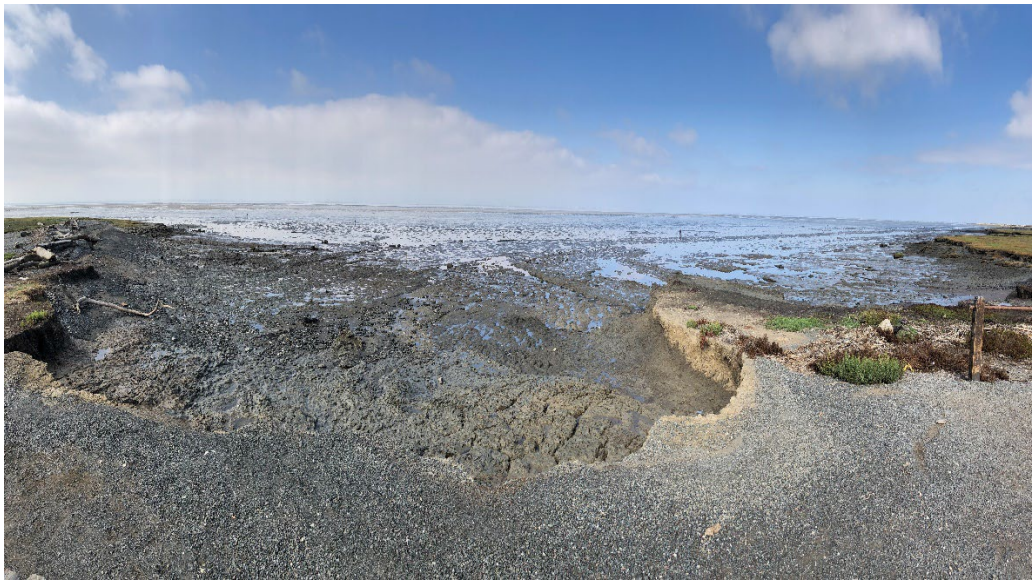
ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

ALAMEDA CREEK WEST END, NORTH LEVEE TURNAROUND RESTORATION PROJECT, FREMONT CITY, ALAMEDA COUNTY (ZONE 5, LINE A)



Initial Study/Mitigated Negative Declaration

SCH No. TBD

Flood Control & Water Conservation DISTRICT

August 2024

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Alameda County Flood Control & Water Conservation District

ALAMEDA CREEK WEST END, NORTH LEVEE TURNAROUND RESTORATION PROJECT, FREMONT CITY, ALAMEDA COUNTY (ZONE 5, LINE A)-FO5CA8

Initial Study/Mitigated Negative Declaration

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August 2024

Montrose Environmental 2024. Alameda County Flood Control and Water Conservation District. Alameda Creek West End, North Levee Turnaround. Initial Study Mitigated Negative Declaration. January. (MES 22.011). Sacramento, CA.

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Acronyms and Abbreviations

A	
AB	Assembly Bill
ACWD	Alameda County Water District
ADT	average daily traffic
APN	Assessor's Parcel Number
B	
BAAQMD	Bay Area Air Quality Management District
BHF	Below Hayward Fault
BMP	best management practice
C	
CalEEMod	California Emissions Estimator Model
Cal/EPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CGS	California Geological Survey
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalents
County	Alameda County
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CWA	Clean Water Act
D	
dB	decibel
dBA	A-weighted decibel
District	Alameda County Flood Control and Water Conservation District
DOC	California Department of Conservation

DPS	Distinct Population Segment
DTSC	California Department of Toxic Substances Control
DWR	California Department of Water Resources

E

EBRPD	East Bay Regional Park District
EFH	Essential Fish Habitat
EIA	U.S. Energy Information Administration
EIR	environmental impact report
EOC	Alameda County Emergency Operations Center
EOP	Emergency Operations Plan
ESA	Endangered Species Act
Estuary	San Francisco Bay Estuary

F

FEMA	Federal Emergency Management Agency
FMMP	Farmland Mapping and Monitoring Program
FMP	fishery management plan
FTA	Federal Transit Administration

G

GHG	greenhouse gas
GSP	groundwater sustainability plan
GWP	global warming potential

H

HCP	habitat conservation plan
HPD	Hayward Police Department
HUSD	Hayward Unified School District
Hz	Hertz

I

in/sec	inches per second
IS/MND	initial study/mitigated negative declaration

L

LRA	Local Responsibility Area

M

M	magnitude
MBTA	Migratory Bird Treaty Act
mph	miles per hour

MRZ	Mineral Resource Zone
MT	metric ton
N	
NAAQS	National Ambient Air Quality Standards
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NHUSD	New Haven Unified School District
NMFS	National Marine Fisheries Service
NO_2	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NPPA	Native Plant Protection Act of 1977
NRHP	National Register of Historic Places
O	
OEHHA	Office of Environmental Health Hazard Assessment
OES	Alameda County Office of Emergency Services
OHWM	ordinary high-water mark
P	
PG&E	Pacific Gas and Electric Company
PM	particulate matter
PM10	particulate matter of aerodynamic radius of 10 micrometers or less
PM2.5	particulate matter of aerodynamic radius of 2.5 micrometers or less
PPV	peak particle velocity
Project	Alameda Creek West End North Turnaround Project
R	
RCRA	Resource Conservation and Recovery Act of 1976
RWQCB	Regional Water Quality Control Board
S	
SB	Senate Bill
SFBAAB	San Francisco Bay Area Air Basin
SGMA	Sustainable Groundwater Management Act
SHPO	State Historic Preservation Officer
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMARA	Surface Mining and Reclamation Act
SMGB	California State Mining and Geology Board
SWPPP	stormwater pollution prevention plan

SWRCB	State Water Resources Control Board
T	
TAC	toxic air contaminant
TCP	traditional cultural property
TCR	tribal cultural resource
TSCA	Toxic Substances Control Act
U	
UCPD	Union City Police Department
USACE	U.S. Army Corps of Engineers
USC	Unites States Code
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
V	
VdB	vibration decibel
VHFHSZ	Very High Fire Hazard Severity Zone
VMT	vehicle miles traveled
W	
WUI	wildland-urban interface

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1 INTRODUCTION

This Initial Study/Mitigated Negative Declaration (IS/MND) has been prepared in accordance with the California Environmental Quality Act (CEQA), under which the Alameda Creek West End North Turnaround (Project) is evaluated at a project level (CEQA Guidelines § 15378). The Alameda County Flood Control and Water Conservation District (District), as the lead agency under CEQA, will consider the Project's potential environmental impacts when considering whether to approve the Project. This IS/MND is an informational document to be used in the planning and decision-making process for the Project and does not recommend approval or denial of the Project.

The site plans for the Project included in this IS/MND are conceptual. The District anticipates that the final design for the Project will include some modifications to these conceptual plans, and the environmental analysis has been developed with conservative assumptions to accommodate some level of modification.

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

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

1.1 Public Involvement Process

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

Contact, Job Title: Deputy Director
Client Name: Moses Tsang
Department: Alameda County Flood Control District & Water Conservation District
Street Address: 399 Elmhurst Street
City, ST Zip: Hayward, CA 94544
Email: moses@acpwa.org

During its deliberations on whether to approve the Project, the District will consider all comments received before 4:00 p.m. on the date identified in the Notice of Intent for closure of the public comment period.

1.2 Organization of this Document

This IS/MND contains the following components:

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

Chapter 2, *Project Description*, describes the Project including its purpose and goals, the site where the Project 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 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 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 IS/MND.

Appendices

Appendix A, Regional and Local Regulations and Policies

Appendix B, Air Quality and Greenhouse Gas Emission and Energy Calculations

Appendix C, Species Lists

Appendix D, Cultural Resources Report

Appendix E, Noise and Vibration

1.3 Impact Terminology and Use of Language in CEQA

This 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 would result 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 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.

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2 PROJECT DESCRIPTION

2.1 Introduction and Project Need

The Alameda County Flood Control and Water Conservation District (District) provides flood protection functions throughout western Alameda County. The District plans, designs, constructs, and maintains flood control facilities, including projects at engineered channels, levees, creeks, wetlands, pump stations, dams, and reservoirs.

The District is planning to restore the Alameda Creek West End North Levee Turnaround (Project), located along the north levee at the mouth of Alameda Creek (Zone 5, Line A) in Fremont, Union City and Hayward, Alameda County, California. Daily wind/wave and tidal action occur along the San Francisco Bay shoreline has severely damaged the terminus of the existing levee access road turnaround for emergency and maintenance vehicles. Alameda Creek was designed and constructed by the U.S. Army Corps of Engineers (USACE) and has been maintained by the District since its completion in the 1970s. Project objectives include:

- **Restore turnaround for emergency and maintenance vehicles:** The District would reconstruct the levee terminus to recommend use of "Turnaround" as this will be relocated away from the terminus of the levee and provide for minimum safe turning movements for emergency and maintenance vehicle.

- **Provide Resiliency to Future Sea Level Rise and Erosion:** The District would reconstruct the levee to increase resiliency to withstand future sea level rise and erosion. In particular, the higher final elevation of the turnaround and its relocation further inland would protect the reconstructed turnaround from erosion from wave run-up and king tides. In addition, these changes would improve the protection of the levee from changes resulting from future sea level rise.

2.2 Project Location and Setting

Alameda Creek was constructed by U.S. Army Corps of Engineers (USACE), and the District owns and maintains Alameda Creek. The East Bay Regional Park District (EBRPD) is operating and maintaining a public trail along the top of the maintenance access road, under a license agreement issued by the District.

The west end of the Alameda Creek north levee circular vehicle turnaround area has been gradually eroding over the years due to wave and tidal actions from the San Francisco Bay. The majority of the circular turnaround area has been eroded to the extent that safe turning movement is restricted. The confluence of Alameda Creek and San Francisco Bay occurs southwest of the Project site. The Alameda Creek Watershed is the largest watershed that feeds into the southern San Francisco Bay and the third-largest tributary to the San Francisco Estuary.

The 0.3-acre Project site is located along the Alameda Creek north levee, to the west of Fremont, and is accessed via Union City Boulevard/Ardenwood Boulevard (Figure 2-1). The Project site is north of Coyote Hills Regional Park and south of Eden Landing Ecological Reserve (Figure 2-2). The Project site is located at the end of the Alameda Creek north levee, approximately 3.8 miles west of the entrance to the Alameda Creek Trail Parking Lot. The elevation of the Project site is approximately 7 to 10.5 feet (NAVD88) and the Project area slope is less than 5 percent with the exception of the intertidal slough channel banks. The Project's immediate vicinity is primarily undeveloped tidal marsh and ruderal grassland. This undeveloped land is bordered to the east by the developed Union City, which has little or no remaining natural habitat. Single-family residential homes are present to the east and throughout the surrounding area. The Project site includes Assessor's Parcel Numbers 482-90-5 and 543-361-4-7; both parcels are owned by the District.

Habitats in the vicinity of the Project site include intertidal marsh, bay, and slough channel waterways. The Project site includes Waters of the U.S. and Waters of the State and is within the jurisdictions of the USACE, California Department of Fish and Wildlife, and Regional Water Quality Control Board, respectively.

Figure 2.2-1. Project Vicinity

8 ½ x 11 portrait

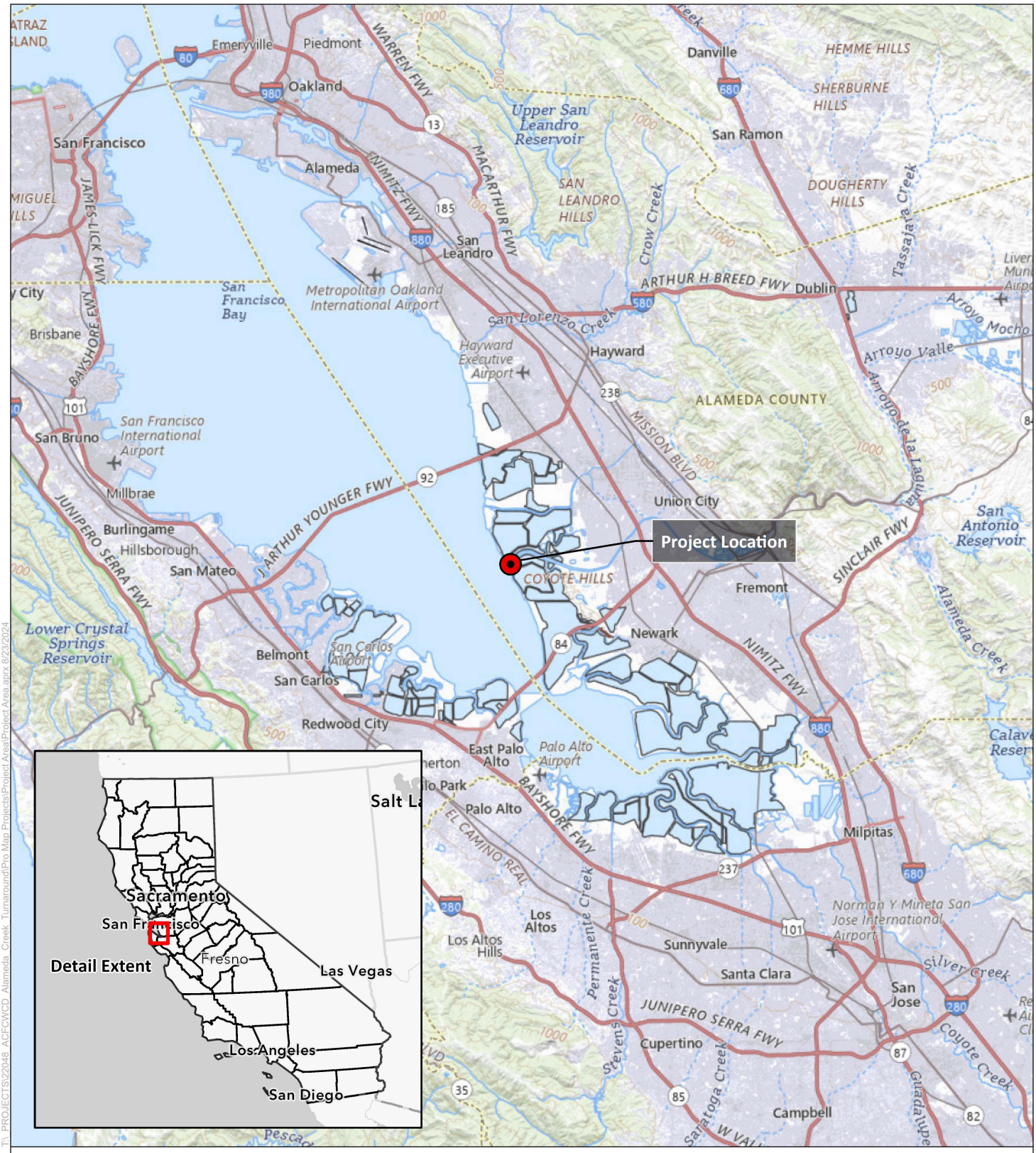

Figure 2.2-1
Project Vicinity

N

0 5
Miles

Project Location

MONTROSE ENVIRONMENTAL

Alameda Creek West End
North Levee Turnaround

T:_PROJECTS\22048_ACFCWCD_Alameda_Creek_Turnaround\Pro Map Projects\Project Area\Project Area.aprx 8/23/2024

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Figure 2.2-2. Project Site
11 x 17 landscape

N

0 0.25 0.5 Miles

Project Area

Component

- Turnaround
- Project Area
- Staging Area #1
- Staging Area #2
- Mitigation Area

Project Access

MONTROSE ENVIRONMENTAL

Data Source: ACFCWCD 2023

Figure 2.2-2
Project Location

Alameda Creek West End
North Levee Turnaround

1

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2.3 Project Components

The Project would restore a circular emergency and maintenance vehicle turnaround area with suitable levee soil material. To minimize potential for future erosion, the vehicular turnaround area would be relocated approximately 600 feet upstream from the original turnaround location. The restored turnaround area would also be raised by approximately 4 to 7 feet to accommodate the future need to raise the levee to keep pace with sea level rise.

The District proposes to restore the turnaround as a circular bulb-out that would extend approximately 60 feet north of the northern edge of the existing maintenance gravel access road. The grading for the proposed turnaround would extend approximately 85 feet north of the northern edge and 20 feet south of the southern edge of the existing gravel road. The reconstructed turnaround would have a diameter of approximately 70 feet, matching the original USACE design. Side slopes of the restored turnaround area would generally be 4 feet horizontal to 1 foot vertical all around conforming to the side slope of the north levee. The turnaround area would be relative flat but would accommodate surface drainage, and the road access would have a 5 percent grade. The higher grade is intended to protect the repaired turnaround from wave run-up and king tides.

The main circular turnaround area would be backfilled up to approximately 4 to 7 vertical feet to create the flat turnaround area, and 12 inches of Class 2 aggregate base would be placed over the fill. It is expected that the Project would require approximately 1,200 cubic yards of clean imported fill and approximately 200 cubic yards of Class 2 aggregate base to restore the turnaround and access road surfaces. No trees would be removed during Project construction, but the Project would require the removal of existing vegetation along the north levee banks during grading and fill placement within the turnaround footprint. No work would be conducted within Alameda Creek. Existing trash and other foreign debris within the Project limits would be removed from the Project site during construction.

The trail along the levee would be left open to the eastern extent of the construction area, to the extent feasible. From this point to the end of the levee, the trail would be closed for construction activities and recreational access.

2.3.1 Construction Equipment

Project construction would involve: clearing and grubbing; importing, grading and compacting clean soil and aggregate base to restore the turnaround; and hydroseeding disturbed areas. Specific pieces of equipment would be determined by the construction contractor, but are anticipated to include the following:

- excavators
- backhoe
- bulldozer
- dump trucks
- haul truck
- compactor, roller
- water truck
- manual and powered hand tools, weed-eater, mower, etc.

2.3.1.1 Construction Access and Staging Areas

Construction vehicles and equipment would access the Project site from Union City Boulevard/Ardenwood Boulevard. The Project includes two staging areas that would be used for mobilizing and staging equipment/material required for reconstructing the eroded turnaround (Figure 2-2). The larger staging area, staging area #2, would be near the beginning of the north levee by Union City Boulevard, to the north of the levee and south of existing single-family residential homes in Union City. Access to this staging area would require the construction of a small pullout from the Alameda Creek north levee, which would include temporary fencing in order to restrict public access to the staging area. The smaller staging area, staging area #1, would be approximately 3.5 miles into Alameda Creek north levee, adjacent to the proposed turnaround location. These staging areas would provide materials and equipment storage, employee parking, and hazardous material storage and containment during Project construction.

2.3.1.2 Site Preparation

Site preparation would include trash and debris removal and vegetation clearing and grubbing of the Project site, access routes, and staging areas prior to grading or excavation activities. Clearing and grubbing of the Project site would be conducted using bulldozers, standard excavators, and hand labor.

Construction-related activities may require the need for off-site hauling and disposal of materials. The disposal site is anticipated to be the Republic Services Newby Island Landfill in Milpitas, California, but the contractor would determine the means and method and actual location of disposal. To the extent feasible, graded soil would be reused onsite. Fill would be delivered to the Project site by conventional haul trucks. Soils would be placed with an excavator.

2.3.1.3 Construction Timing and Schedule

Project construction is anticipated to occur between May and November of 2025. Construction activities would occur Monday through Friday and would occur between 8:00 a.m. and 5:00 p.m. Truck hauling within the City of Union City right-of-way is restricted to Monday through Friday from 9 a.m. through 3:30 p.m. No weekend or nighttime work is anticipated. It is expected that the Project will require up to 10 construction workers.

2.3.1.4 Revegetation

Following grading and construction activities, revegetation of the tidally influenced disturbed areas would consist of a combination of planting and natural colonization/recruitment. The predominant native species currently in the Project site's tidal marsh are pickleweed (*Salicornia pacifica*), with alkali heath (*Frankenia salina*), and saltgrass (*Distichlis spicata*). In addition, in the upland between the top of bank of the Alameda Creek Trail levee and the intertidal marsh margin, there are shrubs comprised of coyote brush (*Baccharis pilularis*) and Oregon gumweed (*Grindelia stricta*). Based on prior tidal salt marsh restoration work in San Francisco Bay, perennial pickleweed and annual pickleweed (*Salicornia depressa*) are anticipated to colonize tidal areas rapidly via natural seed dispersal on the tides with no need for additional planting. However, marsh gumplant and saltgrass would likely take much longer to

establish from natural recruitment; therefore, supplemental planting of these species would occur in small, monospecific patches in approximately 30 percent of the disturbed areas below mean high water.

Hydroseeding is not recommended in tidal habitats because seed is unlikely to persist through repeated inundation during tide cycles. However, upland areas disturbed during Project implementation would be hydroseeded using a native seed mix. Table 2-1 shows a potential seed mix for hydroseeding areas. Actual seed mix is dependent on regulatory agency approval and species availability. Buffer zones adjacent to the access road would remain unvegetated for fire and safety reasons.

TABLE 2-1. PLANT SPECIES PALETTE FOR HYDROSEEDING*

Scientific Name	Common Name
Hordeum brachyantherum	Meadow Barley
Elymus glaucus	Blue Wildrye
Festuca rubra	Red Fescue
Stipa pulchra	Purple Needlegrass
Trifolium willdenovii	Tomcat Clover

*Seed mix is subject to change but would remain either locally native species or a sterile erosion control mix.

2.3.1.5 Mitigation Site

The Project would restore the turnaround area approximately 600 feet upstream of the existing turnaround site. The District would mitigate the Project's impacts to intertidal marsh by creating a seasonal wetland approximately 3.5 miles upstream from the Project, adjacent to a larger proposed mitigation area. This agriculturally disturbed area is used for hay production and grazing, is disked every spring, and is largely barren throughout most of the summer and fall months. The Project impacts on wetlands and sensitive habitats would be mitigated in-kind at a 3:1 ratio for permanent impacts and a 0.1:1 ratio for temporary impacts, thus restoring a total of 0.161 acres of marsh habitat. This 0.161-acre area would be graded and lowered in elevation by 0.5 to 1.0 foot to a new elevation 5.0 NAVD88, which would create soil and drainage conditions suitable for pickleweed to become established. Pickleweed is anticipated to naturally colonize the mitigation area. Marsh gumplant and saltgrass would be planted in small, monospecific patches in approximately 30 percent of the mitigation wetland area. Disturbed upland buffer areas would be hydroseeded with the seed mix in Table 2-1.

2.3.2 Construction Best Management Practices

Specific construction methods would be determined by the construction contractor but would comply with the environmental protection and mitigation measures determined through the regulatory review and authorization process and described in the Project permits. Project construction would utilize and implement best management practices (BMP) to avoid and minimize adverse effects on people and the environment. BMPs would be implemented before, during, and after construction, as specified. The BMPs for the Project are identified in Table 2-2.

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TABLE 2-2 APPLICABLE CONSTRUCTION BMPS FOR THE PROJECT

Number	Title	Description
BMP-1	Construction Work Windows	▪ Ground-disturbing activities will occur during the dry season (June 15 through October 15 or as allowed by permits). ▪ Work activities will occur during daylight hours and will be limited to 8 a.m. through 5 p.m. ▪ No work will be conducted during or within 24-hours of a rain event (0.5 inches in a 24-hour period).
BMP-2	Area of Disturbance	Ground disturbance will be kept to the minimum footprint necessary to complete construction of the Alameda Creek West End North Levee Turnaround (Project) and the mitigation site.
BMP-3	Erosion and Sediment Control	▪ At no time will silt-laden runoff be allowed to enter the waterway or directed to where it may enter the waterway. Silt control features will be monitored for effectiveness and will be repaired or replaced as needed. ▪ Erosion control measures will be installed according to manufacturer's specifications. Appropriate erosion control measures include, but are not limited to, the following: fiber rolls, silt fences, straw bale barriers, erosion control blankets and mats, and soil stabilization measures (e.g., tackified straw with seed, jute blankets, broadcast, and hydroseeding). ▪ Erosion control fabrics will consist of natural fibers that will biodegrade over time and are wildlife friendly. No plastic or other non-porous material will be used as part of a permanent erosion control approach. Plastic sheeting may be used to temporarily protect a slope from runoff. ▪ All temporary construction-related erosion control methods (e.g., silt fences) will be removed at the completion of construction. ▪ All soils disturbed or exposed during construction activities will be seeded and stabilized using erosion control measures, such as erosion control fabric or hydromulch, or re-planted. Areas below the ordinary high-water mark are exempt from this BMP.

TABLE 2-2 APPLICABLE CONSTRUCTION BMPS FOR THE PROJECT

Number	Title	Description
BMP-4	Fill, Spoils, and Stockpiled Materials	Temporary fill materials, excavated spoils that have not yet been hauled offsite, and stockpiled material will be isolated outside of the Eden Landing Ecological Reserve with silt fence, filter fabric, and/or straw bales/fiber rolls. Silt fence and/or fiber rolls will be placed at any locations where work could result in loose sediment that could enter the stream. The silt fence/fiber rolls will be maintained and kept in place for the duration of the Project. Any sediment or debris captured by the fence/rolls will be removed before fence/rolls are pulled.

TABLE 2-2 APPLICABLE CONSTRUCTION BMPS FOR THE PROJECT

Number	Title	Description
BMP-5	On-site Hazardous Materials Management	▪ An inventory of all hazardous materials used (and/or expected to be used) at the worksite and the end products that are produced (and/or expected to be produced) after their use will be maintained by the worksite manager. ▪ As appropriate, containers will be properly labeled with a "Hazardous Waste" label and hazardous waste will be properly recycled or disposed of offsite. ▪ Exposure of chemicals to precipitation will be minimized by storing chemicals in watertight containers or in a storage shed (completely enclosed), with appropriate secondary containment to prevent any spillage or leakage. ▪ Petroleum products, chemicals, cement, fuels, lubricants, and non-storm drainage water or water contaminated with the aforementioned materials will not contact soil and will not be allowed to enter surface waters. ▪ All toxic materials, including waste disposal containers, will be covered when they are not in use, and located as far away as possible from a direct connection to the storm drainage system or surface water. ▪ If hazardous materials are encountered at the Project site, the construction contractor will remove and dispose of them according to the Spill Prevention and Response Plan (refer to BMP-6).
BMP-6	Spill Prevention and Response Plan	To minimize the potential adverse effects due to the release of chemicals, fuels, lubricants, and non-storm drainage water into waterways, the Alameda County Flood Control and Water Conservation District (District) or the construction contractor will develop a Spill Prevention and Response Plan to be implemented by the contractor and all field personnel. The plan will contain guidelines for cleanup and disposal of spilled and leaked materials at the Project site. The plan will include, but not be limited to, the following measures: 1. Contractor's designated field personnel will be appropriately trained in spill prevention, hazardous material control, and cleanup of accidental spills.

TABLE 2-2 APPLICABLE CONSTRUCTION BMPS FOR THE PROJECT

Number	Title	Description
		2. Equipment and materials for cleanup of spills will be available onsite, and spills and leaks will be cleaned up immediately and disposed of according to the following guidelines: a. For small spills on impervious surfaces, absorbent materials will be used to remove the spill, rather than hosing it down with water. b. For small spills on pervious surfaces such as soil, the spill will be excavated and properly disposed of rather than being buried. c. Absorbent materials will be collected and disposed of properly and promptly. 3. Field personnel will ensure that hazardous materials are properly handled and natural resources are protected by all reasonable means. 4. Spill response kits will be on hand at all times while hazardous materials are in use (e.g., at crew trucks and other logical locations). All field personnel will be advised of these locations. 5. The contractor will routinely inspect the worksite to verify that spill prevention and response measures are properly implemented and maintained.
BMP-7	Vehicle and Equipment Maintenance	▪ Servicing of vehicles will be conducted at designated staging areas outside of the Eden Landing Ecological Reserve to avoid contamination through accidental drips and spills. ▪ Incoming equipment will be checked for leaking oil and fluids. No equipment servicing will take place in the Eden Landing Ecological Reserve. If emergency repairs are required, only those repairs necessary to move equipment to a more secure location shall be permissible. ▪ All vehicles and equipment will be kept clean. Excessive build-up of oil and grease will not be permitted. ▪ Vehicle and equipment washing can occur onsite only as needed to prevent the spread of sediment, pathogens, or exotic/invasive species. No runoff from vehicle or equipment washing will be allowed to enter water bodies

TABLE 2-2 APPLICABLE CONSTRUCTION BMPS FOR THE PROJECT

Number	Title	Description
		without being subjected to adequate filtration (e.g., vegetated buffers, hay wattles or bales, and silt screens). Other proper trackout systems can be used to prevent the spread of sediment from the site.
BMP-8	Dust Management Controls and Air Quality Protection	The contractor will implement the following applicable Bay Area Air Quality Management District's Basic Construction Mitigation Measures to reduce emissions of fugitive dust and equipment exhaust: ▪ All haul trucks transporting soil, sand, or other loose material offsite will be covered. ▪ All vehicle speeds on unpaved roads will be limited to 15 miles per hour. ▪ Idling times will be minimized either by turning equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure [13 California Code of Regulations § 2485]). ▪ All construction equipment will be maintained and properly tuned in accordance with manufacturer's specifications. All equipment will be checked by a certified mechanic and determined to be running in proper condition prior to operation.
BMP-9	Work Site Housekeeping	The contractor will maintain a neat and orderly worksite and properly dispose of all trash on a daily basis. Following construction, all construction debris will be removed from the work area.

TABLE 2-2 APPLICABLE CONSTRUCTION BMPS FOR THE PROJECT

Number	Title	Description
BMP-10	Minimize Spread of Weeds and Invasive Species	▪ All ground disturbing equipment used within the channel will be washed (including wheels, tracks, and undercarriages) both before and after being used at the site (refer to BMP-7). ▪ Invasive exotic species that occur within the Project site will be removed and properly disposed of offsite during initial site preparation and grading. ▪ All erosion control materials used onsite, such as straw wattles, mulch, and fill material, will be certified weed free. ▪ All revegetation efforts will include only local plant materials native to the Project site.

BMP = Best Management Practice; District = Alameda County Flood Control and Water Conservation District; NAHC = Native American Heritage Commission; Project = Alameda Creek West End North Levee Turnaround Project.

2.4 Permits and Approvals

Table 2-3 describes the permits and regulatory compliance requirements for the Proposed Project, along with the applicable responsible or permitting agency.

TABLE 2-3. APPLICABLE PERMIT AND REGULATORY REQUIREMENTS

Regulatory Agency	Law/Regulation	Purpose	Permit/ Authorization Type
U.S. Army Corps of Engineers (USACE), San Francisco District	Clean Water Act (CWA) Section 404/Section 10	Regulates placement of dredged and fill materials into Waters of the United States.	CWA 404 Nationwide Permit No. 33, Temporary Construction, Access, and Dewatering
	Title 33 U.S. Code 408	USACE may grant permission for another party to alter a civil works project.	Section 408 compliance letter
	River and Harbors Appropriation Act of 1899/Section 10	Verifies that changes to authorized USACE civil works projects will not be injurious to the public interest and will not impair the usefulness of the project.	Compliance with Section 10 occurs in tandem with the CWA 404 process
San Francisco Bay Regional Water Quality Control Board	CWA Section 401 with Waste Discharge Requirements	Water quality certification for placement of materials into Waters of the United States and Waters of the State.	401 Water Quality Certification
	CWA Section 402	National Pollutant Discharge Elimination System program regulates stormwater and construction discharges.	This Project qualifies for a rainfall erosivity waiver under the State Water Board's Construction General Permit Order 2009-0009-DWQ and a Stormwater Pollution Prevention Plan is not required.
California Department of Fish and Wildlife, Bay-Delta Region	Fish and Game Code § 1600	Applies to activities that will substantially modify a river, steam, or lake.	Lake and Streambed Alteration Agreement (1602 permit)
Bay Conservation and	McAteer-Petris Act and Coastal Zone Management Act	Applies to work in the Bay or within 100 feet of the shoreline, including filling,	Administrative (Minor) Permit

TABLE 2-3. APPLICABLE PERMIT AND REGULATORY REQUIREMENTS

Regulatory Agency	Law/Regulation	Purpose	Permit/ Authorization Type
Development Commission		dredging, dredged sediment disposal, shoreline development, and other work in salt ponds or managed wetlands.	
U.S. Fish & Wildlife Service/ National Marine Fisheries Service (NMFS)	Endangered Species Act	USACE must consult with USFWS and NMFS if threatened or endangered species may be affected by the proposed Project.	USACE to conduct Informal Consultation
State Historic Preservation Officer (SHPO)	National Historic Preservation Act Section 106	USACE must consult with SHPO if historic properties or prehistoric archaeological sites may be affected by the proposed Project.	USACE to conduct SHPO Consultation
CWA = Clean Water Act; NMFS = National Marine Fisheries Service; Project = Alameda Creek West End North Turnaround Project; SHPO = State Historic Preservation Officer; USACE = U.S. Army Corps of Engineers; USFWS = U.S. Fish & Wildlife Service			

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3 ENVIRONMENTAL CHECKLIST

This chapter of the Initial Study/Mitigated Negative Declaration (IS/MND) assesses the environmental impacts of the Alameda Creek West End North Turnaround (Project) based on the environmental checklist provided in Appendix G of the California Environmental Quality Act (CEQA) Guidelines. The environmental resources and potential environmental impacts of the proposed 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.

1)	Project Title	Alameda Creek West End North Levee Turnaround
2)	Lead Agency Name and Address	Alameda County Flood Control and Water Conservation District (District)
3)	Contact Person, Phone Number and Email	James Yoo, Associate Environmental Compliance Specialist, (510) 670-6632, jamesy@acpwa.org
4)	Project Location and Assessor's Parcel Number (APN)	The Project site is north of Coyote Hills Regional Park and south of Eden Landing Ecological Reserve. It is located on the west end of Alameda Creek north levee, approximately 3.8 miles west of the north levee entrance by Union City Boulevard. The APNs are 482-90-5 and 543-361-4-7.
5)	Property Owner(s)	Alameda County Flood Control & Water Conservation District
6)	General Plan Designation	City of Hayward: Baylands City of Union City: Agricultural Residential
7)	Zoning	City of Hayward: Flood Plain City of Union City: Civic Facilities
8)	Description of Project	The Project would restore a circular emergency and maintenance turnaround area at the west end of the north

		levee with suitable levee soil material. To minimize potential for future erosion, the new vehicular turnaround area would be relocated approximately 600 feet upstream from the original turnaround location. The new turnaround area would also be raised by approximately 4 to 7 feet to accommodate the future need to raise the levee to keep pace with sea level rise.
9)	Surrounding Land Uses and Setting	The Project's immediate vicinity is primarily undeveloped tidal marsh and ruderal grassland. This undeveloped land is bordered to the east by the developed Union City, which has little or no remaining natural habitat. Single-family residential homes are present to the east and throughout the surrounding area. Habitats in the vicinity of the Project site include intertidal marsh, bay, and slough channel waterways. The Project site includes Waters of the U.S. and Waters of the State.
10)	Other Public Agencies whose Approval or Input May Be Needed	U.S. Army Corps of Engineers (USACE)-San Francisco District; San Francisco Bay Regional Water Quality Control Board (RWQCB); California Department of Fish and Wildlife (CDFW), Bay-Delta Region; Bay Conservation and Development Commission; U.S. Fish & Wildlife Service (USFWS); National Marine Fisheries Service (NMFS); State Historic Preservation Office (SHPO)
11)	Hazards or Hazardous Materials	No hazardous materials or other hazards are present in the Project area.
12)	Native American Consultation	On April 19, 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. On May 9, 2023, a formal response from Corrina Gould, Chairperson of the Confederated Villages of Lisjan, asking for more information. The Historic Property Survey Report/Finding of Effect report was provided. No other requests or additional responses have been received since May 2023.

