species. A copy of the training program shall be distributed to all	Prior to commencement of construction activities and during construction activities for all newly hired	Oxnard Harbor District	Oxnard Harbor District

Mitigation Measure	Action Required	When Monitoring to Occur	Implementation Responsibility	Monitoring Responsibility
<p>regulations federally-listed species shall also be included in the program. A copy of the training program shall be distributed to all contractors, employers and other personnel involved during in-water construction activities. Specifically, the program shall also include:</p> <ul style="list-style-type: none"> a. Measures to prevent indirect impacts during in-water construction activities, including dredging, demolition and pile driving as they relate to the protection of adjacent aquatic habitat. b. Training materials that 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 OHD Project manager) in the event that protected biological resources are affected. c. The OHD or its contractors shall 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 shall be circulated for signatures to all personal that attend the workers educational training to confirm that program materials were received and that they understand information presented. 	<p>contractors, employers, and other construction personnel. A sign in sheet shall be circulated for signatures to all personal that attend the workers educational training to confirm that program materials were received and that they understand information presented.</p>	<p>personnel.</p>		
<p>B-6</p> <p>Marine Mammal and Avian Species Avoidance. Prior to and during in-water construction activities, an OHD-approved qualified biologist shall monitor dredging, demolition and pile driving activities to avoid potential impacts to marine mammals or avian species in the project area. The OHD-approved qualified biologist would monitor and record the occurrence of marine mammals and avian species with the ability to stop construction. The OHD-approved qualified biologist will have authority to shutdown non-pile driving construction activities if marine mammals, sea turtle or avian species come within 10 m (32.8 ft). If a whale, dolphin, or porpoise (collectively referred to as cetaceans) are observed in the harbor and maintenance activities proceed, a OHD-approved biologist shall be present within the project area to observe cetacean location and behaviors, and ensure all working vessels maintains a 100 m (328 ft.) distance separation. If the cetacean exhibits any adverse[1] behaviors (evasive or defensive), the biologist will direct the vessel to decrease speed and change direction and increase distance from the cetacean until the cetacean has either</p>	<p>Monitor and avoid marine mammals and avian species. Cease construction activities if marine mammals or avian species approach within the specified distances.</p>	<p>During construction activities.</p>	<p>Oxnard Harbor District</p>	<p>Oxnard Harbor District</p>

Mitigation Measure	Action Required	When Monitoring to Occur	Implementation Responsibility	Monitoring Responsibility	
<p>left the area or until the distance is sufficient to reduce the resulting stress response. If approached by a cetacean, the biologist will direct the boat operator to put the engine in neutral and allow the cetacean to pass. During pile driving activities the shutdown distance would be 100 m (328 ft.).</p> <p>[1] For the purposes of this measure, “adverse behaviors” are defined as a change in swim rate, change in inter-breath interval, abrupt change in direction, abandonment of an important activity (i.e., feeding, nursing), or breaching.</p>					
1999 Final Environmental Assessment and Mitigated Negative Declaration (EA/MND) Mitigation Measures Carried Forward					
Air Quality	The contractor would be required to possess or obtain a permit from the Ventura County Air Pollution Control District to operate any type of dredge in the harbor. If a hydraulic cutterhead dredge is used as the primary means of deepening the harbor, state standards for emissions of one or more pollutants could potentially be violated, however; the operation of the dredge would be required to be in compliance with the permit, which would require compliance with all emissions standards.	Obtain and submit for review by OHD a valid VCAPCD permit for operation of dredge equipment	Prior to commencement of construction activities.	Construction contractor	Oxnard Harbor District
Biological Resources	<p>Pismo clams are a state-listed sensitive species. The California Department of Fish & Game (CDFG) regulates recreational harvest and prohibits commercial harvest. Pismo clams are unique to the local and regional area. The Pismo clam has historically been found on Hueneme Beach. If the sediment material is dumped directly on them, the population may die by suffocation. Pismo clams are typically found between +3 feet (+0.9 m) MLLW and -10 feet (-3m) MLLW. Therefore, beach material will be placed in a slurry form on the upper portion of the beach and allowed to migrate seaward minimizing possible suffocation effects on the Pismo clam population. In the past, Pismo clam populations have recovered from local beach nourishment events, and it is expected that natural populations, which routinely fluctuate on a yearly basis, will recover from this event. Between +0.9 m and 0 m MLLW there would be an adverse, but not significant, impact to the Pismo clam population.</p> <p>The California grunion is also a sensitive species, with catch regulated by CDFG. Grunion may spawn on Hueneme Beach. If grunion spawn</p>	For onshore placement, sediment shall be placed in a slurry form on the upper portion of the beach (above +3 feet MLLW). Construction activities shall take place between September and mid-March.	Prior to commencement of and during construction activities, including during sediment placement.	Construction contractor	Oxnard Harbor District

