AIRPORT PERIMETER DIKE FEMA AND SEISMIC IMPROVEMENTS PROJECT

OAKLAND INTERNATIONAL AIRPORT

OAKLAND, ALAMEDA COUNTY, CALIFORNIA

SUPPLEMENTAL INITIAL STUDY / MITIGATED NEGATIVE DECLARATION

APRIL 2024

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2017 Addendum	Addendum to the 2015 Final IS/MND to assess subsequent revisions to the APD Project which included impacting additional tidal wetlands and non-tidal other waters of the U.S.
2018 Addendum	Second addendum to the 2015 Final IS/MND to address additional revisions to the APD Project which included one new area of impact on non-tidal other waters of the U.S.
AB	Assembly Bill
ABAG	Association of Bay Area Governments
ACDEH	Alameda County Department of Environmental Health
ACF	Advanced Clean Fleets
ACT	Advanced Clean Trucks
APD	Airport Perimeter Dike
APE	area of potential effect
APN	assessor's parcel number
BAAQMD	Bay Area Air Quality Management District
BART	Bay Area Rapid Transit
BCDC	San Francisco Bay Conservation and Development Commission
BMP	Best Management Practice
CAA	Clean Air Act
CAAQS	California ambient air quality standards
CAFÉ	Corporate Average Fuel Economy
CalEEMod	California Emission Estimator Model
CAL FIRE	California Department of Forestry and Fire Protection
Caltrans	California Department of Transportation
CAPP	Community Air Protection Program
CARB	California Air Resources Board
CARE	Community Air Risk Evaluation
CAS	Climate Adaptation Strategy
CDC	California Department of Conservation
CDFW	California Department of Fish and Wildlife
CDSM	Cement Deep Soil Mixing
CDTFA	California Department of Tax and Fee Administration
CEC	California Energy Commission
CEMA	California Emergency Management Agency
CEQA	California Environmental Quality Act
CFC	chlorofluorocarbons
CFR	Code of Federal Regulations
CGS	California Geological Survey
CH_4	methane
CMP	Congestion Management Program
CHRIS	California Historical Resources Information System
CNDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CNPS	California Native Plant Society
CNRA	California Natural Resources Agency
CO	carbon monoxide

CO_2	carbon dioxide
CO_2e	carbon dioxide equivalents
Cortese List	list of hazardous materials sites pursuant to Government Code § 65962.5
CPT	cone penetration test
CRHR	California Register of Historical Resources
CWA	Clean Water Act
CWPP	Community Wildfire Protection Plan
CY	cubic yards
dB	decibel
dBA	A-weighted decibel
DPM	diesel particulate matter
DTSC	California Department of Toxic Substances Control
EIR	Environmental Impact Report
EO	Executive Order
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FTA	Federal Transportation Administration
GHG	greenhouse gas
GWP	global warming potential
HAP	hazardous air pollutant
HCP	Habitat Conservation Plan
HFC	hydrofluorocarbon
hp	horsepower
HSC	California Health and Safety Code
IPaC	Information for Planning and Conservation
IPCC	Intergovernmental Panel on Climate Change
IS/MND	Initial Study/Mitigated Negative Declaration
lb	pound
LCFS	Low Carbon Fuel Standard
Ldn	day-night average noise level
Leq	equivalent sound level
LHMP	Local Hazard Mitigation Plan
Lmax	Maximum sound level
Lv	vibration level
MBTA	Migratory Bird Treaty Act
MMS	Materials Management Site
MMTCO2e	million metric tons of carbon dioxide equivalents
MLD	Most Likely Descendent
MMRP	Mitigation Monitoring and Reporting Program
$MTCO_2e$	metric tons of carbon dioxide equivalents
MTC	Metropolitan Transportation Commission
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCCP	National Community Conservation Plan
NHPA	National Historic Preservation Act
NHTSA	National Highway Transportation Safety Administration

NMFS	National Marine Fisheries Service
NO_2	Nitrogen Dioxide
NOI	Notice of Intent
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPORD Site	North Port of Oakland Refuse Disposal Site
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetland Inventory
NWIC	Northwest Information Center
O_3	ozone
OAK	Oakland International Airport
OBD	on-board diagnostic
OHP	Office of Historic Preservation
OSCAR	Open Space, Conservation, and Recreation
PCB	polychlorinated biphenyl
PFC	perfluorocarbon
PG&E	Pacific Gas and Electric Company
PM_{10}	particulate matter less than 10 microns in diameter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
Port	Port of Oakland
ppm	parts per mission
PPV	peak particle velocity
PRC	Public Resources Code
RPS	Renewables Portfolio Standard
RWQCB	Regional Water Quality Control Board
SAFE	Safer Affordable Fuel Efficient
SB	Senate Bill
SDS	Safety Data Sheet
SF_6	hexafluoride
SFBAAB	San Francisco Bay Area Air Basin
SHPO	State Historic Preservation Officer
SO_2	sulfur dioxide
SORE	Small Off-Road Engine
SWL	Stillwater Level
SWPPP	Stormwater Pollution Prevention Plan
TAC	Toxic Air Contaminant
TCP	Tribal Cultural Property
TCR	Tribal Cultural Resource
TWL	Total Water Level
UCMP	University of California Museum of Paleontology
U.S.	United States
US EIA	U.S. Energy Information Administration
USACE	U.S. Army Corps of Engineers
USC	United States Code
USDOT	U.S. Department of Transportation
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service

USGS	U.S. Geological Survey
URS	URS Corporation
VdB	vibration decibels
VMT	vehicle miles traveled
WDR	Waste Discharge Requirement
YBM	Young Bay Mud
ZEV	zero-emission vehicle

Chapter 1
INTRODUCTION

1.1 PROJECT OVERVIEW

The Port of Oakland (Port) is planning for the completion of the Seismic Improvements to the Airport Perimeter Dike FEMA and Seismic Improvements Project (APD Project or Project). In 2015, the Port adopted the Airport Perimeter Dike Federal Emergency Management Agency (FEMA) Seismic Improvements Project Final Initial Study/Mitigated Negative Declaration (2015 Final IS/MND) to meet the requirements of the California Environmental Quality Act (CEQA) Statute and Guidelines. Following the adoption of the 2015 Final IS/MND, the APD Project was restructured to deliver the improvements in two phases to align available funding with the anticipated costs of the improvements. Phase 1 was completed in 2021 and included the construction of flood protection measures to meet the standards required by FEMA. Phase 2 will construct the improvements necessary to protect the dike from catastrophic damage during a major earthquake. The primary objective of Phase 2 of the APD Project is to maintain the flood protection of the APD system following a major earthquake in the San Francisco Bay Area. Following restructuring of the original project design, additional CEQA review was conducted, resulting in two IS/MND Addenda in 2017 and 2018.

Since Project approval in 2015 and the 2017 and 2018 CEQA Addenda, the Port is proposing an alternative seismic improvement method. Additionally, the Port is proposing to reuse excavated materials adjacent to the APD Project Site. These changes and additions to the Project are the subject of this Supplemental Initial Study/Mitigated Negative Declaration (Supplemental IS/MND).

1.1.1 CEQA Background

On December 17, 2015, the Port adopted the Airport Perimeter Dike FEMA and Seismic Improvement Project Final Initial Study/Mitigated Negative Declaration (2015 Final IS/MND) (provided in Appendix A of this Supplemental IS/MND). The 2015 Final IS/MND evaluated the potential impacts associated with the implementation of the APD Project.

In September 2017, the Port prepared an addendum to the 2015 Final IS/MND (2017 Addendum) to assess subsequent revisions to the APD Project which included impacting additional tidal wetlands and non-tidal other waters of the United States (U.S).

In April 2018, a second addendum to the 2015 Final IS/MND (2018 Addendum) addressed additional revisions to the APD Project which included one new area of impact on non-tidal other waters of the U.S.

The subject of this Supplemental IS/MND includes incorporation of an alternative seismic improvement method for the APD Project as well as an optional material reuse area on a parcel owned by the Port adjacent to the APD Project Site.

1.1.2 Purpose of this Supplemental IS/MND

This Supplemental IS/MND has been prepared for the APD Project pursuant to the rules for Supplemental Environmental Review under Public Resources Code (PRC) Section 21166 and CEQA Guidelines Section 15163. The Port, as the lead agency under CEQA, will consider the Project's potential environmental impacts when considering whether to approve the Project. This Supplemental IS/MND analyzes whether proposed changes to the APD Project would result in any new or substantially more severe environmental impacts than those analyzed in the prior CEQA documents or whether any of the other standards requiring further environmental review under CEQA are met.

The 2015 IS/MND and the 2017 and 2018 Addenda evaluated all the potential environmental topics as required by CEQA for the entire APD Project and included mitigation measures to reduce environmental effects. Pursuant to CEQA Guidelines Section 15163(b), a Supplemental IS/MND only needs to contain the necessary information to make the previous IS/MND adequate for the Project. Thus, this Supplemental IS/MND does not evaluate in detail all CEQA checklist environmental topics; rather, it focuses on environmental topics that require additional analysis due to the addition of a new reinforcement area and a new material reuse and storage area and its potential to incur environmental impacts that were not previously evaluated in the 2015 Final IS/MND and addenda. Environmental topics for which no further review was required from those in the 2015 Final IS/MND and Addenda include agricultural resources, mineral resources, and population/housing. Environmental topics requiring additional analysis due to the nature of the new Project elements and evaluated in this Supplemental IS/MND include aesthetics; air quality; geology, soils, and seismicity; GHG emissions; hazards and hazardous materials; hydrology and water quality; land use and planning; noise; transportation; and utilities, energy, and service systems. The new Project elements proposed for the APD Project would be subject to all applicable mitigation measures from the 2015 Final IS/MND and Addenda.

This Supplemental IS/MND describes the APD Project; its environmental setting, including existing conditions and regulatory setting, as necessary; and the potential environmental impacts of the APD Project on or with regard to the following topics:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology, Soils, and Seismicity
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology/Water Quality
- Land Use and Planning
- Noise
- Public Services
- Recreation
- Transportation and Traffic

Tribal Cultural Resources	Wildfire
Utilities and Service Systems	Mandatory Findings of Significance

1.2 PUBLIC INVOLVEMENT PROCESS

Public disclosure and dialogue are priorities under CEQA. CEQA Guidelines Section 15073 and Section 15105(b) require that the lead agency designate a period during the Supplemental IS/MND process when the public and other agencies can provide comments on the potential impacts of the APD Project. Accordingly, to provide input on this Project, please send comments to the following contact:

Brandon Reed, PE
Port Associate Environmental Planner/Scientist
Port of Oakland
530 Water Street
Oakland, CA 94607
Email: breed@portoakland.com

During its deliberations on whether to approve the APD Project, the Port will consider all comments received before 5:00 p.m. on the date identified in the Notice of Intent (NOI) to Adopt a Mitigated Negative Declaration for closure of the public comment period.

1.3 ORGANIZATION OF THIS DOCUMENT

This Supplemental IS/MND contains the following components:

Chapter 1, *Introduction*, provides a brief description of the intent and scope of this Supplemental IS/MND, the public involvement process under CEQA, and the organization of and terminology used in this Supplemental IS/MND.

Chapter 2, *Project Description*, describes the Project including its purpose and goals, the site where the new Project elements would be constructed, the construction approach and activities, operation-related activities, and related permits and approvals.

Chapter 3, *Environmental Checklist*, presents the checklist used to assess the APD Project's potential environmental effects, which is based on the model provided in Appendix G of the CEQA Guidelines. This chapter also includes a brief environmental setting description for each resource topic and identifies the APD Project's anticipated environmental impacts, as well as any mitigation measures that would be required to reduce potentially significant impacts to a less than significant level.

Chapter 4, *References*, provides a bibliography of printed references, websites, and personal communications used in preparing this Supplemental IS/MND.

Appendices

Appendix A: 2015 Final Initial Study/Mitigated Negative Declaration and Addenda
Appendix B: Air Quality Analysis
Appendix C: Biological Resources Report
Appendix D: Cultural Resources Report
Appendix E: Energy Calculations
Appendix F: Noise Calculations
Appendix G: Mitigation Monitoring and Reporting Plan

1.4 IMPACT TERMINOLOGY AND USE OF LANGUAGE IN CEQA

This Supplemental IS/MND uses the following terminology to describe the environmental effects of the Project:

A *finding of no impact* is made when the analysis concludes that the Project would not affect a particular environmental resource or issue.

An impact is considered *less than significant* if the analysis concludes that no substantial adverse change in the environment would result and that no mitigation is needed.

An impact is considered *less than significant with mitigation* if the analysis concludes that no substantial adverse change in the environment would result with the inclusion of the mitigation measures described.

An impact is considered *significant* or *potentially significant* if the analysis concludes that a substantial adverse effect on the environment could result.

Mitigation refers to specific measures or activities that would be adopted by the lead agency to avoid, minimize, rectify, reduce, eliminate, or compensate for an otherwise significant impact.

A *cumulative impact* refers to one that can result when a change in the environment results from the incremental impacts of a Project along with other related past, present, or reasonably foreseeable future Projects. Significant cumulative impacts might result from impacts that are individually minor but collectively significant. The cumulative impact analysis in this Supplemental IS/MND focuses on whether the Project's incremental contribution to significant cumulative impacts caused by the Project in combination with past, present, or probable future Projects is cumulatively considerable.

Because the term "significant" has a specific usage in evaluating the impacts under CEQA, it is used to describe only the significance of impacts and is not used in other contexts within this document. Synonyms such as "substantial" are used when not discussing the significance of an environmental impact.

Chapter 2
PROJECT DESCRIPTION

2.1 BACKGROUND AND PROJECT NEED

The following describes revisions to the APD Project that include the project objectives, the location and setting of the project, and a description of the new project elements. Pertinent elements of the 2015 Final IS/MND and Addenda are also summarized.

2.2 PROJECT OBJECTIVE

The purpose of the APD Project is to meet FEMA requirements for the South Field relating to a 100-year flood event, provide protection against the potential for overtopping or breaching of the perimeter dike during a 100-year flood or during a seismic event, which could lead to flooding of the Oakland International Airport (OAK or Airport) runways and interruption of airport operations; and to reduce susceptibility of the perimeter dike to overtopping or deformation as a result of seismic events. If the perimeter dike were breached, flight operations at the South Field could be reduced or suspended for an unspecified period of time, compromising the Airport's ability to provide passenger and cargo services.

2.3 CEQA HISTORY

2.3.1 2015 Final IS/MND

In January 2015, the Port adopted the Final IS/MND (Appendix A), and the Project was undertaken by the Port in response to FEMA requirements for the certification of the perimeter dike for 100-year flood protection, to reduce the vulnerability of the perimeter dike to seismically induced deformation during an earthquake, and to address future sea level rise. The main improvements to the perimeter dike include the following:

- Raising the crest of the dike above the 10-foot elevation of the Stillwater Level (SWL) by approximately 3 feet—with 2 feet for freeboard and approximately 1 foot for sea-level rise.
- Raising the crest structure to an elevation of the 100-year Total Water Level (TWL), plus approximately 1 foot for freeboard and approximately 1 foot for sea-level rise. In areas where raising the crest structure would not be feasible, the dike would be armored through the installation of riprap.
- Controlling through-seepage by constructing a soil-cement block, a seepage cutoff wall, or a drainage system along a portion of the perimeter dike.
- Improving the inboard slope of the dike by installing stability berms.
- Improving the seismic performance of the sand portion of the dike by installing stone columns or a soil-cement block.

2.3.2 2017 Addendum

In September 2017, the Project design was revised to include improvements at certain locations along the South Field Perimeter Dike. Most of the revisions were due to design requirements necessitating a larger berm footprint. Specifically, the installation of a stability berm in place of sheer panels as a dike stability technique was evaluated. Additionally, modifications of the project footprint related to improvements to the South Field Perimeter Dike vehicle service road were also evaluated (Appendix A).

2.3.3 2018 Addendum

In April 2018, further revisions to the Project designs were evaluated. Improvements to the vehicle service road on the South Field Perimeter Dike evaluated in the 2017 Addendum were further modified as part of this Addendum. Specifically, the improvements at the vehicle service road described in the 2017 Addendum were redesigned to avoid impacts from tidal waters, resulting in a minor modification of the project footprint (Appendix A).

As noted in Chapter 1, the Port has determined that an additional seismic improvement method will need to be utilized to meet the project objectives. Additionally, to reuse some of the material produced from construction in the APD Project Site, an adjacent vacant lot and closed landfill were identified for the placement of material.

2.4 PROJECT LOCATION AND SETTING

The APD Project is located at OAK in Oakland, California. OAK is owned and operated by the Port. OAK property consists of approximately 2,600 acres and includes South Field, which primarily accommodates the commercial passenger and cargo activity, and North Field, which primarily serves corporate and general aviation purposes and other supporting facilities.

According to the City of Oakland General Plan, the APD Project is located within the “General Industry and Transportation” General Plan land use classification established by the Land Use and Transportation Element. The General Industry and Transportation classification is intended to recognize, preserve, and enhance areas of the city for a wide variety of businesses and related establishments that may have the potential to create offsite impacts such as noise, light/glare, truck traffic, and odor. General Industry and Transportation areas are characterized by sites with freeway, rail, seaport, and/or airport access. The planned land uses in the area of OAK are consistent with existing land use patterns, and land use changes in this part of Oakland are not anticipated (see Figure 1, Project Vicinity).

South Field includes primary air carrier Runway 12-30, Terminals 1 and 2, and air cargo facilities. The San Francisco Bay Trail (Bay Trail) is to the northwest and east of OAK. Other surrounding land uses adjacent to the APD Project Site include commercial business and light industrial development land uses.

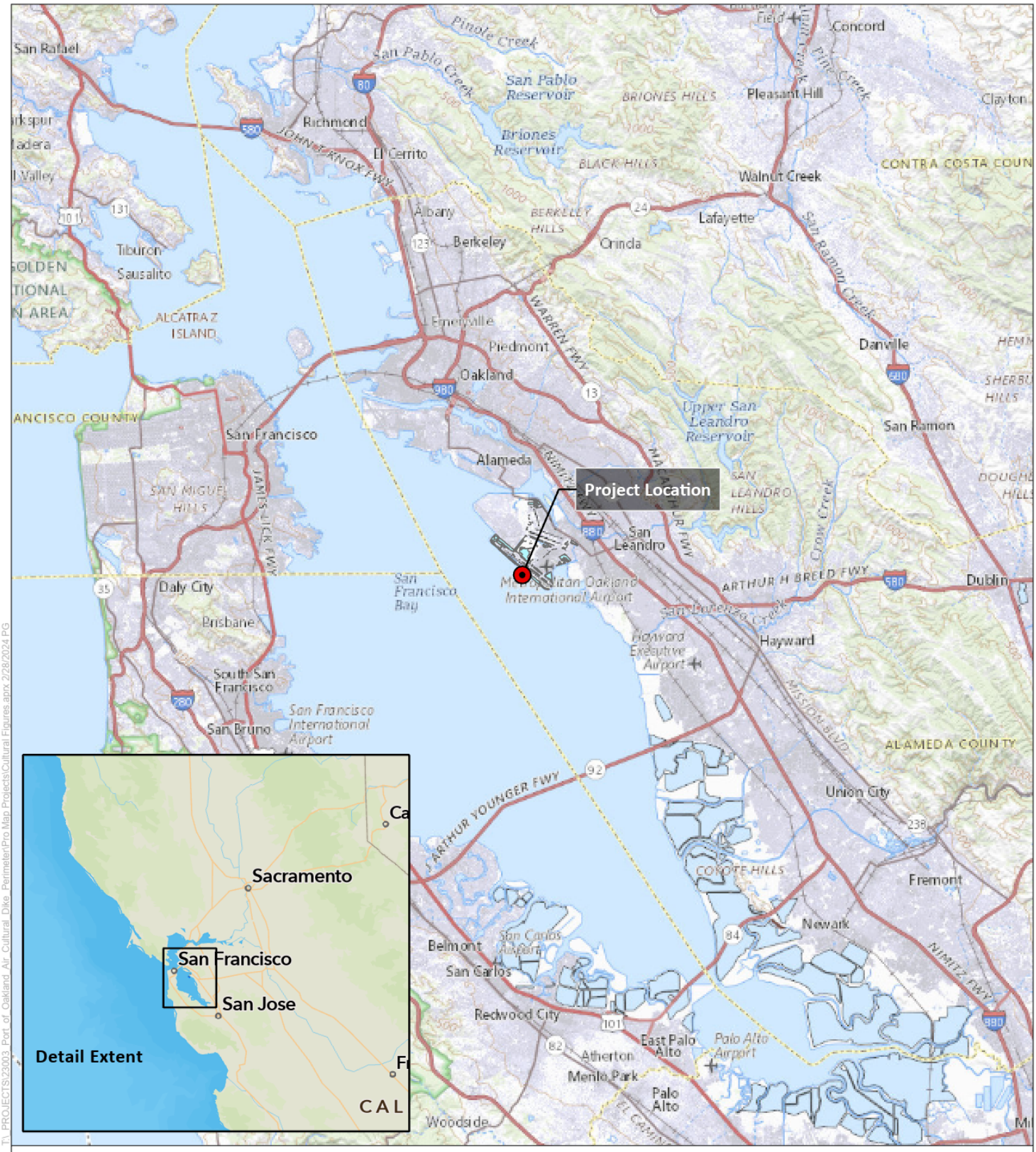

Figure 1
Project Vicinity

Port of Oakland - Airport Perimeter Dike
FEMA and Seismic Improvements Project
Supplemental Initial Study/Mitigated Negative Declaration

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2.4.1 Airport Perimeter Dike Area

The APD extends approximately 4.5 miles and forms the boundary between OAK, its facilities, and San Francisco Bay (Appendix A). The new reinforcement method proposed will occur within a 0.75-mile stretch at the western end of the APD (see Figure 2, Project Location).

2.4.2 Material Re-use Area: NPORD Site

In addition to material disposal methods previously identified in the 2015 Final IS/MND and Addenda, the project proposes an alternate material reuse location adjacent to the APD project site. The North Port of Oakland Refuse Disposal Site (NPORD Site) is an approximately 10-acre site located at the southeast corner of Harbor Bay Parkway and Doolittle Drive in Oakland, California (Figure 2). The parcel is owned by the Port of Oakland and is currently an undeveloped vacant lot. The lot has been subject to historic refuse disposal since approximately 1950. The landfill was closed in 1974 and is now regulated by the Alameda County Department of Environmental Health (ACDEH). Surrounding land uses include a municipal golf course opposite the site entrance, a closed and inaccessible sports field, and a former Rolls Royce Engine Testing Facility.

2.5 PROJECT DESCRIPTION

This Supplemental IS/MND presents new project elements and project modifications not previously identified or evaluated in the 2015 Final IS/MND and Addenda. The Project elements evaluated in this Supplemental IS/MND include the following:

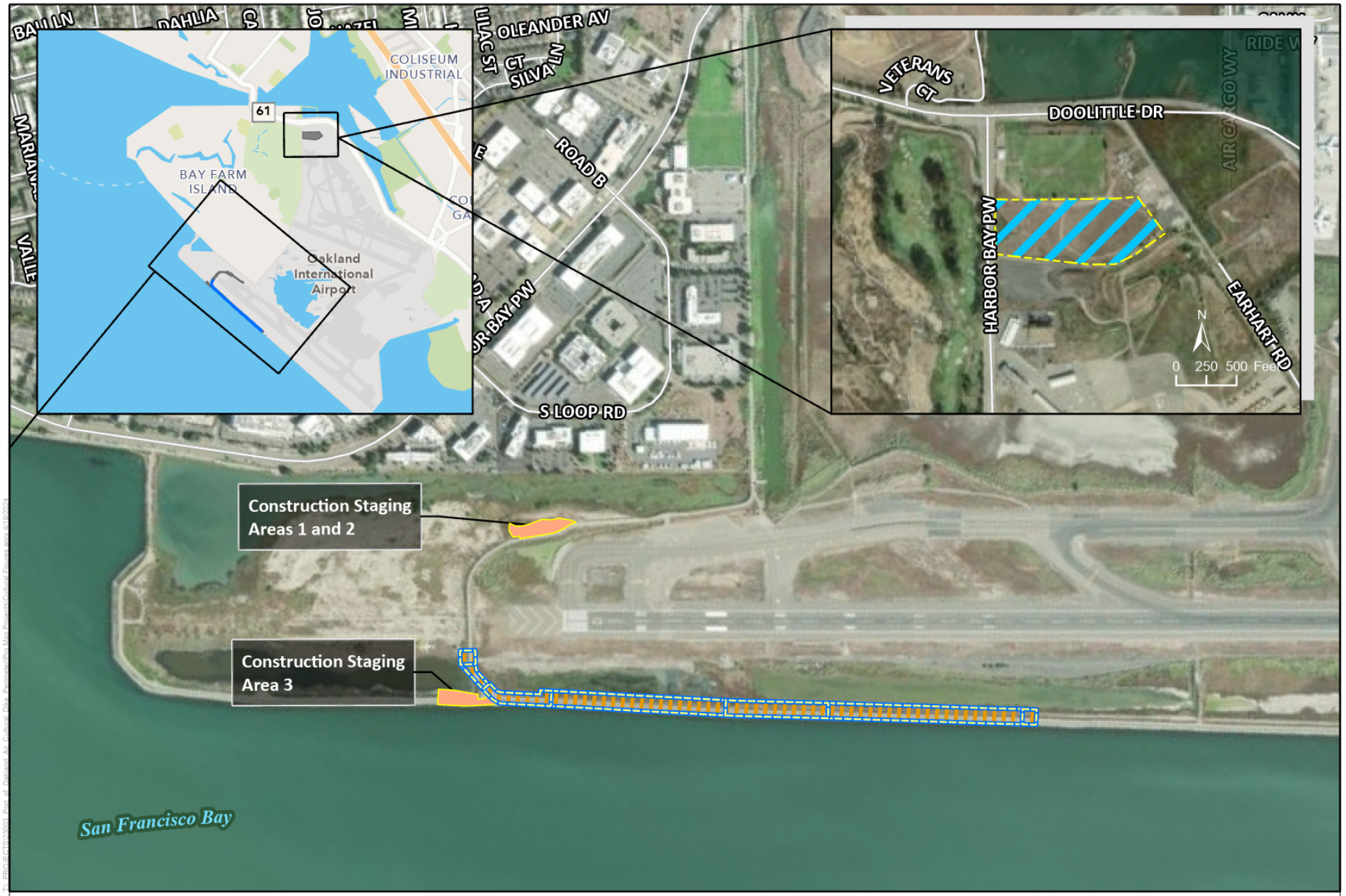
- APD Project Site
- NPORD Site

These two Project elements are described in the next two subsections.

2.5.1 APD Project Site

Since project approval in 2015 and subsequent addenda in 2017 and 2018, the Port determined that seismic improvements to the APD would need to utilize an alternate method to reach seismic improvement goals. This alternate seismic improvement method, Cement Deep Soil Mixing (CDSM), would occur within a 0.75-mile stretch at the western end of the existing 4.5-mile APD footprint identified in the 2015 Final IS/MND (Figure 2). The extent of disturbance is less than the proposed seismic improvements described in the 2015 IS/MND. The new improvements would be completed at depths of 20 to 43 feet below the top of dike. CDSM is a ground improvement technique that involves blending a cement binder with soil in the subsurface to produce a soil-cement zone that has improved properties, such as increased strength, reduced compressibility, and reduced permeability. The CDSM utilizes a wet mixing method, which involves pumping a cementitious slurry at low pressure and mixing it with soil using mechanical means. The CDSM improved zone would strengthen the APD to prevent failure during a major earthquake event. In addition to the CDSM process, three temporary laydown areas not previously identified would be placed within the project footprint to allow for storage of equipment and construction materials (Figure 2). Laydown Areas 1, 2, and 3 are 0.75, 1.1, and 0.6 acres, respectively, and would be restored once construction is completed. A total of

approximately 37,000 cubic yards (CY) of material is expected to be generated from these new Project elements.



0 500 1,000 Feet

Project Area

Portion of the Dike Seismic Seismic Retrofit

Construction Staging Area

NPORD Site

Roads

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Figure 2

Project Location

Port of Oakland - Airport Perimeter Dike
FEMA and Seismic Improvements Project
Supplemental Initial Study/Mitigated Negative Declaration

APD Project Site Construction

Components of the standard site preparation and pre-construction activities previously identified in the 2015 Final IS/MND, will be conducted as applicable. As indicated in the original 2015 project description, preparation would include the removal of a portion of the existing rip-rap along the APD and construction of a temporary working pad along the APD to allow for the seismic improvements to be performed and allow continued airport operational vehicle passage during construction.

After site preparation, seismic improvements to the dike would be started using CDSM. There are various types of mixing equipment for CDSM process, including vertical axis mixing equipment with multiple mixing blades mounted on one or more mixing shafts, cutter-type mixing equipment with blades mounted on rotating wheels forming a single machine setup location, track-mounted "chainsaw" type mixers with cutting teeth that generate continuous trenches for CDSM, or horizontally rotating, toothed drums attached to an excavator.

Excess soil generated from the completion of CDSM seismic improvements and the removal of temporary work pads will require management. Approximately 24,000 CY of material generated during CDSM would consist of a mixture of cement, the APD material itself, and the subsurface material underneath the APD (sand fill, native sands, and bay mud). Approximately 13,000 CY would be generated from the placement and removal of the temporary work pads.

2.5.2 NPORD Site

As noted above, the Project proposes to place approximately 37,000 CY of material from CDSM and removal of temporary work pads at the APD Project site over 10 acres at the NPORD Site, an alternative material reuse site. Placement of the excess material at NPORD Site would provide the benefit of increasing the existing NPORD Site landfill cover. Another option under consideration for disposal of excess soil is an offsite soil disposal site; this second option is evaluated as needed in this Supplemental IS/MND.

NPORD Site Construction

Prior to placement of any fill material, existing vegetation would be removed using standard hand tools and equipment. The perimeter of the 10-acre site would be fenced prior to material placement. Dump trucks would leave the APD Project Site and travel to the NPORD Site on existing Port and public roads. Trucks would enter the NPORD Site, place the excess soil cement material, leave the NPORD Site, and return to the APD Project Site. Following the placement of the excess soil generated by the seismic improvements, the site would be graded to reflect the pre-project topography. Upon completion of the material placement the area will be stabilized utilizing vegetative cover methods, such as hydroseeding, in compliance with SWPPP requirements. The NPORD Site ground surface elevation is expected to be raised by, on average, approximately three feet at the completion of the Project.

NPORD Site Haul Routes and Site Access

Access for haul trucks, crews, and equipment to and from the NPORD Site would be via existing roads. The main haul route to the NPORD Site would involve trucks leaving the APD Project Site at airport gate C2A and exiting onto Ron Cowan Parkway to Harbor Bay Parkway to the NPORD

Site (Figure 3, Proposed Haul Routes). Empty trucks would return to the APD Project Site in the same way. Additionally, a one-way haul route is proposed as an alternative way for trucks to exit the APD Project Site. From the APD Project Site, trucks would travel along an existing levee road and exit onto Harbor Bay Parkway at airport gate M45, then travel to the NPORD Site. This would be an exit-only route. Trucks would return to the APD Project Site via Harbor Bay Parkway to Ron Cowan Parkway to gate C2A (Figure 3). The distance for both proposed haul routes is approximately four miles from the APD Project Site to the NPORD Site disposal area.

The NPORD Site is only expected to have brief periods of activity throughout the construction of the APD Project, depending on the phase of construction. Soil-cement materials generated during the CDSM would be transported and placed on the NPORD Site at an estimated 3-5 truck trips per day over approximately 18 months. During the slope and dike restoration phase, transport of temporary work pad materials is estimated to be approximately 40 to 50 haul trips per day for approximately three months.

2.5.3 Project Construction Hours and Schedule

Consistent with the work hours and project schedule identified in the 2015 Final IS/MND and Addenda, work hours would be Monday through Friday, 7 a.m. to 5 p.m., with some weekend and night work anticipated. The overall project schedule is expected to take approximately 29 months, with construction commencing in the summer of 2024.

Figure 3
Proposed Haul Routes

Port of Oakland - Airport Perimeter Dike
FEMA and Seismic Improvements Project
Supplemental Initial Study/Mitigated Negative Declaration

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2.6 BEST MANAGEMENT PRACTICES

The Project would include the Best Management Practices (BMPs) shown in Table 2-1, taken from the 2015 Final IS/MND, to avoid or minimize environmental impacts, which would be defined in the construction contract documents.

Table 2-1. BMPs from 2015 Final IS/MND to Avoid or Minimize Environmental Impacts

Number	Title	BMP Description
BMP-1	Temporary Erosion Control Measures	Temporary erosion control measures would be implemented as specified in the project-specific Stormwater Pollution Prevention Plan (SWPPP), as applicable. Stormwater runoff would be managed as required by the San Francisco Bay Regional Water Quality Control Board (RWQCB). The contractor will be required to comply with National Pollutant Discharge Elimination System (NPDES)/ No. 2022-0057-DWQ NPDES (General Construction Permit).
BMP-2	Upland Equipment Staging	Equipment staging, material storage, and stockpile areas would be in upland areas so as not to affect jurisdictional wetlands or any other sensitive habitat.
BMP-3	Emergency Spill Plan	A plan for the emergency cleanup of any spills of fuel or other materials would be prepared and implemented by the contractor.
BMP-4	Erosion and Sediment Control	Erosion and sediment control BMPs would be installed prior to the start of any ground-disturbing activities, as detailed in the SWPPP.
BMP-5	Placement of Silt Fences and Fiber Rolls	Silt fences or fiber rolls would be installed, or other suitable measures would be implemented around the perimeters of the construction zone, staging areas, temporary stockpiles, and drainage features, as detailed in the SWPPP.
BMP-6	Dewatering Plan	Dewatering is not anticipated to be required for this Project, but if dewatering of excavations is determined necessary, Resident Engineer shall be notified and a Dewatering Plan shall be developed. If dewatering is needed prior to a Dewatering Plan being able to be developed, the water within an excavation may be containerized and stored in the APD Project Site until a Dewatering Plan is developed and the Port approves of the discharge procedure approach.
BMP-7	Removal of Dewatering Sedimentation	If a dewatering plan (BMP-6) is developed and dewatering discharge is determined acceptable by the Port, a discharge authorization will be obtained from the Port. The Dewatering Plan to include an approach to remove all solids and sediments prior to discharge. Additionally, water is to be discharged in a manner that will not cause overflow, backup, erosion, flooding, pollution to the receiving water, or otherwise damage existing facilities, completed

Number	Title	BMP Description
		work, or adjacent property. Dewatering treatment and discharge control measures will be implemented to ensure that discharges to receiving waters are in accordance with the State of California General Permit for Stormwater Discharges Associated with Construction Activity (General Permit).
BMP-8	Stockpile Management	Stockpiles would be located a minimum of 50 feet away from concentrated flows of stormwater, waterbodies, ditches, and inlets. All stockpiles would be contained using perimeter controls such as berms, dikes, fiber rolls, silt fences, sandbags, gravel bags, or straw bale barriers. All stockpiles would be covered with polyethylene plastic sheeting or other impermeable materials.
BMP-9	Preventing Runoff of Materials	BMPs would be identified in the contractor's SWPPP to prevent raw cement, concrete or concrete washings, asphalt, paint or other coatings; and oils or other petroleum products from entering the storm drain system and/or San Francisco Bay. All concrete waste and wash water would be either returned with each concrete truck for disposal at the concrete batch plant or contained until dried and then disposed of offsite.
BMP-10	Vehicle and Equipment Inspections	Construction vehicles and equipment would be inspected to prevent discharge and contamination of soil or water (from external grease and oil or from leaking hydraulic fluid, fuel, oil, and grease).
BMP-11	Equipment Refueling Areas	Equipment would be refueled and serviced at designated construction staging areas.
BMP-12	Containment of Discharge Pollutants	Discharge of pollutants into water bodies from vehicles and equipment would be avoided by using drip pans, spill kits, berms, and secondary containment.
BMP-13	Placement of Sanitary Facilities	Sanitary facilities would be placed at a minimum of 50 feet from water bodies.
BMP-14	Containment of Sanitary Facilities	Sanitation facilities (e.g., portable toilets) would be placed in containments to prevent discharges of pollutants to the stormwater drainage system or receiving water.
BMP-15	Maintenance of Sanitary Facilities	Sanitary facilities would be maintained regularly.
BMP-16	Storage of Hazardous Materials	Hazardous materials would be stored in an area protected from rainfall and stormwater run-off to prevent the offsite discharge of leaks or spills.
BMP-17	Appropriate Disposal Facilities	All debris materials, sediment, trash, vegetation, or other material removed from the disturbed areas would be disposed of at a Port-approved disposal or recycling facility.

Number	Title	BMP Description
BMP-18	Workplan for Avoidance of Wetlands	Non-tidal wetlands and waters of the United States (waters of the U.S.) to be avoided would be marked in the field. Contractor must develop and submit a workplan, which demonstrates that both temporary/construction activities and the permanent improvements will occur outside the wetlands boundary and include measures to prevent any impacts to sensitive species and wetlands adjacent to the work areas, construction staging areas, and haul routes. Additionally, before any project work begins the wetland boundary within 100 feet of the wetland boundary begins, all work areas, construction staging areas and haul routes must be separated from the wetland area with a silt fence.
BMP-19	Construction Site Safety Plan	A Construction Site Safety Plan would be developed to provide a formal, top-down, systemic approach to identify safety risk, organizational structures, responsibilities, and policies and procedures.
BMPs 20-31 were Mitigation Measure AQ-1 within the 2015 IS/MND		
BMP-20	Equipment Idling Time	Minimize idling time either by shutting equipment off when not in use or by reducing the time of idling to no more than two minutes. Provide clear signage that posts this requirement for workers at the entrances to the site, and the Port will conduct random monthly surveys to check for compliance with idling times to ensure compliance with this measure.
BMP-21	Renewable Diesel	Use CARB-approved renewable diesel fuel (R99 or R100) in off-road construction equipment and on-road trucks.
BMP-22	Maintenance of Construction Equipment	Require all construction equipment be maintained and properly tuned in accordance with manufacturer's specifications. Equipment should be checked by a certified mechanic in accordance with the manufacturer's specifications and determined to be running in proper condition prior to operation.
BMP-23	Alternative Transportation	Encourage and provide carpools, shuttle vans, transit passes, and/or secure bicycle parking to construction workers, and offer meal options on site or shuttles to nearby meal destinations for construction employees.
BMP-24	Debris Management	Recycle or salvage nonhazardous construction and demolition debris.
BMP-25	Water Exposed Surfaces	All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
BMP-26	Cover Haul Materials	All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

Number	Title	BMP Description
BMP-27	Remove Daily Trackout	All visible mud or dirt trackout onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day, or other suitable practices to remove dirt from tire mechanisms shall be employed to minimize occurrences of trackout. The use of dry power sweeping is prohibited.
BMP-28	Speed Limit for Unpaved Roads	All vehicle speeds on unpaved roads shall be limited to 15 mph.
BMP-29	Windspeed Activity Suspension	All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph in a given hour.
BMP-30	Mandatory Equipment Cleaning	All trucks and equipment, including their tires, shall be washed off prior to leaving the site, unless only traveling between the APD and NPORD Site.
BMP-31	Public Dust Signage	Publicly visible signs shall be posted near truck entrances and publicly accessible fences near the project work areas with the telephone number and name of the person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's General Air Pollution Complaints number shall also be posted on a publicly visible sign to ensure compliance with applicable regulations.