This chapter of the IS/MND assesses the environmental impacts of the proposed Project based on the environmental checklist provided in Appendix G of the CEQA Guidelines. The environmental resources and potential environmental impacts of the proposed Project are described in the individual subsections below. Each section (3.1 through 3.21) provides a brief overview of regulations and regulatory agencies

that address the resource and describes the existing environmental conditions for that resource to help the reader understand the conditions that could be affected by the proposed Project. Relevant local laws, regulations, and policies are described in Appendix A. In addition, each section includes a discussion of the rationale used to determine the significance level of the proposed 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.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would potentially be affected by the proposed 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

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, the comments received, conversations with knowledgeable individuals, the preparer's personal knowledge of the area, and, where necessary, a visit to the Project site.

On the basis of this initial evaluation:

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

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

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

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

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

DocuSigned by:
Signature Moses Tsang 4EB8D962203C423... Date 8/26/2024 | 12:32 PM PDT

Name: Moses Tsang, Deputy Director
Alameda County Flood Control & Water Conservation District

3.1 Aesthetics

Criteria	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Except as provided in Public Resources Code § 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

3.1.1.1 Federal and State Laws, Regulations, and Policies

No federal or state regulations related to aesthetics would apply to the Project.

3.1.1.2 Local Laws, Regulations, and Policies

Local laws, regulations, and policies are detailed in Appendix A.

3.1.2 Environmental Setting

The approximately 0.3-acre Project site is within the City of Hayward and the City of Union City. The site is adjacent to Eden Landing Ecological Preserve to the north, Union City to the east, the levee and Coyote Hills Regional Park to the south, and the San Francisco Bay to the west. In addition, the City of Fremont lies on the other side of the creek from the Project site. Views of the Project site consist of the levee and elevated levee access road surrounded by marshlands consisting of intertidal marsh and ruderal grasslands. The adjacent lands are low in elevation and affected by tidal activity. Views of the Project site from nearby urban and recreational areas are often blocked by elevation changes, public utilities, fences, and commercial development.

3.1.3 Discussion of Checklist Responses

a. Adverse effects on scenic vistas

A scenic vista is generally considered a view of an area that has remarkable scenery or a natural or cultural resource that is indigenous to the area. Scenic views of the Bay and baylands in the Project vicinity can be seen from Union City Boulevard and Ponderosa Cove Park in Union City. Views of the levee, levee road, and adjacent marshlands can be seen from Union City Boulevard and Ponderosa Cove Park, albeit from a distance of 2 miles. Views from Coyote Hills Regional Park would be obstructed due to the higher elevation of the levee. In addition, views of the Project site can be seen from the trail loop within the Eden Landing Ecological Reserve, the residential homes located in the Eden Shores development, and the terminus of walking trails in Mariner Park in the City of Hayward. The Project site is approximately 2.7 miles from the trail loop within Eden Landing, 2.6 miles from the Eden Shores development, and 2 miles from the trails in Mariner Park. The levee road itself is used as a regional trail. There are no officially designated scenic viewpoints near the Project site.

The Project proposes to reconstruct an existing turnaround area on a levee access road; the reconstructed turnaround area would be constructed approximately 600 feet inland of the existing turnaround area. The majority of the Project site is constructed on part of the existing road; however, a portion of the new turnaround area would bulb out into the adjacent marshlands, which consist of primarily undeveloped tidal marsh and ruderal grassland.

During construction, as mentioned above, the Project site would be visible from the City of Hayward and the City of Union City, albeit from a distance of approximately 2 miles. The height of construction equipment would result in a change in the viewshed due to the lack of trees or structures near the proposed turnaround location. However, the visual change would be both unsubstantial due to the distance from the viewpoints and temporary as it would occur only during construction. Additionally, during construction, the Project would include two staging areas. Staging area #1 would be located adjacent to the turnaround location and along the existing levee access road. Staging area #2 would be located adjacent to the Alameda Creek Trail trailhead, north of the trail and levee access road, and south of residential homes. Construction equipment and material staging at the staging areas would result in a temporary visual change during the duration of construction for residences and recreational users. However, as the impacts would be temporary, the Project would not substantially degrade the visual character of the Project site or its surroundings in such a way that a permanent degradation of character or quality would occur.

The Project site would be graded to provide a flat surface for vehicles to turn around and would include a 42-inch-tall safety railing that would remain during operation. Following grading and construction activities, revegetation of the tidally influenced disturbed areas would consist of a combination of planting and natural colonization/recruitment. Revegetation would ensure that the baylands disturbed adjacent to the newly constructed turnaround area during construction would be returned to a similar pre-construction condition. The existing turnaround area that would no longer be accessible would be reconstructed as a wetland and would match the adjacent bayland marsh. This portion of the Project site would provide a visual benefit as it would expand the marshlands. Due to the minor elevation changes proposed as part of the Project, the lack of construction of a new structure, and the distance from a viewpoint to the Project site, the Project would result in a less than substantial change to a scenic vista.

For all of the reasons stated above, the Project would not substantially detract from the existing scenic vistas. The impact would be **less than significant**. No mitigation measures would be required.

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

As previously described, the Project site is located adjacent to San Francisco Bay, north of the Coyote Hills Regional Park, and south of the Eden Landing Ecological Preserve. No officially designated State or Alameda County (County) Scenic highways are located adjacent to the Project site (Caltrans, 2023). The closest officially designated State scenic highway is SR-84, located approximately 8.3 miles east of the Project site. Due to distance and the developed nature of Union City which lies between SR-84 and the Project site, the site is not visible from SR-84. Further, the Project would not require the removal of scenic resources like trees, rock outcroppings, or historic buildings. Therefore, **no impact** would occur.

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 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?

While the Project site is located near the urbanized Union City and the City of Hayward, the Project area is located on marshlands and adjacent to Coyote Hills Regional Park and the Eden Landing Ecological Preserve. As such, the Project site is not in an urbanized area. For the same reasons described in item (a) above, the Project would not substantially degrade the existing visual character or quality of public views of the site and its surroundings. Therefore, the impact would be **less than significant**. No mitigation measures would be required.

d. New sources of substantial light or glare

Construction work would generally occur between 8:00 a.m. and 5:00 p.m., Monday through Friday, consistent with the ordinances of nearby cities. Nighttime construction lighting would not be required. The Project would replace an existing turnaround area with similar, non-reflective materials; the Project would not involve installation of permanent lighting, such as street lights, or the use of materials or

surfaces that would create a new source of light or glare. Therefore, the Project would have **no impact** on the surrounding community from increased light or glare.

Mitigation Measures

None required.

3.2 Agriculture/Forestry Resources

Criteria	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the Project:				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b. Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☐	☐	☒
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code § 12220(g)), timberland (as defined by Public Resources Code § 4526), or timberland zoned Timberland Production (as defined by Government Code § 51104(g))?	☐	☐	☐	☒
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e. Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

3.2.1 Regulatory Setting

3.2.1.1 Federal Laws, Regulations, and Policies

There are no relevant federal regulations for agricultural and forestry resources.

3.2.1.2 State Laws, Regulations, and Policies

3.2.1.2.1 State Farmland Mapping and Monitoring Program

The California Department of Conservation's (DOC) Farmland Mapping and Monitoring Program (FMMP), administered by the Division of Land Resource Conservation, is responsible for mapping and monitoring Important Farmlands for most of the State's agricultural areas. The FMMP updates its farmland maps every two years based on information from local agencies. FMMP maps show five categories of agricultural lands and three categories of nonagricultural lands, as described in the following sections.

3.2.1.2.2 Agricultural Lands

Following are descriptions of the farmland mapping categories used by the FMMP. The minimum mapping unit for all agricultural land categories is 10 acres, except for Grazing Land where the minimum mapping unit is 40 acres.

Note that Prime Farmland, Farmland of Statewide Importance, and Unique Farmland are the most suitable for agriculture and are considered especially important agricultural resources. They are often referred to collectively as *important farmland*. Grazing Land may also qualify as important farmland where grazing is a key component of the local economy.

- Prime Farmland is defined by the State as farmland with the best combination of physical and chemical features able to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Prime Farmland must have been used for irrigated agricultural production at some point during the four years prior to the mapping date.
- Farmland of Statewide Importance is defined as "irrigated land similar to Prime Farmland that has a good combination of physical and chemical characteristics for the production of agricultural crops." However, this land has minor shortcomings, such as steeper slopes or less ability to store soil moisture than Prime Farmland. For land to be designated as Farmland of Statewide Importance, it must have been used for production of irrigated crops at some point during the four years prior to the mapping date.
- Unique Farmland is considered to consist of lower-quality soils but nonetheless is used for production of the State's leading agricultural crops. Unique Farmland is usually irrigated but may include non-irrigated orchards or vineyards in some climatic zones. To qualify for this designation, land must have been used for crops at some point during the four years prior to the mapping date.

- Farmland of Local Importance is land identified as important to the local agricultural economy by each county's board of supervisors and a local advisory committee.
- Grazing Land is land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, the University of California Cooperative Extension, and other groups interested in the extent of grazing activities.

3.2.1.2.3 Nonagricultural Lands

Following are descriptions of the nonagricultural land mapping categories used by the FMMP. Mapping units for nonagricultural lands vary, as described below.

- Urban and Built-Up Lands consist of land occupied by structures with a building density of at least one structure per 1.5 acres, or approximately six structures per 10-acre parcel. This type of land is used for residential, industrial, commercial, construction, institutional, and public administration purposes; railroad and other transportation yards; cemeteries; airports; golf courses; sanitary landfills; sewage treatment facilities; water control structures; and other developed purposes.
- Other Land is land not included in any other mapping category. Examples include low-density rural developments and brush, timber, wetland, and riparian areas not suitable for livestock grazing. This category also includes vacant and nonagricultural land surrounded on all sides by urban development; confined livestock, poultry, or aquaculture facilities; strip mines; borrow pits; and water bodies smaller than 40 acres.
- Water includes perennial water bodies with an extent of at least 40 acres.

3.2.1.2.4 California Land Conservation Act (Williamson Act)

The Williamson Act is one of the State's primary mechanisms for conserving farmland. It enables counties and cities to designate agricultural preserves (Williamson Act lands) and to offer preferential taxation to private agricultural landowners based on the income-producing value of their property in agricultural use rather than on the property's assessed market value. In return for the preferential tax rate, the landowner is required to sign a contract with the county or city agreeing not to develop the land for a minimum 10-year period. Contracts are automatically renewed annually unless a party to the contract files for nonrenewal or petitions for cancellation. If the landowner chooses not to renew the contract, it expires at the end of its duration. Under certain circumstances, a county or city may approve a request for cancellation of a Williamson Act contract. Cancellation requires private landowners to pay back taxes and cancellation fees.

Each city and county have the discretion to determine which land uses are compatible with Williamson Act contracts within their jurisdiction, provided these uses are not prohibited under the Act.

3.2.1.3 Local Laws, Regulations, and Policies

Local laws, regulations, and policies are detailed in Appendix A.

3.2.2 Environmental Setting

The 0.3-acre Project site is located along the Alameda Creek levee, to the west of Union City, and is accessed via Ardenwood Boulevard. The project area is on the southern edge of Eden Landing Ecological Reserve and is north of Coyote Hills Regional Park, located at the west end of the Alameda Creek north levee where the Alameda Trail meets the San Francisco Bay. This area does not currently support agriculture.

According to the California DOC's Farmland Mitigation and Monitoring Program, the proposed staging area #2 within the Project area is designated as Grazing Land on which the existing vegetation is suited to the grazing of livestock (DOC, 2021). The Project area and staging area #1 are designated as Other Land (DOC, 2021). None of the Project area is located on land designated as important farmland.

According to the City of Hayward zoning ordinance, the Project site along with staging area #1 is zoned as Flood Plain by the City of Hayward (City of Hayward, 2014). Staging area #2 and the proposed mitigation site are located on land zoned as agricultural by the Union City zoning ordinance (Union City, 2019).

No forest land or land zoned as timber land or forest land is located within or adjacent to the Project area.

3.2.3 Discussion of Checklist Responses

a, e. Convert farmland to non-agriculture use, or result in conflicts with or loss of agricultural or forest lands

As stated in Section 3.2.2, no Prime Farmland, Unique Farmland, nor Farmland of Statewide Importance or forest lands are located within the Project area. **No impact** would occur with implementation of the Project.

b, c. Conflict with existing zoning for agriculture use, the Williamson Act Contract, or forest land or timber land

The Project site, along with staging area #1, is not zoned for agricultural use under a County or City General Plan; therefore, it would not conflict with existing zoning for agricultural use. Staging area #2 and the mitigation site are zoned agricultural (A) by Union City. The Project area is not located within an area enrolled in a Williamson Act contract (DOC 2023). In addition, the Project area is not located in an area zoned for forest land or timber land uses. The Project area and staging areas #1 and #2 would continue to be used the same as after Project activities. The mitigation area would involve creation of 0.161 acres of marsh habitat on an area zoned for agriculture by Union City, adjacent to existing bay land habitat. The Union City General Plan allows low-level open space uses in areas zoned as Agriculture (Union City 2019). Conversion of less than one acre of the existing hay field to marsh would not interfere with adjacent agricultural land uses and would be consistent with the Union City General Plan agricultural use definitions. As a result, construction and implementation of the project would not conflict with zoning for agricultural use, Williamson Act contracts, forest land, or timber land. **No impact** would occur with implementation of the Project.

d. Result in the loss of forest land or conversion of forest land to non-forest use

As stated in Section 3.2.2, the Project area is not zoned for forest land uses. Therefore, the Project would not conflict with such uses, nor would it result in the loss of forest land or the conversion of forest land to non-forest uses. **No impact** would occur with implementation of the Project.

3.3 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?	☐	☐	☒	☐

3.3.1 Regulatory Setting

The Clean Air Act is implemented by the U.S. Environmental Protection Agency (USEPA) and sets ambient air quality limits, the National Ambient Air Quality Standards (NAAQS), for six criteria pollutants: ozone, nitrogen dioxide (NO_2), sulfur dioxide, carbon monoxide, lead, and particulate matter (PM) 10 and 2.5 microns in size and smaller (PM_{10} and $PM_{2.5}$, respectively). Of these criteria pollutants, PM and ground-level ozone pose the greatest threat to human health. The California Air Resources Board (CARB) sets California's ambient air quality standards for criteria pollutants that are more stringent than the NAAQS. CARB has enacted numerous regulations regulating mobile sources such as off-road construction equipment and on-road vehicles that are more stringent than the federal regulations.

The proposed Project is located in the San Francisco Bay Area Air Basin (SFBAAB) and is under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). BAAQMD is responsible for implementation of regional air quality and regulations in the SFBAAB. It regulates air quality through its planning, review, and permitting activities and has established thresholds of significance for project emissions of criteria pollutants (BAAQMD, 2017a). Table 3.3-1 provides recommended significance criteria for analysis of air quality impacts, including cumulative impacts. The BAAQMD recommends

implementing best management practices (BMP) for all projects to reduce fugitive dust emissions. With implementation of fugitive dust BMPs, BAAQMD considers the impact of fugitive dust emissions to be less than significant. The BAAQMD has also established screening criteria that specify an acceptable distance between sensitive receptors and common sources of odors, such as landfills and wastewater treatment plants. BAAQMD specifies that an odor source with five or more confirmed complaints per year averaged over three years would be considered to have a significant impact on receptors within the screening distance. BAAQMD acknowledges that a lead agency has discretion under CEQA to use other established odor detection thresholds or other significance thresholds for CEQA review.

TABLE 3.3-1. BAAQMD AIR QUALITY THRESHOLDS OF SIGNIFICANCE

Pollutant	Daily Emissions (Pounds Per Day)	Annual Emissions (Tons Per Year)
ROG	54	10
NO_X	54	10
PM_{10} (Exhaust)	82	15
$PM_{2.5}$ (Exhaust)	54	10
$PM_{10}/PM_{2.5}$ (Fugitive Dust)	BMPs	None
Local CO	None	None

Source: BAAQMD, 2017a

Note: BAAQMD = Bay Area Air Quality Management District; BMP = Best Management Practice; CO = carbon; NO_x = nitrogen dioxide; $PM_{2.5}$ =-particulate matter 2.5 microns in size or smaller; PM_{10} =-particulate matter 10 microns in size or smaller; ROG = reactive organic gas

The SFBAAB is a State and federal nonattainment area for ozone and $PM_{2.5}$ and State nonattainment area for PM_{10} (BAAQMD, 2023). BAAQMD's Final 2017 Clean Air Plan (CAP), titled "Spare the Air, Cool the Climate," describes how BAAQMD will reduce emissions of toxic air contaminants (TAC) and continue to make progress toward attaining State and federal air quality standards (BAAQMD, 2017b). These proposed measures include controlling PM emissions from paving operations, fugitive dust, trackout during construction, and bulk material handling and transport.

3.3.1.1 Local Laws, Regulations, and Policies

Local laws, regulations, and policies are detailed in Appendix A.

3.3.2 Environmental Setting

The SFBAAB is characterized by complex terrain consisting of coastal mountain ranges, inland valleys, and bays, which distort normal wind flow patterns. The potential for high pollutant concentrations to

develop at a given location depends upon the quantity of pollutants emitted into the atmosphere in the surrounding area or upwind and the ability of the atmosphere to disperse the contaminated air. The topographic and climatological factors of the SFBAAB influence the atmospheric pollution potential of an area, which include wind circulation, inversions, solar radiation, and sheltered terrain. Atmospheric pollution potential is independent of the location of emission sources and is instead a function of topographic and climatological factors.

The Project is located in both Hayward and Union City, in Alameda County in an undeveloped/recreational setting, with the surrounding area consisting primarily of San Francisco Bay, marshland, parkland, and some single-family residences. The Project site is located in the southwestern Alameda County subregion. This subregion is indirectly affected by marine air flow. Marine air entering through the Golden Gate is blocked by the East Bay hills, forcing the air to diverge into northerly and southerly paths. The southern flow is directed down the Bay, parallel to the hills, where it eventually passes over southwestern Alameda County. These sea breezes are strongest in the afternoon. The further from the ocean the marine air travels, the more the ocean's effect is diminished. Although the climate in this region is affected by sea breezes, it is affected less so than in regions closer to the Golden Gate.

The climate of southwestern Alameda County is also affected by its close proximity to San Francisco Bay. The Bay cools the air with which it comes into contact during warm weather, while during cold weather the Bay warms the air. The normal northwest wind pattern carries this air onshore. Bay breezes push cool air onshore during the daytime and draw air from the land offshore at night.

Winds are predominantly out of the northwest during the summer months. In the winter, winds are equally likely to be from the east. Easterly-southeasterly surface flow into southern Alameda County passes through three major gaps: Hayward/Dublin Canyon, Niles Canyon, and Mission Pass. Areas north of the gaps experience winds from the southeast, while areas south of the gaps experience winds from the northeast. Wind speeds are moderate in this subregion, with annual average wind speeds close to the Bay at about 7 miles per hour (mph), while further inland they average 6 mph.

Air temperatures are moderated by the subregion's proximity to the Bay and the sea breeze. Temperatures are slightly cooler in the winter and slightly warmer in the summer than in East Bay cities to the north. During the summer months, average maximum temperatures are in the mid-70s. Average maximum winter temperatures are in the high-50s to low-60s. Average minimum temperatures are in the low 40s in winter and mid-50s in the summer.

Pollution potential is relatively high in this subregion during the summer and fall. When high pressure dominates, low mixing depths and Bay and ocean wind patterns can concentrate and carry pollutants from other cities to this area, adding to the locally emitted pollutant mix. The polluted air is then pushed up against the East Bay hills. In the wintertime, the air pollution potential in southwestern Alameda County is moderate. Air pollution sources include light and heavy industry as well as motor vehicles. Increasing motor vehicle traffic and congestion in the subregion may increase southwest Alameda County pollution as well as that of its neighboring subregions (BAAQMD, 2017a).

3.3.3 Discussion of Checklist Responses

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

Under CEQA, 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's emissions budget. Therefore, projects are 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. The proposed Project would not involve the construction of any residential, commercial, or industrial structures that would generate population and/or long-term employment growth.

As stated above, the proposed Project is located within the SFBAAB in Alameda County. The SFBAAB is in a State and federal nonattainment area for ozone and PM2.5 and in a State nonattainment area for PM10. BAAQMD's Final 2017 CAP describes how the BAAQMD plans to reduce emissions of toxic air pollutants and continues to make progress towards attaining State and federal air quality standards (BAAQMD, 2017b). These proposed measures included in the 2017 CAP include controlling PM emissions from paving operations, fugitive dust, track out during construction, and bulk material handling and transport.

The proposed Project would implement BMPs for fugitive dust and comply with the 2017 CAP's policies. Thus, the proposed Project would not conflict with or impair implementation of applicable air quality plans established by the BAAQMD or local general plans. Because the proposed Project would not generate growth or conflict with the applicable policies from the BAAQMD air quality plan (BAAQMD, 2017a), the impact related to inconsistency with air quality planning would be less than significant.

b. Cumulatively considerable net increase of any criteria pollutant for which the project region is a nonattainment area

During construction of the proposed Project, the combustion of fossil fuels for operation of construction equipment, material hauling, and worker trips would result in construction-related emissions of criteria air pollutants. In addition, construction activities would generate fugitive dust from grading and excavation activities. The proposed Project's criteria for air pollutant emissions during construction were modeled using conservative assumptions for equipment use, scheduling, and haul routes based on information in the Project description. This assumed that the equipment listed in the Project description was used during the full three and a half-month project schedule for eight hours, five days a week, as detailed in Appendix B. The calculations assumed that a total of 213 hauling trips (round-trips) would be needed to remove excavated material from the Project site and to import new material for the Project site based on an estimate of 2,000 cubic yards of concrete removed and 1,400 cubic yards of fill and aggregate base required. The default worker trips were used based on the equipment list. In addition, construction activities at the mitigation site include excavators to lower the ground elevation. Excavated materials would be spread on the adjacent upload spoils site. Emissions were estimated using the California Emission Estimator Model (CalEEMod) version 2022.1.1.5. Modeled emissions are shown in Table 3.3-2.

TABLE 3.3-2. CRITERIA POLLUTANT AND GHG EMISSIONS FOR THE PROPOSED PROJECT CONSTRUCTION

	POLLUTANT						
	ROG	**NO_X**	**CO**	**PM_{10} EXHAUST**	**PM_{10} FUGITIVE**	**$PM_{2.5}$ EXHAUST**	**$PM_{2.5}$ FUGITIVE**
Unmitigated Construction Emissions (lb/day)							
Average Daily Emissions – 2024	2.13	18.4	17.7	0.76	50.1	0.70	6.1
BAAQMD Daily Emissions Threshold (lbs/day)	54	54	None	82	BMPs*	54	BMPs*
Exceed Threshold?	No	No	No	No	No	No	No

Source: Appendix B.

Note: BAAQMD = Bay Area Air Quality Management District; BMP = Best Management Practice; CO = carbon; lb/day = pounds per day; NO_x = nitrogen dioxide; $PM_{2.5}$ =-particulate matter 2.5 microns in size or smaller; PM_{10} =-particulate matter 10 microns in size or smaller; ROG = reactive organic gas

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

BAAQMD established emission thresholds and rules regarding emissions of pollutants. The BAAQMD considers that, if the emissions from a project do not exceed its air quality emission thresholds, the project's emissions are not cumulatively considerable. As shown in Table 3.3-2 above, the emissions from the Project are below the BAAQMD's significance thresholds. In addition, the Project would implement BMPs to control fugitive dust in line with BAAQMD's recommended Basic Construction Mitigation Measures (BMP-8). Following construction, there would be no new sources of emissions, and there is not anticipated to be any increase in criteria pollutant emissions compared to baseline conditions. Inspection and maintenance of the turnaround and remaining levee will require a similar, or possibly lower, level of effort compared to pre-Project conditions. Therefore, the impact related to a net increase in criteria pollutants would be **less than significant**.

c. Expose sensitive receptors to substantial pollutant concentrations

Construction-related activities could result in the generation of TACs, specifically diesel particulate matter from off-road equipment exhaust emissions. Due to the variable nature of construction activity, the generation of TAC emissions would be temporary in most cases, especially considering the short amount of time such equipment is typically operated within an influential distance of sensitive receptors.[1] According to the Office of Environmental Health Hazard Assessment (OEHHA), the

[1] Sensitive receptors are people (e.g., children, the elderly, and others) who are at a heightened risk of negative health outcomes due to exposure to air pollution. Sensitive receptors may include, but are not limited to, daycares, schools, hospitals, and residences.

assessment of cancer risk and chronic non-cancer health impacts is typically based on a 70-year exposure period, and there is considerable uncertainty in trying to evaluate the cancer risk from projects that will only last a small fraction of a lifetime (OEHHA, 2015). There are no sensitive receptors in the immediate vicinity of the turnaround site; however, equipment operating at staging area #2 and trucks hauling material to the Project site would operate in proximity to residences on Eastin Drive, Eastin Court, and Williams Way. The nearest edge of staging area #2 is roughly 130 to 200 feet from multiple residences along Williams Way and Eastin Drive. Given the short duration of Project construction and California construction fleet regulations that require fleets to meet fleet average emission standards, the closest sensitive receptors would have very limited exposure to pollutants generated at the work areas. Thus, TAC emissions generated by the Project would not have a substantial effect on sensitive receptors, and this impact would be **less than significant**.

d. Result in other emissions affecting a substantial number of people

Diesel exhaust from construction activities may generate temporary odors during construction of the proposed Project. Excavated and recently exposed sediment, soil, or vegetation may contain decaying organic material that may create objectionable odors. The intensity of the odor perceived by a receptor depends on the distance of the receptor from excavation areas and the amount and quality of the exposed soil or sediment material. Excavated material from the Project site would be transported for disposal. Concrete and waste would be disposed at a local landfill, whereas soils would be spread over upland areas near staging area #2 . Project-related odors due to exposure and stockpiling of excavated material would be low given that the material would be fairly dry and low in organic material and the nearest sensitive receptors would be at least 130 feet away. Once construction activities have been completed, any odors will cease. Following completion of excavation and grading activities, exposed sediment and soil in the Project area would be revegetated. Impacts related to potential generation of objectionable odors, if any, are thus expected to be temporary and **less than significant**.

3.4 Biological Resources

Criteria	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the Project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the 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 CDFW 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, 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 (HCP), Natural Community Conservation Plan, or other approved local, regional, or State HCP?	☐	☐	☐	☒

3.4.1 Regulatory Setting

3.4.1.1 Federal Laws, Regulations, and Policies

3.4.1.1.1 Endangered Species Act

The Endangered Species Act (ESA) (16 U.S. Code [USC] § 1531 *et seq*.; 50 Code of Federal Regulations [CFR] Parts 17 and 222) provides for conservation of species that are endangered or threatened throughout all or a substantial portion of their range, as well as protection of the habitats on which they depend. The USFWS and the NMFS share responsibility for implementing the ESA. In general, USFWS manages terrestrial and freshwater species, whereas NMFS manages marine and anadromous species.

Section 9 of the ESA and its implementing regulations prohibit the "take" of any fish or wildlife species listed under the ESA as endangered or threatened, unless otherwise authorized by federal regulations. The ESA defines the term "take" to mean "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct" (16 USC § 1532). Section 7 of the ESA (16 USC § 1531 *et seq*.) outlines the procedures for federal interagency cooperation to conserve federally listed species and designated critical habitats. Section 10(a)(1)(B) of the ESA provides a process by which non-federal entities may obtain an incidental take permit from USFWS or NMFS for otherwise lawful activities that incidentally may result in "take" of endangered or threatened species, subject to specific conditions. An HCP must accompany an application for an incidental take permit.

3.4.1.1.2 Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act (16 USC § 1801 *et seq.*) governs all fishery management activities that occur in federal waters within the United States' 200 nautical mile limit. The Act establishes eight Regional Fishery Management Councils responsible for the preparation of fishery management plans (FMP) to achieve the optimum yield from U.S. fisheries in their regions. These councils, with assistance from NMFS, establish Essential Fish Habitat (EFH) in FMPs for all managed species. Federal agencies that fund, permit, or implement activities that may adversely affect EFH are required to consult with the NMFS regarding potential adverse effects of their actions on EFH and respond in writing to recommendations by the NMFS.

The Pacific Fisheries Management Council has designated EFH for the following three FMPs in the Project area: Pacific coast groundfish, coastal pelagic species, and Pacific coast salmon. Thus, if the Project results in impacts on EFH, consultation with NMFS would be required. Such consultation would occur during the Section 7 or 10 consultation process (refer to the Endangered Species Act section above).

3.4.1.1.3 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 USC, Chapter 7, Subchapter II) protects migratory birds. Most actions that result in the taking of, or the permanent or temporary possession of, a migratory bird constitute violations of the MBTA. The MBTA also prohibits the destruction of occupied nests. The USFWS is responsible for overseeing compliance with the MBTA.

3.4.1.1.4 Clean Water Act

Clean Water Act (CWA) Section 404 regulates the discharge of dredged and fill materials into waters of the U.S., which include all navigable waters, their tributaries, and some isolated waters, as well as some wetlands adjacent to the aforementioned waters (33 CFR § 328.3). Areas typically not considered to be jurisdictional waters include non-tidal drainage and irrigation ditches excavated on dry land, artificially irrigated areas, artificial lakes or ponds used for irrigation or stock watering, small artificial waterbodies such as swimming pools, vernal pools, and water-filled depressions (33 CFR Part 328). Areas meeting the regulatory definition of waters of the U.S. are subject to the jurisdiction of USACE under the provisions of CWA Section 404. Construction activities involving placement of fill into jurisdictional waters of the U.S. are regulated by USACE through permit requirements. No USACE permit is effective in the absence of State water quality certification pursuant to Section 401 of CWA.

Section 401 of the CWA requires an evaluation of water quality when a proposed activity requiring a federal license or permit could result in a discharge to waters of the U.S. In California, the State Water Resources Control Board (SWRCB) and its nine RWQCBs issue water quality certifications. Each RWQCB is responsible for implementing Section 401 in compliance with the CWA and its water quality control plan (also known as a Basin Plan). Applicants for a federal license or permit to conduct activities that may result in discharge to waters of the U.S. (including wetlands or vernal pools) must also obtain a Section 401 water quality certification to ensure that any such discharge will comply with the applicable provisions of the CWA.

3.4.1.2 State Laws, Regulations, and Policies

3.4.1.2.1 California Fish and Game Code

The California Fish and Game Code includes various statutes that protect biological resources, including the Native Plant Protection Act of 1977 (NPPA) and the California Endangered Species Act (CESA). The NPPA (California Fish and Game Code §§ 1900–1913) authorizes the CDFW to designate plants as endangered or rare and prohibits the taking of any such plants except as authorized in limited circumstances.

CESA (California Fish and Game Code §§ 2050–2098) prohibits State agencies from approving a project that would jeopardize the continued existence of a species listed under CESA as endangered or threatened. Section 2080 of the California Fish and Game Code prohibits the take of any species that is State listed as endangered, threatened, or designated as a candidate for such listing. CDFW may issue an incidental take permit authorizing the take of listed and candidate species if that take is incidental to an otherwise lawful activity, subject to specified conditions.

California Fish and Game Code §§ 3503 and 3513 protect native and migratory birds, including their active or inactive nests and eggs, from all forms of take. In addition, §§ 3511, 4700, 5050, and 5515 identify species that are fully protected from all forms of take. Section 3511 lists fully protected birds; § 5515 lists fully protected fish; §4 700 lists fully protected mammals; and § 5050 lists fully protected amphibians.

3.4.1.2.2 Porter-Cologne Water Quality Control Act

The Porter–Cologne Water Quality Control Act (known as the Porter–Cologne Act), passed in 1969, dovetails with CWA (refer to discussion of the CWA above). It established SWRCB and divided the State into nine regions, each overseen by a RWQCB. The SWRCB is the primary State agency responsible for protecting the quality of the State's surface water and groundwater supplies; however, much of the SWRCB's daily implementation authority is delegated to the nine RWQCBs, which are responsible for implementing CWA Sections 401, 402, and 303[d]. In general, the SWRCB manages water rights and regulates Statewide water quality, whereas RWQCBs focus on water quality within their respective regions.

The Porter–Cologne Act requires RWQCBs to develop water quality control plans (also known as Basin Plans) that designate beneficial uses of California's major surface-water bodies and groundwater basins and establish specific narrative and numerical water quality objectives for those waters. Beneficial uses represent the services and qualities of a waterbody (i.e., the reasons that the waterbody is considered valuable). Water quality objectives reflect the standards necessary to protect and support those beneficial uses. Basin Plan standards are primarily implemented by regulating waste discharges so that water quality objectives are met.

3.4.2 Environmental Setting

The 0.3-acre Project site is located along the Alameda Creek levee, to the west of Union City, and is accessed via Ardenwood Boulevard. The Project area is in the southern edge of Eden Landing Ecological Reserve and is north of Coyote Hills Regional Park, located at the west end of the Alameda Creek north levee where the Alameda Trail meets the San Francisco Bay. Habitats in the vicinity of the Project site include intertidal marsh, ruderal grassland/levee, intertidal bay margin, and slough channel waterway. Single-family residential homes are present to the east and throughout the surrounding area.

The Project site's immediate vicinity is primarily intertidal marsh and ruderal grassland. The intertidal marsh is dominated by pickleweed (*Salicornia pacifica*), with alkali heath (*Frankenia salina*), and saltgrass (*Distichlis spicata*). This habitat is present on the Project site to the southeast and northwest of the Alameda Creek Trail, which is located on the Alameda Creek North Levee. Along the northeastern section of the Alameda Creek North Levee are stands of shrubs within the top of the bank of the levee and the intertidal marsh margin. The shrubs include coyote brush (*Baccharis pilularis*) and Oregon gumweed (*Grindelia stricta*). Staging area #1 is located on the levee, and the habitat consists of a developed gravel surface consisting of ruderal grassland with scattered coyote brush shrubs. Habitat within staging area #2 consists of ruderal grassland with scattered coyote brush shrubs and the barren road surface.

