

Shoreline Lake Improvements Project

Initial Study/Preliminary Mitigated Negative Declaration



CITY OF MOUNTAIN VIEW

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LIST OF ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
ADA	Americans with Disabilities Act
ALUC	Santa Clara County Airport Land Use Commission
BAAQMD	Bay Area Air Quality Management District
BERD	Built Environment Resources Directory
bgs	below ground surface
BMP	best management practice
B.P.	Before Present
CAL FIRE	California Department of Forestry and Fire Protection
CalEEMod	California Emissions Estimator Model
Cal-IPC	California Invasive Plant Council
Caltrans	California Department of Transportation
CAP	Clean Air Plan
CARB	California Air Resources Board
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CGS	California Geological Survey
CH ₄	methane
CHRIS	California Historical Resources Information System
City	City of Mountain View
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
CRHR	California Register of Historical Resources
cy	cubic yard
DBW	California State Parks' Division of Boating and Waterways
DTSC	Department of Toxic Substances Control
EIR	Environmental Impact Report
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FRP	fiber-reinforced polymer
GCCS	gas collection and control system
GGRP	Greenhouse Gas Reduction Program
GHG	greenhouse gas
GWP	global warming potential
HCP	habitat conservation plan
HDPE	high-density polyethylene
HFC	hydrofluorocarbon
HPD	Historic Property Data

IS	Initial Study
LRA	local responsibility area
µg/m ³	micrograms per cubic meter
MND	Mitigated Negative Declaration
MS4 Permit	municipal separate storm sewer system permit
msl	mean sea level
MVFD	Mountain View Fire Department
MVPD	Mountain View Police Department
MVSL	Mountain View Shoreline Landfill
N ₂ O	nitrous oxide
NAHC	Native American Heritage Commission
NAVD88	North American Vertical Datum 1988
NCCP	natural community conservation plan
NOD	Notice of Determination
NO _x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NWIC	Northwest Information Center
OHP	Office of Historic Preservation
PFC	perfluorocarbon
PGA	peak ground acceleration
PM ₁₀	particulate matter equal to or less than 10 micrometers in diameter
PM _{2.5}	particulate matter equal to or less than 2.5 micrometers in diameter
ppm	parts per million
proposed project	Shoreline Lake Improvements Project
ROG	reactive organic gas
RWQCB	San Francisco Bay Regional Water Quality Control Board
SFPUC	San Francisco Public Utilities Commission
SLF	Sacred Lands File
SMaRT	Sunnyvale Materials Recovery and Transfer
SRA	state responsibility area
SVCE	Silicon Valley Clean Energy
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TMDL	Total Maximum Daily Load
U.S. 101	United States Highway 101
USACE	United States Army Corps of Engineers
U.S.C.	United States Code
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VMT	vehicle miles traveled
WDR	waste discharge report

1.0 INTRODUCTION AND PURPOSE

1.1 PURPOSE OF THE INITIAL STUDY

The City of Mountain View (City), as the Lead Agency, has prepared this Initial Study (IS) for the Shoreline Lake Improvements Project (City CIP Project No. 17-52) in compliance with the California Environmental Quality Act (CEQA), the CEQA Guidelines (California Code of Regulations [CCR] §15000 et. seq.), and the regulations and policies of the City.

The Shoreline Lake Improvements Project (the proposed project) includes making improvements to reduce erosion and sediment deposition; and replacing aging facilities. This IS evaluates the environmental impacts that might reasonably be anticipated to result from implementation of the proposed project.

1.2 INITIAL STUDY PROCESS

An IS is a preliminary analysis prepared to determine the relative environmental impacts associated with a proposed project. It is designed as a measuring mechanism to determine whether a project will have a significant adverse effect on the environment, thereby triggering the need to prepare a full Environmental Impact Report (EIR). It also functions as an evidentiary document, containing information that supports conclusions that the project will not have a significant environmental impact or that the impacts can be mitigated to a “Less than Significant” or “No Impact” level.

If the IS identifies potentially significant effects, but (1) revisions in the project plans or proposals would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur; and (2) there is no substantial evidence, in light of the whole record before the agency, that the project as revised may have a significant effect on the environment, then a Mitigated Negative Declaration (MND) is prepared.

Publication of this IS/Preliminary MND marks the beginning of a 30-day public review and comment period. During this period, the IS/Preliminary MND will be available to local, state, and federal agencies and to interested organizations and individuals for review.

Following the conclusion of the public review period, the City will consider the adoption of the IS/MND for the project at a regularly scheduled meeting. The City shall consider the IS/MND together with any comments received during the public review process. Upon adoption of the MND, the City may proceed with project approval actions.

If the project is approved, the City will file a Notice of Determination (NOD), which will be posted within 24 hours of receipt at the County Clerk’s Office. It will be available for public inspection in this way for 30 days. The filing of the NOD starts a 30-day statute of limitations on court challenges to the approval under CEQA (CEQA Guidelines Section 15075[g]).

2.0 PROJECT DESCRIPTION

2.1 INTRODUCTION AND BACKGROUND

The City is proposing to implement the proposed project to address ongoing operation and maintenance issues at Shoreline Lake (also known as Sailing Lake). The proposed project includes making improvements to reduce erosion and sediment deposition; and replacing aging facilities. This section identifies the background, objectives, location, existing facilities and conditions, proposed improvements, and necessary permits and approvals for the proposed project.

Shoreline Lake covers an area of approximately 45 acres and has an average depth of 18 feet. The saltwater lake is filled by water from San Francisco Bay that is pumped from an intake and pump station currently situated along the levee between Inner Charleston Slough and the Coast Casey Forebay detention basin. Water from the lake is discharged through a gravity outfall into Permanente Creek and then drained back into San Francisco Bay. Backflow through the pump station is also allowed periodically to flush sediment from the intake.

Shoreline Lake is a manmade saltwater lake that occupies the northwestern corner of Shoreline Regional Park, which opened in 1982. Most of the regional park was constructed on the site of a former sanitary landfill; however, Shoreline Lake is not on the former landfill site. A dam separates the lake from Coast Casey Forebay to the west. Shoreline Lake offers a variety of recreational activities, including sailing, windsurfing, kayaking, canoeing, and standup paddle boarding. The facilities at the lake, including a restaurant/boathouse, are operated by a concessionaire under a lease from the City.

2.2 PROJECT OBJECTIVES

The primary objectives for the proposed project include addressing ongoing operation and maintenance issues by:

- replacing aging boat dock facilities;
- restoring and stabilizing the lake shoreline to resist future wind and wave erosion, as well as erosion from boat launching and foot traffic;
- removing sediment that has built up and is impeding use of the boat launch ramp;
- improving personal watercraft launch safety and minimizing the potential for beach erosion;
- removing shallow water conditions to improve windsurfing launch safety;
- improving the overall appearance and aesthetics of the shoreline; and
- ensuring that new facilities meet the requirements of the California State Parks' Division of Boating and Waterways (DBW) and the Americans with Disabilities Act (ADA).

2.3 PROJECT LOCATION

The project site encompasses approximately 1.1 acres along the northeastern and southeastern shoreline of Shoreline Lake, along with a separate 10,000-square-foot staging area. The project site is in Mountain View, near the shoreline of San Francisco Bay, in Santa Clara County (Figures 2-1 and 2-2). The project site is in Shoreline Regional Park, which is owned and operated by the City. The proposed contractor staging area, which would be in a parking lot on the eastern side of the lake boathouse/restaurant, is also in Shoreline Regional Park and serves as a parking area for public access to the facilities at the lake. Access to the project site from United States Highway 101(U.S. 101) is provided via North Shoreline Boulevard.

2.4 EXISTING FACILITIES AND CONDITIONS

2.4.1 NORTH SHORELINE

The shoreline north of the existing boat dock is approximately 1,035 feet long and generally is approximately 3 feet above the lake water surface. A walking trail follows the shoreline at varying distances from the shore. The shoreline is unprotected and has experienced varying degrees of shoreline erosion. Wave-induced damage has caused shoreline recession and steepening. Most of the shoreline consists of a near-vertical earthen edge; this edge has periodically collapsed, leading to shoreline recession. Past shoreline recession is evidenced by exposed irrigation lines along the shoreline several feet from the current shoreline edge.

Although there is minimal surface runoff from the trail into the lake, there are locations where surface runoff has contributed to shoreline erosion.

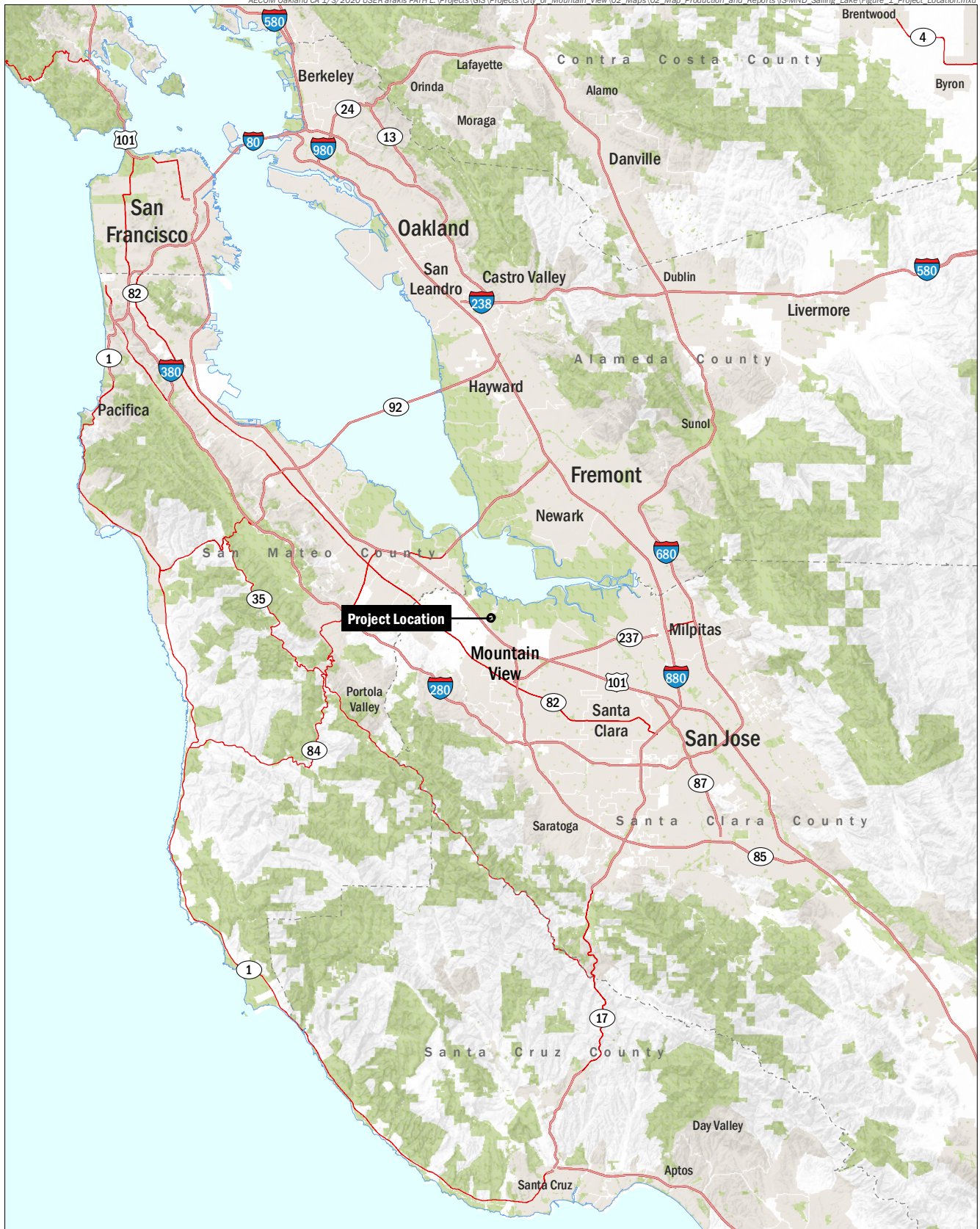
The northern shoreline ends a short distance beyond the peninsula next to the playground area; from this point north/west, the shoreline is protected by grouted riprap.

2.4.2 Boat Dock

The existing boat dock is north of the launch ramp and consists of a main walk used for mooring small recreational sailboats and a finger dock used to moor recreational pedal boats. A smaller dock, south of the launch ramp, is used by maintenance (motorized) work boats; access to this dock is restricted to authorized personnel only. A sheet pile sediment barrier extends from the fixed pier to prevent sediment transport. The existing dock consists of 30 floats with concrete decking. Eight of the original 30 docks (five of which are on the finger dock) were replaced with new Bellingham Marine floats in 2012/2013.

The concrete deck has deteriorated and shows cracking and small spalls. Several portions of the main walk and maintenance dock have plywood decking placed over the concrete deck where the concrete deck has undergone damage.

The main walk is connected to a concrete abutment with a gangplank, which provides a transition from the fixed landside end to the floating dock. The floats were originally held in position by chains and anchors; however, the chains are no longer connected to anchors. In the absence of a functional anchor system, the entire dock system is connected to the shore only at the concrete abutment. During high wind events, the dock is relatively free to move, and high forces are generated at the abutment connection and the finger dock to main walk connection. This results in ongoing damage to the boat dock system.



AECOM

City of Mountain View
Shoreline Lake Improvements Project

FIGURE 2-1
Project Location



2.4.3 KAYAK LAUNCH AREA

The approximately 90-foot-long kayak launch area is immediately north of the boat launch ramp. Kayaks are stored close to shore and are launched into shallow water (approximately 6 inches deep near shore and gradually increasing to 4 feet deep near the finger pier). Artificial grass mats have been placed along the shore to provide a better launching surface and a temporary solution to the shoreline erosion caused by kayak launching.

2.4.4 SOUTH BEACH SHORELINE

A sand and gravel beach extends northward from the lake outfall structure to the boat launch ramp. Beneath the veneer of sand is a dense subgrade material with pea gravel. An approximately 6-inch-high, near-vertical scarp exists along most of the south beach shoreline due to wave action. In addition, erosion from wave action has resulted in beach shoreline materials being transported northeast into the lake; as a result, a drop-off now exists approximately 10 feet from the shoreline.

The southernmost 260-foot-long portion of the south beach shoreline is open beach. From this point northward, a 100-foot-long portion of the shoreline is used for recreational board (stand-up paddle boards and windsurfing boards) launching. Foot traffic in the board launch area prevents a vertical scarp from persisting, so the beach surface is sloped.

2.5 PROJECT DESIGN CHARACTERISTICS

The water level in Shoreline Lake can vary from approximately 8 to 10.5 feet North American Vertical Datum 1988 (NAVD88); it is typically maintained at an approximate elevation of 10.5 feet NAVD88. Therefore, 10.5 feet NAVD88 has been determined to be the appropriate design water surface elevation for the proposed project and is also the mean high-water level elevation and high-tide line elevation. The design of the proposed project would maintain the lake surface area by locating the new design water level line as close as possible to the existing design water level line.

Based on wind measurements in the project area, the proposed improvements have been designed to withstand erosion from a maximum wind speed of 40.3 knots.¹

The City conducted a bathymetric and topographic survey of the lakebed and lakeshore on May 20 through 24, 2019.² The average water depth in the lake is approximately 18 feet. The average daily flow rate through the lake is approximately 8 million gallons per day, corresponding to a rate of 9,000 gallons per minute when the intake pumps are running at capacity. At a typical cross-section of the lake, this equates to an average flow velocity of approximately 0.04 inch per second. This flow rate is so low that it does not affect bank erosion. Therefore, the design of bank stabilization for erosion repair is primarily governed by lake wave action. Wind and wave action were modeled at the lake³ to determine the effects of water level, wind shear, and wave transformation—including refraction, shoaling, set-up, and wave breaking—for use in project design. Wave action and subsequent erosion along the northern shore are the result of south-southeasterly winds up to and exceeding 20 to 25 knots. Wave action and subsequent erosion along the south beach and boat dock areas are the result of westerly to northwesterly winds up to and exceeding 15 to 20 knots. Maximum wave heights for project design purposes were determined to be 1.6 feet.