2.7 PERMITS

The following permits are, or may be, applicable to the new Project elements:

- NPDES/No. 2022-0057-DWQ NPDES No. CAS000002 (General Construction Permit);
- San Francisco Bay Conservation and Development Commission (BCDC) Permit and consistency determination under the Coastal Zone Management Act; and
- City of Alameda right-of-way permits.
- California Air Resources Board registration program.
- Bay Area Air Quality Management District permit.

Chapter 3
ENVIRONMENTAL CHECKLIST

This chapter of the Supplemental IS/MND assesses the environmental impacts of the Port of Oakland APD Project based on the environmental checklist provided in Appendix G of the CEQA Guidelines. The environmental resources and potential environmental impacts of the Project are described in the individual subsections below. Each section includes a discussion of the rationale used to determine the significance level of the Project's environmental impact for each checklist question. For environmental impacts that have the potential to be significant, mitigation measures are identified that would reduce the severity of the impact to a less than significant level.

Project Title:	Airport Perimeter Dike FEMA and Seismic Improvements Project
Lead Agency Name and Address:	Port of Oakland Environmental Programs and Planning Division 530 Water Street Oakland, California 94607
Contact Person, Phone Number and Email:	Brandon Reed, ph. 510-627-1174 Email: breed@portoakland.com
Project Location and Assessor's parcel number (APN)	Alameda County 42-4404-11-2, 74-1025-1, 74-1025-2, 74-1040-4-2, 74-1040-9
Property Owner(s)	Port of Oakland
General Plan Designation	The APD Project is located within the "General Industry and Transportation" General Plan land use classification established by the Land Use and Transportation Element. The General Industry and Transportation classification is intended to recognize, preserve, and enhance areas of the city for a wide variety of businesses and related establishments that may have the potential to create offsite impacts such as noise, light/glare, truck traffic, and odor. General Industry and Transportation areas are characterized by sites with freeway, rail, seaport, and/or airport access.
Zoning	Industrial, General

	Heavy Industrial
Description of Project:	The Port is proposing to implement the APD Project, which involves improving the APD to comply with FEMA requirements for 100-year flood protection, and to reduce the vulnerability of the APD to seismically induced deformation during an earthquake. As part of the project, approximately 37,000 CY of excess soil generated from APD's seismic improvements and placed at the NPORD Site, located approximately 1.7 miles to the northeast.
Surrounding Land Uses and Setting	Urban/industrial; park; commercial
Other Public Agencies whose Approval or Input May Be Needed	State Historic Preservation Officer (SHPO)
Hazards or Hazardous Materials	No hazardous materials or other hazards are present in the APD Project Site.
Native American Consultation	On December 20, 2023, Assembly Bill (AB) 52 letters were sent to the tribes listed in the contact list provided by the Native American Heritage Commission (NAHC). The letters described the Project, provided maps of the Project site, and invited tribes to request consultation should have concerns. Engagement with tribes is on-going.

This chapter of the Supplemental IS/MND analyzes the environmental impacts of the proposed changes to the APD Project based on the environmental checklist provided in Appendix G of the CEQA Guidelines. In particular, the main purpose of this section is to evaluate the potential for impacts associated with a new seismic improvement method and with placement of material at a former landfill n to the APD Seismic Improvements Area. The environmental resources and potential environmental impacts of the Project are described in the individual subsections below. As noted in Section 1.1.3 of this document, this Supplemental IS/MND augments the previously adopted 2015 Final IS/MND and Addenda to the extent necessary to address the changed conditions and circumstances of the APD Project as modified by the new Project elements.

Each section (3.1 through 3.19) provides a brief update of new regulations that have occurred since 2015 that may apply to address the resource area and describes the existing environmental conditions for that resource to help the reader understand the conditions that could be affected by the new elements of the Project. In addition, each section includes a discussion of the rationale used to determine the significance level of the Project's environmental impact for each checklist question that would result in any new or substantially more severe significant environmental impacts than those analyzed in the prior CEQA documents. For new environmental impacts that have the potential to be significant, mitigation measures are identified that would reduce the severity of the impact to a less than significant

level. Where existing mitigation measures from the 2015 Final IS/MND do not reduce impacts to a less than significant level, new mitigation measures are proposed.

Environmental Factors Potentially Affected

The environmental factors checked below would potentially be affected by the APD Project, as indicated by the checklist on the following pages.

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

Sections Eliminated from Further Analysis

Three resource topics have been eliminated from further analysis based on the nature and scope of the APD Project. A brief summary and description of these resource topics dismissed from further review is provided below. Impact determinations and mitigation measures from the 2015 IS/MND and addenda were also reviewed for potential applicability to the Project.

Agricultural and Forestry Resources

The 2015 IS/MND determined that there would be no impact to agricultural and forestry resources as the Project would not convert any Prime Farmland, Unique Farmland, of Farmland of Statewide Importance to non-agricultural use, and would not conflict with existing zoning or agricultural land use or a Williamson Act contract. Additionally, no part of the project area qualified as forest land or timberland according to State PRC definitions.

Similarly, the APD and the NPORD Site included in the revised APD Project are designated as "urban and built-up" and "other land" (California Department of Conservation [CDC] 2020). Additionally, the Project would not change current land uses or convert farmland or timberland to non-agricultural or non-timberland uses, nor would it conflict with existing agricultural zoning regulations or Williamson Act contracts. As such, no impact on agricultural or forestry uses would occur.

Mineral Resources

The 2015 IS/MND determined that there are no significant mineral deposits or mining operations for oil, coal, natural gas, sand, gravel, or crushed stone in the Airport vicinity, and thus that the Project would not affect mineral resources crucial to the area or its residents. Additionally, the 2015 IS/MND found that the project location was situated within an urbanized zone lacking any significant mineral resources of local importance and that construction of the Project would only utilize standard building materials like riprap, aggregate, and concrete, which are readily accessible throughout the San Francisco Bay Area. Therefore, the 2015 IS/MND found there were no impacts to mineral resources.

APD Project activities would not take place near any active mineral mines. Therefore, no impact on mineral resources would occur.

Population and Housing

The 2015 IS/MND determined that that Project would not create new facilities, businesses, or expand the operations at the Oakland Airport and surrounding area by a significant amount, and that the work force would likely be local and therefore would not need to relocate to the area. Because of this, and because it was also determined that the project would not displace existing housing or people, it was determined there would be no impacts on population or housing.

The revised APD Project would also not involve the construction of new housing or generate any long-term employment opportunities that could cause substantial population growth.

Maintenance activities would be conducted by Port of Oakland contractors who would be employed temporarily in the APD Project Site. Because these jobs would likely be filled by the local work force, the program would not directly induce population growth related to new long-term employment opportunities. Further, the program would not result in the construction of new roads, trails, or flood control facilities that would indirectly induce population growth; the program would entail maintenance of existing facilities.

Furthermore, maintenance activities would be minimal and would be confined to the existing APD area and the existing NPORD Site. Although residences are located in the surrounding area of the Project vicinity, no residents would be displaced by the Project, either temporarily or permanently. Therefore, the Project would not displace existing housing or people, such that replacement housing would be needed elsewhere. As such, no impacts related to housing displacement would occur.

Determination

The conclusions and recommendations contained herein are professional opinions derived in accordance with current standards of professional practice. They are based on a review of sources of information cited in this document, and the comments received, conversations with knowledgeable individuals; the preparer's personal knowledge of the area; and, where necessary, a visit to the site.

On the basis of this initial evaluation:

☐ I find that the Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT (EIR) is required.

☐ I find that the Project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An EIR is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the Project, nothing further is required.

Signature  Date 5/1/2024

Name: Brandon Reed
Port of Oakland

3.1 AESTHETICS

Criteria	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Except as provided in PRC Section 21099, would the project:				
a. Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

3.1.1 Regulatory Setting

Federal Laws, Regulations, and Policies

No updated federal regulations relevant to aesthetics have occurred since the 2015 Final IS/MND.

State Laws, Regulations, and Policies

No updated state regulations relevant to aesthetics have occurred since the 2015 Final IS/MND.

Local Laws, Regulations, and Policies

City of Oakland General Plan, Land Use and Transportation Element

The City of Oakland General Plan, Land Use and Transportation Element includes the following policies (City of Oakland 2023):

Policy I/C4.1: Protecting Existing Activities. Existing industrial, residential, and commercial activities and areas that are consistent with long-term land use plans for the city should be protected from the intrusion of potentially incompatible land uses.

Policy T6.3: Making the Waterfront Accessible. The waterfront should be made accessible to pedestrians and bicyclists throughout Oakland.

Policy OS-10.1: View Protection. Protect the character of existing scenic views in Oakland, paying particular attention to (a) views of the Oakland Hills from the flatlands, (b) views of downtown and Lake Merritt, (c) views of the shoreline, and (d) panoramic views from Skyline Boulevard, Grizzly Peak Road, and other hillside locations.

3.1.2 Environmental Setting

As mentioned in Chapter 2, Project Description, Project activities will occur along a 0.75-mile stretch within the existing 4.5-mile APD footprint that was analyzed in the 2015 IS/MND. Three temporary construction staging areas not previously identified within the 2015 IS/MND that are 0.75, 1.1, and 0.6 acres, respectively, will be used to store equipment and materials needed for construction. The construction staging areas are located within the Airport boundary in close proximity to the APD (Figure 2). The NPORD Site is located approximately 1.7 miles northeast of the APD at the southeast corner of Harbor Bay Parkway and Doolittle Drive in Oakland, California. The undeveloped site is owned by the Port of Oakland and was formerly used as a landfill. Adjacent land uses to the NPORD Site parcel include Spunkmeyer Field, which is a currently closed athletic field that is immediately north; Corica Park Golf Course, which is to the west of Harbor Bay Parkway; Oakland Airport, which is located immediately south; and Sandy Beach, which is to the east. Residential Alameda is located approximately 0.7 miles north, and residences in Oakland are located approximately 0.7 miles to the west.

3.1.3 Environmental Impacts and Mitigation Measures

Impact determinations and mitigation measures from the 2015 IS/MND and addenda were reviewed for potential applicability to the Project modifications. Impacts and the associated mitigation measures that may apply to the Project are summarized below.

a. Adverse effects on scenic vistas (No impact)

The 2015 IS/MND and addenda concluded there would be no impacts related to scenic vistas because improvements would create such a small change from the existing APD height that it would be indistinguishable from the surrounding area and because there are no designated or identifiable scenic vistas in the vicinity of the APD Project Site.

During the construction period, the CDSM Project activities would take place along the previously evaluated 4.5-mile APD footprint and thus would not create impacts to scenic vistas that differ from the 2015 IS/MND conclusion. New construction staging areas are proposed that were not previously evaluated in the 2015 IS/MND. However, these areas are in close proximity to the APD footprint, share similar visual characteristics, and are at a similar elevation. Additionally, the changes to the construction staging area would only occur during construction and the sites would be returned to pre-project topography after project implementation. As

such, it is not expected that the proposed construction staging areas would create any impacts to scenic vistas.

The NPORD Site is relatively flat and is surrounded by the open expanse of the Corica Park Golf Course complex to the west, the OAK to the south, the Martin Luther King Regional Shoreline to the east, and the Alameda Harbor and residential Alameda to the north. Following the placement of fill at the NPORD Site, the area would be graded to reflect the pre-Project topography. While the height of the landfill cover at the NPORD Site would be raised by approximately three feet, this minor change in height is not expected to change the visual character of the area due to the flat topography and lack of nearby designated scenic vistas. After grading, the bare soil would either be revegetated with a non-invasive seed mix. The inclusion of the revegetated seed mixer would not result in a substantial change from existing conditions. Finally, the NPORD Site would remain fenced post-project. The inclusion of a fence around the NPORD Site would be similar to the surrounding parcels and land uses. Thus, the inclusion of the fence would not result in a substantial change to existing conditions.

Because the visual characteristics of the APD, construction staging areas, and NPORD Site are similar to what was previously evaluated in the 2015 IS/MND, there are no designated scenic vistas within the vicinity of the APD Project Site, and the approximate 3-foot increase to the NPORD Site height is not anticipated to lead to any substantial changes in existing visual characteristics of the area, the Project would have ***no impact*** on scenic vistas.

b. Damage to scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway (Less than significant)

The 2015 IS/MND and addenda also concluded that scenic resources would not be adversely affected because there are no built or natural visual resources contributing to a scenic public setting, and because the Project would only create a minor height increase of the dike that would not alter views of scenic resources.

As identified in the 2015 Final IS/MND, the closest state-designated scenic highway is approximately 4.5 miles east of the Project site. There are no built or natural visual resources within the surrounding vicinity of APD Project Site, construction staging areas, or NPORD Site. The changes in height associated with the Project (the small height increase associated with the ADP seismic improvement reinforcements and approximate 3-foot increase at the NPORD Site) would be minor and thus would not affect any views or scenic resources. As a result, the implementation of the Project would have a similar ***less-than-significant impact*** on scenic resources.

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

The 2015 IS/MND and addenda concluded that there would be no impact to the existing visual character because, following construction, the new perimeter dike would largely look the same as it did prior and was not expected to change the existing visual character of the area in any way.

As stated in the 2015 IS/MND, the visual characteristics in the area surrounding the Airport are associated with commercial and industrial uses, as well as the Alameda Municipal Golf Course (also known as the Corica Park Golf Course), the Metropolitan Golf Links golf course, and the surrounding San Francisco and San Leandro bays. The APD Project Site is surrounded by existing Airport facilities, including paved runways. While the newly proposed seismic reinforcement improvements to the APD Project Site would marginally alter the height of the existing perimeter dike, Project activities would be mostly underground; the improvements would not change the current visual character of the site or surrounding area.

The new construction staging areas are located adjacent to the previously analyzed APD Project Site and, therefore, have similar visual characteristics. Additionally, the construction staging areas would only be used temporarily during the construction period and would then be restored to their existing uses. As a result, there would be no change to the visual characteristics associated with use of the construction staging areas.

As previously mentioned, the NPORD Site is located adjacent to a soccer field, a golf course, and OAK. While the site is viewable from roads and businesses, the site is zoned as industrial land and has a long history of being used as a landfill. Project activities would raise the existing height of the NPORD Site by approximately three feet; however, the site would be graded to reflect the pre-project topography after construction is completed. The visual characteristics of the area are not anticipated to substantially change as a result of the Project. Thus, any changes to the existing visual characteristics would be ***less than significant***.

d. New sources of substantial light or glare (No impact)

The 2015 IS/MND and addenda concluded that because there were no proposed lights or new facilities that would lead to light or glare, there would be no impact.

The Project does not propose or include the installation of new lights or feature that would produce glare. Furthermore, construction would mainly occur during daytime hours, similar to the 2015 IS/MND. As such, the Project would have ***no impact*** with regards to creating new light or glare in the Project vicinity, similar to the 2015 IS/MND.

3.2 AIR QUALITY

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

3.2.1 Regulatory Setting

Federal Laws, Regulations, and Policies

The federal Clean Air Act (CAA) is implemented by U.S. Environmental Protection Agency (USEPA) and sets ambient air limits, known as the National Ambient Air Quality Standards (NAAQS), for six criteria pollutants: carbon monoxide (CO), lead, nitrogen dioxide (NO_2), ground-level ozone (O_3), sulfur dioxide (SO_2), and particulate pollution. Table 3.2-1 shows the current attainment status for NAAQS and California Ambient Air Quality Standards (CAAQS) in the APD Project Site's air basin—the San Francisco Bay Area Air Basin (SFBAAB).

The SFBAAB is currently classified as non-attainment for the one-hour state O_3 standard as well as for the federal and state eight-hour standards. Additionally, the SFBAAB is classified as non-attainment for the state 24-hour and annual arithmetic mean PM_{10} standards, as well as the state annual arithmetic mean and the national 24-hour PM2.5 standards. The SFBAAB is unclassified or classified as attainment for all other pollutant standards.

USEPA and the California Air Resources Board (CARB) regulates various stationary sources, area sources (e.g., gas stations, dry cleaners, print shops, cleaners and other solvent use, storage piles), and mobile sources of air pollutant emissions. USEPA has regulations involving performance standards for specific sources that may release pollutants known to cause or suspected of causing cancer or other serious health effects known as toxic air contaminants (TACs) or known at the federal level as hazardous air pollutants (HAPs). In addition, USEPA has regulations involving emission standards for off-road sources such as emergency generators, construction equipment, and vehicles, as well as other releases of toxic chemicals.

Table 3.2-1. Federal and State Ambient Air Quality Standards and Bay Area Air Basin Attainment Status

Pollutant	Averaging Time	CAAQS Concentration	CAAQS Attainment Status	NAAQS Concentration	NAAQS Attainment Status
O_3	8-Hour	0.070 ppm	N	0.070 ppm	N
	1-Hour	0.09 ppm	N	N/A	N/A
CO	8-Hour	9.0 ppm	A	9 ppm	A
	1-Hour	20 ppm	A	35 ppm	A
NO_2	1-Hour	0.18 ppm	A	0.100 ppm	N/A
	Annual Arithmetic Mean	0.030 ppm	U	0.053 ppm	A
SO_2	24-Hour	0.04 ppm	A	0.14 ppm	N/A
	1-Hour	0.25 ppm	A	0.075 ppm	N/A
	Annual Arithmetic Mean	N/A	N/A	0.030 ppm	N/A
PM_{10}	Annual Arithmetic Mean	20 µg/m3	N	N/A	N/A
	24-Hour	50 µg/m3	N	150 µg/m3	U
$PM_{2.5}$	Annual Arithmetic Mean	12 µg/m3	N	12 µg/m3	U/A
	24-Hour	N/A	N/A	35 µg/m3	N
Sulfates	24-Hour	25 µg/m3	A	N/A	N/A
Lead	30-Day Average	1.5 µg/m3	A	N/A	N/A
	Calendar Quarter	N/A	N/A	1.5 µg/m3	A
	Rolling 3-Month Average	N/A	N/A	0.15 µg/m3	N/A

Pollutant	Averaging Time	CAAQS Concentration	CAAQS Attainment Status	NAAQS Concentration	NAAQS Attainment Status
Hydrogen Sulfide	1-Hour	0.03 ppm	U	N/A	N/A
Vinyl Chloride	24-Hour	0.010 ppm	No Information Available	N/A	N/A
Visibility Reducing Particles	8-Hour	Extinction Coefficient of 0.23 kilometer with relative humidity less than 70%	U	N/A	N/A

Notes:

A = Attainment; CAAQS = California Ambient Air Quality Standards; NAAQS = National Ambient Air Quality Standards; N = Non-attainment; U = = Unclassified; N/A = Not Applicable, no applicable standard; ppm = parts per g/m = micrograms per cubic meter.

a. CAAQS = California ambient air quality standards. CAAQS for O_3, CO (except Lake Tahoe), SO_2 (1-hour and 24-hour), NO_2, PM, and visibility reducing particles are values that are not to be exceeded. All other state standards shown are values not to be equaled or exceeded.

b. NAAQS = national ambient air quality standards. NAAQS, other than O_3 and particulates, and those based on annual averages or annual arithmetic means, are not to be exceeded more than once a year. The 1-hour O_3 standard is attained if, during the most recent three-year period, the average number of days per year with maximum hourly concentrations above the standard is equal to or less than one. The 8-hour O_3 standard is attained when the 3-year average of the fourth highest daily concentration is 0.070 ppm or less. The 24-hour PM_{10} standard is attained when the 3-year average of the 99th percentile of monitored concentrations is less than the standard. The 24-hour $PM_{2.5}$ standard is attained when the 3-year average of the 98th percentile is less than the standard.

c. The USEPA revoked the national 1-hour O_3 standard on June 15, 2005.

d. This federal 8-hour O3standard was approved by USEPA in October 2015, and became effective on December 28, 2015.

e. On October 1, 2015, the national 8-hour O_3 primary and secondary standards were lowered from 0.075 to 0.070 ppm. An area will meet the standard if the fourth-highest maximum daily 8-hour O_3 concentration per year, averaged over three years, is equal to or less than 0.070 ppm. USEPA made recommendations on attainment designations for California by October 1, 2016, and issued final designations on June 4, 2018, classifying the San Francisco Bay Area Air Basin as being in Nonattainment (Federal Register Vol. 83, No. 107, pp. 25776-25848). Nonattainment areas will have until 2020 to 2037 to meet the health standard, with attainment dates varying based on O_3 level in the area.

f. To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100 ppm (effective January 22, 2010).

g. On June 2, 2010, the USEPA established a new 1-hour SO_2 standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. The existing 0.030 ppm annual and 0.14 ppm 24-hour SO_2 NAAQS must, however, continue to be used until one year following USEPA initial designations of the new 1-hour SO2 NAAQS. USEPA classified the San Francisco Bay Area Air Basin as being in Attainment/Unclassifiable in January 2018 (Federal Register Vol. 83, No. 6, pp. 1098-1172).

h. State standard = annual geometric mean

i. In June 2002, CARB established new annual standards for $PM_{2.5}$ and PM_{10}.

j. National lead standard, rolling three-month average: final rule signed October 15, 2008. Final designations effective December 31, 2011.

k. CARB has identified lead and vinyl chloride as toxic air contaminants, with no threshold level of exposure below which there are no adverse health effects determined.

l. Statewide visibility reducing particle standard (except Lake Tahoe Air Basin): Particles in sufficient amount to produce an extinction coefficient of 0.23 per kilometer when the relative humidity is less than 70 percent. This standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.

m. On January 9, 2013, USEPA issued a final rule, determining that SFBAAB has attained the 24-hour $PM_{2.5}$ national standard. This rule suspends key SIP requirements as long as monitoring data continue to show that SFBAAB attains the standard. Despite this USEPA action, SFBAAB will continue to be designated as "nonattainment" for the national 24-hour $PM_{2.5}$ standard until BAAQMD submits a "redesignation request" and a "maintenance plan" to USEPA, and USEPA approves the proposed redesignation.

n. On February 7, 2024, the USEPA strengthened the NAAQS for the annual $PM_{2.5}$ to 9.0 micrograms per cubic meter. New designations for this standard will be available within two years of issuing the revised NAAQS. It is anticipated that Alameda County would not meet the new standard.

Sources: BAAQMD 2017a; USEPA 2023

Non-road Emission Regulations

The USEPA has adopted emission standards for different types of non-road engines, equipment, and vehicles. For non-road diesel engines, the USEPA has adopted multiple tiers of emission standards.

USEPA signed a final rule on May 11, 2004, introducing the Tier 4 emission standards, to be phased in between 2008 and 2015 (69 Code of Federal Regulations [CFR] 38957–39273, June 29, 2004). The Tier 4 standards require that emissions of particulate matter (PM) and (nitrogen oxides) NO_X be further reduced by about 90 percent. Such emission reductions can be achieved by using control technologies, including advanced exhaust gas after-treatment. To enable sulfur-sensitive control technologies in Tier 4 engines, USEPA also mandated reductions in sulfur content in non-road diesel fuels. In most cases, federal non-road regulations also apply in California; states have limited authority to set emission standards for new non-road engines.

On-Road Vehicle Emission Regulations and Corporate Average Fuel Economy Standards

The USEPA and National Highway Transportation Safety Administration (NHTSA) have issued rules regarding the national program of fuel economy standards for passenger vehicles and light-duty trucks of model years 2017 through 2025, culminating in fuel economy of 54.5 miles per gallon (mpg) by model year 2025 (USEPA 2012). Similarly, fuel economy standards have been issued for medium- and heavy-duty vehicles of model years 2014-2018, including large pickup trucks and vans, semi-trucks, and all types and sizes of work trucks and buses (USEPA and USDOT 2011).

The NHTSA and the USEPA updated the Corporate Average Fuel Economy (CAFE) and GHG emissions standards for passenger cars and light trucks and established new standards covering model years 2021 through 2026, under the Safer Affordable Fuel Efficient (SAFE) vehicles final rule (SAFE Rule Part Two). This rule, which went into effect on June 29, 2020, rolled back some of the fuel efficiency mandates that had been in effect. In March 2022, CAFE standards were

finalized for model years 2024 through 2026. The final rule establishes standards that require an industry-wide fleet average of approximately 49 mpg for passenger cars and light trucks. Current rule-making is under way to establish standards for model years 2027 and beyond for passenger cars and light trucks, standards for model years 2029 and beyond for heavy-duty pickup trucks and vans, and standards for model years 2030 and beyond for medium- and heavy-duty on-highway vehicles and work trucks.

In 2019, the NHTSA and the USEPA also issued a regulation revoking California's CAA waiver, which had allowed California to set its own emissions standards, asserting that the waiver was preempted by federal law. On December 21, 2021, the NHTSA published its CAFE Preemption rule, which finalizes its repeal of the SAFE Rule Part One. The USEPA rescinded SAFE Rule Part One on March 9, 2022, and reinstated California's authority under the CAA to implement its own GHG emission standards and zero-emission vehicle (ZEV) sales mandate. Notably, California harmonized its vehicle efficiency standards through 2025 with the federal standards through the Advanced Clean Cars Program.

State Laws, Regulations, and Policies

Ambient Air Quality Standards

CARB sets standards for criteria pollutants in California that are more stringent than the NAAQS and include the following additional contaminants: visibility-reducing particles, hydrogen sulfide, sulfates, and vinyl chloride. Table 3.2-1 provides the CAAQS and their corresponding attainment status for the Proposed Project's air basin. The APD Project Site is in Alameda County, within the SFBAAB. The Bay Area Air Quality Management District (BAAQMD) has the responsibility to monitor ambient air pollutant levels throughout the basin, and to develop and implement strategies to attain the applicable federal and state standards.

As shown in Table 3.2-1, the SFBAAB is currently classified as non-attainment for the one-hour state O_3 standard as well as for the federal and state eight-hour standards. Additionally, the SFBAAB is classified as non-attainment for the state 24-hour and annual arithmetic mean PM_{10} standards, as well as the state annual arithmetic mean and the national 24-hour $PM_{2.5}$ standards. The SFBAAB is unclassified or classified as attainment for all other pollutant standards.

CARB is responsible for setting emission standards for vehicles (on-road and off-road) sold in California and for other emission sources, such as consumer products and certain off-road equipment. CARB also establishes passenger vehicle fuel specifications. CARB has granted authority to the regional air quality management districts and county air pollution control districts to develop stationary source emissions standards, issue air quality permits, and enforce permit conditions.

In-Use Off-Road Diesel Vehicle Regulation

In 2007, CARB adopted a regulation to reduce DPM and NO_X emissions from in-use, off-road, heavy-duty diesel vehicles in California. The regulation imposes limits on vehicle idling and requires fleets to reduce emissions by retiring, replacing, repowering, or installing exhaust retrofits to older engines. In December 2011, the regulation was amended to modify the compliance dates for performance standards and establish requirements for compliance with

verified diesel emission control strategy technologies that reduce PM and/or NO_X emissions. The regulation is in the process of finalizing additional amendments, which would require phase-out of the oldest and highest emitting off-road engines and restrict the addition of vehicles with Tier 3 and Tier 4 interim engines. The rulemaking starting in 2024 would also require contracting entities to obtain and retain a fleet's valid Certificate of Reported Compliance prior to awarding a contract or hiring a fleet; mandate the use of R99 or R100 Renewable diesel for all fleets, with some limited exceptions; and provide additional requirements to increase enforceability and provide flexibility for permanent low-use vehicles.

AB 1346: Air Pollution: small off-road engines

AB 1346 required CARB to adopt cost-effective and technologically feasible regulations to prohibit engine exhaust and evaporative emissions from new Small Off-Road Engines (SORE) by July 1, 2022 for engines produced on or after January 1, 2024, or as soon as CARB determines is feasible. SORE are spark-ignition engines rated at or below 19 kilowatts, and are typically used in lawn and gardening equipment, outdoor power equipment, and specialty vehicles. In determining technological feasibility, CARB is to consider emissions from SOREs in the state; timeline for zero-emission SORE development; increased electricity demand from charging zero-emission SORE; cases for both commercial and residential users of SOREs; and expected availability of zero-emission generators and emergency response equipment. In addition, CARB is to identify and make funds available for rebates or incentive funding. CARB adopted engine exhaust emission regulations for small off-road engines in compliance with AB 1346, requiring most new small off-road engines to be zero emissions by 2024. The Project may use SORE engines during construction.

Portable Equipment Registration Program

The statewide Portable Equipment Registration Program (PERP) establishes a system to uniformly regulate portable engines and portable engine–driven equipment units such as generators. After being registered in this program, engines and equipment units may operate throughout the state without the need to obtain permits from individual air districts. Owners or operators of portable engines and certain types of equipment can voluntarily register their units under this program. Operation of registered portable engines may still be subject to certain district requirements for reporting and notification. Engines with less than 50 brake horsepower (hp) are exempt from this program. Some of the engines used for the Project may operate under PERP.

California Standards for Diesel Fuel Regulations

These regulations require diesel fuel with sulfur content of 15 parts per million (ppm) or less (by weight) to be used for all diesel-fueled vehicles that are operated in California. The standard also applies to non-vehicular diesel fuel, other than diesel fuel used solely in locomotives or marine vessels, which are regulated under federal and international regulations. The regulations also contain standards for the aromatic hydrocarbon content and lubricity of diesel fuels.

Advanced Clean Trucks Regulation

The Advanced Clean Trucks Regulation is a manufacturer's ZEV sales requirement and a one-time reporting requirement for large entities and fleets. The regulation contains requirements for truck manufacturers to increase the percentage of sales in California that are ZEV over time

while allowing for credit generation and credit redemption. Under this rule, every new truck sold in California must have zero emissions by 2045. This regulation pairs with the Advanced Clean Fleets Regulation.

Advanced Clean Fleets Regulation

The Advanced Clean Fleets (ACF) regulation is part of the CARB's overall approach to accelerate a large-scale transition to zero-emission medium- and heavy-duty vehicles. This regulation works in conjunction with the Advanced Clean Trucks (ACT) regulations which helps ensure that zero-emission vehicles (ZEV) are brought to market. The ACF regulation applies to fleets performing drayage operations, those owned by State, local, and federal government agencies, and high-priority fleets. High-priority fleets are entities that own, operate, or direct at least one vehicle in California, and that have either $50 million or more in gross annual revenues, or that own, operate, or have common ownership or control of a total of 50 or more vehicles (excluding light-duty package delivery vehicles). The regulation affects medium- and heavy-duty on-road vehicles with a gross vehicle weight rating greater than 8,500 pounds, off-road yard tractors, and light-duty mail and package delivery vehicles. Manufacturers may sell only zero-emission medium- and heavy-duty vehicles starting in 2036. High priority and federal fleets must comply with the Model Year Schedule or may elect to use the optional ZEV Milestones Option to phase-in ZEVs into their fleets. Model year schedule fleets must purchase only ZEVs beginning 2024 and, starting January 1, 2025, must remove internal combustion engine vehicles at the end of their useful life as specified in the regulation. The ZEV Milestones Option allows fleets to elect to meet ZEV targets as a percentage of the total fleet, starting with vehicle types that are most suitable for electrification.

State and local government fleets, including city, county, special district, and State agency fleets, are required to ensure 50 percent of vehicle purchases are zero-emission beginning in 2024 and 100 percent of vehicle purchases are zero-emission by 2027. Small government fleets (those with 10 or fewer vehicles) and those in designated counties must start their ZEV purchases beginning in 2027. Alternately, State and local government fleet owners may elect to meet ZEV targets using the ZEV Milestones Option. State and local government fleets may purchase either ZEVs or near-ZEVs, or a combination of ZEVs and near-ZEVs, until 2035. Starting in 2035, only ZEVs will meet the requirements.

The requirements Include an exemption for cases in which a ZEV is not available for purchase and is needed to comply. The ZEV Purchase Exemption allows a fleet owner to purchase a new internal combustion engine vehicle and exclude it from the internal combustion engine vehicle removal requirement.

Heavy-Duty On-Board Diagnostic System Regulations

In 2004, CARB adopted regulations requiring on-board diagnostic (OBD) systems on all 2007 and later model year heavy-duty engines and vehicles (i.e., vehicles with a gross vehicle weight rating greater than 14,000 pounds) in California. CARB subsequently adopted a comprehensive OBD regulation for heavy-duty vehicles model years 2010 and beyond. The heavy-duty OBD regulations were updated in 2010, 2013, and 2016, with revisions to enforcement requirements, testing requirements, and implementation schedules. Heavy-duty trucks used during the Project construction would be required to comply with the heavy-duty OBD regulatory requirements.

Heavy-duty Vehicle Inspection Program

The heavy-duty vehicle inspection program requires heavy-duty trucks and buses to be inspected for excessive smoke and tampering and for compliance with engine certification labels. Any heavy-duty vehicle (i.e., a vehicle with a gross vehicle weight rating greater than 14,000 pounds) traveling in California, including vehicles registered in other states and foreign countries, may be tested. Tests are performed by CARB inspection teams at border crossings, California Highway Patrol weigh stations, fleet facilities, and randomly selected roadside locations. Owners of trucks and buses found to be in violation are subject to penalties starting at $300 per violation. Heavy-duty trucks used during project construction would be subject to the inspection program.

Toxic Air Contaminants (TACs)

CARB regulates TACs to reduce emissions under the Airborne Toxic Control Measures (ATCMs); the following relevant measures to address sources of TACs:

- ATCM for Diesel Particulate Matter (DPM) from Portable Engines Rated at 50 Horsepower and Greater
- ATCM to Limit Diesel-Fueled Commercial Motor Vehicle Idling
- ATCM to Reduce Particulate Emissions from Diesel-Fueled Engines Standards for Non-vehicular Diesel Fuel
- ATCM for Stationary Compression Ignition Engines
- Asbestos ATCM for Construction, Grading, Quarrying, and Surface Mining Operations
- Asbestos ATCM for Surfacing Applications

In addition to ATCMs, TACs are controlled under several regulations in California, including the Tanner Air Toxics Act, Air Toxics Hot Spots Information Act, and AB 2588: Air Toxics “Hot Spots” Information and Assessment Act. In addition, Proposition 65 (the Safe Water and Toxic Enforcement Act of 1996) requires the state to publish a list of chemicals known to cause cancer or birth defects or other reproductive harm. Proposition 65 requires businesses to notify Californians about substantial amounts of chemicals in the products they purchase or that are released into the environment.

Odors

Odors are commonly regarded as a form of public nuisance, and in the United States, many states have adopted regulations to limit odors generated by odorous operations. In California, odors are regulated through California Health and Safety Code (HSC) Section 41700, which states: “A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, determent, nuisance, or annoyance to any considerable number of people.” The regulation does not contain guidance on how to define or determine a violation. As a result, local agencies are typically responsible for establishing enforcement criteria. Many agencies have developed their own criteria based on the acceptable number of complaints reported for a particular incident or facility, and a violation is issued if the criteria are not satisfied. In most cases, each odor complaint is investigated by authorized personnel from the responsible agency to determine the source and cause, as well as to

determine the validity of the complaint. If the complaint is verified, then it would be classified as a confirmed complaint; otherwise, the complaint would be classified as unconfirmed.

AB 617 and CARB Community Air Protection Program

AB 617 requires CARB to develop a uniform statewide system for annual reporting of emissions of criteria air pollutants and TACs for use by certain categories of stationary sources and requires the stationary sources to report their annual emissions as specified. The law requires air districts in nonattainment for one or more air pollutants to adopt an expedited schedule for the implementation of best available retrofit control technology. It also requires CARB to establish and maintain a statewide clearing house that identifies the best available control technology or best available retrofit control technology. The law also requires CARB to prepare a statewide strategy to reduce emissions of TACs and criteria pollutants in communities affected by a high cumulative exposure burden.

CARB established the Community Air Protection Program (CAPP) to implement the requirements of AB 617. The CAPP's focus is to reduce exposure in the communities most affected by air pollution. Communities around the state are working together to develop and implement new strategies to measure air pollution and reduce health impacts.

This first-of-its-kind statewide effort includes community air monitoring and community emissions reduction programs. In addition, the California State Legislature appropriated funding to support early actions to address localized air pollution through targeted incentive funding that will deploy cleaner technologies in these communities, as well as grants to support community participation in the AB 617 process. AB 617 also includes new requirements for accelerated retrofit of pollution controls on industrial sources, increased penalty fees, and greater transparency and availability of air quality and emissions data, which will help advance air pollution control efforts throughout the state. East Oakland was selected in 2022 to participate in the CAPP, and to develop a Community Action Plan.

Regional Laws, Regulations, and Policies

Bay Area Air Quality Management District

The BAAQMD regulates stationary sources of air pollution in the nine San Francisco Bay Area (Bay Area) counties to achieve and maintain air quality standards. The BAAQMD adopts and enforces rules and regulations, issues air quality permits for equipment that emits air pollutants, and monitors air quality and meteorological conditions. BAAQMD has local air quality jurisdiction over the APD Project Site.

BAAQMD 2017 Clean Air Plan

The BAAQMD has developed the Spare the Air-Cool the Climate: A Blueprint for Clean Air and Climate Protection in the Bay Area Final 2017 Clean Air Plan (2017 Clean Air Plan), which details planned efforts to improve Bay Area air quality, including reducing PM and TAC emissions, and protect public health. In addition, the 2017 Clean Air Plan simultaneously updates the 2010 Clean Air Plan, which is the most recent ozone plan for the Bay Area, to comply with state air quality planning requirements and reduce ozone precursors (BAAQMD 2017b). The 2017 Clean Air Plan contains a control strategy that includes 85 individual control measures to reduce

emissions of CAPs and GHGs from the full range of emission sources. The measures include stationary (industrial) sources, transportation, energy, buildings, agriculture, natural and working lands, waste management, and water (BAAQMD 2017b).