Ruderal grassland occurs along the Alameda Creek North Levee slope at higher elevations than the intertidal marsh as well as in staging area #2. The ruderal grassland habitat primarily consists of soft brome (*Bromus hordeaceus*) and ripgut brome (*Bromus diandrus)*. Other intermixed species found within the soft brome and ripgut brome include rattail six-weeks grass (*Festuca myuros*), cutleaf geranium (*Geranium dissectum*), and Bermuda buttercup (*Oxalis pes-caprae*). Lastly, trace amounts of pickleweed, alkali heath, and salt grass occur in the ruderal grassland along the intertidal marsh margin (Vollmar Natural Lands Consulting, 2022).

The mitigation site is approximately 2.5 miles upstream of the proposed turnaround. It is currently an agriculturally disturbed area that is used for hay production and grazing, is disked every spring, and is largely barren throughout most of the summer and fall months. The mitigation site is adjacent to marsh habitat to the west. To the south of the mitigation site, there is a strip of blue gum and oak trees.

The intertidal bay margin where the shoreline area meets San Francisco Bay is located just west of the proposed mitigation site and is comprised of an unvegetated mudflat below the Ordinary High-Water Mark. Intertidal slough channels are also present near the Project site in the northern section of the intertidal marsh area. These channels directly flow into the San Francisco Bay (Vollmar Natural Lands Consulting, 2022).

3.4.3 Discussion of Checklist Responses

a. Substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species

3.4.3.1 Special-Status Species

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, 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 Project area:

- USFWS IPaC Trust Resources Report for the Project Area (USFWS, 2023)
- National Oceanic and Atmospheric Administration (NOAA) Fisheries Endangered Species Act Critical Habitat (NOAA, 2023)
- A California Natural Diversity Database (CNDDB) query of federally listed species in the nine U.S. Geological Survey (USGS) quadrangles containing and surrounding the Project area (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 Project area (CNPS, 2023, Appendix C)
- Biological Resources Evaluation Report Zone 5, Line A Turnaround Repair Project, Alameda County, California (Vollmar Natural Lands Consulting, 2022)

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 Project site, mitigation site, and staging area #2. Figure 3.4-1 shows CNDDB occurrences of special-status plant species within 5 miles of the Project site. Figure 3.4-2 shows CNDDB occurrences of special-status animal species within 5 miles of the Project 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 Project area are listed in Tables C-1 and C-2 in Appendix C. These special statuses are discussed below.

Based on the special-status plant species search described above, 70 species were identified that are known to occur in the vicinity of the project (CDFW, 2023; CNPS, 2023; USFWS, 2023). Sixty-five of these plant species were determined to have "no" or "not expected" potential to occur in the Project area. Three species have the potential to occur near the Project site and mitigation site: Point Reyes salty bird's-beak (*Chloropyron maritimum ssp. Palustre*), California seablite (*Suaeda californica*), and long-styled sand-spurrey (*Spergularia macrotheca* var. *longistyla)*.

The Point Reyes salty bird's beak and long-styled sand-spurrey have a California Rare Plant Rank (California Rare Plant Rank [CRPR][1]) of 1B.2. The California seablite is federally endangered and has a CRPR of 1B.1[2] (USFWS, 2023; CDFW, 2023). No special-status plant species were observed during surveys of the vicinity of the Project site (Vollmar Natural Lands Consulting, 2022).

The potential for 52 special-status wildlife species to occur in the Project area was considered due to their occurrence in the general vicinity of the Project site (CDFW, 2023; CNPS 2023; USFWS, 2023). Thirty-seven of these species are not discussed in detail because of an absence of suitable habitat or a reasonable expectation of occurrence in the Project area; therefore, there is no potential for Project-related impacts on these species, and they are not discussed further.

The northern harrier (*Circus cyaneus*) and short-eared owl (*Asio flammeus)*, both California Species of Special Concern, were determined to have a "Possible" or "Not Expected" potential to occur within the Project area. These particular species are considered species of special concern only when nesting and not when they occur as non-breeding visitors. Additionally, the white-tailed kite (*Elanus leucurus)* is Fully Protected in California and has a "Possible" potential to occur in the Project area. These three species have the potential to forage and visit the Project area, but none are expected to nest in the Project area due to a lack of suitable breeding or nesting habitat.

[2] California Rare Plant Rank definitions: 1B: Plants Rare, Threatened, or Endangered in California and Elsewhere. Threat ranks: 0.1 - Seriously threatened in California and 0.2 - Moderately threatened in California

These species also have the ability to disperse when unfavorable conditions occur in their foraging habitat. Therefore, impacts to these species are not anticipated by the Project activities (Vollmar Natural Lands Consulting, 2022), and these species are not discussed further.

Figure 3.4-1. CNDDB Special-status Plants

[[11 x 17 landscape]]

Number	Common Name
1	alkali milk-vetch
2	chaparral ragwort
3	Congdon's tarplant
4	Contra Costa goldfields
5	Diablo helianthella
6	hairless popcornflower
7	Hoover's button-celery
8	long-styled sand-spurrey
9	most beautiful jewelflower
10	northern slender pondweed
11	Point Reyes salty bird's-beak
12	saline clover
13	San Joaquin spearscale

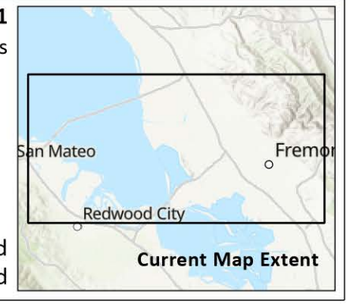
Edge of Turnaround
Limits of Grading
Mitigation Area
Staging Area #1
Staging Area #2

N
0 0.5 1 Miles

Project Area
Component
Turnaround
Project Area
Staging Area #1
Staging Area #2
Mitigation Area
Project Access
Five-Mile Buffer
Taxonomic Group
Dicots
Monocots
Species Common Name

Figure 3.4-1
CNDDB Special-status Plants

Alameda Creek West End
North Levee Turnaround



MONTROSE ENVIRONMENTAL

Data Source: California Natural Diversity Database, February 2023.

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Figure 3.4-2. CNDDB Special-status Animals

[[11 x 17 landscape]]

Number	Common Name
1	Alameda song sparrow
2	bank swallow
3	black skimmer
4	burrowing owl
5	California black rail
6	California least tern
7	California red-legged frog
8	California Ridgway's rail
9	green sturgeon - southern DPS
10	longfin smelt
11	monarch - California overwintering population
12	northern harrier
13	pallid bat
14	salt-marsh harvest mouse
15	salt-marsh wandering shrew
16	saltmarsh common yellowthroat
17	San Francisco gartersnake
18	short-eared owl
19	steelhead - central California coast DPS
20	tricolored blackbird
21	western bumble bee
22	western snowy plover
23	white-tailed kite
24	yellow rail

Figure 3.4-2
CNDDB Special-status Animals

Alameda Creek West End
North Levee Turnaround

MONTROSE ENVIRONMENTAL

Data Source: California Natural Diversity Database, February 2023.

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A discussion of the Proposed Project's potential effects on special-status species and the resultant level of impacts is provided for the following special-status species that may potentially occur within or adjacent to the Project area:

- Plants
  - California seablite
  - Long-styled sand-spurrey
  - Point Reyes salty bird's-beak
- Birds
  - California Ridgway's rail (= clapper rail) (*Rallus obsoletus obsoletus*)
  - California black rail (*Laterallus jamaicensis coturniculus*)
  - Alameda song sparrow (*Melospiza melodia pusillula*)
  - Western burrowing owl (*Athene cunicularia*)
- Fish
  - Green sturgeon (*Acipenser medirostris*)
  - Central California Coast (CCC) steelhead (*Oncorhynchus mykiss irideus*)
  - Longfin smelt (*Spirinchus thaleichthys*)
- Mammals
  - Salt marsh harvest mouse (*Reithrodontomys raviventris*)
  - Salt marsh wandering shrew (*Sorex vagrans halicoetes*)
- Invertebrates
  - Western bumble bee (*Bombus occidentalis*)

3.4.3.2 Special-Status Plants

Special-status plant species with the potential to occur within the Project area are the California seablite, long-styled sand-spurrey, and Point Reyes salty bird's-beak. These species are known to occur within intertidal salt marsh habitat and have the potential to occur within the Project area. No special-status plants were observed within the vicinity of the Project site during reconnaissance-level surveys assessment by Vollmar Natural Lands Consulting during the flowering period of most special-status plant species (i.e., April through October) (Vollmar Natural Lands Consulting, 2022).

Long-styled sand-spurrey has the potential to occur in the vicinity of the Project site in intertidal salt marsh habitat, but has only had one known occurrence in Alameda County. The last known occurrence in Alameda County of long-styled sand-spurrey was in 1897 (CDFW, 2023). (Figure 3.4-1) California seablite may occur in the vicinity of the Project site as well in the intertidal marsh. There are no known CNDDB occurrences of this species in the Project vicinity, but this species may occur in suitable salt marsh habitat. Point Reyes salty bird's beak also has the potential to occur in intertidal marsh habitat.

The closest CNDDB occurrence of Point Reyes salty bird's-beak is approximately 4 miles away (Figure 3.4-1).

If any of these special-status plants were present within the Project area, project construction could result in the removal, trampling, or crushing of individual plants, and improperly controlled runoff could enter potential special-status plant habitat. The Project would adhere to BMPs such as BMP-1: Construction Work Windows; BMP-2: Area of Disturbance; BMP-3: Erosion and Sediment Control; BMP-4: Fill, Spoils, and Stockpiled Materials; BMP-5: On-site Hazardous Materials Management; BMP-6: Spill Prevention and Response Plan; BMP-7: Vehicle and Equipment Maintenance; BMP-8: Dust Management Controls and Air Quality Protection; BMP-9: Work Site Housekeeping; and BMP-10: Minimize Spread of Weeds and Invasive Species listed in Table 2-2. The BMPs listed in Chapter 2 would minimize the potential for runoff, sediment, or hazardous materials to enter special-status plant habitat by conducting work in the dry season, minimizing the work area, conducting erosion and sediment control activities, properly maintaining vehicles, developing a Spill Prevention and Response Plan, and minimizing the spread of weeds and invasive species. **Mitigation Measures BIO-1** and **BIO-2** would minimize potential impacts to special-status plant species by conducting environmental awareness training, minimizing the potential for runoff or sediment to enter potential special-status plant habitat, and surveying for and avoiding special-status plant populations.

Mitigation Measure BIO-1: Environmental Awareness Training

All construction personnel involved in the Project will attend an environmental awareness training prior to the commencement of Project disturbance activities. The training will be conducted by a qualified biologist and will involve the presentation of sensitive species and habitats documented or potentially occurring in the Project area. The training will include handouts that describe each resource with respect to listing status, habitat preferences, distinguishing physical characteristics, causes of its decline, and potential protection and avoidance measures. The handout will be distributed among construction personnel and will include photographs of the resources in order to facilitate the identification by personnel.

Mitigation Measure BIO-2: Special-Status Plant Surveys

Prior to the start of construction, a qualified biologist or ecologist will conduct surveys for the special-status plant species that have the potential to occur within the Project area. Surveys will be conducted during the peak bloom periods for each species. The peak bloom periods for each species are as follows: June through October for Point Reyes bird's-beak, February through May for long-styled sand-spurrey, and June through October for California seablite. If none of the species surveyed are present, no further action will be required, and construction may proceed. If any of the species are present, the qualified biologist will be responsible for defining appropriate no-disturbance buffers to protect them during construction. Buffers will be established using temporary construction fencing or another low-impact medium installed by or under the direct supervision of the biologist.

Impacts on special-status plants would be **less than significant with mitigation**.

3.4.3.3 Special-Status Birds

Special-Status bird species with the potential to occur within the Project area are the California Ridgway's rail, California black rail, Alameda song sparrow, and Western burrowing owl.

3.4.3.3.1 California Ridgway's Rail and California Black Rail

The closest known occurrence of California Ridgway's rail is approximately 2 miles from the vicinity of the Project site (Figure 3.4-2) (CDFW, 2023). The closest known occurrence of California black rail is 2.4 miles from the vicinity of the Project site (Figure 3.4-2) (CDFW, 2023). Both species use tidal marsh habitats and have been observed in adjacent areas such as Eden Landing Ecological Reserve and Alameda Creek. Due to presence of intertidal marsh with pickleweed in the Project area and in adjacent areas, both rail species may be present within Project vicinity. Construction activities could temporarily disturb adjacent foraging and nesting habitats, resulting in potential impacts on these species. However, foraging individuals would not be impacted during construction because they would disperse and leave the Project site prior to noise disturbance. Implementation of BMPs 1 through 10 listed in Chapter 2 would minimize the potential for runoff, hazardous materials, or sediment to enter intertidal habitat, by minimizing the work area, conducting erosion and sediment control activities, properly maintaining vehicles, and developing a Spill Prevention and Response Plan. **Mitigation Measures BIO-1**, **BIO-3**, and **BIO-4** would minimize potential impacts to California black rail and California Ridgway's rail by conducting environmental awareness training, performing protocol-level surveys for nesting rails, and carrying out biological monitoring.

Mitigation Measure BIO-3: Special-Status Bird Surveys

The following measures will be adopted to minimize negative effects on California black rail and California Ridgway's rail:

- To minimize negative effects on California black rail and California Ridgway's rail, the project activities, including vegetation management activities requiring heavy equipment, adjacent to tidal marsh areas (within 500 feet) or a distance determined in coordination with USFWS and/or CDFW, will be avoided during the breeding season from February 1 through August 31.
- If areas within or adjacent to rail habitat cannot be avoided during the breeding season (February 1 through August 31), protocol-level surveys will be conducted to determine rail nesting locations. The surveys will focus on potential habitat that could be disturbed by construction activities during the breeding season to ensure that rails are not breeding in these locations. Survey methods for rails will follow the Site-Specific Protocol for Monitoring Marsh Birds, which was developed for use by USFWS and partners to improve Bay-wide monitoring accuracy by standardizing surveys and increasing the ability to share data. Surveys will be concentrated during the approximate period of peak

detectability, January 15 to March 25, and will be structured to efficiently sample an area in three rounds of surveys by broadcasting calls of target species during specific periods of each survey round. Call broadcast increases the probability of detection compared to passive surveys when no call broadcasting is employed. This protocol has since been adopted by Invasive Spartina Project and Point Blue Conservation Science to survey Ridgway's rails at sites throughout the San Francisco Bay. The survey protocol for Ridgway's rail is summarized below:

  - Previously used survey locations (points) will be used when available to maintain consistency with past survey results. Adjacent points will be at least 200 meters apart along transects in or adjacent to areas representative of the marsh. Points will be located to minimize disturbances to marsh vegetation. Up to eight points can be located on a transect.
  - At each transect, three surveys (rounds) are to be conducted, with the first round of surveys initiated between January 15 and February 6, the second round performed from February 7 to February 28, and the third round conducted from March 1 to March 25. Surveys will be spaced at least one week apart, and the period between March 25 and April 15 can be used to complete surveys delayed by logistical or weather issues. A federal ESA Section 10(a)(1)(A) permit is required to conduct active surveys.
  - Each point on a transect will be surveyed for 10 minutes each round. A recording of calls available from USFWS will be broadcast at each point. The recording consists of 5 minutes of silence, followed by a 30-second recording of Ridgway's rail vocalizations, followed by 30 seconds of silence, followed by a 30-second recording of California black rail, followed by 3.5 minutes of silence.

- If no breeding Ridgway's rails or black rails are detected during surveys, or if their breeding territories can be avoided by 500 feet, then Project activities may proceed at that location.
- If protocol surveys determine that breeding Ridgway's rails or black rails are present in the Project area, the following measures will apply to project activities conducted during their breeding season (February 1-August 31):
  - A USFWS- and CDFW-approved biologist with experience recognizing Ridgway's rail and black rail vocalizations will be onsite during construction activities occurring within 500 feet of suitable rail breeding habitat.
  - If a Ridgway's rail or black rail vocalizes or flushes within 30 feet, it is possible that a nest or young are nearby. If an alarmed bird or nest is detected, work will be stopped, and workers will leave the immediate area carefully and quickly.

- All crews working in marsh habitat during rail breeding season will be trained and supervised by a USFWS- and CDFW-approved rail biologist.
- If any activities will be conducted during the rail breeding season in Ridgway's rail- or black rail-occupied marshes, biologists will have maps or global positioning system locations of the most current occurrences within the vicinity of the Project area and will proceed cautiously and minimize time spent in areas where rails were detected.
- All personnel walking in the marsh will be required to limit time spent within 150 feet of an identified Ridgway's rail or black rail calling center to 30 minutes or less.

Mitigation Measure BIO-4: Terrestrial Noise Impacts to Special-Status Species

A qualified biologist shall be present at the start of each workday to observe if terrestrial noise related to the Project activities is negatively impacting California Ridgway's rail and/or saltmarsh harvest mouse behavior. If California Ridgway's rail and/or saltmarsh harvest mice are observed to be negatively impacted by the terrestrial noise generated by construction activities by the qualified biologist, such activities generating terrestrial noise will cease immediately.

3.4.3.3.2 Alameda Song Sparrow

The Alameda song sparrow has the potential to occur in and adjacent to the Project. The nearest documented CDNND occurrence is in Newark, about 1.5 miles from the vicinity of the Project area (Figure 3.4-2) (CDFW, 2023). This species inhabits tidal salt marsh habitats with adequate vegetation cover to nest in areas of the San Francisco Bay (Marshall and Dedrick, 1994). Due to the presence of brush habitat along the levee and ruderal grassland areas in the Project area, the brush may provide potential nesting habitat for Alameda song sparrows. If Project activities occur during the nesting season, the Alameda song sparrow could be impacted by construction-related noise and visual disturbance, and Project construction could potentially result in nest failure.

Implementation of **Mitigation Measures BIO-1** and **BIO-5** would minimize potential impacts to the Alameda song sparrow by conducting environmental awareness training, conducting nesting bird surveys, and establishing buffer zones around active nests.

Mitigation Measure BIO-5: Nesting Bird Surveys

If construction activities commence anytime during the nesting/breeding season of raptors or other migratory birds (typically February 1 through August 31), a pre-construction survey for nesting birds will be conducted by a qualified biologist within two weeks of the commencement of construction activities. If there is a two-week or longer lapse in construction activities within the Project area, the pre-construction survey will be repeated. If active nests are found in areas that could be directly affected or are within 500 feet of construction and would be subject to prolonged construction-related noise, a qualified biologist will establish a no-disturbance buffer zone around active nests during the breeding season or until a qualified biologist determines that all young have fledged. The size of the buffer zone and types of construction activities restricted within it will account for factors such as the following:

- Noise and human disturbance levels at the construction site at the time of the survey and the noise and disturbance expected during the construction activity;
- Distance and amount of vegetation or other screening between the construction site and the nest; and
- Sensitivity of individual nesting species and behaviors of the nesting birds.

3.4.3.3.3 Western Burrowing Owl

The Western burrowing owl is currently listed as a Bird Species of Special Concern (breeding), priority 2 by the USFWS (Shuford &Gardali, 2008). Burrowing owl habitat consists of grassland, deserts, agricultural, and scrubland in which they prefer habitats with open, low-growing vegetation and minimal trees. They require the presence of abandoned burrows from burrowing animals such as ground squirrels to nest. The nearest nesting occurrence of burrowing owls is 3.5 miles from the vicinity of the Project area (Figure 3.4-2) (CDFW, 2023). The burrowing owl has the protentional to occur in the Project area. Further, several ground squirrel burrows have been observed along Alameda Creek North Levee that could potentially provide suitable burrowing owl nesting habitat, although the amount of trail disturbance from trail users can make burrows unlikely nesting habitat locations (Vollmar Natural Lands Consulting, 2022). If Project construction occurs during the nesting season, then nesting burrowing owls could be affected by Project activities.

Mitigation Measures BIO-1 and **BIO-5** would minimize potential impacts on the western burrowing owl by conducting environmental awareness training, performing nesting bird surveys, and establishing buffer zones around active nests.

3.4.3.3.4 Other Special-Status Birds

Western snowy plover (*Charadrius alexandrinus nivosus*) and California least tern (*Sternula antillarum browni*) are both known to occur in Alameda County and nest at Eden Landing Ecological Reserve (Figure 3.4-2) north of the Project area. However, it is not expected for both species to use vicinity of Project site as nesting habitat because they prefer sandy habitat, salt pond habitat, and gravelly/friable soils for nesting substrate. These species are not discussed further.

3.4.3.3.5 Migratory and Nesting Birds

The MBTA and the California Fish and Game Code (Section 3503) prohibit the take of migratory birds as well as disturbance of the active nests of most native birds. The habitat within the vicinity of Project site could support nests of multiple migratory bird species, including raptors. Vegetation removal could result in direct loss of birds protected by the MBTA. Additionally, construction-related noise or other disturbance could result in the abandonment of an active nest in vegetation adjacent to or near the Project area, including potential nests of special-status bird species.

If Project activities commence during nesting bird season, individual nesting birds could be harmed. **Mitigation Measure BIO-5** would minimize potential impacts on nesting birds protected by the MBTA and California Fish and Game Code by conducting nesting bird surveys and establishing buffer zones around active nests.

Impacts to special-status birds would be **less than significant with mitigation**.

3.4.3.4 Special-Status Fish

Special-status fish known to occur in the portion of San Francisco Bay near the Project area include green sturgeon, CCC steelhead Distinct Population Segment (DPS), and longfin smelt.

CCC steelhead are federally listed as threatened (Figure 3.4-2). The South Bay and Alameda Creek in the Project vicinity are not designated as Critical Habitat for steelhead. Critical Habitat for CCC Steelhead DPS was designated by NMFS and NOAA in 2005 (NMFS, 2011). The San Francisco Bay does play an important part in the lifecycles of steelhead, providing transitional habitat between freshwater and saltwater environments (NMFS, 2011).

Green sturgeon DPS is listed as federally threatened. The San Francisco Bay and Alameda Creek into Coyote Hills Slough near the vicinity of the Project area are designated as Critical Habitat for green sturgeon (Figure 3.4-3).

Longfin smelt is State listed as threatened, and the San Francisco Bay population was recognized as a federal candidate species in 2012. The closest CNDDB-documented occurrence of longfin smelt from the vicinity of the Project site is 3.5 miles (Figure 3.4-2) (CDFW 2023). Movement of longfin smelt is known to be variable; they are known to forage in bay margins (Merz et al. 2013; Lewis et al. 2020). Because of this, longfin smelt may be present in the San Francisco Bay and in the Project vicinity during proposed Project activities.

Project activities were originally proposed immediately adjacent to where Alameda Creek meets the San Francisco Bay, but Project construction is currently planned 600 feet inland from the original site on the Alameda Creek North Levee. Implementation of the BMPs listed in Chapter 2 (BMP-1 through BMP-9) would minimize the potential for runoff, sediment, or hazardous materials to enter special-status fish habitat by conducting work in the dry season, minimizing the work area, conducting erosion and sediment control activities, properly maintaining vehicles, and developing a Spill Prevention and Response Plan. **Mitigation Measure BIO-1** would minimize potential impacts by conducting environmental awareness training. Impacts on special-status fish would be **less than significant with mitigation**.

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Figure 3.4-3. Critical Habitat Green Sturgeon DPS

[[11 x 17 landscape]]

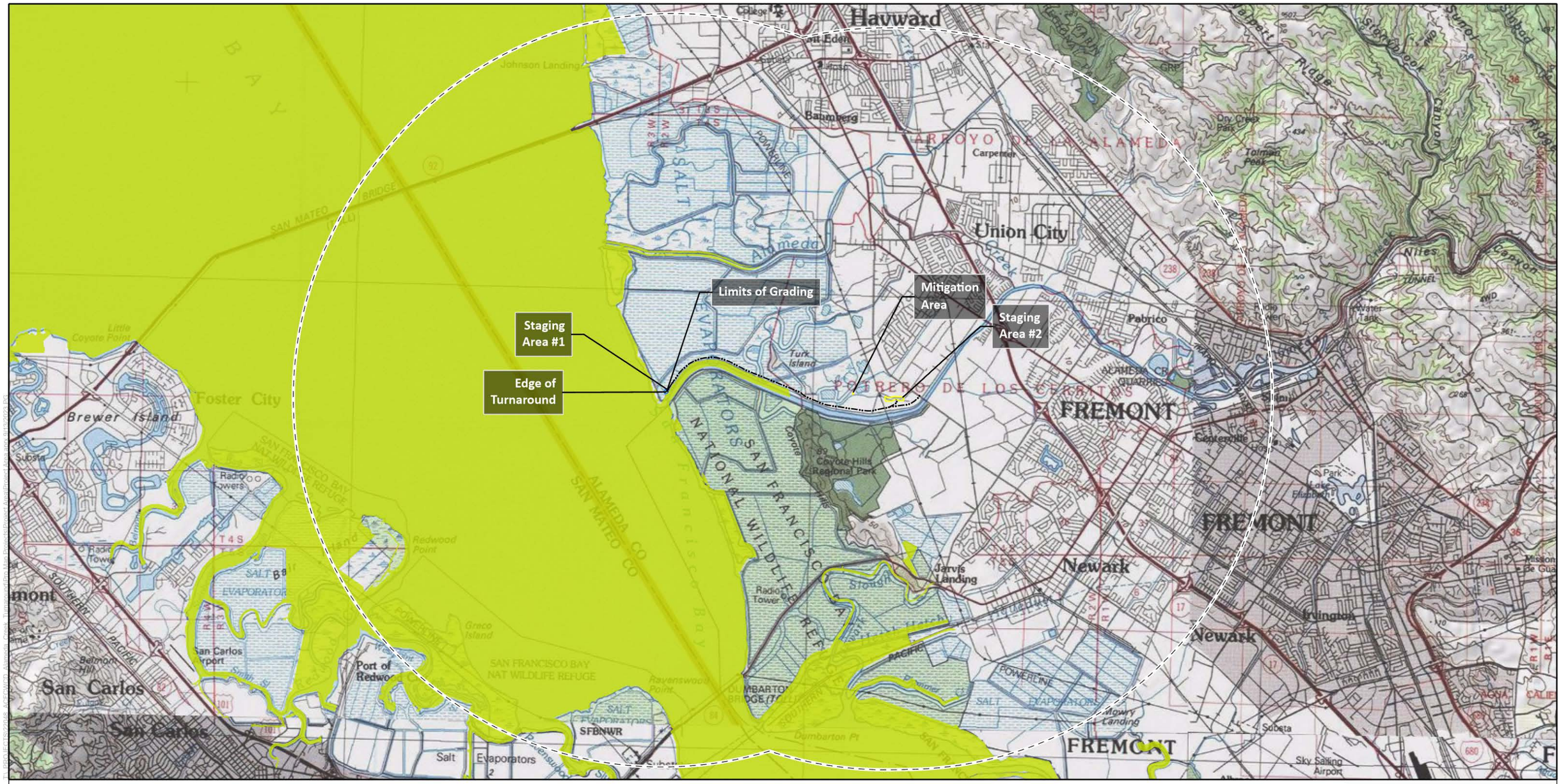

Figure 3.4-3
Critical Habitat Green Sturgeon DPS

Alameda Creek West End
North Levee Turnaround

MONTROSE ENVIRONMENTAL

Data Source: NOAA Critical Habitats Database https://www.webapps.nwfsc.noaa.gov/server7/rest/services/NMFS/NMFS_WCR_ESA_Critical_Habitat/MapServer

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3.4.3.5 Special-Status Mammals

Salt marsh harvest mice and salt marsh wandering shrews may potentially occur in the Project vicinity (CDFW, 2023). The salt marsh harvest mouse was listed as federally endangered in 1970. Habitat includes dikes and tidal marshes, with a preference for areas that have heavy vegetation that consists of pickleweed, tule, and other vegetation that is used for foraging and cover (USFWS, 2013). The salt marsh harvest mouse does not generally inhabit areas that are open and unvegetated, thus making their home range relatively small, with an average of no larger than a half-acre per individual. As seen in Figure 3.4-2, the closest CNDDB occurrence of salt marsh harvest mice is about 1.3 miles away from the vicinity of the Project area.

The salt marsh wandering shrew is a Species of Special Concern (Bryslski et al., 1998). The distribution and associated habitats of the salt marsh wandering shrew are not well known in the South Bay; however, this species may be present in the same locations as the salt marsh harvest mouse due to using pickleweed habitat in intertidal marsh habitat as well (Vollmar Natural Lands Consulting, 2022).

Due to the presence of pickleweed habitat, the preferred habitat of both the salt marsh harvest mouse and the wandering shrew, it is possible that both species may be present in Project area during Project activities. Project construction could result in injury or mortality to saltmarsh harvest mice and saltmarsh wandering shrews due to the proximity of Project activities to pickleweed (Vollmar Natural Lands Consulting, 2022). Implementation of the BMPs listed in Chapter 2 (BMP-1 through BMP-9) would minimize the potential for runoff, sediment, or hazardous materials to enter special-status fish habitat by conducting work in the dry season, minimizing the work area, conducting erosion and sediment control activities, properly maintaining vehicles, and developing a Spill Prevention and Response Plan. **Mitigation Measures BIO-1** and **BIO-6** would minimize potential impacts by implementing environmental awareness training, conducting pre-construction surveys, installing exclusion fencing, and performing biological monitoring. Therefore, impacts on salt marsh harvest mice and salt marsh wandering shrews would be **less than significant with mitigation**.

Mitigation Measure BIO-6: Salt Marsh Harvest Mouse and Salt Marsh Wandering Shrew

- A USFWS and CDFW-approved biologist, with knowledge and experience with salt marsh harvest mouse habitat requirements, will conduct pre-construction surveys for the species and identify and mark suitable salt marsh harvest mouse marsh habitat prior to the start of Project activities.
- Ground disturbance to suitable salt marsh harvest mouse habitat (including, but not limited to, pickleweed and emergent salt marsh vegetation, including bulrush and cattails) will be avoided to the extent feasible. Where salt marsh harvest mouse habitat cannot be avoided, vegetation will be removed from the ground disturbance work area plus a 10-foot buffer around the area utilizing mechanized hand tools or by another method approved by the USFWS and CDFW. Vegetation height will be maintained at or below 5 inches above ground. Vegetation removal in salt marsh harvest mouse habitat will be conducted under the supervision of USFWS- and CDFW-approved biologists.

- Prior to ground disturbance activities, an exclusion barrier and/or fencing will be installed around the construction area to exclude salt marsh harvest mice and/or salt marsh wandering shrews from areas of active construction. The design of the exclusion barriers and fencing will be approved by a qualified biologist and installed in the presence of a qualified biological monitor. The fence will be made of a material that does not allow salt marsh harvest mice and/or salt marsh wandering shrews to pass through, and the bottom will be buried to a depth of a minimum of 4 inches below ground surface so they cannot crawl under the fence.
- Construction activities will be scheduled to avoid extreme high tides when there is potential for salt marsh harvest mice to move to higher, drier grounds, such as ruderal and grassland habitats. An extreme high tide would be in excess of 6 feet, as predicted for the nearest tide gauge.
- All construction equipment and materials will be staged on existing roadways and away from suitable wetland habitats when not in use.
- A USFWS- and CDFW-approved biologist with previous salt marsh harvest mouse monitoring and/or surveying experience will be onsite during construction activities occurring in suitable habitat. The biologist will document compliance with the Project's permit conditions and avoidance and conservation measures. The USFWS- and CDFW-approved biologist has the authority to stop Project activities if any of the requirements associated with these measures is not being fulfilled. If a salt marsh harvest mouse is observed in the work area, construction activities will cease in the immediate vicinity of the salt marsh harvest mouse. The individual will be allowed to leave the area before work is resumed. If the individual does not move on its own volition, the USFWS-approved biologist will contact USFWS (and CDFW, if appropriate) for further guidance on how to proceed.
- If the USFWS- and CDFW-approved biologist has requested work stoppage because of take of any of the listed species or if a dead or injured salt marsh harvest mouse is observed, the USFWS and CDFW will be notified by the District within one day by email or telephone.

3.4.3.6 Special-Status Invertebrates

The western bumble bee is a candidate for State endangered status. The closest CNDDB-documented occurrence from the vicinity of Project area is 5.2 miles (Figure 3.4-2) (CDFW, 2023). However, the Project area encompasses ruderal grassland with burrows from California ground squirrels that can provide suitable foraging habitat and potential nesting habitat for western bumble bees (Vollmar Natural Lands Consulting, 2022). If Project activities occur during their active nesting season from March 1 to November 1, then active western bumble bee colonies could be negatively impacted or harmed (USFWS, 2019).

Implementation of the BMPs listed in Chapter 2 (BMP-1 through BMP-9) would minimize the potential for runoff, sediment, or hazardous materials to enter special-status invertebrate habitat by conducting

work in the dry season, minimizing the work area, conducting erosion and sediment control activities, properly maintaining vehicles, and developing a Spill Prevention and Response Plan. **Mitigation Measures BIO-1** and **BIO-7** would minimize direct and indirect impacts on western bumble bees by conducting environmental awareness training, conducting pre-construction surveys, and avoiding western bumble bee colonies if detected. Therefore, impacts to western bumble bee would be **less than significant with mitigation**.

Mitigation Measure BIO-7: Special-Status Bumble Bee Surveys

A qualified biologist(s) will conduct a pre-construction survey for special-status bumble bees prior to the onset of work. The pre-construction survey effort will be conducted for a minimum of one hour. If bumble bees of any species are observed, an attempt will be made to photograph the bees for identification following the USFWS guidance in Survey Protocols for the Rusty-Patched Bumble Bee (*Bombus affinis*) (USFWS, 2019). If construction begins between March 1 and November 1, the ground shall also be searched during the survey for active bumble bee colonies. No capture or handling of bumble bees is allowed without formal CDFW take authorization. If individual western bumble bees are observed during pre-construction surveys, they will be avoided during project construction activities to ensure no "take" occurs. Avoidance may require biological monitoring or establishment of avoidance buffers until the bees have left the work area. If western bumble bee colonies are identified, these colonies shall be demarcated with a flagged avoidance buffer, as determined by a qualified biologist, and will be avoided during the active season from March 1 through November 1, or until the qualified biologist has determined that the colony is no longer active. All sightings of western bumble bees will be reported to the CNDDB.

b. Substantial adverse effect on any riparian habitat or other sensitive natural community

Sensitive plant communities within the Project area include intertidal marshes dominated by pickleweed (*Salicornia* spp.). Intertidal wetland habitat dominated by pickleweed (pickleweed marsh) is found to the north and south of the Alameda Creek North Levee (Vollmar Natural Lands Consulting, 2022). Pickleweed marsh has an alliance ranking of G4[3] S3[4] and is therefore considered a sensitive habitat type. No other sensitive natural communities occur within Project area.