¹ Moffatt & Nichol. 2020. Sailing Lake Shoreline Improvements Basis of Design Report. Prepared for: City of Mountain View Public Works Department. Moffatt & Nichol Project No. 10718. Walnut Creek, California.

² Cited in Moffatt & Nichol. 2020.

³ Moffatt & Nichol. 2020.

Bank erosion rates were estimated based on historical LiDAR and topographical survey data from 2004, 2006, 2010, and 2019. The shoreline profile as it was in 2004 has gradually receded, and in the process has transitioned to a near-vertical scarp. Erosion due to wave-driven processes generally involves cross-shore transport of sediments. Wave modeling⁴ was used to assess longshore sediment transport patterns based on the magnitude of waves and the angle of incidence relative to the shoreline. Wave modeling results confirm that the northwestern portion of the lake and the eastern shore and boat docks are exposed to more wave action than the shoreline along the southern part of the lake. The sediment transport patterns indicate a general trend of transport toward the boat docks, which is why shoaling is occurring in this area. Increasing rates of erosion are associated with the areas that have a higher degree of sediment transport. As a result of sediment transport, a portion of the material eroded from the bank has mounded up in deeper water at a distance approximately 70 to 78 feet from the shoreline.

2.6 PROPOSED IMPROVEMENTS

To address the ongoing operation and maintenance issues described above, the City proposes to implement a variety of improvements (Figure 2-3), which are described in detail below.

2.6.1 NORTH SHORELINE REPAIR

A stable bank edge along the northern shoreline would be created by replacing the near-vertical scarp with a sloped revetment (armored bank). This repair would provide long-term resiliency by preventing and minimizing future bank erosion due to wave action. The armored bank would protect existing infrastructure (trail and related amenities) and provide a stable lake edge for trail users. The bank would be regraded and armored with rock materials, which requires excavation along the shoreline, placement of fill (backing rock) to establish subgrade (where necessary), placement of geotextile fabric, and placement of rock materials. The shoreline recession caused by wave erosion would be partially restored by the construction of a sloped shoreline edge.

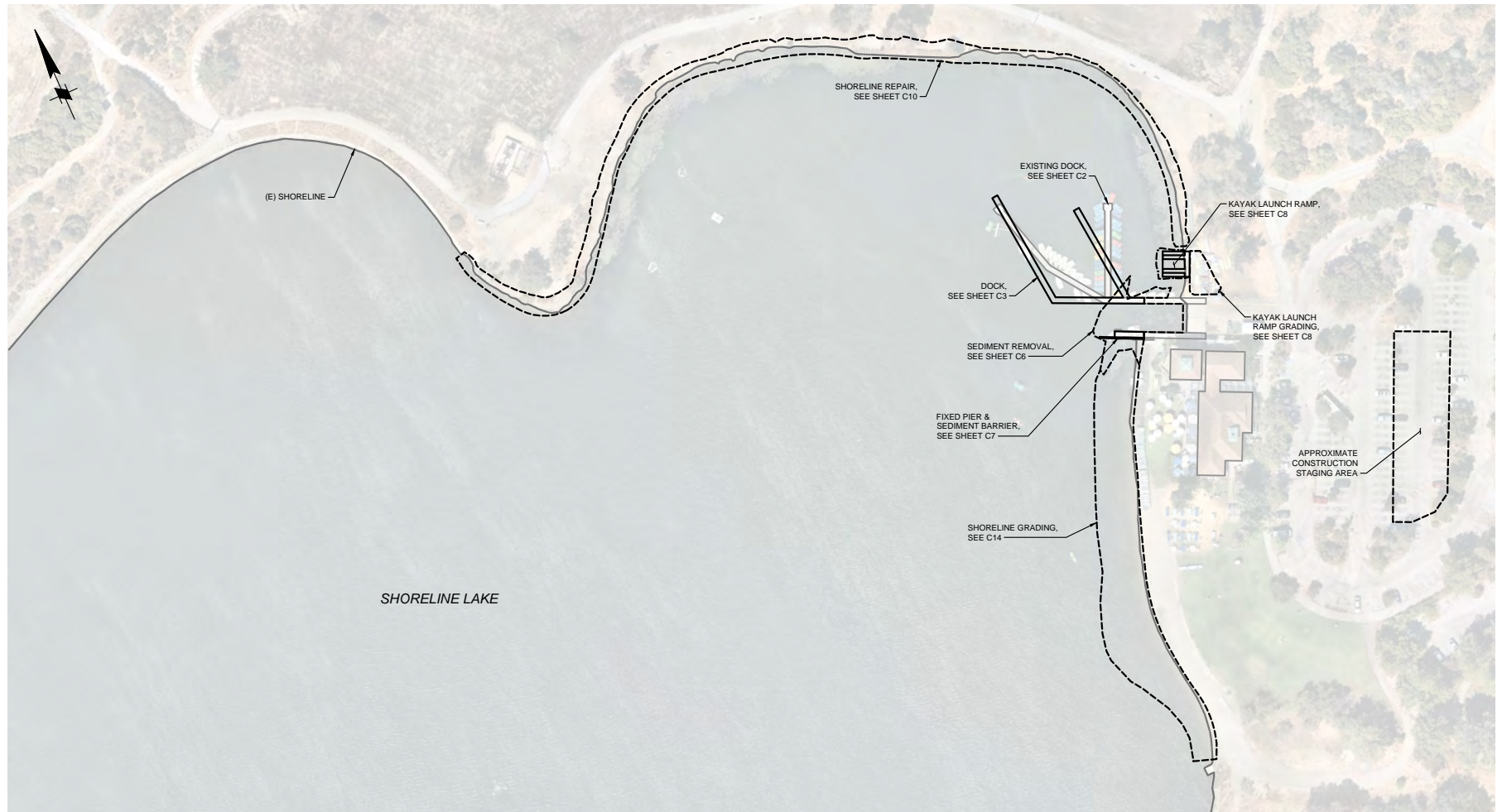
The revetment would consist of armor rock with a 2:1 nominal slope. The type of rock slope protection is based on the California Department of Transportation (Caltrans) 2018 Standard Specifications (Section 72 – Slope Protection).⁵ The riprap does not require an underlayer and can be placed directly on a geotextile fabric. The minimum layer thickness for the armor is 1.5 feet. Work would be accomplished using land-based equipment; no in-water equipment would be used.

2.6.2 DOCK REPLACEMENT

The existing dock system would be replaced with a new floating dock system that meets DBW and ADA requirements. The new dock system would be slightly larger to provide adequate berthing space for continued operation of the boat rental facility, designed to accommodate approximately 27 sailboats and 30 pedalboats (see Figure 2-4). In addition, a future floating dock extension may be added to the dock to accommodate haul-out dock storage for up to approximately 20 sailboats. Because Shoreline Lake consists of salt water, only aluminum frame or concrete dock systems would be suitable. The new dock system would be designed and installed by the selected contractor, with City review and approval.

⁴ Moffatt & Nichol. 2020.

⁵ California Department of Transportation (Caltrans). 2018. *Standard Specifications*. Division VIII: Miscellaneous Construction, Section 72: Slope Protection, Subsection 72-2: Rock Slope Protection. Available online at: http://ppmoe.dot.ca.gov/hq/esc/oe/construction_contract_standards/std_specs/2018_StdSpecs/2018_StdSpecs.pdf. Accessed September 8, 2020.

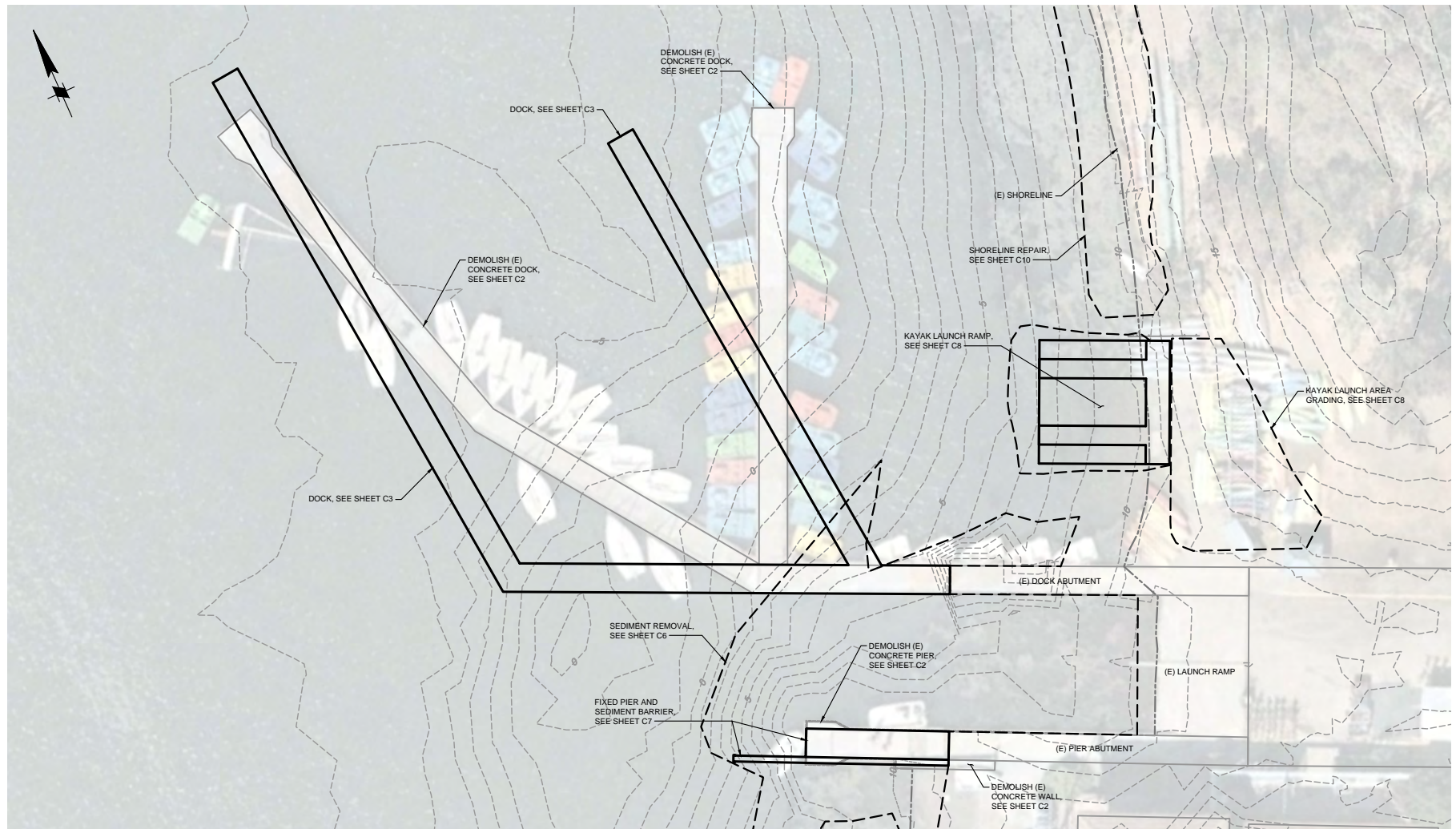


LEGEND:

- (E) SHORELINE
- (E) FEATURE



Source: AECOM, 2020; Moffat & Nichol, 2020



LEGEND:

- (E) SHORELINE
- - - (E) CONTOUR



Source: AECOM, 2020; Moffat & Nichol, 2020

Aluminum frame dock systems use polystyrene-filled pontoons attached to the frame. Concrete dock systems use polystyrene blocks either fully or partially enclosed by concrete. Both types of dock systems would be acceptable for use at Shoreline Lake and would provide acceptable performance.⁶ If an aluminum frame dock system is selected, the decking may be constructed using timber, engineered lumber planks, aluminum planks, or precast concrete panels; however, engineered lumber planks are recommended for this application. An anchor system with anchor chains would be used to maintain the dock position and orientation. Screw anchors (as opposed to concrete deadmen or steel anchors) are the preferred system for this project; because it is possible to attach multiple anchor lines to a single anchor, screw anchors have the highest capacity and greatest flexibility, disturb the smallest area in the water body, and are least likely to create a submerged hazard in shallower depths.⁷

2.6.3 KAYAK LAUNCH FACILITY

A new concrete kayak launch ramp with four launch lanes would be constructed so that it would no longer be necessary to launch from the gravel beach (see Figure 2-4). Kayak launch ramps require a sloped surface (called a slip) adjacent to accessible walkways. Due to the marine environment and wave exposure at the lake, a concrete ramp is preferable to timber or plastic lumber. The slip and walk would be constructed of concrete, and launch rails/skids would be attached to the concrete surface to facilitate kayak launching/retrieving. A minimum 1.5 feet of water depth would be provided at the end of the launch ramp. A flat access walk would be provided for ingress and egress between each pair of launch lanes. Kayaks would slide on high-density polyethylene (HDPE) rails/skids, spaced to accommodate a variety of kayak hull shapes and widths and to prevent the kayaks from contacting the concrete ramp surface (which could damage the kayaks and potentially create an unstable launch condition). Hand railings would be installed along and above the sloped launch lanes to facilitate launching and retrieving. The ramp would be erosion-resistant, while providing a safe and stable launch and retrieval area.

The bottom of the launch ramp would be in the water. To construct this portion, the concrete would be installed using one of the two methods described below.

- **Temporary Cofferdam.** This may consist of short sheet piles, sandbags, or a water-filled dam, with the work area behind the cofferdam being dewatered during construction. Excavation, subgrade preparation, and placement of concrete would take place behind the cofferdam, and the cofferdam would be removed after the ramp is completed.
- **Precast Concrete.** The necessary elements would be cast off site and delivered to the site. Excavation and foundation preparation would occur in the water behind a silt curtain to reduce turbidity. Because underwater compaction is not feasible, foundation materials would consist of self-compacting gravel. Precast elements would be placed on the prepared foundation and connected as needed to other launch ramp elements.

Flat launch slopes are preferred for launching to safely allow users to enter the kayak while on a slope. A flat slope also enables users to paddle upslope into the slip when returning to land. A 10:1 horizontal-to-vertical distance was chosen as an appropriate slope that would meet this intent for both safe launch and ease of return. The walk would have an ADA-compliant 1 percent longitudinal slope for drainage, and the upper bench accessing the slips and walks would also have an ADA-compliant cross-slope.

⁶ Moffatt & Nichol. 2020.

⁷ Moffatt & Nichol. 2020.

2.6.4 SEDIMENT REMOVAL

Sediment that has accumulated in the vicinity of the boat launch ramp and boat dock by erosion and wave action would be removed to ensure that an adequate water depth is available for boat users. The depth of sediment removal is a function of the water surface elevation (which is typically 10.5 feet NAVD88), vessel draft,⁸ and minimum under-keel clearance requirements. Sailboats used in the lake typically draft 3.5 feet, based on the existing Catalina 14.2 and Catalina Expo 14.2 models on site. Minimum under-keel clearance has been set at 1 foot, based on the types of boats used on Shoreline Lake. Based on these criteria, the target sediment removal elevation would be approximately 6.0 feet NAVD88 in areas used by sailboats. Pedalboat manufacturers recommend a minimum 4 feet of water depth; therefore, the target sediment removal elevation would be 6.5 feet NAVD88.

Because the existing water depth in the dock area and kayak launch area meets these criteria, no sediment removal is required for the dock or kayak launch. However, sediment removal is required around the boat launch ramp and adjacent areas to the north and south (see Figure 2-5). Sediment removal would be accomplished using a long-reach excavator on land; no in-water equipment would be used for sediment removal.