Community Air Risk Evaluation (CARE) Program

In 2004, BAAQMD initiated the Community Air Risk Evaluation (CARE) program. This program has helped identify communities in the Bay Area that are disproportionately impacted by local emission sources. The CARE program serves as a foundation for BAAQMD's efforts to reduce human exposure to TACs, including DPM, in communities that experience higher than average pollution levels. These communities are generally located near sources of pollution (e.g., freeways, industrial facilities), and thus have higher levels of risk from TAC exposure. The CARE program goals are as follows: (1) identify areas where air pollution contributes most to health impacts and where populations are most vulnerable to air pollution; (2) apply sound scientific methods and strategies to reduce health impacts in these areas; and (3) engage community groups and other agencies to develop additional actions to reduce local health impacts. BAAQMD-designated CARE communities are located in Concord, Richmond/San Pablo, eastern San Francisco, western Alameda County, Vallejo, San Rafael, Pittsburg/Antioch, and San José. The Airport and its surrounding neighborhoods are located within the CARE area in western Alameda County.

BAAQMD Rules

The BAAQMD supports incentive programs to reduce criteria air pollutant emissions in the district and has established rules and permitting requirements. The Project would be subject to the following BAAQMD rules, as applicable:

Regulation 6, Rule 6: Prohibition of Trackout, limits the quantity of PM in the atmosphere through control of trackout of solid materials onto paved public roads outside the boundaries of large construction sites.

Regulation 7: Odorous Substances, places general limitations on odorous substances and specific emission limitations on certain odorous compounds.

Regulation 11, Rule 14: Asbestos-Containing Serpentine, limits the use of serpentine material with >5 percent asbestos content for covering roads or paths.

3.2.2 Environmental Setting

The APD Project Site is in the City of Oakland and falls within the SFBAAB, which is under the jurisdiction of the BAAQMD. This region of the SFBAAB is bordered on the east by the Oakland-Berkeley hills and on the west by the San Francisco Bay. Temperatures in this subregion have a narrow range due to the proximity of the moderating marine air. Maximum temperatures during summer average in the mid-70s in degrees Fahrenheit (°F), with minimums in the mid-50°s. Winter highs are in the mid- to high-50°s, with lows in the low- to mid-40°s. The air pollution potential is lowest for the parts of the subregion that are closest to the bay, due largely to good ventilation and less influx of pollutants from upwind sources. The occurrence of light winds in the evenings and early mornings occasionally causes elevated pollutant levels. The air pollution potential at the northern (Richmond) and southern (Oakland, San Leandro) parts of

this subregion is marginally higher than communities directly east of the Golden Gate, because of the lower frequency of strong winds. This subregion contains a variety of industrial air pollution sources. Some industries are quite close to residential areas. The subregion is also traversed by frequently congested major freeways (BAAQMD 2017c).

The study area has a Mediterranean climate characterized by cool, wet winters and hot, dry summers. Average temperatures range from a low of 42°F in January to a high of 74°F in September (NRCS 2023a). Average annual precipitation is approximately 23.3 inches, with most of the precipitation occurring from November through April (WRCC 2023).

BAAQMD operates a regional monitoring network that measures the ambient concentrations of the six criteria air pollutants. Existing levels of air quality in Oakland can generally be inferred from historical ambient air quality data based on measurements conducted by BAAQMD at its nearby monitoring stations. The monitoring station closest to the Project is the Oakland East station, located approximately three miles northeast of the Airport at 9925 International Boulevard. The Oakland East station measures O_3, NO_2, CO, and $PM_{2.5}$. The air monitoring data for calendar years 2020-2022 is shown in Table 3.2-.

Table 3.2-2. Oakland East Air Monitoring Data for 2020-2022

Pollutant	Averaging Time	Days Exceed Standard 2020	Days Exceed Standard 2021	Days Exceed Standard 2022	Maximum Concentration 2020	Maximum Concentration 2021	Maximum Concentration 2022
O_3	1-hr	0	0	0	0.090 ppm	0.083 ppm	0.069 ppm
O_3	8-hr	0	0	0	0.066 ppm	0.062 ppm	0.056 ppm
$PM_{2.5}$[a]	24-hr	11	0	0	167.7 µg/m^3	33.0 µg/m^3	25.7 µg/m^3
$PM_{2.5}$	Annual	0	0	0	11.4 µg/m^3	7.9 µg/m^3	8.2 µg/m^3
NO2	1-hr	0	0	0	59.2 ppb	48.7 ppb	50.8 ppb
CO	1-hr	0	0	0	1.997 ppm	1.261 ppm	1.474 ppm
CO	24-hr	-	-	-	1.577 ppm	0.776 ppm	0.826 ppm

ppb = parts per billion

ppm = parts per million

µg/m^3 = micrograms per cubic meter

= not an ambient air quality standard so no exceedances shown.

[a] The 24-hour $PM_{2.5}$ exceedances in 2020 are attributable to wildfires.

Source: CARB 2023a, CARB 2023b.

3.2.3 Environmental Impacts and Mitigation Measures

Impact determinations and mitigation measures from the 2015 IS/MND and addenda were reviewed for potential applicability to the Project modifications. Impacts and the associated mitigation measures that may apply to the APD Project are summarized below.

a. Conflict with or obstruct implementation of the applicable air quality plan (Less than significant with mitigation)

The 2015 IS/MND determined that the Project would have a less-than-significant impact on the implementation of applicable air quality plans because it aligns with the goals of the 2010 Clean Air Plan and does not contradict its primary objectives. Since construction activities associated with the project are temporary and short-term, there would be: 1) no significant rise in ambient concentrations of key air pollutants; 2) no significant increase in exposure to harmful air contaminants; and 3) no permanent escalation in long-term GHG emissions.

A project is deemed inconsistent with air quality plans if it would result in population and/or employment growth that exceeds growth estimates included in the applicable air quality plan, which, in turn, would generate emissions not accounted for in the applicable air quality plan emissions budget. Therefore, projects need to be evaluated to determine whether they would generate population and employment growth and, if so, whether that growth would exceed the growth rates included in the relevant air quality plans. BAAQMD CEQA Guidelines say that if a project is above any of its significance thresholds, then it conflicts with their air quality plans. As discussed in criterion (b), below, the APD Project would be potentially significant since it does exceed the BAAQMD NOx threshold unless there is implementation of Mitigation Measure AQ-2: Off-road Construction Equipment Mitigation and the following applicable BMPs from Chapter 2, *Project Description*:

- BMP 20: Equipment Idling Time,
- BMP 21: Renewable Diesel,
- BMP 22: Maintenance of Construction Equipment,
- BMP 23: Alternative Transportation,
- BMP 24: Debris Management,
- BMP 25: Water Exposed Surfaces,
- BMP 26: Cover Haul Materials,
- BMP 27: Remove Daily Trackout,
- BMP 28: Speed Limit for Unpaved Roads,
- BMP 29: Windspeed Activity Suspension,
- BMP 30: Mandatory Equipment Cleaning, and
- BMP 31: Public Dust Signage.

Similar to what was stated in the 2015 IS/MND, the APD Project would follow all federal, state, and local regulations related to stationery and area sources of air pollutants. The Project would be consistent with the applicable general plan policies and would comply with all applicable regulations for sources of air pollutants. With the implementation of Mitigation Measure AQ-2 and BMPs 20-31, outlined above, the Project would have a ***less-than-significant impact with mitigation*** and would not obstruct or conflict with applicable air quality plans.

Mitigation Measure AQ-2: Off-road Construction Equipment Mitigation

The Port shall require contractors to implement construction-related emission reduction measures. All requirements shall be included in applicable bid documents, purchase orders, and constructs, with the contractors demonstrating the ability to supply the compliant on-road and off-road construction equipment for use prior to any ground-disturbing and construction activities. The mitigation measures to include are as follows:

Require all diesel-fueled off-road construction equipment used on land to be equipped with USEPA Tier 4 final compliant engines or better as a condition of contract unless a unique piece of equipment is not available as a Tier 4 engine. As part of Air Pollution Management and Equipment Idling Plan Submittal required by 01340 *Safety and Environmental Submittals*, Contractor shall provide their complete Equipment List with Engine Tiers from the California Air Resources Board's (CARB's) DOORS online reporting system and identify all off-road construction equipment that will be used on this Project. For equipment used on this Project with non-Tier 4 Final engines, the Contractor shall provide an explanation why that equipment is unavailable.

b. Cumulatively considerable net increase of any criteria pollutant for which the project region is a nonattainment area (Less than significant with mitigation)

The 2015 IS/MND determined that while ground-disturbing activities, materials handling, and the use of mobile equipment on unpaved surfaces from the Project would generate fugitive dust, the Project would not breach any air quality standards or significantly contribute to surpassing existing or predicted levels of BAAQMD air quality standards. Additionally, the 2015 IS/MND used the California Emissions Estimator Model (CalEEMod) to estimate exhaust emissions associated with construction-worker vehicle trips, truck trips, and the operation of construction equipment; based on the model output, the predicted emissions did not exceed the applicable BAAQMD thresholds of significance. Because any impacts would be minimized to a level deemed insignificant with the implementation of Mitigation Measure AQ-1: Fugitive Dust Control BMPs, the 2015 IS/MND found this impact to be less than significant with mitigation.

In 2023, BAAQMD revised its CEQA Air Quality Guidelines which modified the suggested fugitive dust best management practices. Due to these changes, Mitigation Measure AQ-1 from the 2015 IS/MND is revised in this Supplemental IS/MND and listed as BMPs 20-31 as stated above.

- BMP 20: Equipment Idling Time,
- BMP 21: Renewable Diesel,
- BMP 22: Maintenance of Construction Equipment,
- BMP 23: Alternative Transportation,
- BMP 24: Debris Management,
- BMP 25: Water Exposed Surfaces,
- BMP 26: Cover Haul Materials,
- BMP 27: Remove Daily Trackout,

- BMP 28: Speed Limit for Unpaved Roads,
- BMP 29: Windspeed Activity Suspension,
- BMP 30: Mandatory Equipment Cleaning, and
- BMP 31: Public Dust Signage.

As shown in Table 3.2-1, the APD Project Site is in a region that is designated in non-attainment for O3, PM10, and PM2.5. It is assumed that projects that do not have mass emissions exceeding the screening level significance thresholds would not create a cumulatively considerable net increase in emissions. During construction of the Project, the combustion of fossil fuels for operation of fossil fueled construction equipment, material hauling, and worker trips would result in construction-related criteria air pollutant emissions. Since there is a substantial gap in time from completion of the first phase of the Project and this second phase of the project involving the seismic improvements using CDSM, in practicality since the BAAQMD emission thresholds are based on the average daily emissions, only the emissions in this second phase need to be evaluated as they would represent their own average daily emissions. The analysis of average daily emissions reported in the 2015 IS/MND are valid for the first completed phase of the project.

These emissions were estimated using the CalEEMod version 2022.1.1.20 using information from Chapter 2, *Project Description*. The concrete batch plant PM emissions was estimated using US EPA AP 42 emission estimates. The Project's criteria air pollutant emissions during construction are shown in Table 1.2-3 and Table 3.2-6. Table 3.2-3 shows the unmitigated criteria pollutants and GHG emissions for reuse at the NPORD Site compared to the relevant CEQA thresholds. Since Table 3.2-3 indicates that the construction emissions would exceed the BAAQMD's NO_X threshold, mitigated emissions were estimated assuming that all off-road construction equipment would be Tier 4 final. Table 3.2-4 shows the mitigated criteria pollutant and GHG emissions for reuse at the NPORD Site compared to the relevant CEQA significance thresholds. Table 3.2-5 shows the unmitigated criteria pollutants and GHG emissions for offsite disposal compared to the relevant CEQA thresholds. Similarly, since Table 3.2-5 shows that construction emissions would exceed the BAAQMD's NO_X threshold, mitigation emissions were estimated assuming that all off-road construction equipment would be Tier 4 final. Table 3.2-6 shows the mitigated criteria pollutant and GHG emissions for offsite disposal compared to the relevant CEQA significance thresholds. CalEEMod modeling results and calculation of the concrete batch plant emissions for the Project are provided in Appendix B.

Table 1.2-3. Unmitigated Additional Construction Emissions with Reuse at NPORD Site

	ROG	NO_X	CO	SO_2	PM_{10} (E)	PM10 (D)	$PM_{2.5}$ (E)	$PM_{2.5}$ (D)	CO_2e
Total Construction Emissions ((tons or Metric Tons for CO_2e)	2.50	20.83	22.12	0.07	0.81	12.81	0.75	1.80	7,466

	ROG	NO_X	CO	SO_2	PM_{10} (E)	PM10 (D)	$PM_{2.5}$ (E)	$PM_{2.5}$ (D)	CO_2e
Average Daily Maximum Emissions (lb/day)	8.26	69.74	72.46	0.24	2.73	45.9	2.51	7.7	27,016
BAAQMD CEQA Mass Emission Threshold (lb/day)	54	54	None	None	84	BMPs*	54	BMPs*	None
Is the CEQA Threshold Exceeded?	No	Yes	NA	NA	No	NA	No	NA	NA

Note: lb/day = pounds per day. E = exhaust; D = dust

* BMPs indicates that no calculation is required because compliance with BMPs is considered by BAAQMD to reduce the emission to below the threshold.

Table 3.2-2. Mitigated Additional Construction Emissions with Reuse at NPORD Site

	ROG	NO_X	CO	SO_2	PM_{10} (E)	PM_{10} (D)	$PM_{2.5}$ (E)	$PM_{2.5}$ (D)	CO_2e
Total Construction Emissions (tons or Metric Tons for CO_2e)	0.83	5.33	40.46	0.07	0.17	12.97	0.17	1.90	7,466
Average Daily Maximum Emissions (lb/day)	2.71	17.78	132	0.24	0.56	45.9	0.55	7.7	27,016
BAAQMD CEQA Mass Emission Threshold (lb/day)	54	54	None	None	84	BMPs*	54	BMPs*	None
Is the CEQA Threshold Exceeded?	No	No	NA	NA	No	NA	No	NA	NA

Note: lb/day = pounds per day. E = exhaust; D = dust

* BMPs indicates that no calculation is required because compliance with BMPs is considered by BAAQMD to reduce the emission to below the threshold.

Table 3.2-5. Unmitigated Additional Construction Emissions with Offsite Disposal

	ROG	NO_X	CO	SO_2	PM_{10} (E)	PM_{10} (D)	$PM_{2.5}$ (E)	$PM_{2.5}$ (D)	CO_2e
Total Construction Emissions (tons or Metric Tons for CO_2e)	2.54	23.84	23.13	0.09	0.85	1.71	0.79	0.81	9,929
Average Daily Maximum Emissions (lb/day)	8.39	78.9	75.8	0.29	2.87	15.5	2.66	5.06	35,077
BAAQMD CEQA Mass Emission Threshold	54	54	None	None	84	BMPs*	54	BMPs*	None
Is the CEQA Threshold Exceeded?	No	Yes	NA	NA	No	NA	No	NA	NA

Note: lb/day = pounds per day. E = exhaust; D = dust

* BMPs indicates that no calculation is required because compliance with BMPs is considered by BAAQMD to reduce the emission to below the threshold.

Table 3.2-6. Mitigated Additional Construction Emissions with Offsite Disposal

	ROG	NO_X	CO	SO_2	PM_{10} (E)	PM_{10} (D)	$PM_{2.5}$ (E)	$PM_{2.5}$ (D)	CO_2e
Total Construction Emissions (tons or Metric Tons for CO_2e)	0.87	8.38	41.4	0.09	0.22	1.71	0.22	0.81	9,929
Average Daily Maximum Emissions (lb/day)	2.85	19.0	135	0.29	0.49	15.5	0.70	5.06	35,077
BAAQMD CEQA Mass	54	54	None	None	84	BMPs*	54	BMPs*	None

	ROG	NO_X	CO	SO_2	PM_{10} (E)	PM_{10} (D)	$PM_{2.5}$ (E)	$PM_{2.5}$ (D)	CO_2e
Emission Threshold									
Is the CEQA Threshold Exceeded?	No	No	NA	NA	No	NA	No	NA	NA

Note: lb/day = pounds per day. E = exhaust; D = dust

* BMPs indicates that no calculation is required because compliance with BMPs is considered by BAAQMD to reduce the emission to below the threshold.

As noted above in Table 3.2-3 and Table 3.2-5, construction emissions of the Proposed Project would be potentially significant since the BAAQMD NO_X threshold is exceeded and the need for implementation of fugitive dust best management practices. As is noted above in Table 3.2-4 and Table 3.2-6, adding mitigation requiring Tier 4 final equipment for off-road engines unless specialized equipment is not available that reduces the NO_X emissions to below the BAAQMD CEQA significance threshold for mass emissions. Mass emissions from construction would be higher than the NO_X average daily threshold without implementation of mitigation measures. Implementation of Mitigation Measure AQ-2 will require Tier 4 final engines and lower the emissions below the mass emission level significance thresholds. Additionally, the implementation of BMPs 20-31, described in criterion (a) above and listed here, will be implemented to control fugitive dust.

- BMP 20: Equipment Idling Time,
- BMP 21: Renewable Diesel,
- BMP 22: Maintenance of Construction Equipment,
- BMP 23: Alternative Transportation,
- BMP 24: Debris Management,
- BMP 25: Water Exposed Surfaces,
- BMP 26: Cover Haul Materials,
- BMP 27: Remove Daily Trackout,
- BMP 28: Speed Limit for Unpaved Roads,
- BMP 29: Windspeed Activity Suspension,
- BMP 30: Mandatory Equipment Cleaning, and
- BMP 31: Public Dust Signage.

With the implementation of Mitigation Measure AQ-2, the impact of emissions during construction and operations would be considered ***less than significant with mitigation***.

c. Expose sensitive receptors to substantial pollutant concentrations (Less than significant)

The 2015 IS/MND determined that, although there are residential areas and daycare centers northeast, east, and southeast of the APD Project Site Area, none are within 1,000 feet of the Project site. Considering the distance of these sensitive receptors and the temporary nature of construction activities, the 2015 IS/MND concluded that the impacts would be deemed less than significant.

During APD Project construction, DPM and gasoline fuel combustion emissions that are classified as TACs could be emitted from construction equipment. Due to the variable nature of construction activity, the generation of TAC emissions in most cases would be temporary, especially considering the short amount of time such equipment is typically operating within an influential distance that would result in the exposure of sensitive receptors to substantial concentrations. Chronic and cancer-related health effects estimated over short periods are uncertain. Cancer potency factors are based on animal lifetime studies or worker studies with long-term exposure to the carcinogenic agent. There is considerable uncertainty in trying to evaluate the cancer risk from exposure that would last only a small fraction of a lifetime. Some studies indicate that the dose rate may change the potency of a given dose of a carcinogenic chemical. In other words, a dose delivered over a short period may have a different potency than the same dose delivered over a lifetime (California Office of Environmental Health Hazard Assessment [OEHHA] 2015). Furthermore, construction impacts are most severe adjacent to the construction area and decrease rapidly with increasing distance. Concentrations of mobile-source DPM emissions are typically reduced by 70 percent at approximately 500 feet (CARB 2005) and the nearest residences are 2,400 feet from the APD Project Site. There are no sensitive receptors located within 1,000 feet of the construction work areas.

Given the short duration of construction, the fact that TAC concentrations would quickly be reduced away from the active construction site, the relatively large distances to sensitive receptors, and the uncertainties in modeling such emissions, the Project's effect on nearby sensitive receptors due to construction-related air pollutant emissions would be ***less than significant***.

d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people (Less than significant)

The 2015 IS/MND stated that while the diesel-fueled construction equipment linked to the Project would emit some odors associated with diesel exhaust, these emissions would be temporary, limited to the construction phase, and unlikely to affect a significant number of individuals. Consequently, the 2015 IS/MND found that odor impacts associated with the construction of the Project were less than significant.

Similarly, diesel exhaust from construction activities and oxidation/decomposition of organic material in newly exposed sediment during the APD Project may temporarily generate odors while construction is underway. These odors would stop once construction activities have been completed and exposed sediment has dried out or become vegetated. As stated above, BMP 20 would require that vehicle idling at the site would be minimized to the extent feasible and so would not be likely to cause odor issues.

- BMP 20: Equipment Idling Time.

Impacts from the APD Project related to potential generation of objectionable odors are thus expected to be ***less than significant***.

3.3 BIOLOGICAL RESOURCES

Criteria	New Potentially Significant Impact	Less than Significant with New Mitigation Incorporated	Less than Significant Impact	No New Impact
Would the Project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?	☐	☒	☐	☐
b. 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 DFG or USFWS?	☐	☐	☐	☒
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state HCP?	☐	☐	☐	☒

3.3.1 Regulatory Setting

Federal Laws, Regulations, and Policies

No updates to federal laws, regulations, and policies that are relevant to the APD Project have occurred since the 2015 IS/MND was prepared.

State Laws, Regulations, and Policies

No updates to state laws, regulations, and policies that are relevant to the APD Project have occurred since the 2015 IS/MND was prepared.

Local Laws, Regulations, and Policies

No updates to local laws, regulations, and policies that are relevant to the APD Project have occurred since the 2015 IS/MND was prepared.

3.3.2 Environmental Setting

APD Project Site

The APD Project Site is located within Airport property; as outlined in the 2015 IS/MND and subsequent addenda, this area encompasses a blend of urbanized zones interwoven with natural landscapes, primarily wetlands, bordered by the cities of Alameda, Oakland, and San Leandro. Notable habitats for special-status species within the study area of the APD Project comprise muted-tidal and non-tidal wetlands, open water expanses, and upland areas.

The APD Project Site is directly adjacent to riprap that extensively covers the outer side of the portion of the dike proposed for seismic retrofit. It is comprised of rock and/or concrete rubble that was placed to prevent erosion. Vegetation is scarce on most of the dike covered in riprap, although ice plant can be found sparsely growing at the upper edge of the riprap. Sparse clusters of salt-tolerant plants grow just above the mean high tide line within the riprap section of the dike. There are small areas of tidal marsh vegetation, primarily composed of pickleweed (*Salicornia sp.*), saltgrass (*Distichilis spicata*), and marsh daisy (*Jaumea carnosa*), occurring in one location where riprap material loss has been significant. While resembling tidal marsh vegetation superficially, these patches are extremely small (0.025 acre), with sparse and patchy growth, severe inundation, wave action, and marginal growing conditions. In general, riprap offers limited value to wildlife and plants in the area. The 2015 IS/MND and addenda concluded that riparian and other sensitive natural communities were absent within the APD Project Site.

Within the APD Project Site, small patches of bare ground or sparse vegetation with non-native annual grassland are scattered throughout the APD Project Site, such as the access road parallel to the APD Project Site.

The APD Project Site includes three newly identified, temporary construction staging areas within the Project footprint to allow for storage of equipment and construction materials (Figure 2). Construction staging areas 1, 2 and 3 are 0.75, 1.1, and 0.6 acres, respectively and are

located along access roads and ruderal areas. The construction staging areas will be restored to pre-project topography once construction is completed.

Adjacent Areas to the APD Project Site

Adjacent areas to the APD Project Site include vegetation in the muted-tidal wetlands near the APD area consists of pickleweed, saltgrass), saltbush (*Atriplex sp.*), Mediterranean barley (*Hordeum marinum ssp. gussoneanum*), rabbit's-foot grass (*Polypogon monspeliensis*), sheep sorrel (*Rumex acetosella*), and curly dock (*Rumex crispus*). No work will be occurring within muted-tidal wetlands within Revised APD Project. The uplands portion of the APD area contains vegetation such as non-native annual grassland, monotypic stands of pampas grass (*Cortaderia jubata*), large patches of invasive iceplant (*Carpobrotus sp.*), and small stands of coyote bush (*Baccharis pilularis*). Other common annual species in the APD area include mustard (*Brassica nigra*), fennel (*Foeniculum vulgare*), wild radish (*Raphanus sativus*), filaree (*Erodium botrys*), bird's foot trefoil (*Lotus corniculatus*), plantain (*Plantago sp.*), Mediterranean barley (*Hordeum hystrix*), common wild oat (*Avena fatua*), ripgut brome (*Bromus diandrus*), Italian ryegrass (*Lolium multiflorum*), foxtail (*Hordeum leporinum*), Queen Anne's lace (*Daucus carota*), sweet clover (*Melilotus alba*), bristly ox-tongue (*Picris echioides*), and purple thistle (*Cirsium vulgare*). Additionally, small patches of bare ground or sparsely vegetated areas are scattered throughout the APD site, mainly adjacent to the runways. These areas often extend from developed zones like the runways, taxiways, and access roads.

NPORD Site

The APD Project includes a newly identified, 10-acre NPORD Site for placement of excess soil and soil cement generated from the Project (Figure 2).

The main habitat within the NPORD Site is non-native grassland and ruderal land cover. Vegetation within this landcover type is dominated by a mixture of non-native annual grasses, and non-native opportunistic weedy herbaceous species. Plant species observed during reconnaissance surveys included Mediterranean barley, common wild oat, ripgut brome, Italian ryegrass, foxtail, common tarweed (*Centromadia pungens* ssp. *pungens.*), stinkwort (D*ittrichia graveolens*), yellow star thistle (*Centaurea solstitialis*), wild radish, poa (*Poa* sp.), field mustard (*Brassica rapa*), bristly ox-tongue, sacred thornapple (*Datura wrightii*), fennel, ribwort plantain (*Plantago lanceolata*), curly dock (*Rumex crispus*), switchgrass (*Panicum virgatum*), cheeseweed (*Malva parviflora*), common mallow (*Malva neglecta*), and nightshade (*Solanum* sp.). Large stands of non-native, invasive giant reed (*Arundo donax*) and pampas grass (*Cortaderia selloana*) were present within the southeast portion of the NPORD Site, Himalayan blackberry (*Rubus armeniacus*) and one acacia tree (*Acacia* sp.) along the northern fence line along Spunkmeyer Field, and iceplant was present in the western portion of the NPORD Site adjacent to Harbor Bay Parkway. Shrubs, primarily native coyote brush (*Baccharis pilularis*), are present only within the western portion of the NPORD Site adjacent to Harbor Bay Parkway. The NPORD Site also includes developed land cover, such as access roads.

No riparian habitat or sensitive natural communities were identified within the Project boundaries of the NPORD Site (Montrose 2024; Appendix C).

Special-Status Species at NPORD Site

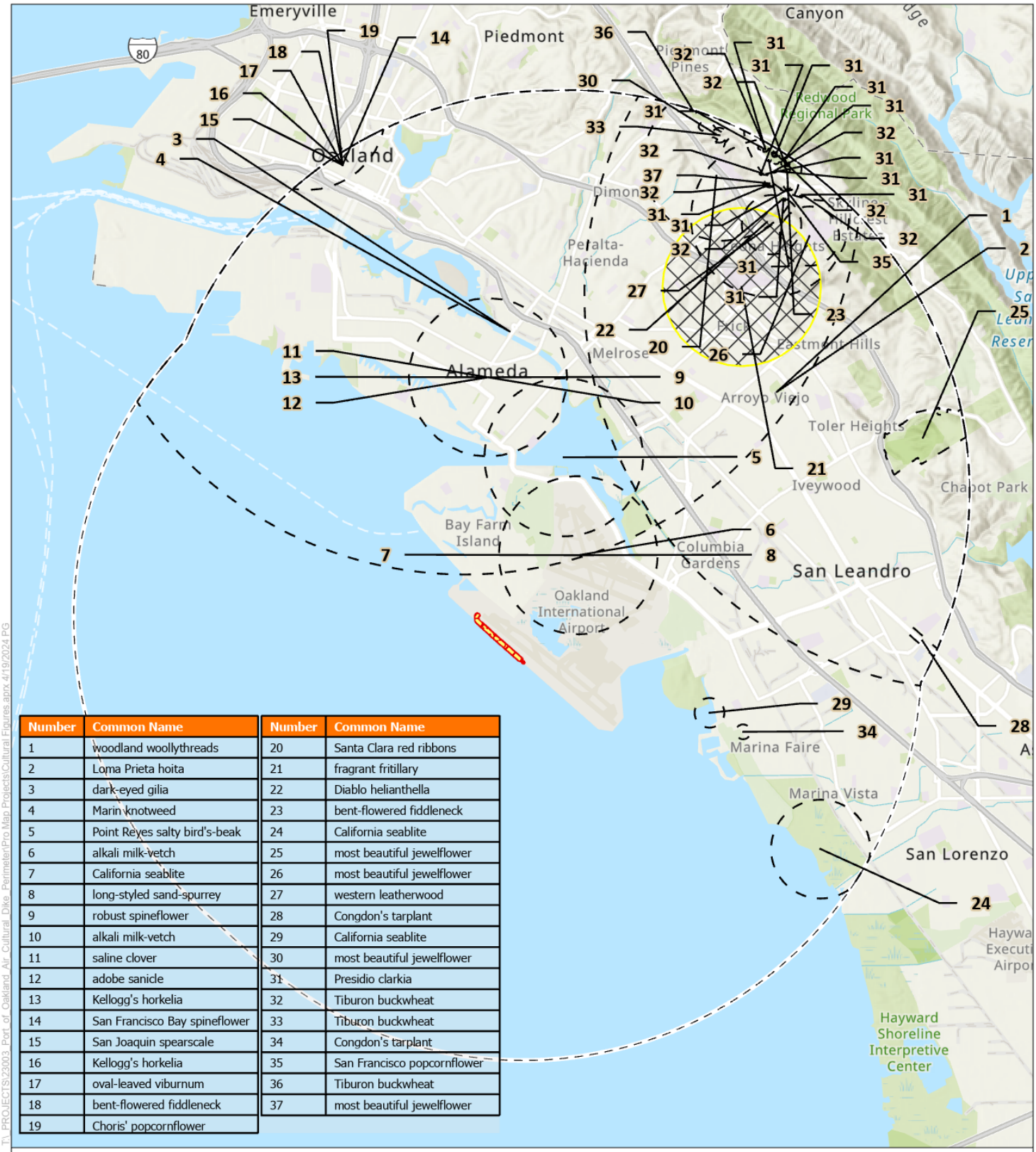
For the purposes of this assessment, special-status species are those that are listed as rare, species of concern, candidate, threatened, or endangered by the USFWS), California Department of Fish and Wildlife (CDFW), or NMFS. The following resources were consulted and reviewed to identify special-status species with the potential to occur in the vicinity of the NPORD Site:

- USFWS, Information for Planning and Conservation (iPaC) list of federally endangered and threatened species (USFWS 2023a);
- USFWS's Critical Habitat Portal (USFWS 2023b);
- NMFS California Species List (NMFS 2023);
- CDFW, California Natural Diversity Database (CNDDB) queries for the U.S. Geological Survey (USGS) 7.5-minute quadrangles encompassing and surrounding the study area: San Leandro, Las Trampas Ridge, Hayward, Oakland East, Oakland West, San Mateo, Redwood Point, Newark, and Hunters Point (CDFW 2023; Appendix C);
- California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants of California query for the nine USGS 7.5-minute quadrangles containing and surrounding the NPORD Site (CNPS, 2023, Appendix C)
- National Wetland Inventory (NWI) results (USFWS 2023c);
- eBird records for the study area (Cornell Lab of Ornithology 2023); and
- Aerial photography (Google Earth 2023).

These data sources were reviewed to determine the list of special-status species and their potential to occur within the existing Project area, including the NPORD Site. CNDDB Plants, Figure 4 shows CNDDB occurrences of special-status plant species within 5 miles of the NPORD Site. CNDDB Animals, Figure 5 shows CNDDB occurrences of special-status animal species within 5 miles of the NPORD Site. The potential for special-status species to occur in areas affected by the proposed Project was evaluated according to the following criteria:

- None: indicates that the area contains a complete lack of suitable habitat, the local range for the species is restricted, and/or the species is extirpated in this region.
- Not Expected: indicates situations where suitable habitat or key habitat elements may be present but may be of poor quality or isolated from the nearest extant occurrences. Habitat suitability refers to factors such as elevation, soil chemistry and type, vegetation communities, microhabitats, and degraded/substantially altered habitats.
- Possible: indicates the presence of suitable habitat or key habitat elements that potentially support the species.
- Present: indicates that either the target species was observed directly, or its presence was confirmed by diagnostic signs during field investigations or in previous studies in the area.

Special-status plant and animal species tables and their potential to occur in the NPORD Site are listed in Tables C-1 and C-2 in Appendix C.



Number	Common Name
1	woodland woollythreads
2	Loma Prieta hoita
3	dark-eyed gilia
4	Marin knotweed
5	Point Reyes salty bird's-beak
6	alkali milk-vetch
7	California seablite
8	long-styled sand-spurrey
9	robust spineflower
10	alkali milk-vetch
11	saline clover
12	adobe sanicle
13	Kellogg's horkelia
14	San Francisco Bay spineflower
15	San Joaquin spearscale
16	Kellogg's horkelia
17	oval-leaved viburnum
18	bent-flowered fiddleneck
19	Choris' popcornflower

Number	Common Name
20	Santa Clara red ribbons
21	fragrant fritillary
22	Diablo helianthella
23	bent-flowered fiddleneck
24	California seablite
25	most beautiful jewelflower
26	most beautiful jewelflower
27	western leatherwood
28	Congdon's tarplant
29	California seablite
30	most beautiful jewelflower
31	Presidio clarkia
32	Tiburon buckwheat
33	Tiburon buckwheat
34	Congdon's tarplant
35	San Francisco popcornflower
36	Tiburon buckwheat
37	most beautiful jewelflower

T:_PROJECTS\23003 Port of Oakland Air Cultural Dike Perimeter\Pro Map Projects\Cultural Figures.aprx 4/19/2024 PG

Figure 4
CNDDB Plants

N

0 1 2
Miles

Project Element
Portion of Dike Proposed for Seismic Retrofit

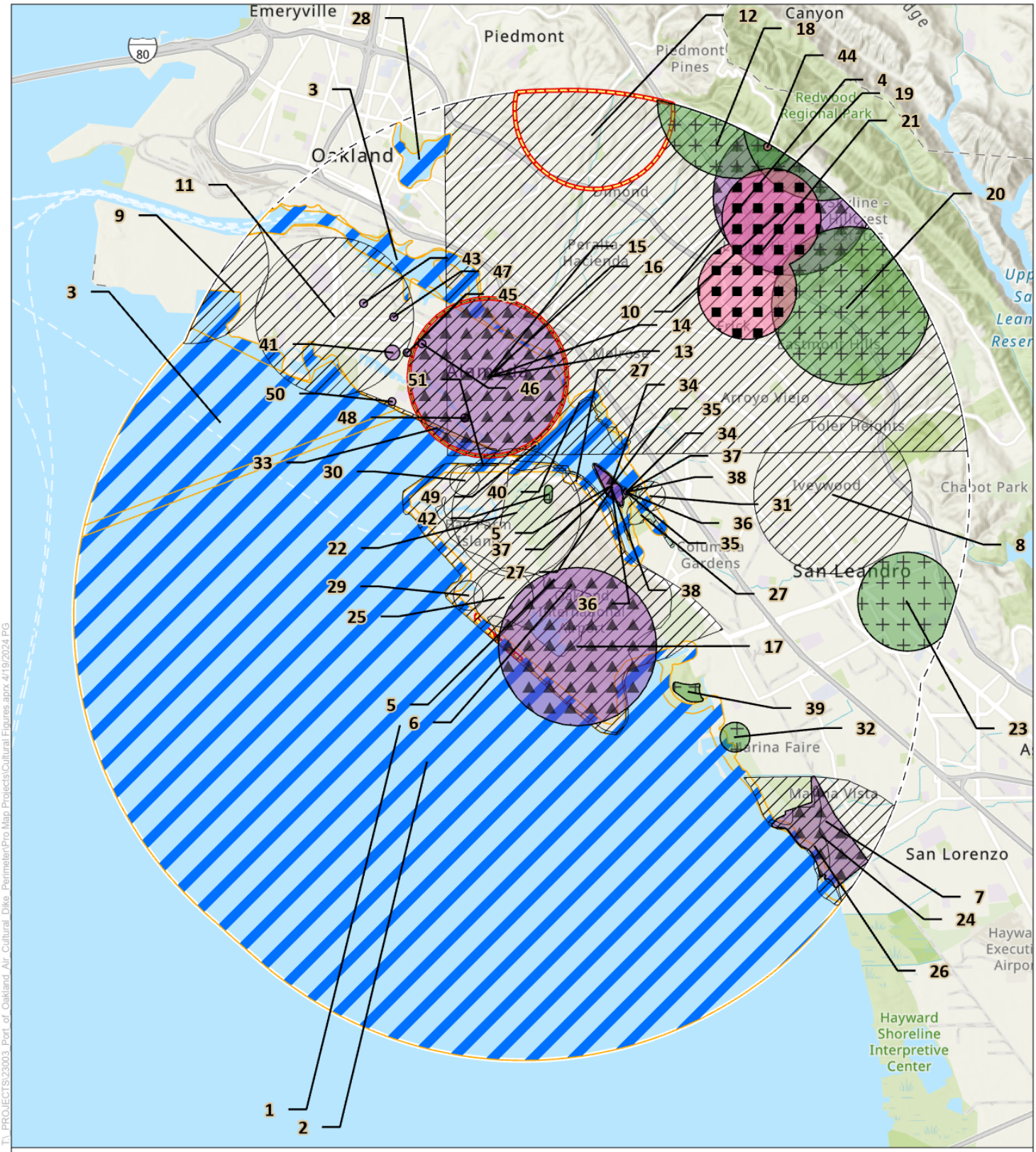
5-Mile Buffer

Taxon
Dicots
Monocots

MONTROSE ENVIRONMENTAL

Source: California Natural Diversity Database, January 2024

Port of Oakland - Airport Perimeter Dike
FEMA and Seismic Improvements Project
Supplemental Initial Study/Mitigated Negative Declaration



Project Element

Portion of Dike Proposed for Seismic Retrofit

5-Mile Buffer

Taxon

Amphibians

Birds

Fish

Insects

Mammals

Reptiles

N

0 1 2 Miles

Figure 5
CNDDB Animals

Port of Oakland - Airport Perimeter Dike
FEMA and Seismic Improvements Project
Supplemental Initial Study/Mitigated Negative Declaration

MONTROSE ENVIRONMENTAL

Source: California Natural Diversity Database, January 2024

T:_PROJECTS\23003_Port_of_Oakland_Air_Cultural_Dike_Perimeter\Pro Map Projects\Cultural Figures.aprx 4/19/2024 PG

Based on the resource database queries, a possible 56 special-status plant species and 41 wildlife species were identified with the potential to occur in the NPORD Site. However, most special-status species identified during the database queries were determined to be absent from the NPORD Site due to being outside the current range for that species, a lack of suitable habitat, and/or isolation of the area from known populations due to urbanization and associated barriers to dispersal.

As such, no special-status plant species and only western burrowing owl (*Athene cunicularia*), (State Species of Concern) and northern harrier (*Circus cyaneus*) (State Species of Concern), were identified as having potential to occur on or near the NPORD Site. Plant and wildlife species identified as 'none' or 'not expected' to occur at the NPORD Site are not discussed further.