Mitigation Measure	Action Required	When Monitoring to Occur	Implementation Responsibility	Monitoring Responsibility	
	<p>on the beach prior to the beachfill, eggs may be buried. the use of earthmoving equipment on the beach may crush or uncover grunion eggs. Because grunion are a declining species which only spawns on a limited number of beaches, impacts to grunion may be significant. These impacts will be avoided by conducting the beachfill between September and mid-March, when grunion spawning does not occur. If it is necessary to conduct the disposal activities during the spring or summer spawning season, other mitigation shall be developed and approved by the resource agencies prior to any beach disposal activities occurring past March 15.</p> <p>The federally listed Endangered California brown pelican and California least tern may be in the project area during project construction; however, construction will not affect nesting or roosting opportunities. Turbidity may preclude foraging in a small area; however, forage fish will be available for capture elsewhere. Because turbidity will likely remain in the surf zone, this method may not impact foraging opportunities. Consequently, potential impacts will be completely avoided by constructing the project between September and March. Under these conditions, the proposed project will not affect these species. It is not known if the Federally listed Threatened Western snowy plover uses Hueneme Beach for foraging or nesting (FWS, 1997). To avoid potential impacts on this species, construction will occur during the plovers’ non-nesting season, between September and March. Therefore, the proposed project will not affect the Western snowy plover population.</p>				
Noise	<p>The contractor constructing the wharf improvements will be required to provide adequate sound barriers around the construction site to maintain noise levels within the City of Port Hueneme’s exterior noise standards of 55 dBA between the hours of 7:00 A.M. and 10:00 P.M. All wharf modification construction activities would be confined to these hours.</p>	<p>Install sound barriers as necessary and limit construction activities to between the hours of 7:00 A.M. and 10:00 P.M.</p>	<p>Prior to and during construction activities.</p>	<p>Construction contractor</p>	<p>Oxnard Harbor District</p>

Appendix C

Mitigation Monitoring and Reporting Program

Mitigation Monitoring and Reporting Program

The Initial Study-Subsequent Mitigated Negative Declaration (MND) identifies the mitigation measures that will be implemented to reduce the impacts associated with the Port of Hueneme Berth Deepening and Wharf Improvement Project. In addition, the 1999 Final Environmental Assessment and Mitigated Negative Declaration (EA/MND) for the originally proposed project contained mitigation measures that are carried forward and implemented for the revised project as analyzed in the Final Subsequent MND. In the event that similar mitigation measures differ between the 1999 Final EA/MND and the Final Subsequent MND, the more protective mitigation measure shall control. The California Environmental Quality Act (CEQA) requires a public agency to adopt a monitoring and reporting program for assessing and ensuring compliance with any required mitigation measures applied to proposed development. As stated in section 21081.6(a)(1) of the Public Resources Code:

... the public agency shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment.

Section 21081.6 also provides general guidelines for implementing mitigation monitoring programs and indicates that specific reporting and/or monitoring requirements, to be enforced during project implementation, shall be defined as part of adopting a mitigated negative declaration.

The mitigation monitoring table lists those mitigation measures that may be included as conditions of approval for the project. To ensure that the mitigation measures are properly implemented, a monitoring program has been devised which identifies the timing and responsibility for monitoring each measure. The District will have the responsibility for implementing the measures and for monitoring and reporting the implementation of those mitigation measures.

City of Port Hueneme
Port of Hueneme Berth Deepening and Wharf Improvement Project