2.6.5 FIXED PIER AND SEDIMENT BARRIER

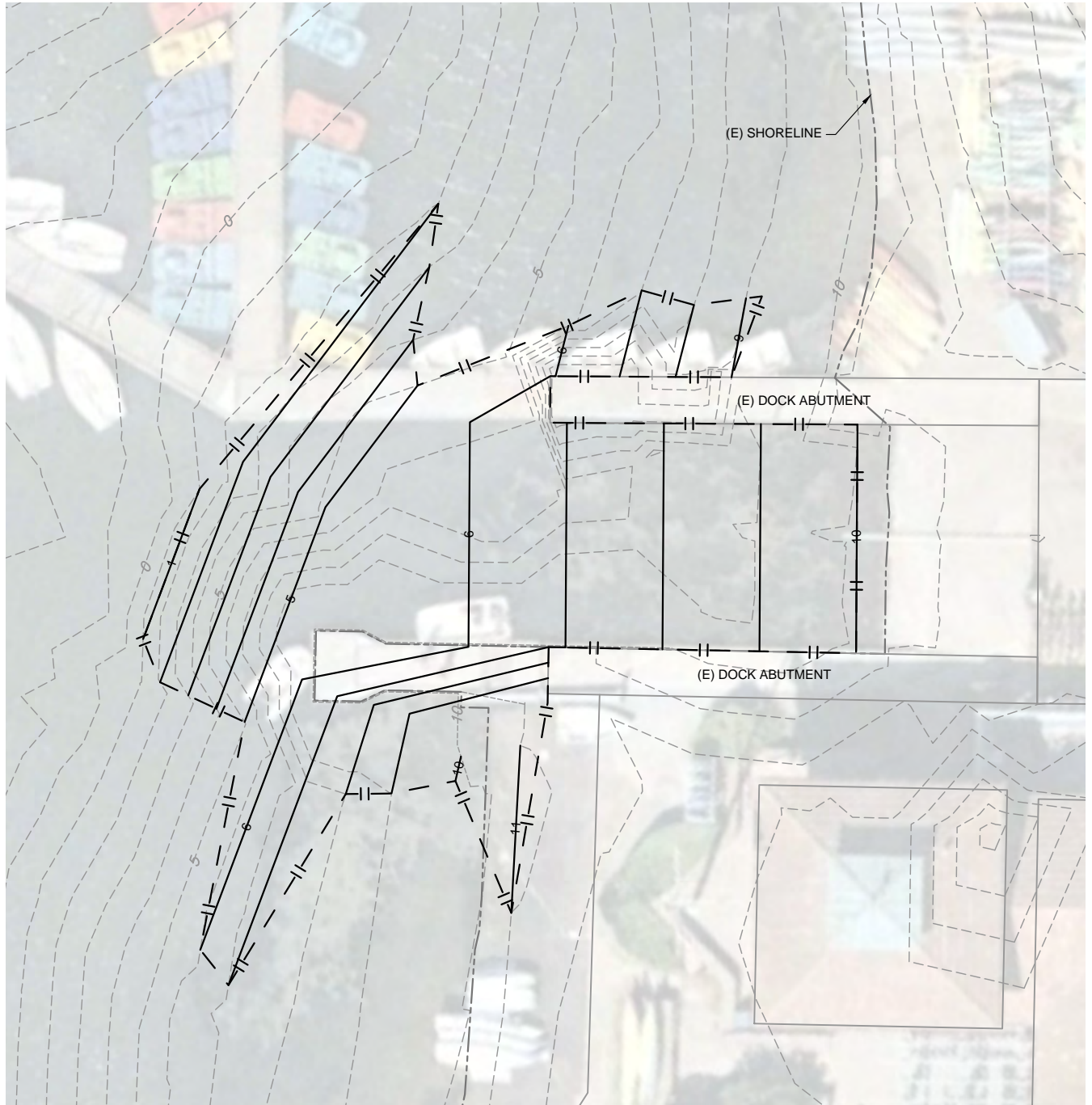
The existing grounded boat dock that is used for maintenance (south of the boat launch ramp) and associated concrete wall would be demolished, removed, and replaced with a fixed pier; a sediment barrier (i.e., sheet pile wall) would be installed on the southern side of the dock to prevent future sediment transport into the boat launch ramp area (see Figure 2-6).

The fixed pier would provide access for maintenance vessels, primarily for boathouse/rental operations. The pier would be pile-supported, with a structural frame and a bar grating decking. The piles and pier structure would be made of fiberglass-reinforced HDPE, and the decking would be composed of fiber-reinforced polymer (FRP) bar grating similar to the existing overflow structure. In contrast to the existing solid deck of the grounded concrete dock, the new decking would allow light transmittal to the water and lake bottom (which is beneficial for aquatic life).

After sediment is removed (as described in subsection 2.6.4, above), a sheet pile wall would be installed along a length of approximately 45 feet to an elevation of 12 feet NAVD88. The total exposed (above the lake bottom surface) height of the sheet pile wall would initially vary between 0 and 9 feet. Sheet piles are typically made of steel, composite (FRP), or vinyl. Based on the marine environment and relatively low loads resulting from the short height of the wall, a composite sheet pile is recommended for the proposed project. Sheet pile walls consist of z-shaped or u-shaped sheets driven into the ground. The sheet pile would be installed with approximately two-thirds of its length embedded into the lake bottom and one-third above the lake bottom surface. A continuous “waler” is often installed to distribute loads along the wall and straighten undulations in the wall; the walers are typically made of timber, steel, or composite (fiberglass). For this project, FRP-reinforced HDPE structural members would be used for the walers, stringers, and beams; stainless steel (316SS) bolts and hardware would be used to attach the walers to the sheet pile. The top of the wall would have a cap to improve aesthetics and to provide additional structural capacity.

⁸ The vertical distance between the water line and the bottom of the boat’s keel.

AECOM Oakland CA 11/5/2020 USER sally.sharford PATH \\va.aecomnet.com\va\AMER\Oakland\SDM401\DCS\Projects\GIS\Projects\City of Mountain View\60639753_ShorelineLakeImprovements\02_Maps\02_Report_Maps\IS-MND\Figure X - Illustrator_Template.mxd

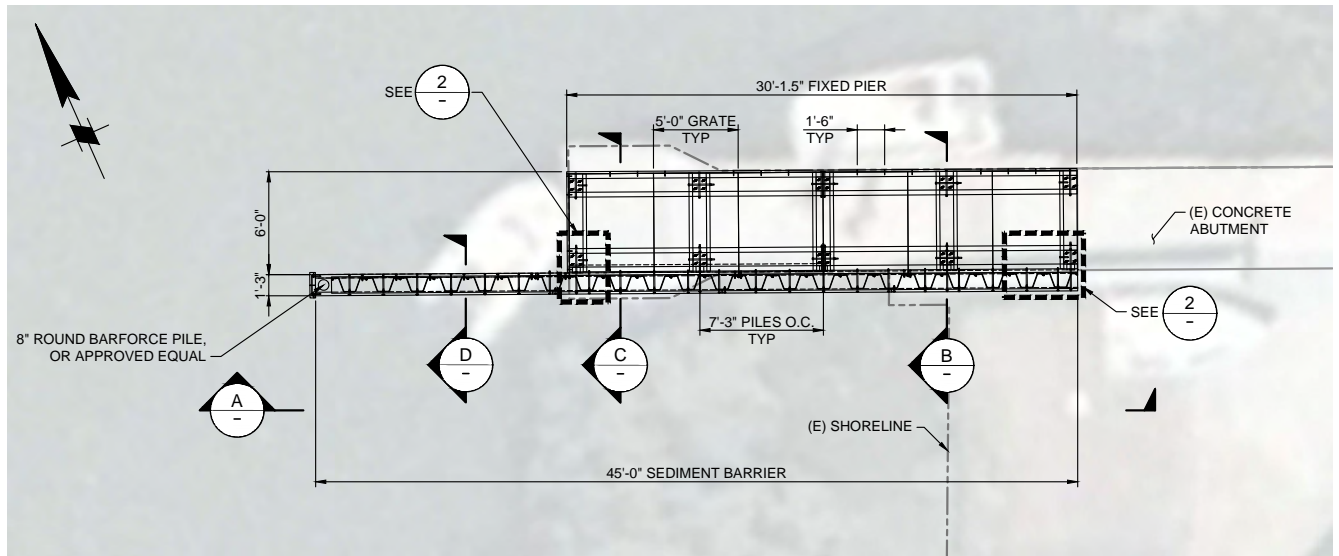


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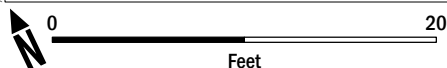
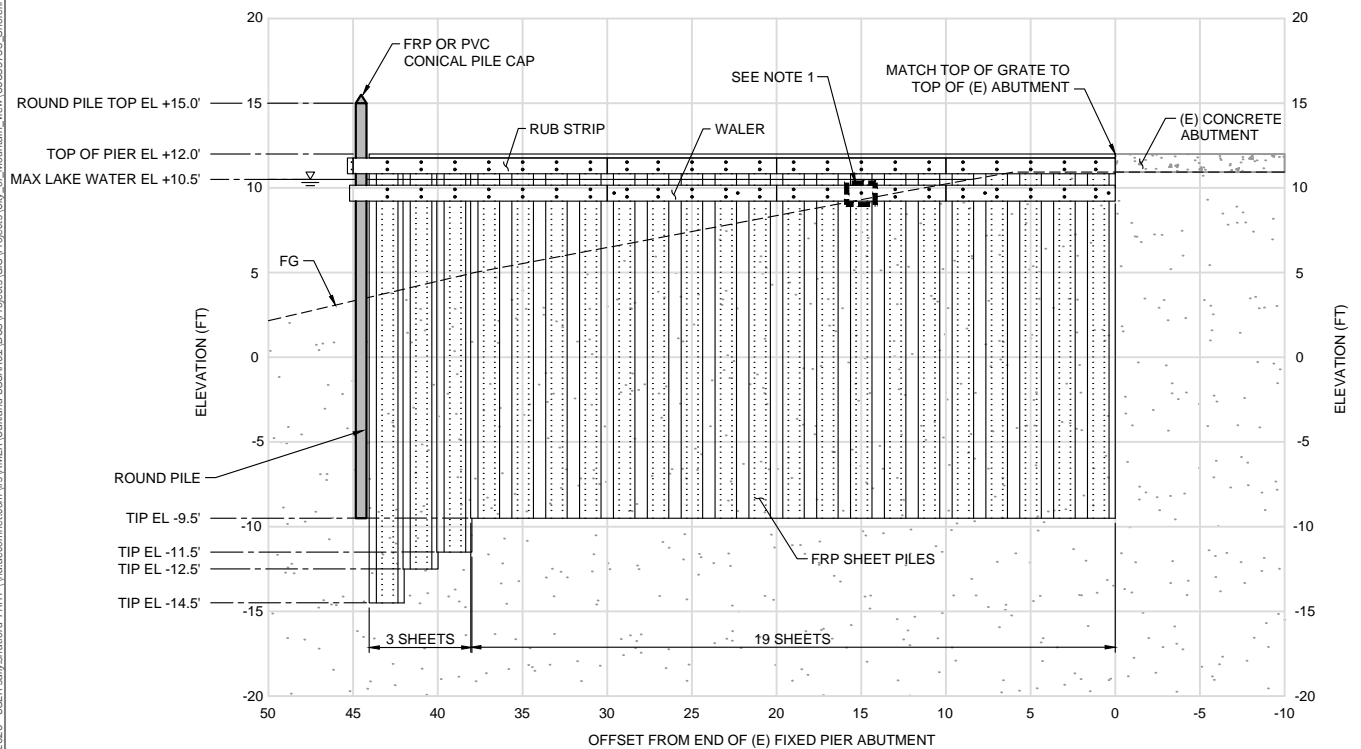
- PROPOSED CONTOUR
- - - (E) CONTOUR
- . - (E) SHORELINE
- - - (E) FEATURE



Sources: AECOM, 2020; Moffatt & Nichol, 2020



1 PLAN
SCALE: 1" = 5'



Sources: AECOM, 2020; Moffatt & Nichol, 2020

2.6.6 SOUTH BEACH GRADING

A drop-off exists approximately 10 feet west of the shoreline in the windsurf/paddleboard launch area along the south beach. To reduce the potential for windsurfing keels to ground out, the south beach windsurf launch area would be regraded from an approximate elevation of 11 feet NAVD88 down to 6 feet NAVD88 (see Figure 2-3). This would provide a smooth lake bottom out to approximately 4.5 feet of water depth. The area between the 6-foot and 11-foot elevation would be regraded to provide a smooth, planar, lake bottom surface. No excavation (removal) or fill (import) would be performed. Material from high points would be used to fill low spots. The proposed regrading would likely be accomplished using a long-reach excavator on land; however, this work may also require water-based equipment, such as a sectional barge or floating platform.

2.7 CONSTRUCTION ACTIVITIES

Construction of the proposed project would commence in 2021, for a duration of approximately 4 months. Construction activities are expected to occur primarily from Monday through Friday, 7:00 a.m. to 6:00 p.m. Construction of the proposed improvements would require up to approximately 15 workers at peak times. The anticipated sequencing of construction activities, with some improvements likely constructed concurrently, is as follows:

1. Boat dock demolition
2. Pier demolition
3. Sediment removal in boat launch area
4. Dock construction
5. Construction of kayak launch dock
6. Construction of fixed pier and sediment barrier
7. Shoreline repair (revetment) of areas to the north of the boat launch ramp
8. Shoreline grading of beach area to the south of the boat launch ramp

Shoreline repair (grading and rock armoring) would be accomplished by long-reach excavators set up on land; no water-based equipment would be used for this work. A water-based floating work platform may be required to remove the sediment at and around the launch ramp. It is possible that land-based equipment could reach far enough into the water to remove the sediment. Working pads could be built up on the lower part of the launch ramp, which would then be excavated/removed as sediment removal work moves landward after reaching the most lakeward areas first. It is anticipated that the shoreline grading of the south beach would be completed using land-based equipment, either a long-reach excavator or crane, to regrade the underwater lake bottom; however, this work may also require water-based equipment, such as a sectional barge or floating platform.

For the dock replacement, the existing docks would be floated toward the launch ramp and removed with land-based equipment. The new docks would be placed into the water at the launch ramp and floated into position for attachment. A small work boat may be needed for the demolition and installation. The dock anchors would be installed by divers. Helical anchors are expected to be installed with handheld equipment. If the potential floating dock extension is added at a later date, it would be installed in a similar manner. It is anticipated the fixed pier and sediment barrier would be constructed using land-based equipment; however, a water-based pile-driving rig may be required for fixed pier and sediment barrier wall construction if land-based equipment cannot reach the waterward extent of the wall. The kayak launch dock would be constructed behind a temporary cofferdam installed in the water close to shore; this could be sheet pile, sandbags and plastic sheeting, or some other means.

Other construction equipment that maybe used includes air and electric power tools, compressors, generators, and water trucks. Construction vehicles and equipment would be staged in a fenced contractor staging area in the parking lot on the eastern side of the lake boathouse/restaurant.

The proposed project is designed to minimize the amounts of cut (off-haul) and fill (import). Approximately 100 cubic yards (cy) of gravel and 800 cy of facing class armor rock would be imported for the shoreline repair. Excavated material from sediment removal and shoreline repair work would be transported off site to an appropriate landfill.

Approximately 100 truck trips would be necessary to import rock material for the proposed northern shore revetment. Approximately 20 additional truck trips would be necessary to haul construction equipment and materials, including the new boat dock system, the new kayak launch ramp, the new maintenance pier, and the new sheet pile (sediment barrier) wall. Approximately 1,100 cy of excavated material is anticipated, resulting in approximately 120 truck trips. Approximately 240 total truck trips would be required for hauling excavated material, importing rock fill materials, mobilizing and demobilizing of equipment, and materials deliveries.