Burrowing owl occurrences have been recorded less than 1 mile east of the NPORD Site; one occurrence within Bay Farm Island, located northwest of OAK, and one near San Leandro Bay (CDFW 2023). Additionally, other sightings of burrowing owl have been reported less than a mile away from the NPORD Site within the vicinity of the Bay Farm Island, with one occurrence within Arrowhead Marsh, several sightings within Martin Luther King Jr. Regional Shoreline Park, and one observation in the East End Neighborhood in the City of Alameda (iNaturalist 2023). The NPORD Site and surrounding undeveloped habitat contain key ecological and suitable habitat elements to support burrowing owl, including suitable burrows and foraging habitat.

Northern harrier are frequently observed around the NPORD Site within Martin Luther King Jr. Regional Shoreline Park, Corica Park Golf Course complex, and even at Spunkmeyer Field directly north of the NPORD Site (CDFW 2023; Cornell Lab of Ornithology 2023). The NPORD Site and surrounding undeveloped areas provide suitable foraging habitat with rodents and other prey base. While more closely associated with wetland habitats, northern harrier nest on the ground in open, vegetated areas, including upland grasslands. There is potential for northern harrier to forage and nest in and/or adjacent to the NPORD Site.

3.3.3 Environmental Impacts and Mitigation Measures

Impact determinations and mitigation measures from the 2015 IS/MND and addenda were reviewed for potential applicability to the Project. Impacts and the associated mitigation measures that may apply to the Project are summarized below.

a. Substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species (Less than significant with mitigation)

The 2015 IS/MND and addenda concluded that impacts related to special-status species were determined to be less than significant with mitigation due to temporary disturbance of potential suitable habitat for special-status plant and wildlife species.

The 2015 IS/MND and addenda identified Project activities could adversely affect special-status wildlife species and their habitats through permanent vegetation removal, and by temporarily disturbing non-tidal and muted-tidal wetlands. These species included salt marsh harvest mouse (*Reithrodontomys raviventris*), Ridgway's rail (*Rallus obsoletus obsoletus*), and California black

rail (*Laterallus jamaicensis coturniculus*). Other special-status wildlife species that have the potential to be affected by wetland or upland habitat loss include the northern harrier *(Circus cyaneus*), white-tailed kite (*Elanus leucurus*), salt marsh common yellowthroat (*Geothylypis trichas sinuosa*), and Alameda song sparrow (*Melospiza melodia pusillula*). The 2015 IS/MND and addenda concluded Project impacts to special-status fish species would not occur.

The current APD Project would not disturb or include any areas of suitable salt marsh habitat, such as non-tidal or muted tidal wetlands, within the Project Site work areas. Thus, the APD Project would not adversely affect special-status species such as salt marsh harvest mouse, Ridgway's rail, or California black rail. The APD Project Site is within the previous Project footprint, and Mitigation Measure BO-2: Environmental Awareness Training, and Mitigation Measure BO-3: Conduct Pre-Construction Surveys, would avoid and minimize potential impacts on biological resources within the APD Project Site and the NPORD Site. The revised Project does not include Project activities that would adversely affect special-status species and their habitats through permanent vegetation removal that would not result in new or substantially more severe impacts to biological resources nor require additional new mitigation measures.

To reduce these effects on biological resources and wildlife, and their associated habitats, the Project would include implementation of Mitigation Measure BO-2 and Mitigation Measure BO-3. These mitigation measures avoid and minimize potential impacts on wildlife species and biological resources wildlife species that have the potential to occur in the APD Project Site to less-than-significant levels.

Project modifications and improvements that were not previously identified within the 2015 Final IS/MND and addenda includes three temporary construction staging areas adjacent to the ADP. However, these construction staging areas fall within the previous Project footprint and Mitigation Measure BO-2 and Mitigation Measure BO-3 would avoid and minimize potential impacts on biological resources within the temporary construction staging areas. The revised Project to include these temporary construction staging areas would not result in new or substantially more severe impacts to biological resources nor require additional new mitigation measures.

In addition, the revised Project proposes to off-haul and dispose of approximately 37,000 CY of excess soils generated from CDSM and from the removal of temporary work pads at the APD Project Site across the10 acres at the NPORD Site. This excess material would be spread and compacted across the NPORD Site, thereby increasing the former landfill cover by approximately 3 feet. Proposed modifications to the Project of the inclusion of NPORD Site may result in new significant impacts to biological resources and both temporary and permanent effects to special-status wildlife species, i.e., western burrowing owl and northern harrier, and their associated habitats. Construction activities at the NPORD Site could temporarily disturb foraging patterns for these species and disturb or destroy active nest sites.

To avoid and minimize potential impacts on special-status raptors and other bird species protected by the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code, in addition to BO-2 and BO-3, the Port would implement Mitigation Measure BO-5: Pre-Construction Survey(s) for Nesting Birds, and Mitigation Measure BO-6: Protection Measures for Burrowing Owls. (Please note that Mitigation Measure BO-1, Construction Activities in Suitable

Salt Marsh Habitat, and BO-4, Offsite Mitigation for Wetlands and Other Waters, from the 2015 IS/MND do not apply to the new Project elements evaluated in this Supplemental IS/MND.) With implementation of Mitigation Measures BO-2, BO-3, BO-5, and BO-6, described below, the APD Project would avoid or reduce potentially significant impacts to special-status wildlife species to a level that would be ***less than significant with mitigation***.

Mitigation Measure BO-2: Environmental Awareness Training

A qualified biologist shall conduct environmental awareness training for all construction crews and contractors before initiating work on the Project. The training shall include a brief review of all the special-status species and other sensitive resources that may exist in the study area, including the field identification and the habitat requirements of each species; the locations of sensitive biological resources; the legal status and protection of each species; the Project's avoidance and minimization measures; environmental permits; and regulatory compliance requirements.

New workers who arrive after the start of construction shall be trained as needed by the Contractor's designated onsite supervisor. Additional training shall be conducted as needed, including morning briefings , to update crews as the work progresses. A record of all personnel trained during the Project shall be maintained, and this record shall be made available for compliance verification. In addition, training materials, written documentation, photographs, and/or interpretive signs shall be provided to the Contractor by the Port with details on sensitive resources, resource avoidance, permit conditions, and possible fines for violations of state or federal environmental laws.

Mitigation Measure BO-3: Conduct Pre-Construction Surveys

A pre-construction survey for any protected species shall be conducted 2 weeks prior to the start of construction activities. In the unlikely event that a protected species is in the study area, the Port shall implement measures (such as implementing a construction buffer around the area, having a qualified biologist onsite, or waiting for the species to passively leave the area) to avoid impacts.

Mitigation Measure BO-5: Pre-construction Survey(s) for Nesting Birds

To the extent feasible, construction activities should be scheduled to avoid the nesting season. If Project activities are scheduled to take place outside the nesting season, impacts to nesting birds protected under the Migratory Bird Treaty Act would be avoided. The nesting season for most birds in Alameda County extends from February 1 through August 31, inclusive. If it is not possible to schedule Project activities outside the nesting season, then a qualified biologist shall conduct pre-construction survey(s) for nesting birds. These survey(s) shall be conducted no more than seven days prior to the initiation of Project activities. During these surveys, the biologist shall inspect all potential nesting habitats (e.g., shrubs, trees, open space areas, and structures) in and immediately adjacent to the construction areas for nests.

A qualified biologist shall conduct weekly surveys for nesting birds during the nesting season.

If an active nest is found sufficiently close to Project work areas, a non-disturbance buffer zone will be established around the nest at the biologist's discretion and in accordance with regulatory guidance. Buffers zones will remain until the birds have fledged or the nest is no longer active, as determined by a qualified biologist.

Mitigation Measure BO-6: Pre-Construction Burrowing Owl Survey

At the NPORD Site, a qualified wildlife biologist shall assess burrowing owl presence or activity (e.g., molted feathers, cast pellets, prey remains, eggshell fragments, or excrement) at or near burrow entrances within the Project area. These burrow assessments shall be conducted seven days prior to construction activities.

If no burrowing owl or signs of burrowing owls are detected during the survey, no further actions shall be required.

If potential burrowing owl activity is suspected, three or more surveillance surveys shall be conducted during daylight hours when burrowing owls are most detectable with each visit occurring at least 3 weeks apart during the peak breeding season (April 15 to July 15), as recommended by the California Burrowing Owl Consortium's (CBO's) Burrowing Owl Survey Protocol and Mitigation Guidelines (CBOC 1997) and CDFW's Staff Report on Burrowing Owl Mitigation (CDFW 2012).

If the pre-construction surveys detect nesting burrowing owls, a buffer shall be established within which no ground-disturbing or vegetation removal activity is permissible. Buffers around occupied burrows shall be determined by a qualified biologist and approved by CDFW.

If avoidance buffers are not feasible and occupied burrows are to be relocated, a passive relocation plan shall be developed by a qualified biologist and approved by CDFW prior to implementation. The plan shall be subject to the approval of CDFW.

b. Substantial adverse effect on any riparian habitat or other sensitive natural community (No new impact)

The 2015 IS/MND and addenda concluded that impacts related to riparian and other sensitive natural communities were less than significant due to an absence of riparian habitat and other sensitive natural communities within the APD Project Site. Additionally, no riparian or sensitive natural communities occur within the NPORD Site (Montrose 2024). ***No new impacts*** related to riparian habitat or to sensitive natural communities would occur that have not been analyzed in the prior environmental documents.

c. Substantial adverse effects on state or federally protected wetlands (No new impact)

The 2015 IS/MND and addenda concluded that impacts related to wetlands and other waters of the U.S. from APD Project activities could result in significant effects to jurisdictional wetlands and other waters. Effects to jurisdictional wetlands and other waters would be less than significant with mitigation. The second addendum concluded that no new significant

environmental effects or a substantial increase in the severity of the previously identified significant effects, including effects to wetlands and special-status species, would occur. No substantial changes have occurred with respect to the circumstances under which the Project is undertaken. No new mitigation measures are proposed or needed from the second addendum (Port of Oakland 2018).

The 2015 IS/MND and addenda concluded that the APD Project impacts would result in both temporary and permanent effects to wetlands and other waters of the U.S. within the APD. Per the second addendum the estimated total environmental impact of raise dike improvements would be a total of 2.917 acres, which includes 2.710 of non-tidal wetlands and 0.207 acres of non-tidal other waters of the U.S. (Port of Oakland 2018).

Project modifications and improvements not previously identified in the 2015 Final IS/MND within the APD Project includes a smaller footprint to the initial impacts to wetlands and other waters of the U.S. From the 2018 Addenda, Table 1. Summary of Wetlands and Other Waters Impacts (acres) the Project could impact up to 0.978 acres of jurisdictional wetlands and other waters of the U.S. adjacent to the APD Project Site, specifically in the area of STA 164+00 to STA 206+00 from the improvements of raising the dike and improving the stability of the berm and STA 206+00 to 230+00 the improvements of raising the dike.

The revised Project is still within the previous Project footprint of the 2015 IS/MND and addenda. However, impacts to wetlands within the APD Project Site previously occurred from prior seismic improvements (previous site preparation), and the revised Project seismic improvements will not impact adjacent wetlands directly adjacent to the APD Project Site. The seismic improvements occurring within the APD Project Site within the dike would be the CDSM work only. In addition, no jurisdictional wetlands and other waters were identified within NPORD Site at the Reverification of USACE Jurisdictional Wetlands/Waters Determination for Oakland International Airport report for the Project area conducted in February 2017 by Huffman-Broadway Group, Inc (2017). The delineation report is provided in Appendix C.

The new elements being evaluated in this supplemental IS/MND would not affect jurisdictional waters. With implementation of applicable BMPs from Chapter 2, below, no new impacts or substantially more severe impacts to adjacent wetlands or other waters of the U.S. would occur due to the Project. Therefore, there would be ***no new impacts*** related to effects on state or federally protected wetlands.

The Project would include the following BMPs from Chapter 2, *Project Description*, that would minimize impacts to water bodies:

- BMP 1: Temporary Erosion Control Measures,
- BMP 2: Upland Equipment Staging,
- BMP 3: Emergency Spill Plan,
- BMP 4: Erosion and Sediment Control,
- BMP 5: Placement of Silt Fences and Fiber Rolls,
- BMP 6: Dewatering Plan,

- BMP 7: Removal of Dewatering Sedimentation,
- BMP 8: Stockpile Management,
- BMP 9: Preventing Runoff of Materials,
- BMP 10: Vehicle and Equipment Inspections,
- BMP 11: Equipment Refueling Areas,
- BMP 12: Containment of Discharge Pollutants,
- BMPs 13, 14, and 15: Placement, Containment, and Maintenance of Sanitary Facilities,
- BMP 16: Storage of Hazardous Materials,
- BMP 17: Appropriate Disposal Facilities, and
- BMP 18: Workplan for Avoidance of Wetlands

d. Substantial interference with wildlife movement, established wildlife corridors, or the use of native wildlife nursery sites (No new impact)

The 2015 IS/MND and addenda for the APD Project concluded that impacts related to the interference with wildlife or fisheries migratory corridors were determined to be less than significant because riparian habitat and other sensitive natural communities were otherwise absent from the Project area, and the vast majority of Project work would be conducted on the APD itself, which would not interfere with wildlife or fisheries migratory corridors. No new impacts related to with wildlife or fisheries migratory corridors have been identified within the APD Project Site.

The NPORD Site supports disturbed, ruderal habitat across the former landfill site and is surrounded by recreational facilities and developed areas and does not provide a significant wildlife corridor for terrestrial wildlife species. Therefore, there would be ***no new impacts*** related to wildlife movement, established wildlife corridors, or the use of native wildlife nursery sites.

e. Conflict with local policies or ordinances protecting biological resources (No new impact)

The 2015 IS/MND and addenda concluded that there would be no conflict with local policies and ordinances, and therefore the Project would have no impact. The Project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Project modifications and improvements within the 2015 IS/MND and addenda within the APD Project Site and the addition of the NPORD Site and offsite disposal site do not include actions that may conflict with local policies or ordinances protecting biological resources, such as tree preservation. There would be ***no new impact***.

f. Conflict with the provisions of an adopted HCP, Natural Community Conservation Plan, or other approved local, regional, or state HCP (No new impact)

The 2015 IS/MND and addenda concluded that the Project would not conflict with adopted Habitat Conservation Plan (HCP) or Natural Community Conservation Plan (NCCP) and would have no impact. Similarly, the revised Project would not conflict with a proposed or adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan that encompasses the NPORD Site.

While the APD Project Site is located within the Pacific Gas and Electric Company (PG&E) Bay Area Operations and Maintenance HCP, the Project is not a PG&E-covered activity under the HCP and would not affect species covered under the PG&E HCP (i.e., California red-legged frog and San Francisco garter snake). Thus, the Project would not conflict with the HCP's conservation strategy.

The Project does not conflict with any locally adopted HCP or NCCP, and therefore the Project would not conflict with provisions adopted by an HCP, NCCP, or other approved local, regional, or State HCP. There would be ***no new impact***.

3.4 CULTURAL RESOURCES

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

The term "cultural resources "refers to sites, objects, buildings, structures, burials, and cultural landscapes. Cultural Resources can also be classified as built-environment resources, archaeological resources, and human remains. Built-environment resources generally refer to above-ground designed, constructed, and landscape features and include buildings, structures, objects, and districts. Archaeological resources generally refer to deposits, structural features, and objects below ground. Human remains are also addressed in this section. The findings discussed below for this section are summarized from the Historic Properties Inventory Amendment Memorandum, Attachment D to this Supplemental IS/MND.

3.4.1 Regulatory Setting

Federal Laws, Regulations, and Policies

National Historic Preservation Act and Section 106

Construction of the Project will take place in areas that are within the jurisdiction of the Federal Aviation Administration (FAA). As a result, the project constitutes a federal undertaking as defined by Title 54 U.S. Code (USC) Section 300101 of the National Historic Preservation Act (NHPA) and mandates compliance with 54 USC Section 306108, commonly known as Section 106 of the NHPA and its implementing regulations found under Title 36 of the CFR Section 800, as amended in 2001. To comply with Section 106 of the NHPA, the project proponent must consider the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register of Historic Places (NRHP).

The NHPA of 1966 establishes the role and responsibilities of the federal government in historic preservation. Toward this end, the NHPA directs agencies to (1) identify and manage historic properties under their control; (2) undertake actions that will advance the act's provisions; and

avoid actions contrary to its purposes; (3) consult with others while carrying out historic preservation activities; and (4) consider the effects of their actions on historic properties.

Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on potential effects. The regulations that implement Section 106 and an outline of the historic preservation review process are provided at 36 CFR Part 800.

Some degree of review under Section 106 must be conducted for all federal projects, including federally assisted, federally licensed, or federally funded projects. If a project is subject to federal jurisdiction and the project are an "undertaking," as defined at 36 CFR Part 800.16(y), with the potential to cause effects on historic properties (36 CFR Part 800.3[a]), Section 106 of the NHPA must be addressed to take into account the effect of the undertaking on any district, site, building, structure, or object included in or eligible for inclusion in the NRHP (i.e., historic properties).

National Historic Preservation Act and National Register of Historic Places

The National Register was authorized by Section 101 of the NHPA as the nation's official list of cultural resources worthy of preservation. Properties listed in the National Register consist of districts, sites, buildings, structures, and objects significant in American history, architecture, archaeology, engineering, and culture. Properties listed in or eligible for listing in the National Register are considered in planning and environmental review, and effects to such properties are primarily addressed under Section 106.

The criteria for determining a resource's eligibility for National Register listing are defined at 36 CFR Part 60.4 and are as follows:

> . . .the quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and

A. That are associated with events that have made a significant contribution to the broad patterns of our history; or

B. That are associated with the lives of significant people in our past; or

C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. That have yielded, or may be likely to yield, important information in prehistory or history.

Under Criteria A, B, and C, the National Register places an emphasis on a resource appearing as it did during its period of significance to convey historical significance; under Criterion D, properties convey significance through the information they contain.

National Register Bulletin How to Apply the National Register Criteria for Evaluation states that in order for a property to qualify for listing in the National Register, it must meet at least one of the National Register criteria by (1) being associated with an important historic context, and (2) retaining historic integrity of those features necessary to convey its significance (National Park Service 1997). The historic context of a resource will define the theme(s), geographical limits, and period of significance by which to evaluate a resource's significance (National Park Service 1997:7).

Generally, cultural properties must be 50 years of age or older to be eligible for listing on the National Register. According to the National Park Service (1997:2), "properties that have achieved significance within the past 50 years shall not be considered eligible" unless such properties are "of exceptional importance."

State Laws, Regulations, and Policies

CEQA and CEQA Guidelines

Section 21083.2 of CEQA requires that the lead agency determine whether a project may have a significant effect on unique archaeological resources. A unique archaeological resource is defined in CEQA as an archaeological artifact, object, or site about which it can be clearly demonstrated that there is a high probability that it:

- Contains information needed to answer important scientific research questions, and there is demonstrable public interest in that information;
- Has a special or particular quality, such as being the oldest of its type or the best available example of its type; or
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Although not specifically inclusive of paleontological resources, these criteria may also help to define "a unique paleontological resource or site" (refer to Section 3.7).

Measures to avoid, conserve, preserve, or mitigate significant effects on these resources are also provided under CEQA § 21083.2.

Section 15064.5 of the CEQA Guidelines notes that "a project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment." Substantial adverse changes include physical changes to the historic resource or to its immediate surroundings, such that the significance of the historic resource would be materially impaired. Lead agencies are expected to identify potentially feasible measures to mitigate significant adverse changes in the significance of a historic resource before they approve such projects. Historical resources are those that are:

- Listed in, or determined to be eligible for listing in, the California Register of Historical Resources (CRHR) (PRC § 5024.1(I));

- Included in a local register of historic resources (PRC § 5020.1(k)) or identified as significant in an historic resource survey meeting the requirements of PRC § 5024.1(g); or
- Determined by a lead agency to be historically significant.

CEQA Guidelines § 15064.5 also prescribe the processes and procedures found under HSC § 7050.5 and PRC § 5097.95 for addressing the existence of, or probable likelihood of, Native American human remains, as well as the unexpected discovery of any human remains within a project site. This includes consultation with the appropriate Native American tribes.

CEQA Guidelines § 15126.4 provides further guidance about minimizing effects to historical resources through the application of mitigation measures. Mitigation measures must be legally binding and fully enforceable.

California Register of Historical Resources

PRC § 5024.1 establishes the CRHR. The register lists all California properties considered to be significant historical resources. The CRHR includes all properties listed as or determined to be eligible for listing in the NRHP, including properties evaluated under Section 106 of the NHPA. The criteria for listing are similar to those of the NRHP. Criteria for listing in the CRHR include resources that:

1. Are associated with the events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Are associated with the lives of important people in our past;
3. Embody the distinctive characteristics of a type, period, region, or method of construction; represent the work of an important creative individual; or possess high artistic values; or
4. Have yielded, or may be likely to yield, information important in prehistory or history.

The regulations set forth the criteria for eligibility as well as guidelines for assessing historical integrity and resources that have special considerations.

3.4.2 Environmental Setting

Cultural resources include prehistoric archaeological sites; historic-era archaeological sites; tribal cultural resources (TCRs); and historic buildings, structures, landscapes, districts, and linear features. In northern California, human occupation extends back in time for at least 9,000-11,500 years with Native American occupation and use of the Bay Area extending over 5,000-8,000 years and possibly longer. The Project area has changed over the past 6,000 years due to either natural factors or urban development including flood control. The County of Alameda was once inhabited by indigenous Costanoan communities prior to being settled by Spanish explorers in the late 1760s and 1770s, and who were followed by Mexican rancheros in the early 1800s (Milliken et al. 2009). In 1848, the Gold Rush began, bringing unprecedented numbers of travelers into the East Bay. Oakland Township was founded in 1850 and began to grow in 1869, when it was selected to be the western terminus of the transcontinental railroad; the Port was also an important draw for economic and population growth. Growth was further spurred by

the 1906 San Francisco earthquake, which drove thousands into the East Bay; Oakland's population doubled during this decade. By 1935, Oakland was one of the largest cities in the state. In the 1940s, population in Oakland grew rapidly due to wartime economic expansion; the combination of a large port and railroad terminus drew a significant amount of wartime industry (Allen 2005). Today, the land around the APD Project Site is a mix of residential, industrial, and commercial land.

Archival Search

The records search conducted by URS Corporation (URS) (2015) is considered too old be utilized for the purposes of the current project; therefore, a new record search was requested at the Northwest Information Center (NWIC) to determine whether any portions of the Project area had been previously surveyed for cultural resources and to identify the presence of any previously recorded cultural resources within the Project area, as well as a 0.25-mile buffer (the search radius). The records search was received on March 15, 2023 (NWIC File No. 22-1257). Since this records search was performed, the NPORD Site was added to the Project, which was not covered in the previous records search. Consequently, an update to this records search was conducted (File No. 23-0772).

Other sources of information reviewed included, but were not limited to, the current listings of properties on the National Register of Historic Places, California Historical Landmarks, California Register of Historical Resources, California Points of Historical Interest, as listed in the Office of Historic Preservation's (OHP's) Historic Property Directory, and the Built Environment Resource Directory for Alameda County (OHP 2020).

No previously recorded resources have been identified within the Project area; however, four resources have been identified within a 0.25-mile of the Project area (see Table 3.4-1).

Table 3.4-1. Previously Recorded Resources within the Search Radius

Primary No.	Name/Description	Type	Age	Resource Status
P-01-011016	Terminal 1, OAK	Building, Structure	Historic	Not evaluated for CRHR or NRHP
P-01-011450	MR1, runways 9L-27R and 9R-27L	Structure	Historic	Not evaluated for CRHR or NRHP
P-01-011451	MR2, Runway 11-29	Structure	Historic	Not evaluated for CRHR or NRHP
P-01-012124	Unknown; a wood-framed structure, likely a former diner or similar establishment	Building	Historic	Not evaluated for CRHR or NRHP; this property is demolished

According to the record search results, the boundaries of one previous study intersects the Project area and ten have been conducted within the search radius. The report conducted

completely within the boundaries of the APD Project Site, S-042430, did not identify any historic resources or properties (Hale 2011). Further, the investigation prepared by URS (2015), which also encompassed the APD Project Site, did not identify any resources as a result of the study. The NPORD Site location has not been previously surveyed.

Geoarchaeological Context

To assess the potential for buried archaeological sites within a Project area's components, an investigation will often consider factors that either encouraged or discouraged human use or occupation of certain landforms (e.g., geomorphic setting and distance to water), combined with those that affected the subsequent preservation (i.e., erosion or burial) of those landforms. It is well known, for instance, that prehistoric archaeological sites in California are most often found on relatively level landforms near natural water sources (e.g., spring, stream, river, or estuary), which is often where two or more environmental zones (ecotones) are present. Landforms with this combination of variables are frequently found at or near the contact between a floodplain and a higher and older geomorphic surface, such as an alluvial fan or stream terrace (Hansen 2004:5).

In general, most Pleistocene-age landforms have little potential for harboring buried archaeological resources, as they developed before the first evidence of human migration into North America (ca. 13,000 years ago). However, Pleistocene or older surfaces buried below younger Holocene deposits do have a potential for containing archaeological deposits because of the long-term viability of the platform (or Pleistocene age surface) from which occupation can occur. Holocene alluvial deposits may contain buried soils (paleosols) that represent periods of landform stability before renewed deposition. The identification of paleosols within Holocene-age landforms is of particular interest because they represent formerly stable surfaces that have a potential for preserving archaeological deposits.

The potential for the APD Project Site to contain buried archaeological resources was investigated using a model formulated by Byrd et al. (2017) for predicting a location's sensitivity for buried Native American archaeological sites based on the age of the landform, slope, and proximity to water. A location is considered to have the highest sensitivity if the landform dates to the Holocene[1], has a slope of 5 percent or less, is within 150 meters (500 feet) of fresh water, and 150 meters (500 feet) of a confluence. A basic premise of the model is that Native American archaeological deposits will not be buried within landforms that predate human colonization of the area. Calculating these factors using the buried site model (Byrd et al. 2017: Tables 11 and 12), a location's sensitivity was scored on a scale of 1–10 and classed as follows: lowest (<1); low (1-3); moderate (3-5.5); high (5.5-7.5); highest (>7.5).

Based on landform age and the other factors described above, the model determined that the sensitivity for buried sites in the Project area is considered low. Moreover, a review of Witter et al. (2006), a quaternary geology review of the Bay Area—from which the Byrd et al. (2017) analysis is partially derived—indicates that the Project areas are underlain by artificial fill

[1] The Holocene Epoch is the current period of geologic time, which began about 11,700 years ago, and coincides with the emergence of human occupation of the area.

material followed by Bay Mud deposits. Further, the pre-contact conditions for this location were under bay waters, and a considerable distance from the margins of the former bay margins (SFEI 1998). This suggests that the majority of the APD Project Site is underlain by a landform that would not have likely supported substantial human activity due to it being modern fill and under bay waters prior to that modern fill.

Native American Outreach

As part of the Port's AB52 compliance, an email request was made to the Native American Heritage Commission (NAHC) on October 18, 2023, to review its files for the presence of recorded sacred sites in the Project area. The NAHC responded on November 30, 2023. The results of the Sacred Lands database review were negative for any sacred sites within the Project areas.

On December 20, 2023, letters were sent via certified mail to the 18 tribal contacts provided by the NAHC. The letters requested any additional information regarding tribal resources and to notify the Port if they wished to initiate consultation regarding the Project actions. The Lisjan Nation responded on January 11, 2024, via email to request the associated documentation regarding the cultural resource investigations once completed. A follow up email with the original outreach letter was sent to each contact via email on January 26, 2024. Following that email, a response was received from Andrew Galvan of the Ohlone Indian Tribe, who requested further information on the project and the investigations conducted thus far and requested consultation regarding this project. As planning proceeds, the Port will continue to consult with Mr. Galvan and any other interested tribal representatives regarding the Project and incorporate their concerns into Project planning and mitigation as warranted. Coordination with tribes is described further in Section 3.15, "Tribal Cultural Resources"

3.4.3 Environmental Impacts and Mitigation Measures

a. Adverse change in the significance of a historical resource (Less than significant)

As stated in the 2015 IS/MND, no historic period elements of the built environment have been previously recorded within the Project area based on previous archival and field surveys (URS 2015). The NPORD Site is a former landfill, and no element of the built environment is extant within this area.

For the reasons listed above, it is not expected that the Project would cause any adverse changes any historical resources within the APD Project Site. As a result, the Project would have a ***less-than-significant impact*** on historical resources.

However, historical resources that are archaeological in nature may be accidentally discovered during Project construction; archaeological resources are discussed further in Section 3.5.4(b) below.

b. Adverse change in the significance of an archaeological resource (Less than significant with mitigation)

Due to the alteration of the margins of San Francisco Bay over the past century and changes to the extent of bay waters since the pre-contact period, evidence of human occupation in the Project area is not expected to exist. The Project area, including the NPORD Site, was under bay waters during the pre-contact period and, since that time, it has undergone a process of filling bay waters with artificial material for the purposes of development. As such, intact, substantial archaeological deposits are not expected to occur in the Project area. However, although unlikely, the possibility remains that deeply buried deposits may exist. If archaeological remains were accidentally discovered that are determined eligible for listing in the CRHR, and construction activities would affect them in a way that would render them ineligible for such listing, a significant impact would result. Should previously undiscovered archaeological resources be found, implementation of Mitigation Measure CR-1: Immediately Halt Construction would require the contractor to immediately halt work if materials are discovered, evaluate the finds for NRHP/CRHR eligibility, and implement appropriate mitigation measures, as necessary. Implementation of Mitigation Measure CR-1 would reduce impacts related to accidental discovery of significant archaeological resources to a level that is ***less than significant with mitigation***.

Mitigation Measure CR-1: Immediately Halt Construction

The Port will include this measure in construction plans and specifications. If any cultural resources, such as structural features, unusual amounts of bone or shell, flaked or ground stone artifacts, historic-era artifacts, or architectural remains, are encountered during any project construction activities, work shall be suspended immediately at the location of the find and within a radius of at least 50 feet and the Port will be contacted.

All cultural resources accidentally uncovered during construction within the APD Project Site and restoration area will be evaluated for eligibility for inclusion in the NRHP/CRHR. Resource evaluations will be conducted by individuals who meet the U.S. Secretary of the Interior's professional standards in archaeology, history, or architectural history, as appropriate. If any of the resources meet the eligibility criteria identified in Pub. Res. Code Section 5024.1 or Pub. Res. Code Section 21083.2(g), mitigation measures will be developed and implemented in accordance with CEQA Guidelines Section 15126.4(b) before construction resumes.

For resources eligible for listing in the NRHP/CRHR that would be rendered ineligible by the effects of project construction, additional mitigation measures will be implemented. Mitigation measures for archaeological resources may include (but are not limited to) avoidance; incorporation of sites within parks, greenspace, or other open space; capping the site; deeding the site into a permanent conservation easement; or data recovery excavation. Mitigation measures for archaeological resources will be developed in consultation with responsible agencies and, as appropriate, interested parties such as Native American tribes. Native American consultation is required if an archaeological site is determined to be a TCR. Implementation of the approved mitigation will be required before resuming any construction activities with potential to affect identified eligible resources at the site.

c. Disturbance of any human remains, including those interred outside of formal cemeteries (Less than significant with mitigation)

Project activities would not create ground disturbance beyond the existing level of disturbance; therefore, it is not expected that there would be any impact to human remains. Although unlikely, there is the possibility that excavations associated with construction could uncover burials, if they are present. Impacts on accidentally discovered human remains would be considered a significant impact. Implementation of Mitigation Measure CR-2: Immediately Halt Construction for Human Remains would require that, if human remains are uncovered, work must be halted, and the County Coroner must be contacted. Adherence to these procedures and provisions of the HSC would reduce potential impacts on human remains to a level that is ***less than significant with mitigation***.

Mitigation Measure CR-2: Immediately Halt Construction for Human Remains

The Port will include this measure in construction plans and specifications. If human remains are accidentally discovered during project construction activities, the requirements of California Health and Human Safety Code Section 7050.5 will be followed. Potentially damaging excavation will halt in the vicinity of the remains, with a minimum radius of 100 feet, and the County Coroner will be notified. The Coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or state lands (HSC Section 7050.5[b]). If the Coroner determines that the remains are those of a Native American, they must contact the NAHC by phone within 24 hours of making that determination (HSC Section 7050[c]). Pursuant to the provisions of Pub. Res. Code Section 5097.98, the NAHC will identify a Most Likely Descendent (MLD). The MLD designated by the NAHC will have at least 48 hours to inspect the site, once access is granted, and propose treatment and disposition of the remains and any associated grave goods. The Port will work with the MLD to ensure that the remains are removed to a protected location and treated with dignity and respect.

3.5 ENERGY

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

3.5.1 Regulatory Setting

Federal Laws, Regulations, and Policies

The Energy Policy and Conservation Act of 1975 was established in response to the oil crisis of 1973, which increased oil prices due to a shortage of reserves. The Act required that all vehicles sold in the U.S. meet certain fuel economy goals, known as the Corporate Average Fuel Economy standards. The National Highway Traffic Safety Administration (NHTSA) of the USDOT administers the Corporate Average Fuel Economy (CAFE) program, and the USEPA provides the fuel economy data. The USEPA and the NHTSA have developed regulations to improve the efficiency of cars, and light-, medium-, and heavy-duty vehicles.

State Laws, Regulations, and Policies

Energy resource-related regulations, policies, and plans at the state level require the regular analysis of energy data and developing recommendations to reduce statewide energy use, and setting requirements on the use of renewable energy sources. Senate Bill (SB) 1389, passed in 2002, requires the California Energy Commission (CEC) to prepare an Integrated Energy Policy Report for the governor and legislature every 2 years (CEC 2022a). The report contains an integrated assessment of major energy trends and issues facing California's electricity, natural gas, and transportation fuel sectors; and provides policy recommendations to conserve resources, protect the environment, ensure reliable, secure, and diverse energy supplies, enhance the state's economy, and protect public health and safety (CEC 2022a). The 2022 Integrated Energy Policy Report Update discusses the California Energy Commission's equity and environmental justice efforts, its development of a more easily navigable online data platform via the California Energy Planning Library, and an update to the California Energy Demand Forecast. The report also provides information and policy recommendations on emerging topics related to energy reliability, western electricity integration, hydrogen, gasoline prices, gas transition, and distributed energy resources (CEC 2022b).

In addition, since 2002, California has established a Renewables Portfolio Standard (RPS) program, through multiple senate bills (SB 1078, SB 107, SB X1-2, SB 350, SB 100) and executive orders (S-14-08, B-55-18), that requires increasingly higher targets of electricity retail sales be served by eligible renewable resources. The established eligible renewable source targets include 20 percent of electricity retail sales by 2010; 33 percent of electricity retail sales by 2020; 50 percent by 2030; and 100 percent zero-carbon electricity for the state and statewide carbon neutrality by 2045 (CPUC 2022, CEC 2017).

Section 3.6, "Greenhouse Gas Emissions," provides additional details on California's 2020 Climate Change Scoping Plan, which details the state's strategy for achieving the state's GHG targets, including energy-related goals and policies. It contains measures and actions that may pertain to the proposed Project relating to vehicle efficiency and transitioning to alternatively powered vehicles (CARB 2022).

Local Laws, Regulations, and Policies

No updates to applicable local regulations relevant to energy have occurred since 2015.

3.5.2 Environmental Setting

California has extensive energy resources, including an abundant supply of crude oil, high production of conventional hydroelectric power, and leads the nation in electricity generation from renewable resources (solar, geothermal, and biomass resources). In 2022, renewable resources accounted for 49% of California's in-state electricity generation with natural gas at 42% and nuclear and other sources making up the remainder of the resources. California has the second highest total energy consumption in the United States but the fourth lowest energy consumption rate per capita due to its mild climate and energy efficiency programs. A comparison of California's energy consuming end-use sectors indicates that the transportation sector is the greatest energy consumer at about 38% of total energy consumed followed by industrial, residential and commercial sectors. California is the seventh largest producer of crude oil and the third largest in crude oil refining capacity. California is the second largest consumer of motor gasoline and largest consumer of jet fuel in the United States (U.S. Energy Information Administration [US EIA] 2023a).

Transportation Fuels Supply

The energy consumed by the transportation sector accounts for roughly 84.5% of California's petroleum products demand (US EIA 2023d). In 2022, taxable gasoline sales (including aviation gasoline) in California accounted for approximately 13.6 billion gallons of gasoline (California Department of Tax and Fee Administration [CDTFA] 2023, and taxable diesel fuel sales accounted for approximately 3.2 billion gallons of diesel fuel (CDTFA 2023).

In 2022, California consumed approximately 3.7 billion gallons of diesel fuel, and of that, about 1.7 billion gallons were low-carbon diesel, which consisted of 1.4 billion gallons of renewable diesel and 281 million gallons of biodiesel (CARB 2023b).

Other transportation fuel sources used in California include alternative fuels, such as methanol and denatured ethanol (alcohol mixtures that contain no less than 70% alcohol), natural gas

(compressed or liquefied), liquefied petroleum gas (LPG), hydrogen, and fuels derived from biological materials (i.e., biomass).

The CEC forecasts show that the demand for gasoline in California will range from 12.1 billion to 12.6 billion gallons in 2030, with most of the demand generated by light-duty vehicles. While the models show an increase in light-duty vehicles along with population and income growth over the forecast horizon, total gasoline consumption is expected to decline, primarily due to increasing fuel economy (stemming from federal and state regulations) and gasoline displacement from the increasing market penetration of zero emission vehicles (ZEVs). For diesel, demand is forecast to increase modestly by 2030, following the growth of California's economy, but would be tempered by an increase in fleet fuel economy and market penetration of alternative fuels, most prominently by natural gas in the medium- and heavy-duty vehicle sectors (CEC 2018).

According to the CEC, 2021 sales of gasoline and diesel fuel in Alameda County were 492 million gallons and 53 million gallons, respectively (CEC 2023d). Note that the CEC only tracks fuel sales at the retail level, which allows for data to be collected on a county-by-county basis, whereas the Board of Equalization (BOE) tracks all fuel sales, retail and non-retail, but only at the statewide level.

3.5.3 Environmental Impacts and Mitigation Measures

Energy resource impacts were not expressly addressed in the 2015 IS/MND and addenda and do not constitute legally "new information" as specifically defined under CEQA.
Therefore, energy impacts were not legally required to be analyzed as part of this Supplemental IS/MND. However, an analysis was conducted of energy impacts using the recommended guidelines from Appendix F of the CEQA Guidelines to provide more information to the public and decisionmakers. The analysis of potential impacts associated with energy resources from the Project is presented here.

a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources (Less than significant)

and

b. Conflict with or obstruct with or obstruct a state or local plan for renewable energy or energy efficiency (Less than significant)

The Project would require the consumption of energy (fossil fuels) for construction equipment, worker vehicles, and truck trips. Table 3.5-1 shows the estimated total fuel use from construction equipment, worker vehicles, and truck trips for both the NPORD Site soil reuse and offsite soil disposal options. The calculations used to develop these estimates are presented in Appendix E.