The Project would result in approximately 0.019 acres of temporary impacts and 0.053 acres of permanent impacts on pickleweed marsh. Following the completion of the new turnaround area (grading and construction activities), revegetation of the tidally influenced, temporarily disturbed areas would consist of a combination of planting and natural colonization/recruitment. The predominant native species currently in the Project site's tidal marsh are pickleweed (*Salicornia pacifica*), with alkali

[3] Alliance ranking of G4 indicates that the community is considered secure globally.

[4] Alliance ranking of S3 indicates that the community is considered vulnerable in California.

heath (*Frankenia salina*), and saltgrass (*Distichlis spicata*). In addition, in the upland between the top of bank of the Alameda Creek Trail levee and the intertidal marsh margin, there are shrubs comprised of coyote brush and Oregon gumweed. Based on prior tidal salt marsh restoration work in San Francisco Bay, perennial pickleweed and annual pickleweed are anticipated to colonize tidal areas rapidly via natural seed dispersal on the tides with no need for additional planting. However, marsh gumplant and saltgrass would likely take much longer to establish from natural recruitment; therefore, as stated in the Project description, supplemental planting of these species would occur in small, monospecific patches in approximately 30 percent of the disturbed areas below mean high water. To offset permanent impacts to pickleweed habitat from the Project, the District would create approximately 0.161 acres of seasonal wetland 2.5 miles upstream of the proposed turnaround (the mitigation site) (Figure 2-2). The District proposes to restore an agriculturally disturbed area that is primarily used for hay production to a seasonal wetland by grading and lowering the elevation by 0.5 to 1.0 foot, to a new elevation of 5.0 NAD88. This would create soil and drainage conditions suitable for pickleweed to become established.

Implementation of the BMPs listed in Chapter 2 (BMP-1 through BMP-9) would further minimize the potential for impacts to sensitive natural communities by conducting work in the dry season, minimizing the work area, conducting erosion and sediment control activities, and minimizing the spread of invasive weeds. **Mitigation Measure BIO-1** would minimize negative impacts on pickleweed marsh by conducting environmental awareness training. Therefore, Project-related impacts on sensitive pickleweed habitat would be **less than significant with mitigation**.

c. Substantial adverse effects on state or federally protected wetlands

Wetlands and waters mapped within the Project area include intertidal marshes, and the San Francisco Bay, (Vollmar Natural Lands Consulting, 2023). Impacts to intertidal wetlands are discussed previously in Response 3.4.3(b). *Substantial adverse effect on any riparian habitat or other sensitive natural community.*

The majority of Project activities would be conducted along the Alameda Creek North Levee (an upland), and no work would be conducted within Alameda Creek or the San Francisco Bay. Additionally, as discussed in Response 3.4.3(b), the Project would restore an intertidal marsh wetland near the trailhead to offset Project impacts to wetlands (Figure 2-2). Following the completion of new turnaround area (grading and construction activities), revegetation of the tidally influenced disturbed areas would consist of a combination of planting and natural colonization/recruitment.

Implementation of the BMPs listed in Chapter 2 (BMP-1 through BMP-9) would minimize the potential for impacts to sensitive natural communities by conducting work in the dry season, minimizing the work area, conducting erosion and sediment control activities, and minimizing the spread of invasive weeds. **Mitigation Measure BIO-1** would minimize negative impacts on wetlands by conducting environmental awareness training. Potential Project-related impacts on State or federally protected wetlands would be **less than significant with mitigation**.

d. Substantial interference with wildlife movement, established wildlife corridors, or the use of native wildlife nursery sites

3.4.3.7 Resident and Migratory Fish

San Francisco Bay and Alameda Creek in the Project vicinity both provide migratory habitat for native fish species. However, no work would be conducted within Alameda Creek or San Francisco Bay. The Project is located near NMFS-designated critical habitat for green sturgeon. Project activities would not create substantial interference with movement, migratory corridors, or nursery sites or impede fish movement within the San Francisco Bay or in Alameda Creek for migratory fish. Impacts on potential migratory fish would be **less than significant**.

3.4.3.8 Resident and Migratory Wildlife

A number of resident and migratory wildlife species, such as birds, utilize adjacent areas, including Eden Landing Ecological Reserve, Don Edwards National Wildlife Refuge, and Coyote Hills Regional Park. The Project area is located within intertidal marsh habitat along Alameda Creek. The Project would not block or impede movement by resident or migratory wildlife due to no project work occurring in San Francisco Bay or Alameda Creek. There would be potential disruption of nesting or breeding of special-status species addressed above. **Mitigation Measures BIO 1** through **BIO-7** and Implementation of the BMPs listed in Chapter 2 (BMP-1 through BMP-9) would ensure that the nesting and breeding of resident and migratory special-status wildlife species are protected. Therefore, impacts on wildlife movement and use of native wildlife nursery sites would be **less than significant with mitigation**.

e. Conflict with local policies or ordinances protecting biological resources

The Project does not involve tree removal; therefore, it would not conflict with a tree preservation policy or ordinance.

The general plans for Hayward and Union City contain numerous goals, policies, and action items to protect biological resources (Appendix A). As shown in Table 2-2 in Chapter 2, the Project incorporates a variety of BMPs to avoid or minimize impacts to sensitive habitats, wildlife, and fisheries resources. Implementation of **Mitigation Measures BIO-1** through **BIO-7**, and implementation of the BMPs listed in Chapter 2 (BMP-1 through BMP-9) would further minimize impacts by protecting biological resources such as sensitive native habitat, vegetation communities, special-status species, and local native and wildlife species. Therefore, impacts would be **less than significant with mitigation**.

f. Conflict with the provisions of an adopted HCP, Natural Community Conservation Plan, or other approved local, regional, or state HCP

The Project is located within the Pacific Gas and Electric Company (PG&E) Bay Area Operations and Maintenance HCP. Species covered under this HCP are the Ridgway's rail and salt marsh harvest mouse. The proposed Project is not a PG&E-covered activity under their HCP and would not conflict with the HCP's conservation strategy because there is no covered activity and thus no conflict. The Project area is not within the area covered by any other HCPs, and the Project would not conflict with provisions

adopted by an HCP, Natural Community Conservation Plan, or other approved local, regional, or State HCP. There would be **no impact**.

3.5 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 following discussion regarding cultural resources is adapted from the following technical reports prepared by Basin Research Associates:

- Historic Property Survey Report/Finding of Effect, Alameda Creek Trail, North Levee, West End Turnaround Repair (2023);
- Historic Property Survey Report/Finding of Effect, Fish Passage Restoration in Lower Alameda Creek Flood Control District Zone 5 (2019); and
- Memorandum, Archaeological Literature Review – Lower Alameda Creek Fish Passage Restoration Sediment Storage Area (2022).

3.5.1 Regulatory Setting

3.5.1.1 Federal Laws, Regulations, and Policies

3.5.1.1.1 National Historic Preservation Act and Section 106

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 is 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).

3.5.1.1.2 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."

3.5.1.2 State Laws, Regulations, and Policies

3.5.1.2.1 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) (Public Resources Code § 5024.1(l));
- Included in a local register of historic resources (Public Resources Code § 5020.1(k)) or identified as significant in an historic resource survey meeting the requirements of Public Resources Code § 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 Health and Safety Code § 7050.5 and Public Resources Code § 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.

3.5.1.2.2 California Register of Historical Resources

Public Resources Code § 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.

3.5.1.3 Regional and Local

Local laws, regulations, and policies are detailed in Appendix A.

3.5.2 Environmental Setting

The prehistory of the Project area reflects information known about the indigenous population from the time the region was first populated with humans until the arrival of the first Europeans, who visited and recorded their journeys through the written record. The prehistoric record is derived from over a century of archaeological research, and while much has been gleaned from these studies, large gaps in the data record remain. The following prehistoric culture sequence, derived from Milliken et al. (2010:114-118), briefly outlines the prehistory of the San Francisco Bay region.

The Early Holocene (Lower Archaic; 8000-3500 B.C.) is considered a time when populations continued to be very mobile as they practiced a foraging subsistence pattern around the region. Artifacts that characterize this period include the milling slab and handstone to process seeds, as well as large, wide-stemmed, and leaf-shaped projectile points.

The Early Period (Middle Archaic; 3500- 500 B.C.) is marked by the appearance of cut shell beads in the archaeological record, as well as the presence of the mortar and pestle for processing acorns. House floors with postholes indicate substantial living structures, which suggests a move toward establishing a more sedentary lifestyle and an increasing population.

The Middle Period, which includes the Lower Middle Period (Initial Upper Archaic; 500 B.C. to A.D. 430) and Upper Middle Period (Late Upper Archaic; A.D. 430 to 1050), appears to be a time when geographic mobility may have continued, although groups began to establish longer-term base camps in localities from which a more diverse range of resources could be exploited. The first rich black middens are recorded from this period. The addition of milling tools, obsidian and chert concave-base projectile points, and the occurrence of sites in a wider range of environments suggest that the economic base was more diverse. By the Upper Middle Period, mobility was being replaced by the development of numerous small villages. Around A.D. 430, a “dramatic cultural disruption” occurred, as evidenced by the sudden collapse of the Olivella saucer bead trade network.

The Initial Late Period (Lower Emergent; A.D. 1050-1550) reflects a social complexity that had developed toward the lifeways of large, central villages with resident political leaders and specialized activity sites. Artifacts associated with the period include the bow and arrow, small corner-notched projectile points, and a diversity of beads and ornaments.

The Terminal Late Period (Upper Emergent; A.D. 1550 to circa 1750) generally represents the indigenous cultures that were encountered by the Spanish when they first arrived in San Francisco Bay.

Ethnographically, the vicinity of the Project falls within the territory of the Costanoan, which occupied the entire San Francisco Peninsula, as well as all lands along the east and south of San Francisco Bay and extended south to include Monterey Bay, Salinas Valley, and the area around Hollister. The Costanoan peoples, who are referred to as the Ohlone, Mutsun, or Rumsen, depending on geography, were not a united cultural or political entity (Milliken et al. 2009:2-4). Rather, there were strong differences, not only in language but also in culture, between the San Francisco and Monterey Bay occupants, and political affinity was based on the tribelet, which comprised one or more villages within a specific geographic territory (Levy 1978:487).

Tribelet territory had a range of 10 to 12 miles in diameter and contained a population that consisted of 200 to 400 people living among four or five villages (Milliken et al. 2010:99). Those living in the Project area resided in large villages along permanent streams in locations that allowed access to the diverse resources found in the tidal marshlands, the valley floor, and the hills (Milliken et al., 2010:106; Moratto, 2004:225).

During the historic period, the area around Alameda Creek is thought to have been used for important water transport of goods to surrounding areas during the American Period (Basin 2023). In more recent years, the areas farther inland of the Project Area were known to be used for the production of salt and agriculture. The Alameda Creek was fully channelized by the year 1980 which occurred alongside the urbanization of the east end of the Project vicinity.

3.5.3 Cultural Resources Studies

Cultural resources include prehistoric archaeological sites; historic-era archaeological sites; tribal cultural resources (TCRs); and historic buildings, structures, landscapes, districts, and linear features. TCRs are addressed in Section **Error! Reference source not found.**, "**Error! Reference source not found.**."

3.5.3.1 Archival Research

Record searches were requested by Basin Research at the Northwest Information Center of the California Historical Resources Information System at Sonoma State University (IC File Numbers 21-1102 and 22-1294). The purpose of the record searches was to identify the presence of any previously recorded cultural resources within the Project Area and mitigation area, as well as within a 0.25-mile buffer, and to determine whether any portions of the Project site and mitigation area had been surveyed for cultural resources. The record searches determined that 13 cultural resource studies have been conducted within the Project area, but 18 studies have taken place within the 0.25-mile record search area. Nearly all of these studies were linear in nature and focused either on the levees in the area or were related to utility lines. Other studies that encompass the Project area include various historic, archaeological, and ethnographic overviews. A complete list of the studies identified by the record search is included in Appendix B of the Cultural Resources Report for the Project (see Appendix D of this IS/MND).

The record search did not identify any previously recorded cultural resources within the Project area, although four resources have been recorded within the 0.25-mile buffer. However, a small segment of the Eden Landing Salt Works Historic Landscape (P-01-11827) does intersect the Project Area. Table 3.5-1 summarizes these resources.

TABLE 3.5-1. PREVIOUSLY RECORDED CULTURAL RESOURCES WITHIN THE SEARCH RADIUS

Resource	Type	Recorded By	Eligibility NRHP/CRHR	Comment
Adjacent to Project Area				
P-01-011437	Site: District, Historic Eden Landing Salt Works Historic Landscape	Lou Ann Speulda, Drews, Nick Valentine, & Ellen Joslin Johnck, 2007	Eligible as a historic property	Boundary adjacent to property line on north levee road and project area – does not extend into project area.
Within Search Radius				
P-01-000033 CA-ALA-00012	Site: Prehistoric	F. Fenenga, 1949; Peter Banks, 1985	Not Evaluated	Burials present; East end of project area on south bank of channel; a.1,000 feet south of north levee road
P-01-000034 CA-ALA-	Site: Prehistoric, Historic	Fenenga, 1949; Rackerby, 1965. Peter Banks, 1979	Individually determined eligible for NRHP	East end of project area on south bank of channel; ca.800- 990 feet south of north

Resource	Type	Recorded By	Eligibility NRHP/CRHR	Comment
0013/H			by consensus through Section 106 process (2S2); CRHR listed	levee road within Coyote Hills Regional Park
P-01-000115 CA-ALA-00341	Site: Prehistoric	Rackerby, 1965	Not Evaluated	Burials present; identified 900-1000 feet south of North Levee Road
P-01-011827	Other: Historic	None provided	Not Evaluated	Located adjacent to project area

Source: Historic Property Survey Report/Finding of Effect, Alameda Creek Trail North Levee West End Turnaround Repair Project, Basin Research Associates (2023)

Although not officially recorded, components of a Native American burial were reported as present within San Francisco Bay in the mudflats near the existing eroding turnaround on July 27, 2021, by Mr. Andrew Galvan, The Ohlone Tribe (Basin Research 2023). Mr. Galvan was appointed Most Likely Descendant (MLD) by the NAHC in mid-August, 2021. The District, after discussions with Mr. Galvan, accepted his recommendations to preserve the cultural finds in place and avoid the area by adjusting the footprint of the turnaround location from the shoreline 600 feet east inland. As such, no impacts are expected to occur on this resource.

3.5.3.2 Native American Communication

An email request was made to the Native American Heritage Commission (NAHC) on February 22, 2023, to review its files for the presence of recorded sacred sites on the Project site. The NAHC responded on February 28, 2023, stating that the records search identified significant resources in the Project vicinity. The NAHC also provided a list of 13 tribes and tribal contacts with a traditional and cultural affiliation with the Project area for notification pursuant to Public Resources Code § 21080.3.1 (Assembly Bill 52). Letters were sent to each contact on April 19, 2023, to elicit any concerns or information regarding any known tribal cultural resources within the project area. One response was received from Corrina Gould, Chairperson, The Confederated Villages of Lisjan, on May 9, 2023, who requested the results of the cultural resources investigation. The District, as the CEQA lead agency, will continue to provide information to the Tribe as planning proceeds. Coordination with tribes is described further in Section **Error! Reference source not found.**, "**Error! Reference source not found.**."

3.5.3.3 Archaeological Survey and Results

Archaeologists with Basin Research conducted a pedestrian survey of the project area on March 16, 2023. The linear project area is contained within the 3.82-mile-long north levee maintenance road extending from the trailhead on the east to the eroding shoreline of San Francisco Bay. The project area

includes the proposed Stables Staging Area (at the trailhead and parking lot) adjacent to 35000 Eastin Court; the existing approximately 3.82-mile-long north levee access road; the new turnaround located 600 feet east of the San Francisco Bay shoreline; and the area around the old turnaround near the bay shoreline that will be conformed to the existing wetland elevation. Construction parking and storage will use the existing levee maintenance road and shoulder.

A field inventory was not conducted for the proposed mitigation area due to the site's location within or immediately adjacent to a former tidal marsh not suitable for prehistoric occupation (Basin Research, 2022).

No evidence of prehistoric or significant historic-era cultural material—isolates, features, or sites—was observed in or adjacent to the project area or mitigation area during the survey (Basin Research, 2022; Basin Research, 2023).

3.5.3.3.1.1 Built Environment Resources

The Project area is located within a minimally developed landscape. One historic-period structure, a small livestock shed, was identified during the survey conducted within the Project area. The shed was previously a part of an equestrian stable complex which was demolished in the early 2000s. Based on the review of the structure history and architectural integrity, the structure does not appear eligible for NRHP or CRHR listing under any criteria and appears to have been significantly altered since when it was originally built (Basin Research, 2023). Additionally, the previous demolition of the accompanying stable complex significantly compromised the historical context and integrity of the structure.

3.5.4 Discussion of Checklist Responses

a. Adverse change in the significance of a historical resource

A cultural resource review was conducted to address the responsibilities of the CEQA, as codified in Public Resource Code sections 5097, and its implementing guidelines 21082 and 21083.2. No cultural resources were identified within the Project area as a result of this investigation. Additionally, while no resources were identified within the Project area, a small section of the recorded boundaries of an historic landscape known as Eden Landing Salt Works (P-01-011437), is located adjacent to the Project Area. This resource was determined by the United States Fish and Wildlife Service (USFWS) to be considered an historic property under NRHP criteria A and D (and therefore also considered an historic resource under CEQA), and consists of 23 salt evaporation ponds and "smaller interior levees, remnant smaller ponds, water control structures, a pumphouse, pilings, remnant piers, remnant Archimedes screw pumps, and a boat landing" (Basin Research 2023). The majority of the landscape associated with this resource exists within the Don Edwards San Francisco Bay National Wildlife Refuge and spans from Highway 29 south to a minimal area of the Coyote Hills Slough, adjacent to the Project Area. The Eden Landing Ecological Reserve Project previously returned 19 of the former salt ponds into native salt marsh. Additionally, the Proposed Project Area is located approximately 1.6 miles away from the salt ponds. As such, the Project is not expected to disturb or impact the Eden Landing Salt Works as an

historic resource. Further, no alteration of the existing setting is proposed that would affect any historical resources, if any exist within the viewshed of the Project area. Further, the shed structure identified is not considered a historic resource. Therefore, **no impact** to historic resources (built environment) will result from the proposed project.

However, historical resources that are archaeological in nature may be accidentally discovered during Project construction; archaeological resources are discussed further in Section 3.5.3(b) below.

b. Adverse change in the significance of an archaeological resource

No archaeological resources, as defined in Section 15064.5 of the CEQA Guidelines, have been identified within the Project area or mitigation area. A model for predicting a location's sensitivity for buried Native American archaeological sites was formulated by Byrd et al. (2017) 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, has a slope of five percent or less, is within 150 meters (500 feet) of fresh water, and is within 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, Byrd et al. (2017) determined that the sensitivity for buried sites at the location of the Project area and mitigation area is considered low, principally due to the fact that the project area would have been underlain by bay waters during the peak periods of pre-contact occupation of the area. While the Bay was utilized for resource procurement, long-term habitation would not have occurred in bay waters and would rather have been focused along the margins and near freshwater confluences. In addition, the Project mitigation area would be constructed in soils that have been previously disturbed by agricultural practices, such as adding soil amendments and discing, which may have disturbed the subsurface up to 3 feet below the ground surface (see Chapter 2 *Project Description* for more information about the location of the mitigation site). The proposed mitigation would disturb only the top 6-12 inches of soils. Moreover, the area has been re-claimed from tidal inundation that would have prehistorically been under bay waters. As such, the potential for impacting archaeological resources in this location is considered discountable.

Although no significant impacts to known unique archaeological resources or historic resources will result from the project activities, given the proximity to previously recorded resources, the implementation of an archaeological sensitivity training (MM CR-1) is recommended for all workers who are to be involved with ground disturbing activities in order to ensure proper handling of any unpredicted inadvertent discoveries. If archaeological remains are accidentally discovered that are determined eligible for listing in the CRHR/NRHP, and Proposed Project activities would affect them in a way that would render them ineligible for such listing, a significant impact would result. Implementation of MM CR-2 would require that work stop should any archaeological remains be discovered during construction.

Implementation of MMs CR-1 and CR-2 would reduce impacts related to currently unknown archaeological resources to a less-than-significant level.

Mitigation Measure CR-1:

A cultural resource awareness training program will be provided to all construction personnel active on the Project site during earth-moving activities. The training will be provided prior to the initiation of ground disturbing activities. The training will be developed and conducted in coordination with a qualified archaeologist meeting the U.S. Secretary of Interior guidelines for professional archaeologists. A representative or representatives from culturally affiliated Native American tribe(s) who have participated in consultations with the District will be invited to participate in the training. In addition, as applicable, the MLD shall be invited to participate in the training. The program will include relevant information regarding sensitive cultural resources, including applicable regulations, protocols for avoidance, and consequences of violating State laws and regulations.

The worker cultural resources awareness program will also describe appropriate avoidance and minimization measures for resources that have the potential to be located on the Project site and outline what to do and whom to contact if any potential archaeological resources or artifacts are encountered. The program will also underscore the requirement for confidentiality and culturally appropriate treatment of any finds of significance to Native Americans, consistent with Native American tribal values.

Mitigation Measure CR-2:

If evidence of any subsurface archaeological features or deposits is discovered during construction-related earth-moving activities (e.g., lithic scatters, midden soils, historic era farming, or construction materials), all ground-disturbing activity in the area of the discovery shall be halted within 100 feet of the find until a qualified archaeologist and Native American representative from a traditionally and culturally affiliated tribe, as appropriate, can assess the significance of the find and make recommendations for further evaluation and treatment as necessary. Culturally appropriate treatment may include, but is not limited to, processing materials for reburial, minimizing handling of cultural objects, leaving objects in place within the landscape, and returning objects to a location within the project area where they will not be subject to future impacts.

If after evaluation, a resource is considered significant or is considered a tribal cultural resource, all preservation options shall be considered as required by CEQA (see Public Resources Code 21084.3), including possible capping, data recovery, mapping, or avoidance of the resource. Treatment that preserves or restores the cultural character and integrity of a tribal cultural resource may include tribal monitoring, culturally appropriate recovery of cultural objects, and reburial of cultural objects or cultural soil. If artifacts are recovered from significant prehistoric archaeological resources or tribal cultural resources, the first option shall be to transfer the artifacts to an appropriate tribal representative. If possible, accommodations shall be made to re-inter the artifacts at the Project site. Only if no other options are available will recovered

prehistoric archeological material be housed at a qualified curation facility. The results of the identification, evaluation, and/or data recovery program for any unanticipated discoveries shall be presented in a professional-quality report that details all methods and findings, evaluates the nature and significance of the resources, analyzes and interprets the results, and distributes this information to the public.

Further, if post-review suggests that discoveries include significant cultural resources,[5] the USACE shall be notified so that any discoveries may be treated in accordance with 36 CFR Part 800.13(b).

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

A human cranium, identified as Native American, was reported outside of the APE at the west end of the levee in the mudflats, approximately 20 to 45 feet from the existing turnaround (Basin Research, 2023). The cranium could not be found again in 2022, probably due to additional shoreline erosion and storm damage from wet weather and flooding during the winter of 2021.

The discovery of human remains is not anticipated during the construction of the Proposed Project as the new turnaround is located 600 feet east of the bay shoreline and discovery. The lack of recorded

[5] Notes:

a. Significant cultural resources include both significant prehistoric cultural materials and significant historic cultural materials.

Significant prehistoric cultural materials may include:

a. Human bone—either isolated or intact burials

b. Habitation (occupation or ceremonial structures as interpreted from rock rings/features, distinct ground depressions, differences in compaction [e.g., house floors]).

c. Artifacts include chipped stone objects such as projectile points and bifaces; groundstone artifacts such as manos, metates, mortars, pestles, grinding stones, and pitted hammerstones; and shell and bone artifacts, including ornaments and beads.

d. Various features and samples including hearths (fire-cracked rock; baked and vitrified clay), artifact caches, faunal and shellfish remains (which permit dietary reconstruction), distinctive changes in soil stratigraphy indicative of prehistoric activities.

e. Isolated artifacts

Significant historic cultural materials may include finds from the late 19th through early 20th centuries.

Objects and features associated with the Historic Period can include.

f. Structural remains or portions of foundations (bricks, cobbles/boulders, stacked field stone, postholes, etc.).

g. Trash pits, privies, wells and associated artifacts.

h. Isolated artifacts or isolated clusters of manufactured artifacts (e.g., glass bottles, metal cans, manufactured wood items, etc.).

i. Human remains.

In addition, cultural materials including both artifacts and structures that can be attributed to Hispanic, Asian and other ethnic or racial groups are potentially significant. Such features or clusters of artifacts and samples include remains of structures, trash pits, and privies.

resources and previous flood control efforts, including the channel and levee construction, as well as the installation of the north levee road and the regional trail, suggest a very low potential for a discovery. In addition, the mitigation area appears to have a low sensitivity for the discovery of prehistoric or historic archaeological resources based on previous studies and prior construction impacts and agricultural practices, as well as its former location within a tidal marsh, an environment generally not suitable for either temporary or seasonal occupation by prehistoric Native American groups (Basin Research 2022).

However, there is the possibility that human remains could be discovered during excavation activities. Should any such remains be discovered during construction, MM CR-3 shall be followed, which would reduce any potential impact on human remains to a less-than-significant level.

Mitigation Measure CR-3:

> Consistent with the California Health and Safety Code and the California Native American Historical, Cultural, and Sacred Sites Act, if suspected human remains are found during project construction, all work shall be halted within 100 feet of the finds, and the Alameda County Medical Examiner shall be notified, pursuant to California Public Resources Code Sections 5097.94, 5097.98, and 5097.99, to determine the nature of the remains. The coroner shall examine all discoveries of suspected human remains within 48 hours of receiving notice of a discovery on private or State lands (Health and Safety Code Section 7050.5[b]). If the coroner determines that the remains are those of a Native American, he or she shall contact the NAHC by phone within 24 hours of making that determination (Health and Safety Code Section 7050[c]). The NAHC shall then assign a most likely descendant (MLD) to serve as the main point of Native American contact and consultation. Following the coroner's findings, the MLD, in consultation with the State, shall determine the ultimate treatment and disposition of the remains.

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3.6 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?	☐	☐	☒	☐

3.6.1 Regulatory Setting

This section describes the federal, State, and local regulations related to energy resources. Section 3.8 contains additional discussions of greenhouse gas (GHG)-related regulations that may also be relevant to energy resources.

At the federal level, the USEPA and the National Highway Traffic Safety Administration (NHTSA) have developed regulations to improve the efficiency of cars and light-, medium-, and heavy-duty vehicles. These regulations are discussed in greater detail in Section 3.8.

Energy resource-related regulations, policies, and plans at the State level require the regular analysis of energy data, the development of recommendations to reduce Statewide energy use, and setting of 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 two years (CEC, 2023a). 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, 2023a). The *Draft 2022 Integrated Energy Policy Report* Update discusses the energy-related impacts of the COVID-19 pandemic, extreme summer weather, and drought conditions. The report also provides information on emerging topics related to energy reliability, western electricity integration, hydrogen, gasoline prices, the gas transition, and distributed energy resources (CEC, 2022).

Since 2002, California has established a Renewables Portfolio Standard program through multiple Senate Bills (SB 1078, SB 107, SB X1-2, SB 350, and SB 100) and Executive Orders (S-14-08, B-55-18) that

requires that 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, 60 percent by 2030, and 100 percent zero-carbon electricity for the State and Statewide carbon neutrality by 2045 (CEC, 2017; CEC, 2023b).

Section 3.8 provides additional details on California's *2017 Climate Change Scoping Plan* and the *2022 Scoping Plan for Achieving Carbon Neutrality*, which detail the State's strategy for achieving its GHG targets, including energy-related goals and policies. They contain measures and actions that may pertain to the proposed Project relating to vehicle efficiency and transitioning to alternatively powered vehicles (CARB, 2017; CARB, 2022).

The BAAQMD 2017 CAP lays the groundwork for a long-term effort to reduce Bay Area GHG emissions by 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050. The plan contains multiple key priorities related to energy, including reducing demand for fossil fuels and decarbonizing the energy system, and contains transportation control measures aimed at reducing emissions from vehicles and equipment (BAAQMD, 2017).

3.6.1.1 Local Laws, Regulations, and Policies

Local laws, regulations, and policies are detailed in Appendix A.

3.6.2 Environmental Setting

California leads the nation in electricity generation from renewable resources (solar, geothermal, and biomass resources) and is the seventh largest producer of crude oil among the 50 states (U.S. Energy Information Administration (EIA), 2022). California has the second highest total energy consumption in the U.S. but one of the lowest energy consumption rates per capita due to its mild climate and energy efficiency programs (EIA, 2022). A comparison of California's energy-consuming end-use sectors indicates that the transportation sector is the greatest energy consumer, followed by industrial, residential, and commercial in that order (EIA, 2022). California is the largest consumer of jet fuel in the U.S. and the second largest consumer of motor gasoline (EIA, 2022).

As described in Section 3.8, in 2019, Alameda County's government operations generated an estimated 43,372 metric tons of carbon dioxide equivalents (CO_2e), representing a 31 percent reduction from their 2003 baseline (Alameda County, 2021). The largest sources of emissions, a rough indicator of energy consumption, were employee commutes, natural gas usage in facilities, and fuel usage in the vehicle fleet.

3.6.3 Discussion of Checklist Responses

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

b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency

The proposed Project would require the consumption of energy (fossil fuels) for construction equipment, worker vehicles, and truck trips. The consumption of energy for the Project's equipment and vehicles would be minimized by ensuring construction equipment is properly tuned and maintained and by minimizing vehicle idling (BMP-8). Table 3.6-1 shows the estimated total fuel use from construction equipment, worker vehicles, and truck trips. The calculations used to develop these estimates are presented in Appendix B.

TABLE 3.6-1 PROJECT FOSSIL FUEL USE

Source Type	Gasoline Fuel Use (Gallons)	Diesel Fuel Use (Gallons)
Construction On-Road Vehicles	580	1,317
Construction Off-Road Equipment	n/a	11,660
Total for Construction	**580**	**12,977**

Source: Appendix B

The proposed Project's energy consumption is necessary for the repair and maintenance of flood-control infrastructure. These 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. Although no mitigation measures are necessary to reduce this impact to a less-than-significant level, implementation of BMP-8 would reduce the proposed Project's effect by requiring the minimization of idling times and requiring that all equipment be maintained and tuned properly. As a result, the proposed Project would not result in wasteful, inefficient, or unnecessary consumption of energy.

In addition, the District's activities would not conflict with any of the goals, policies, or implementation actions identified in the applicable plans, such as the *Draft 2022 Integrated Energy Policy Report Update* and BAAQMD's 2017 Clean Air Plan, because the proposed Project would not create any additional future energy demands over current conditions and would be completed as efficiently as possible. Thus, the proposed Project would not conflict with any plans relating to renewable energy or energy efficiency. Therefore, this impact would be considered **less than significant**.

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3.7 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 an 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 waste water 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?	☐	☐	☒	☐

3.7.1 Regulatory Setting

3.7.1.1 Federal Laws, Regulations, and Policies

3.7.1.1.1 Clean Water Act

Activities discharging pollutants from a point source to a body of water in the United States are subject to the National Pollutant Discharge Elimination System (NPDES) permitting program, as authorized by the federal CWA, established in 1972. The NPDES permitting program has been delegated to the State of California for implementation through the SWRCB and nine RWQCBs. Under the NPDES program, any construction project that would result in the disturbance of 1 or more acres would require compliance with the state's NPDES General Permit for stormwater discharges associated with the construction activity, discussed in more detail in Section 3.7.1.2.3.

3.7.1.1.2 U.S. Army Corps of Engineers Levee Safety Program

The USACE is responsible for studying, constructing, and operating dams on a regional scale (Alameda County, 2022). Many of these levees are operated and maintained by local sponsors (USACE, 2018). To ensure that levees are consistent with respect to safety considerations, the USACE runs and maintains the Levee Safety Program. This program provides guidance on how to conduct inspections and risk assessments that identify and describe levee-related flood risk associated with a levee system. In addition, the program provides guidance on how to increase flood risk awareness among elected officials and risk managers and build understanding among stakeholders of the role that levees play in flood risk management. The National Levee Database (USACE and Federal Emergency Management Agency [FEMA], 2016) maintains a record of levee construction, management, and maintenance, risk level, and other issues related to levees, including levees sponsored by local management agencies such as the District.

3.7.1.1.3 U.S. Army Corps of Engineers Section 408

The USACE Section 408 policy, EC 1165-2-220, effective September 10, 2018, sets forth the process and criteria USACE uses to review requests to alter USACE Civil Works projects, which include dams, hydropower, levee systems, and navigational channels. Communities may want to alter existing USACE projects to increase recreational opportunities or improve flood risk management. Section 408 also applies if a business or utility company seeks to run power lines or pipelines over or through a USACE project. The purpose of a Section 408 review is to ensure that the Congressionally authorized benefits of

a USACE project are not undermined by an alteration made by others and that the alteration is not injurious to the public.

3.7.1.2 State Laws, Regulations, and Policies

3.7.1.2.1 Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (Public Resources Code § 2621 *et seq.*), also known as the Alquist-Priolo Act, was passed in 1972 to mitigate the hazard of surface faulting to structures intended for human occupancy. The Act's main purpose is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The law requires the State Geologist to establish regulatory zones (known as Earthquake Fault Zones) around the surface traces of active faults and to issue appropriate maps depicting those zones. The maps are distributed to all affected cities, counties, and State agencies for their use in planning and controlling new or renovated construction. Before a project can be permitted, cities and counties must require a geologic investigation to demonstrate that proposed buildings would not be constructed across active faults. An evaluation and written report of a specific site must be prepared by a licensed geologist. If an active fault is identified, a structure for human occupancy cannot be placed over the trace of the fault and must be set back from the fault (generally 50 feet) (DOC, 2018). Under the Alquist-Priolo Act, an active fault is one that has ruptured in the last 11,000 years.

3.7.1.2.2 Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (Public Resource Code §§ 2690-2699.6) is intended to reduce the threat to public safety resulting from earthquakes. While the Alquist-Priolo Act addresses surface fault rupture, the Seismic Hazards Mapping Act addresses other earthquake-related hazards, including strong ground shaking, liquefaction, and seismically induced landslides. The Seismic Hazards Mapping Act highlights the need to identify and map seismic hazard zones to allow cities and counties to adequately prepare the safety element of their general plans and to encourage land use management policies and regulations that reduce and mitigate those hazards to protect public health and safety. Cities and counties are required to regulate development within mapped Seismic Hazard Zones (DOC, 2023).