To construct the proposed project, several trees and bushes would be removed from the northern shore improvements area, in the project site. At the conclusion of construction activities, the contractor would be responsible for reseeding all disturbed areas with a native seed mix to be approved by the project engineer.

2.8 CONSTRUCTION BEST MANAGEMENT PRACTICES

The proposed project would include the following best management practices (BMPs) to avoid or minimize environmental impacts, which would be defined in the construction contract documents:

- Temporary erosion control measures would be implemented as specified in the project-specific Storm Water Pollution Prevention Plan (SWPPP), as applicable. Stormwater runoff would be managed as required by the San Francisco Bay Regional Water Quality Control Board (RWQCB). The contractor would be required to comply with National Pollutant Discharge Elimination System (NPDES)/ No. 2012-0006-DWQ NPDES No. CAS000002 (General Construction Permit).
- Erosion and sediment control BMPs would be installed prior to the start of any ground-disturbing activities, as detailed in the SWPPP.
- Silt fences or fiber rolls would be installed, or other suitable measures would be implemented around the perimeters of the construction zone, staging areas, temporary stockpiles, and drainage features, as detailed in the SWPPP.
- A turbidity curtain would be installed around the in-water construction area to avoid the spread of suspended sediments in the water column. The bottom of the turbidity curtain would be securely anchored to the lakebed and the top would include a floating boom with adequate freeboard to contain turbid waters in high wave and wind conditions. Prior to daily construction activities, the perimeter of the turbidity curtain would be checked to ensure proper installation and functionality. This would include checking that the base of the turbidity curtain is securely anchored, that there are no gaps in the floating boom, and that all turbidity barriers are in good condition. Needed repairs or replacements would be performed

before construction for that day begins. The turbidity curtain would be removed only when construction is completed and turbidity returns to background levels.

- During periods of high wind and wave action that could cause water to breach the turbidity curtain, construction would cease until weather conditions improve.
- A Water Quality Monitoring Plan would be prepared and implemented during construction. Continuous visual inspection would be conducted to check that the turbidity curtain is functioning properly and that the construction equipment is in good working order. If a turbidity plume or petroleum product sheen is detected outside the turbidity-curtained area, work would be suspended and a discharge mitigation plan (to be prepared by the City or its construction contractor) would be implemented.
- Staging and use of construction equipment and materials would be limited to paved upland areas and areas contained by turbidity barriers. Materials subject to wind displacement into the water would be secured. Upland staging areas would be centralized and delineated with construction boundary fencing to minimize impacts to adjacent soils and vegetation. Construction materials and equipment would not be stored along the beach or shoreline.
- A spill prevention and response plan would be prepared and implemented during construction. Petroleum products and other hazardous materials would be kept in nonleaking containers, stored in secondary containment on an impermeable surface (in the upland staging area), and covered in a manner that would prevent stormwater from contacting the container. If a spill occurs, it would be contained and cleaned up immediately to the extent that this can be accomplished safely. A supply of suitable spill control and cleanup materials, such as absorbent booms and pads, would be available on site for prompt cleanup of spills. Coatings for new boat facilities would be applied in advance and not over the lake. Application of paints, sealers, and coatings over water would be limited to minor touch ups that must be done after structures are constructed and in place.
- Water produced by construction site dewatering (if necessary) would be detained and treated using sedimentation basins on the project site, sediment traps (when water is flowing and there is sediment), or other measures, to ensure that discharges to receiving waters are in accordance with the State of California General Permit for Storm Water Discharges Associated with Construction Activity (General Permit).
- Stockpiles would be kept a minimum of 50 feet away from concentrated flows of stormwater, water bodies, ditches, and inlets. All stockpiles would be contained using perimeter controls such as berms, dikes, fiber rolls, silt fences, sandbag, gravel bags, or straw bale barriers. All stockpiles would be covered with polyethylene plastic sheeting or other impermeable materials.
- Construction vehicles and equipment would be inspected to prevent discharge and contamination of soil or water (from external grease and oil or from leaking hydraulic fluid, fuel, oil, and grease).
- Equipment would be refueled and serviced at the designated construction staging area.
- Discharge of pollutants into water bodies from vehicles and equipment would be avoided by using drip pans, spill kits, berms, and secondary containment.

- Hazardous materials would be stored in an area protected from rainfall and stormwater runoff to prevent the offsite discharge of leaks or spills.
- All debris materials, sediment, trash, vegetation, or other material removed from the disturbed areas would be disposed of at an approved disposal site.
- All construction personnel will be given environmental awareness training by a qualified biological monitor before the start of construction. The training will familiarize all construction personnel with the listed species that may occur on site, their habitats, general provisions and protections afforded by law, measures to be implemented to protect these species, and the project boundaries.

2.9 PROJECT APPROVALS

The anticipated approval actions required for the proposed project include:

City of Mountain View

- City adoption of the final MND and the mitigation monitoring and reporting program
- City approval of the proposed project

State Agency Approvals

- San Francisco RWQCB Clean Water Act Section 401 Water Quality Certification

Federal Agency Approvals

- United States Army Corps of Engineers (USACE) Clean Water Act Section 404 Permit

3.0 ENVIRONMENTAL CHECKLIST

This section describes the existing environmental conditions in the project vicinity, as well as the environmental impacts associated with the proposed project. The environmental checklist, as recommended by CEQA, identifies environmental impacts that could occur if the proposed project is implemented. The following subsections discuss the project's impact as it relates to the environmental checklist questions. For significant impacts, feasible mitigation measures are identified. "Mitigation measures" are measures that will minimize, avoid, or eliminate a significant impact (CEQA Guidelines Section 15370).

PROJECT INFORMATION																							
1. Project Title:	Shoreline Lake Improvements Project (City CIP Project No. 17-52)																						
2. Lead Agency:	City of Mountain View																						
3. Contact Person and Phone Number:	Raymond Wong, 650-867-3304																						
4. Project Location:	Shoreline Lake, Shoreline Regional Park, northern end of North Shoreline Boulevard																						
5. Project Sponsor	City of Mountain View																						
6. General Plan Designation:	Regional Park																						
7. Zoning:	Public Facility																						
8. Description of Project:	<p>The City is proposing to implement the Shoreline Lake Improvements Project to address ongoing operation and maintenance issues at the lake. The proposed project would reduce erosion and sediment deposition and replace aging facilities. Components of the proposed project include:</p> <ul style="list-style-type: none"> armoring a portion of the northern shore with riprap to prevent further erosion; replacing the existing aging dock system with a new floating dock system that meets California Division of Boating and Waterways and Americans with Disability Act requirements; constructing a new concrete kayak launch ramp; removing sediment in the vicinity of the boat launch ramp; replacing the existing maintenance boat dock with a fixed pier and installing a sheet-pile wall to prevent further sediment deposition at the boat launch ramp; and regrading the southern shore to reestablish a gradual slope suitable for windsurf/paddleboard launching. 																						
9. Surrounding Land Uses and Setting:	The project site is in Shoreline Regional Park and is bordered by the Shoreline Golf Links. Surrounding land uses consist of a regional park, a flood detention basin, and office buildings.																						
10. Other public agencies whose approval may be required:	San Francisco Bay Regional Water Quality Control Board																						
11. Request by California Native American tribes traditionally and culturally affiliated with the project area for consultation pursuant to Public Resources Code section 21080.3.1	No tribes have requested consultation																						
ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:																							
<p>The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.</p> <table style="width: 100%; border: none;"> <tr> <td><input type="checkbox"/> Aesthetics</td> <td><input type="checkbox"/> Agriculture and Forestry Resources</td> <td><input checked="" type="checkbox"/> Air Quality</td> </tr> <tr> <td><input checked="" type="checkbox"/> Biological Resources</td> <td><input type="checkbox"/> Cultural Resources</td> <td><input type="checkbox"/> Energy</td> </tr> <tr> <td><input type="checkbox"/> Geology and Soils</td> <td><input type="checkbox"/> Greenhouse Gas Emissions</td> <td><input checked="" type="checkbox"/> Hazards and Hazardous Materials</td> </tr> <tr> <td><input type="checkbox"/> Hydrology and Water Quality</td> <td><input type="checkbox"/> Land Use and Planning</td> <td><input type="checkbox"/> Mineral Resources</td> </tr> <tr> <td><input type="checkbox"/> Noise</td> <td><input type="checkbox"/> Population and Housing</td> <td><input type="checkbox"/> Public Services</td> </tr> <tr> <td><input checked="" type="checkbox"/> Recreation</td> <td><input type="checkbox"/> Transportation/Traffic</td> <td><input type="checkbox"/> Tribal Cultural Resources</td> </tr> <tr> <td><input type="checkbox"/> Utilities and Service Systems</td> <td><input type="checkbox"/> Wildfire</td> <td><input checked="" type="checkbox"/> Mandatory Findings of Significance</td> </tr> </table>			<input type="checkbox"/> Aesthetics	<input type="checkbox"/> Agriculture and Forestry Resources	<input checked="" type="checkbox"/> Air Quality	<input checked="" type="checkbox"/> Biological Resources	<input type="checkbox"/> Cultural Resources	<input type="checkbox"/> Energy	<input type="checkbox"/> Geology and Soils	<input type="checkbox"/> Greenhouse Gas Emissions	<input checked="" type="checkbox"/> Hazards and Hazardous Materials	<input type="checkbox"/> Hydrology and Water Quality	<input type="checkbox"/> Land Use and Planning	<input type="checkbox"/> Mineral Resources	<input type="checkbox"/> Noise	<input type="checkbox"/> Population and Housing	<input type="checkbox"/> Public Services	<input checked="" type="checkbox"/> Recreation	<input type="checkbox"/> Transportation/Traffic	<input type="checkbox"/> Tribal Cultural Resources	<input type="checkbox"/> Utilities and Service Systems	<input type="checkbox"/> Wildfire	<input checked="" type="checkbox"/> Mandatory Findings of Significance
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<input type="checkbox"/> Utilities and Service Systems	<input type="checkbox"/> Wildfire	<input checked="" type="checkbox"/> Mandatory Findings of Significance																					

DETERMINATION (To be completed by the Lead Agency)

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 in the project have been made by or agreed to by the project proponent. A **MITIGATED NEGATIVE DECLARATION** will be prepared.
- ☐ I find that the proposed project **MAY** have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.
- ☐ I find that the proposed project **MAY** have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier **EIR** or **NEGATIVE DECLARATION** pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier **EIR** or **NEGATIVE DECLARATION**, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

DocuSigned by:

Dawn S. Cameron

0E8601A0DA4D442...

Signature

3/17/2021 | 10:23 AM PDT

Date

Dawn S. Cameron

Printed Name

Public Works Director

Title

City of Mountain View

Agency

EVALUATION OF ENVIRONMENTAL IMPACTS

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

3.1 AESTHETICS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. Aesthetics. Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.1.1 ENVIRONMENTAL SETTING

The project site is along the eastern shoreline of the approximately 45-acre Shoreline Lake in Shoreline Regional Park, adjacent to the southwestern side of San Francisco Bay. The topography in the project area is nearly flat. The project site includes the main entrance to Shoreline Lake and some of the associated recreational facilities, including the boat launch ramp, boat dock, kayak launch area, paddleboard launch area, and beach areas. The Shoreline Lake boathouse and restaurant are immediately adjacent to, but outside of, the eastern side of the project site.

From the main entrance to the lake and the terrace of the restaurant/boathouse, recreationists have views of the water in the lake, boat launch ramp, floating pier, kayak launch area, and associated boats (see Viewpoint 1). Beaches along the lake shoreline, and adjacent vegetation, are visible to the northeast and southwest. The Diablo Range and the Santa Cruz Mountains are clearly visible in the background. In terms of visual character, the colorful paddleboats and the tall vertical masts and white hulls of the sailboats provide a pleasing contrast with and add visual interest to the views of the lake with the mountains in the background. Shoreline Lake exhibits a high degree of visual quality.

A pedestrian/bicycle trail parallels the northeastern side of the lake, connecting with the Bay Trail both north and east of the project site. Metal benches are present at the edges of the beach areas. This area and the associated trails are flat, and recreationists have expansive views of Shoreline Lake surrounded by green turf grass and trees, the boat dock and launch area, and the Santa Cruz Mountains in the background (see Viewpoint 2).



Viewpoint 1: Boat Launch Ramp, Floating Dock, and Kayak Launch Area
Source: AECOM 2020



Viewpoint 2: Pedestrian/Bicycle Trail along Northeastern Shore
Source: AECOM 2020



The southeastern portion of the project site consists of the paddleboard launch area and associated beach. From this area, recreationists have views to the north of the floating dock with sailboats, the restaurant with shade umbrellas associated with outdoor dining, the boathouse, and green grass and trees along the northern shoreline (see Viewpoint 3). To the west, green grass associated with Holes 10 through 12 of the Shoreline Golf Links dominates the foreground view, and the Santa Cruz Range dominates the background view.

The proposed staging area would be in the paved parking lot on the eastern side of the Shoreline Lake boathouse/restaurant. The staging area consists primarily of asphalt paving, with planters containing trees and shrubs, along with tall metal poles containing parking lot lighting (see Viewpoint 4). Views of the lake from the parking area are blocked by the restaurant and boathouse.

Viewpoint 3: South Beach and Paddleboard Launch Area
Source: AECOM 2020



Viewpoint 4: Proposed Staging Area
Source: AECOM 2020

3.1.2 DISCUSSION

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

The project site and surrounding Shoreline Regional Park do not contain any designated scenic vistas. However, expansive views of Shoreline Lake, the Santa Cruz Mountains, and open space in Shoreline Regional Park are available to recreationists in areas surrounding the project site. The project site would be temporarily closed during project-related construction activities, and boating on the lake would be prohibited during this period. At the conclusion of construction activities, the visual appearance of the project site would be improved as a result of bank stabilization along the northeastern shoreline (replacement of steep scarps and uneven eroded soil with riprap) and regrading of the paddleboard launch area along the south beach shoreline. The new boat dock, kayak launch ramp, and potential haul-out dock storage for sailboats would also improve the viewshed in several ways. First, the existing boat dock is aging; the concrete deck has deteriorated and shows cracking and small spalls. Several portions of the main walk and maintenance dock have plywood decking placed over the concrete deck where the concrete deck has undergone damage. Therefore, the new boat dock would represent an improved visual appearance. Second, the artificial grass mats along the shore for kayak launching, which detract from the visual appearance of the boat area, would be replaced with a concrete launch ramp with safety railings. The future haul-out docks for sailboats would be visually consistent with other haul-out docks at other marinas, and visually consistent with the existing boating facilities. The sheet pile wall would be visible approximately 3 feet above the waterline but would be adjacent to the new fixed pier for most of its length; therefore, it would tend to blend visually with the existing surrounding boating facilities. In contrast to the solid deck surface of the existing grounded concrete dock, the new pier would have metal grating, which would allow light transmittal to the water and lake bottom (which is beneficial for aquatic life).

Use of a portion of the parking lot at the entrance to Shoreline Lake for the project's construction staging area would result in the short-term and temporary visual presence of construction equipment, materials, and personnel in this approximately 10,000-square-foot paved parking area. However, because Shoreline Lake would be temporarily closed during construction activities, use of the staging area would not affect views from recreational boaters. Recreationists on park trails to the north and east (including the Bay Trail) and on Holes 10 through 12 of the Shoreline Golf Links to the south/southwest would have views of construction equipment and personnel, but these views would be short-term and temporary. Therefore, the proposed project would not have a substantial adverse effect on a scenic vista, and this impact is considered **less than significant**.