Table 3.5-1. Project Fossil Fuel Use

Source Type	Gasoline Fuel Use (Gallons)	Diesel Fuel Use (Gallons)
NPORD Site Reuse		
Construction On-Road Vehicles	7,032	31,413
Construction Off-Road Equipment	n/a	693,903
Total for Construction and NPORD Site Reuse	7,291	725,316
Offsite Disposal		
Construction On-Road Vehicles	7,032	311,598
Construction Off-Road Equipment	n/a	691,534
Total for Construction and Offsite Disposal	7,032	1,003,132

Source: Appendix E

The Project's energy consumption is necessary for the completion of the APD Project. A conservative amount of energy needed for construction activities was calculated using fuel consumption factors for on-road vehicles and off-road equipment with details provided in Appendix E. Because only the minimum amount of energy necessary would be used, Project activities would not cause wasteful, inefficient, and unnecessary consumption of energy or a substantial increase in energy demand or the need for additional energy resources. In addition, the Port's activities would not conflict with any of the goals, policies, or implementation actions identified in the applicable plans, such as the 2023 Integrated Energy Policy Report and BAAQMD's 2017 Clean Air Plan, because the Project would not create any additional future energy demands over current conditions and would be completed as efficiently as possible. Thus, the Project would not conflict with any plans relating to renewable energy or energy efficiency. Therefore, this impact would be considered ***less than significant***.

3.6 GEOLOGY, SOILS, AND SEISMICITY

Criteria	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii. Strong seismic ground shaking?	☐	☐	☒	☐
iii Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv. Landslides?	☐	☐	☒	☐
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒

3.6.1 Regulatory Setting

Federal Laws, Regulations, and Policies

No updated federal regulations relevant to geology, soils, and seismicity have occurred since the 2015 Final IS/MND.

State Laws, Regulations, and Policies

No updated state regulations relevant to geology, soils, and seismicity have occurred since the 2015 Final IS/MND.

Local Laws, Regulations, and Policies

No updated local regulations relevant to geology, soils, and seismicity have occurred since the 2015 Final IS/MND.

3.6.2 Environmental Setting

As discussed in the 2015 IS/MND, the APD Project Site is in a seismically active region and is in close proximity to major active faults including the San Andreas Fault, approximately 13 miles southwest of the project site and the Hayward Fault, approximately 5.5 miles northeast of the project site. The site is not in an Alquist-Priolo Special Studies Zone.

The Project involves additional seismic improvements not previously identified in the 2015 Final IS/MND or subsequent addenda. It also includes an alternative material disposal location at the NPORD Site near the intersection of Doolittle Drive (State Route 61) and Harbor Bay Parkway, approximately 1.7 miles to the northeast of the 2015 IS/MND Project site.

The USGS 2015 Working Group on California Earthquakes (Field 2015) has reported a 95 percent chance that at least one magnitude 6.7 or greater earthquake will occur within northern California within the next 30 years, with a 72 percent chance of occurrence within the San Francisco region. The APD Project Site and the NPORD Site are not within a mapped fault zone; however, both are within a liquefaction zone (California Geological Survey (CGS) 2024). The APD Project Site and NPORD Site are not within a mapped landslide zone (CGS 2024).

The 2015 IS/MND and addenda concluded that much of the material that would be disturbed during Project construction would be imported fill material, and any paleontological resources would be of limited scientific value. Excavation extending through the fill would reach young bay mud (YBM) and Posey-Merritt Sands. Generally, the type of paleontological resources that may be found in the Project vicinity in YBM are not considered significant due to their relative abundance, and not scientifically significant. Posey-Merritt Sands may contain significant terrestrial fossils; however, University of California Museum of Paleontology (UCMP) records did not reveal large fossil discoveries in similar environments in Alameda County. The Project will not result in digging or significant soil disturbance at the NPORD site but will place excess soil cement material on top of the existing de-vegetated ground cover which will subsequently be graded to pre-project topography.

3.6.3 Environmental Impacts and Mitigation Measures

Impact determinations and mitigation measures from the 2015 IS/MND and addenda were reviewed for potential applicability to the Project. Impacts and the associated mitigation measures that may apply to the Project are summarized below.

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

i. Seismic-related rupture of a known earthquake fault

ii. Strong seismic ground shaking

iii. Seismic-related ground failure, including liquefaction

iv. Landslides (Less than significant)

The 2015 IS/MND and addenda concluded that the impacts related to Alquist-Priolo Earthquake Zone, a Seismic Ground Shaking, and Seismic-Related Ground Failure would be less than significant as the project is not in an Alquist-Priolo Earthquake Zone but would include seismic improvements to improve stability in the event of an earthquake. The 2015 IS/MND and addenda also concluded that there would be no impact related to landslides due to the flat topography of the area.

There are no known active faults that cross the APD area or the NPORD Site (CGS 2024). The seismic reinforcement of the APD and the deposit of reuse materials on the NPORD Site would not result in new ground disturbing activities that would increase the potential of fault rupture. Therefore, the Project would not increase risk of loss, injury, or death involving seismic-related surface fault rupture. The Project area is located in a region known to be seismically active, with the potential for large earthquakes (Field 2015). However, neither construction nor operation of the Project would increase likelihood of seismic ground shaking. Therefore, the Project would not increase risk of loss, injury, or death involving seismic ground shaking. The Project area is located in a mapped liquefaction zone (CGS, 2024). However, the dike improvements would reduce the possibility of liquefaction. Fill material on the NPORD Site would be graded and stabilized through establishing vegetation. No building structures, or dwellings would be constructed as part of the Project. Therefore, risk of liquefaction in the Project area is low and the Project would not exacerbate liquefaction. Both the APD Project Site and the NPORD Site are located on flat topography and are not located in within a known landslide area; therefore, the Project modifications would not result in an increased risk of landslide. Thus, the Project modifications would result in a ***less-than-significant impact***.

b. Substantial soil erosion or the loss of topsoil (Less than significant)

The 2015 IS/MND and addenda concluded that impacts related to substantial erosion would be less than significant as the Project is intended to protect from erosion once complete, and during construction implementation of a SWPPP would reduce construction related erosion.

Ground-disturbing activities conducted during construction on the NPORD Site include vegetation removal, fill material deposition, grading and achieving stabilization through establishing vegetation. Removal of ground cover would increase the hazard of erosion and could temporarily increase erosion and sedimentation rates above existing levels. Adherence to Project BMPs 1, 4, and 5, below, would ensure temporary erosion and sediment control measures are put in place including the inclusion of silt fences or fiber rolls around the area of ground disturbance, and the presence of a SWPPP. These BMPs will minimize risk of erosion and sedimentation from Project construction by lowering the likelihood of increased erosion and sedimentation from ground-disturbing Project activities. Hydroseeding will also be used to stabilize the site after the excess soils generated from seismic improvements have been placed and graded on site. The impact related to soil erosion and loss of topsoil would be ***less than significant***.

The Project would implement the following BMPs from Chapter 2, *Project Description*, that would minimize impacts related to soil erosion and the loss of topsoil:

- BMP 1: Temporary Erosion Control Measures,
- BMP 4: Erosion and Sediment Control, and
- BMP 5: Placement of Silt Fences or Fiber Rolls.

c. Location on a geologic unit or soil that is unstable or that would become unstable as a result of the Project and potentially result in an on-site or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse (Less than significant)

The 2015 IS/MND and addenda concluded that impacts related to unstable geologic unit, would be less than significant as the dike improvements would reduce the possibility of liquefaction.

Similar to the 2015 project, the Project activities in the APD area would also reduce the possibility of liquefaction by improving existing seismic reinforcements.

Additionally, the Project area is relatively flat and not susceptible to landslides. Although the Project would increase the height at the NPORD Site by approximately three feet, it is not expected that this would increase the potential for landslides either on or off-site as the area would be fully graded and leveled out following the addition of material from APD Project activities. In addition, the Project would not involve removal of groundwater or other subsurface resources and would not increase risks of subsidence or collapse.

As stated in criterion (b), BMPs 4 and 5 would ensure the use of erosion and sediment control measures prior to ground-disturbing activities and require the use of silt fences, fiber rolls, or other suitable measures to lower the likelihood of increased erosion and sedimentation from ground-disturbing activities associated with the Project would reduce the risk of erosion.

- BMP 4: Erosion and Sediment Control and
- BMP 5: Placement of Silt Fences or Fiber Rolls.

Therefore, this impact would be l***ess than significant***.

d. Location on expansive soil, creating substantial direct or indirect risks to life or property (Less than significant)

The 2015 IS/MND and addenda concluded that impacts related to expansive soils, would be less than significant because of the granular nature of the soil in the Project area; the soils within the Project site are not susceptible to shrinking and swelling. A geotechnical investigation of the NPORD Site revealed that edges of the NPORD Site have no documented soil cover above the refuse of the old landfill. In other areas, fill materials were present with a thickness of 2-4 feet. These fill materials consisted of sand, clayey sand, clayey silt, clay, sandy gravel, gravelly silty sand, clayey gravelly silt, silty clayey gravel, silty sandy gravel, and silty sand (Bonkowski & Associates, 2015). Below the fill material was Bay Mud at depths ranging from 4-14 feet, and refuse was approximated to be located 4-11 feet (Bonkowski & Associates, 2015).

Expansive soils are predominantly composed of clays and can undergo substantial volume change in response to changes in moisture content. During wetting and drying cycles, expansive soils may shrink and swell, creating differential ground movements. Actual shrink-swell potential is unknown in the proposed fill material, composed of a mixture of cement, APD material and material underneath the existing dike (sand film native sands, and bay mud). However, the soils identified in the main Project area adjacent to the airport in the 2015 IS/MND and addenda were not considered to be susceptible to shrinking and swelling, it can be inferred that the fill material would also not exhibit expansive qualities. In addition, the Project does not involve constructing structures, hydroseeding will also be used to stabilize the site after the excess soils generated from seismic improvements has been placed and graded.

Furthermore, the addition of fill material on the NPORD Site will increase the cover on the existing landfill, helping to protect surrounding people and property from the effects of exposed landfill waste.

Thus, based on the above discussion, impacts on the Project as a result of expansive soils would be ***less than significant***.

e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater (No impact)

The 2015 IS/MND and addenda concluded that there would be no impacts related to wastewater as there are no septic tanks or wastewater disposal systems included as part of the Project.

The revised Project does not include septic tanks or alternative wastewater disposal systems. Therefore, there would be ***no impact***.

f. Destruction of a unique paleontological resource or site or unique geological feature (Less than significant)

The 2015 IS/MND and addenda concluded that the impacts related to paleontological resources would be less than significant because much of the material that would be disturbed as during Project construction is imported fill material, and any paleontological resources would be of limited scientific value.

Ground-disturbing activities conducted during construction on the NPORD Site include vegetation removal, fill material deposition, and grading. As the NPORD Site is the location of an old landfill, there would be no digging that would impact any unknown, unique paleontological or geological features located below the landfill. Therefore, the proposed modifications to the Project would have no impact on unique paleontological and geological features, and the overall impact of the proposed Project to paleontological and geological features would be ***less than significant***.

3.7 GREENHOUSE GAS EMISSIONS

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

3.7.1 Regulatory Setting

This section summarizes federal, state, and local laws, regulations, and policies pertinent to the evaluation of the Project's impacts on greenhouse gas (GHG) emissions.

Federal Laws, Regulations, and Policies

At the federal level, the USEPA has developed regulations to reduce GHG emissions from motor vehicles and has developed permitting requirements for large stationary emitters of GHGs. For further information regarding the current USEPA and NHTSA joint rulemaking for vehicle standards, see the regulatory setting in Section 3.2, "Air Quality."

State Laws, Regulations, and Policies

State of California Executive Orders

Executive Order S-3-05. In 2005, in recognition of California's vulnerability to the effects of climate change, then-Governor Schwarzenegger issued Executive Order (EO) S-3-05, which set forth a series of target dates by which statewide emissions of GHGs would be progressively reduced, as follows:

- By 2010, reduce GHG emissions to 2000 levels;
- By 2020, reduce GHG emissions to 1990 levels; and
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

Executive Order S-1-07. EO S-1-07, which was signed by Governor Schwarzenegger in 2007, proclaims that the transportation sector is the main source of GHG emissions in California, generating more than 40 percent of statewide emissions. It establishes a goal to reduce the carbon intensity of transportation fuels sold in California by at least 10 percent by 2020 and

directed that a Low Carbon Fuel Standard (LCFS) be established for California. CARB approved the proposed regulation to implement the LCFS in 2009.

Executive Order S-13-08. Governor Schwarzenegger signed EO S-13-08 on November 14, 2008. The order called on state agencies to develop California's first strategy to identify and prepare for expected climate impacts. As a result, the 2009 California Climate Adaptation Strategy (CAS) report was developed to summarize the best-known science on climate change impacts in the state, assess vulnerability, and outline possible solutions that can be implemented in and across state agencies to promote resiliency (CNRA 2009), and updated in 2014 (CNRA 2014). The state has also developed an Adaptation Planning Guide (California Emergency Management Agency [CEMA] 2012) to provide a decision-making framework intended for use by local and regional stakeholders to aid in the interpretation of climate science and develop a systematic rationale for reducing risks caused or exacerbated by climate change. The state's third major assessment (CNRA 2018) on climate change explores local and statewide vulnerabilities to climate change, highlighting opportunities for taking concrete actions to reduce climate-change impacts.

Executive Order B-30-15. Governor Brown signed EO-B-30-15 on April 29, 2015, which directed the following:

- Established a new interim statewide reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030;
- Ordered all state agencies with jurisdiction over sources of GHG emissions to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 (80 percent below 1990 levels) reduction targets; and
- Directed CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of MMTCO2e.

Executive Order B-55-18. On September 10, 2018, Governor Brown signed EO B-55-18, committing California to total, economy-wide carbon neutrality by 2045. EO B-55-18 directs CARB to work with relevant State agencies to develop a framework to implement these goals, and accounting that tracks progress toward this goal.

Executive Order N-79-20. In EO N-79-20, Governor Newsom states that "clean renewable fuels play a role as California transitions to a decarbonized transportation sector." EO N-79-20 directs as follows:

> *"[T]o support the transition away from fossil fuels consistent with the goals established in this Order and California's goal to achieve carbon neutrality by no later than 2045, the California Environmental Protection Agency and the California Natural Resources Agency, in consultation with other State, local and federal agencies, shall expedite regulatory processes to repurpose and transition upstream and downstream oil production facilities....*
>
> *"The Governor's Order also directs CARB to "develop and propose strategies to continue the State's current efforts to reduce the carbon intensity of fuels beyond 2030 with consideration of the full life cycle of carbon."*

Assembly Bill 32 and Senate Bill 32 – California Global Warming Solutions Act

In September 2006, Governor Schwarzenegger signed the California Global Warming Solutions Act (AB 32). AB 32 (HSC, Division 25.5) establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and establishes a cap on statewide GHG emissions. AB 32 required that statewide GHG emissions be reduced to 1990 levels by 2020. This reduction was intended to be accomplished by enforcing a statewide cap on GHG emissions that was phased in starting in 2012. To effectively implement the cap, AB 32 directed CARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources.

In 2016, Senate Bill (SB) 32 and its companion bill AB 197 amended HSC, Division 25.5 Section 38500 et seq. and established a new GHG reduction target of 40 percent below 1990 levels by 2030. The bills also include provisions to ensure the benefits of state climate policies reach into disadvantaged communities.

Scoping Plan

A specific requirement of AB 32 was to prepare a Climate Change Scoping Plan for achieving the maximum technologically feasible and cost-effective GHG emission reduction by 2020. CARB developed and approved the initial Scoping Plan in 2008, outlining the regulations, market-based approaches, voluntary measures, policies, and other emission reduction programs that would be needed to meet the 2020 statewide GHG emission limit and initiate the transformations needed to achieve the state's long-range climate objectives (CARB 2009).

Most recently, CARB approved the 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan) in December 2022. The 2022 Scoping Plan outlines the proposed framework of action for achieving the 2045 GHG target of an 85 percent reduction in GHG emissions relative to 1990 levels; the update also adds carbon neutrality as a science-based guide for California's climate work (CARB 2022). The 2022 Scoping Plan outlines how carbon neutrality can be achieved to reduce GHGs to meet the emission targets by reducing anthropogenic emissions and expanding actions to capture and store carbon. New to the 2022 Scoping Plan is a commitment to incorporate and quantify natural and working lands as a key component to GHG reductions and actions around capture and storage of carbon. The 2022 Scoping Plan strategy for meeting the state's 2030 GHG target incorporates the full range of legislative actions and state-developed plans that have relevance to the year 2030. The 2022 Scoping Plan is heading toward the 2045 target of 85 percent below 1990 levels and carbon neutrality, including the following reductions in key sectors:

The transportation sector targets reductions based on the technology of vehicles and associated refueling infrastructure for those vehicles; the fuel used as the energy source to power vehicles and the facilities that produce them; and vehicle miles traveled (VMT), which relates to development patterns and available transportation options.

The electricity grid sector has a target of 38 $MMTCO_2e$ in 2030 and 30 $MMTCO_2e$ in 2035, which includes a goal of generating 20 gigawatts of offshore wind by 2045 and specifies that the increased demand for electrification occurs without new fossil gas–fired resources.

The manufacturing and building sector include increased electrification of energy demand for construction equipment, as well as across many manufacturing sectors and buildings.

CO_2 removal and capture include carbon capture and storage facilities and mechanical systems to remove CO2 from the ambient air.

Short-lived climate pollutants, including non-combustion CH_4 emissions, are reduced with various strategies.

Natural and working lands sectors include targets to conserve natural working lands and coastal waters, and to implement actions to accelerate natural removal of carbon and improve resilience to climate change.

In the 2022 Scoping Plan, CARB recommends statewide targets of no more 226 $MMTCO_2e$ from AB 32 GHG inventory sector emissions and 7 $MMTCO_2e$ from natural and working lands, a reduction from carbon capture and sequestration due to avoided GHG emissions from industry and electric sectors of 13 $MMTCO_2e$, and a reduction of 7 $MMTCO_2e$ from CO_2 removal, including carbon sequestration on natural and working lands, as well as direct air capture and bio-energy with carbon capture and sequestration. The net 2030 GHG emissions, accounting for emissions and removal or sequestration, is 226 $MMTCO_2e$. For the 2045 scenario in the 2022 Scoping Plan, maximum GHG emissions from AB 32 inventory sector emissions are 65 MMTCO2e, emissions from working lands are 7 $MMTCO_2e$, and reductions from carbon capture and sequestration and CO_2 removal are 100 $MMTCO_2e$. This is a net reduction of 3 $MMTCO_2e$ by 2045.

Tractor-Trailer Greenhouse Gas Regulation

CARB's Tractor-Trailer Greenhouse Gas regulation reduces the energy consumption of large trucks. CARB developed this regulation to make heavy-duty tractors more fuel efficient. Fuel efficiency is improved by requiring the use of aerodynamic tractors and trailers that are also equipped with tires that have a low rolling resistance. The tractors and trailers subject to this regulation must either use USEPA SmartWay (SmartWay) certified tractors and trailers or retrofit their existing fleet with SmartWay-verified technologies. The SmartWay certification process is part of the broader voluntary program called the SmartWay Transport Partnership Program. The regulation applies primarily to owners of 53-foot or longer box-type trailers and owners of the heavy-duty tractors that pull them on California highways. These owners are responsible for replacing or retrofitting their affected vehicles with compliant aerodynamic technologies and low-rolling-resistance tires. All owners, regardless of where their vehicle is registered, must comply with the regulation when they operate their affected vehicles on California highways. Besides the owners of these vehicles, drivers, motor carriers, California-based brokers, and California-based shippers that operate or use them also share in the responsibility for compliance with the regulation.

Low-Carbon Fuel Standard

The Low-Carbon Fuel Standard (LCFS), established in 2007 through Executive Order S-1-07 and administered by CARB, requires producers of petroleum-based fuels to reduce the carbon intensity of their products that started with a 0.25 percent reduction in 2011, and culminated in a 10 percent total reduction in 2020. In September 2018, CARB extended the LCFS program to

2030, making significant changes to the design and implementation of the program, including a doubling of the carbon intensity reduction to 20 percent by 2030.

Petroleum importers, refiners, and wholesalers can either develop their own low-carbon fuel products or buy LCFS credits from other companies that develop and sell low-carbon alternative fuels, such as biofuels, electricity, natural gas, and hydrogen. The Port started participating in the LCFS program in January 2019 as an opt-in entity, generating credits by providing electricity to vessels through shore power, as well as providing charging infrastructure for battery-electric Class 8 on-road trucks, battery-electric cargo-handling equipment, and battery-electric light-duty vehicles.

Zero-Emission Vehicles

In March 2012, Governor Brown issued Executive Order B-16-12, establishing a goal of 1.5 million ZEVs on California roads by 2025. In addition to the ZEV goal, Executive Order B-16-12 stipulated that by 2015, all major cities in California must have adequate infrastructure and be "zero-emission vehicle ready" by 2020, the state establish adequate infrastructure to support 1 million ZEVs; and by 2050, virtually all personal transportation in the state will be based on ZEVs; and GHG emissions from the transportation sector will be reduced by 80 percent below 1990 levels in 2050.

On January 26, 2018, Governor Brown issued Executive Order B-48-18, establishing a goal of 5 million ZEVs on California roads by 2030, and spurred the installation and construction of 250,000 plug-in electric vehicle chargers, including 10,000 direct-current fast chargers, and 200 hydrogen refueling stations by 2025.

In September 2020, Governor Newsom signed Executive Order N-79-20, which sets a new state goal that 100 percent of in-state sales of new passenger cars and trucks will be zero-emission by 2035; that 100 percent of medium- and heavy-duty vehicles in the state be zero-emission by 2045 for all operations where feasible, and by 2035 for drayage trucks; and that 100 percent of off-road vehicles and equipment will be zero emission by 2035 where feasible. This order calls on state agencies, including CARB, the CEC, the CPUC, the Department of Finance, and others to develop and propose regulations and strategies to achieve these goals.

Other State Regulations and Policies

For further information regarding the following regulations and policies, see Section 2.1, Air Quality Regulatory Setting.

- Advanced Clean Cars
- Advanced Clean Fleets
- Advanced Clean Trucks
- AB 617 and Community Air Protection Program

Regional Laws, Regulations, and Policies

BAAQMD has established a climate protection program to reduce pollutants that contribute to global climate change and affect air quality in the San Francisco Bay Area Air Basin. The climate protection program includes measures that promote energy efficiency, reduce VMT, and develop alternative sources of energy, all of which assist in reducing emissions of GHG and air pollutants that affect the health of residents. BAAQMD also seeks to support and stimulate climate protection programs in the region through public education and outreach, technical assistance to local governments and other interested parties, and promotion of collaborative efforts among stakeholders.

3.7.2 Environmental Setting

"Global warming" and "climate change" are common terms used to describe the increase in the average temperature of the earth's near-surface air and oceans since the mid-20th century. Natural processes and human actions have been identified as impacting climate. The Intergovernmental Panel on Climate Change (IPCC) has concluded that variations in natural phenomena such as solar radiation and volcanoes produced most of the warming from pre-industrial times to 1950 and had a small cooling effect afterward. Since the 19th century however, increasing GHG concentrations resulting from human activity such as fossil fuel combustion, deforestation, and other activities are believed to be a major factor in climate change. GHGs in the atmosphere naturally trap heat by impeding the exit of solar radiation that has hit the earth and is reflected back into space—a phenomenon sometimes referred to as the "greenhouse effect." Some GHGs occur naturally and are necessary for keeping the earth's surface inhabitable. However, increases in the concentrations of these gases in the atmosphere during the last 100 years have trapped solar radiation and decreased the amount that is reflected back into space, intensifying the natural greenhouse effect and resulting in the increase of global average temperature.

CO_2, CH_4, nitrous oxide (N_2O), hydrofluorocarbons (HFC), perfluorocarbons (PFC), and sulfur hexafluoride (SF_6) are the principal GHGs. When concentrations of these gases exceed historical concentrations in the atmosphere, the greenhouse effect is intensified. CO_2, CH_4, and N_2O occur naturally and are also generated through human activity. Emissions of CO_2 are largely by products of fossil fuel combustion, whereas CH_4 results from off-gassing, natural gas leaks from pipelines, and industrial processes and incomplete combustion associated with agricultural practices, landfills, energy providers, and other industrial facilities. Other human-generated GHGs include fluorinated gases such as HFCs, PFCs, and SF_6, which have much higher heat-absorption potential than CO_2 and are byproducts of certain industrial processes.

CO_2 is the reference gas for climate change, as it is the GHG emitted in the highest volume. The effect that each of the GHGs have on global warming is the product of the mass of their emissions and their global warming potential (GWP). GWP indicates how much a gas is predicted to contribute to global warming relative to how much warming would be predicted to be caused by the same mass of CO_2. For example, CH_4 and N_2O are substantially more potent GHGs than CO_2, with GWPs of approximately 25 and approximately 298 times, respectively, that of CO_2, which has a GWP of 1.

In emissions inventories, GHG emissions are typically reported in units of metric tons of carbon dioxide equivalent (CO_2e). CO_2e is calculated as the product of the mass emitted of a given GHG and its specific GWP. While CH_4 and N_2O have much higher GWPs than CO_2, CO_2 is emitted in higher quantities and it accounts for the majority of GHG emissions in CO_2e, both from commercial developments and human activity in general.

Existing Site Emissions

The Project site has vegetation and may assist in sequestration of carbon. The capped NPORD Site landfill is not a productive landfill anymore and does not emit substantial amounts of CH_4 but may occasionally still have some residual CH_4 emissions from the decomposition of organic matter in this old landfill although rare. There are GHG emissions from airport operations vehicles and equipment completing routine maintenance.

3.7.3 Environmental Impacts and Mitigation Measures

Impact determinations and mitigation measures from the 2015 IS/MND and addenda were reviewed for potential applicability to the Project modifications. Impacts and the associated mitigation measures that may apply to the Project are summarized below.

a. Generate a net increase in greenhouse gas emissions which may have a significant impact on the environment (Less than significant)

The 2015 IS/MND determined that the total GHG emissions attributed to Project construction activities would amount to approximately 818 metric tons of carbon dioxide ($MTCO_2e$) over the 28-month construction period. Typically, for construction endeavors, GHG emissions are quantified and spread out over the projected lifespan of the project, which refers to the duration until components of the project need replacement. To spread out the emissions over the life of the project, the total GHG emissions from construction activities are divided by the project's lifespan (usually assumed to be 30 years, although it may vary by project). Consequently, the 2015 IS/MND found that the GHG emissions from construction, amortized over a 30-year timeframe, would average to 27.3$MTCO_2e$ per year. Because BAAQMD's significance threshold of 1,100 $MTCO_2e$, the 2015 IS/MND determined this impact to be less than significant.

In 2023, BAAQMD revised their CEQA Air Quality Guidelines which do not contain any quantitative significance thresholds for construction-related GHG emissions or prescriptive measures for infrastructure projects. Rather, BAAQMD recommends that lead agencies quantify and disclose GHG emissions that would occur during construction and operation of infrastructure projects. BAAQMD states that, even though the significance of construction-related GHG emissions is not determined, to minimize GHG emissions and emissions of other air quality pollutants, projects should incorporate the best management practices for reducing GHG emissions listed in the agency's CEQA guidance (BAAQMD 2023). BAAQMD does not have any guidance for projects that are not land use projects, stationary sources, or under a local GHG reduction strategy. BAAQMD notes that these guidelines are nonbinding recommendations intended to assist lead agencies, and they may be updated as needed in the future; any updates will likewise be nonbinding and advisory.

Therefore, this impact analysis evaluates whether implementation of the Proposed Project would result in significant impacts related to GHG levels based on the anticipated construction, operation, and maintenance activities required for the Proposed Project. For purposes of significance determination, the GHG emissions are tied back to the goals set forth in SB 32 and applicable strategies outlined in the latest Scoping Plan.

Construction-related GHG emissions would result from the combustion of fossil-fueled construction equipment, material hauling, and worker trips. As discussed in Section 3.2, Air Quality, the Project's criteria air pollutant emissions during construction were modeled using conservative assumptions for equipment use, scheduling, and haul routes, as detailed in Appendix B, Air Quality and Greenhouse Gas Emission Calculations. Emissions were calculated using CalEEMod version 2022.1.1.20, with default assumptions and site-specific estimate of equipment and construction days. The Project's second phase construction related GHG emissions with reuse at NPORD Site are estimated at 7,466 $MTCO_2e$. The Project's second phase construction related GHG emissions with offsite disposal are 9,929 $MTCO_2e$. Since GHGs are typically amortized over the life of the project, these second phase emissions are combined with the 2015 IS/MND GHG emissions. The net Project emissions when amortized construction emissions when both phases are included would be less than 360 $MTCO_2e$ per year, which would not be anticipated to result in a significant impact to global climate change or impede the goals of AB 32 or SB 32. Since the Project's emissions would not conflict or impede the progress of AB32 or SB32 or any other plans or policies, the impact would be l***ess than significant***.

b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases (Less than significant)

The 2015 IS/MND determined that the Project aligns with the State's goals for reducing GHG emissions outlined in AB 32 as the Project's emissions would be lower than levels deemed significant by the BAAQMD for operational (annual) emission sources during construction. The 2015 IS/MND also stated that the Project would only emit these minimal amounts during construction and would not alter the airport's baseline operations, and thus, it would not generate GHG emissions significant enough to impact the environment. Moreover, because the Project would not contradict any local policies, plans, or regulations aimed at reducing GHG emissions, the 2015 IS/MND found that the GHG impacts of the Project are less than significant.

Similarly, implementation of the APD Project would result in GHG emissions. However, these would not impede the achievement of statewide GHG goals and policies specifically outlined in AB 32 and SB 32, which codify the goals of EOs S-3-05 and B-30-15. GHG emissions from construction equipment use are one-time emissions and would cease once construction of the Project is complete. As mentioned above, GHG emissions from the Project's second phase of construction would be 7,466–9,929 $MTCO_2e$. Therefore, the Project would not conflict with the state goal of reducing GHG emissions and would not conflict with the updated Scoping Plan. Transportation sector regulations and future measures designed to achieve the emission reductions assumed as part of the Scoping Plan are applicable to the Project operations, as described above, including truck efficiency and low-carbon fuel standard, transition to ZEV. These measures would result in reduction of GHG emissions associated with the Project. Therefore, the Project would not conflict with any applicable plan, policy, or regulation for the purpose of reducing GHG emissions. The impact is ***less than significant***.

3.8 HAZARDS AND HAZARDOUS MATERIALS

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

3.8.1 Regulatory Setting

Federal Laws, Regulations, and Policies

No updated federal regulations relevant to hazards and hazardous materials have occurred since the 2015 Final IS/MND.

State Laws, Regulations, and Policies

No updated state regulations relevant to hazards and hazardous materials have occurred since the 2015 Final IS/MND.

Local Laws, Regulations, and Policies

No updated local regulations relevant to hazards and hazardous materials have occurred since the 2015 Final IS/MND.

3.8.2 Environmental Setting

Existing Hazards and Hazardous Materials

An assessment was prepared by Environmental Data Resources Inc. in February 2024 to identify sites and facilities from the original project that are known, suspected or likely to contain or store hazardous materials in order to evaluate if there are any known levels of subsurface soil or groundwater contamination. The EDR report included in the 2015 Final IS/MND and returned 70 sites within 0.25 mile of the APD Project Site. The releases at the sites identified have primarily been of petroleum hydrocarbons from leaking USTs, and jet fuel releases from surface spills and below-grade pipeline leaks. The APD Project Site is not located on a site listed pursuant to Government Code § 65962.5 (also known as the Cortese List) (DTSC, 2023).

As discussed in the 2015 IS/MND, two active pipelines were installed in 1968, and became operational in 1969, which are owned and maintained by SFPP, L.P./Kinder Morgan Energy Partners, L.P. Both pipelines are situated in the perimeter dike; the 10-inch pipeline is used for multi-product fuel, and the 12-inch pipeline is currently used for jet fuel to supply San Francisco International Airport. The active pipelines are separated by between 1.6 and 5.2 feet and are between 0 and 18 feet to the inboard of the outboard edge of the service road at 2.7 and 6.2 feet, respectively, below the crest of the dike.

The NPORD Site is a former landfill that will be utilized for the disposal of excess soils and construction refuse. There are three sites within 0.25 miles of the NPORD Site, two of which are designated as Cleanup Program sites and one of which is designated as a LUST Cleanup site; all three sites were listed due to the presence of multiple potential contaminants of concern from jet fuel releases. The sites were monitored for several years until it was determined they are no longer a hazard to human health or the environment, and all three have been closed as of June 2023, according to the Envirostor database (Envirostor n.d; Geotracker n.d).

OAK was constructed on top of the San Francisco Bay with fill from the 1920s to 1960s. The South Field was filled with sand from dredged from the San Francisco Bay and the North Field was filled with a mixture of solutions (URS Corporation Americas, 2015). There was no evidence that the fill utilized in construction contained any contaminants.

There is no risk of wildfire on or within the vicinity of the Project site.

3.8.3 Environmental Impacts and Mitigation Measures

The following sections provide an analysis of impacts related to hazards previously analyzed within the 2015 IS/MND that would result from APD Project implementation. Impact determinations and mitigation measures from the 2015 IS/MND and addenda were reviewed for potential applicability to the Project. Impacts and the associated mitigation measures that may apply to the Project are summarized below.

The 2015 IS/MND concluded there was a less-than-significant impact with respect to hazards for people residing or working in the Project area for projects located within two miles of an airport. Despite the several release sites in the proximity of the Project site, the project site itself is not listed on the Cortese list compiled pursuant to Government Code Section 65962.5. Impacts associated with compiled government listings of hazardous materials pursuant to Government Code Section 65962.5 are less than significant.

The following analysis is related to the changes to the project description since the 2015 IS/MND and addenda.

a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials (Less than significant with mitigation)

The 2015 IS/MND concluded there would be significant impacts with respect to the creation of significant hazards through the routine transport, use, or disposal of hazardous materials. The impacts could potentially take place during the use of hazardous materials during construction that are similar to the ones use for airport operations, during equipment storage, and during hauling for disposal. These impacts would be reduced to a less than significant with the incorporation of Mitigation Measure HZ-1: Hazardous Material Handling Documentation

During construction, hazardous materials typically associated with construction activities, such as fuel, oil, and lubricants, would be used when operating construction equipment. The Project would continue to comply with all relevant federal, State, and local statutes and regulations related to transport, use, storage, or disposal of hazardous materials during construction, and all materials designated for disposal would be evaluated for appropriate federal and State hazardous waste criteria. During routine transport and use of equipment, small amounts of fuel and oil could be accidentally released. Mitigation Measure HZ-1 from the 2015 IS/MND would ensure that hazardous materials on site would be stored, labeled, and disposed of in accordance with applicable regulations. Any spoils or other on-site soils that become contaminated by products used by heavy construction equipment (e.g., from a hydraulic fluid leak) would be managed according to applicable federal, state, and local policies/regulations.

Additionally, BMPs 3, 9, 12, 13, 14, 15, 16, and 17 from Chapter 2, *Project Description*, listed below, would further reduce the potential for hazardous materials to cause harm to the public or environment. Therefore, with the implementation of these BMPs and Mitigation Measure HZ-1, the Project would have a ***less-than-significant impact with mitigation*** during construction.

Mitigation Measure HZ-1: Hazardous Material Handling Documentation

During construction, hazardous materials (i.e., fuel, waste oil, solvents, paint, and other hydrocarbon-based products) would be used in quantities that are typical of the construction industry. The Port shall require the contractor to comply with the safety and environmental submittals detailed in Section 01340 of the Port's contracts documents for contractors' submittals. The construction contract documents shall require that these materials be identified in an inventory, that current Safety Data Sheets (SDSs) be available on site, and that the hazardous materials be stored, labeled, and disposed of in accordance with applicable regulations. The contractor shall be held responsible for reporting any release of hazardous materials or other similar substances (in amounts above their reportable quantities).

The Project would implement the following BMPs from Chapter 2, *Project Description*, that would minimize impacts to the public or the environment due to the release of hazardous materials:

- BMP 3: Emergency Spill Plan,
- BMP 9: Preventing Runoff of Materials,
- BMP 12: Containment of Discharge Pollutants,
- BMP 13, 14, and 15: Placement, Containment, and Maintenance of Sanitary Facilities,
- BMP 16: Storage of Hazardous Materials, and
- BMP 17: Appropriate Disposal Facilities.

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 (Less than significant with mitigation)

The 2015 IS/MND concluded with respect to the hazards to the public or environment created by accident conditions and reasonable and foreseeable upset. The impacts could be caused by a number of factors such as refueling of vehicles, construction, and close proximity of seismic work near active fuel pipelines. These impacts would be reduced to a less than significant with the incorporation of mitigation. Mitigation Measures HZ-2: Active Fuel Pipelines Hazards and HZ-3: Contaminated Soils and/or Groundwater were identified to reduce these impacts to a less than significant level.

Potential releases of hazardous materials to the environment through reasonably foreseeable upset and accident conditions could result from the routine use of hazardous materials and/or spills of pipeline during construction. As discussed in response (a) above, Project construction would require the use of certain hazardous materials, such as fuels and oils. Spills of these hazardous materials could result in a significant hazard to the public or environment if not handled properly. However, the use of hazardous materials would comply with all applicable laws and regulations.

In addition, as discussed in response (d) below, the APD Project Site is not located on a hazardous site listed pursuant to Government Code § 65962.5. Construction and maintenance activities associated with the Project modifications would use a minor amount of hazardous materials, such as lubricants, and produce refuse or debris from construction materials. However, the use of hazardous materials would comply with all applicable laws and regulations. With compliance with all applicable laws and regulations and the implementation of applicable BMPs from Chapter 2, *Project Description*, listed below, and Mitigation Measures HZ-2 and HZ-3 from the 2015 IS/MND, potential impacts to the public or environment through accidental release of hazardous materials from pre-existing hazards or construction near fuel lines would be reduced. Impacts with respect to releases from accident conditions or reasonably foreseeable upset would be ***less than significant with mitigation***.

Mitigation Measure HZ-2 Active Fuel Pipeline Hazards:

Prior to performing boring cone penetration tests (CPT) to determine finalize treatment depths and of in-situ soil treatment associated with the Project, the exact locations of the two active fuel pipelines shall be verified. Per Specification Section 02741, maintain at least 5 ft clear distance between CPT penetration locations and pipelines as documented as part of the Contractor's CPT investigation plan. Furthermore, a survey of the existing conditions, an optical survey of the pipelines, and a survey of the background levels of vibration shall be performed before construction begins and monitoring of the pipeline displacement using optical surveying, settlement monitors, or borehole extensometers shall be performed. An optical survey is performed using a robotic survey instrument that measures changes on prisms installed on pipelines.