3.7.1.2.3 General Permit for Construction Activities

The State of California adopted the Construction General Permit, Order No. 2012-0006-DWQ, amending Order No. 2009-0009-DWQ, effective July 17, 2012. SWRCB Water Quality Order 2012-0006-DWQ (Construction General Permit) regulates construction site stormwater management. Projects that will result in stormwater discharges and also disturb 1 or more acres of soil, or disturb less than 1 acre, but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the Construction General Permit for discharges of stormwater associated with construction activity. The General Permit requires the preparation of a Project-specific Stormwater Pollution Prevention Plan (SWPPP) to minimize any potential stormwater impacts to surface waters (SWRCB, 2023). This program is further discussed in Section 3.11. Construction activities that are subject to this permit include clearing, grading, and ground disturbance (stockpiling or excavation), but do not include regular maintenance activities performed to restore the original grade of the disturbed area.

Permit applicants are required to submit a Notice of Intent (NOI) to the SWRCB and to prepare a SWPPP. The SWPPP identifies BMPs that must be implemented to reduce construction effects on receiving water quality based on pollutants. BMPs are directed at implementing sediment and erosion control measures and other measures to control chemical contaminants. The SWPPP must also include descriptions of the BMPs to reduce pollutants in stormwater discharges after all construction phases have been completed at the site (post-construction BMPs). The SWPPP must contain a visual monitoring program, a chemical monitoring program for "nonvisible" pollutants to be implemented if there is a failure of BMPs, and a sediment monitoring plan if the site discharges directly to a waterbody listed on the CWA Section 303(d) list of waterbodies impaired for sediment.

3.7.1.2.4 Public Resources Code Section 5097.5

Public Resources Code § 5097.5 defines a misdemeanor as any unauthorized disturbance or removal of a historic or prehistoric ruin, burial ground, or archaeological or vertebrate paleontological site on public lands,[6] without the express permission of the public agency having jurisdiction over the lands. This protection includes fossilized footprints, inscriptions, or other archaeological, paleontological, or historical features on public land.

3.7.1.2.5 CEQA and CEQA Guidelines

The lead agency having jurisdiction over a project is also responsible to ensure that paleontological resources are protected in compliance with CEQA and other applicable statutes. Paleontological and historical resource management is also addressed in Public Resources Code § 5097.5, "Archaeological, Paleontological, and Historical Sites." This statute defines as a misdemeanor any unauthorized disturbance or removal of a fossil site or remains on public land and specifies that state agencies may undertake surveys, excavations, or other operations as necessary on State lands to preserve or record paleontological resources. This statute would apply to any construction or other related project impacts that would occur on State-owned or State-managed lands.

3.7.1.3 Regional and Local

Local laws, regulations, and policies are detailed in Appendix A.

3.7.1.3.1 Alameda County Flood Control and Water Conservation District

The north bank levee along the Alameda Creek is identified in the National Levee Database as Alameda Creek – RB (USACE & FEMA 2016). It was constructed by the USACE and transferred to the sponsor (the District), which operates and maintains the levee.

[6] As used in this section, "public lands" means lands owned by, or under the jurisdiction of, the state, or any city, county, district, authority, or public corporation, or any agency thereof.

3.7.2 Environmental Setting

The environmental setting is based on reporting in the Geotechnical Investigation Report prepared for the Project (GEI, 2023) unless otherwise noted.

3.7.2.1 Geology

3.7.2.1.1 Regional Geology

The San Francisco Bay Area lies within the Coast Ranges geomorphic province, a series of discontinuous northwest-trending mountain ranges, ridges, and intervening valleys characterized by complex folding and faulting. Geologic and geomorphic structures within the San Francisco Bay Area are dominated by the San Andreas Fault, a right-lateral strike-slip fault that extends from the Gulf of California in Mexico to Cape Mendocino, on the coast of Humboldt County in northern California. It forms a portion of the boundary between two independent tectonic plates on the surface of the earth. To the west of the San Andreas Fault is the Pacific Plate, which moves north relative to the North American Plate, located east of the fault. In the San Francisco Bay Area, movement across this plate boundary is concentrated on the San Andreas Fault; however, it is also distributed to a lesser extent across a number of other significant faults that include the Hayward, Calaveras, and Concord-Greenville faults, among others. Together, these faults are referred to as the San Andreas Fault System. Movement along the San Andreas Fault system has been ongoing for approximately the last 25 million years. The northwest trend of the faults within this fault system is largely responsible for the strong northwest structural orientation of geologic and geomorphic features in the Bay Area.

Rising above the eastern shore of San Francisco Bay is the northwest-trending Diablo Range, which is characterized by rolling hillsides and intervening narrow valleys. Along the western base of the range lie thick deposits of alluvial sediment eroded by numerous streams and deposited as a narrow apron between the foothills and the eastern shore of San Francisco Bay. Also near the base of the range lies the Hayward Fault, one of the main faults within the San Andreas Fault System. Over the last few million years, the Hayward Fault has laterally displaced many of the major southwest-flowing streams along the base of the hills, creating geomorphic features that are indicative of active faults.

One of the main drainages within this portion of the Diablo Range is Alameda Creek. Alameda Creek has a large watershed, covering over 600 square miles, and cuts across the Diablo Range Foothills through Niles Canyon. At Niles Junction, Alameda Creek emerges from the foothills and flows towards the San Francisco Bay, as shown on Figure 3.7-1.

3.7.2.1.2 Local Geology

The Project site is located approximately 9 miles west of Niles Junction, within the cities of Hayward and Union City. The general surface geology of the Project site and surrounding area is depicted on Figure 3.7-1. The Project site extends out into existing and historic shoreline areas influenced by tidal fluctuations and bay deposition environments. Here, the surface geology is mapped as Bay Mud Deposits (Qhbm). According to this map, the Bay Mud deposits are described as follows: Bay Mud Deposits (Qhbm): Holocene age deposits distributed along the shoreline of the bay and generally

consisting of saturated soft, compressible estuarine mud, clay, and silty clay with occasional lenses of fine silt and sand.

3.7.2.2 Local Topography

The site elevation is approximately 0 to 5 feet above sea level, and the Project area slope is less than 5 percent, with the exception of the intertidal slough channel banks.

3.7.2.3 Soils

Soils in the Project area are shown in Table 3.7-1, along with their risk of erosion and expansion/contraction. These soils have a low to moderate risk of erosion and a low to high risk of expansion/contraction.

TABLE 3.7-1 SOILS IN THE PROJECT AREA

Map Unit Label	Map Unit Name	Erosion (K Factor, Whole Soil)a	Expansion/ Contraction
110	Contra Costa clay loam, 30% to 50% slopes	0.28	Moderate
131	Omni silty clay loam, drained	0.24	High
132	Omni silty clay loam, strongly saline	0.24	High
138	Novato clay, ponded	0.24	High
139	Reyes clay, 0% to 2% slopes	0.20	Moderate
143	Sycamore silt loam, drained, 0% to 2%	0.37	Low
144	Sycamore silt loam, clay substratum	n/a	Moderate
153	Vallecitos-Rock outcrop complex, 30% to 50% slopes	0.20	Low

Source: Natural Resources Conservation Service, 2023

a Values range from 0.02 to 0.69. In general, the higher the value, the more susceptible the soil is to erosion by water.

3.7.2.4 Seismicity

The San Francisco Bay Area is one of the most seismically active regions in the United States. Significant earthquakes that occur in the Bay Area are generally associated with crustal movement along well-defined, active fault zones of the San Andreas Fault System, which regionally trend in a northwesterly direction. At its nearest projection, the Hayward fault is located approximately 6 miles to the northeast of the Project site. This fault was the source of an estimated M (magnitude) 6.8 earthquake in 1868. The San Andreas Fault is located approximately 12 miles southwest of the Project site. It was the source of the M7.9 Great San Francisco Earthquake in 1906 and the M7.1 Loma Prieta Earthquake in October 1989. Other major Holocene active faults in the area include the Calaveras Fault and the Concord-Greenville Fault. The Hayward Fault is the likely source of strongest ground shaking at

the Project site due to its proximity and potential magnitude. The San Andreas Fault is capable of generating long duration shaking due to its large potential magnitude.

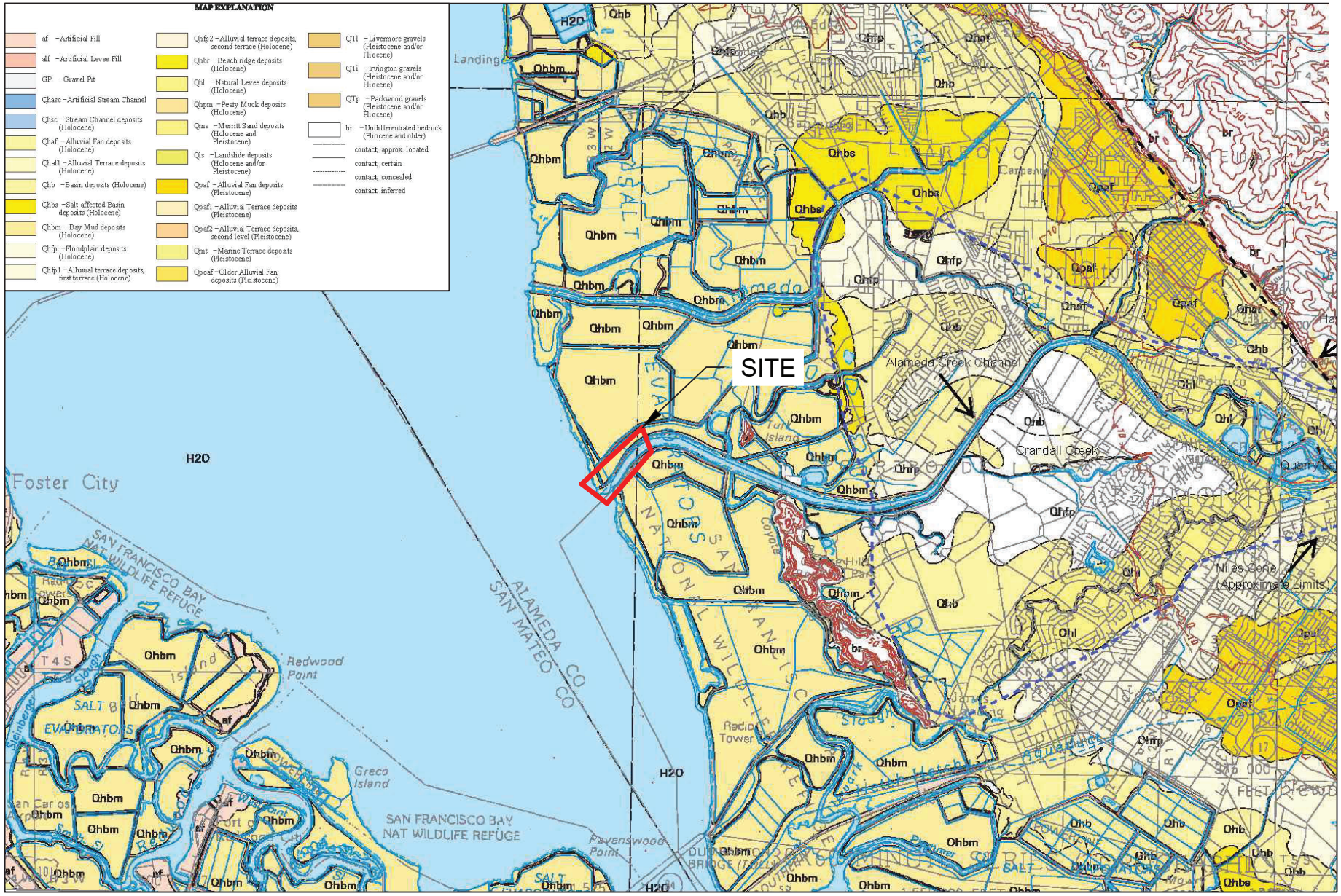
A regional fault map showing known faults within the region is shown on Figure 3.7-2. The Project site is not located within a State-designated Alquist-Priolo Earthquake Fault Zone. No known surface expression of active faults crosses the Project site.

3.7.2.4.1 Ground Shaking

The USGS 2015 Working Group on California Earthquakes (WGOCEP, 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 Bay Area. The Hayward Fault is the most likely source, with a more than 14.3 percent chance of at least one magnitude 6.7 earthquake or larger within the next 30 years.

Figure 3.7-1. Regional Geologic Map

[[8 ½ x 11 landscape]]



Source: GEI Consultants, 01/2023

MONTROSE ENVIRONMENTAL

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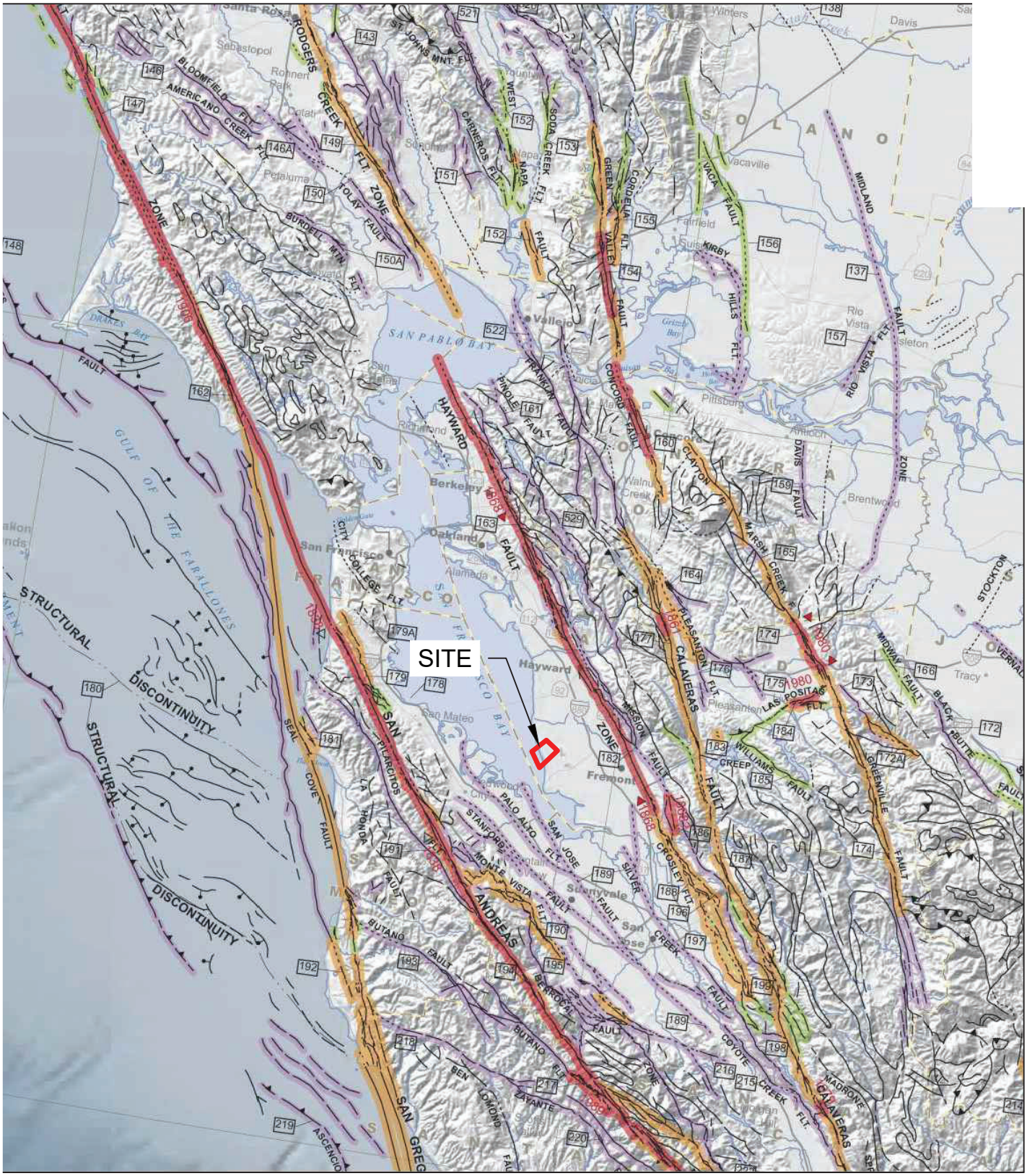
Figure 3.7-1
Regional Geologic Map

Figure 3.7-2. Regional Fault Activity

[[8 ½ x 11 portrait]]



Source: GEI Consultants, 01/2023

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Figure 3.7-2
Regional Fault Activity

3.7.2.4.2 Liquefaction and Lateral Spreading

Soil liquefaction results from loss of strength that could occur due to earthquake ground shaking. Soils most susceptible to liquefaction are clean, loose, saturated, poorly graded sands and silts. The California Geological Survey (CGS) has compiled Seismic Hazard Zone Reports, including maps that depict where historical occurrences of liquefaction were reported or local geological, geotechnical, and groundwater conditions indicate a potential for permanent ground displacements. Figure 3.7-3 shows the Seismic Hazard Zone Map for the Newark Quadrangle, indicating the Project site location and that the area is subject to seismically induced liquefaction. Additionally, the CGS has mapped liquefaction susceptibility of the Quaternary deposits in the Central San Francisco Bay Region. This map indicates the north levee Project area has a moderate susceptibility to seismically induced liquefaction, as shown on Figure 3.7-4.

Lateral spreading is the lateral, or sideways, movement of sloping and saturated soil that results from seismically induced liquefaction. While liquefaction risk exists in the Project area, the slopes are on engineered levees, so the risk of lateral spreading is low.

3.7.2.4.3 Differential Settlement

Differential settlement can result from compression, liquefaction, and strong seismic ground shaking.

When a load is placed on soil, the soil particles and any air and water contained in the areas around the soil particles rearrange so that air and water are displaced and the soil particles are consolidated more closely together. The proposed turnaround would be located on areas underlain by soft, compressible Bay Mud that would consolidate (i.e., settle) under the weight of the new fill. In places where the Bay Mud or levee fill thickness varies, settlement could also vary.

As stated in Section 3.7.2.4.2, soils most susceptible to liquefaction are loose, clean, poorly graded, saturated sands and silts. The result of the loss of strength of the sand layer is settlement of the overlying soil layers into the liquified sand layer as sand particles are pushed upward, causing characteristic sand boils at the ground surface. Liquefaction settlement typically does not occur below thick cohesive layers (such as Bay Mud) due to the low conductivity and confining pressure of the overlying sediments, which prevent the sand particles from moving upwards in the soil column. During geotechnical investigation, loose sands were encountered underlying the Bay Mud at a depth of 45 feet below ground surface. However, due to the 30- to 40-foot-thick Bay Mud layer and existing levee overlying the cohesionless soils encountered at depth, liquefaction-induced settlement is not anticipated at the Project site, as the Bay Mud will likely confine the sands and prevent its movement upwards to the ground surface.

Strong seismic ground shaking can also cause settlement of unsaturated soils above the groundwater table. Soils considered susceptible to seismically induced settlement are generally loose, cohesionless soils and poorly compacted fills. The surficial soils encountered in the geotechnical investigation above the groundwater table were cohesive and relatively stiff; therefore, seismically induced settlement of the near-surface soils is not anticipated at the Project site.

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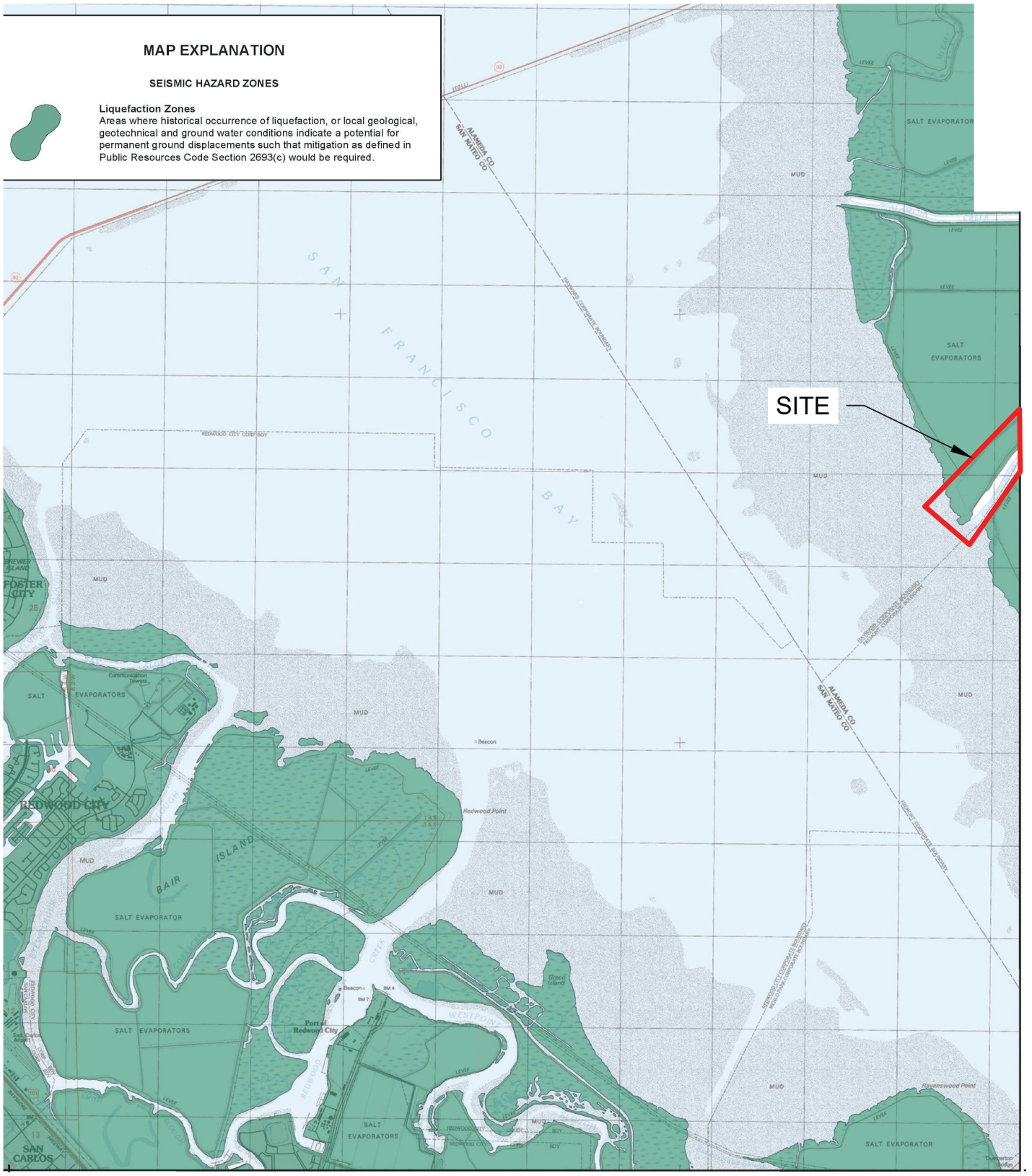
Figure 3.7-3. Seismic Hazard Zones

[[8 ½ x 11 portrait]]



Source: GEI Consultants, 01/2023

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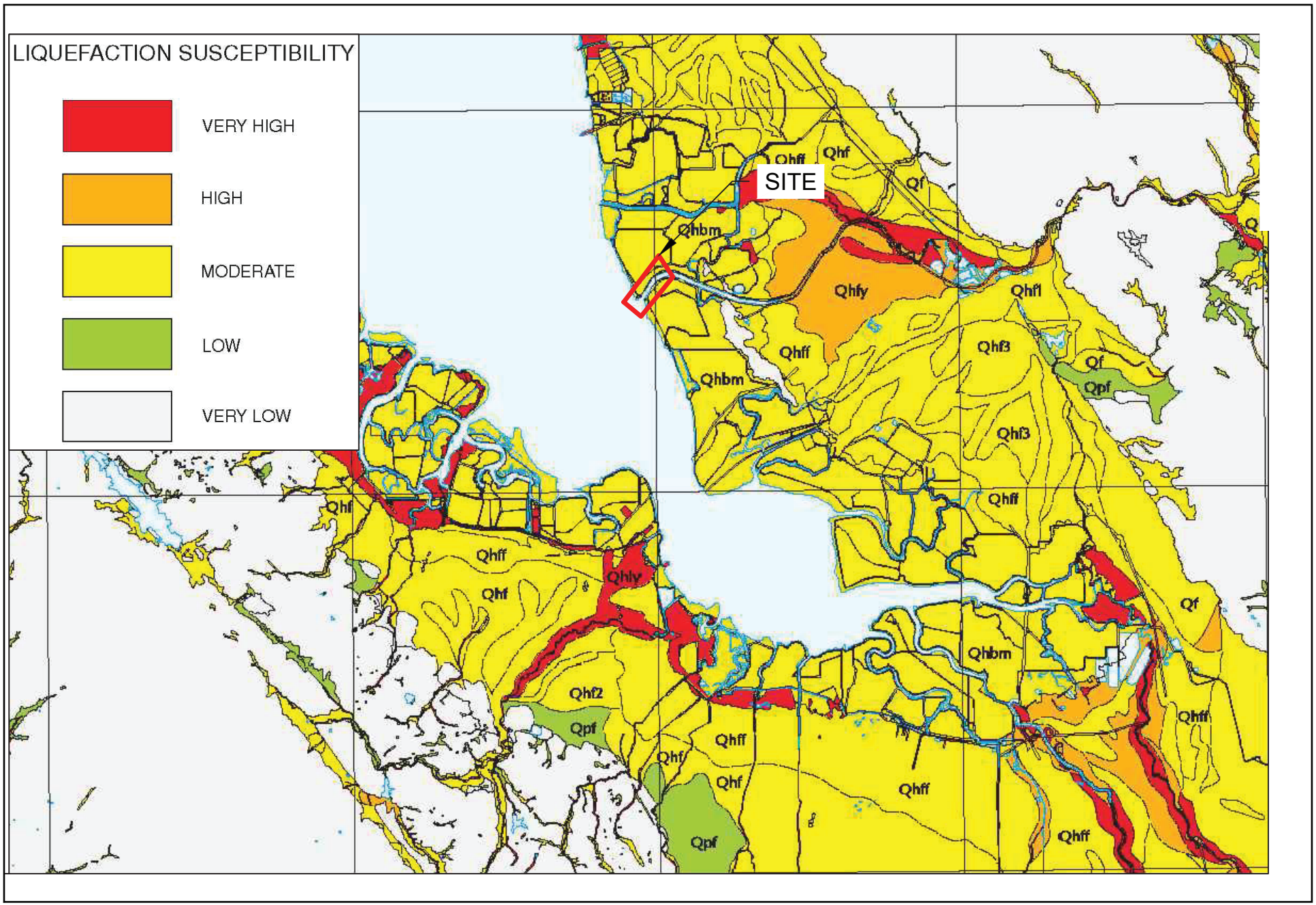
Figure 3.7-3
Seismic Hazard Zones

Figure 3.7-4. Liquefaction Susceptibility

[[8 ½ x 11 landscape]]



Source: GEI Consultants, 01/2023

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Figure 3.7-4
Liquefaction Susceptibility

3.7.2.4.4 Landslide and Slope Failure

The Project area is located in a flat area with no landslide risk (CGS, 2003; CGS, 2018). The only steep slopes in the Project area are the levee walls of the USACE levee, which are engineered to resist slope failure and are owned and maintained by the District.

3.7.2.5 Paleontological Resources

Paleontological resources are the preserved remains or traces of remains of ancient organisms. Geologic units that contain paleontological resources in one geographic location are likely to contain paleontological resources in another geographic location (SVP, 2010). Therefore, the likelihood of finding paleontological resources at a site depends on the geologic unit(s) underlying the site and its likelihood of yielding fossils (based on age, rock type, depositional environment, documented history of yielding fossils in other geographic locations, and whether previous finds were localized concentrations).

Geologic units exposed at ground surface in the Project area are Holocene intertidal deposits (Qi) and Jurassic to Cretaceous Franciscan Formation (KJf) (Wagner et al., 1991). The intertidal deposits are too young to yield paleontological resources (SVP, 2010). These sediments are likely underlain by Holocene alluvium (Q), which is also too young to yield paleontological resources. The Franciscan Formation is a complex composed of greenstone, sandstone, shale, conglomerate, metagraywacke, limestone, chert, and serpentinized ultramafic rock. Some components of the Franciscan Formation contain numerous microfossils, such as radiolarians in chert. The Franciscan Formation has yielded three vertebrate fossils (Hilton, 2003): two *Ichthyosaurus* and one *Plesiosaurus*. Fossils other than the abundant microfossils are rare in this geologic unit.

3.7.3 Discussion of Checklist Responses

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

There are no known active faults that cross the Project area. In addition, neither construction nor operation of the Project would increase likelihood of surface fault rupture. Therefore, the Project would not increase risk of loss, injury, or death involving seismic-related surface fault rupture. There would be **no impact**.

ii. Strong seismic ground shaking

The Project area is located in a region known to be seismically active, with the potential for large earthquakes. 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. There would be **no impact**.

iii. Seismic-related ground failure, including liquefaction

The Project area is located on soils that have been mapped as having moderate liquefaction risk. However, site-specific investigations have determined that the liquefiable layer of saturated sand lies approximately 45 feet below ground surface. Therefore, risk of liquefaction in the Project area is low. The impact would be **less than significant**.

iv. Landslides

The Project area is not located in an area of landslide risk. There would be **no impact**.

b. Substantial soil erosion or the loss of topsoil

Ground-disturbing activities conducted during construction include vegetation removal and grubbing, and removal of concrete debris and riprap. Removal of ground cover would increase the hazard of erosion and could temporarily increase erosion and sedimentation rates above existing levels.

Because the Project site is less than 1 acre, a SWPPP would not be required. However, the Project would adhere to BMPs described in Chapter 2. The BMPs that would limit potential for discharge of sediment include BMP-3 (Erosion and Sediment Control) and BMP-4 (Fill, Spoils, and Stockpiled Materials). Adherence to requirements of these BMPs described in Chapter 2 would minimize risk of erosion and sedimentation from Project construction.

Construction of the turnaround would take place on the levee, where no native topsoil is located; therefore, construction would not result in the loss of topsoil. Construction of the mitigation site would remove 0.5 to 1 foot of soil to create a seasonal wetland. The soil elevation will be lowered to create soil and drainage conditions suitable for pickleweed to become established. This area is currently a disturbed agricultural field used for hay production, and the conversion from an agricultural field to a seasonal wetland would reduce erosion and overall loss of topsoil. While it is possible that excavation could incidentally remove some topsoil, it is unlikely that a substantial amount would be disturbed or removed from the Project site. Therefore, any loss of topsoil would be minimal.

During Project operation, there would be limited potential for erosion and loss of topsoil. As discussed in Section 3.10, because the turnaround would be raised by approximately 4 to 7 feet to accommodate the future need to raise the levee to keep pace with sea level rise, the Project would alter the existing drainage patterns in the Project area. Water falling on the new turnaround structure as precipitation would either flow to surrounding areas or directly infiltrate the soil/groundwater below. Over the long term, the changes would be beneficial and would reduce potential for erosion and siltation on- or offsite. Project improvements would correct the existing erosion at the west end of the Alameda Creek north levee and reduce the level of ongoing erosion/sedimentation that is occurring. In addition, the reconstructed turnaround would function unattended and with only limited periodic maintenance.

The impact related to soil erosion and loss of topsoil would be **less than significant**.

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

The slopes in the Project area are engineered levee walls. Therefore, even in the case of strong seismic ground shaking, they are unlikely to collapse or result in lateral spreading. Liquefaction and landslides are discussed earlier under (a)(iii) and (a)(iv).

Subsidence from soil compression is unlikely because the levee has already been in its location since 1977 and the soils underlying the levee have already been compressed. However, variations in foundation conditions over relatively short horizontal distances can be expected where the variable fill thickness of turnaround alignment overlies the Bay Mud. Differential settlements, if concentrated over a short horizontal distance, could cause transverse cracking of the new turnaround, particularly for embankments built of relatively stiff cohesive materials. Such cracking could permit through-seepage and potentially cause internal erosion during periods of high water levels in the creek. However, construction of the levee foundation would adhere to USACE requirements and recommendations in the Project-specific geotechnical report and would take place under authorization of a Section 408 permit. Accordingly, Project design would reduce any risk of compression. Therefore, likelihood of subsidence from soil compression is low. The impact would be **less than significant**.

d. Location on expansive soil, creating substantial direct or indirect risks to life or property

The Project site is located on soils that range from low to high susceptibility to expansion-contraction. However, the soil underlying the levee was engineered to resist expansive soils when the levee was constructed. [[District: please confirm]] Furthermore, the levee itself does not contain expansive soils. The risk to life or property is low. The impact 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?

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

f. Destruction of a unique paleontological resource, site, or unique geological feature

Impacts on paleontological resources occur during ground disturbance of geologic units that have high potential to yield fossils (SVP, 2010). For the Project, ground disturbance would occur only during the construction period, so impacts on paleontological resources and unique geologic features are considered only during construction. If a unique paleontological resource were encountered during ground disturbance, the resource could be destroyed, damaged, or removed from its geologic context before its scientific information could be recorded. The Society of Vertebrate Paleontology has adopted

recommended mitigation guidelines (2010) for ground-disturbing activities that could encounter unique paleontological resources.

Geologic units underlying the Project area include Holocene deposits, which are too young to yield unique paleontological resources, and Franciscan Formation, which is unlikely to yield unique paleontological resources. Further, excavation would be into levee soils rather than into native soils, and excavation into native soils, if it occurs at all, would be incidental and very shallow. Accordingly, it is unlikely that unique paleontological resources would be disturbed during Project construction.

Further, there are no unique geologic features in the Project area. The geologic units in the area, intertidal deposits and Franciscan Formation, are common and widespread.

The impact on paleontological resources and geologic features is **less than significant**.

3.8 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?	☐	☐	☒	☐

3.8.1 Regulatory Setting

This section describes the federal, State, and local regulations related to GHG emissions and climate change. At the federal level, the USEPA has developed regulations to reduce GHG emissions from motor vehicles and has developed permitting and reporting requirements for large stationary emitters of GHGs. The USEPA and NHTSA set standards for passenger cars and light trucks for the Corporate Average Fuel Economy standards and GHG emissions standards. In March 2020, NHTSA and the USEPA revised these standards under the Safer Affordable Fuel-Efficient Vehicles Rule, which increases the stringency of fuel economy and carbon dioxide standards by 1.5 percent in stringency each year for model years 2021 through 2026. This is less than previous standards issued in 2012, which would have had increases of about 5 percent per year (CCES, 2023).