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

There are no state- or locally designated scenic highways in the project vicinity.^{9,10} Therefore, the proposed project would not substantially damage scenic resources in a state scenic highway, and there would be **no impact**.

⁹ Caltrans. 2020. *List of Eligible and Officially Designated State Scenic Highways*. Available online at: <https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways>. Accessed December 3, 2020.

¹⁰ City of Mountain View (City). 2012a. *Mountain View 2030 General Plan*. Adopted 2012, amended 2017. Available online at: <https://www.mountainview.gov/depts/comdev/planning/regulations/general.asp>. Accessed December 2, 2020.

c) Substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from 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?

As described in detail in threshold criterion a), above, the visual appearance of the project site would be improved as a result of bank stabilization along the northeastern shoreline (replacement of steep scarps and uneven eroded soil with riprap) and regrading of the paddleboard launch area along the south beach. The new boat dock, kayak launch ramp, and potential haul-out dock storage for sailboats would also represent an improvement in visual conditions compared to the existing facilities (which are deteriorating). The sheet pile wall would be visible approximately 3 feet above the waterline but would be adjacent to the new fixed pier for most of its length; it would therefore tend to blend visually with the existing surrounding boating facilities. The presence of construction equipment, materials, and personnel in the staging area at the entrance to Shoreline Lake would be visible to recreationists on the Bay Trail east of the lake, as well as from Holes 10 through 12 of the Shoreline Golf Links south of the lake. However, these construction views would be short-term and temporary. Therefore, the proposed project would not substantially degrade the existing visual character or quality of public views of the site or its surroundings.

The project site, including the proposed staging area, is zoned and designated for public facility/regional park use. The area surrounding the project site is zoned and designated for public facility/regional park use, and high-intensity office land uses in the North Bayshore Precise Plan Area.^{11,12} The proposed shoreline improvements would not conflict with zoning, because the same recreational amenities that are available now at the lake would continue at the conclusion of project-related construction. For the reasons described in the preceding paragraph, the proposed project would not conflict with any existing regulations governing scenic quality, because the proposed shoreline improvements and new boat dock, pier, sheet pile wall, and kayak launch ramp would have a visually similar (and improved) appearance compared to the existing boating facilities. Therefore, this impact would be **less than significant**.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Project-related construction activities would occur during the daytime hours. No additional nighttime lighting would be required for continued operation after the proposed improvements have been implemented. The minimal amount of existing nighttime lighting for safety purposes would continue during operation of the improved facilities. The boating facilities do include new reflective surfaces compared to existing conditions. Therefore, the proposed project would not create new sources of substantial light or glare that would adversely affect day or nighttime views, and there would be **no impact**.

¹¹ City. 2018a. Accessed September 10, 2020.

¹² City. 2018b. *Zoning Map*. Available online at: <https://www.mountainview.gov/civicax/filebank/blobdload.aspx?BlobID=10990>. Accessed September 10, 2020.

3.2 AGRICULTURE AND FORESTRY RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
II. Agriculture and Forestry Resources.				
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997, as updated) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.				
Would the project:				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.2.1 ENVIRONMENTAL SETTING

Based on a review of the Important Farmland Map for Santa Clara County produced by the California Department of Conservation under the Farmland Mapping and Monitoring Program, the project site is designated as “Urban and Built-Up Land” and “Other Land.”¹³ The project site is in the Shoreline Regional Park adjacent to the Shoreline Lake boathouse/restaurant and the Shoreline Golf Links. San Francisco Bay, the Coast Casey Forebay

¹³ California Department of Conservation. 2020. *Santa Clara County Important Farmland—Most Recent*. Available online at: <https://maps.conservation.ca.gov/dlrp/ciff/app/>. Accessed September 9, 2020.

flood control detention basin, and high-intensity office land uses are nearby; there is no farmland at the project site or in the project vicinity.

The project site and staging area are zoned and designated for public facility/regional park use. The surrounding area is zoned and designated for public facility/regional park use, and high-intensity office land uses.^{14,15}

3.2.2 DISCUSSION

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?

There is no designated Farmland at the project site or in the project vicinity. Therefore, the proposed project would not result in the conversion of Farmland to a nonagricultural use, and there would be **no impact**.

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

The project site is zoned for public facility use.¹⁶ There are no Williamson Act contracts at the project site or in the project vicinity. Therefore, the proposed project would not conflict with existing zoning for agricultural use or a Williamson Act contract, and there would be **no impact**.

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

The project site is in Shoreline Regional Park and does not contain forest land or timberland. The project site is zoned for public facility use.¹⁷ Therefore, the proposed project would not conflict with existing zoning or cause rezoning of forest land, timberland, or land zoned for timber production, and there would be **no impact**.

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

Neither the project site nor the surrounding area contains any forest land. Therefore, the proposed project would not result in the loss of forest land or conversion of forest land to nonforest use, and there would be **no impact**.

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

There is no Farmland or forest land at the project site or in the project area. Construction and operational activities would take place in the existing Shoreline Regional Park. Therefore, the proposed project would not result in the conversion of Farmland or forest land to other uses, and there would be **no impact**.

¹⁴ City. 2018a. Accessed September 8, 2020.

¹⁵ City. 2018b. Accessed September 8, 2020.

¹⁶ City 2018b.

¹⁷ City 2018b.

3.3 AIR QUALITY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
III. Air Quality.				
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied on to make the following determinations.				
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.3.1 ENVIRONMENTAL SETTING

The proposed project is in Mountain View, near the shoreline of San Francisco Bay, in Santa Clara County and in the San Francisco Bay Area Air Basin. Federal and state ambient air quality standards have been established in this region. The Bay Area meets all ambient air quality standards except for ground-level ozone, respirable particulate matter (particulate matter equal to or less than 10 micrometers in diameter, or PM₁₀), and fine particulate matter (particulate matter equal to or less than 2.5 micrometers in diameter, or PM_{2.5}).

Air Pollutants of Concern

High ozone levels are caused by the cumulative emissions of reactive organic gases (ROG) and nitrogen oxides (NO_x). These precursor pollutants react under certain meteorological conditions to form high ozone levels. Controlling the emissions of these precursor pollutants is the focus of the Bay Area's attempts to reduce ozone levels. The highest ozone levels in the Bay Area occur in the eastern and southern inland valleys, which are downwind of air pollutant sources. High ozone levels aggravate respiratory and cardiovascular diseases, reduce lung function, and increase coughing and chest discomfort.

Particulate matter is assessed and measured in terms of respirable particulate (PM₁₀) and fine particulate matter (PM_{2.5}). Elevated concentrations of PM₁₀ and PM_{2.5} are the result of both region-wide (i.e., cumulative) emissions and localized emissions. High particulate matter levels aggravate respiratory and cardiovascular diseases, reduce lung function, increase mortality (e.g., lung cancer), and result in reduced lung function growth in children.

Toxic Air Contaminants

Toxic air contaminants (TACs) are a broad class of compounds known to cause morbidity or mortality (usually because they cause cancer) and include, but are not limited to, the criteria air pollutants. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter near a freeway). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, state, and federal levels.

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs (based on the Bay Area average). According to the California Air Resources Board (CARB), diesel exhaust is a complex mixture of gases, vapors, and fine particles. This makes the evaluation of the health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by CARB and are listed as carcinogens either under the state's Proposition 65 or under the federal Hazardous Air Pollutants program.

Sensitive Receptors

There are groups of people more affected by air pollution than others. CARB has identified the following persons who are most likely to be affected by air pollution: children under 16, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, and elementary schools. For cancer risk assessments, children are the most sensitive receptors because they are more susceptible to cancer-causing TACs. Residential locations are assumed to include infants and small children. The closest sensitive receptors are residences approximately 0.8 mile southwest of the project site.

Regulatory Setting

Bay Area Air Quality Management District

The Bay Area Air Quality Management District (BAAQMD) is the agency tasked with managing air quality in the region. BAAQMD has jurisdiction over the approximately 5,600-square-mile Bay Area, encompassing all or portions of nine counties. BAAQMD is the lead agency in developing plans to address the attainment and maintenance of the National Ambient Air Quality Standards and California Ambient Air Quality Standards. BAAQMD is responsible for permitting and inspection of stationary sources; enforcement of regulations, including setting fees, levying fines, and enforcement actions; and ensuring that public nuisances are minimized.

The BAAQMD *CEQA Air Quality Guidelines*¹⁸ were prepared to assist in the evaluation of air quality impacts of projects and plans proposed in the Bay Area. The guidelines provide recommended procedures for evaluating potential air quality impacts during the environmental review process, consistent with CEQA requirements, including thresholds of significance, mitigation measures, and background air quality information. They also include assessment methodologies for air toxics, odors, and greenhouse gas (GHG) emissions. Table 3.3-1 lists the BAAQMD air quality significance thresholds for construction and operation.

¹⁸ Bay Area Air Quality Management District (BAAQMD). 2017a. California Environmental Quality Act Air Quality Guidelines. Available online at: https://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en.

Table 3.3-1 Air Quality Significance Thresholds

Criteria Air Pollutant	Construction Thresholds	Operational Thresholds	
	Average Daily Emissions (pounds per day)	Average Daily Emissions (pounds per day)	Annual Average Emissions (tons per year)
ROG	54	54	10
NO _x	54	54	10
PM ₁₀	82 (Exhaust)	82	15
PM _{2.5}	54 (Exhaust)	54	10
CO ₂	Not Applicable	9.0 ppm (8-hour average) or 20.0 ppm (1-hour average)	
Health Risks and Hazards	Single Sources Within 1,000-foot Zone of Influence	Combined Sources (Cumulative from all sources within 1,000-foot zone of influence)	
Excess Cancer Risk	>10.0 per one million	>100 per one million	
Hazard Index	>1.0	>10.0	
Incremental Annual PM _{2.5}	>0.3 µg/m ³	>0.8 µg/m ³	

Notes:

CO₂ = carbon dioxide

µg/m³ = micrograms per cubic meter

NO_x = nitrogen oxides

PM₁₀ = coarse particulate matter or particulates with an aerodynamic diameter of 10 micrometers or less

PM_{2.5} = fine particulate matter or particulates with an aerodynamic diameter of 2.5 micrometers or less

ppm = parts per million

ROG = reactive organic gases

Source: BAAQMD 2017b¹⁹

3.3.2 DISCUSSION

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

BAAQMD developed a regional air quality plan, the *Bay Area 2017 Clean Air Plan* (CAP), to meet planning requirements related to regional exceedances of air quality emissions standards.²⁰ As discussed under checklist criterion b) below and shown in Table 3.3-2, the project would not exceed BAAQMD impact significance thresholds. Project construction would be temporary and would not generate a substantial amount of new vehicle trips (refer to Section 3.17, “Transportation”). Furthermore, the proposed project would not be considered growth-inducing because it would not increase the regional population. Operation of the proposed project would not generate new air pollutants or otherwise result in a significant air quality impact. Therefore, the project would not conflict with or obstruct implementation of the CAP, and **no impact** would occur.

¹⁹ BAAQMD. 2017b. Final 2017 Clean Air Plan. Available online at: https://www.baaqmd.gov/~media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-1-pdf.pdf.

²⁰ BAAQMD. 2017b.

Table 3.3-2 Average Daily Construction Emissions

Construction Phase	Average Daily Emissions (pounds per day)			
	ROG	NO _x	PM ₁₀	PM _{2.5}
Average daily emissions	3.8	39.5	12.7	7.2
Threshold of significance	54	54	82	54
Significant Impact?	No	No	No	No

Notes:

NO_x = nitrogen oxides

PM₁₀ = particulate matter equal to or less than 10 micrometers in diameter

PM_{2.5} = particulate matter equal to or less than 2.5 micrometers in diameter

ROG = reactive organic gases

Source: Modeled by AECOM in 2020.

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?

The cumulative analysis focuses on whether a specific project would result in a cumulatively considerable increase in emissions. By its very nature, air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development in the Bay Area Air Basin, and this regional impact is cumulative rather than being attributable to any one source. A project's emissions may be individually limited, but cumulatively considerable when taken in combination with past, present, and future development projects.

The Project is in the Bay Area Air Basin, which is currently designated as being in nonattainment for the state 1-hour and 8-hour ozone standards, nonattainment for the state 24-hour and annual PM₁₀ standards, and nonattainment for the state annual PM_{2.5} standard. It is also designated as being in nonattainment for the national 8-hour ozone standard and nonattainment for the national 24-hour PM_{2.5} standard.

Project Construction

The proposed project would involve construction activities that would result in temporary, incremental increases in air pollutant emissions generated from equipment exhaust, earth disturbance, and construction-related vehicle trips to and from the site. The California Emissions Estimator Model (CalEEMod) Version 2016.3.2 was used to estimate emissions associated with project construction. Table 3.3-2 shows average daily construction emissions of ROG, NO_x, PM₁₀ exhaust, and PM_{2.5} exhaust during the construction of the proposed project. As indicated in Table 3.3-2, construction-period emissions would not exceed the BAAQMD significance thresholds. Additional emission modeling assumptions and details (the project's size, land uses, construction schedule, and other CalEEMod inputs) are provided in Appendix A.

Construction activities, particularly during site preparation and grading, would temporarily generate fugitive dust in the form of PM₁₀ and PM_{2.5}. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying loads of soils. Unless properly controlled, vehicles leaving the site would deposit mud on local streets, which could be an additional source of airborne dust after it dries. The BAAQMD CEQA Air Quality Guidelines consider these impacts to be less than significant if controlled with implementation of the *Basic Construction Mitigation Measures Recommended for all Projects* identified in the BAAQMD CEQA Air Quality Guidelines, as outlined in **Mitigation Measure AQ-1**. BAAQMD recommends the implementation of all *Basic Construction Mitigation Measures*, whether or not construction-related emissions exceed applicable significance thresholds.

Mitigation Measure AQ-1: Air Quality Construction Measures

The applicant shall require all construction contractors to implement the basic construction mitigation measures recommended by BAAQMD to reduce fugitive dust emissions. Emission reduction measures shall include, at a minimum, the following measures. Additional measures may be identified by the BAAQMD or contractor as appropriate.

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of CCR). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- A publicly visible sign shall be posted with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

The proposed project, with the implementation of the above measures, would reduce construction criteria air pollutant emissions by controlling dust and exhaust and limiting exposed soil surfaces, and would not result in a cumulatively considerable increase in criteria air pollutants from construction emissions. Therefore, this constructed-related impact would be **less than significant with mitigation**.

Project Operations

The project would not require a change to the existing land use designation. Implementation of the project would not require or result in additional activities for operations and maintenance beyond existing conditions. Project operation would not generate new vehicle trips or require a substantial number of new maintenance vehicle trips that would emit substantial levels of criteria pollutant emissions. Therefore, **no impact** would occur as a result of project operations.

c) Expose sensitive receptors to substantial pollutant concentrations?

Project Construction

Some members of the population—children, older adults, and persons with pre-existing respiratory or cardiovascular illness—are especially sensitive to air pollutant emissions. Such people are given additional consideration when the impacts of projects on air quality are evaluated. Therefore, at-risk land uses sensitive to poor air quality would include residences, schools, daycare centers, playgrounds, medical facilities, and nursing homes. The BAAQMD CEQA Air Quality Guidelines recommend analyzing pollutant sources within 1,000 feet of at-risk sensitive receptors for emission levels that could result in unacceptable cancer risk. The land uses surrounding the project area do not include at-risk sensitive uses within 1,000 feet of the proposed project site. Recreational land uses, such as parks, are also considered moderately sensitive to air pollution. The project site is in Shoreline Regional Park, and recreational uses within 1,000 feet of the project site include trails, a portion of the Shoreline Gold Links golf course, and nonmotorized boating and windsurfing in Shoreline Lake. These recreational activities are transient by nature, and any exposure of recreationists to project-related construction emissions would be short-term and temporary. Therefore, the proposed project would not expose sensitive receptors to substantial pollutant concentrations, and this constructed-related impact would be **less than significant**.