As a condition and prior to receiving approval to perform Cement Deep Soil Mixing (CDSM) production work, perform two CDSM test sections in accordance with Specification Section 02475 to demonstrate the Contractor can successfully install CDSM to meet the project requirements in an area both with and without active pipelines. The first test section shall be performed at a location of the APD without pipelines. prior to installation of in-situ soil improvement adjacent to the pipelines, to demonstrate that the in-situ soil improvement methods and procedures being used would not damage the pipelines. After receiving approval of the first test section, the second test section shall be performed at a location of the APD Project Site that contains the pipelines to demonstrate that the in-situ soil improvement methods and procedures being used would not damage the pipelines. Pipeline monitoring at both test sections shall be performed at the test sections to demonstrate strains displacement caused by the improvement methods will not damage the pipelines. monitoring of the second CDSM test section shall be completed in accordance with specification Section 02222 Pipeline Protection and Movement Monitoring.

Prior to completing the second test section, a Fuel Line Area Construction Plan and Pipeline Monitoring Plan must be developed and submitted per Specification Section 02222. Following successful completion of the second test section, Contractor must resubmit these work plans with any required adjustments to the workplan prior to commencing on production CDSM work. Pipeline monitoring shall be performed during all CDSM production work in compliance with Specification Section 02222 Pipeline

Protection and Movement Monitoring. Contractor must strictly comply with all Action Trigger Level observations and actions.

The Port, its Contractor, and SFPP, L.P./Kinder Morgan Energy Partners, L.P. shall develop an Action Plan for construction activities near the pipelines and shall monitor in-situ soil treatment adjacent to the active fuel pipelines and provide and respond immediately to shut down the pipelines in the event of a rupture. After construction is complete, a final conditions survey of the pipelines shall be conducted to ensure that the pipelines have not been damaged.

Mitigation Measure HZ-3 Contaminated Soils and or Groundwater:

Previous excavation activities along the APD by Shell Pipeline and the Port have not encountered contaminated soils or groundwater, and there is no record of the pipelines leaking along the APD. However, if contamination is encountered during construction, the Port shall ensure that the contractor's Soil and Groundwater Management Plan has provisions for the handling, storage, treatment, and/or testing and disposal of hazardous materials, contaminated soil, and/or groundwater in accordance with federal, state, and local regulations. The Soil and Groundwater Management Plan is within the safety and environmental submittals detailed in Section 01340 of the Port's contracts documents for contractors' submittals.

The Project would include the following BMPs included in Chapter 2 that would minimize impacts to the public or the environment due to the release of hazardous materials:

- BMP 3: Emergency Spill Plan,
- BMP 8: Stockpile Management,
- BMP 9: Preventing Runoff of Materials,
- BMP 10: Vehicle and Equipment Inspections,
- BMP 11: Equipment Refueling Areas,
- BMP 12: Containment of Discharge Pollutants,
- BMP 13, 14, and 15: Placement, Containment, and Maintenance of Sanitary Facilities,
- BMP 16: Storage of Hazardous Materials, and
- BMP 17: Appropriate Disposal Facilities.

c. Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school (No impact)

The 2015 IS/MND and addenda concluded that there were no impacts on noise resources related to the private airstrip, impairment or physical interference with emergency response or emergency evacuation plans, exposure to wildfire, and the emission of hazards or handling of hazardous waste within one quarter mile of a school.

There are no existing or planned elementary, middle, intermediate or high schools within 0.25 mile of the project site. The nearest school to the NPORD Site is Bay Farms K-8, which is located

1.38 miles west. Therefore, the Project would have ***no impact*** associated with the handling of hazardous materials and hazardous emissions within one quarter mile of a school.

d. Located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, create a significant hazard to the public or the environment (Less than significant)

The 2015 IS/MND concluded that despite the several release sites in the proximity of the project site, the project site itself is not listed on the Cortese list compiled pursuant to Government Code Section 65962.5. Impacts associated with compiled government listings of hazardous materials pursuant to Government Code Section 65962.5 are less than significant.

The Project would not be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5. There were several sites returned within the vicinity of the project site and within the vicinity of the NPORD Site for releases. However, none were active and mandatory clean-ups. There is one voluntary clean up located adjacent to the NPORD Site; however, this site would be untouched by the Project modifications. The proposed fill to be reused at the NPORD Site would be tested for contaminants prior to reuse. If the laboratory analytical results are above Port screening levels to allow for the reuse of soil on-site, the soil would be disposed at an appropriate permitted landfill. Therefore, the Project would not create a substantial hazard to the public or the environment. This impact would be ***less than significant***.

e. Located within an airport land use plan area or, where such a plan has not been adopted, be within 2 miles of a private airport or public airport and result in a safety hazard or excessive noise for people residing or working in the project area (Less than significant)

The 2015 IS/MND concluded there was a less than significant impact with respect to hazards for people residing or working in the Project area for projects located within two miles of an airport.

The Project modifications would include the addition of the NPORD Site, which is Port of Oakland–owned land to the north of the Port of Oakland-owned OAK. The CDSM stabilization techniques and the construction staging areas would be located within the OAK. The Port of Oakland or its contractor would employ a Safety Management Plan to ensure that the potential hazards are managed for the safety and well-being of those working or residing in the area. The Project modifications would not result in excessive permanent noise or safety hazards for people working in the vicinity of the APD Project Site during Project operation as the use of the sites would remain unchanged. The Project would have a ***less-than-significant impact***.

f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan (Less than significant with mitigation)

The 2015 IS/MND and addenda concluded that there were no significant noise impacts, impairment or physical interference with emergency response or emergency evacuation plans, exposure to wildfire, or emission of hazards or handling of hazardous waste within one quarter mile of a school.

The Project modifications would not interfere with current operations at OAK or increase the number of customers or passengers visiting the area and would have no adverse impacts on emergency evacuation. The Project modifications would redirect off-site hauling of excess soil to the NPORD Site, which could result in intermittent delays and slower moving construction vehicles could impact emergency service providers. Mitigation Measure TR-1: Traffic Control Plan would require the preparation and implementation of a traffic control plan, which would reduce possible safety hazards and coordinate with local fire and police departments. With the implementation of Mitigation Measure TR-1, this impact would be ***less than significant with mitigation***.

Mitigation Measure TR-1: Traffic Control Plan

During periods of time when materials are being hauled to and from the NPORD Site, the Port and/or its contractor will prepare and implement a traffic control plan to reduce traffic impacts on local roads, to reduce potential traffic safety hazards with bicyclists with motorists, and ensure adequate access for construction vehicles, as appropriate. The Port and construction contractor will coordinate construction activities with local Fire and Police Departments, as appropriate. The traffic control plan will provide for the appropriate control measures including (but not limited to) barricades, warning signs, speed control devices, and other measures. The traffic control plan may also require flaggers near the work areas.

g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires (No impact)

The 2015 IS/MND and addenda concluded that there were no significant noise impacts, impairment or physical interference with emergency response or emergency evacuation plans, exposure to wildfire, or emission of hazards or handling of hazardous waste within one quarter mile of a school.

The Project modifications would not generate wildfire risks or potentially expose sensitive receptors to pollutant concentrations from a wildfire or uncontrolled spread of a wildfire. Please refer to Section 3.17, “Wildfire,” below for further discussion. The site is not located within a wildlands area and there is no risk of wildfire at the project site. Therefore, there would be ***no impact***.

3.9 HYDROLOGY AND WATER QUALITY

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

e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

3.9.1 Regulatory Setting

Federal Laws, Regulations, and Policies

No updated federal regulations relevant to hydrology and water quality have occurred since the 2015 Final IS/MND.

State Laws, Regulations, and Policies

No updated state regulations relevant to hydrology and water quality have occurred since the 2015 Final IS/MND.

Local Laws, Regulations, and Policies

No updated local regulations relevant to hydrology and water quality have occurred since the 2015 Final IS/MND.

3.9.2 Environmental Setting

The environmental setting of the APD site is identical to the 2015 IS/MND. The NPORD Site is a former land fill and is relatively flat. Stormwater management would consist of off-site municipal gutters and storm drains. Groundwater is expected to vary based on tides and season. The new project elements would not involve withdrawal or recharge of groundwater.

3.9.3 Environmental Impacts and Mitigation Measures

Impact determinations and mitigation measures from the 2015 IS/MND and addenda were reviewed for potential applicability to the Project. Impacts and the associated mitigation measures that may apply to the Project are summarized below.

a. Violate any water quality standards, waste discharge requirements or otherwise substantially degrade water quality (Less than significant with mitigation)

The 2015 IS/MND and addenda concluded a less than significant impact related to water quality. Impacts related to water quality were determined to be less than significant due to the Project's compliance with required regulations, permits, BMPs, and MMs. The 2015 IS/MND included an airport-wide SWPPP and is implementing a sampling and analysis plan for stormwater discharges at the Airport. This SWPPP was developed in accordance with Order 2014-0057-DWQ requirements and is associated with an updated Industrial General Permit NOI filed for OAK.

The Project's remaining construction activities have the potential to temporarily cause erosion, sedimentation, and increased turbidity in water bodies, and thereby affect water quality. In addition, the handling of hazardous materials typically associated with construction activities could result in the accidental release of fluids, such as fuel or oils, or in leaking from vehicles and equipment, which has the potential to decrease water quality.

Excavation and/or installation of geotechnical supports for the dike was originally going to occur up to a depth of approximately 39 feet, CDSM will now be completed to a depth of 43 feet below the top of the APD. As discussed in the 2015 IS/MND, the Airport has a relatively shallow groundwater table, with the potential for groundwater to occur within one foot of the ground surface. In addition, seepage from San Francisco Bay may be present in the dike.

As stated in Chapter 2, *Project Description,* The Project would include the following BMPs that would minimize impacts to water quality:

- BMP 1: Temporary Erosion Control Measures,
- BMP 2: Upland Equipment Staging,
- BMP 3: Emergency Spill Plan,
- BMP 4: Erosion and Sediment Control,
- BMP 5: Placement of Silt Fences or Fiber Rolls,
- BMP 6: Dewatering Plan,
- BMP 7: Removal of Dewatering Sedimentation,
- BMP 8: Stockpile Management,
- BMP 9: Preventing Runoff of Materials,
- BMP 10: Vehicle and Equipment Inspections,
- BMP 11: Equipment Refueling Areas,
- BMP 12: Containment of Discharge Pollutants,
- BMP 13, 14, and 15: Placement, Containment, and Maintenance of sanitary facilities,
- BMP 16: Storage of Hazardous Materials,
- BMP 17: Appropriate Disposal Facilities, and
- BMP 18: Workplan for Avoidance of Wetlands.

In addition, the project-specific SWPPP would include specific BMPs to further address the storage, handling, and disposal of fuel, oils, and other wastes from project construction activities to reduce the potential for pollutants and sediment to enter water bodies.

The 2015 IS/MND would implement Mitigation Measures HZ-1, HZ-2, and HZ-3, described in Section 3.8, "Hazards and Hazardous Materials," which would regulate the use of hazardous materials during construction, provide fuel pipeline monitoring during construction, and ensure appropriate handling of contaminated soils and groundwater if encountered during construction. These measures would reduce the potential impacts to surface and groundwater

quality during construction to less than significant levels. Furthermore, the Port would implement BMPs 20-31 described in Section 3.3, "Air Quality," and listed below, to reduce fugitive dust impacts, and therefore reduce indirect impacts of dust emissions to water quality. With the implementation of Mitigation Measures HZ-1, HZ-2, HZ-3, from Section 3.8, "Hazards and Hazardous Materials," and BMPs 20-31 from Chapter 2, *Project Description*, the Project's impacts to water quality during construction would be less than significant. By complying with Section 401 Water Quality Certification/WDRs monitoring stormwater quality, and implementing mitigation measures listed above, impacts to water quality resulting from the 2015 IS/MND Project would be less than significant.

The Project would include the following BMPs that would minimize impacts to water quality from fugitive dust emissions:

- BMP 20: Equipment Idling Time,
- BMP 21: Renewable Diesel,
- BMP 22: Maintenance of Construction Equipment,
- BMP 23: Alternative Transportation,
- BMP 24: Debris Management,
- BMP 25: Water Exposed Surfaces,
- BMP 26: Cover Haul Materials,
- BMP 27: Remove Daily Trackout,
- BMP 28: Speed Limit for Unpaved Roads ,
- BMP 29: Windspeed Activity Suspension,
- BMP 30: Mandatory Equipment Cleaning, and
- BMP 31: Public Dust Signage.

CDSM and NPORD Site – Location

As discussed in the project description, since the Project approval in 2015, it was determined that seismic improvements to the airport dike would need to utilize an alternate method of reinforcement in addition to three new staging areas and utilizing a material reuse site, instead of disposal at an offsite landfill. The new method, CDSM, would occur within a 0.75-mile stretch at the northern end of the existing 4.5-mile APD footprint identified in the 2015 IS/MND. CDSM is a ground improvement technique that involves blending a cement binder with soil on site to produce a soil-cement zone that has improved properties, such as increased strength, reduced compressibility, and reduced permeability. Using a wet mixing method, which involves pumping a cementitious slurry at low pressure and mixing it with soil using mechanical means. The concrete used would be appropriate for the project's location, adjacent to the seawater in the Bay.

Ground-disturbing activities including sediment and vegetation removal which could result in erosion and the movement of sediment to surface waters downstream from work areas. The movement and transport of soil, sediment and other loose material associated with these

activities could also emit dust which could affect surface waters in the vicinity of work areas. Other related water quality impacts include increased turbidity, water temperature and reduced dissolved oxygen levels in the water column. These ground-disturbing activities have the potential to degrade water quality or violate WDRs established by the San Francisco Bay and Central Coast RWQCBs. Implementation of BMPs 4, 5, and 6 would adequately prevent against erosion and sediment transport during and after sediment removal by installing mechanisms to reduce erosion and sediment prior to the start of ground-disturbing activities, using silt fences, fiber rolls, and other protective measures around the construction area, staging areas, and stockpiles, and, by using sedimentation basins and sediment traps to make sure that discharges to receiving waters are in accordance with the State of California General Permit for Stormwater Discharges Associated with Construction Activity (Construction General Permit). Ground-disturbing maintenance activities in jurisdictional waterways, such as vegetation or sediment removal would occur during the dry season when work sites are dry or water levels are at their lowest and present little risk for sediment erosion and transport. Implementation of a SWPPP would further limit erosion and sediment transport and minimize impacts on water quality.

Project construction would include the potential storage, use, transport, and/or disposal of hazardous materials (e.g., fuels, oils, solvents) for construction equipment. All construction materials and equipment would be stored in designated staging areas. Accidental spills of these materials or improper material disposal could pose a significant risk to water quality. Potentially significant impacts on water quality due to accidental releases of fuels, lubricants, hydraulic fluids, and other chemicals associated with operating equipment would be minimized by implementing the BMPs from Chapter 2, *Project Description*, identified above.

Furthermore, the Project would be required to comply with all applicable federal, state, and local permits, such as the Clean Water Act (CWA) Section 404 Individual Permit (issued by the U.S. Army Corps of Engineers [USACE]), CWA Section 401 Water Quality Certification (issued by the San Francisco Bay RWQCB), and the San Francisco Bay Region Municipal Regional Stormwater NPDES Permit. Adherence to previously mentioned BMPs and permit requirements would prevent potential violations to water quality standards or waste discharge requirements. Potential impacts of the Project modifications would not result in new or substantially more severe impacts to water quality. Therefore, overall impact to water quality would continue to be ***less than significant with mitigation***.

- BMP 4: Erosion and Sediment Control,
- BMP 5: Placement of Silt Fences and Fiber Rolls, and
- BMP 6: Dewatering Plan.

b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge, such that the project may impede sustainable groundwater management of the basin (Less than significant)

The 2015 IS/MND and addenda concluded a less than significant impact related ground water. Impacts related to groundwater were determined to be less than significant due to the fact implementation of the Project would not require the use of groundwater resources during construction or operations. Impacts to groundwater supplies and groundwater recharge from construction and implementation of the 2015 IS/MND Project would be less than significant.

The Project modifications would not have a substantial effect on groundwater resources because the new seismic improvement methodology, alternate excess material management location, and new staging areas would not require the use of groundwater supplies. The new Project elements do not require temporary dewatering. However, as stated in the 2015 IS/MND, construction activities that require excavation could encounter groundwater or bay seepage. In this event, temporary dewatering may be required. Overall, the impact would be ***less than significant***.

c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: (Less than significant)

The 2015 IS/MND and addenda concluded a less than significant impact to water drainage. Impacts related to water drainage were determined to be less than significant due to the fact the Project would not substantially modify the storm drain system or change the amount or quality of runoff entering the system. Although the Project would include engineered installation drainage systems on the inboard side of the dike to collect and control seepage water where installation of a seepage cutoff wall in the dike crest is not feasible, these improvements would not change drainage patterns, and would not change the areas drained by the pump houses serving the Project area. During operations, runoff would continue to be directed to the existing detention basins at the pump houses that serve the Project prior to discharge to San Francisco Bay.

The Project modifications would involve a new seismic improvement technique, new construction staging areas, and a new site to reuse the fill removed from the APD (NPORD Site). The NPORD Site would be graded similarly to the existing condition and would either be topped with non-invasive seed mix or have vegetative stabilization established. The construction staging areas would be returned to pre-project condition after construction and the internal CDSM technique would not alter to the post-project surface condition of the dike as compared to the 2015 IS/MND. The Project would not alter the drainage pattern or create more impervious surfaces. Therefore, project impacts would be ***less than significant***, similar to the 2015 IS/MND.

i. Result in substantial erosion or siltation on- or off-site (Less than significant)

The 2015 IS/MND found that the clearing, grading, and excavation activities during construction could expose soils to erosion and result in sediment discharge to onsite drainages. Impacts resulting from construction activities would be temporary. BMPs, including erosion control measures such as straw wattles, sediment traps, and silt fences, would be implemented during construction in accordance with federal, state, and local requirements, to minimize the potential for erosion or siltation. Because BMPs and erosion control measures would be implemented during construction and the dike would be armored for protection against erosion, the Project would not result in substantial erosion or siltation on or off site. Therefore, the 2015 IS/MND Project's impacts on soil erosion and siltation would be ***less than significant***.

The new project elements would not alter drainage patterns and is not anticipated to result in significant erosion or siltation on- or off-site. The Project would continue to implement BMPs 1, 2, 4, 5, 6, 7, and 8, listed above, including erosion control measures. Therefore, impacts would be ***less than significant***.

- BMP 1: Temporary Erosion Control Measures,
- BMP 2: Upland Equipment Staging,
- BMP 4: Erosion and Sediment Control,
- BMP 5: Placement of Silt Fences and Fiber Rolls,
- BMP 6: Dewatering Plan,
- BMP 7: Removal of Dewatering Sedimentation, and
- BMP 8: Stockpile Management.

ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite (Less than significant)

The 2015 IS/MND and addenda concluded a less than significant impact related surface runoff. Impacts related to surface runoff were determined to be less than significant due to the fact the Project would not alter the existing drainage patterns or increase the rate or amount of surface runoff from the site. The Project would provide protection from a 100-year flood event and would therefore result in beneficial impacts associated with flooding. Therefore, the 2015 IS/MND Project's impacts associated with flooding from surface runoff would be less than significant.

The Project modifications would not reduce the 2015 Project's objective to reduce flood risk at OAK.

Therefore, impacts would be ***less than significant***.

iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff (Less than significant)

The 2015 IS/MND and addenda concluded a less than significant impact related surface runoff. Impacts related to surface runoff were determined to be less than significant due to the contractor's implementation of BMPs, implementation of Mitigation Measure AQ-1 from the 2015 IS/MND (BMPs 20-31 of this supplemental IS/MND) and Mitigation Measures HZ-1 through HZ-3, and required water permits. Because the Project would not introduce new operational activities, no new permanent sources of pollutants in runoff water would occur. Thus the 2015 IS/MND found that, with implementation of mitigation measures listed above, construction-related impacts from additional sources of polluted runoff would be reduced to less than significant levels.

The Project modifications would support the work completed in Phase 1, which is intended to reduce the risk of flooding. The inclusion of the CDSM method for seismic control, the construction staging areas, and the reuse of the fill material on the NPORD Site would not increase the amount of runoff or exceed the existing system capacity. The new structures are proposed and the NPORD Site would be graded to be similar to existing conditions. The NPORD Site would be topped with non-invasive seed mix or asphalt grinding, neither of which would substantially increase impervious surface on the site. Therefore, the impacts associated with the Project modifications would have a ***less-than-significant impact***.

iv. Impede or redirect flood flows (No impact)

The 2015 IS/MND found that the Project would have no impact on flood flows because the purpose of the 2015 Project is to improve the dike to provide protection against a 100-year flood event, consistent with FEMA requirements, and to reduce the susceptibility of the APD from overtopping or deformation resulting from seismic events. This Project would result in improvements to the existing dike and would not place structures in the 100-year flood hazard areas that would impede or redirect flood flows. Therefore, it would have no impact.

The Project modifications would include a change in the seismic improvement method, new temporary construction staging areas during construction, and the reuse of fill on the undeveloped NPORD Site. The modifications would not include the construction of new structures, nor would it result in a substantial increase in runoff that would overcome existing stormwater capacity. Thus, the Project modifications would have ***no impact.***

d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation (Less than significant)

The 2015 IS/MND and addenda concluded a less than significant impact related to flood hazards. Impacts related to flood hazards were determined to be less than significant due to the fact these events are uncommon to occur at the Project site. Seiches are not historically common occurrences in the San Francisco Bay Area. Additionally, damaging tsunamis are not common along the California coast or in San Francisco Bay.

The Project would not introduce new operational activities that would increase the number of workers or visitors, nor would it involve construction of structures. Therefore, the Project would not increase exposure, or risk of loss, injury, or death from inundation by seiche or tsunami and impacts associated with risk involving inundation by seiche or tsunami would be ***less than significant***.

e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan (Less than significant)

The Appendix G checklist has changed since the preparation of the 2015 IS/MND and did not previously explicitly reference compliance with a water quality control plan or sustainable groundwater management plan. However, with regards to the Project's potential conflict with a sustainable ground water management plan, the 2015 IS/MND did evaluate the potential to deplete groundwater supplies or interfere with groundwater recharge. The IS/MND concluded that the project would have a less than significant impact on groundwater supply and recharge.

As earlier mentioned, APD Project construction and operation would comply with local, state, and federal regulations, including the San Francisco Bay Region Municipal Regional Stormwater NPDES Permit, NPDES Construction General Permit, the Airport-wide SWPPP, and the BCDC Permit. Additionally, BMPs would be implemented in order to adhere to permit regulations during construction activities. Implementation of these BMPs would support the attainment of water quality standards, including the preservation of designated beneficial uses of surface and groundwater, as outlined in the Water Quality Control Plan for the San Francisco Bay Basin. The runoff from construction activities must also adhere to the relevant water quality objectives set for the area. The NPDES permits mentioned earlier mandate that stormwater discharges must not contain pollutants that exceed applicable water quality objectives or standards, which include designated beneficial uses. The Project would not interfere with the execution of a water quality control plan.

The new project elements would not require dewatering and are not expected to affect groundwater. The operational activities resulting from the Project are anticipated to remain unchanged from existing conditions as impervious earth fill materials, such as low-plasticity clays, clayey sands, and clayey gravels, suitable for use as a sub-base for the gravel-surfaced access road, would be less permeable to infiltration compared to the existing sand soils. Similarly, soil enhancements implemented to reinforce the dike, such as soil-cement, seepage cutoff walls, and stone columns, would contribute to reduced permeability. Given the surrounding areas' permeability, construction activities are not expected to impede groundwater recharge.

Overall, the Project modifications would not obstruct implementation of water quality control plan or sustainable groundwater management plan as the project would comply with all regulations and is not anticipated to change beneficial uses, significantly impact water quality, or impact groundwater, as discussed above. The Project would also comply with BMPs 1-13, 16, and 18 from Chapter 2, listed below. This would be a ***less-than-significant impact***. The Project would implement the following BMPs from Chapter 2, *Project Description*, to further reduce impacts to water quality and groundwater:

- BMP 1: Temporary Erosion Control Measures,
- BMP 2: Upland Equipment Staging,
- BMP 3: Emergency Spill Plan,
- BMP 4: Erosion and Sediment Control,
- BMP 5: Placement of Silt Fences or Fiber Rolls,
- BMP 6: Dewatering Plan,
- BMP 7: Removal of Dewatering Sedimentation,
- BMP 8 Stockpile Management,
- BMP 9: Preventing Runoff of Materials,
- BMP 10: Vehicle and Equipment Inspections,
- BMP 11:Equipment Refueling Areas,
- BMP 12: Containment of Discharge Pollutants,

- BMP 13, 14, and 15: Placement, Containment, and Maintenance of sanitary facilities,
- BMP 16: Storage of Hazardous Materials,
- BMP 17: Appropriate Disposal Facilities, and
- BMP 18: Workplan for Avoidance of Wetlands.

3.10 LAND USE AND PLANNING

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

3.10.1 Regulatory Setting

Federal Laws, Regulations, and Policies

No updated federal regulations relevant to land use and planning have occurred since the 2015 Final IS/MND.

State Laws, Regulations, and Policies

No updated state regulations relevant to land use and planning have occurred since the 2015 Final IS/MND.

Regional and Local Laws, Regulations, and Policies

<u>San Francisco Bay Conservation and Development Commission's (BCDC's) San Francisco Bay Plan</u>

The BCDC's Bay Plan was recently updated in 2019 to include two amendments to the original plan regarding Fill for Habitat and Environmental Justice and Social Equity (BCDC 2024). The following policies about land use are relevant to the Project:

- Further expansion into San Francisco Bay is permitted only if a clear need is shown by a regional airport system study.
- Runway approach and takeoff areas are to be kept clear of tall structures and incompatible uses.
- Bay Trail is to be completed along an inland route.

- New shoreline protection projects and the maintenance or reconstruction of existing projects and uses should be authorized if:
  - The project is necessary to provide flood or erosion protection for:
    - Existing development, use, or infrastructure; or
    - Proposed development, use, or infrastructure that is consistent with other Bay Plan policies;
  - The type of the protective structure is appropriate for the project site, the uses to be protected, and the erosion and flooding conditions at the site;
  - The project is properly engineered to provide erosion control and flood protection for the expected life of the project, based on a 100-year flood event that takes future sea-level rise into account;
  - The project is properly designed and constructed to prevent significant impediments to physical and visual public access; and
  - The protection is integrated with current or planned adjacent shoreline protection measures.

3.10.2 Environmental Setting

The APD Project Site where the additional seismic improvements are to take place is located on Oakland Airport Property. The APD Project is located within the "General Industry and Transportation" General Plan land use classification established by the Land Use and Transportation Element. The General Industry and Transportation classification is intended to recognize, preserve, and enhance areas of the city for a wide variety of businesses and related establishments that may have the potential to create offsite impacts such as noise, light/glare, truck traffic, and odor. General Industry and Transportation areas are characterized by sites with freeway, rail, seaport, and/or airport access. There is a small parcel of land at the east end of the APD footprint that is within the City of Oakland and is designated as open space/recreation and zoned as industrial/general (Alameda County n.d.). The location of the proposed seismic improvement activities, as well as the proposed construction staging areas, are within the Airport Property.

The NPORD Site is located within the City of Oakland, approximately 1.7 miles northeast of the APD Project Site. NPORD Site is also zoned as general industry/transportation and is within the Airport/Gateway Showcase District, according to the City of Oakland General Plan (City of Oakland 2023). The property was previously used as a landfill and is now vacant (Cal Recycle n.d.). Adjacent land uses include the closed Spunkmeyer soccer field to the north, the Corica Park Golf Course complex to the east, Sandy Beach to the west, and the land associated with various airport uses to the south.

3.10.3 Environmental Impacts and Mitigation Measures

Impact determinations and mitigation measures from the 2015 IS/MND and addenda were reviewed in light of the proposed Project modifications. Impacts and the associated mitigation measures that apply to the Project are summarized below.

a. Physically divide an established community (No impact)

The 2015 IS/MND and addenda concluded that there would be no impact related to physically dividing an established community because the Project improved the existing APD to protect the Airport from a 100-year flood, enhanced the resistance of the APD to seismic activity, and because the work would not take place within an established community; the nearest established communities to the APD Project Site are the City of Alameda, City of Oakland, and City of San Leandro, which are separated from the Project site by Harbor Bay Parkway, Doolittle Drive, and Davis Street, as well as by airport property.

Construction of the Project modifications includes the temporary use of construction staging areas within the 2015 IS/MND Project footprint. Due to their proximity to the APD which was previously found to have no impact to established communities, and because use of the construction staging areas would be limited to during the construction period, it is expected that they would have no impact on surrounding established communities. The parcel where the NPORD Site is located is owned by the Port of Oakland and is currently vacant and undeveloped. While the parcel is located within the City of Oakland, it has historically been used as a landfill on and off since 1947 and is zoned as industrial land. The movement of fill from the APD Project Site to the NPORD Site would not result in a change in land uses. Thus, the Project would have ***no impact*** on established communities.

b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect (Less than significant with mitigation)

The 2015 IS/MND and addenda concluded that impacts related to conflicts with any land use plan, policy, or regulation would be reduced to less-than-significant levels by the implementation of mitigation. Mitigation Measure RE-1: Bay Trail Detour Plan and Access from the 2015 IS/MND was identified to reduce potential impacts related to the temporary closure of the Bay Trail at the eastern end of the APD during construction. Therefore, the impact would be less than significant with mitigation.

> **Mitigation Measure RE-1: Bay Trail Detour Plan and Access**
>
> In the event the Bay Trail would need to be closed during construction, the Contractor, in coordination with BCDC and the City of Alameda, shall identify a temporary alternate route for the Bay Trail. Temporary signage shall be installed to direct trail users along the alternate route. In the event that construction activities would only require crossing the Bay Trail and there is determined to be no need for the trail closure, the Contractor will provide a flag person stationed at the Bay Trail crossing to control public access and construction traffic crossing the trail.

The Bay Trail is currently open to public access on a small portion of the eastern end of the APD site. While the 2015 IS/MND concluded that there could be a potentially significant impact related to closure of the Bay Trail at the eastern end of the APD during the construction period, due to the updated Project area, the eastern end of the APD would not be impacted by construction of the updated APD Project. However, if chosen, the proposed alternate haul route could potentially encroach upon the Bay Trail at the western end of the APD. The implementation of Mitigation Measure RE-1 would ensure impacts related to closure of the trail

and current public access at the western end of the APD would be less than significant. The implementation of Mitigation Measure RE-1 would address potential conflicts with existing land uses, during the temporary closure of the Bay Trail during the construction period.

As previously stated, the NPORD Site is within the City of Oakland and is zoned for industrial/transportation uses. The proposed hauling and fill placement associated with seismic activities at the APD Project Site would not change the existing land use. Construction of the new project elements are not anticipated to interfere with the Bay Trail at the eastern end of the APD. However, if the proposed alternate haul route is utilized by the contractor the contractor would implement Mitigation Measure RE-1 and would be responsible for all permitting activities with BCDC and the City of Alameda. As a result, there would be no impact regarding land use conflicts at the NPORD Site.

Implementation of Mitigation Measure RE-1 would minimize the potential for land use conflicts at the APD Project Site to a level that is ***less than significant with mitigation***.

3.11 NOISE

Criteria	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project result in:				
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b. Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c. For a project located within the vicinity of a private airstrip or an airport land use plan area, or, where such a plan has not been adopted, within 2 miles of a public airport or public-use airport, would the project expose people residing or working in the project site to excessive noise levels?	☐	☐	☒	☐

3.11.1 Overview of Noise and Vibration Concepts and Terminology

Noise

Sound is characterized by various parameters, including the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). In particular, the sound pressure level is the most common descriptor used to characterize the loudness of an ambient sound level, or sound intensity. The decibel (dB) scale is used to quantify sound intensity. Because sound pressure can vary enormously within the range of human hearing, a logarithmic scale is used to keep sound intensity numbers at a convenient and manageable level. The human ear is not equally sensitive to all frequencies in the spectrum, so noise measurements are weighted more heavily for frequencies to which humans are sensitive, creating the A-weighted decibel (dBA) scale.

Different types of measurements are used to characterize the time-varying nature of sound. Below are brief definitions of these measurements and other terminology used in this chapter.

dB is a measure of sound on a logarithmic scale that indicates the squared ratio of sound pressure amplitude to a reference sound pressure amplitude. The reference pressure is 20 micro-pascals.

dBA is an overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.

Maximum sound level (Lmax) is the maximum sound level measured during a given measurement period.

Minimum sound level (Lmin) is the minimum sound level measured during a given measurement period.

Equivalent sound level (Leq) is the equivalent steady-state sound level that, in a given period, would contain the same acoustical energy as a time-varying sound level during that same period.

Vibration Velocity Levels (L v) or (VdB) is the overall velocity of the vibration levels in decibels.

Day-night sound level (Ldn) is the energy average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the A-weighted sound levels during the period from 10:00 p.m. to 7:00 a.m. (typical sleeping hours). This weighting adjustment reflects the elevated sensitivity of individuals to ambient sound during nighttime hours.

Community noise equivalent level (CNEL) is the energy average of the A-weighted sound levels during a 24-hour period, with 5 dB added to the A-weighted sound levels between 7:00 p.m. and 10:00 p.m. and 10 dB added to the A-weighted sound levels between 10:00 p.m. and 7:00 a.m.

3.11.2 Regulatory Setting

Federal Laws, Regulations, and Policies

No updated federal regulations relevant to noise have occurred since the 2015 Final IS/MND.

State Laws, Regulations, and Policies

No updated state regulations relevant to noise have occurred since the 2015 Final IS/MND.

Local Laws, Regulations, and Policies

No updated local regulations relevant to noise have occurred since the 2015 Final IS/MND.

3.11.3 Environmental Setting

The Project is located at OAK and is adjacent to the San Francisco Bay. The closest sensitive receptors to the NPORD Site are the soccer fields located next to the NPORD Site at 200 feet from the center of the NPORD Site and the Corica Park Golf Course complex located across the street and 500 meters from the center of the NPORD Site. Currently, the soccer field is closed and inaccessible for recreational activities. In addition, commercial property along Harbor Bay

Parkway and the Bay Trail are located approximately 400 feet, respectively, from the Airport Perimeter Dike site.

3.11.4 Discussion of Checklist Reponses

The following sections provide an analysis of impacts related to noise previously analyzed within the ISMND that would result from Project implementation. Impacts and the associated mitigation measures that may apply to the Project are summarized below.

The following analysis is related to the changes to the project description since the 2015 IS/MND and addendum.

Methods

Noise Analysis

Construction and operation noise sources would include various pieces of heavy equipment and other machinery. To establish an approximate estimate of noise levels, the FTA recommends that the noisiest two pieces of equipment be used to analyze the anticipated noise levels at sensitive receptors, assuming the following:

- full power operation for a full 1 hour,
- there are no obstructions to the noise travel paths,
- typical noise levels from construction equipment, and
- both pieces of equipment operate at the center of the work area.

Using these assumptions, the noise levels at specific distances can be obtained using the following equation:

$$L_{eq}(equip) = EL_{50ft} - 20log_{10}(D/50)$$

Where:

L_{eq} (equip) = the noise emission level at the receiver at distance D over 1 hour

EL_{50ft} = noise emission level of a particular piece of equipment at a reference distance of 50 feet

D = the distance from the receiver to the piece of equipment, in feet

To add the two noisiest pieces of equipment together, the following equation applies:

$$L_{total} = 10\ log_{10}(10^{\frac{L1}{10}} + 10^{\frac{L2}{10}})$$

Where:

L_{total} = the noise emission level of two pieces of equipment combined

L_1 = the noise emission level of equipment type 1

L_2 = the noise emission level of equipment type 2

These equations were used to compare proposed construction and operation activities to the noise sound levels established by the FTA of 100 dBA. The following assumptions were used to evaluate noise effects of proposed construction and operation activities:

- While the above calculations apply to construction and operation equipment, truck traffic to and from the work sites could also create additional noise for residences and commercial establishments located along haul routes.
- Using typical equipment noise emission levels from Table 12-1 of FTA's *Transit Noise and Vibration Impact Assessment* (FTA 2018) and Table 9.1 of FHWA's *Construction Noise Handbook* (Federal Highway Administration [FHWA] 2019), the noisiest piece of equipment used for any construction activity would be a drill rig and dozer at the APD Project Site and a dozer and graders at the NPORD Site,. Apart from the drill rig, many types of equipment that will be used for the proposed program's construction activities have the similar noise level (85 dBA at 50 feet.).
- It was assumed there will be no noise generating equipment used for operation.
- See Appendix F for detailed calculations.

Vibration Analysis

Construction activity associated with the operation of heavy equipment may generate localized groundborne vibration and noise. Vibration from ground-disturbing construction activity is typically below the threshold of perception when the activity is more than 50 feet from the receiver. Based on methods described by FTA (2018), the vibration levels at specific distances can be calculated using the following equation:

$$L_{eq}(equip) = EL_{50ft} - 20log_{10}(D/50)$$

Using the most sensitive building types and land use categories, the PPV would have to exceed 0.12 inch per second and the L_{eq} would have to exceed 65 VdB to result in any building damage or vibrational disturbances. For industrial buildings, the PPV would have to exceed 0.5 inch per second to result in any building damage or vibrational disturbances (FTA 2018). The typical annoyance level for single-family residences is 80 VdB.

Potential vibration from the proposed project was evaluated using the following assumptions:

- Using typical equipment noise emission levels from Table 12-2 of FTA's *Transit Noise and Vibration Impact Assessment* (FTA 2018), the pieces of equipment that would produce the greatest vibration would be a bulldozer. For construction activities that don't include either of these equipment items, loaded trucks would be another possible source of vibration.

a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies (Less than significant)

The 2015 IS/MND and addenda concluded there was a less than significant impact with respect to the generation of noise in excess of standards established in the local general plan or noise ordinance. Noise generated by construction would be limited to the duration of improvements and would have a less than significant impact with respect to temporary ambient noise increases. It was anticipated that noise levels would be at approximately 64 dBA at the City of Alameda commercial land uses, which is well below the FTA standard of 100 dBA. At the Bay Trail segment locations or Metropolitan Golf Links, it is expected construction noise would be 70 dBA. This level of construction noise would be within the allowable limit per the City of Oakland's regulations for commercial areas.