In recent years, California has enacted numerous policies and plans to address GHG emissions and climate change. In 2006, the California State Legislature enacted Assembly Bill (AB) 32, the Global Warming Solutions Act, which set the overall goals for reducing California's GHG emissions to 1990 levels by 2020. SB 32, a follow-up to the California Global Warming Solutions Act of 2006 (AB 32), similarly calls for a Statewide GHG emissions reduction to 40 percent below 1990 levels by December 31, 2030. Subsequent executive orders and bills (AB 1279 and SB 100) have revised the overall goal to Statewide carbon neutrality by 2045 and net negative emissions thereafter. The CARB has completed rulemaking to implement several GHG emission reduction regulations and continues to investigate the feasibility of implementing additional regulations. These include the low-carbon fuel standard, which reduces GHG emissions associated with fuel usage, and the renewable portfolio standard, which requires electricity suppliers to increase the amount of electricity generated from renewable sources. CARB has implemented a mandatory reporting regulation and a cap-and-trade program for large emitters of GHGs.

California's 2017 Climate Change Scoping Plan outlines the strategies that will be implemented to reach the 2030 goal, and the 2022 Scoping Plan for Achieving Carbon Neutrality lays out a path to achieve

targets for carbon neutrality and reduce anthropogenic GHG emissions by 85 percent below 1990 levels no later than 2045, as directed by AB 1279 (CARB, 2017; CARB, 2022a). Strategies discussed in these plans include increasing building efficiency, increasing renewable power production, using clean and renewable fuels, transitioning to zero-emission vehicles, enhancing walkable and bikeable communities with transit, cleaner freight and goods movement, reducing emissions of pollutants with high global warming potential (GWP), capping emissions from key sectors, investing in communities to reduce emissions, capturing and storing carbon through the State's natural and working lands, and using a variety of mechanical approaches.

The BAAQMD has adopted and released the Final 2017 Bay Area Clean Air Plan (also known as Spare the Air – Cool the Climate: A Blueprint for Clean Air and Climate Protection in the Bay Area) and Regional Climate Protection Strategy that updates the 2010 Bay Area Clean Air Plan, provides a road map for the BAAQMD's future efforts to reduce air pollution, and identifies rules, control measures, and strategies to reduce GHG emissions throughout the Bay Area (BAAQMD, 2017a; BAAQMD, 2013). As part of this update, 85 control measures have been identified and categorized within 9 economic sectors, including stationary sources, transportation, waste, water, and energy. In addition, the BAAQMD has established a Climate Protection Planning Program, which aims to achieve its goal of reducing GHG emissions in the Bay Area by establishing GHG reduction goals, developing and implementing the 2017 Clean Air Plan, and working with local governments (BAAQMD, 2021). The BAAQMD's GHG emission reduction goals are 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050 (BAAQMD, 2022a).

The BAAQMD CEQA Guidelines (BAAQMD 2017b) included operation-related thresholds of significance for land use development and stationary-source projects. Stationary sources have a threshold of 10,000 metric tons (MT) of CO_2e. For land use development projects, including residential, commercial, industrial, and public land uses and facilities, the threshold includes compliance with a qualified GHG reduction strategy or annual emissions of less than 1,100 MT CO_2e or efficiency performance criteria based on service population (BAAQMD, 2017b). This "bright-line threshold" of 1,100 MT CO_2e was set for the 2020 goal established in AB 32. The BAAQMD recently adopted new GHG significance thresholds for land use projects and plans (BAAQMD, 2022b). These thresholds are not applicable to the Project as they are applicable to buildings or projects that include trip generation and do not apply to infrastructure projects such as roadway improvements. These also do not include a threshold for short-term construction emissions. Because implementation of the proposed Project would take place after 2020, the GHG analysis should consider whether the Project would make substantial progress toward these future goals. In absence of guidance from the BAAQMD for construction emissions, the relevance of an appropriate threshold for post-2020 GHG emissions must be considered.

The Project will use the bright-line threshold for construction emissions of 1,100 MT CO_2e threshold. This threshold was established by the BAAQMD by conducting a "gap" analysis, considering the emissions reductions required from projects undergoing CEQA review that are not otherwise addressed by existing regulations or strategies identified in the Scoping Plan. The BAAQMD determined that, with a bright-line threshold of 1,100 MT CO_2e, most CEQA projects would be required to implement all feasible mitigation measures because they would exceed this threshold and, most importantly, that 92 percent of GHG emissions above this threshold would be captured (BAAQMD, 2017b).

Sacramento Metropolitan Air Quality Management District (SMAQMD) initially conducted a similar analysis of the CEQA projects that would be captured by establishing a bright-line threshold for the 2020 goals. Recently, SMAQMD updated its analysis and determined that the existing bright-line threshold would still capture over 98 percent of GHG emissions (SMAQMD, 2020). Thus, it would be reasonable to assume that an updated analysis by the BAAQMD would find that projects would continue to achieve a high capture rate of total GHG emissions with use of this bright-line threshold. This conclusion supports the continued use of 1,100 MT CO_2e as a significance threshold post-2020 and indicates that continued progress toward the 2030 and 2050 goals is likely to be maintained with this bright-line threshold.

In 2010, Alameda County published the "Alameda County Climate Action Plan for Government Services and Operations Through 2020" and is currently working on a climate action and resilience plan that will be finalized in 2023. While the 2010 CAP did not cover the construction year, it contains strategies for emissions reductions and climate change adaptation that would otherwise be applicable to the proposed Project.

Global climate change is already affecting ecosystems and societies throughout the world and is caused, in part, by the accumulation in the atmosphere of GHGs, which are produced primarily by the burning of fossil fuels for energy. Because GHGs (carbon dioxide [CO2], methane, NO_2, and chlorofluorocarbons) persist and mix in the atmosphere, emissions anywhere in the world affect the climate everywhere in the world. Consequently, the cumulative analysis is the same as the discussion concerning proposed Project impacts. GHG emissions are typically reported in terms of CO_2e, which converts all GHGs to an equivalent basis, taking into account their GWP compared to CO_2.

Climate change adaptation refers to the efforts undertaken by societies and ecosystems to adjust to and prepare for current and future climate change, thereby reducing vulnerability to those changes. Human adaptation has occurred naturally over history; people move to more suitable living locations, adjust food sources, and more recently, change energy sources. Similarly, plant and animal species also adapt over time to changing conditions; they migrate or alter behaviors in accordance with changing climates, food sources, and predators. The proposed Project's design incorporates climate adaptation elements, including lowering the end of the levee, expanding wetland habitat, and increasing the elevation of the turnaround.

3.8.1.1 Local Laws, Regulations, and Policies

Local laws, regulations, and policies are detailed in Appendix A.

3.8.2 Environmental Setting

In 2020, total California GHG emissions were 369.2 million MT of CO_2e (CARB, 2022b). That is 35.3 MT CO_2e below 2019 levels and 61.8 million MT CO_2e below the 2020 GHG limit set by AB 32. This represents a per capita GHG emission rate of 9.3 MT CO_2e per person. Much of the large decline compared to 2019 was very likely due to impacts of the COVID-19 pandemic. In 2020, the transportation sector of the California economy saw a decrease in emissions of 26.6 MT CO_2e, but remained the largest source of emissions, accounting for approximately 37 percent of the total emissions. Emissions from the electricity sector accounted for 16 percent of the 2020 inventory, a decline largely due to low-GHG electricity making up a larger share of imports.

Alameda County GHG emissions were estimated to be 13.4 MT CO_2e in 2005 (Alameda County, 2009). In 2019, Alameda County's government operations generated an estimated 43,372 MT of CO_2e, representing a 31 percent reduction from their 2003 baseline (Alameda County, 2021). Employee commutes, natural gas usage in facilities, and fuel usage in the vehicle fleet were the largest contributors to the government's emissions.

3.8.3 Discussion of Checklist Responses

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

The proposed Project would generate GHG emissions during construction. Construction-related GHG emissions would result from the combustion of fossil-fueled construction equipment, material hauling, and worker trips. Estimated emissions associated with the Project's construction activities would be 141 MT CO_2e. Construction-related emissions were estimated using CalEEMod version 2022.1.1.5, which uses estimates from CARB's models for off-road vehicles and EMFAC2021 (v1.0.1). Project construction assumptions, including equipment usage, schedule, and haul routes used for this analysis, were based on the Project description.

Operational GHG emissions would not change as a result of this Project from current conditions as the Project contains no new sources of GHG emissions and inspection, and maintenance needs of the turnaround and levee would be similar to, or even lower than, pre-Project levels.

As discussed earlier, the BAAQMD does not have a recommended threshold for construction GHG emissions. However, the GHG emissions from the proposed Project are well below the BAAQMD's threshold of 1,100 MT CO_2e per year. The BAAQMD recently adopted new GHG significance thresholds for land use projects and plans (BAAQMD 2022b). These thresholds are not applicable to the Project as they apply to buildings or projects that include trip generation and do not apply to infrastructure projects such as roadway improvements. Therefore, the proposed Project would not conflict with any plans or policies adopted to reduce GHG emissions. Impacts related to generation of GHG emissions would be **less than significant**.

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

The proposed Project would be subject to Statewide and local GHG emission reduction plans and policies. The State of California implemented AB 32 to reduce GHG emissions to 1990 levels by 2020. SB 32 codified an overall goal for reducing California's GHG emissions to 40 percent below 1990 levels by 2030. AB 1279 and SB 100 have revised the overall goal to Statewide carbon neutrality by 2045. The proposed Project would not impede implementation of any of the State's goals under AB 32, SB 32, SB 100, or AB 1279 because it does not create any permanent new sources of GHG emissions and consists only of temporary construction activities to implement a climate adaptation-related project. For these reasons, the proposed Project would not conflict with State goals or a local general plan. Therefore, this impact would be **less than significant**.

3.9 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 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?	☐	☐	☐	☒
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?	☐	☐	☒	☐

3.9.1 Regulatory Setting

3.9.1.1 Federal and State Laws, Regulations, and Policies

Hazardous Materials Management. The USEPA is the lead agency with responsibility for enforcing federal laws and regulations that govern hazardous materials that can affect public health or the environment. The major federal laws and regulations pertaining to the management of hazardous materials are the Resource Conservation and Recovery Act (RCRA) and the Toxic Substances Control Act (TSCA).

RCRA, enacted in 1976, provides a general framework for the USEPA to regulate hazardous waste from the time it is generated until its ultimate disposal. In accordance with RCRA, facilities that generate, treat, store, or dispose of hazardous waste are required to ensure that the waste is properly managed from "cradle to grave" by complying with the federal waste manifest system. The California Department of Toxic Substance Control (DTSC) administers the RCRA program in California.

The TSCA, also enacted in 1976, provides the USEPA with the authority to regulate the production, importation, use, and disposal of chemicals that pose a risk to public health and the environment.

3.9.1.1.1 Hazardous Materials Release Sites

In California, the USEPA has granted enforcement authority of federal hazardous materials regulations to the California Environmental Protection Agency (Cal/EPA). Under the authority of Cal/EPA, the DTSC and the SWRCB are responsible for overseeing the remediation of contaminated soil and groundwater sites. The provisions of Government Code § 65962.5 (also known as the Cortese List) require the DTSC, SWRCB, California Department of Health Services, and California Department of Resources Recycling and Recovery to submit information to Cal/EPA pertaining to sites that were associated with solid waste disposal, hazardous waste disposal, and/or hazardous material releases.

3.9.1.1.2 Hazardous Materials Transportation

The federal Hazardous Material Transportation Act was amended in 1990 and 1994 to strengthen regulations for protecting life, property, and the environment from the inherent risks of transporting hazardous materials. Furthermore, the U.S. Department of Transportation (DOT) developed hazardous materials regulations pertaining to classification, packaging, transport, and handling, as well as regulations regarding employee training and incident reporting. The transport of hazardous materials is subject to both RCRA and DOT regulations. The California Highway Patrol, the California Department of Transportation (Caltrans), and DTSC are responsible for enforcing federal and State regulations pertaining to the transport of hazardous materials. If a discharge or spill of hazardous materials occurs during transportation, the transporter is required to take appropriate immediate action to protect human health and the environment (e.g., notify local authorities and contain the spill); the transporter is also responsible for cleanup.

3.9.1.1.3 Wildland Fire Protection

In accordance with California Public Resource Code §§ 4201–4204 and Government Code §§51175–51189, the California Department of Forestry and Fire Protection (CAL FIRE) has mapped areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. These zones, referred to as Fire Hazard Severity Zones (FHSZ), represent the risks associated with wildland fires. The FHSZs mapped by CAL FIRE for State and local responsibility areas are classified as *medium*, *high*, or *very high* based on fire hazards; however, the law requires only identification of Very High Fire Hazard Severity Zones (VHFHSZ) in local responsibility areas.

3.9.1.2 Local Laws, Regulations, and Policies

Local laws, regulations, and policies are detailed in Appendix A.

3.9.2 Environmental Setting

3.9.2.1 Existing Hazards and Hazardous Materials

The closest hazardous materials sites documented near the Project site are more than 2.5 miles away. Table 3.9-1 shows the nearby hazardous materials sites that have not been indicated as closed as documented by Geotracker (SWRCB, 2023) or as needing no further action by EnviroStor (DTSC, 2023).

TABLE 3.9-1. HAZARDOUS MATERIALS SITES NEAR THE PROJECT SITE

Site Name	Location	Distance (miles)	Type of Site	Contaminants of Concern	Potential Media of Concern
Turk Island Landfill Parcel C (T10000018571)[a]	Northwest corner of Carmel Way and Westport Way Union City, CA 94587	2.7	Cleanup Program Site, Open – Site Assessment	Dichloroethane, methane	Other groundwater (uses other than drinking water), soil, soil vapor, under investigation
Union Sanitary District-Veasy St. Expansion (SL0600100493)[a]	Veasy Street & Benson Road Union City, CA 94587	2.7	Cleanup Program Site, Open – Site Assessment	None specified	Other groundwater (uses other than drinking water)

Site Name	Location	Distance (miles)	Type of Site	Contaminants of Concern	Potential Media of Concern
San Francisco Nike Battery 37 (J09CA0939) (80000676)	Fremont, CA	3.2	Formerly Used Defense Sites	None specified	None specified
Chemseco (SL0600135858)[a]	1 Tara Court Union City, CA 94587	3.3	Cleanup Program Site, Open – Site Assessment	None specified	Other groundwater (uses other than drinking water), soil vapor
R J Chase Company (01290003)[b]	4000 Tara Court Union City, CA 94587	3.3	State Response Or National Priority List	Metals - other inorganic solid waste	Soil
Patterson Ranch (60000863)[b]	Patterson Ranch Road and Paseo Padre Fremont, CA 94555	3.4	Voluntary Cleanup Inactive – Needs Evaluation	Dichlorodiphenyl-trichloroethane Endrin Toxaphene	Soil
Mission Uniform & Linen Service (T0600100905)[a]	30305 Union City Blvd Union City, CA 94587	3.5	Cleanup Program Site, Open – Remediation	Gasoline, Stoddard solvent / mineral spirits / distillates, tetrachloroethylene, trichloroethylene, vinyl chloride, waste oil / motor / hydraulic / lubricating	Aquifer used for drinking water supply, other groundwater (uses other than drinking water)
Campbell Chain Company (01330006)[b]	30070 Union City Boulevard Union City, CA 94587	3.6	Evaluation	No contaminants found	No media affected
Ponderosa Homes-Cerruti Family Property (01010012)	4897 Lowry Road Union City, CA 94587	3.6	Voluntary agreement	Methoxychlor, organochlorine pesticides (8081 OCPS)	Soil

1 Notes:

a SWRCB, 2023
b DTSC, 2023a

The Project would not disturb soil or groundwater at any of these sites.

The Project area is not located on a site listed pursuant to Government Code § 65962.5 (also known as the Cortese List) (DTSC, 2023b). However, the Project would be located adjacent to San Francisco Bay, which is known to contain mercury in both the water and the underlying Bay Mud (San Francisco Bay RWQCB, 2023).

3.9.2.2 Schools

One school is located within 0.25 miles of the Project area: Delaine Eastin Elementary School at 34901 Eastin Drive in Union City, approximately 0.1 mile from staging area #2. The school is approximately 3 miles from the area where excavation and grading would take place.

3.9.2.3 Airports

No airports are located within 2 miles of the Project area.

3.9.2.4 Wildfire Hazards

Mapping by CAL FIRE shows that the Project area is not located in a VHFHSZ or a State-designated FHSZ. The Project area is located in a Local Responsibility Area (LRA) (CAL FIRE, 2007; CAL FIRE, 2008). The Project area is not located within a mapped wildland urban interface (WUI) area, but portions of staging area #2 are located in mapped WUI and Wildfire Influence Zones (CAL FIRE, 2012). The WUI typically consists of dense housing adjacent to vegetation that can burn in a wildfire, and the Wildfire Influence Zone consists of wildfire-susceptible vegetation up to 1.5 miles from the WUI (CAL FIRE, 2012).

3.9.3 Discussion of Checklist Responses

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

3.9.3.1 Construction

As described in Chapter 2, construction would involve clearing and grubbing; removing existing concrete debris and rock riprap; constructing the concrete and asphalt turnaround; and hauling of soil, debris, and material on- and offsite. Accordingly, Project construction would potentially require the routine transfer, use, storage, or disposal of hazardous materials used during typical construction activities. During construction, hazardous materials typically associated with construction activities, such as fuel, oil, and lubricants, would be used when operating construction equipment. The District would 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 oils could be accidentally released. Implementation of BMP-3

(Erosion and Sediment Control), BMP-4 (Fills, Spoils, and Stockpiled Materials), BMP-5 (On-site Hazardous Materials Management), BMP-6 (Spill Prevention and Response Plan), BMP-7 (Vehicle and Equipment Maintenance), and BMP-9 (Work Site Housekeeping) would require the safe handling, storage, and disposal of chemicals used during the construction phase. A summary of these measures is included in Table 2-2 in Chapter 2.

As described in Chapter 2, the Project site would be cleared and grubbed to create the new turnaround area. In addition, the Project would excavate the existing levee and turnaround structure and grade the remaining area to an elevation that is subject to tidal inundation to create a new wetland at the end of the trail. Any levee material that is unsuitable for plant growth would be removed and disposed of offsite at the Republic Services Newby Island Landfill in Milpitas, California. [[District please confirm]] Because spoils from excavation work would consist of levee materials, it is not expected that they would be contaminated and therefore would not require special handling. In addition, 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 hauled offsite for disposal at a permitted landfill.

3.9.3.2 Operation

Operation and maintenance activities may require the use of a minor amount of hazardous materials (i.e., the use of fuel to power access vehicles); however, all hazardous materials used during operation and maintenance would comply with existing federal, State, and local regulations. The proposed Project would not produce hazardous emissions or handle acutely hazardous materials, substances, or waste.

Overall, through compliance with relevant regulatory requirements regarding the transport, use, storage, and disposal of hazardous materials during construction and operation, this impact would be **less than significant**.

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

Potential releases of hazardous materials to the environment through reasonably foreseeable upset and accident conditions could result from releases from the routine use of hazardous materials during construction and from disturbance of mercury-containing Bay Mud.

As discussed in Response 3.9.3(a), 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, excavation and transport of Bay Mud, which could contain mercury, could also result in upset or accident that could release mercury into the environment. However, BMPs implemented by the County would ensure the safe handling, storage, and disposal of chemicals used during the construction process. Specifically, BMP-5, BMP-6, BMP-7, and BMP-9) would be implemented to address accidental releases of hazardous materials.

Operation and maintenance activities associated with the proposed Project would use a minor amount of hazardous materials, such as lubricants. 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 these BMPs, potential impacts to the public or environment through accidental release of hazardous materials would be **less than significant**.

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.

One school is located within 0.25 miles of the Project site, Delaine Eastin Elementary School, approximately 0.1 mile from staging area # 2. During construction of a small pullout from Alameda Creek Trail to this staging area, there would be ground disturbance. However, there is no documentation that soils at this site are contaminated. In addition, vehicle servicing would be conducted at staging area #2.

With compliance with all applicable laws and regulations and the implementation of these BMPs, potential emissions or handling of hazardous materials within 0.25 mile of a school would be **less than significant**.

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.

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. Therefore, the Project would not create a significant hazard to the public or the environment. There would be **no impact**.

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 study area.

The Project would not be located within an airport land use plan area or within 2 miles of a private or public airport. The closest airport is Palo Alto Airport, approximately 7.3 miles south of the Project site. Therefore, the Project would not create a safety hazard or excessive noise for people working in the study area. There would be **no impact**.

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

Alameda County's Emergency Operations Plan (Alameda County Sheriff's Office of Homeland Security and Emergency Services, 2012) encompasses the entire County, including the Project area. Within the Project area, emergency response is provided by the County Sheriff's Office. This could interfere with emergency access, creating a potentially significant impact. However, implementation of **Mitigation Measure TR-1** would provide traffic control at the project access road that could allow emergency

vehicles access through the area and to the site. Construction-related lane closures and traffic flow disruptions that would affect the provision of emergency services in the vicinity of the work area are discussed in Section 3.17.

The Project site is in an area designated by the California Office of Emergency Services as a Tsunami Hazard Area (California Office of Emergency Services, 2015; Alameda County, 2023). However, Project construction would not involve large numbers of construction personnel, and Project operation would not introduce new users to the Project area.

With implementation of **Mitigation Measures TR-1**, neither Project construction nor operation would impair emergency response or interfere with implementation of an adopted emergency response plan or emergency evacuation plan. The Project would have a **less than significant impact with mitigation** on adopted emergency response plans or emergency evacuation plans.

g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires

The Project is not within a designated fire hazard area (CAL FIRE, 2007; CA FIRE, 2008), and therefore little fire risk would exist. The District routinely mows ruderal grass vegetation along the levee, which would reduce the risk of an accidental wildfire ignition at the Project site. Due to its location 3.8 miles from urban development and the low fire risk, activities within the Project site would not exacerbate wildfire risks. Staging area #2 is located immediately adjacent to single-family residential homes and is located in a mapped WUI and Wildfire Influence Zone (CAL FIRE, 2012). The District would clear and grub staging area #2 prior to its use as a staging area, which would reduce the potential for accidental wildfire ignition by removing flammable vegetation. The Project area would not significantly exacerbate wildfire risks or potentially expose Project occupants to pollutant concentrations from a wildfire or uncontrolled spread of a wildfire. Therefore, the impact would be **less than significant**.

3.10 Hydrology and Water Quality

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

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

3.10.1 Regulatory Setting

3.10.1.1 Federal Laws, Regulations, and Policies

3.10.1.1.1 Clean Water Act

The CWA is the primary federal law that protects the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. Key sections pertaining to water quality regulation that are potentially relevant for the proposed Project are CWA Sections 303, 401, and 402. For discussion of Section 404 of the CWA, please refer to Section 3.4.

3.10.1.1.2 Section 303(d) – Listing of Impaired Water Bodies

Under CWA Section 303(d), states are required to identify "impaired water bodies" (i.e., those not meeting established water quality standards); identify the pollutants causing the impairment; establish priority rankings for waters on the list; and develop a schedule for the development of control plans to improve water quality. The USEPA then approves the state's recommended list of impaired waters or adds and/or removes waterbodies.

3.10.1.1.3 Section 401 – Water Quality Certification

Under CWA Section 401, a federal agency may not issue a permit or license to conduct any activity that may result in any discharge into waters of the U.S. unless a Section 401 water quality certification is issued or certification is waived (USEPA, 2022). States and authorized tribes where the discharge would originate are generally responsible for issuing water quality certifications. One of the major federal permits subject to Section 401 is the CWA Section 404 permit issued by the USACE (refer to the discussion in Section 3.4).

In issuing water quality certifications, certifying authorities consider whether the federally licensed or permitted activity would comply with applicable water quality standards, effluent limitations, new source performance standards, toxic pollutant restrictions and other appropriate water quality requirements of state or tribal law (USEPA, 2022).

3.10.1.1.4 Section 402 – National Pollutant Discharge Elimination System Permits for Stormwater Discharge

CWA Section 402 regulates stormwater discharges to surface waters through the NPDES, which is officially administered by USEPA. In California, USEPA has delegated its authority to the SWRCB, which, in turn, delegated implementation responsibility to the nine RWQCBs, as discussed below in reference to the Porter-Cologne Water Quality Control Act.

The NPDES program provides for both general (those that cover a number of similar or related activities) and individual (activity- or project-specific) permits. One of the common general permits that comes into play for construction activities is SWRCB's General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order 2009-0009-DWQ as amended by 2010-0014-DWQ and 2012-0006-DWQ) ("Construction General Permit"). This permit applies to most construction projects that disturb 1 or more acre(s) of land and requires that the applicant file a public NOI to discharge stormwater and prepare and implement a SWPPP. Because the proposed Project would not disturb 1 acre or more of land, it would not be subject to the Construction General Permit.

3.10.1.2 State Laws, Regulations, and Policies

3.10.1.2.1 Porter–Cologne Water Quality Control Act

The Porter–Cologne Water Quality Control Act (known as the Porter–Cologne Act), passed in 1969, dovetails with CWA (refer to the discussion in the CWA section). It established the SWRCB and divided the state into nine regions, each overseen by an RWQCB. The SWRCB is the primary State agency responsible for protecting the quality of California's surface water and groundwater supplies; however, much of the SWRCB's daily implementation authority is delegated to the nine RWQCBs, which are responsible for implementing CWA Sections 401, 402, and 303[d]. In general, SWRCB manages water rights and regulate Statewide water quality, whereas RWQCBs focus on water quality within their respective regions.

The Porter–Cologne Act requires RWQCBs to develop water quality control plans (also known as Basin Plans) that designate beneficial uses of California's major surface water bodies and groundwater basins and establish specific narrative and numerical water quality objectives for those waters. Beneficial uses represent the services and qualities of a waterbody (i.e., the reasons that the waterbody is considered valuable). Water quality objectives reflect the standards necessary to protect and support those beneficial uses. Basin Plan standards are primarily implemented by regulating waste discharges so that water quality objectives are met. Under the Porter–Cologne Act, Basin Plans must be updated every 3 years.

The Project area is within the jurisdiction of the San Francisco Bay RWQCB (Region 2), which has adopted the San Francisco Bay Basin Plan (San Francisco Bay RWQCB, 2019) to govern water quality in the region.

3.10.1.2.2 Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act (SGMA), passed in 2014, became law in 2015 and created a legal and policy framework to locally manage groundwater sustainably. The SGMA allows local agencies to customize groundwater sustainability plans (GSP) to their regional economic and environmental conditions and needs and establish new governance structures known as groundwater sustainability agencies (GSA). GSPs are intended to facilitate the use of groundwater in a manner that can be maintained during the planning and implementation horizon without causing undesirable results (e.g., chronic lowering of groundwater levels).

The Project area overlies the Santa Clara Valley Groundwater Basin – Niles Cone Subbasin (#2-009.01), which is designated as medium-priority[7] by the Department of Water Resources (DWR, 2023a). The Alameda County Water District (ACWD) serves as the GSA for this basin and it has submitted its existing planning and operating policies as an Alternative to a GSP (ACWD, 2023a).

3.10.1.3 Local Laws, Regulations, and Policies

Local laws, regulations, and policies are detailed in Appendix A.

3.10.2 Environmental Setting

3.10.2.1 Regional Setting, Topography, and Climate

The Project area is located in the San Francisco Bay Hydrologic Region, specifically within the South Bay Basin. This hydrologic region covers 4,603 square miles and is characterized by its dominant feature, the San Francisco Bay Estuary (Estuary) (San Francisco Bay RWQCB, 2019). The Estuary conveys the waters of the Sacramento and San Joaquin rivers into the Pacific Ocean. While these two rivers contribute almost all the freshwater inflow to the San Francisco Bay, many other small rivers and streams also convey fresh water to the Bay system (San Francisco Bay RWQCB, 2019).

The Project site is located adjacent to the San Francisco Bay and, as such, is relatively flat. The site elevation is approximately 0 to 5 feet above sea level, and the slope is less than 5 percent with the exception of the intertidal slough channel banks.

The climate of the San Francisco Bay region is generally cool and foggy along the coast, with warmer Mediterranean-like weather in the inland valleys. The Project area experiences warm, dry summers with maximum temperatures of 75 to 80 degrees Fahrenheit (°F) and moderate winters with minimum temperatures of 40 to 50°F (NOAA, 2023a). This area receives an average of roughly 13.75 inches of precipitation annually, most of which occurs in the winter months (NOAA, 2023a).

3.10.2.2 Surface Water Hydrology and Quality

The Project site is adjacent to the southern portion of San Francisco Bay as well as Alameda Creek. The confluence of Alameda Creek and San Francisco Bay occurs immediately southwest of the Project site, as shown on Figure 2-2. Waterbodies in the region, including Alameda Creek, generally drain towards the Estuary. Flows in the region are highly seasonal, with more than 90 percent of the annual runoff occurring during the winter rainy season between October and April (San Francisco Bay RWQCB, 2019).

[7] Pursuant to SGMA and the California Statewide Groundwater Elevation Monitoring (CASGEM) program, DWR classifies groundwater basins into one of four categories: high-, medium-, low-, or very low-priority. SGMA requires medium- and high-priority basins to develop GSAs and GSPs, and manage groundwater for long-term sustainability (DWR 2023b).

Many streams go dry during the middle or later summer. The flow of Alameda Creek generally gets very low in the summer months or goes dry, as shown in TABLE 1.

TABLE 1.10-1 ALAMEDA CREEK MEAN MONTHLY DISCHARGE

	Monthly Mean, cubic feet per second											
	USGS 11180700 (Alameda Creek Flood Channel at Union City, California) – October 1, 1958 to September 30, 2022											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean of Monthly Discharge	244	358	253	113	30	13	3.8	2.8	3.5	13	37	102

Source: USGS, 2023

Both waterbodies near the Project site (San Francisco Bay and Alameda Creek) are listed as impaired under CWA Section 303(d). Specifically, Alameda Creek is listed as impaired by diazinon, while the San Francisco Bay (South) is listed as impaired by chlordane, dichlorodiphenyltrichloroethane, dieldrin, dioxin compounds, furan compounds, invasive species, mercury, polychlorinated biphenyls, and selenium (SWRCB, 2022). There is an existing wetland adjacent to the mitigation site. The mitigation site was historically tidally influenced and connected to the tidal action of the San Francisco Bay by a series of tidal channels. Hydrologic conditions in the Project have been significantly altered by historic diking for salt production to the south, agricultural drainage ditches and historical irrigation well pumping, urbanization, and flood control channel construction. However, groundwater remains very high throughout the project area and is typically within 1 to 3 feet of the surface. Existing site runoff does not currently drain into an urban storm drain or storm sewer system; it ponds within the adjacent marshlands during wet periods and drains to Alameda Creek.

3.10.2.3 Stormwater

The Project site is characterized by an existing gravel road and adjacent undeveloped lands. No stormwater management features or facilities are present on the site, and it is presumed that stormwater sheetflows off of the existing gravel road to adjacent lands or infiltrates into the soil below.

3.10.2.4 Groundwater Levels, Flows, and Quality

The Project area is located within the Santa Clara Valley Groundwater Basin – Niles Cone Subbasin (#2-009.01), as defined by DWR. Although considered a subbasin by DWR, it is considered a basin and referred to as the Niles Cone Basin by ACWD. The following description follows the ACWD naming convention and understanding of the basin. The Niles Cone Basin is comprised chiefly of the alluvial fan formed by Alameda Creek as it exits the Diablo Range and flows toward the San Francisco Bay (DWR, 2006). The shoreline of the Bay has both transgressed and regressed in the past due to glacial and interglacial cycles, thereby creating large aquifers (regressive period) interbedded with aquitards (transgressive period). The majority of water-bearing materials are comprised of Quaternary alluvium, though the Santa Clara Formation underlies a portion of the groundwater basin along its eastern margin (DWR, 2006).

The Hayward Fault cuts across the apex of the Niles Cone alluvial fan and impedes the westward flow of groundwater; thus, the basin is separated into two subbasins, the Below Hayward Fault (BHF) (which would include the Project area) and the Above Hayward Fault subbasins (DWR, 2006). The BHF subbasin is composed of a series of gently westward-dipping aquifers separated by extensive clay aquitards. The aquifers are comprised of gravels and sands deposited from ancestral Alameda Creek and other small creeks as fluvial or alluvial deposits (DWR, 2006). Water levels in the BHF subbasin have recovered substantially since their low point in the 1960s due to recharge activities using water from the State Water Project. In the Newark Aquifer, which underlies most of the Niles Cone alluvial fan, water levels in indicator wells have generally ranged from sea level to approximately 20 feet above mean sea level (DWR, 2006).

Saline water intrusion of the Newark Aquifer was first noted in the 1920s. Overdraft of the basin for the next several decades led to the landward migration of saline water as far as the Hayward Fault by the 1950s (DWR, 2006). From here, saline water migrated into deeper aquifers through the natural connection at the forebay area and also in other areas of the fan where aquitards separating the aquifers are thin to absent. Additionally, saline water may have migrated downward from the Newark Aquifer to the deeper aquifers through abandoned, improperly sealed, or multiple-aquifer-screened wells (DWR, 2006).

The ACWD manages artificial recharge of the Niles Cone Basin and operates about 16 wells, capable of producing up to 47.5 million gallons per day, to extract water from the basin (ACWD, 2023b). The extracted water is blended with the San Francisco Regional Water System supplies before being delivered to customers.

3.10.2.5 Floodplains and Tsunamis

The entire Project area, including mitigation area and both staging areas, is located within the 1 percent annual chance flood hazard zone, as designated by FEMA (FEMA, 2023). The entirety of the Project area is also within the mapped tsunami hazard zone (DOC, 2023).

3.10.3 Discussion of Checklist Responses

a. Violate any water quality standards, waste discharge requirements or otherwise substantially degrade water quality

Construction of the Project would involve ground disturbance associated with clearing and grubbing; removing existing concrete debris and rock riprap; hauling of soil, debris, and material on- and offsite; constructing the earthen and aggregate turnaround; and the creation of a seasonal wetland. These construction activities could result in sediments being transported into Alameda Creek and/or the San Francisco Bay, thereby degrading the quality of these receiving waters. The Project's ground-disturbing activities (e.g., clearing and grubbing) would be unlikely to expose shallow groundwater and require groundwater dewatering because there would not be any deep excavation required for construction. Wetland creation earthwork could cause increased turbidity in surrounding surface waters if not properly stabilized. The proposed Project includes measures to minimize erosion and water quality degradation.

Construction would also include the potential storage, use, transport, and/or disposal of hazardous materials (e.g., fuels, oils, and solvents) used for construction equipment. Accidental spills of these materials or improper material disposal could pose a risk to the groundwater underlying the spill or disposal area if the materials seep into the soil or groundwater. As discussed in Section 3.9, the storage or use of hazardous materials for the Project's construction activities would be performed in compliance with all applicable federal, State, and local regulations. No chemical processing, storage, or stockpiling of hazardous materials would take place in the Project area other than what would be necessary for standard construction activities. Furthermore, the State and/or its contractor would dispose of hazardous materials at an appropriate hazardous materials disposal facility or landfill in accordance with applicable regulations.