Project Operations

Post-project operations and maintenance would not require new or result in additional activities beyond existing conditions. Therefore, **no impact** would occur as a result of post-project operations.

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

Project Construction

The occurrence and severity of odor impacts depend on numerous factors: the nature, frequency, and intensity of the source; the wind speed and direction; and the presence of sensitive receptors. Although offensive odors rarely cause physical harm, they still can be very unpleasant and can generate citizen complaints to local governments and regulatory agencies. The BAAQMD CEQA Air Quality Guidelines have not established a threshold of significance for construction-related activities in terms of odors.

Exhaust from diesel construction equipment may emit odors during project construction. However, because of the temporary nature of these emissions and the highly diffusive properties of diesel exhaust, nearby receptors would not likely be adversely affected by project-related diesel exhaust odors. Odors from these sources would be localized and generally confined to the immediate area surrounding the project site; these odors would be typical of most construction sites, and temporary. As a result, the project would not create objectionable odors affecting a substantial number of people. Therefore, such odors are not anticipated to result in odor complaints. This construction-related impact would be **less than significant**.

Project Operation

Post-project operations and maintenance would not require new or result in additional activities beyond existing conditions. Therefore, **no impact** would occur as a result of post-project operations.

3.4 BIOLOGICAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
IV. Biological Resources. Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.4.1 ENVIRONMENTAL SETTING

A background review of the following data sources was conducted to identify special-status plants, special-status wildlife, and sensitive natural communities with the potential to occur in the project area:

- United States Fish and Wildlife Service (USFWS) list of federal candidate, proposed, threatened, and endangered plant and wildlife species for the project area obtained from the Environmental Conservation Online System Information for Planning and Consultation online tool;²¹
- USFWS Critical Habitat for Threatened and Endangered Species;²²

²¹ United States Fish and Wildlife Service (USFWS). 2020a. IPaC Resource List. November 19. Available online at: <https://ecos.fws.gov/ipac/location/CQIJB6GJ4VCU3CWOITN65PR3PA/resources>.

²² USFWS. 2020a.

- California Natural Diversity Database (CNDDDB) list of known plant occurrences, wildlife occurrences, and California Department of Fish and Wildlife (CDFW)-designated sensitive natural communities within a 3-mile radius of the proposed project (Figure 3.4-1);²³
- California Native Plant Society Inventory of Rare and Endangered Plants;²⁴
- National Wetland Inventory and National Hydrography Database.^{25,26}

AECOM biologists conducted a reconnaissance survey of the project area on November 5, 2020, to gather additional information about biological resources present in the project area; a cursory inventory of potential protected trees and a habitat assessment for special-status species were performed.

This section describes the environmental conditions of the project area. These physical characteristics provide context for the biological conditions and the potential for special-status species to occur in the project area.

Vegetation Communities

Upland vegetative communities present in and near the project area include ruderal and nonnative grasslands that are interspersed with planted trees and shrubs and are adjacent to developed areas such as gravel beach, parking lots, paved trails and infrastructure associated with Shoreline Lake recreational facilities (Figure 3.4-2).

Ruderal vegetation abuts developed land use types in the project area. Ruderal communities are dominated by nonnative and invasive species, but also include sparse patches of native shrubs such as coyote brush (*Baccharis pilularis*), toyon (*Heteromeles arbutifolia*), and planted rushes (*Juncus* spp.). The ruderal areas are primarily herbaceous and include manicured and irrigated lawns in Shoreline Park.

Within the ruderal community are large areas of compacted soil with no vegetation. Areas of bare soil line the northern bank/shore of Shoreline Lake. The northern bank contains a short, steep, eroded ledge at the shoreline that abruptly transitions to bare soil; small patches of nonnative ornamental plantings; and occasional patches of native coyote brush and rushes. Occasional patches of glasswort (*Salsola soda*) were observed on the steep eroded ledge at the shoreline. Farther upland from the shoreline, nonnative landscape trees and a large expanse of irrigated lawn follow a walking path around the northern shore of the lake. All concrete, asphalt, and other installed surfaces in the project area are defined as developed, including the parking lot, multiuse trails and sidewalks, recreational facilities, compacted clay/gravel beach south of the recreational facilities, and staging area situated in a parking lot.

²³ California Department of Fish and Wildlife (CDFW). 2020a. Rarefind 5, a program created by the California Department of Fish and Wildlife that allows access to the California Natural Diversity Database. Updated November 2020.

²⁴ California Native Plant Society (CNPS). 2020. Plant List. 9-Quad Review Area for 3712252, 3712251, 3712158, 3712242, 3712241, 3712148, 3712232, 3712231, and 3712138. November. Available online at: <http://www.rareplants.cnps.org/advanced.html>.

²⁵ USFWS 2020b. National Wetland Inventory. Updated November 19. Available online at: <https://www.fws.gov/wetlands/data/Mapper.html>.

²⁶ U.S. Geological Survey (USGS). 2020. National Hydrography Dataset. Available online at: https://www.usgs.gov/core-science-systems/ngp/national-hydrography/national-hydrography-dataset?qt-science_support_page_related_con=0#qt-science_support_page_related_con.

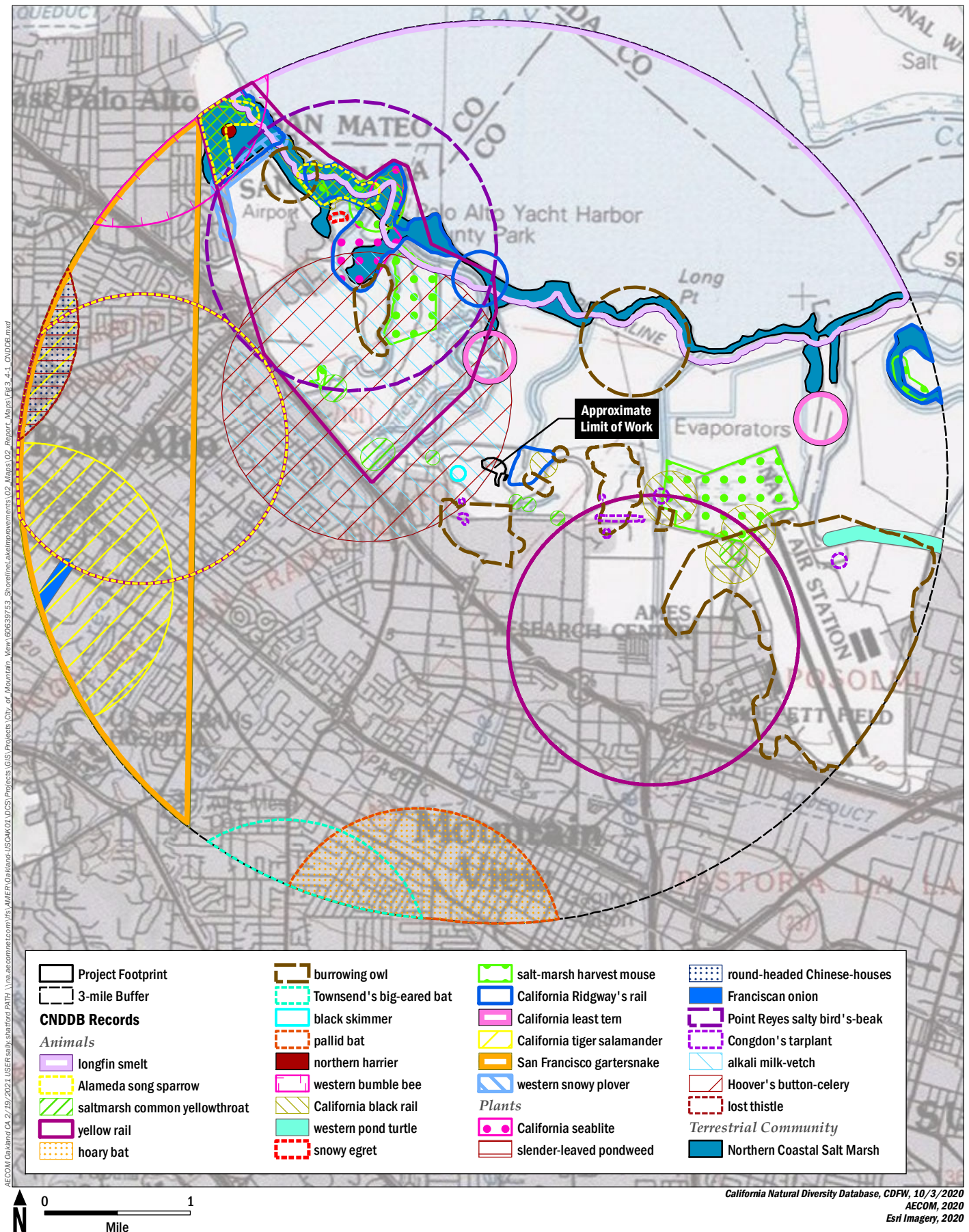
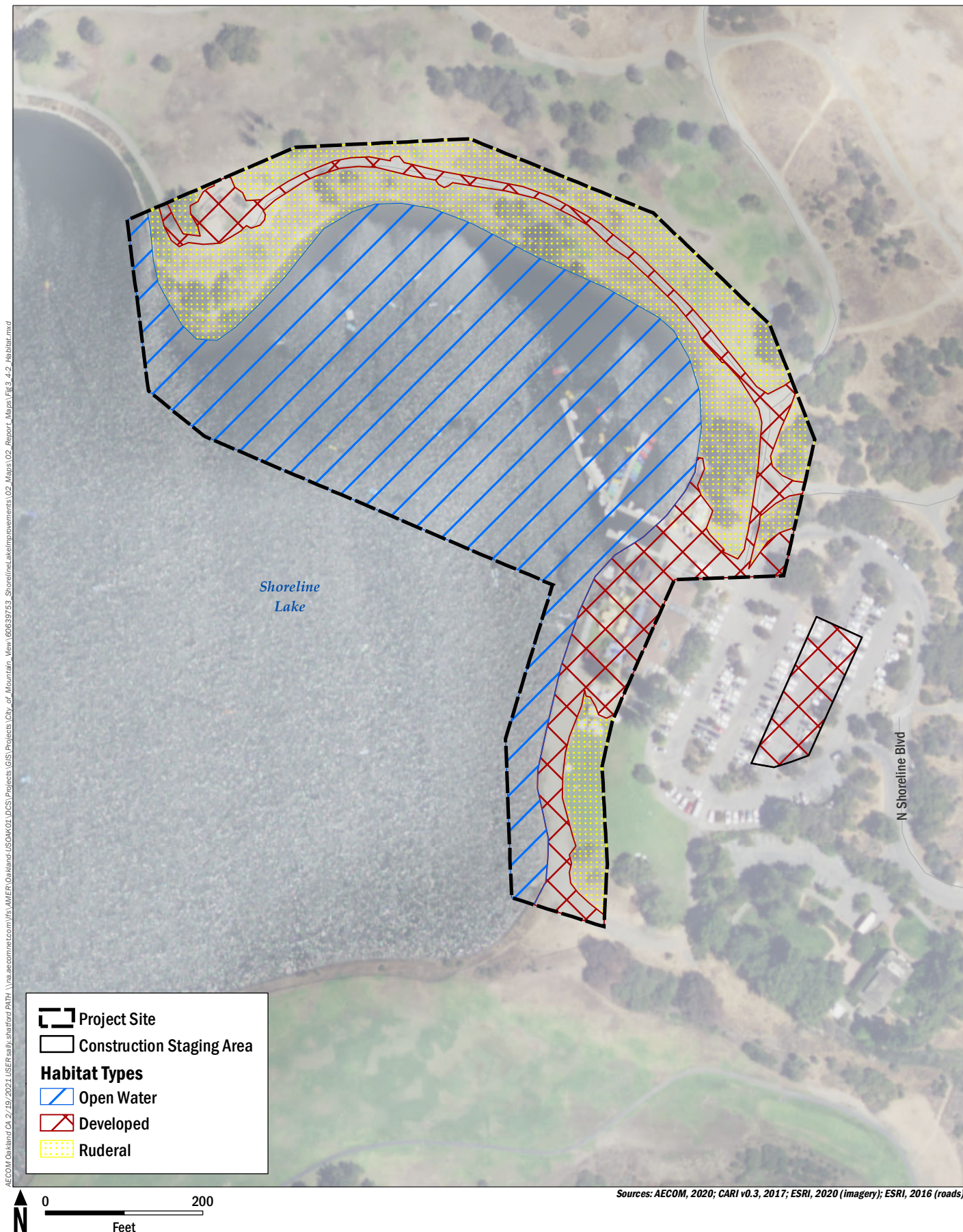


FIGURE 3.4-1
 CNDDDB Occurrences within 3 miles



These ruderal and developed areas are interspersed with occasional patches of trees and shrubs. Many of these trees and shrubs appear to have been planted and are in poor condition. There is no dominant species in this community. The composition of tree species is primarily nonnative, including blackwood acacia (*Acacia melanoxylon*), she-oaks (*Casuarina* sp.), cajeput tree (*Melaleuca quinquenervia*), sycamore (*Plantanus* sp.), weeping willow (*Salix babylonica*), Monterey cypress (*Hesperocyparis macrocarpa*) and redwood (*Sequoia sempervirens*).

Special Status Species

The potential for special-status species to occur in the project area was evaluated based on the background data review and the reconnaissance survey. For the purpose of this evaluation, “special-status species” include those species protected under the federal Endangered Species Act (ESA) and the California Endangered Species Act (CESA) as threatened or endangered; or proposed for listing as threatened or endangered; or identified as species of special concern, rare, or as a candidate species.

Most of the special-status species identified through the database search were eliminated from further consideration either because the project area is outside the known range of the species or because the project area lacks habitats required by the species. Because natural communities, such as salt marshes, vernal pools, oak woodlands, and grasslands, are absent from the project area, many of the special-status species identified in the background data review do not have potential to occur in the project area. Other species are not expected to occur in the project area because of habitat quality or lack of known occurrences in the vicinity of the project. Special-status wildlife species determined to have potential to occur in the project area are listed in Table 3.4-1. No special-status plant species were determined to have potential to occur in the project area.

Critical habitat designations were reviewed and determined to be absent from the project area.

Sensitive Natural Communities

Natural communities with a State Rank of 1, 2, or 3 are considered to be Sensitive Natural Communities and are identified by the CDFW Vegetation Classification and Mapping Program.²⁷ Sensitive Natural Communities are not present due to the presence of ruderal communities that lack significant native vegetation and the developed nature of the project area.

Aquatic Resources

There are no wetlands in the project area.

Shoreline Lake is a salt-water lake that was created by levee construction and placement of fill. No emergent or submerged vegetation was observed in the project area; the lake appears to consist almost entirely of open water. Substrates along the shore include clay, mud, and gravel. Along the northern shore of the lake, some pickleweed (*Salicornia pacifica*) is present, and floating algae was observed near the shoreline. Shoreline Lake covers an area of approximately 45 acres and has an average depth of 18 feet. Salt water is circulated through Shoreline Lake by pumping water from Inner Charleston Slough and discharging it to Permanente Creek/Mountain View Slough through a separate gravity outfall. Backflow through the pump station is also allowed periodically to flush sediment from the intake. Hydrologic and water quality impacts to Shoreline Lake are discussed in Section 3.10, “Hydrology and Water Quality.”

²⁷ CDFW. 2020b. California Sensitive Natural Communities. November 24. Available online at: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=153609&inline>.