The Project modifications would not substantially increase in ambient noise level in the vicinity of the Project Site as the majority of noise would be generated during construction. Construction noise would be limited to Monday through Friday during daytime hours 7:00 am to 5:00 pm, with some anticipated nighttime and weekend work. Construction would take place over a period of 29 months and is anticipated to begin in summer of 2024.

Noise impacts resulting from construction depend on the noise generated by various pieces of construction equipment, the timing and duration of noise-generating activities, and the distance between construction noise sources and noise-sensitive receptors. Construction noise impacts primarily occur when construction activities occur during noise-sensitive times of the day (early morning, evening, and nighttime hours), when construction occurs in areas immediately adjoining noise-sensitive land uses, or when construction occurs over an extended period (e.g., longer than one year). The noise generated by the Project modifications would be limited to construction related noise from construction equipment, hauling trips to the NPORD Site, and noise generated by the CDSM process. The City of Oakland Planning Code outlines noise levels for commercial areas between 7:00 am and 7:00 pm, Monday through Friday, for noise produced over periods of time longer than 10 days as 70 dBA. However, the receptors are within the jurisdiction of the cities of San Leandro and Alameda which exempt noise from construction during allowable construction hours. Given this, the federal threshold for commercial areas would be applied which is 100 dBA (FTA, 2018).

During the construction of the Project, noise from construction activities would temporarily add to the noise environment in the Project vicinity. As shown in Table 3.11-1, activities involved in construction would generate noise levels above 100 dBA 29.5 feet from the project work area and noise levels above 75 dBA 525 feet from the project work area. At the nearest sensitive receptors to the APD Project Site, the noise levels would be 77.4 dBA and at the NPORD Site

would be 76 dBA at the soccer fields and 68 dBA at the Corica Park Golf Course. These noise estimates were based on the two nosiest pieces of equipment operating at the center of the project site. For the APD Project Site, the equipment was drilling rig (95 dBA at 50 feet) and dozers (85 dBA at 50 feet). For the NPORD Site, the equipment was dozer (85 dBA at 50 feet) and graders (85 dBA at 50 feet).

Table 3.11-1. Construction Equipment Noise Levels at Nearby Sensitive Receptors

Sensitive Receptor	Distance to Center of Project Site (feet)	Equipment Used	Predicted Construction Noise Levels (dBA)	Significance Threshold (dBA)	Significant
Commercial Property along Harbor Bay Parkway	400	Drill Rig, Dozer	77.4	100	No
Spunkmeyer Soccer Fields	200	Dozer, Grader	76.0	100	No
Corica Park Golf Course	500	Dozer, Grader	68.0	100	No

Source: FTA, 2018; Appendix F

Multiple types of equipment (e.g., trucks, drills, compactors) that would be used for construction of the Project. The equipment utilized during CDSM would likely include, but is not limited to, a Soil Mix Drill Rig and compactors. The CDSM equipment would result in a slight increase in noise levels compared to the previous noise levels reported in the IS/MND due to the addition of drill rigs. The noise levels at the NPORD Site were not previously evaluated. Even though there is an increase in noise levels compared to the previously reported noise levels, the noise levels would remain below the significance threshold of 100 dBA and would not result in a substantial change in the severity.

Current ambient noise at this location includes traffic and noise from OAK operations, so hauling trucks transporting fill would not generate a significant increase in ambient noise levels. Furthermore, construction would be for 29 months and would be, isolated to the perimeter of Runway 12-30, and dump truck trips on hauling roots for material disposal at the NPORD Site during daytime working hours. Trips to the NPORD Site or offsite hauling to a landfill would generate some noise along the hauling routes. There are approximately 40 to 50 haul trips expected per day which would be limited to trips leaving the APD Project Site to the NPORD Site or offsite landfill along Harbor Bay Parkway and returning to the project site using Ron Cowan Parkway. Upon completion of construction, the operations within the Project area would be nearly identical to existing conditions, with some periodic maintenance required, and would not permanently change the ambient noise profile of the area or violate in excess existing noise standards. Thus, impacts from noise generated by the construction would be ***less than significant***.

b. Exposure of persons to, or generation of, excessive ground borne vibration or ground borne noise levels (Less than significant)

The exposure of persons to the generation of excessive ground borne vibration or ground borne noise levels is less than significant given that construction would produce approximately vibrations less than the human perception threshold at 42.8 feet which is closer than any of the sensitive receptors.

Common construction activities and equipment may expose people to excessive groundborne vibration or groundborne noise. Construction vibration impacts include human annoyance and building structural damage. Human annoyance occurs when construction vibrations rise significantly above the threshold of perception. Caltrans provides guidance regarding construction-related groundborne vibration (Caltrans, 2020). The Caltrans manual states that vibrations with a peak particle velocity (PPV) of 0.1 inches/second begin to cause irritation. Larger, heavier construction vehicles have a PPV of 0.089 inches/second or less at a distance of 25 feet (Caltrans, 2020). The vibration would be below the damage threshold for sensitive buildings at 20.5 feet and below the human perception level at 42.8 feet in both project sites. There are no sensitive buildings or sensitive receptors located within this distance to the project sites. Groundborne vibrations typically reduce in effect over short distances. Thus, potential impacts associated with the Project would be localized and temporary during the construction period and would not substantially impact nearby residences or other sensitive receptors. Construction of the Project would require the use of heavier construction equipment, specifically excavators, dozers, and trucks. The Project would not require pile driving, blasting, or other special construction techniques associated with greater groundborne vibration. Therefore, the expected generation of groundborne vibration associated with the Project would remain below the 80VdB annoyance threshold. Accordingly, the Project would have a less than significant impact related to vibration during construction or operation. Impacts would be ***less than significant***.

c. For a project located within the vicinity of a private airstrip or an airport land use plan area, or, where such a plan has not been adopted, within 2 miles of a public airport or public-use airport, would the project expose people residing or working in the project site to excessive noise levels (No impact)

The 2015 IS/MND and addenda concluded that there would be no impacts related to a substantial permanent increase in ambient noise levels and is not located within the vicinity of a private airstrip. The Project is located within an airport land use plan but would have a less than significant impact to people working in and residing in the area given the temporary nature of the noise.

The APD site is located within the OAK and the NPORD Site is within close proximity. There are no other airports, either public or private, within the vicinity of the Project site. Implementation of the Project would not increase exposure of sensitive receptors to excessive noise levels associated with the airport operations. Thus, the Project would have ***no impact***.

3.12 PUBLIC SERVICES

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

3.12.1 Regulatory Setting

Federal Laws, Regulations, and Policies

No updated federal regulations relevant to noise have occurred since the 2015 Final IS/MND.

State Laws, Regulations, and Policies

No updated state regulations relevant to noise have occurred since the 2015 Final IS/MND.

Local Laws, Regulations, and Policies

City of Oakland General Plan, Land Use and Transportation Element

The City of Oakland General Plan, Land Use and Transportation Element includes the following policies (City of Oakland 2023):

Policy N12.2 – Developing Public Service Facilities: The development of public facilities and staffing of safety-related services, such as fire stations, should be sequenced and times to provide a balance between land use and population growth, and public services at all times.

City of Oakland General Plan, Safety Element

The City of Oakland General Plan, Land Use and Transportation Element includes the following policies relevant to public services with regard to the Project (City of Oakland 2023a):

SAF-1.1 - Seismic Hazards: Develop and continue to enforce and carry out regulations and programs to reduce seismic hazards and hazards from seismically triggered phenomena. Prioritize programs in areas of highest seismic risk and seismic vulnerability.

SAF-8.1 - Emergency Response: Maintain and enhance the City's capacity for emergency response, fire prevention, and firefighting.

SAF-8.5 - Cohesive Evacuation Routes Network: Ensure the evacuation routes network is interconnected with adequate capacity and reflects ability to evacuate for multiple threats.

3.12.2 Environmental Setting

There are several public services within the vicinity of the APD Project Site.

Fire and Police Protection

Fire protection at the Oakland Airport is provided by the City of Oakland. The closest fire station to the APD Project Site is Fire Station 22, which is located on Airport property, north of the intersection of Taxiways B and T in South Field. The Airport sits within Oakland Police District 5 (City of Oakland n.d.); however, police protection at the Airport is provided by the Alameda County Sheriff's office located 2 miles southeast at 8980 Earhart Rd, Oakland, CA.

The NPORD Site, located within the City of Oakland, is also mainly served by the City of Oakland Police and Fire departments. The closest fire station is Oakland Fire Station 27, which is located approximately 2.3 miles southwest at 8501 Pardee Drive, Oakland, CA 94621, and the closest police station is the Alameda County Sheriff's office.

Schools

The closest school in the vicinity of the entire Project area is Bay Farm School, which is located approximately 1.8 miles west of the NPORD Site at 200 Aughinbaugh Way, Alameda, CA 94502.

Parks

There are several parks/recreational facilities in the vicinity of the Project. The Bay Trail, which extends to San Leandro Slough, is located at the eastern end of the APD Project footprint. Additionally, there is an unpaved public access area with benches that connects to the Bay Trail that is located at the west end of the APD. The Spunkmeyer soccer field is also located immediately north of the NPORD Site at 970 Harbor Bay Parkway, the Corica Park Golf Course complex is located west of the NPORD Site at 1 Clubhouse Memorial Road, on the other side of Harbor Bay Parkway, and the Martin Luther King Jr. Regional Shoreline is located approximately 0.7 mile east at 1 Swan Way. The Metropolitan Golf Links, Oyster Bay Regional Shoreline, Godfrey Park, and Harrington Park are also all within 2.5 miles of the APD Project Site.

3.12.3 Environmental Impacts and Mitigation Measures

Impact determinations and mitigation measures from the 2015 IS/MND and addenda were reviewed for potential applicability to the Project. Impacts and the associated mitigation measures that may apply to the Project are summarized below.

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

i, ii. Fire and Police Protection (Less than significant with mitigation)

The 2015 IS/MND and addenda concluded that the Project would have no impact related to fire and police protection services because the improvements to the APD would not change existing Airport operations. Additionally, the 2015 IS/MND concluded that the Project would improve the existing perimeter and thus reduce the demand for emergency response in the event of a flood or earthquake.

No components of the Project would require road closures. However, it is possible that construction equipment maneuvering, or slower moving construction vehicles may result in delays that could impact emergency service providers, particularly in the vicinity of the NPORD Site. Mitigation Measure TR-1 from Section 3.14, "Transportation and Traffic," would require the preparation and implementation of a traffic control plan, which would reduce possible safety hazards and require coordination with local fire and police departments. With the implementation of Mitigation Measure TR-1, this impact would be ***less than significant with mitigation***.

iii. Schools (No impact)

The 2015 IS/MND and addenda concluded that the Project would have no impact related to schools because it would not lead to population growth and would therefore not create an increased need for school facilities.

As outlined in the 2015 IS/MND, Project construction activities would not result in population growth and would thus not lead to an increased demand for educational facilities. Thus, there would be ***no impact*** on schools as a result of the Project, similar to the 2015 IS/MND.

iv. Parks (Less than significant)

The 2015 IS/MND and addenda concluded that the Project would have a less-than-significant impact on parks because the public access to the Bay Trail at the western end of the APD would be temporarily closed for the duration of the construction period. The 2015 IS/MND stated that the presence and availability of other parks in the vicinity, as well as the fact that the closure was only temporary, meant that the impact was considered less than significant.

The Project would not involve the construction of new parks or recreational facilities, nor displace users of any existing parks or recreational facilities; however, the 2015 IS/MND concluded that there would be a less-than-significant impact to parks as a result of the temporary closure of the public access area at the western-most end of the APD. The newly proposed seismic improvement activities also fall within the previously analyzed APD Project Site and could also temporarily impact public access at this location to a less than significant level.

Additionally, the NPORD Site would require up to 50 trips per day associated with hauling of excess soils from the APD Project Site during the slope and dike restoration phase of construction. Although access to Spunkmeyer soccer field located immediately north of the NPORD Site is not available, if it were to be opened during Project construction, vehicular traffic associated with construction could impede the ability of patrons to visit the recreation facility which could potentially cause a significant impact. The implementation of Mitigation Measure TR-1 would require the contractor(s) to create a traffic plan and would reduce the likelihood of impacts to parks and recreational facilities. This impact would be ***less than significant with mitigation***, similar to the 2015 IS/MND.

v. Other Public Facilities (No impact)

The 2015 Final IS/MND and addenda concluded that the Project would have no impact on any other public facilities in the Project vicinity.

As previously stated, activities associated with both construction and operations of the Project would not increase population that could lead to increased demand for public facilities and will not affect access to any surrounding public facilities. It is anticipated that there will be ***no impact*** on other public facilities similar to the 2015 IS/MND.

3.13 RECREATION

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

3.13.1 Regulatory Setting

Federal Laws, Regulations, and Policies

No updated federal regulations relevant to recreation have occurred since the 2015 Final IS/MND.

State Laws, Regulations, and Policies

No updated state regulations relevant to recreation have occurred since the 2015 Final IS/MND.

Regional and Local Laws, Regulations, and Policies

BCDC's San Francisco Bay Plan

The San Francisco Bay Conservation and Development Commission's (BCDC's) San Francisco Bay Plan (Bay Plan) includes findings and policies pertinent to public access and recreation around the Bay. Bay Plan policies relevant to recreational uses in the Bayside portion of the program area include the following:

Recreation Policy 1. Diverse and accessible water-oriented recreational facilities, such as marinas, launch ramps, beaches, and fishing piers, should be provided to meet the needs of a growing and diversifying population, and should be well distributed around the Bay and improved to accommodate a broad range of water-oriented recreational activities for people of all races, cultures, ages and income levels. Periodic assessments of water-oriented recreational needs that forecast demand into the future and reflect changing recreational preferences should be made to ensure that sufficient, appropriate water-oriented recreational facilities are

provided around the Bay. Because there is no practical estimate of the acreage needed on the shoreline of the Bay, waterfront parks should be provided wherever possible.

Public Access Policy 10. Access to and along the waterfront should be provided by walkways, trails, or other appropriate means and connect to the nearest public thoroughfare where convenient parking or public transportation may be available. Diverse and interesting public access experiences should be provided which would encourage users to remain in the designated access areas to avoid or minimize potential adverse effects on wildlife and their habitat.

City of Oakland General Plan, Open Space, Conservation, and Recreation (OSCAR) Element

The City of Oakland General Plan, OSCAR Element includes the following policy relevant to land use with regard to the Project (City of Oakland 2023):

Policy OS-7.2 – Dedication of Shoreline Public Access: Support the BCDC requirements which mandate that all new shoreline development designate the water's edge as publicly accessible open space where safety and security are not compromised, and where access can be achieved without interfering with waterfront industrial and maritime uses.

3.13.2 Environmental Setting

There are several recreational facilities in the vicinity of the APD where the seismic improvements are proposed to take place. The Bay Trail is located at the eastern end of the APD footprint, and an unpaved public access area with benches that connects to the Bay Trail is located at the west end. The Bay Trail on the eastern side extends all the way to San Leandro Slough by way of the Bill Lockyer Bay Trail Bridge. The NPORD Site is located approximately 1.7 miles northeast of the APD site and is immediately south of Spunkmeyer Field. The Corica Park Golf Course complex is located west of the NPORD Site, on the other side of Harbor Bay Parkway. Additional recreational facilities within the vicinity of the APD Project Site include Metropolitan Golf Links, Oyster Bay Regional Shoreline, Godfrey Park, and Harrington Park.

3.13.3 Environmental Impacts and Mitigation Measures

Impact determinations and mitigation measures from the 2015 IS/MND and addenda were reviewed for potential applicability to the Project. Impacts and the associated mitigation measures that may apply to the Project are summarized below.

a. Increase use of existing parks or recreational facilities (Less than significant)

The 2015 IS/MND and addenda concluded no impact related to an increase in the use of existing neighborhood and regional parks or other recreational facilities.

The newly proposed seismic improvement activities would take place along the previously analyzed APD alignment and would not create a land use change that would lead to an increase in population. Construction staging areas not previously analyzed in the 2015 IS/MND and subsequent addenda would be used temporarily throughout the construction period and restored to their existing condition upon Project completion.

As previously discussed, the NPORD Site is located immediately south of the closed and inaccessible Spunkmeyer Field. During construction, crews would access the NPORD Site by exiting the C2A airport gate onto Ron Cowan Parkway and then turning on to Harbor Bay Parkway and continuing until reaching the NPORD Site. Because the NPORD Site is in very close proximity to Spunkmeyer Field, accessible from the Spunkmeyer Field parking lot, and it is estimated there would be between 40 and 50 hauling trips per day from the APD Project Site to the NPORD Site during the slope and dike restoration phase of construction, traffic and congestion associated with construction vehicles and equipment would affect recreation at Spunkmeyer Field. However, construction would not restrict the use of the soccer field and would be limited in duration. Therefore, it is not expected that a substantial number of visitors would seek out recreational opportunities elsewhere or that users would not return upon project completion. Following construction, the NPORD Site would operate under current conditions. For these reasons, the Project would have a ***less-than-significant impact***.

b. Creation of new or altered recreational facilities (Less than significant with mitigation)

The 2015 IS/MND found that potentially significant impacts related to the construction or expansion of recreational facilities associated with the interference of recreational use of the Bay Trail at the east end of the APD Project Site would be reduced to less-than-significant levels. Mitigation Measure RE-1 from the 2015 IS/MND was identified to reduce these impacts to a less-than-significant level.

The proposed seismic improvement activities would reinforce the dike to ensure greater protection in the event of a major earthquake, thus improving safety of the Airport and surrounding area. The seismic activities would occur within the original APD Project Site, including use of the construction staging areas, and would not require the construction or expansion of recreational facilities. Proposed seismic improvement activities could temporarily impact public access associated with the existing unpaved trail at the west end of the APD Project Site that connects to the Bay Trail. However, the public access to this area would be restored to pre-project topography following construction completion and is not expected to create a significant impact on recreation. Further, the implementation of Mitigation Measure RE-1 from the 2015 IS/MND would reduce impacts on recreation associated with seismic improvement activities to a less-than-significant level.

As mentioned in criterion (a), vehicular traffic from the APD Project Site to the NPORD Site associated with the slope and dike restoration phase of the Project could deter visitors from visiting Spunkmeyer Field if it were open and accessible. However, this impact would be less than significant due to the short duration of the construction period and because public access to this area would be restored to existing conditions upon Project completion.

With the implementation of Mitigation Measure RE-1, the impact on the creation of new or altered recreational facilities associated with a potential temporary closure of the Bay Trail during APD seismic improvements would be ***less than significant with mitigation***.

3.14 TRANSPORTATION AND TRAFFIC

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

3.14.1 Regulatory Setting

Federal Laws, Regulations, and Policies

No updated federal regulations relevant to transportation have occurred since the 2015 Final IS/MND.

State Laws, Regulations, and Policies

No updated state regulations relevant to transportation have occurred since the 2015 Final IS/MND.

Local

Countywide Active Transportation Plan

This plan was implemented in 2019 to provide a vision for improved walking and biking throughout Alameda County by providing a safe, comfortable, and interconnected network which also connects to transit and other major activity centers. It replaces previous separate Countywide Bicycle and Pedestrian Master Plans. Relevant goals include the following:

- Increase the safety of people bicycling and walking in Alameda County by identifying projects, policies, and programs that address the greatest safety needs and by optimizing investments through corridor-level analyses, performance evaluation, and by following industry best practices.

3.14.2 Environmental Setting

The Project involves additional seismic improvements not previously identified in the 2015 Final IS/MND or subsequent addenda. It also includes an alternative material disposal location at the NPORD Site near the intersection of Doolittle Drive (State Route 61) and Harbor Bay Parkway, approximately 1.7 miles to the northeast of the 2015 IS/MND Project area. Access for trucks and equipment to and from NPORD Site would be via existing roads. This route includes completing a U-turn at the signalized intersection of Air Cargo Way and Ron Cowan Parkway, near airport gate C2A. Ron Cowan Parkway is a separated roadway with two lanes in each direction. The intersection of Ron Cowan Parkway and Harbor Bay Parkway is signalized with dedicated turning lanes. Adjacent to the intersection, Harbor Bay Parkway is also a separated roadway with two lanes in each direction; however, the center berm is phased out approximately 0.6 mile south of the NPORD Site. Access to and from the site is available via the parking lot of the Spunkmeyer Field to the north of the site. Additionally, a one-way haul route is proposed as an alternative truck exit. From the APD Project Site, trucks would travel along an existing levee road and exit onto Harbor Bay Parkway at airport gate M45, cross the Bay Trail, then travel to the NPORD Site. If an alternative route is selected, additional permitting would be needed to modify the gate, as no existing intersection is located in that area.

3.14.3 Environmental Impacts and Mitigation Measures

Impact determinations and mitigation measures from the 2015 IS/MND and addenda were reviewed for potential applicability to the Project. Impacts and the associated mitigation measures that may apply to the Project are summarized below.

a. Conflict with applicable circulation plans, ordinances, or policies and applicable congestion management programs (Less than significant with mitigation)

The 2015 IS/MND and addenda concluded that potentially significant impacts related to resource issue “d. Adopted Policies, Plans, or Programs, and Safety of Public Transit, Bicycle, or Pedestrian Facilities” would be reduced to less-than-significant levels. Mitigation Measure RE-1 identified in Section 3.XV, “Recreation,” of the 2015 IS/MND was identified to reduce potential impacts on potential pedestrian or bicycle facilities to a less-than-significant level.

Project activities would generate some worker and maintenance vehicle trips and would temporarily increase traffic volumes on local roads in the vicinity of the Project during construction, in addition to what was assessed by the 2015 IS/MND and addenda. Approximately 3-5 truck trips of generated soil-cement materials generated will be transported and placed on the NPORD Site over approximately 18 months. During the slope and dike restoration phase, transport of temporary construction staging area materials is estimated at approximately 40 – 50 haul trips per day. The Alameda Countywide Congestion Management Program estimates indicate that this would approximately double the traffic along Harbor Bay Parkway but, using the 2020 estimates, would only be an increase of 0.48% along Ron Cowan Parkway (Table 3.14-1).

Table 3.14-1. Estimated Daily Traffic Volume

Year	Road	Estimated Daily Volume (total)
2010	Harbor Bay Parkway	26 (13+13)
	Ron Cowan Parkway	9965 (4988 + 4977)
2020	Harbor Bay Parkway	57 (39+18)
	Ron Cowan Parkway	10,384 (5196 + 5188)
2040	Harbor Bay Parkway	351 (284 +67)
	Ron Cowan Parkway	13,078 (6731 + 6347)

Source: Alameda County Transportation Commission, 2018a, 2018b, 2018c

While there would be an increase to the traffic along Harbor Bay Parkway, as a two-lane road with a low estimated daily volume, it Is unlikely that the construction vehicles would result in congestion. During the Project construction phase, no lane closures would be necessary. Construction vehicles and slow-moving equipment may cause traffic slowdowns, particularly when maneuvering on and off roadways, or when completing a U-turn. Implementation of Mitigation Measure TR-1, described in Section 3.8, "Hazards and Hazardous Materials," would require installation of warning signs and flaggers during the period of time when materials are being hauled offsite. This would address potential traffic safety hazards that could occur when equipment and vehicles travel to and from the NPORD Site.

Based on the projected amount of Project-related traffic added to the roads and with implementation of these measures, potential conflicts with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities would be ***less than significant with mitigation***.

b. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b) (No impact)

The Project involves an additional alternative material disposal location at the NPORD Site that would be temporary in nature and which was not examined in the 2015 IS/MND or subsequent addenda. The Project would not entail a change in land use from existing conditions or introduce factors that would generate new or unanticipated long-term changes in ADT or VMT, such as residences and facilities. Roadway capacity would be unaffected. Therefore, the Proposed Project would not conflict with or be inconsistent with CEQA Guidelines § 15064.3(b)(2). ***No impact*** would result.

c. Increased hazards resulting from geometric design features (Less than significant with mitigation)

The 2015 IS/MND and addenda concluded that potentially significant impacts related to road safety hazards related to the 2-week construction period where construction equipment would cross the Bay Trail would be potentially significant. Mitigation Measure RE-1 identified in Section

3.XV, "Recreation," of the 2015 IS/MND was identified to reduce these impacts to a less than significant level.

Project activities would require the use of public roads in the vicinity of the Project during construction to a greater extent than what was assessed by the 2015 IS/MND and addenda. The Project would not involve any improvements to public roads, nor would it increase hazards due to a design feature or incompatible use. Construction worker vehicles and haul trucks associated with the Project would share public roads with other vehicles. The use of these roads to enter and leave the APD Project Site and the NPORD Site could potentially increase traffic hazard concerns due to the presence of slow-moving trucks requiring access to staging and work areas. While the number of daily trips would be low, with implementation of Mitigation Measure TR-1, previously described in Section 3.8, "Hazards and Hazardous Materials," potential traffic safety hazard impacts would be ***less than significant with mitigation***.

d. Inadequate emergency access (Less than significant with mitigation)

The 2015 IS/MND and addenda concluded that impacts related to resource issue "e. Emergency Access" would be less than significant as Project-related traffic would be minimal and would not pose an obstacle to emergency response vehicles.

Project activities would likely require the use of public roads in the vicinity of the Project during construction to a greater extent than what was assessed by the 2015 IS/MND and addenda. The implementation of Mitigation Measure TR-1, described in Section 3.8, "Hazards and Hazardous Materials," would ensure that Project activities would not result in substantial delays for emergency vehicles. Thus, impacts related to emergency access would be ***less than significant with mitigation***.

3.15 TRIBAL CULTURAL RESOURCES

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

3.15.1 Regulatory Setting

Federal Laws, Regulations, and Policies

Federal law does not address TCR, as these resources are defined in the California PRC. However, similar resources, called Tribal Cultural Properties (TCPs), fall under the purview of Section 106 of the NHPA, which was referenced in Section 3.5, "Cultural Resources." TCPs are locations of cultural value that are historic properties. A place of cultural value is eligible as a TCP "because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community's history and (b) are important in maintaining the continuing cultural identity of the community" (Parker & King 1990, rev. 1998). A TCP must be a tangible property, meaning that it must be a place with a referenced location, and it must have been continually a part of the community's cultural practices and beliefs for the past 50 years or more. Unlike TCRs, TCPs can be associated with communities other than Native American tribes, although the resources are usually associated with tribes. By definition, TCPs are historic properties; that is, they meet the eligibility criteria as a historic property for listing in the NRHP.

Therefore, as historic properties, TCPs must be treated according to the implementing regulations found under Title 36 CFR §800, as amended in 2001.

State Laws, Regulations, and Policies

AB 52 requires, per Pub. Res. Code 21080.3.1, that CEQA lead agencies consult with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of a Project, if so requested by the tribe, and if the agency intends to release a negative declaration, mitigated negative declaration, or EIR for a project. The bill also specifies, under Pub. Res. Code 21084.2, that a project with an effect that may cause a substantial adverse change in the significance of a TCR is considered a project that may have a significant effect on the environment.

As defined in Section 21074(a) of the Pub. Res. Code, TCRs are:

> (1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
>
> > (a) Included or determined to be eligible for inclusion in the CRHR; or
> >
> > (b) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.
>
> (2) 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 Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

TCRs are further defined under Section 21074(b) and (c) as follows:

> (b) A cultural landscape that meets the criteria of subdivision (a) is a TCR to the extent that the landscape is geographically defined in terms of the size and scope of the landscape; and
>
> (c) A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "nonunique archaeological resource" as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms to the criteria of subdivision (a).

Mitigation measures for TCRs must be developed in consultation with the affected California Native American tribe pursuant to the newly chaptered Pub. Res. Code Section 21080.3.2, or according to Pub. Res. Code Section 21084.3. Section 21084.3 identifies mitigation measures that include avoidance and preservation of TCRs and treating TCRs with culturally appropriate dignity, considering the tribal cultural values and meaning of the resource.

3.15.2 Environmental Setting

Prior to the arrival of the Spanish explorers in northern California in the late 1700s, the area now known as Alameda County was occupied by unique tribelets of the Costanoan, some of which also occupied more southern counties and San Mateo Counties. The Costanoan tribelet most likely associated with much of Bay-side Alameda County was called the Huchiun (Milliken et al. 2009:87-89). Many different village locations pertaining to the Huchiun have been identified within Alameda County (Milliken et al. 2009:4-5).

As part of the Port's AB52 compliance, an email request was made to the NAHC on October 18, 2023, to review its files for the presence of recorded sacred sites in the Project area. The NAHC responded on November 30, 2023. The results of the Sacred Lands database review were negative for any sacred sites within the Project areas.

On December 20, 2023, letters were sent via certified mail to the 18 tribal contacts provided by the NAHC (Table 3.15-1). The letters requested any additional information regarding tribal resources and to notify the Port if they wished to initiate consultation regarding the Project actions. The Lisjan Nation responded on January 11, 2024 via email to request the associated documentation regarding the cultural resource investigations once completed. A follow up email with the original outreach letter was sent to each contact via email on January 26, 2024. Following that email, one response was received from Andrew Galvan, who requested further information on the project and the investigations conducted thus far and requested consultation regarding this project. As planning proceeds, the Port will continue to consult with Mr. Galvan, and any other interested tribal representatives regarding the Project and incorporate their concerns into Project planning and mitigation as warranted. The outreach discussed here for this section are summarized from the Historic Properties Inventory Amendment Memorandum, Attachment D to this Supplemental IS/MND.

Table 3.15-1. Tribal Communication Conducted to Date

Organization/Tribe	Name of Contact	Letter Date	Follow Up	Comments
Amah Mutsun Tribal Band of Mission San Juan Bautista	Irene Zwierlein	December 20, 2023	January 26, 2024 via email	No response to date.
Confederated Villages of Lisjan Nation	Cheyenne Gould	December 20, 2023	January 26, 2024 via email	The Lisjan Nation responded by email on January 11, 2024 and requested all materials related to the cultural resource investigation upon completion.
Confederated Villages of Lisjan Nation	Corrina Gould	December 20, 2023	January 26, 2024 via email	The Lisjan Nation responded by email on January

Organization/Tribe	Name of Contact	Letter Date	Follow Up	Comments
				11, 2024 and requested all materials related to the cultural resource investigation upon completion.
Confederated Villages of Lisjan Nation	Deja Gould	December 20, 2023	January 26, 2024 via email	The Lisjan Nation responded by email on January 11, 2024 and requested all materials related to the cultural resource investigation upon completion.
Costanoan Rumsen Carmel Tribe	Desiree Munoz	December 20, 2023	January 26, 2024 via email	No response to date.
Costanoan Rumsen Carmel Tribe	Carla Munoz	December 20, 2023	January 26, 2024 via email	No response to date.
Indian Canyon Mutsun Band of Costanoan	Kanyon Sayers-Roods	December 20, 2023	January 26, 2024 via email	No response to date.
Indian Canyon Mutsun Band of Costanoan	Ann Marie Sayers	December 20, 2023	January 26, 2024 via email	No response to date.
Muwekma Ohlone Indian Tribe of the SF Bay Area	Charlene Nijmeh	December 20, 2023	January 26, 2024 via email	No response to date.
Muwekma Ohlone Indian Tribe of the SF Bay Area	Monica Arellano	December 20, 2023	January 26, 2024 via email	No response to date.
North Valley Yokuts Tribe	John Murga	December 20, 2023	January 26, 2024 via email	No response to date.

Organization/Tribe	Name of Contact	Letter Date	Follow Up	Comments
North Valley Yokuts Tribe	Jessica Murga	December 20, 2023	January 26, 2024 via email	No response to date.
North Valley Yokuts Tribe	Erolinda Perez	December 20, 2023	January 26, 2024 via email	No response to date.
North Valley Yokuts Tribe	Timothy Perez	December 20, 2023	January 26, 2024 via email	No response to date.
The Ohlone Indian Tribe	Desiree Vigil	December 20, 2023	January 26, 2024 via email	No response to date.
The Ohlone Indian Tribe	Vincent Medina	December 20, 2023	January 26, 2024 via email	No response to date.
The Ohlone Indian Tribe	Andrew Galvan	December 20, 2023	January 26, 2024 via email	Responded January 27, 2024; requested consultation
Wuksachi Indian Tribe/Eshom Valley Band	Kenneth Woodrow	December 20, 2023	January 26, 2024 via email	No response to date.

3.15.3 Environmental Impacts and Mitigation Measures

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

i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k) (No impact)

No TCRs within the APD Project Site have been identified that are either listed or eligible for listing on the CRHR, or on any other local register of historical resources as defined by PRC Section 21074. Therefore, ***no impact*** to known TCRs would occur as a result of the Project.

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

Although it is not anticipated, it is possible that Native American archaeological or human remains could be discovered during Project activities. Implementation of Mitigation Measure CR-1 and Mitigation Measure CR-2 from Section 3.4, "Cultural Resources," would reduce any potential effects on tribal cultural resources to a ***less-than-significant level with mitigation***.

3.16 UTILITIES AND SERVICE SYSTEMS

Criteria	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
a. Require or result in the relocation or construction of new or expanded water, or wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☒	☐	☐
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☐	☒
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

3.16.1 Regulatory Setting

Federal Laws, Regulations, and Policies

No updated federal regulations relevant to utilities and service systems have occurred since the 2015 Final IS/MND.

State Laws, Regulations, and Policies

No updated state regulations relevant to utilities and service systems have occurred since the 2015 Final IS/MND.

Local Laws, Regulations, and Policies

City of Oakland – Construction and Demolition Debris and Recycling Ordinance (2018)

The Ordinance requires projects to recycle 100 percent of all asphalt and concrete materials, and 65 percent of all other materials.

Alameda County Department of Environmental Health's Solid/Medical Waste Program

This program oversees the solid waste collection, disposal, recycling, and hazardous waste programs at OAK.

Oakland Airport's Materials Management Program (2019)

This program diverts recyclable construction materials from public landfills—such as concrete and asphalt—and converts them into reusable material for new Airport construction and maintenance projects.

3.16.2 Environmental Setting

The environmental setting for the APD Project Site would remain consistent with the 2015 IS/MND. The NPORD Site is under the jurisdiction of the Port of Oakland. The NPORD Site is a former landfill and is not a development or currently connected to any utilities. There is a defunct wastewater line that runs through NPORD Site with a manhole in the middle of the placement area. The manhole is currently broken beyond repair and filled with trash. The line originated from a closed public bathroom associated with Spunkmeyer Field and goes to a lift station to the south. The APD Project plans to abandon the line in place.

3.16.3 Environmental Impacts and Mitigation Measures

Impact determinations and mitigation measures from the 2015 IS/MND and addenda were reviewed for potential applicability to the Project. Impacts and the associated mitigation measures that may apply to the Project are summarized below.

a. Require the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities or expansion of existing facilities, the construction or relocation of which could cause significant environmental effects (Less than significant with mitigation)

The 2015 IS/MND and addenda identified less-than-significant impacts related to relocation, construction, or expansion of utility facilities. Impacts related to relocation, construction, or expansion of facilities were determined to be less than significant because the Project would not increase Airport operations, or the number of passengers or aircraft operations at the Airport, and therefore the construction or expansion of water or wastewater treatment facilities would

not be required. The Project would result in less-than-significant impacts associated with stormwater drainage facilities with the implementation of Mitigation Measures AQ-1 and HZ-3. Therefore, impacts of the 2015 IS/MND Project associated with the relocation, construction, or expansion of utility facilities would be less than significant with mitigation.

The new Project modifications would not require relocation, construction, or expansion of wastewater, stormwater, electric power, natural gas, or telecommunication facilities. The Project would not require the construction, relocation, or expansion of facilities because construction of the Project would be temporary and would not bring substantial people or operations to the vicinity. The Project would continue to include engineered-installation drainage systems, it would not change the existing drainage patterns or change the areas drained by the pump houses serving the Project area. To further reduce the impacts to quality of the stormwater discharge, the Port would implement Mitigation Measure HZ-3 from Section 3.8, "Hazards and Hazardous Materials," and BMPs 20-31 related to the minimization of fugitive dust emissions from Chapter 2, *Project Description*. Therefore, with implementation of the mitigation measures, impacts related to relocation, construction, or expansion of utility facilities would be ***less than significant with mitigation***.

- BMP 20: Equipment Idling Time,
- BMP 21: Renewable Diesel,
- BMP 22: Maintenance of Construction Equipment,
- BMP 23: Alternative Transportation,
- BMP 24: Debris Management,
- BMP 25: Water Exposed Surfaces,
- BMP 26: Cover Haul Materials,
- BMP 27: Remove Daily Trackout,
- BMP 28: Speed Limit for Unpaved Roads,
- BMP 29: Windspeed Activity Suspension,
- BMP 30: Mandatory Equipment Cleaning, and
- BMP 31: Public Dust Signage.

b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years (No impact)

The 2015 IS/MND and addenda concluded no impacts related to water supplies. Impacts related to water supplies were determined to be no impact because the Project would not result in an increase in Airport operations, nor would the number of passengers at the Airport or water use increase as a result of the Project. Additionally, the Project would not require relocation or disturbance of public drinking-water supply pipelines or local distribution systems. The 2015 IS/MND and addenda concluded there would be no impacts to water supplies.

The Project would not result in an increase in Airport operations, nor would the number of passengers at the Airport or water use increase as a result of the Project's modifications. The Project's new CDSM method, staging areas, or land fill location would not require relocation or disturbance of public drinking-water supply pipelines or local distribution systems. However, use of the concrete mixture and the implementation of BMPs 25, 27, and 30 would require the watering of construction vehicles and exposed surfaces, and the use of water to remove mud or dirt trackout in order to reduce the impact from fugitive dust. This is a requirement under the BAAQMD regulations and would not involve the use of potable water. Furthermore, this impact would only occur during construction. Therefore, there would be ***no impact***.

- BMP 25: Water Exposed Surfaces,
- BMP 27: Remove Daily Trackout, and
- BMP 30: Mandatory Equipment Cleaning.

c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments (No impact)

The 2015 IS/MND and addenda concluded no impacts related to wastewater services. Impacts related to wastewater services were determined to be no impact because the Project would not increase Airport operations or the number of passengers at the Airport, and it would not result in increased wastewater discharges or introduce additional sources of pollutants to the wastewater treatment system. The 2015 IS/MND and addenda concluded there would be no impacts related to wastewater services.

The Project modifications would not include new bathroom facilities or new land uses that would increase demand on existing wastewater systems. The Project would not result in increased wastewater discharges or introduce additional sources of pollutants to the wastewater treatment system. The APD Project Site and NPORD Site would be returned to pre-project stormwater drainage conditions and would continue to rely on the existing stormwater infrastructure. Therefore, there would be ***no impact***.

d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals (Less than significant)

Comply with federal, state, and local management and reduction statutes and regulations related to solid waste. The 2015 IS/MND and addenda concluded no impacts related to solid waste. Impacts related to solid waste were determined to be no impact because the Port would abide by the applicable standards and programs in the area. The Project would adhere to City of Oakland's Construction and Demolition Debris and Recycling Ordinance, which includes detailed specifications and defined responsibilities for meeting the City's waste reduction and recycling requirements. The ordinance requires projects to recycle 100 percent of all asphalt and concrete materials, and 65 percent of all other materials.