Mitigation Measure	Action Required	When Monitoring to Occur	Implementation Responsibility	Monitoring Responsibility	
Biological Resources					
B-1	Least Tern and Snowy Plover Avoidance. To avoid potential biological impacts, construction activities shall occur during the time when grunion and federally listed least terns and snowy plovers are not onsite, between September 1 and March 15.	Limit construction activities to between September 1 and March 15.	Prior to and during construction activities.	Construction contractor	Oxnard Harbor District
B-2	Least Tern and Snowy Plover Pre-Construction Surveys and Construction Monitoring. To ensure that no impacts to wintering/roosting western snowy plover and California least tern, a qualified biologist familiar with these species shall be present on site prior to and, if necessary, during beach nourishment activities. The biologist shall perform a pre-construction clearance survey to ensure that no sensitive wildlife is within the project area. Monitoring during construction activities shall be performed at the discretion of the biologist, and dependent upon the presence of the species and the location of the construction activity being performed. The area where construction is occurring, plus an approximately 50-foot buffer from equipment activity where machinery may turn around, shall be established. Although the exact location of this area is expected to change as construction progresses, it shall be considered the “active construction zone.” In the event that western snowy plover, California least tern, or other sensitive wildlife are found to be foraging within 100 feet or roosting within 200 feet of the active construction zone, the biologist shall notify the operator or construction manager. If, based on the judgment of the biological monitor, the western snowy plover, California least tern or other sensitive wildlife could be impacted by construction equipment, construction shall cease until the western snowy plover and California least tern have left the area and are not in danger of being impacted by construction activities.	Conduct pre-construction clearance survey and monitor for presence during construction. Cease construction activity if monitored species could be adversely impacted by construction activity.	Prior to and during construction activities.	Oxnard Harbor District	Oxnard Harbor District
B-3	Kelp Wrack Relocation. Kelp wrack refers to stranded kelp (large brown seaweed) on the beach. Prior to construction, if on-shore disposal is to be used, and if substantial kelp wrack material (estimated to be at least 2 cy in volume) is present on the disposal site, the material shall be collected and relocated to a downcoast beach area outside the disposal area. The wrack material shall be	Relocate kelp wrack downcoast as necessary.	Prior to construction activity and/or prior to sediment disposal.	Construction contractor	Oxnard Harbor District

Mitigation Measure	Action Required	When Monitoring to Occur	Implementation Responsibility	Monitoring Responsibility	
	placed near the inter-/supra-tidal boundary, or at approximately the same elevation as where it was collected. The purpose of this measure is to maintain the invertebrate population which the kelp wrack supports, which also provides an important food source for shore birds.				
B-4	Pismo Clam Avoidance. To avoid the potential impacts to the Pismo clam, onshore dredged material placement shall be above the mean lower low-water elevation and nearshore placement shall be below minus 10 feet, mean lower low-water. If it is necessary to place the dredged material on-shore below +0.9 ft MLLW, the OHD shall conduct transect surveys, in coordination with the CDFW and other resource agencies, to determine if Pismo clams are present on Hueneme Beach, prior to disposal of dredged material. If a population of Pismo clams is present, the OHD shall coordinate with CDFW and other resource agencies to develop appropriate mitigation, which may involve relocation of Pismo clams. If a population of Pismo clams is present within the onshore disposal area between 0.9 and -10.0 ft. MLLW then the OHD shall coordinate with CDFW and other resource agencies to relocate a portion of the population to adjacent habitat. With implementation of the above plan, significant impacts to the local Pismo clam population are not expected to occur. For Onshore Placement, a hydraulic cutter pipeline dredge with pumpout capability shall be used to place material between 0 and +4.9 M MLLW, then material shall be graded to match the existing beach profile. For Nearshore Placement, a bottom dump scow or barge shall be used to place sediment in a mound parallel to the shore in the littoral zone, at depths ranging from -6.1 to -10.6 M MLLW. Therefore, impacts on sensitive species are not anticipated.	Modify sediment placement location, as necessary, to avoid Pismo clams. If a population of Pismo clams is present at the disposal site, coordinate with CDFW and relocate Pismo clams, as necessary.	Prior to sediment disposal.	Construction contractor and Oxnard Harbor District	Oxnard Harbor District
B-5	Workers Educational Training. Prior to the initiation of any in-water project activities, all personnel associated with the Proposed Project shall attend a worker education training program (program) with content developed by a qualified biologist. The program shall discuss the sensitive marine and avian species including but not limited to the California least tern and western snowy plover their habitat preference(s), law and regulations, as well as potential impacts and protection measures, and Action Area limits. Protections and	All project personnel shall attend a worker education training program covering sensitive marine and avian species. A copy of the training program shall be distributed to all	Prior to commencement of construction activities and during construction activities for all newly hired	Oxnard Harbor District	Oxnard Harbor District