In addition, the Project would implement BMPs during construction that would limit potential for discharge of sediment and other pollutants. These include BMP-1 (Construction Work Windows), BMP-2 (Areas of Disturbance), BMP-3 (Erosion and Sediment Control), BMP-4 (Fill, Spoils, and Stockpiled Materials), BMP-5 (On-site Hazardous Materials Management), BMP-6 (Spill Prevention and Response Plan), and BMP-7 (Vehicle and Equipment Maintenance). Implementation of these BMPs would reduce potential for erosion and off-site movement of sediments during construction, as well as the potential for spills or accidental releases of hazardous materials. If a hazardous material release were to occur, there would be reduced potential for the pollutants to enter the surface or groundwater given prompt and complete clean-up of the materials.

During Project operation, there would be limited potential for adverse impacts on water quality. The reconstructed turnaround would function unattended and with only limited periodic maintenance. The turnaround would reduce erosion and sedimentation relative to baseline conditions, as these adverse effects are occurring as a result of the existing inadequate turnaround structure.

As a result, this impact would be **less than significant**.

b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge, such that the Project may impede sustainable groundwater management of the basin.

The Project would result in the construction of a 70-foot-diameter turnaround. This structure would not be impervious, as it would be constructed with suitable levee soil material overlain with an aggregate base. Therefore, following completion of the Project, water falling on the turnaround structure as precipitation or running on to the structure from adjacent areas would infiltrate through the aggregate layer to the soil and groundwater below. In this respect, the Project would not interfere substantially with groundwater recharge. The project will create a seasonal wetland that is both surface-flow and groundwater-fed. However, this would not negatively interfere with groundwater recharge.

Project construction would require minimal quantities of water that would be supplied by a water truck. Even if all of this water were ultimately sourced from groundwater, it would not meaningfully affect the basin's existing supplies or inhibit the sustainable management of the basin. Therefore, this 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:

i. result in substantial erosion or siltation on- or offsite

The Project site includes the existing gravel road, a portion of which would be replaced with the new turnaround structure. As described in Chapter 2, the turnaround would be relocated approximately 600 feet upstream from the original turnaround location and would be raised by approximately 4 to 7 feet to accommodate the future need to raise the levee to keep pace with sea level rise. The new turnaround would be constructed as a circular bulb-out that would extend approximately 60 feet north of the northern edge of the existing gravel road and would have a diameter of approximately 70 feet, with side slopes of 4 feet horizontal to 1 foot vertical along the Bay-facing sides.

In this regard, the Project would alter the existing drainage patterns in this area. As noted above, water falling on the new turnaround structure as precipitation would likely sheet flow to the surrounding lands or infiltrate to the soil/groundwater below. Over the long term, the changes would be beneficial and would reduce potential for erosion and siltation on- or offsite. As described in Chapter 2, the west end of the Alameda Creek north levee circular vehicle turnaround area has been gradually eroding over the years due to wave and tidal actions from the San Francisco Bay. The majority of the circular turnaround area has been eroded to the extent that safe turning movement is restricted. The Project improvements would correct this existing adverse condition and reduce the level of ongoing erosion/sedimentation that is occurring. The Project would not create any impervious surfaces that could increase potential for erosion and siltation on- or offsite.

The creation of a seasonal wetland would slow surface flows, result in a longer detention time, and be beneficial to water quality. Additionally, the reduction of flow rates is expected to reduce erosion.

During construction, clearing, vegetation removal, grading, and other ground-disturbing activities would expose soils within the Project area and alter the on-site drainage patterns, thereby increasing on-site susceptibility to erosion during the construction period. This could result in subsequent adverse impacts on water quality if sediments were transported to Alameda Creek or the San Francisco Bay. Implementation of construction BMPs for the Project, as described earlier in Response 3.10.3(a), would minimize these potential construction-related water quality impacts by requiring erosion and sediment control measures, as well as limiting construction to dry periods and limiting the area of disturbance.

With implementation of applicable requirements, this impact would be **less than significant**.

ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite

The Project would not create any new impervious surfaces that could increase the rate or amount of surface runoff. The earthen turnaround structure (overlain with aggregate base) would have similar permeability to the existing roadway, and any water that does not infiltrate would flow to surrounding areas that drain directly to Alameda Creek and/or San Francisco Bay. Construction activities, likewise, would not create any conditions that would increase the rate or amount of surface runoff and would not

be conducted during the rainy season. Therefore, there would be no potential for the Project to result in flooding on- or off-site. **No impact** would occur.

iii. create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

The Project would not be connected to the municipal stormwater drainage system. Runoff water from the Project would be expected to flow to Alameda Creek and/or the San Francisco Bay. Use of hazardous materials (e.g., fuel, oil, etc.) during Project construction would create the potential for discharge of polluted runoff; however, implementation of BMPs discussed in Response 3.10.3(a) would reduce this potential to a level that is less than significant. As shown in Table 2-2 in Chapter 2, this would include conducting work during dry periods; managing hazardous materials appropriately onsite, including implementing proper containment; implementing a Spill Prevention and Response Plan; keeping vehicles clean and in working order; and conducting servicing of vehicles at designated staging areas. With implementation of these measures, this impact would be **less than significant**.

iv. impede or redirect flood flows

As described in Section 3.10.1.3, the Project area is located within the 100-year flood hazard area designated by FEMA. Thus, there would be some potential for impedance or redirection of flood flows (e.g., by construction equipment present in the flow path). However, construction would take place during the dry season, when there would be no real potential for a 100-year flood event to occur.

Over the long term, the new turnaround structure would increase the aboveground dimensions of the facility relative to existing conditions (it would be raised 4 to 7 feet to account for future sea level rise). While this could impede or redirect flood flows to some degree, the effect would not be significant and would likely result in flows spreading out further into the surrounding marshlands. No occupied or unoccupied structures are located nearby the Project area that could be affected by any impedance or redirection of flood flows. The seasonal wetland is not expected to impede or redirect flows. Therefore, this impact would be **less than significant**.

d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation

As described in Response 3.10.3(c)(iv), the Project area is located within the FEMA 100-year flood hazard zone. The site is also located within the mapped tsunami hazard zone. Due to its proximity to the San Francisco Bay, the Project area could also be subject to a seiche[8]. During construction, hazardous

[8] A seiche is a standing wave oscillating in a body of water. Seiches can occur in any semi- or fully enclosed body of water. Seiches are typically caused when strong winds and rapid changes in atmospheric pressure push water from one end of a body of water to the other (NOAA, 2023b). When the wind stops, the water rebounds onto the other side of the enclosed area. The water then continues to oscillate back and forth for hours or even days. In a similar fashion, earthquakes, tsunamis, or severe storm fronts may also cause seiches along ocean shelves and ocean harbors (NOAA, 2023b).

materials could be stored onsite or at staging areas, which could potentially result in the release of pollutants if an inundation event were to occur. Because construction would take place during the dry season, there would be no meaningful risk of inundation due to a flood event. A tsunami or seiche could potentially be triggered by an earthquake, leading to inundation of the Project area during construction; however, the probability of such an event occurring during the approximately 4-month-long construction period would be so low as to render the risk as *de minimis*. Additionally, BMP-5, which requires proper storage and containment of hazardous materials, as well as BMP-7, which requires maintenance of vehicles and equipment in a clean condition, could potentially reduce adverse effects in the event of such an inundation event. Therefore, this impact would be **less than significant**.

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

As discussed above in Responses 3.10.3(a), 3.10.3(c)(i), and 3.10.3(c)(iii), with implementation of BMPs, the Project would not have significant adverse impacts on water quality during construction. Thus, it would not adversely affect beneficial uses. Over the long term during the operations period, the Project would improve conditions with respect to water quality as it would correct existing problems with erosion at the turnaround. The Project would also not add any new impervious surfaces or create other conditions that could potentially interfere with groundwater recharge. The Project would not create any new permanent demand for water and would not use water other than the relatively small amount needed for construction. As such, the Project would not conflict with or obstruct implementation of the San Francisco Bay Basin Plan or the ongoing sustainable management of the Niles Cone Basin by ACWD. Therefore, this impact would be **less than significant**.

3.11 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?	☐	☐	☐	☒

3.11.1 Regulatory Setting

3.11.1.1 Federal Laws, Regulations, and Policies

No federal regulations are applicable to land use and planning in relation to the proposed Project.

3.11.1.2 State Laws, Regulations, and Policies

No State regulations are applicable to land use and planning in relation to the proposed Project.

3.11.1.3 Regional and Local

Local laws, regulations, and policies are detailed in Appendix A.

3.11.2 Environmental Setting

The Project site is located along the Alameda Creek levee and is accessed via Ardenwood Boulevard. The turnaround and staging area #1 are located at the end of the Alameda Creek Trail, approximately 3.8 miles west of the entrance and parking lot. The turnaround area is south of Eden Landing Ecological Reserve and is open space along the shoreline with trails and recreational facilities. The mitigation site is approximately 2.5 miles upstream from the proposed turnaround area.

The turnaround site, mitigation area, and staging area #1 are within the City of Hayward. The parcel is designated Baylands in the City of Hayward 2040 General Plan (City of Hayward, 2014) and zoned Flood Plain. The Baylands General Plan designation applies to open space resources along the Hayward shoreline. The general plan indicates that development activities in the Baylands are expected to include the continued restoration of saltwater and freshwater marshes and upland habitat, improvements to

regional levees to protect the shoreline from rising sea levels, and the construction of various trails and compatible recreational facilities throughout the area.

Staging area #2 is adjacent to the parking lot and is within the City of Union City. Single-family residential homes are present to the east and throughout the surrounding area. Staging Area #2 and the proposed mitigation site are located within the City of Union City. The area is designated Agriculture and Open Space in the City of Union City General Plan (City of Union City, 2019) and is zoned Agriculture. The Agriculture General Plan designation provides for agriculture and other low-intensity open space uses and is intended to conserve lands that should remain as open space because of their value for agricultural production. The Open Space General Plan designation provides for open space, passive and active recreation, resource management, flood control management, public safety, and similar and compatible uses.

3.11.3 Discussion of Checklist Responses

a. Divide an established community

The Project would replace the existing, deteriorating trail turnaround with a new turnaround approximately 600 feet upstream of the existing location. The wetland mitigation area would be created approximately 2.5 miles upstream of the proposed turnaround site. The wetland mitigation site would be converted back to salt marsh habitat. The mitigation site would be revegetated using a combination of planting and natural colonization/recruitment. Staging areas would be sited along the trail access roadway and would not divide or obstruct the trail or the nearby residential areas. Therefore, the Project would not divide an established community. **No impact** would result.

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.

The Project would not change land use of the Project area. Therefore, the Project would be consistent with the General Plan and zoning designations of both jurisdictions. **No impact** would result.

3.12 Mineral Resources

Criteria	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the Project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?	☐	☐	☐	☒
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

3.12.1 Regulatory Setting

3.12.1.1 Federal Laws, Regulations, and Policies

There are no relevant federal regulations for mineral resources.

3.12.1.2 State Laws, Regulations, and Policies

3.12.1.2.1 Surface Mining and Reclamation Act

The Surface Mining and Reclamation Act of 1975 (SMARA) mandated the initiation by the State Geologist of mineral land classification in order to help identify and protect mineral resources in areas within the State subject to urban expansion or other irreversible land uses that would preclude mineral extraction. SMARA also allowed the State Mining and Geology Board (SMGB), after receiving classification information from the State Geologist, to designate lands containing mineral deposits of regional or Statewide significance.

3.12.1.2.2 Guidelines for Classification and Designation of Mineral Lands

The California DOC's SMGB and Division of Mines and Geology have mapped much of the State of California for the likelihood of yielding mineral resources, including aggregate. The Mineral Resource Zones (MRZ) are defined as listed below, with the following characteristics:

- **MRZ-1:** Areas where adequate information indicates that no significant aggregate deposits are present or where it is judged that little likelihood exists for their presence.
- **MRZ-2:** Areas where adequate information indicates that significant aggregate deposits are present or where it is judged that a high likelihood of their presence exists.

- **MRZ-3:** Areas containing aggregate deposits, the significance of which cannot be evaluated from available data.
- **MRZ-4:** Areas where available information is inadequate for assignment to any other MRZ. Areas classified as MRZ-2 that also have existing land uses compatible with mining have been further delineated as Mineral Resource Sectors.

3.12.1.3 Local Laws, Regulations, and Policies

Local laws, regulations, and policies are detailed in Appendix A.

3.12.2 Environmental Setting

Neither the Union City General Plan nor the City of Hayward General Plan identify or delineate any resource recovery areas within the cities. Regionally significant mineral deposits are located in the foothills, extending along the eastern edges of the cities of Hayward and Union City. However, the Project site is classified as MRZ-1 by the California Department of Conservation Division of Mines and Geology (DOC). The MRZ-1 designation is assigned to areas where there is adequate information available to indicate that no significant mineral deposits are present or where it is judged that little likelihood exists for their presence.

3.12.3 Discussion of Checklist Responses

a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.

As stated in Section 3.12.2, the Division of Mines and Geology has indicated that there is no known mineral resource that would be of value regionally or Statewide within the Project area (DOC 1996, DOC 2022). Consequently, the proposed Project would have **no impact** with respect to mineral resources.

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

No general plans, specific plans, or land use plans that cover the Project area identify any mineral resource that would be of value within the Project area. In addition, no locally significant mineral resources are designated in the Cities' General Plans (City of Hayward 2014, City of Union City 2019). Consequently, the Project would have **no impact** with respect to mineral resources.

3.13 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?	☐	☐	☐	☒

3.13.1 Overview of Noise and Vibration Concepts and Terminology

3.13.1.1 Noise

In the CEQA context, noise can be defined as unwanted sound. 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.

Decibel (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.

A-weighted decibel (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.

Percentile-exceeded sound level (Lxx) is the sound level exceeded during x percent of a given measurement period. For example, L10 is the sound level exceeded 10 percent of the measurement period.

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 p.m.

In general, human sound perception is such that a change in sound level of 3 dB is barely noticeable, a change of 5 dB is clearly noticeable, and a change of 10 dB is perceived as doubling or halving the sound level. TABLE 3.13-1. **EXAMPLES OF COMMON NOISE LEVELS**

presents approximate noise levels for common noise sources, measured adjacent to the source.

TABLE 3.13-1. EXAMPLES OF COMMON NOISE LEVELS

Common Outdoor Activities	Noise Level (dBA)
Jet flyover at 1,000 feet	110
Gas lawnmower at 3 feet	100
Diesel truck at 50 feet traveling 50 miles per hour	90
Noisy urban area, daytime	80
Gas lawnmower at 100 feet, commercial area	70
Heavy traffic at 300 feet	60
Quiet urban area, daytime	50

Common Outdoor Activities	Noise Level (dBA)
Quiet urban area, nighttime	40
Quiet suburban area, nighttime	30
Quiet rural area, nighttime	20

Source: Caltrans, 2013

3.13.1.2 Vibration

Ground-borne vibration propagates from the source through the ground to adjacent buildings via surface waves. Vibration may be composed of a single pulse, a series of pulses, or a continuous oscillatory motion. The frequency of a vibrating object describes how rapidly it is oscillating, measured in Hertz (Hz). Most environmental vibrations consist of a composite, or "spectrum," of many frequencies. The normal frequency range of most ground-borne vibrations that can be felt generally starts from a low frequency of less than 1 Hz to a high frequency of about 200 Hz. Vibration information for this analysis has been described in terms of the peak particle velocity (PPV), measured in inches per second, or of the vibration level measured with respect to the root-mean-square vibration velocity in decibels (VdB), with a reference quantity of 1 micro-inch per second.

Vibration energy dissipates as it travels through the ground, causing the vibration amplitude to decrease with distance away from the source. High-frequency vibrations reduce much more rapidly than those characterized by low frequencies, so that in a far-field zone distant from a source, the vibrations with lower frequency amplitudes tend to dominate. Soil properties also affect the propagation of vibration. When ground-borne vibration interacts with a building, a ground-to-foundation coupling loss usually results, but the vibration can also be amplified by the structural resonances of the walls and floors. Vibration in buildings is typically perceived as the rattling of windows, the shaking of loose items, or the motion of building surfaces. In some cases, the vibration of building surfaces can also be radiated as sound and heard as a low-frequency rumbling noise, known as ground-borne noise.

Ground-borne vibration is generally limited to areas within a few hundred feet of certain types of industrial operations and construction/demolition activities, such as pile driving. Road vehicles rarely create enough ground-borne vibration amplitude to be perceptible to humans unless the receiver is in immediate proximity to the source or the road surface is poorly maintained and has potholes or bumps. Human sensitivity to vibration varies by frequency and by receiver. Generally, people are more sensitive to low-frequency vibration. Human annoyance is also related to the number and duration of events; the more events or the longer the duration, the more annoying it becomes.

3.13.2 Regulatory Setting

3.13.2.1 Federal Laws, Regulations, and Policies

No federal laws, regulations, or policies for construction-related noise and vibration apply to the proposed Project. However, the Federal Transit Administration (FTA) *Guidelines for Construction Vibration in Transit Noise and Vibration Impact Assessment* state that for evaluating daytime construction noise impacts in outdoor areas, a noise threshold of 90 dBA L_{eq} should be used for residential areas (FTA, 2018).

For construction vibration impacts, the FTA guidelines use an annoyance threshold of 80 VdB for infrequent events (fewer than 30 vibration events per day) and a damage threshold of 0.12 inches per second (in/sec) PPV for buildings extremely susceptible to vibration damage (FTA, 2018). The ground-borne vibration annoyance level is 65 VdB for buildings where vibration would interfere with interior operations, 72 VdB for residences, and 75 VdB for institutional land uses with primarily daytime uses.

3.13.2.2 State Laws, Regulations, and Policies

California requires each local government entity to implement a noise element as part of its general plan. The California Administrative Code, Title 4, presents guidelines for evaluating the compatibility of various land uses as a function of community noise exposure. The State land use compatibility guidelines are listed in Table 3.13-2.

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

3.13.2.3 Local Laws, Regulations, and Policies

Local laws, regulations, and policies are detailed in Appendix A.

3.13.2.3.1 Alameda County General Plan – Noise Element

The Noise Element of the Alameda County General Plan contains the following policies and goals that may be relevant to the proposed Project and the noise analysis.

Countywide Goal 1: The peace, health, safety, and welfare of the residents of Alameda County require protection from excessive, unnecessary, and unreasonable noises from any and all sources in the cities and unincorporated territory.

TABLE 3.13-2. STATE LAND USE COMPATIBILITY STANDARDS FOR COMMUNITY NOISE ENVIRONMENT

Land Use Category	Community Noise Exposure - L_{dn} or CNEL (dB)													
		55		60		65		70		75		80		
Residential – Low Density Single Family, Duplex, Mobile Homes														
Residential – Multi-Family														
Transient Lodging – Motels, Hotels														
Schools, Libraries, Churches, Hospitals, Nursing Homes														
Auditoriums, Concert Halls, Amphitheaters														
Sports Arenas, Outdoor Spectator Sports														
Playgrounds, Neighborhood Parks														
Golf Courses, Riding Stables, Water Recreation, Cemeteries														
Office Buildings, Business Commercial and Professional														
Industrial, Manufacturing, Utilities, Agriculture														

- **Normally Acceptable:** Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
- **Conditionally Acceptable:** New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
- **Normally Unacceptable:** New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
- **Clearly Unacceptable:** New construction or development generally should not be undertaken.

Source: California Governor's Office of Planning and Research, 2017

3.13.3 Environmental Setting

The proposed Project is located in southwestern Alameda County along the Alameda Creek Trail near the confluence of Alameda Creek and the San Francisco Bay. Work activities will take place in or near the jurisdictions of Hayward, Union City, and Fremont. There are no sensitive receptors in the immediate vicinity of the turnaround site; however, equipment operating at staging area #2 and trucks hauling material to the Project site will operate in proximity to residences on Eastin Drive, Eastin Court, and Williams Way. Further, the City of Fremont lies on the other side of the creek from the Project site. The nearest edge of staging area #2 is roughly 130 to 200 feet from multiple residences along Williams Way and Eastin Drive. The Union Pacific Railroad is located 0.8 and 3.8 miles east of staging area #2 and the turnaround site, respectively. Interstate 880 is 1.5 miles east of staging area #2. There are no airports or other major sources of noise in the Project vicinity.

3.13.4 Discussion of Checklist Reponses

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.

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), the construction occurs in areas immediately adjoining noise-sensitive land uses, or when construction occurs over an extended period (e.g., longer than one year).

Significant noise impacts do not normally occur when standard construction noise control measures are enforced or when the duration of the noise-generating construction activities is limited to one construction season or less. Reasonable regulation of the hours of construction, as well as regulation of the arrival and operation of heavy equipment and the delivery of construction material, are necessary to protect the health and safety of the public, promote the general welfare of the community, and maintain the quality of life.

The Project site is in the Baylands, which is a relatively quiet area compared to more developed sections of the County. The Project area is largely surrounded by the Bay, marshland, and parkland, with some single-family residential use near the eastern edge of the Project site. There are multiple sensitive receptors to the north of staging area #2 within 130 to 200 feet (residences), and Delaine Eastin Elementary School is located approximately 680 feet north of the staging area. Hauling trucks using Eastin Drive to access the project site would pass within 30 to 50 feet of two residences on Sloan Way. Recreational users choosing to visit nearby portions of Eden Landing Ecological Reserve, Coyote Hills Regional Park, or Ponderosa Cove Park during construction could be exposed to Project-generated noise.

Project construction activities would be typical for roadway improvements and would generate noise from activities such as site grading and material hauling. The City of Hayward allows construction

between 7 a.m. and 7 p.m. Monday through Saturday and between 10 a.m. and 6 p.m. Sundays and holidays as long as noise levels do not exceed 86 dBA outside the property or no individual piece of equipment produces noise levels exceeding 83 dBA at a distance of 25 feet. The City of Union City allows construction between 8 a.m. and 8 p.m. weekdays, 9 a.m. and 8 p.m. on Saturdays, and 10 a.m. and 6 p.m. on Sundays and holidays, as long as noise levels don't exceed 86 dBA outside the property or no individual piece of equipment produces noise levels exceeding 83 dBA at a distance of 25 feet. The City of Fremont limits construction activities near residential areas to weekdays between 7 a.m. and 7 p.m. and Saturdays and holidays 9 a.m. and 6 p.m., with more flexible hours for construction not located within 500 feet of residences. Additionally, construction, maintenance, and repair operations conducted by public agencies or their contractors are exempt from these limitations.

Construction would occur weekdays between 8 a.m. and 5 p.m. (BMP-1), with most work taking place over 2 miles from the nearest sensitive receptors; however, dump trucks hauling material and equipment operating in staging area #2 would be closer to sensitive receptors. Truck hauling within City of Union City rights-of-way would be restricted to weekdays from 9 a.m. to 3:30 p.m. Multiple types of equipment (bulldozer, grader, roller, and excavator) that would be used for construction of the proposed Project may generate sound levels of 85 dBA at a distance of 50 feet (FTA, 2018; FHWA, 2017). These would be operating at more than 50 feet from the nearest residences (>130-200 feet for work in staging area #2) and would therefore not exceed 86 dBA at those properties. Hauling trucks using Eastin Drive would briefly pass within 30 to 50 feet of two homes on Sloan Way, with an average of six truck passings a day during the construction period (based on the amount of material to be imported/exported). These homes are separated from Eastin Drive by a sound wall, and any noise from hauling trucks would be brief and temporary. Ambient noise at this location includes traffic and noise from Union City Boulevard and a nearby Alameda County Fire Station, so hauling trucks would not generate a significant increase in ambient noise levels. The implementation of BMP-8, would also serve to limit noise from construction activities by limiting idling times and requiring all equipment to be properly tuned and maintained.

Upon completion of construction, the Project would operate nearly identically to existing conditions, with the same amount or less maintenance required. Thus, impacts from noise generated by the construction and operation would be **less than significant**.

b. Generation of excessive groundborne vibration or groundborne noise levels

Vibration thresholds for buildings occur at a PPV of 0.12 in/sec for buildings extremely susceptible to vibration damage; the human annoyance threshold is at 80 VdB. Vibration and ground-borne noise levels were estimated following methods described in the FTA Noise and Vibration Impact Assessment (FTA, 2018) to determine the PPV that would potentially impact buildings and the VdB for annoyance because there are no applicable local vibration-related thresholds or recommended methodology. It was assumed that the equipment would have similar vibration sound levels as a vibratory roller (at project sites with road work) or loaded trucks (which would impact areas along hauling routes). Table 3.13-3 below shows relevant parameters for the construction equipment anticipated to be used for the proposed Project and distance to sensitive receptors to be below vibration thresholds.

TABLE 3.13-3 CONSTRUCTION EQUIPMENT AND VIBRATION DISTANCE

Equipment	PPV at 25 ft	Distance to PPV of 0.12 in/sec	Noise Vibration Level at 25 ft	Distance to Noise Vibration of 80 VdB
Vibratory Roller	0.21 in/sec	36.3 feet	94 VdB	73 feet
Loaded Truck	0.076 in/sec	18.4 feet	86 VdB	40 feet

Source: Calculations are provided in Appendix E, Noise and Vibration Calculations.

Table 3.13-3 shows that Project-related vibration noise related to the vibratory roller would be below the human annoyance level of 80 VdB at a distance of 73 feet below the building damage threshold at a distance of 36 feet. There are no sensitive receptors or sensitive buildings within these threshold distances of the Project area. Hauling trucks heading to the Project site would pass within the 40-foot annoyance threshold distance for one residence on Sloan Way; however, these occurrences would be brief and temporary, with an average of six truck passings a day for a period of four months, and would be in a location acclimated to frequent firetruck transits. Therefore, this impact 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 within 2 miles of a public airport or public-use airport, would the project expose people residing or working at the project site to excessive noise levels?

The Project site is approximately 6 miles south of the Hayward Executive Airport and is over 7 miles from the San Carlos and Palo Alto Airports. There are no other airports, either public or private, within the vicinity of the Project site. Implementation of the Project would have **no impact** related to airport noise.

3.14 Population and Housing

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

3.14.1 Regulatory Setting

3.14.1.1 Federal Laws, Regulations, and Policies

No federal regulations are applicable to population and housing in relation to the Project.

3.14.1.2 State Laws, Regulations, and Policies

No State regulations are applicable to population and housing in relation to the Project.

3.14.1.3 Local Laws, Regulations, and Policies

Local laws, regulations, and policies are detailed in Appendix A.

3.14.2 Environmental Setting

The Project site does not contain any residential, commercial, or industrial structures. The site is within the City of Hayward, which has a population of 159,827 (U.S. Census Bureau, 2020a). Additionally, the Project site is located adjacent to Union City and staging area #2 is located in Union City; Union City has a population of 68,681 as of the 2020 Census (U.S. Census Bureau, 2020b).

3.14.3 Discussion of Checklist Responses

a. Induce unplanned population growth

During construction, it is expected that the 10-person construction workforce would be drawn from the adjacent urban areas. Due to the small number of construction jobs generated by the Project, regional

labor would meet the construction workforce requirements. Construction workers residing outside of the area would not be required to relocate to the area for the construction period; therefore, construction activities would not generate an increase in population or growth. Maintenance of the maintenance road turnaround replacement on the existing levee would be conducted as needed by existing local maintenance crews; therefore, maintenance activities would not generate an increase in population or influence growth in the Project vicinity. The Project does not include a housing component or involve extending existing infrastructure that would indirectly induce population growth. Therefore, implementation of the Project would not result in substantial unplanned growth in the area, either directly or indirectly. **No impact** would occur.

b. Displace a substantial number of existing people or housing

As described in Response 3.14.3(a), the Project is located on land designated to preserve natural resources; no housing is located onsite. Therefore, no residences or housing would be acquired for implementation of the Project. The Project would result in **no impact** related to displacement of people or housing.

Mitigation Measures

None required.

3.15 Public Services

Criteria	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the Project:				
a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, 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?	☐	☐	☐	☒

3.15.1 Regulatory Setting

3.15.1.1 Federal Laws, Regulations, and Policies

No federal regulations are applicable to public services in relation to the Project.

3.15.1.2 State Laws, Regulations, and Policies

No State regulations are applicable to public services in relation to the Project.

3.15.1.3 Local Laws, Regulations, and Policies

Local laws, regulations, and policies are detailed in Appendix A.

3.15.2 Environmental Setting

The Project is within the City of Union City and the City of Hayward and is accessible via Union City streets.

The Alameda County Fire Department provides fire protection to unincorporated areas of Alameda County, the cities of San Leandro, Dublin, Newark, and Union City, the Lawrence Berkeley National Laboratory, and the Lawrence Livermore National Laboratory. Hayward Fire Department provides fire protection to the City of Hayward (Hayward Fire Department, 2023). The closest fire station is Station 30, located at 35000 Eastin Court, approximately 2 miles east of the Project site and approximately 800 feet east of staging area #2 (Union City, 2019).

The Union City Police Department (UCPD) provides law enforcement services to Union City and would provide services to the Project site. The closest police station is a neighborhood service center located at 31880 Alvarado Boulevard, approximately 3 miles northeast of the Project site. UCPD currently has 1.11 sworn officers per 1,000 residents (Union City, 2023). The Hayward Police Department (HPD) provides police protection services to the City of Hayward. The HPD headquarters are located at 300 West Winton Avenue, which is approximately 5.9 miles northeast of proposed turnaround location (HPD, 2023).

New Haven Unified School District (NHUSD) serves Union City and adjacent unincorporated areas (NHUSD, 2023). NHUSD operates eleven schools. Delaine Eastin Elementary School is the closest school to the Project site, located approximately 2.5 miles east. The Hayward Unified School District (HUSD) operates 21 elementary, 5 middle, and 3 high schools in Hayward (HUSD, 2023).

The Union City Community and Recreation Department manages 136 acres of parks and open space (Union City General Plan, 2019). A detailed description of park and recreation uses is included in Section 3.16.

3.15.3 Discussion of Checklist Responses

a. Result in adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities: Fire protection, police protection, schools, parks, and other public facilities.

The Project consists of the reconstruction and replacement of a turnaround area adjacent to an existing turnaround area on an existing access road and levee. The Project would not involve construction of any new or altered government facilities nor involve any long-term activities that would result in increased demand for new or altered government facilities, including police, fire, or other public services. There would be **no impact** related to fire, police, schools, parks, or other public utilities.

3.16 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?	☐	☐	☒	☐

3.16.1 Regulatory Setting

3.16.1.1 Federal Laws, Regulations, and Policies

No federal regulations are applicable to recreation in relation to the proposed Project.

3.16.1.2 State Laws, Regulations, and Policies

No state regulations are applicable to recreation in relation to the proposed Project.

3.16.1.3 Regional and Local

Local laws, regulations, and policies are detailed in Appendix A.

3.16.2 Environmental Setting

The Alameda Creek Regional Trail is owned and maintained by the East Bay Regional Parks District (EBRPD). The trail follows the banks of Alameda Creek in southern Alameda County for approximately 12 miles, from the mouth of Niles Canyon in Fremont westward to San Francisco Bay (EBRPD, 2023).

In the Project area, the trail is unpaved and accessible to hikers, bikers, and horses. Motor vehicles are not permitted on the trail (EBRPD, 2022). Stables and a recreational staging area are available at the parking lot adjacent to Ardenwood Boulevard. The staging area has picnic tables, drinking water, restrooms, 30 parking spaces, and interpretive panels and is accessible in compliance with requirements of the Americans with Disabilities Act.

3.16.3 Discussion of Checklist Responses

a. Increase use of existing parks or recreational facilities

The Project would involve construction of a new turnaround at the western end of the Alameda Creek Regional Trail, the creation of a wetland mitigation area, and temporary establishment of two staging areas for equipment and construction materials. Construction equipment would travel back and forth on the unpaved trail between the staging areas and the turnaround site. No unauthorized motor vehicles are permitted on the trail; access is restricted to bicyclists, pedestrians, and equestrians. Periodic trips by construction vehicles along the trail would not prevent recreationists from using the trail, except for the westernmost approximately 600 feet where construction activities for the new turnaround would take place over the 4-month construction period. Access to the parking lot and accompanying recreational facilities would not be restricted because equipment would be housed in a separate staging area, staging area #2. Therefore, recreationists would not need to find replacement facilities during construction. Project-related activities would not increase use of existing parks or recreational facilities. The impact would be **less than significant**; no mitigation is required.

b. Creation of new or altered recreational facilities

The purpose of the Project is to reconstruct the vehicle turnaround farther away from the San Francisco Bay margins and at a higher elevation to protect the reconstructed turnaround from erosion from wave run-up and king tides and to anticipate future sea level rise. The altered turnaround and levee improvements would be constructed to USACE standards. The Project would allow for greater resilience and improved safety of the recreational facilities at the Project site. Further, the Project does not include expansion of existing facilities or have potential to induce growth, which would lead to a need for new recreational facilities. The impact would be **less than significant**; no mitigation is required.

3.17 Transportation

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. Conflict or be inconsistent with CEQA Guidelines § 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?	☐	☒	☐	☐

3.17.1 Regulatory Setting

3.17.1.1 Federal Laws, Regulations, and Policies

No federal regulations are applicable to transportation in relation to the proposed Project.

3.17.1.2 State Laws, Regulations, and Policies

No State regulations are applicable to transportation in relation to the proposed Project.

3.17.1.3 Regional and Local

Local laws, regulations, and policies are detailed in Appendix A.

3.17.2 Environmental Setting

3.17.2.1 Existing Vehicle Access

Access to the Project area is on Ardenwood Boulevard/Union City Boulevard, and Lowry Road, which lead to the Alameda Creek Regional Trail parking lot and staging area. Union City Boulevard is an arterial, and Lowry Road is a minor residential roadway in the Project vicinity. Union City Boulevard is also designated as a truck route in the City of Union City General Plan (2019).

3.17.2.2 Existing Bicycle and Pedestrian Facilities

The Alameda Creek Regional Trail is a Class I bikeway and is designated as a shared-use path in the *Union City Bicycle and Pedestrian Master Plan* (City of Union City, 2021). A pedestrian/bike overcrossing provides access to the trail on the south side of Alameda Creek, which connects to Quarry Lakes Regional Recreation Area. The path is paved on the south side of the creek and unpaved on the north side, including in the Project area. According to the master plan, Class II bicycle lanes are also planned for Lowry Road, Rocklin Road, and Delores Drive. A Class IV separated bike lane is planned for Union City Boulevard.

3.17.2.3 Existing Transit Service

The Union Square BART station is located off Decoto Road, northeast of its intersection with Alvarado-Niles Road. The station is served by the Green and Orange Lines. Quarry Lakes Regional Recreation Area is 2.15 miles south of the BART station and provides access to the Alameda Creek Regional Trail, 4.4 miles east of the trail parking area.