The Project modifications would divert clean fill material to be reused at the NPORD Site. The Project proposes to place approximately 37,000 CY of soils from CDSM and removal of temporary work pads at the APD Project Site over 10 acres at the NPORD Site. This would result in a reduction of solid waste deposited at a landfill. This would result in further compliance with the City of Oakland's Construction and Demolition Debris and Recycling Ordinance. Thus, the Project would have a ***less-than-significant impact*** related to solid waste.

3.17 WILDFIRE

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

3.17.1 Regulatory Setting

Federal Laws, Regulations, and Policies

No updated federal regulations relevant to wildfire have occurred since the 2015 Final IS/MND.

State Laws, Regulations, and Policies

2018 Strategic Fire Plan for California

The Strategic Fire Plan, developed by the State Board of Forestry and Fire Protection, provides direction and guidance to the California Department of Forestry and Fire Protection (CAL FIRE) and its 21 field units. The 2018 Plan sets forth a number of goals focused on fire prevention, natural resource management, and fire suppression efforts, and are summarized here:

- Improve the availability and use of consistent, shared information on hazard and risk assessment;

- Promote the role of local planning processes, including general plans, new development, and existing developments, and recognize individual landowner/homeowner responsibilities;
- Foster a shared vision among communities and the multiple fire protection jurisdictions, including county-based plans and community-based plans such as Community Wildfire Protection Plans (CWPP);
- Increase awareness and actions to improve fire resistance of man-made assets at risk;
- Increase awareness and actions to improve fire resistance of man-made assets at risk and fire resilience of wildland environments through natural resource management;
- Integrate implementation of fire and vegetative fuels management practices consistent with the priorities of landowners or managers;
- Determine and seek the needed level of resources for fire prevention, natural resource management, fire suppression, and related services; and
- Implement needed assessments and actions for post-fire protection and recovery.

Local Laws, Regulations, and Policies

2021 Alameda County Local Hazard Mitigation Plan

This Local Hazard Mitigation Plan (LHMP) updates the previous 2016 document. It aims to assess risks posed by hazards in Alameda County and establish action plans to reduce risk. Hazards assessed include climate change, earthquake, flood, landslide, and wildfire.

3.17.2 Environmental Setting

The Project area is on the western side (bayside) of Alameda County and is highly urbanized. While there have been many wildfires in the region, the majority of wildfires in Alameda County are to the southeast of county, or in neighboring counties such as Santa Clara County or Marin County (Alameda County, 2022). Alameda County identifies area of Wildfire Severity as part of the LHMP, the majority of the Project area is classified as “urban unzoned” with small areas of “non-wildland/non-urban” and “moderate” (Alameda County, 2024). The majority of the NPORD Site specifically is classified as “urban unzoned” with the northern edge classified as “moderate” and the neighboring Spunkmeyer field zoned a mixture of “moderate” and “high” (Alameda County, 2024).

3.17.3 Environmental Impacts and Mitigation Measures

At the time of the 2015 IS/MND, wildfire was not included as a separate subsection of the environmental checklist. Therefore, relevant impact determinations and mitigation measures from various subsections of the 2015 IS/MND and addenda were reviewed for potential applicability to the Project. Impacts and the associated mitigation measures that may apply to the Project are summarized below.

The 2015 IS/MND and addenda further concluded that there would be no impact related to resource issue “h. wildfires” in Subsection VIII Hazards and Hazardous Materials as the lack of wildlands in the vicinity would mean there is no risk to people or buildings associated with wildland fire.

a. Substantially impair an adopted emergency response plan or emergency evacuation plan (Less than significant with mitigation)

The 2015 IS/MND and addenda concluded that there would be no impact related to interference with Emergency Plans as it was determined that the project would not result in any changes to operations or aviation activity at the Oakland Airport, that construction related traffic would be limited to the construction period, and temporary increases in traffic volumes would be expected to be less than significant.

Project activities would generate some worker and maintenance vehicle trips and would temporarily increase traffic volumes on local roads in the vicinity of the Project during construction in addition to what was assessed by the 2015 IS/MND and addenda. Construction-related vehicle trips or maneuvering on and off-site may result in traffic slowdowns in the vicinity of Project locations. Thus, should the construction period coincide with an emergency, construction could result in delays and contribute to temporary impairment of an emergency response plan or evacuation plan. As discussed in Section 3.14, "Transportation and Traffic," Mitigation Measure TR-1 would ensure that a plan for management of traffic will be implemented during construction. This would help to minimize potential impacts and maintain adequate traffic flow and access for emergency vehicles. However, given the temporary nature of construction activities, the Project is not expected to have long-term impacts on emergency response or evacuation plans. Furthermore, with the Project goal of reducing flood risk in the area, the Project would likely improve access during a flood related emergency. Therefore, this impact would be ***less than significant with mitigation***.

b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire (Less than significant with mitigation)

The 2015 IS/MND and addenda concluded that impacts related to Geology and Soils would be less than significant as the 2015 would be located on flat topography and intended to protect from erosion once complete. Implementation of a SWPPP would ensure construction related erosion would remain at a less than significant level.

Project modifications would include work sites with more significant wildfire severity concerns than what was assessed by the 2015 IS/MND and addenda. In particular, while the majority of the NPORD Site specifically is classified as "urban unzoned," the northern edge is classified as "moderate" and the neighboring Spunkmeyer field is zoned a mixture of "moderate" and "high" (Alameda County 2024). Project activities would not involve placement of people or habitable structures in areas without adequate fire protection. Additionally, proposed activities would not result in the creation of new wildland areas which could increase fire dangers.

Because maintenance activities would be conducted during the dry summer months when fire danger is the highest, there is a potential for an accidental ignition of a fire. The Port would implement Mitigation Measure WF-1: Wildfire Prevention to reduce potential impacts. This mitigation requires on-site fire suppression equipment, spark arrestors on all equipment with internal combustion engines, and restricts certain activities on high fire danger days. Therefore, this impact would be ***less than significant with mitigation***.

Mitigation Measure WF-1: Wildfire Prevention

All earthmoving and portable equipment with internal combustion engines will be equipped with spark arrestors.

During the high fire danger period (April 1–December 1), work crews will:

- Have appropriate fire suppression equipment available at the work site.
- Keep flammable materials, including flammable vegetation slash, at least 10 feet away from any equipment that could produce a spark, fire, or flame.
- Not use portable tools powered by gasoline-fueled internal combustion engines within 25 feet of any flammable materials unless a round-point shovel or fire extinguisher is within immediate reach of the work crew (no more 25 feet away from the work area).

c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment (Less than significant with mitigation)

The 2015 IS/MND did not evaluate this topic in a separate analysis; however, the 2015 Project would not require the installation of roads, fuels breaks, emergency water sources or utility lines either for the 2015 Project or to serve additional population. This does not constitute new substantial information as all project components would have been identified in the 2015 IS/MND and the potential impacts associated could have been inferred with the available information.

Project modifications would not require installation or maintenance of infrastructure to a significantly greater extent than what was assessed by the 2015 IS/MND and addenda. Transporting and placing fill in the NPORD Site would not require the installation of new infrastructure and would therefore not exacerbate fire risks in the area. Implementation of the possible secondary haul route from the M45 gate may require modifications to the gate, but this would not likely exacerbate fire risk in the region.

Given that maintenance activities would occur during the dry season, there is potential for an accidental ignition of wildland fire due to operating construction equipment Mitigation Measure WF-1 would be implemented to reduce potential impacts. This would require on-site fire suppression equipment, spark arrestors on all equipment with internal combustion engines, and additional precautions on high fire danger days. With the implementation if Mitigation Measure WF-1, this impact would be ***less than significant with mitigation***.

d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes (Less than significant)

The 2015 IS/MND and addenda concluded that impacts related to flooding from surface runoff would be less than significant as the Project would not affect existing patterns of drainage, or impact surface runoff. Further, the 2015 IS/MND found that the intended purpose of the Project would result in beneficial impacts and protect the area from flooding. The 2015 IS/MND and addenda concluded that there would be no impact related to construction of new water and wastewater treatment facilities, and a less-than-significant impact relating to stormwater drainage facilities as drainage patterns would not be changed, and the Port would continue to comply with all applicable requirements for water quality as required by the general construction permit, which would also require preparation of a SWPPP.

Project activities would include a different footprint, an include the NPORD Site, what was assessed by the 2015 IS/MND and addenda. The Project would not place people or habitable structures in areas with risks relating to post-wildfire flooding or landslides. The Project area is not considered to have a high susceptibility to landslides (Alameda County, 2022).

Construction activities would have the potential to contribute to erosion during the construction period and in the near-term following construction. However, preparation and implementation of a SWPPP as part of the general construction permit, would result in a low risk of erosion during construction. Furthermore, Project activities would help to protect against future flooding events. Therefore, the Project would minimize the potential risks related to landslides, or flooding.

This impact would be ***less than significant*** with compliance with requirements of the following BMPs related to fugitive dust emissions from Chapter 2, *Project Description*:

- BMP 20: Equipment Idling Time,
- BMP 21: Renewable Diesel,
- BMP 22: Maintenance of Construction Equipment,
- BMP 23: Alternative Transportation,
- BMP 24: Debris Management,
- BMP 25: Water Exposed Surfaces,
- BMP 26: Cover Haul Materials,
- BMP 27: Remove Daily Trackout,
- BMP 28: Speed Limit for Unpaved Roads ,
- BMP 29: Windspeed Activity Suspension,
- BMP 30: Mandatory Equipment Cleaning, and
- BMP 31: Public Dust Signage.

3.18 MANDATORY FINDINGS OF SIGNIFICANCE

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

3.18.1 Environmental Impacts and Mitigation Measures

a. Effects on environmental quality, fish or wildlife, and historic resources (Less than significant with mitigation)

The 2015 IS/MND determined there were several potential impacts to key areas of the environment including air quality, biological resources, hazards and hazardous materials, hydrology and water quality, land use and planning, recreation, and transportation/traffic; however, they would be lowered to less than significant levels with the implementation of mitigation measures. Therefore, the 2015 IS/MND found that the Project would not degrade the quality of the environment substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory.

As discussed throughout the above sections, significant but mitigable impacts were identified for the APD Project with regards to air quality, biological resources, cultural resources, water quality, and tribal cultural resources. Similarly to the 2015 IS/MND, with the implementation of BMPs 1-31 from Table 2.4-1 in Chapter 2, *Project Description*, and mitigation measures identified in this Supplemental IS/MND (refer to Mitigation Measures AQ-1, BO-1 through BO-6, CR-1, CR-2, and HZ-1 through HZ-3), the Project would not have the potential to substantially reduce the habitat of fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, eliminate important examples of the major periods of California history or prehistory, or impact culturally important tribal resources. With implementation of the above-described mitigation measures, this impact would be ***less than significant with mitigation***.

- BMP-1: Temporary Erosion Control Measures
- BMP-2: Upland Equipment Staging
- BMP-3: Emergency Spill Plan
- BMP-4: Erosion and Sediment Control
- BMP-5: Placement of Silt Fences and Fiber Rolls
- BMP-6: Dewatering Plan
- BMP-7: Removal of Dewatering Sedimentation
- BMP-8: Stockpile Management
- BMP-9: Preventing Runoff of Materials
- BMP-10: Vehicle and Equipment Inspections
- BMP-11: Equipment Refueling Areas
- BMP-12: Containment of Discharge Pollutants
- BMP-13: Placement of Sanitary Facilities
- BMP-14: Containment of Sanitary Facilities
- BMP-15: Maintenance of Sanitary Facilities
- BMP-16: Storage of Hazardous Materials
- BMP-17: Appropriate Disposal Facilities
- BMP-18: Workplan for Avoidance of Wetlands
- BMP-19: Construction Site Safety Plan
- BMP-20: Equipment Idling Time
- BMP-21: Renewable Diesel
- BMP-22: Maintenance of Construction Equipment
- BMP-23: Alternative Transportation
- BMP-24: Debris Management

- BMP-25: Water Exposed Surfaces
- BMP-26: Cover Haul Materials
- BMP-27: Remove Daily Trackout
- BMP-28: Speed Limit for Unpaved Roads
- BMP-29: Windspeed Activity Suspension
- BMP-30: Mandatory Equipment Cleaning
- BMP-31: Public Dust Signage

b. Cumulative Impacts

A cumulative impact refers to the combined effect of "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts" (CEQA Guidelines Section 15355). As defined by the State of California, cumulative impacts reflect "the change in the environment which results from the incremental impact of the Proposed Project when added to other closely related past, present, and reasonably foreseeable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time" (CEQA Guidelines Section 15355[b]).

The 2015 IS/MND identified several past, present, and reasonably foreseeable cumulative projects with the combined potential to affect environmental resources which could interact with the impacts of the Project. The 2015 IS/MND determined that aesthetics, agriculture and forestry resources, mineral resources, and population and housing were not expected to be cumulatively impacted by the Project. Additionally, the 2015 IS/MND determined that cumulative impacts to cultural resources, geology and soils, land use and planning, noise, public services, and recreation would be less than significant. Lastly, impacts to air quality, biological resources, GHG emissions, hazards and hazardous materials, hydrology and water quality, transportation and traffic, and utilities and service systems were found to be less than significant with the implementation of Mitigation Measures AQ-1, BO-1 through BO-4, HZ-1 through HZ-3, and RE-1.

The Proposed Project's primary effects on the environment are related to air quality, biological resources, cultural resources, hazards and hazardous materials, hydrology/water quality, public services, recreation, transportation, tribal and cultural resources, and wildfire. Long-term effects on other resource topics considered in this document (e.g., energy, GHG, noise) would be reduced to a less than significant level after mitigation and would not overlap with cumulative projects in a way that could result in a considerable contribution to a significant cumulative impact.

Table 3.18–1. Geographic Scope for Resources with Potential Cumulative Impacts

Resource	Scope
Air Quality	The San Francisco Bay Area Air Basin.
Biological Resources	Migratory nesting sites and natural habitat at the APD area, NPORD Site, and surrounding area.
GHG Emissions	The geographic scope for GHG emissions is the State of California, where GHG policies and regulations have been established. However, the true impact of GHG emissions is global in nature.
Noise and Vibrations	APD Project Site and surrounding areas exposed to noise and vibration generated in the Project site.
Traffic and Transportation	Roads surrounding the APD Project Site and NPORD Site in the City of Oakland that will be utilized during construction.

The list approach is applied by developing a list of past, present, and reasonably foreseeable projects. Projects considered in this analysis are listed in Table 3.18-2. The list of projects used for this analysis was developed by identifying projects listed in the CEQANet database. Several of these projects may have construction activities occurring at the same time as the Proposed Project. While not every possible cumulative project is likely listed, the list of cumulative projects is believed to be comprehensive and representative of the types of impacts that would be generated by other projects related to the Proposed Project. The cumulative impact evaluation assumes that the impacts of past and present projects are represented by baseline conditions and cumulative impacts are considered in the context of baseline conditions alongside reasonably foreseeable future projects.

Table 3.18–2. List of Reasonably Foreseeable Future Projects that May Cumulatively Affect Resources of Concern for the Proposed Project

Project Number	Project Title	Brief Project Description
1	880 Doolittle Drive Industrial Project	The project is set to demolish existing warehouse buildings and associated street parking, and then construct an approximately 244,573 square-foot warehouse. Additionally, the Project would include 204 parking stalls of various types.
2	66th Ave Bay Area Rapid Transit (BART) to Bay Trail	The project would establish a direct link from East Oakland to the Shoreline, facilitating pedestrian and bicycle access along 66th Avenue between San Leandro Street and Oakport Street. The project involves reconfiguring freeway ramps to establish a dedicated off-street Class I biking and walking pathway along the southern side of 66th Avenue to create a pathway for pedestrians and cyclists and link Bay Trail/Oakport Street with San Leandro Street.

Project Number	Project Title	Brief Project Description
3	3600 Alameda Avenue Project	The project involves the demolition of all existing structures on the site to make way for the construction of an approximately 430,022 square foot industrial building standing at 56 feet tall. Additionally, the new facility will feature up to 30,000 square feet of accessory office space, likely distributed across three areas along E. 7th and Boehmer Streets in the northwest and northeast corners of the building, as well as in the central-northern section of the building. The project will also entail an employee parking lot located to the north of the building, alongside loading docks and truck parking areas in the southern part of the site. A section of the southeast corner of the site (at the intersection of Alameda Avenue and the proposed extension of 37th Avenue) will be left open for future development, potentially as a retail space or restaurant.
4	East Bay Greenway (EBGW) Multimodal Project: Lake Merritt to Bayfair	The EBGW project aims to build an active transportation network linking BART stations, downtown areas, schools, and key destinations along arterials spanning approximately 11 miles across the cities of Oakland and San Leandro. The project entails various components including Class I Multi-Use Paths, Class II Bike Lanes, traffic-calmed Class III neighborhood bike routes (also known as bicycle boulevards) on low-traffic volume roads, and one- and two-way Class IV Separated Bikeway facilities. Additionally, the project will involve improvements to intersection crossings and traffic control, enhancements to pedestrian ADA accessibility, and providing access to intermediate BART stations along the project route.
5	Oakland International Airport Terminal Modernization and Development Project	The project includes modernizing Terminals 1 and 2, consolidating passenger functions (e.g., ticketing, baggage check-in, baggage, security screening), constructing expanded international arrival facilities, constructing a new terminal, relocating existing cargo and support facilities, and improving the terminal area roadway, parking areas, and support facilities.

Detailed analysis of a project's contribution to cumulative impacts is required when (1) a cumulative impact to which a project may contribute is expected to be significant, and (2) the project's contribution to the cumulative impact is expected to be cumulatively considerable, or significant in the context of the overall (cumulative) level of effect. Table 3.18-3 summarizes cumulatively significant impacts and identifies the Proposed Project's contribution. Additional analysis follows for those impacts to which the Proposed Project would contribute.

Table 3.18-3. Summary of Cumulative Significant Impacts and Proposed Project's Contribution

Resource Topic	Cumulatively Significant Impacts	Proposed Project's Contribution
Aesthetics	In recent decades, developments in the vicinity of the Project have impacted the aesthetic qualities of the San Francisco Bay shoreline and surrounding scenic vistas. Continued development could further affect the visual quality of the area and lead to a cumulatively considerable impact.	While the Project would minimally raise both the existing height of the APD and the NPORD Site as a result of construction activities, it is not expected that this would create a significant change in terms of nearby scenic vistas or overall aesthetic qualities in the Project vicinity. This impact would be less than cumulatively considerable.
Agricultural Resources	None identified.	No analysis required.
Air Quality	The Project is in Alameda County which is designated as a federal and state non-attainment area for O3 and PM2.5, and a state non-attainment area for PM10. Major existing sources of pollution in the San Francisco Air Basin include on- and off-road vehicles, fuel combustion, and wood burning.	With the implementation of Mitigation Measure AQ-2 and BMPs 20-31, construction of the APD Project would not increase emissions above cumulative thresholds for significant air quality impacts. The Project's contribution would therefore be less than considerable. Further analysis is provided below.
Biological Resources	Past and present actions in Alameda County have adversely affected regionally sensitive biological resources. Although the area is home to many special-status species, these species face threats from any number of development projects and human activities.	The Project would be unlikely to substantially affect biological resources, including special-status species. There is minimal suitable habitat on the site or nearby populations of special-status species, from which individuals could stray. Although the Project could potentially impact burrowing owls, nesting birds and sensitive habitats, implementation of Mitigation Measures BO-2 through BO-6 would reduce this possible impact to a level that is less than significant. The Project's contribution to the cumulatively significant impact would not be considerable.

Resource Topic	Cumulatively Significant Impacts	Proposed Project's Contribution
Cultural Resources	Throughout California, the Native American cultural legacy, including culturally important sites and traditional cultural practices, has been substantially affected by land management practices and urbanization over the past 150 years. While there are several state and federal laws regarding preservation of important cultural resources, ongoing development could lead to the cumulative loss of significant historic, archeological, and paleontological resources. This impact would be considered cumulatively significant.	The Project would not impact any known cultural resources, as no cultural resources were identified on the Project site based on the record search and archaeological survey. Nevertheless, Project construction activities could encounter buried unknown cultural resources, including archaeological or paleontological finds, or human remains. With implementation of Mitigation Measures CR-1 and CR-2, the Proposed Project's effects on cultural resources would be less than significant. Likewise, the Project's contribution to cumulatively significant impacts would be less than considerable. Further analysis is provided below.
Energy	The production of energy typically involves the burning of GHGs which cumulatively, and over a large geographical area, contribute to climate change. Projects that involve the burning of GHGs associated with providing energy for necessary construction equipment and vehicles have the potential to increase overall energy consumption, thus leading to a cumulatively considerable impact.	While the Project would require the consumption of energy for construction equipment, only energy that is needed for the repair and maintenance of the APD and transportation of materials to the NPORD Site would be used. The Project would not involve a wasteful, inefficient, or unnecessary consumption of energy resources of conflict with or obstruct plans for energy efficiency. Therefore, the Project's contribution to cumulatively significant impacts would be less than considerable.
Geology, Soils, and Seismicity	Multiple development projects in an area can lead to increased soil disturbance and erosion, particularly in regions with steep slopes or fragile soils. This can result in a cumulatively considerable impact due to increased sedimentation of waterways, loss of soil fertility, destabilization of slopes, and increased risk of on-site or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.	The removal of ground cover on the NPORD Site would temporarily increase erosion and sedimentation rates above existing levels. However, the implementation of BMPs 1,4, and 5 would lower the likelihood of increased erosion and sedimentation by ensuring temporary erosion and sediment measures are put in place, requiring the placement of silt fences and fiber rolls around ground-disturbing activities, and requiring a SWPPP. The implementation of these BMPs would lower the cumulatively considerable impact to a

Resource Topic	Cumulatively Significant Impacts	Proposed Project's Contribution
		less than significant level. Additionally, the Project would raise the NPORD Site and the APD Project Site minimally, which could increase the potential for landslides either on or off-site. Implementation of BMPs 4 and 5, above, would lower the likelihood of off-site landslides, lateral spreading, subsidence, liquefaction, or collapse in the Project vicinity. This impact would be less than cumulatively considerable.
GHG Emissions	Anthropogenic emissions of GHGs are widely accepted in the scientific community as contributing to global warming. This impact is considered cumulatively significant.	Use of construction equipment and vehicles during Project construction would emit GHGs. However, these emissions would be below applicable significance thresholds, and, likewise, would be considered less than cumulatively considerable.
Hazards and Hazardous Materials	There are previously recorded hazardous sites within the vicinity of the Project. Multiple instances of hazardous materials within a limited geography have the potential to exacerbate environmental and public health risks and ultimately lead to cumulative exposure risks for nearby communities and the degradation of local ecosystems. This impact is considered cumulatively significant.	While Project construction would involve the use of materials and activities that could create a hazard to the site and surrounding area, implementation of Mitigation Measures HAZ-1, HAZ-2, HAZ-3, and TR-1 would reduce potential impacts to be less than cumulatively considerable.
Hydrology and Water Quality	The water quality of the San Francisco Bay Region as the San Francisco Bay is listed as impaired under CWA Section 303(d) for a number of contaminants, including chlordane, DDT, dieldrin, dioxin compounds, furin compounds, invasive species, mercury, polychlorinated biphenyls (PCBs), and trash.	Construction and operation of the Proposed Project could adversely affect aquatic resources via discharge of pollutants. Further analysis provided below.
Land Use and Planning	None identified.	No analysis required.
Mineral Resources	None identified.	No analysis required.

Resource Topic	Cumulatively Significant Impacts	Proposed Project's Contribution
Noise	Given its location in a developed environment near the Oakland Airport, the Project site experiences noise from vehicle traffic and airport-associated activities. Cumulatively significant impacts could occur if noise from other projects in the area were to combine with the effects of the Project to result in adverse effects and/or exceed significance thresholds.	While construction of the Project would involve use of heavy construction equipment and noise-intensive equipment, this would not generate a significant increase in existing ambient noise levels. Additionally, operation of the Project would not result in an increase in the existing setting as the Project would operate nearly identically to existing conditions. This impact would be considered less than cumulatively considerable.
Population and Housing	None identified.	No analysis required.
Public Services	Public services may be impacted if several projects occur in a limited geographical area; additional strain on emergency services, schools, parks, and other public facilities due to localized population growth, and increased response times from strain on existing roads would be potentially significant impacts. If this were to occur, it could be a cumulatively considerable impact.	While construction of the Project is not expected to lead to an increase in population that would place a strain on existing public services, it might result in temporary roadway delays during construction, due to slower moving construction vehicles that could impact emergency service providers, particularly in the vicinity of the NPORD Site. The implementation of Mitigation Measure TR-1 would require that a traffic control plan is used throughout construction, limiting the potential for the Project to impact emergency response times. As a result, this impact would be considered less than cumulatively considerable.
Recreation	Multiple development projects in an area can lead to an increased demand for recreational facilities and open spaces as well as increased vehicular traffic and parking demands near popular recreational destinations. Heightened demand may result in overcrowding at parks, trails, and recreational areas, as well as congestion, limited parking availability, and safety concerns for pedestrians and cyclists. This would be a cumulatively considerable impact that would reduce the quality of the	Construction vehicles and construction traffic associated with the Project could potentially affect the seasonal use of the parking lot at Spunkmeyer field for Brent's Christmas Tree Farm by deterring visitors from using the associated access road and parking lot. However, due to the temporary nature of the construction period, the Project is not expected to contribute to a cumulatively considerable impact with regards to this use because it is not expected that a significant number of visitors would seek out recreational

Resource Topic	Cumulatively Significant Impacts	Proposed Project's Contribution
	recreational experience for residents and visitors.	opportunities elsewhere or that users would not return upon project completion. Additionally, the Project could potentially close a nearby portion of the Bay Trail during the construction period, thus placing heightened demand on other nearby recreational facilities. Implementation of Mitigation Measure RE-1 would reduce impacts on recreation associated with seismic improvement activities to a less than significant level by identifying a temporary alternate route for the Bay Trail. This impact would therefore be less than cumulatively considerable.
Transportation and Traffic	The Project is in a relatively developed part of Alameda County near the Oakland Airport. If multiple projects or impacts to local transportation and traffic occur at one time, it has the potential to lead to increased congestion on roads and highways, thus placing a strain on infrastructure, creating increased hazards, limiting connectivity, and impacting emergency access. This would be a cumulatively considerable impact.	Though the Project might temporarily impact pedestrian or bicycle use associated with closure of the Bay Trail and could lead to inadequate emergency access in the vicinity of the Project, the implementation of Mitigation Measures RE-1 and TR-1 would limit the potential for the Project to create a cumulatively considerable impact on pedestrian and bicycle access and emergency access to a less than significant level.
Utilities and Service Systems	Numerous development initiatives within a region can trigger heightened demand, overwhelming utilities and services such as water, sewage, waste, electricity, and telecommunications. This collective surge in demand has the potential to strain the current infrastructure and resources, causing service interruptions, capacity limitations, and escalated expenses for consumers. Consequently, it results in a cumulatively considerable impact.	The Project would not require relocation, construction, or expansion of wastewater, stormwater, electric power, natural gas, or telecommunication facilities. Additionally, implementation of Mitigation Measures AQ-1 and HZ-3 would reduce Project impacts related to relocation, construction, or expansion of utility facilities to less than cumulatively considerable.

Resource Topic	Cumulatively Significant Impacts	Proposed Project's Contribution
Wildfire	Multiple development projects situated in areas prone to wildfires can lead to the accumulation of vegetation, debris, and flammable materials. This buildup increases the fuel load available for wildfires. Over time, this heightened fuel load can contribute to the escalation of wildfires, intensifying their scope and impact. As a result, there are greater risks to human life, property, and natural ecosystems. This is a cumulatively considerable impact.	Project activities would generate some worker and maintenance vehicle trips and would temporarily increase traffic volumes on local roads in the vicinity of the Project during construction which could result in traffic slowdowns in the vicinity of Project locations and contribute to temporary impairment of an emergency response plan or evacuation plan. Implementation of Mitigation Measure TR-1 would ensure that a plan for management of traffic will be implemented during construction, thus reducing this impact to be less than cumulatively considerable. Additionally, because maintenance activities would be conducted during the dry summer months when fire danger is the highest, there is a potential for an accidental ignition of a fire. Implementation of Mitigation Measure WF-1 would require on-site fire suppression equipment, spark arrestors on all equipment with internal combustion engines, and restricts certain activities on high fire danger days. Lastly, the implementation of a SWPPP and BMPs 20-31, listed below and in Chapter 2, would reduce the potential for the Project to Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes to a less than cumulatively considerable level.

The following sections provide a detailed analysis of the Proposed Project's contribution to existing significant cumulative impacts. As identified in Table 3.16-3, the following resource issues are discussed: air quality, biological resources, cultural resources, hydrology/ water quality, and global climate change.

Air Quality: Emissions of Criteria Air Pollutants (Less than significant with mitigation)

Alameda County is in a non-attainment area for O_3, PM_{10}, and $PM_{2.5}$. Construction of the Project would involve ground disturbance and vehicle usage that would emit criteria air pollutants and

toxic air contaminants. Implementation of Mitigation Measure AQ-2 would reduce Project-related construction and operational emissions below the BAAQMD's significance thresholds, which means they would be unlikely to result in a cumulatively considerable impact. In addition, the Project would comply with implementation of the BAAQMD's BMPs (BMPs 20-31). Therefore, the Project would not have a considerable contribution to this cumulative effect. This impact would be ***less than significant with mitigation***.

- BMP 20: Equipment Idling Time,
- BMP 21: Renewable Diesel,
- BMP 22: Maintenance of Construction Equipment,
- BMP 23: Alternative Transportation,
- BMP 24: Debris Management,
- BMP 25: Water Exposed Surfaces,
- BMP 26: Cover Haul Materials,
- BMP 27: Remove Daily Trackout,
- BMP 28: Speed Limit for Unpaved Roads,
- BMP 29: Windspeed Activity Suspension,
- BMP 30: Mandatory Equipment Cleaning, and
- BMP 31: Public Dust Signage.

Biological Resources: Impacts to Special-Status Species – Less Than Significant with Mitigation

As described in Section 3.3, "Biological Resources", several special-status species often found within non-tidal and muted-tidal wetlands have potential to occur at the Proposed Project site, including salt marsh harvest mouse (*Reithrodontomys raviventris*), Ridgway's rail (*Rallus obsoletus obsoletus*), California Black Rail (*Laterallus jamaicensis coturniculus*). Other special-status wildlife species that have the potential to be affected by wetland or upland habitat loss include the northern harrier (*Circus cyaneus*), white-tailed kite (*Elanus leucurus*), salt marsh common yellowthroat (*Geothylypis trichas sinuosa*), and Alameda song sparrow (*Melospiza melodia pusillula*), western burrowing owl and northern harrier. Bird species that are protected by the MBTA and Fish & Game Code Sections 3503 and 3503.5 could nest in the vicinity of the Proposed Project site. No special-status fish species have the potential to occur within the Project site due to lack of suitable habitat.

There is the potential of construction activities to affect special status species, but Mitigation Measures BO-2 through BO-6 would avoid or minimize potential for adverse impacts to these species, if they were to be present during Project construction activities. None of the reasonably foreseeable projects identified in the area of the Proposed Project (see Table 3.16-2) would be anticipated to have especially significant biological resources impacts, as all of the projects are not immediately adjacent to the Project site and all of the foreseeable projects would be required to implement their own BMPs or mitigation in order to reduce any potential to impact

special status species. With implementation of Mitigation Measures BO-2 through BO-6, the Project's contribution to cumulatively significant impacts on biological resources is considered less than considerable. This impact would be ***less than significant with mitigation***.

Cultural Resources: Impacts to Unknown Cultural Resources (Less than significant with mitigation)

The record search and archaeological survey conducted for the APD Project did not find any significant cultural resources on the Project site. Nevertheless, there may be buried unknown archeological or paleontological resources, or human remains within the Project site that could potentially be discovered during Project construction activities. As described in Section 3.5, "Cultural Resources," and under (a) above, implementation of Mitigation Measures CR-1 and CR-2 would avoid or minimize potential for the Project to adversely impact these resources, were they to exist.

Other projects in the area of the Proposed Project could impact buried unknown cultural resources to the extent that they involve excavation and/or ground disturbance. The reasonably foreseeable projects listed in Table 3.16-2 would likely have a similar, if reduced, potential to impact buried cultural resources as the APD Project. Overall, given the limited size of the Project and implementation of effective mitigation measures, the Project would not significantly affect cultural resources, and its contribution to cumulatively significant impacts would be less than considerable. Therefore, this impact would be l***ess than significant with mitigation***.

Greenhouse Gas Emissions: Emissions of GHGs (Less than significant)

As noted in Table 3.16-2, climate change is a global issue that is inherently cumulative in nature, as anthropogenic GHG emissions are generally believed to be one of the primary drivers. As described in Section 3.8, "Greenhouse Gas Emissions," the Proposed Project would emit some GHGs during construction and operation (e.g., from operation of construction equipment, use of the back-up generator, vehicle trips by CHP officers and staff); however, these emissions would be below applicable thresholds of significance established by BAAQMD.

Virtually all development projects contribute some level of GHG emissions because, at a minimum, such projects require operation of heavy equipment in their construction. Therefore, all the reasonably foreseeable project nearby the Project site identified in Table 3.16-2 would contribute GHG emissions. However, while any level of GHG emissions can be considered to contribute to global climate change, given that the Proposed Project's emissions would be below BAAQMD significance thresholds, its contribution to cumulatively significant impacts is considered less than considerable. Therefore, this impact would be ***less than significant***.

Hydrology and Water Quality: Contributions to Water Quality Impairment (Less than Significant with Mitigation)

During construction, the APD Project would implement Mitigation Measures HZ-1, HZ-2, and HZ-3 from Section 3.8, "Hazards and Hazardous Materials," which would regulate the use of hazardous materials during construction, provide fuel pipeline monitoring during construction, and ensure appropriate handling of contaminated soils and groundwater if encountered during construction. By complying with Section 401 Water Quality Certification/WDRs monitoring

stormwater quality. Additionally, the implementation of the following BMPs would reduce the potential for the Project to contribute to hydrological impacts.

- BMP 1: Temporary Erosion Control Measures,
- BMP 2: Upland Staging Areas,
- BMP 3: Emergency Spill Plan,
- BMP 4: Erosion and Sediment Control,
- BMP 5: Placement of Silt Fences or Fiber Rolls,
- BMP 6: Dewatering Plan,
- BMP 7: Removal of Dewatering Sedimentation,
- BMP 8: Stockpile Management,
- BMP 9: Preventing Runoff of Materials,
- BMP 10: Vehicle and Equipment Inspections,
- BMP 11: Equipment Refueling Areas,
- BMP 12: Containment of Discharge Pollutants,
- BMP 13: Placement of Sanitary Facilities,
- BMP 14: Containment of Sanitary Facilities, and
- BMP 15: Maintenance of Sanitary Facilities.

With the implementation of these measures and BMPs, impacts to water quality resulting from the Project would be less than significant.

Operation and maintenance activities at the Project site may require the use of a minor amount of hazardous materials. However, all hazardous materials used during operation and maintenance would comply with existing federal, State, and local regulations and would not create a significant hazard to the public or the environment. Overall, the Proposed Project would not make a considerable contribution to existing cumulative impacts related to water quality impairment. Therefore, this impact would be ***less than significant with mitigation***.

Conclusion

In summary, the Project would not contribute considerably to any cumulatively significant impacts. With implementation of applicable mitigation measures, all impacts would be ***less than significant with mitigation***.

c. Effects on Human Beings (Less than significant with mitigation)

The 2015 IS/MND determined that all potentially significant impacts associated with air quality, biological resources, cultural resources, land use and planning, hazards and hazardous materials, hydrology and water quality, recreation, transportation and traffic, and utilities would be reduced to less than significant impacts with the implementation of mitigation measures

previously listed. Additionally, the 2015 IS/MND found that impacts to GHG emissions, geology and soils, noise, and public services would be less than significant and there would be no impact to aesthetics, agricultural and forestry resources, mineral resources, or population and housing. Overall, the 2015 IS/MND found that the Project would not yield environmental effects that would significantly harm human beings, whether directly or indirectly.

Based on the analysis provided in the above resource sections, and with incorporation of the BMPs below, APD Project would result in no impact or less-than-significant impacts for the following resource topics: aesthetics, agricultural resources, energy, geology and soils, GHGs, noise, and utilities and service systems.

- BMP 1: Temporary Erosion Control Measures,
- BMP 2: Upland Equipment Staging,
- BMP 3: Emergency Spill Plan,
- BMP 4: Erosion and Sediment Control,
- BMP 5: Placement of Silt Fences or Fiber Rolls,
- BMP 6: Dewatering Plan,
- BMP 7: Removal of Dewatering Sedimentation
- BMP 8: Stockpile Management,
- BMP 9: Preventing Runoff of Materials,
- BMP 10: Vehicle and Equipment,
- BMP 11: Equipment Refueling Areas,
- BMP 12: Containment of Discharge Pollutants,
- BMP 13, 14, and 15: Placement, Containment, and Maintenance of Sanitary Facilities,
- BMP 16: Storage of Hazardous Materials,
- BMP 17: Appropriate Disposal Facilities BMP 18: Workplan for Avoidance of Wetlands,
- BMP 19: Construction Site Safety Plan,
- BMP 20: Equipment Idling Time,
- BMP 21: Renewable Diesel,
- BMP 22: Maintenance of Construction Equipment,
- BMP 23: Alternative Transportation,
- BMP 24: Debris Management,
- BMP 25: Water Exposed Surfaces,
- BMP 26: Cover Haul Materials,
- BMP 27: Remove Daily Trackout,
- BMP 28: Speed Limit for Unpaved Roads,

- BMP 29: Windspeed Activity Suspension,
- BMP 30: Mandatory Equipment Cleaning, and
- BMP 31: Public Dust Signage.

Mitigation measures pertaining to air quality, biology, cultural and tribal cultural resources, hydrology and water quality, hazards and hazardous materials, land use, mandatory findings of significance, public services, recreation, transportation and traffic, and wildfire, found within the above sections and within Appendix G, Mitigation Monitoring and Reporting Program (MMRP), would reduce Project-related impacts to a less-than-significant level. As such, implementation of BMPs and mitigation measures would ensure that the effects on human beings would be ***less than significant with mitigation***.

Chapter 4
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Chapter 2 Project Description

None cited.

Chapter 3 Environmental Setting, Impacts, and Mitigation Measures

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