Table 3.4-1 Special-Status Wildlife with Potential to Occur in the Project Area

Common Name/ Scientific Name	Listing Status	General Habitat Requirements	Potential to Occur
California least tern <i>Sterna antillarum browni</i>	FE/SE/FP	This species nests along the coast from San Francisco Bay south to northern Baja California. The species is a colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, landfills, or paved areas.	Suitable wintering and staging habitat is present in the project area; however, given the poor habitat conditions, lack of documented occurrences, use of the project site for recreation, and lack of nearby breeding habitat, the species is not expected to be impacted by the proposed project. The project area does not contain breeding habitat and is far from known breeding sites.
western snowy plover <i>Charadrius nivosus nivosus</i>	FT/SSC	This species is found on sandy beaches, salt pond levees, and shores of large alkali lakes. It needs sandy, gravelly, or friable soils for nesting.	Suitable wintering or roosting habitat is present in the project area; however, given the poor habitat conditions, lack of documented occurrences within the project footprint, use of the project site for recreation, and lack of adjacent breeding habitat, the species is not expected to be impacted by the proposed project. Suitable breeding habitat is present 1.1 miles from the project area, near Stevens Creek.
Alameda song sparrow <i>Melospiza melodia pusillula</i>	SSC	This species is a resident of salt marshes bordering the southern arm of San Francisco Bay. It inhabits <i>Salicornia</i> marshes; nests low in <i>Grindelia</i> bushes (high enough to escape high tides) and in <i>Salicornia</i> .	Suitable habitats are absent from the project area. However, one recent nesting observation was documented from the Coast Casey Forebay west of the project area.
American peregrine falcon <i>Falco peregrinus anatum</i>	FD/SD/FP	This species is found near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds, and human-made structures. Its nest consists of a scrape or a depression or ledge in an open site.	Suitable foraging habitat is present in the project area.
northern harrier <i>Circus hudsonius</i>	SSC	This species is found in coastal salt and freshwater marsh. It nests and forages in grasslands, from salt grass in desert sink to mountain cienegas. The species nests on ground in shrubby vegetation, usually at marsh edge; its nest is built of a large mound of sticks in wet areas.	Suitable foraging habitat is present in the project area. The species is known to nest in the Mountain View tidal marsh, approximately 1,500 feet from the project area and is present at Shoreline Regional Park year-round.
salt marsh common yellowthroat <i>Geothlypis trichas sinuosa</i>	SSC	This species is a resident of the San Francisco Bay region, in fresh and saltwater marshes. It requires thick, continuous cover down to the water surface for foraging; and tall grasses, tule patches, and willows for nesting.	The species has been observed year-round at Shoreline Regional Park. The closest nest is documented about 0.2 mile from the project area at Pond 4 on the golf course. Breeding also occurs west of the project area; however, suitable habitat is absent from the project area due to the lack of dense vegetation. The species is known and endemic to the area.

Table 3.4-1 Special-Status Wildlife with Potential to Occur in the Project Area (Continued)

Common Name/ Scientific Name	Listing Status	General Habitat Requirements	Potential to Occur
black skimmer <i>Rynchops niger</i>	SSC	This species nests on gravel bars, low islets, and sandy beaches, in unvegetated sites. Nesting colonies usually consist of fewer than 200 pairs.	Suitable nesting habitat is not present in the project area; however, there is a known nesting colony on Shoreline Lake Island. The species is known to forage in Shoreline Lake.
burrowing owl <i>Athene cunicularia</i>	SSC	This species is found in open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. It is a subterranean nester, dependent on burrowing mammals, most notably the California ground squirrel.	Both resident and migratory individuals have been documented at Shoreline Regional Park. The <i>Shoreline Burrowing Owl Preservation Plan</i> identifies the area adjacent to project area as containing 30 acres of nesting or foraging habitat. A burrowing owl was observed in this area, 277 feet from the project footprint. No burrows are known within the project footprint. Most breeding and wintering owl observations are east and south of the project area at Northeast Meadow Lands, Vista Slope, Crittenden Hill, and in the Shoreline Golf Links golf course.
white-tailed kite <i>Elanus leucurus</i>	FP	This species is found in rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. It needs open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	Foraging and breeding habitats are present in and adjacent to the project area. Confirmed nesting has occurred at Shoreline Regional Park for the past 3 years including 2020, about 130 feet from the project footprint.

Sources:

CDFW. 2020.

City. 2012c.

Philip Higgins, Biologist, City of Mountain View. 2020. Personal communication.

Philip Higgins, Biologist, City of Mountain View. 2021. Personal communication.

Notes:

Federal Status

FE = Federal Endangered

FT = Federal Threatened

FD = Federally Delisted

State Status

SE = State Endangered

Other

FP = Fully Protected

SSC = Species of Special Concern

SD = State Delisted

Wildlife Movement

Based on a review of existing databases containing locations of wildlife movement corridors, the project area is not identified as an Essential Connectivity Corridor but is in a Natural Landscape Block.²⁸ Natural Landscape Blocks support native biodiversity, whereas Essential Connectivity Areas are areas essential for ecological connectivity between the Natural Landscape Blocks. This coarse-scale assessment of wildlife movements is based primarily on the concept of ecological integrity, rather than the needs of a species.²⁹ The project area is a modified environment, constructed adjacent to a former landfill, and includes clay deposits above natural Bay Muds. Natural communities and habitat are absent from the project area but are present in the vicinity of the project area (e.g., Coast Casey Forebay; Mountain View Slough; and other marshes, sloughs, and ponds). Shoreline Regional Park is frequently used by the public for recreation. The project area is a modified environment that provides limited habitat for a narrow group of fish and wildlife species. For these reasons, the project areas offer diminished potential to support wildlife movement and likely does not provide a significant wildlife corridor for terrestrial wildlife species. In portions of the project area, the steep bank of Shoreline Lake prohibits aquatic movement from Shoreline Lake to the terrestrial areas, and *vice versa*. The project area includes aquatic environments that may support aquatic wildlife, but these habitats are not expected to support anadromous fish or other aquatic migratory species and would not be considered an important migratory route.

Local Policies and Ordinances

The City's tree regulations protect all trees designated as "Heritage" trees (Chapter 32, Article 2). Under this ordinance, a Heritage tree is defined as any one of the following:

- a tree with a trunk with a circumference of 48 inches (diameter of about 16 inches) or more measured at 54 inches above natural grade;
- a multi-branched tree with major branches below 54 inches above the natural grade and a circumference of 48 inches measured just below the first major trunk fork;
- any *Quercus* (oak), *Sequoia* (redwood), or *Cedrus* (cedar) tree with a circumference of 12 inches or more when measured at 54 inches above natural grade (diameter at breast height of about 4 inches); or
- a tree or grove of trees designated by resolution of the City Council to be of special historical value or of significant community benefit.

It is unlawful to willfully injure, damage, destroy, move, or remove a Heritage tree. Removal of Heritage trees requires a permit approved by Urban Forestry Board and City Council. Several Heritage trees are present in the project area.

²⁸ Caltrans and CDFW. 2010. Essential Connectivity Areas – California Essential Habitat Connectivity. SDE Raster Dataset. Available online at: <https://map.dfg.ca.gov/metadata/ds0620.html>.

²⁹ Caltrans and CDFW. 2010.

The City also protects trees in the public right-of-way along streets, in parks, and in other City-owned properties. The City Street Tree Master list was reviewed; however, the list does not identify trees in Shoreline Regional Park.³⁰

During the reconnaissance survey, trees in the project site around the shoreline were identified, measured, and assessed. The trees identified in the vicinity of the project include both potential Heritage trees as well as City trees and included the following: 11 black acacias, eight cajeput trees, seven London plane trees (*Platanus × acerifolia*), two Monterey cypress, five mountain she-oak (*Allocasuarina verticillata*), and two weeping willow. Most of the trees in the project area are nonnative species, and some are listed on the California Invasive Plant Council (Cal-IPC) watch list. Trees in the parking lot staging area are not listed because these trees would not be impacted by the project.

Habitat Conservation Plan, Natural Community Conservation Plan, or Other Habitat Conservation Plans

Based on a review of USFWS and CDFW websites, there are no habitat conservation plans (HCPs) or natural community conservation plans (NCCPs) in the project area.³¹ There are no nearby NCCPs; the closest HCP, in San Jose, is associated with the Santa Clara Valley HCP.

3.4.2 DISCUSSION

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

No special-status amphibians, reptiles, fish, mammal, or invertebrate species are expected to occur in the project area. Nine special-status bird species have potential to occur in the project area. Project implementation could impact these species through modifications to ruderal habitat present in the project site.

Birds

Nesting birds, including special-status birds, are known to occur in or have potential to occur in the vicinity of the project area. Due to the limited habitat and the proximity to developed areas, breeding habitat is limited to those bird species that use and grasslands. Special-status bird foraging habitats are present in the aquatic areas of Shoreline Lake and in the ruderal areas. Special-status bird species with potential to occur in the project area include California least tern, western snowy plover, Alameda song sparrow, American peregrine falcon, black skimmer, burrowing owl, northern harrier, salt marsh common yellowthroat, and white-tailed kite (Table 3.4-1).

California Least Tern

The California least tern is listed as an endangered species under both the ESA and CESA and is also Fully Protected under the California Fish and Game Code 3511. There are two CNDDDB known occurrences in the vicinity of the project area; both are historic (greater than 30 years old). These occurrences are from Charleston Slough, north of the project area; and from Pond B2 (between Mountain View Slough and Guadalupe Slough),

³⁰ City. 2012b. City Street Tree Master List. March. Available online at: <https://www.mountainview.gov/civicax/filebank/blobdload.aspx?blobid=10803>.

³¹ USFWS. 2020c. Habitat Conservation Plans. Sacramento Fish and Wildlife Office. Available online at: <https://www.fws.gov/sacramento/es/Habitat-Conservation-Plans/>.

east of the project area. These occurrences represent observations associated with post-breeding foraging and staging for the species. There is no suitable breeding habitat in and around the project area, and there are no known breeding areas within 2 miles of the project area. Suitable post-breeding foraging habitat (prior to migration to Central America) is present in the project area, primarily associated with Shoreline Lake; however, given the lack of documented occurrences, use of the project area for recreation, and lack of nearby breeding habitat, the species is not expected to be impacted by the proposed project.

Western Snowy Plover

The western snowy plover is listed as a threatened species under the ESA and is a California Species of Special Concern. A 2020 survey identified western snowy plover breeding site about 1.1 miles from the project area, east of Stevens Creek.³² There is one CNDDDB occurrence in the vicinity of the project area. This occurrence is more than 2 miles from the project area. The occurrence is from a nonbreeding season survey (January) of a brackish marsh dominated by pickleweed near San Francisquito Creek,³³ during which 35 individuals were observed. There is no suitable breeding habitat in or adjacent to the project area. The ruderal areas adjacent to Shoreline Lake may provide suitable wintering or roosting habitat for the species. In the post-breeding season and in winter, western snowy plovers may forage or roost in and adjacent to the project area but would not be expected to occur in the project area during the species' breeding season. Given the lack of documented occurrences, general poor condition of habitats in the project area, use of the project area for recreation, and lack of adjacent breeding habitat, the species is not expected to be impacted by the proposed project.

Alameda Song Sparrow

The Alameda song sparrow is listed as a California Species of Special Concern. There are several documented occurrences of the Alameda song sparrow in the general vicinity of the project, including one recent observation of a nesting individual in the Coast Casey Forebay.³⁴ This occurrence is from the brackish marsh associated with Coast Casey Forebay, approximately 1,800 feet west of the project area. This species predominately occurs in salt marshes containing pickleweed (*Salicornia* sp.) and gumplant (*Grindelia* sp.), both of which are absent from the project area. Alameda song sparrows are not expected to occur in the project area, due to the lack of suitable breeding and foraging habitat; therefore, the species is not expected to be impacted by the proposed project.

American Peregrine Falcon

American peregrine falcon was originally listed as an endangered species under the ESA and CESA but has since been delisted. Peregrine falcons are currently listed as Fully Protected species by the State of California Fish and Game Code 3511, making it illegal to kill, harm, or harass the species. The closest CNDDDB occurrence is about 4 miles from the project area. The American peregrine falcon is not expected to nest or breed in or adjacent to the project area, due to absence of suitable nesting habitat, but may forage in the project area.

Black Skimmer

Black skimmer is listed as a California Species of Special Concern. There is one documented occurrence of the black skimmer near the project area from the island in the middle of Shoreline Lake.³⁵ In 2019, there were

³² Phillip Higgins, Biologist, City of Mountain View. 2021. Personal communication. 2021.

³³ CDFW. 2020a. Occurrence 128.

³⁴ Philip Higgins, Biologist, City of Mountain View. 2020. Personal communication.

³⁵ CDFW. 2020a. Occurrence 7.

more than a dozen nesting pairs; in 2020, 15 nests were documented.³⁶ Black skimmers also forage in Shoreline Lake.

Burrowing Owl

Burrowing owl is listed as a California Species of Special Concern. The species is well documented in Shoreline Regional Park, and the Shoreline Burrowing Owl Preservation Plan³⁷ identifies breeding and foraging habitat in a 30-acre area adjacent to project. This area is described as low use due to poor suitability for nesting. The numerous trails result in heavy human activity, and the numerous large trees attract owl predators. Although breeding has not been documented in the project area, one burrowing owl has been documented using a burrow about 275 feet from the project footprint.³⁸ Most breeding and wintering owl observations are at Northeast Meadow Lands, Vista Slope, Crittenden Hill, in the Golf Course, and east of the project area.^{39 40} Burrowing owls are known to forage up to 2 miles from their burrow. Shoreline Regional Park is one of only four breeding locations for this species in Santa Clara County, making the park regionally significant for this species. A year-round population of burrowing owls is present at Shoreline Regional Park, consisting of both resident and migratory individuals. Breeding pairs have used the golf course and other areas of Shoreline Regional Park.^{41 42} Mountain View is within the Extended Study Area for burrowing owls under the Santa Clara Valley Habitat Conservation Plan, although not within the permit area.

Northern Harrier

Northern harrier is a California Species of Special Concern. This species has been observed nesting in Shoreline Regional Park at the Mountain View Tidal Marsh, about 1,500 feet from the project area.⁴³ A CNDDDB occurrence describes the habitat as salt marsh containing pickleweed and cordgrass.⁴⁴ These habitat types are absent from the project area but are present in several nearby areas. Although suitable breeding habitat (i.e., shrubby vegetation and marshes) is absent, northern harriers may forage in the ruderal habitats of the project area.

Salt Marsh Common Yellowthroat

Salt marsh common yellowthroat is a California Species of Special Concern and is observed year-round at Shoreline Regional Park. There are six CNDDDB occurrences of the species within 3 miles of the project area, including occurrences from Charleston Slough and Coast Casey Forebay to the west of the project area,⁴⁵ and in Shoreline Park and the overflow outfall of Shoreline Lake to Permanent Creek/Mountain View Slough.^{46 47} The closest known occurrence is about 0.2 mile from the project area in Pond 4 associated with the golf course.⁴⁸ The

³⁶ Higgins. 2020.

³⁷ City. 2012c. Shoreline Burrowing Owl Preservation Plan. Public Works and Community Services Departments. Prepared by Lynne Trulio and Philip Higgins. October 1. Available online at: <https://www.mountainview.gov/civicax/filebank/blobdload.aspx?BlobID=29099>.

³⁸ Higgins. 2021.

³⁹ CDFW. 2020a. Occurrences 25, 1031, 1032, 1033, and 1235.

⁴⁰ Higgins. 2020.

⁴¹ CDFW. 2020a. Occurrences 25, 1031, 1032, 1033, and 1235.

⁴² Higgins. 2020.

⁴³ Higgins. 2020.

⁴⁴ CDFW. 2020a. Occurrences 2, 4, and 33.

⁴⁵ CDFW. 2020a. Occurrence 55.

⁴⁶ Higgins. 2020.

⁴⁷ CDFW. 2020a. Occurrence 118.