Mitigation Measure	Action Required	When Monitoring to Occur	Implementation Responsibility	Monitoring Responsibility
<p>regulations federally-listed species shall also be included in the program. A copy of the training program shall be distributed to all contractors, employers and other personnel involved during in-water construction activities. Specifically, the program shall also include:</p> <ol style="list-style-type: none"> Measures to prevent indirect impacts during in-water construction activities, including dredging, demolition and pile driving as they relate to the protection of adjacent aquatic habitat. Training materials that 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 OHD Project manager) in the event that protected biological resources are affected. The OHD or its contractors shall 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 shall be circulated for signatures to all personal that attend the workers educational training to confirm that program materials were received and that they understand information presented. 	<p>contractors, employers, and other construction personnel. A sign in sheet shall be circulated for signatures to all personal that attend the workers educational training to confirm that program materials were received and that they understand information presented.</p>	<p>personnel.</p>		
<p>B-6</p> <p>Marine Mammal and Avian Species Avoidance. Prior to and during in-water construction activities, an OHD-approved qualified biologist shall monitor dredging, demolition and pile driving activities to avoid potential impacts to marine mammals or avian species in the project area. The OHD-approved qualified biologist would monitor and record the occurrence of marine mammals and avian species with the ability to stop construction. The OHD-approved qualified biologist will have authority to shutdown non-pile driving construction activities if marine mammals, sea turtle or avian species come within 10 m (32.8 ft). If a whale, dolphin, or porpoise (collectively referred to as cetaceans) are observed in the harbor and maintenance activities proceed, a OHD-approved biologist shall be present within the project area to observe cetacean location and behaviors, and ensure all working vessels maintains a 100 m (328 ft.) distance separation. If the cetacean exhibits any adverse[1] behaviors (evasive or defensive), the biologist will direct the vessel to decrease speed and change direction and increase distance from the cetacean until the cetacean has either</p>	<p>Monitor and avoid marine mammals and avian species. Cease construction activities if marine mammals or avian species approach within the specified distances.</p>	<p>During construction activities.</p>	<p>Oxnard Harbor District</p>	<p>Oxnard Harbor District</p>

Mitigation Measure	Action Required	When Monitoring to Occur	Implementation Responsibility	Monitoring Responsibility	
<p>left the area or until the distance is sufficient to reduce the resulting stress response. If approached by a cetacean, the biologist will direct the boat operator to put the engine in neutral and allow the cetacean to pass. During pile driving activities the shutdown distance would be 100 m (328 ft.).</p> <p>[1] For the purposes of this measure, “adverse behaviors” are defined as a change in swim rate, change in inter-breath interval, abrupt change in direction, abandonment of an important activity (i.e., feeding, nursing), or breaching.</p>					
1999 Final Environmental Assessment and Mitigated Negative Declaration (EA/MND) Mitigation Measures Carried Forward					
Air Quality	The contractor would be required to possess or obtain a permit from the Ventura County Air Pollution Control District to operate any type of dredge in the harbor. If a hydraulic cutterhead dredge is used as the primary means of deepening the harbor, state standards for emissions of one or more pollutants could potentially be violated, however; the operation of the dredge would be required to be in compliance with the permit, which would require compliance with all emissions standards.	Obtain and submit for review by OHD a valid VCAPCD permit for operation of dredge equipment	Prior to commencement of construction activities.	Construction contractor	Oxnard Harbor District
Biological Resources	<p>Pismo clams are a state-listed sensitive species. The California Department of Fish & Game (CDFG) regulates recreational harvest and prohibits commercial harvest. Pismo clams are unique to the local and regional area. The Pismo clam has historically been found on Hueneme Beach. If the sediment material is dumped directly on them, the population may die by suffocation. Pismo clams are typically found between +3 feet (+0.9 m) MLLW and -10 feet (-3m) MLLW. Therefore, beach material will be placed in a slurry form on the upper portion of the beach and allowed to migrate seaward minimizing possible suffocation effects on the Pismo clam population. In the past, Pismo clam populations have recovered from local beach nourishment events, and it is expected that natural populations, which routinely fluctuate on a yearly basis, will recover from this event. Between +0.9 m and 0 m MLLW there would be an adverse, but not significant, impact to the Pismo clam population.</p> <p>The California grunion is also a sensitive species, with catch regulated by CDFG. Grunion may spawn on Hueneme Beach. If grunion spawn</p>	For onshore placement, sediment shall be placed in a slurry form on the upper portion of the beach (above +3 feet MLLW). Construction activities shall take place between September and mid-March.	Prior to commencement of and during construction activities, including during sediment placement.	Construction contractor	Oxnard Harbor District

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