Union City Transit provides local bus service, including stops along the #1 bus line along Union City Boulevard at Rocklin Drive, approximately 0.5 mile from the trail parking area.

3.17.3 Transportation Terminology

The following terms are used in the City of Union City General Plan (2019) to define key transportation concepts:

Arterials. Arterials travel at moderate speeds through streets. Average daily traffic (ADT) on an arterial in Union City ranges from approximately 20,000 vehicles per day to more than 35,000 vehicles per day on some of the busier roadways. Arterials usually have four to six travel lanes with separate left-turn lanes. Access to an arterial is primarily accomplished through primary collector and residential collector streets. In the vicinity of the Project area, Union City Boulevard is an arterial.

Primary Collectors. Primary collector streets carry traffic from collector and minor residential streets to an arterial. ADT on a primary collector usually averages less than 10,000 vehicles per day. Primary collector streets are generally used as direct linkages to neighborhood shopping areas; direct access for low-density residential, commercial, and industrial uses and developments are sometimes permitted. Lowry Road, on the north/west side of Union City Boulevard, is a primary collector street.

Residential Collectors. Residential collector streets are intended to carry moderate volumes of traffic from local streets to primary collectors and arterials. ADT on a residential collector normally averages 500 to 4,000 vehicles per day. Direct access is permitted consistent with adopted improvement standards. No streets in the Project area are residential collectors.

Minor Residential Streets. Minor residential streets are low-capacity streets primarily serving low-density residential uses. ADT on a minor residential street averages less than 1,000 vehicles per day, although most local street average less than 500 vehicles per day. Lowry Road between Union City Boulevard and the trail parking area is a minor residential street.

The Caltrans *Highway Design Manual* (2020) establishes the following standards for bicycle facilities:

Class I Bikeway (Bike Path). Generally, bike paths offer opportunities not provided by the road system. The most common applications are in recreational settings, such as along rivers, ocean fronts, canals, utility right-of-way, abandoned railroad right-of-way, within school campuses, or within and between parks.

Class II Bikeway (Bike Lane). Bike lanes are intended to delineate the right-of-way assigned to bicyclists and motorists and to provide for more predictable movements by each. Construction of bike lanes is intended to better accommodate bicyclists through corridors where insufficient room exists for side-by-side sharing of existing streets by motorists and bicyclists.

Class III Bikeway (Bike Route). Bike routes are shared facilities that provide continuity to other bicycle facilities (usually Class II bikeways) or designate preferred routes through high-demand corridors. Normally, bike routes are shared with motor vehicles.

Class IV Bikeways (Separated Bikeways). A Class IV bikeway (separated bikeway) is a bikeway for the exclusive use of bicycles and includes a separation (e.g., grade separation, flexible posts, inflexible posts, inflexible barriers, or on-street parking) between the bikeway and vehicular traffic.

The *Union City Bicycle and Pedestrian Master Plan* (City of Union City, 2021) identifies the following categories of bicycle facilities:

Shared-Use Path. A shared-use path is an off-road pathway designed for both bicyclists and pedestrians. It provides the least interaction between bicyclists and vehicles compared to other facility types. A shared-use path correlates to a Caltrans Class I bikeway.

Buffered Bike Lane. A buffered bike lane allows bicyclists to ride adjacent to vehicular traffic in a designated lane that is augmented with a striped buffer area that neither vehicles nor bicyclists can use. Because the buffer provides additional horizontal separation between vehicles and bicyclists, buffered bike lanes are appropriate for roadways with medium vehicle speeds (i.e., 25-30 mph) and medium vehicle volumes (i.e., 3,000 to 6,000 vehicles per day). A buffered bike lane correlates to a Caltrans Class II bikeway. Buffered bike lanes are planned for Lowry Road, Rocklin Road, and Delores Drive.

Separated Bike Lane. In a separated bike lane, bicyclists ride in a designated lane separated from vehicular traffic by a buffer with vertical protection, such as flexible posts, planters, parked vehicles, or curbs. Separated bike lanes are used on roadways with high vehicle speeds (i.e., greater than 30 mph) and volumes (i.e., greater than 6,000 vehicles per day). A separated bike lane correlates to a Caltrans Class IV separated bikeway. No separated bike lanes are in use in Union City currently.

3.17.4 Discussion of Checklist Responses

a. Conflict with applicable circulation plans, ordinances, or policies and applicable congestion management programs

As described in Chapter 2, construction activities would take place Monday through Friday between 8:00 a.m. and 5:00 p.m. Truck hauling within City of Union City right-of-way is restricted to Monday through Friday, 9:00 a.m. to 3:30 p.m. No weekend or nighttime work is anticipated. Project construction would require up to 10 construction workers.

Approximately 1,200 cubic yards of imported fill and approximately 200 cubic yards of Class 2 aggregate base would be hauled to the Project site to restore the access road surface. Existing vegetation along the levee banks would be removed during grading and fill placement. Existing concrete riprap, rock riprap, gravels, trash, and other debris would be removed from the Project site during construction.

The mitigation site would remove 0.5 to 1 foot of soil to create hydrologic conditions amenable to restoration as a pickleweed-dominated seasonal wetland. Spoils would be placed on the adjacent soil storage area and would not be hauled offsite. The soil storage area would continue to be used for agricultural purposes following temporary soil placement.

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 vehicle miles traveled (VMT), such as residences and facilities. Therefore, no direct or cumulative population growth would occur that is not already incorporated in regional growth projections of the Hayward and Union City general plans and reflected in policies and ordinances related to transportation. Therefore, it would have a **less-than-significant impact** on programs, plans, ordinances, and policies addressing the circulation system. No mitigation is required.

b. Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)

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

The Project is intended to replace a deteriorating recreational trail turnaround and accompanying levee modifications. Construction activities would take place over a 4-month period in 2024, with a maximum of 10 employees. Grading, excavation, and site disturbance would take place at the western end of the Alameda Creek Regional Trail, with equipment and materials stored in staging area #1 near the turnaround site and staging area #2 adjacent to the trail parking lot. Trucks entering and leaving the Project area could present a hazard to vehicles traveling on Union City Boulevard and Lowry Road. This would have a significant impact. Implementation of **Mitigation Measure TR-1** would reduce this impact to a **less-than-significant level with mitigation**.

Mitigation Measure TR-1. Prepare and Implement a Construction Traffic Management Plan

The District shall require that the construction contractor(s) prepare and implement a construction traffic management plan to manage traffic flow during construction, reduce potential interference with local emergency response plans, reduce potential traffic safety hazards, and ensure adequate access for emergency responders. Development and implementation of this plan shall be coordinated with the City of Union City. The District and/or the construction contractor(s) will ensure that the plan is implemented during construction. The plan will include, but not be limited to, the following measures:

- Identify construction truck haul routes and timing to limit conflicts between truck and automobile traffic on nearby roads. The identified routes will be designed to minimize impacts on vehicular and pedestrian traffic, circulation, and safety.
- Provide signage indicating the access route to Alameda Creek Regional Trail.
- Coordinate construction activities to ensure that one travel lane remains open at all times, unless flaggers or temporary traffic controls are in place, to provide emergency access.
- Evaluate the need to provide flaggers or temporary traffic control on Union City Boulevard to assist trucks in accessing the roadway with minimal disruption of traffic.
- Document road pavement conditions before and after project construction. Make provisions to monitor the condition of roads used for haul routes so that any damage or debris attributable to haul trucks can be identified and corrected. Roads damaged by construction vehicles shall be repaired to their preconstruction condition.

d. Inadequate emergency access

Traffic on Union City Boulevard and Lowry Road could be delayed and one or more lanes temporarily closed when construction material or vehicles are being moved on and off the Project site. This could interfere with emergency access, creating a potentially significant impact. However, implementation of **Mitigation Measure TR-1** would provide traffic control at the project access road that could allow emergency vehicles access through the area and to the site. Therefore, this impact would be **less than significant with mitigation**.

3.18 Tribal Cultural Resources

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

3.18.1 Regulatory Setting

3.18.1.1 Federal Laws, Regulations, and Policies

Federal law does not address tribal cultural resources (TCR), as these resources are defined in the California Public Resources Code. However, similar resources, called TCPs, fall under the purview of Section 106 of the NHPA, which was referenced in Section 3.5. 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.

3.18.1.2 State Laws, Regulations, and Policies

3.18.1.2.1 Assembly Bill 52

AB 52, which was approved in September 2014 and went into effect on January 1, 2015, requires that State lead agencies consult with any California Native American tribe that is traditionally and culturally affiliated with the geographic area of a proposed project, if so requested by the tribe. The bill, chaptered in Public Resources Code § 21084.2, also specifies that a project with an effect that may cause a substantial adverse change in the significance of a TCR is a project that may have a significant effect on the environment.

Defined in Public Resources Code § 21074(a), 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 I of Section 5024.1. In applying the criteria set forth in subdivision I 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 Public Resources Code § 21074 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

    I 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 with the criteria of subdivision (a).

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

3.18.1.3 Regional and Local

Local laws, regulations, and policies are detailed in Appendix A.

3.18.2 Environmental Setting

Tribal cultural resources (TRC) are defined in PRC Section 21074 as sites, features, places, cultural landscapes, sacred places, and objects that hold cultural value to a California Native American Tribe.

The Native American Heritage Commission (NAHC) was contacted for a review of the Sacred Lands File (SLF) by Basin Research Associates (Basin Research, 2022; Basin Research, 2023). Results of the of the NAHC sacred lands file was positive (Basin Research 2023). The District sent letters/ emails in order to collect any information regarding any traditional cultural properties within the project area to 13 Native American individuals and/or organizations in California that were identified by the NAHC as knowledgeable contacts. All correspondence can be found in the historic property survey report (Basin Research 2023).

Table 3.18-1 below the names of those contacted for information regarding known resources within the Project area.

TABLE 3.18-1: RECORD OF CONTACT LETTERS SENT TO RESOURCES IDENTIFIED BY THE NAHC.

Tribe	Name	Position	City	Date of Mailing
Amah Mutsun Tribal Band of Mission San Juan Bautista	Irene Zwierlein	Chairperson	Lakeport	April 19, 2023
Costanoan Rumsen Carmel Tribe	Tony Cerda	Chairperson	Pomona	April 19, 2023
Indian Canyon Mutsun Band of Costanoan	Kanyon Sayers-Roods	MLD	San Jose	April 19, 2023

Tribe	Name	Position	City	Date of Mailing
Indian Canyon Mutsun Band of Costanoan	Ann Marie Sayers	Chairperson	Hollister	April 19, 2023
Muwekma Ohlone Indian Tribe of the SF Bay Area	Monica Arellano	Vice Chairwoman	Castro Valley	April 19, 2023
North Valley Yokuts Tribe	Katherine Perez	Chairperson	Linden	April 19, 2023
North Valley Yokuts Tribe	Timothy Perez	Unknown	Linden	April 19, 2023
The Ohlone Indian Tribe	Andrew Galvan	Unknown	Fremont	April 19, 2023
The Ohlone Indian Tribe	Desiree Vigil	THPO	Burlingame	April 19, 2023
Wuksache Indian Tribe/Eshom Valley Band	Kenneth Woodrow	Chairperson	Salinas	April 19, 2023
The Confederated Villages of Lisjan	Corrina Gould	Chairperson	Oakland	April 19, 2023
Tamien Nation	Jonathan Waska Costillas	THP	Clearlake Oaks	April 19, 2023
Tamien Nation	Quirina Luna Geary	Chairperson	San Jose	April 19, 2023

Of the letters sent, one formal response was received on May 9, 2023, by Corrina Gould, Chairperson of the Confederated Villages of Lisjan, asking for more information. The Basin Research (2023) Historic Property Survey Report/Finding of Effect report was provided. The positive findings report indicated the presence of an unrecorded Native American burial along Alameda Creek in the mudflats adjacent to the existing levee turnaround location. As a result of this finding, Mr. Galvan from the Ohlone Tribe was contacted and appointed as the Most likely Descendant (MLD) by the NAHC. Although subsequent efforts were made to find the discovery again following the initial report, they were not successful. Following further discussions between the District and Mr. Galvan, the location of the new turnaround

was moved 600 feet east inland of the existing turnaround location in order to avoid any potential impacts from construction (Basin 2023).

In addition, the District agreed to incorporate additional recommendations from Mr. Galvan during implementation of the Proposed Project, including participation of a Native American representative to monitor project activities during excavation and other ground disturbing activities, incorporating guidelines for the respectful and dignified treatment of human remains discovered at the end of the Alameda Creek Trail, preparation of a sacred site documentation, and preparation of an archaeological final report of findings.

The District has continued consultation with Mr. Galvan and the Ohlone Tribe throughout the development of the Project's environmental document.

3.18.3 Discussion of Checklist Responses

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

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

No TCRs within the Project area or mitigation area 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 Proposed 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.

Although it is not anticipated, is it possible that Native American archaeological or human remains could be discovered during Project activities? Implementation of AMMs **CR-1** (Archeological Sensitivity Training), **CR-2** (archaeological discoveries), and **CR-3** (discovery of human remains) would help limit any potential effects on tribal culture resources to a less-than-significant level with mitigation.

3.19 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?	☐	☐	☒	☐

3.19.1 Regulatory Setting

3.19.1.1 Federal Laws, Regulations, and Policies

No federal regulations are applicable to utilities and service systems in relation to the proposed Project.

3.19.1.2 State Laws, Regulations, and Policies

No State regulations are applicable to utilities and service systems in relation to the proposed Project.

3.19.1.3 Regional and Local

Local laws, regulations, and policies are detailed in Appendix A.

The City of Hayward's Construction and Demolition Debris Municipal Code Section (Municipal Code Section 5.10) was amended in 2017 to increase debris recycling and ensure consistency with the current California Green Building Standards Code (CalGreen) (City of Hayward, 2023a). The City requires a diversion rate of 65 percent recycling for all covered projects and 100 percent recycling for asphalt, concrete, and similar materials. Debris must be removed by a licensed contractor or a fixed body vehicle hired by the contractor and must be hauled directly to a verified recycling facility. A truck load is considered recyclable if it contains more than 5 percent of the following construction and demolition materials: concrete, asphalt, brick, rock, gravel, tiles, cardboard, paper, plastic film, scrap metal, clean (untreated and unpainted) wood, unpainted drywall, carpet, and soil.

3.19.2 Environmental Setting

3.19.2.1 Water

The ACWD serves an area of approximately 105 square miles and provides water service to Union City (City of Union City, 2019). The Alameda Creek Regional Trail parking area has a drinking fountain, but no water facilities are available beyond the parking area.

3.19.2.2 Sewer

The Union Sanitary District is an independent special district that provides wastewater collection, treatment, and disposal services in Union City. A portable restroom is available in the trail parking area; no other sewer or wastewater disposal facilities are present.

3.19.2.3 Stormwater

The City owns and maintains the public storm drain system, which includes all of the storm drains, pipes, catch basins, and manholes within the City right-of-way. The outfalls, channels, creeks, and pump stations are owned and operated by Alameda County Flood Control and Water Conservation District. All storm drains in Union City flow directly to nearby creeks, wetlands, and the Bay (City of Union City, 2019).

The Project site is characterized by an existing gravel road and adjacent undeveloped lands. No stormwater management features or facilities are present on the site, and it is presumed that stormwater runoff flows to adjacent lands or infiltrates into the soil.

3.19.2.4 Solid Waste

At the Project site, the turnaround area, levee reconstruction area, and Staging Area #1 are located in Hayward and Staging Area #2 and the parking area are in Union City. Although construction activities would take place at both locations, construction debris would be taken only from the turnaround and levee areas. For this reason, this IS/MND evaluates the Project's consistency with the City of Hayward's solid waste requirements and processes.

The City of Hayward Public Works and Utilities Department, Environmental Services Division, is responsible for managing solid waste and recycling services in Hayward. The City has contracted with Waste Management of Alameda County (WMAC) and Tri-CED (residential recyclables only) to provide these services (City of Hayward 2023b). Garbage is hauled to the Davis Street Resource Recovery Complex and Transfer Station in San Leandro, and from there it is sorted into trash (transported to the Altamont Landfill in Livermore), "readily recyclable materials" (separately processed and distributed), and organic waste (composted on site) (City of Hayward 2023c).

The Davis Street facility is the only third-party certified mixed construction and demolition debris recycling facility in Alameda County (WMAC 2016). Its expanded Material Recovery Facility is designed to meet CalGreen construction and demolition debris requirements as well as commercial diversion goals for Alameda County (WMAC 2023).

Trash cans are provided at the picnic area adjacent to the trail parking lot, but no routine garbage collection service is provided to the Project area.

3.19.2.5 Electricity and Natural Gas

PG&E is responsible for providing power supply to Union City (City of Union City 2019). No electricity or natural gas service is available at the Project site.

3.19.2.6 Communications

No telecommunication facilities are available at the Project site.

3.19.3 Discussion of Checklist Responses

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

The Project consists of the reconstruction and replacement of a turnaround area adjacent to an existing turnaround area on an existing access road and levee. No new or expanded water, wastewater treatment, or stormwater drainage facilities, electric power, natural gas, or telecommunications facilities, or expansion of existing facilities, would be constructed or relocated as part of the Project. During construction, water would be provided to the site by a water truck. Power would be provided to

construction trailers by diesel-powered generators. Additional portable restroom facilities would be installed for the 4-month construction period. There would be **no impact**.

b. Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years.

Project construction would require minimal quantities of water to be supplied by a water truck. Even if all of this water were ultimately sourced from groundwater, it would not meaningfully affect the basin's existing supplies or inhibit the sustainable management of the basin. If needed, the small amount of water needed to reduce dust in the Project area could be supplied by ACWD, and this small additional demand would not affect the ability of ACWD to meet its current water demand. Therefore, there would be **no impact** on water supply.

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

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

d. Generate solid waste in excess of State or local standards, 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.

As described in Chapter 2, *Project Description,* approximately 2,000 cubic yards of concrete would be removed from the turnaround portion of the Project site, as well as vegetation removed from the levee, during site preparation. Because this portion of the Project site is located within Hayward city limits, that city's regulations related to solid waste and solid waste reduction would apply.

As described above, the City of Hayward's Construction and Demolition Debris Municipal Code Section (Municipal Code Section 5.10) requires a diversion rate of 65 percent recycling for all covered projects and 100 percent recycling for asphalt, concrete, and similar materials (City of Hayward 2023a). Debris must be removed by a licensed contractor or a fixed-body vehicle hired by the contractor and must be hauled directly to a verified recycling facility.

Following project construction and before final inspection, contractors must complete and submit to the City Department of Public Works and Utilities a Construction and Demolition Debris Recycling Statement. If the project value exceeds $75,000, the statement must be accompanied by all weigh tags documenting tons recycled or landfilled.

The District would require contractors to comply with the City of Hayward regulations on solid waste and solid waste recycling. Therefore, the impact would be **less than significant**. No mitigation is required.

1

3.20 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?	☐	☐	☐	☒

3.20.1 Regulatory Setting

3.20.1.1 Federal Laws, Regulations, and Policies

There are no relevant federal regulations for wildfire in relation to the proposed Project.

3.20.1.2 State Laws, Regulations, and Policies

The State Fire Marshal is mandated to classify lands within State Responsibility Areas into FHSZs. FHSZs fall into the following classifications:

- Moderate
- High

- Very High

The California laws that require FHSZs include California Public Resource Code §§ 4201-4204, California Code of Regulations Title 14, § 1280 and California Government Code§§ 51175-89.

3.20.1.3 Local Laws, Regulations, and Policies

Local laws, regulations, and policies are detailed in Appendix A.

3.20.2 Environmental Setting

The 0.3-acre Project site is located along the Alameda Creek levee, to the west of Union City, and is accessed via Ardenwood Boulevard (refer to Figure 2-2). The project area is on the southern edge of Eden Landing Ecological Reserve and is north of Coyote Hills Regional Park, located at the west end of the Alameda Creek north levee where the Alameda Trail meets the San Francisco Bay, approximately 3.8 miles west of the entrance to the Alameda Creek Trail Parking Lot. Habitats in the vicinity of the Project site include intertidal marsh, ruderal grassland/levee, intertidal bay margin, and slough channel waterways. Single-family residential homes are present to the east and throughout the surrounding area.

Geographic areas can be susceptible to wildfires under certain conditions, including the presence of certain types and conditions of vegetation, topography, weather, and dense structures. Fires can be ignited by natural causes like lightning or human causes such as cigarettes, sparks from automobiles, or other sources of ignition. Vegetation in the Project area's immediate vicinity is primarily undeveloped tidal marsh, which is at low risk of wildfire. The levee and staging areas #1 and #2 (refer to Figure 2-2) are dominated by ruderal grassland, which could potentially burn in a wildfire.

Mapping by CAL FIRE shows that the Project area is not located in a VHFHSZ or a State-designated FHSZ. The Project area is located in an LRA (CAL FIRE, 2007; CA FIRE, 2008). The Project area is not located within a mapped WUI area, but portions of staging area #2 are located in mapped WUI and Wildfire Influence Zones (CAL FIRE, 2012; CA FIRE, 2022). The WUI typically consists of dense housing adjacent to vegetation that can burn in a wildfire, and the Wildfire Influence Zone consists of wildfire-susceptible vegetation up to 1.5 miles from the WUI (CAL FIRE, 2012; CAL FIRE, 2022).

3.20.3 Discussion of Checklist Responses

a. Substantially impair an adopted emergency response plan or emergency evacuation plan

The Project is not within a designated fire hazard area (CAL FIRE, 2007; CAL FIRE, 2008), and therefore there would be little fire risk. The Project is adjacent to a heavily urbanized area that can be accessible by emergency vehicles. Additionally, none of the Project elements would conflict with the County's or Cities' emergency operations plan.

The Alameda County Emergency Operations Center (EOC) is maintained and coordinated by the Alameda County Sheriff's Office of Emergency Services (OES). Alameda County OES coordinates

countywide emergency response efforts, including the preparation and implementation of the Alameda County Emergency Operations Plan (Alameda County Sheriffs OES, 2012) and the Alameda County Local Hazard Mitigation Plan (Alameda County, 2016). However, the Emergency Operations Plan does not indicate the specific emergency evacuation routes within Alameda County. The Project area is not located along an identified evacuation route, nor would it affect local roadways. The Project would not substantially impair or block an adopted emergency response plan or emergency evacuation plan. Therefore, there would be **no impact**.

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

The Project site is located along the Alameda Creek north levee, which is accessed via Ardenwood Blvd. The Project site is located at the end of the Alameda Creek trail, approximately 3.8 miles west of the entrance for the Alameda Creek Trail Parking Lot. The site elevation is approximately 0-5 feet above sea level, and the Project area slope is less than 5 percent with the exception of the intertidal slough channel banks. The Project's immediate vicinity is primarily undeveloped tidal marsh and ruderal grassland. This undeveloped land is bordered to the east by the developed Union City, which has little or no remaining natural habitat. Single-family residential homes are present to the east and throughout the surrounding area.

The Project is not within a designated fire hazard area (CAL FIRE, 2007; CA FIRE, 2008), and does not involve habitable structures. The District routinely mows ruderal grass vegetation along the levee, which would reduce the risk of an accidental wildfire ignition at the Project site. Due to its location 3.8 miles from urban development and the low fire risk, activities within the Project site would not exacerbate wildfire risks. Staging area #2 is located immediately adjacent to single-family residential homes and is located in a mapped WUI and Wildfire Influence Zone (CAL FIRE, 2012; CA FIRE, 2022). The District would clear and grub staging area #2 prior to use as a staging area, which would reduce the potential for accidental wildfire ignition by removing flammable vegetation. The Project area would not significantly exacerbate wildfire risks or potentially expose Project occupants to pollutant concentrations from a wildfire or uncontrolled spread of a wildfire. Therefore, the impact would be **less than significant**.

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.

During construction, access to the Project would be via Ardenwood Boulevard from the entrance of the Alameda Creek Trail Parking Lot (Figure 2-2). Two staging areas would be established for mobilizing and staging equipment/material required for reconstructing the eroded turnaround. Staging area #1 would be located along the existing Alameda Creek levee. This smaller staging area would be approximately 3.5 miles into Alameda Creek Trail, adjacent to the proposed turnaround location. The larger staging area #2 would be near the beginning of the trail, to the north of the levee and west and south of existing single-family residential homes. Access to this staging area would require the construction of a small pullout from the Alameda Creek Trail, which would include temporary fencing in order to restrict public

access to the staging area. No new maintenance roads or paved areas, water sources, powerlines, or other utilities would be constructed as part of the Project. As a result, the Project would not require the installation or maintenance of infrastructure that may exacerbate fire risk or may result in temporary or ongoing impacts to the environment. There would be **no impact**.

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.

The proposed Project would not involve placement of people or habitable structures in areas with significant fire risk. As previously described, the Project site is located along the intertidal bay margin and is not within a designated fire hazard area (CAL FIRE, 2007: CAL FIRE, 2008). The Project site is located 0 to 5 feet above sea level, near the confluence of Alameda Creek with San Francisco Bay. Therefore, there is no potential for the Project to result in downstream or downslope flooding or landslides. There would be no changes to Alameda Creek; therefore, drainage patterns would not change.

Additionally, one objective of the Project is to provide resilience to future sea level rise and erosion. The Project would reconstruct the turnaround farther away from the San Francisco Bay margins and at a higher elevation than under current conditions. The higher final elevation and relocation further inland are intended to protect the repaired turnaround from erosion from wave run-up and king tides and to anticipate future sea level rise. This would reduce the potential for flooding at the turnaround.

Therefore, it would result in **no impact** with regard to exposing 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.

3.21 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?	☐	☒	☐	☐

3.21.1 Discussion of Checklist Responses

a. Effects on environmental quality, fish or wildlife, and historic resources

As discussed through this Initial Study checklist, significant but mitigable impacts were identified for biological resources, cultural resources, and tribal cultural resources. With implementation of BMPs and mitigation measures identified in this IS/MND (refer to **Mitigation Measures BIO-1** through **BIO-7**, **CR-1**, **CR-3** and **CR-3**), the proposed 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, or 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**.

b. Cumulative Impacts

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

Error! Reference source not found. lists projects in the cumulative study area that could interact with the Project and result in significant cumulative impacts. The list of projects used for this analysis was developed by identifying projects listed in the CEQANet database and review of recent and current project pages for the City of Hayward and City of Union City. 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 3.21-7. LIST OF REASONABLY FORESEEABLE FUTURE PROJECTS THAT MAY CUMULATIVELY AFFECT RESOURCES OF CONCERN

1 **PROPOSED PROJECT**

Project Number	Project Title	Lead Agency	Status	Brief Project Description	Distance from Project

	South Bay Salt Pond Restoration Project, Eden Landing Phase 2	California Department of Fish and Wildlife	Approved	The South Bay Salt Pond Restoration Project is a multi-agency effort to restore tidal marsh habitat, reconfigure managed pond habitat, maintain or improve flood risk management, and provide recreation opportunities and public access in 15,100 acres of former salt evaporation ponds purchased from and donated by Cargill, Inc. in 2003. The Eden Landing Phase 2 project is adjacent to the Project site.	1,000 feet

Project Number	Project Title	Lead Agency	Status	Brief Project Description	Distance from Project
	Cargill Mixed Sea Salts Processing and Brine Discharge Project	East Bay Dischargers Authority	Environmental review	The proposed project would enable the enhanced processing and removal of mixed sea salts in existing Cargill ponds by harvesting additional liquid bittern from the mixed sea salts matrices in these ponds as commercial product, dissolving the residual mixed sea salts solids in the ponds using Bay water, and transferring the resulting brine to East Bay Dischargers Authority's combined effluent pipeline for discharge into the Bay under their National Pollutant Discharge Elimination System permit. The Union Effluent Pump Station and the Union Sanitary District Alvarado Wastewater Treatment Plant are located near the Project.	Adjacent

Project Number	Project Title	Lead Agency	Status	Brief Project Description	Distance from Project
	Lower Alameda Creek Fish Passage Restoration project	Alameda County Flood Control and Water Conservation District	Approved	The purposed of this Proposed Project is to remove migratory impediments and improve the migratory corridor below the BART Weir to allow Central California Coast steelhead and other fish movement within the flood control channel to access upstream spawning grounds.	Mitigation site is adjacent.

1 Source: CDFW 2019, East Bay Dischargers Authority 2023, Office of Planning and Research 2023, State Coastal Conservancy 2019.

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. Where a project would result in no impact on a resource, no cumulative impact analysis is required. Table 3.21-2 summarizes the cumulatively significant impacts and identifies the Proposed Project's contribution. Additional analysis follows for those impacts to which the Proposed Project would contribute.

TABLE 3.21-2 SUMMARY OF CUMULATIVE SIGNIFICANT IMPACTS AND PROPOSED PROJECT'S CONTRIBUTION

Resource Topic	Cumulatively Significant Impacts	Proposed Project's Contribution
Aesthetics	None identified.	No analysis required.
Agriculture and Forestry Resources	None identified.	No analysis required.
Air Quality	The San Francisco Bay Area Air Basin (SFBAAB) has been designated as being in nonattainment under both federal and State standards for ozone and fine particulate matter (PM2.5); particulate matter (PM10) is also designated as in nonattainment under State standards. These impacts would be considered cumulatively significant.	Use of vehicles, hauling trucks, and other equipment would result in emissions of criteria air pollutants. However, because such emissions would be below Bay Area Air Quality Management District (BAAQMD) thresholds, in accordance with BAAQMD guidance, the proposed Project would not make a considerable contribution to cumulative impacts related to air quality.
Biological Resources	Past and present projects could have temporary adverse effects on special-status species and habitat during the construction phase. This cumulative impact is significant.	Project construction activities could potentially result in adverse effects on special-status plants and wildlife as well as sensitive natural communities, which could add to ongoing impacts occurring to such resources from other activities in the area. However, the Project would create a seasonal wetland at the mitigation site, thus improving conditions for special-status species including California Ridgway's rail, California black rail, Salt marsh harvest mouse, Salt marsh wandering shrew, and pickleweed intertidal marsh, a sensitive natural community. Further, implementation of **Mitigation Measures BIO-1** through **BIO-7** would protect special-status species and pickleweed intertidal marshes. Accordingly, the Project's contribution to the cumulative impact would be less than cumulatively 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 the City General Plans contain policies regarding preservation of important cultural resources, ongoing development could lead to the cumulative loss of significant historic and archeological resources. This cumulative impact is significant.	The proposed Project would involve ground-disturbing activities (e.g., sediment removal) during construction, which could potentially expose buried unknown cultural resources. Adverse impacts to such resources would add to the ongoing losses of, and effects on, cultural resources in California due to development activities. As discussed in this document implementation of Mitigation Measures CR-1, CR-2 and CR-3 would reduce project impacts to cultural resources to a less than significant level. Accordingly, the Project's contribution to the cumulative impact would be less than cumulatively considerable.
Energy	None identified.	No analysis required.
Geology and Soils	None identified.	No analysis required.
Greenhouse Gas Emissions	Anthropogenic emissions of greenhouse gases (GHG) are widely accepted in the scientific community as contributing to global warming. This cumulative impact is significant.	Vehicle and equipment use would result in emissions of GHGs. However, because such emissions would be below applicable thresholds, in accordance with BAAQMD guidance, the proposed Project would not make a considerable contribution to cumulative impacts related to GHG emissions.
Hazards and Hazardous Materials	None identified.	No analysis required.
Hydrology and Water Quality	The hydrology and water quality of surface and ground waters in the San Francisco Bay Area have been adversely impacted through decades of urban development and other human activities. The San Francisco Bay and surface streams flowing to the Bay continue to be listed as impaired under the Clean Water Act for various pollutants. The cumulative impact is significant.	Construction of the Proposed Project would involve ground-disturbing activities and vehicle/equipment use that could result in erosion and discharge of sediment, as well as accidental releases of hazardous materials. However, implementation of BMPs 1 through 7 would reduce these impacts to a level that is less than significant at the project level. The Project's contribution to the cumulative impact would be less than cumulatively considerable.
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	Traffic-related noise associated with reasonably foreseeable future increased growth in traffic volumes in Alameda County is considered a significant cumulative impact.	Vehicle use during proposed Project implementation would contribute to traffic-related noise. However, the proposed Project would not make a considerable contribution to cumulative impacts related to traffic-related noise.
Population and Housing	None identified.	No analysis required.
Public Services	None identified.	No analysis required.
Recreation	None identified.	No analysis required.
Transportation	None identified.	No analysis required.
Tribal Cultural Resources	Throughout California, the Native American cultural legacy, which include tribal cultural resources such as sites, features, places, cultural landscapes, sacred places, and objects that hold cultural value to a California Native American Tribe, have been substantially affected by land management practices and urbanization over the past 150 years. While the City General Plans contain policies regarding preservation of important tribal cultural resources, ongoing development could lead to the cumulative loss of significant tribal cultural resources. This cumulative impact is significant.	The proposed Project would involve ground-disturbing activities (e.g., sediment removal) during construction, which could potentially impact tribal cultural resources. Adverse impacts to such resources would add to the ongoing losses of, and effects on, places, features, landscapes or objects of important value to a California Native American Tribe due to development activities. Mitigation Measures CR-1, CR-2 and CR-3 would consider tribal cultural values and treat tribal cultural resources with appropriate dignity reducing impacts to a less than significant level. Accordingly, the Project's contribution to the cumulative impact would be less than cumulatively considerable.
Utilities and Service Systems	None identified.	No analysis required.
Wildfire	None identified.	No analysis required.

BAAQMD = Bay Area Air Quality Management District, GHG = greenhouse gas, PM_{10} = particulate matter 10 microns in size or smaller, $PM_{2.5}$ = particulate matter 2.5 microns in size or smaller, SFBAAB = San Francisco Bay Area Air Basin

Construction of the Project would overlap with the projects listed in Table 3.21-1. Therefore, the Project could result in cumulative impacts related to air quality, biological resources, cultural resources, greenhouse gas emissions, hydrology and water quality, and noise as a result of Project construction. However, because the construction duration would be short, over four months, and would generate a maximum of six daily truck trips, and because Project construction would comply with BMPs identified in Chapter 2, the Project's contribution to existing cumulative impacts would be less than considerable. Therefore, the Project would result in a **less-than-significant cumulative impact with mitigation**.

c. Effects on Human Beings

Based on the analysis provided in the above resource sections, with incorporation of BMPs (listed in Table 2-2), the proposed Project would result in less-than-significant impacts for the following resource topics: aesthetics, air quality, energy, geology and soils, greenhouse gases, hydrology and water quality, hazards and hazardous materials, land use, noise, transportation, and utilities and service systems. Mitigation measures pertaining to cultural and tribal cultural resources 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**.

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None.

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