⁴⁸ Higgins. 2021.

project area does not likely support the species breeding due to the lack of suitable habitat. Salt marsh common yellowthroat are present in the late fall, are winter resident, and are endemic to the area.⁴⁹

White-Tailed Kite

White-tailed kite is a Fully Protected species under the California Fish and Game Code 3511. White-tailed kites have been observed nesting at Shoreline Regional Park for the past 3 years; the closest known nest site is about 130 feet from the project area.⁵⁰ This species has been observed in the vicinity of the project area and has potential to use the habitats in the project area for foraging. Suitable nesting trees are present in and adjacent to the project site.

Potential Impacts

Based on the anticipated construction schedule, the project activities are not expected to impact breeding special-status bird species or other nesting birds because project construction would occur outside of the nesting season (February 1 to August 31). Construction activities during the nonbreeding season could disturb special-status bird species foraging, wintering, and/or roosting activities. Construction activities may degrade foraging, wintering, and roosting habitat for special-status birds; however, given the small project footprint relative to the available habitat in the vicinity, impacts from habitat degradation would be negligible. Furthermore, the improvements at the North Shoreline would benefit birds by removing the steep embankment and creating a gentle slope at the bank of Shoreline Lake. The gentle slope would allow birds to forage or wade at shoreline and may facilitate movement between aquatic and terrestrial habitats for certain species.

Although not currently anticipated, if construction occurs in the special-state bird species breeding season, then construction activities and the presence of personnel could result in nest failure or abandonment. This impact on special-status birds would be considered **potentially significant**. If construction occurs during the breeding season, then the City will implement **Mitigation Measure BIO-1: Nesting Bird Protection Measures**, which requires the performance of preconstruction surveys to identify nest sites in the vicinity of the project area, as well as the establishment of nest protection buffers around active nests. As stated in Section 2.8, “Construction Best Management Practices,” all construction personnel would be given environmental awareness training by a qualified biological monitor before the start of construction. The training would familiarize all construction personnel with the special-status bird species that may occur onsite, their habitats, general provisions and protections afforded by law, measures to be implemented to protect these species, and the project boundaries. With implementation of worker training and the mitigation measure to avoid and minimize impacts, impacts on special-status bird species would be **less than significant with mitigation**.

Mitigation Measure BIO-1: Nesting Bird Protection Measures

If construction must occur during the breeding season, then a qualified biologist will conduct preconstruction nesting bird surveys at least 2 weeks prior to construction to identify active nests in the vicinity of the project. The nesting bird breeding season varies by species; the generally accepted breeding season is February 1 through August 31, but the nesting season is often shorter for passerines.

⁴⁹ Higgins. 2021.

⁵⁰ Higgins. 2021.

The nesting bird minimum survey area radius beyond the project area will be (1) 250 feet for passerines; (2) 500 feet for small raptors; and (3) 1,000 feet for larger raptors.

If active nests are identified, the City will establish a construction buffer to avoid disturbance, in consultation with the qualified biologist monitor and/or the CDFW and USFWS. The City's biological monitor will monitor the nests for potential signs of disturbance and to verify nest status and fledging of young. The biological monitor will have stop-work authority and will stop work if signs of disturbance are observed. Once the young have fledged, then construction activities may occur within the construction buffer. If active nests are found and require disturbance or removal, the City will consult with the CDFW and USFWS regarding appropriate actions to comply with the Migratory Bird Treaty Act of 1918 and the Fish and Game Code, Section 3503.

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

The habitats associated with the proposed project are classified as ruderal, open water, and developed land uses. There are no riparian communities or other sensitive natural community identified by the CDFW Vegetation Classification and Mapping Program⁵¹ in the project area. The proposed project impact does not overlap with designated or proposed critical habitat for a federally listed species protected under the ESA. For these reasons, the project would have **no impact** on riparian habitat or sensitive natural communities.

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?

There are no wetlands in the project area, and the proposed project would have **no impact** on federally protected wetlands. Potential impacts on other waters of the United States in the project area (i.e., Shoreline Lake), are discussed in Section 3.10, "Hydrology and Water Quality."

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

The proposed project would not interfere with the movement of native resident or migratory fish species, nor would the project impede the use of native wildlife nursery sites. Because the improvements on the northern shore would soften the slopes of the shoreline, terrestrial wildlife species should benefit from increased ability to traverse the shoreline; thus, in the long term, there would be a benefit to wildlife movement through the project area. Other components of the proposed project would not result in long-term changes to wildlife movement through the project area.

During construction, the ability of fish and wildlife species to move across the project area may be limited due to the presence of silt fences in terrestrial habitats and turbidity curtains in aquatic environments. Use of these construction BMPs would prevent exposure of fish and wildlife to equipment and potentially adverse environmental conditions (i.e., siltation and turbidity). However, this impact would only occur in a small area, and movements to other habitats would be possible in the general vicinity of the project area. The impact would be

⁵¹ CDFW. 2020b.

limited to the short construction duration (4 months). Therefore, the project would not interfere substantially with the movement of any native resident or migratory wildlife species, or with an established native resident or migratory wildlife corridor; impacts would be **less than significant**.

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

There are many Heritage trees, as defined by the City, in the vicinity of the project; however, based on the preliminary assessment, it appears that most of the Heritage trees would be avoided. The following potential Heritage trees have high or moderate potential to be influenced or impacted by the proposed project:

- one multi-trunked black acacia that appears to be dead/unstable, with high potential to be impacted;
- two multi-trunked cajeput trees, one appearing to be dead/unstable and the other in poor condition, with moderate potential to be impacted;
- one multi-trunked Monterey cypress in poor condition, with moderate potential to be impacted; and
- one multi-trunked mountain she-oak in poor condition, with moderate potential to be impacted.

Based on the tree assessment conducted during the reconnaissance survey, the proposed project would likely require trimming or removal of protected trees in the project area. All trees in the project area are nonnative, and blackwood acacia trees are classified on the Cal-IPC list as invasive, with minor ecological impacts. Tree removal for the project would adhere to the City's tree removal guidelines and Tree Preservation Ordinance, as applicable. There are no other local policies or ordinances protecting biological resources that are applicable to the proposed project. Although trees would be impacted during construction of the project, they would be replaced in accordance with City guidelines and ordinances. The project would comply with local policies or ordinances protecting trees, and the impact on protected trees would be **less than significant**.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

There are no HCPs, NCCPs, or other approved local, regional, or state HCPs in, or in the immediate vicinity of, the proposed project. For these reasons, the project would not conflict with any HCP or NCCP, and there would be **no impact**.

3.5 CULTURAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
V. Cultural Resources. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.5.1 ENVIRONMENTAL SETTING

Project Setting and Context

The project site is on the northeast shore of and partially in Shoreline Lake, which is in the northwestern corner of Shoreline Regional Park. The park, which is owned and operated by the City, opened in 1982 and was constructed on the site of a former sanitary landfill. The project site covers a 1.1-acre area at the eastern end of Shoreline Lake. The project site also includes a separate 10,000-square-foot staging area east of the lake boathouse/restaurant in an existing, paved parking lot. Historically, the shoreline was approximately 2,000 feet to the south of the project site and the project site was in San Francisco Bay.⁵²

Data Collection and Review

Baseline historical and archaeological conditions in the project vicinity are based on a review of available ethnographic and historical literature and maps, archaeological base maps and site records, survey reports, and atlases of historic places on file at the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS) at Sonoma State University; a review of the Office of Historic Preservation's (OHP's) Directory of Properties in the Historic Property Data (HPD) File for Santa Clara County;⁵³ a review of OHP's Built Environment Resources Directory (BERD);⁵⁴ and a Sacred Lands File (SLF) review by the California Native American Heritage Commission (NAHC) (November 2020). No cultural resources were identified in the HPD or BERD, nor were resources identified in the SLF search of the project site or adjacent area. One nearby resource, the Alviso Salt Works Historic Landscape (P-43-002823), is a historic district eligible for listing in the National Register of Historic Places (NRHP) and therefore is on the California Register of Historical Resources (CRHR). P-43-002823 is characterized by large evaporation ponds contained by levees.⁵⁵

⁵² USGS. 1899. *Palo Alto, California*. Scale 1:62500. U.S. Geological Survey, Washington, DC. Available online at: <https://ngmdb.usgs.gov/topoview/viewer/#6/37.431/-119.301>. Accessed December 1, 2020.

⁵³ Office of Historic Preservation (OHP). 2012. *Directory of Properties in the Historic Property Data File* for Santa Clara County (California Office of Historic Preservation, April 5, 2012). On file at Northwest Information Center, Sonoma State University, Rohnert Park, California.

⁵⁴ OHP. 2019. *Built Environment Resources Directory* for Santa Clara County (California Office of Historic Preservation, December 2019). On file at Northwest Information Center, Sonoma State University, Rohnert Park, California.

⁵⁵ Speulda-Drews, Lou Ann, and Nick Valentine. 2007. California Department of Parks and Recreation 523 Series Form for Alviso Salt Works Historic Landscape (P-43-002823). On File: Northwest Information Center, Sonoma State University, Rohnert Park, California.

The levee that defines the southwestern edge of the district is approximately 425 feet north of the project site. The records search (NWIC File No. 20-0866) identified one previously studied area in the current project site.⁵⁶

Study

Basin Research Associates compiled a cultural resource assessment for USACE⁵⁷ to determine whether there would be a federal interest to provide flood protection and ecosystem restoration along the Alviso portion of the southern San Francisco Bay shoreline. As part of the study, a planning-level assessment of the condition and spatial extent of cultural resources was similarly compiled. No significant cultural resources were reported in the area near the current project site (Reach B).

Historical Resources

Alviso Salt Works Historic Landscape (P-43-002823), a NRHP-eligible district, is recorded 425 feet north of Shoreline Lake in Shoreline Slough. Shoreline Slough forms the southwestern portion of the extensive historic district. The primary landscape characteristics of the resource are large evaporation ponds bounded by levees and small-scale elements such as pilings, remnant piers, small-interior berms, and water control structures. These evaporative salt ponds were created during the twentieth century industrialization and experienced a period of significance from 1920 through 1953, when salt production was at its highest. Since the 1950s, salt production has decreased, and many of the ponds have been taken out of production. Many of these ponds form part of the South Bay Salt Pond Restoration Project and are either being managed as tidal ponds for resident shorebirds or are being restored back to tidal marsh. The Alviso Salt Works Historic Landscape (P-43-002823) is eligible for the NRHP; NRHP-listed “historic properties” in California are considered historical resources for the purposes of CEQA and are also listed in the CRHR.

Native American Outreach

On November 2, 2020, AECOM contacted the NAHC on behalf of the City and requested a search of the SLF and Native American contact list for the project site. On November 4, 2020, the NAHC responded that the SLF search was “negative...[however] a negative response to these searches does not preclude the existence of a tribal cultural resource.” Native American consultation pursuant to Assembly Bill (AB) 52 is being completed by the City and discussed further in Section 3.18, “Tribal Cultural Resources.”

3.5.2 DISCUSSION

a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?

The proposed project would require construction over a 1.1-acre site, including replacing existing boat dock facilities with floating docks, installing a fixed pier and sheet pile sediment barrier, constructing a kayak launch facility, removing sediment from the lake, grading the south beach, and restoring the shoreline with the construction of a sloped revetment. As identified in the NWIC records search, one historical resource, Alviso Salt Works Historic Landscape (P-43-002823), is 425 feet north of the project site. The portion of the resource near

⁵⁶ Basin Research Associates, Inc. 2009. *Cultural Resources Assessment, South San Francisco Bay Shoreline Interim Feasibility Study*. San Leandro, California. Prepared for U.S. Army Corps of Engineers, San Francisco.

⁵⁷ Basin Research Associates, Inc. 2009.

the project site is at the edge of a much more extensive landscape, which stretches into Alameda County to the east. Ground-disturbing activities related to the project site would be conducted over 400 feet south of the resource and would not involve improvements that would notably alter the landscape. These activities therefore would not physically demolish or alter any part of the historical resource and would not alter the characteristics that convey its historical significance and justify its eligibility for inclusion in the CRHR for the purposes of CEQA. Therefore, there would be **no impact**.

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

The deepest proposed ground disturbance for the project would be approximately 12 feet for the installation of the 45-foot-long sheet pile retaining wall adjacent to the new pier. Most of the proposed ground disturbance would be shallow. No archaeological resources were identified in the NWIC records search, and the search of the SLF was also negative. Native American outreach identified no tribal cultural resources in the vicinity of the project site. A review of the historical maps of the area depict the current project site in San Francisco Bay, with the historic-era shoreline being more than 2,000 feet to the south of the project site.⁵⁸ Soil borings taken at the northwestern end of the lake indicate that the fill is between 10.5 and 16 feet thick and is underlain by 5 to 10 feet of Young Bay Mud, which was deposited when the project site was underwater.⁵⁹ Project excavation would be primarily in the artificial fill and may extend to the upper portion of the Young Bay Mud, which is not archaeologically sensitive due to its setting during deposition. The minimal ground disturbance required for this project is unlikely to uncover any archaeological resources because the vertical project area is in artificial fill and Young Bay Mud; therefore, there would be **no impact**.

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

Section 15064.5 of CEQA assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. These procedures are detailed under Public Resources Code Section 5097.98.

There are no known burial locations in the project site, no known archaeological resources were identified in the NWIC records search, and the search of the SLF was also negative. A review of the historical maps of the area depict the current project site in San Francisco Bay, with the shoreline being more than 2,000 feet to the south of the project site.⁶⁰ A prior study⁶¹ at the northwestern portion of the lake identified 10.5 to 16 feet of artificial fill material, which was underlain by 5 to 10 feet of Young Bay Mud. The potential for encountering human remains in the artificial fill or Young Bay Mud in the project's subsurface footprint is considered extremely low; there would be **no impact**.

⁵⁸ USGS. 1899.

⁵⁹ AECOM. 2019. *Sailing Lake Access Road Improvement Basis of Design, 50% Design*. Prepared by AECOM. Project No. 60548950. Oakland, California.

⁶⁰ USGS. 1899.

⁶¹ AECOM. 2019.

3.6 ENERGY

ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
VI.	Energy. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b)	Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.6.1 ENVIRONMENTAL SETTING

The proposed project involves erosion control, sediment removal, and replacing aging boating facilities. Construction equipment—such as an excavator, and haul trucks that would be used to import rocks for riprap, along with other construction materials—would consume fuel, but such fuel consumption would be minimal in comparison to the fuel used on a daily basis in the highly urbanized San Francisco Bay Area surrounding the project site. Electricity would be required during the construction period for operation of the contractor's construction trailer in the staging area; however, this electrical energy usage would also be minimal.

3.6.2 DISCUSSION

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?

Construction equipment and haul trucks would consume fuel, and minor amounts of electricity would be required during the construction process; however, the site's small size and the limited extent of proposed improvements would minimize the energy consumed. Silicon Valley Clean Energy (SVCE) is the official electricity provider for the City, including the project site. SVCE delivers 100 percent carbon-free electricity, which is generated from clean, renewable sources, such as solar, wind, geothermal, and biomass, and produces no GHG emissions. Furthermore, the City reduces its electrical use through solar power; the pro shop of the Shoreline Golf Links golf course and the Shoreline Maintenance Facility (in Shoreline Regional Park) are both powered by solar energy.⁶²

Construction of the proposed project would not result in wasteful or unnecessary energy consumption or inefficient energy use. The proposed project would not result in any operational changes at Shoreline Lake other than the use of improved facilities; no additional energy would be consumed as a result of operation of the new boat dock, kayak launch facility, or pier.

Therefore, the proposed project would not adversely affect energy resources or energy conservation. Furthermore, the project would not result in an unnecessary or wasteful use of energy. Therefore, there would be **no impact**.

⁶² City. 2020a. Renewable Energy, Silicon Valley Clean Energy. Available online at: https://www.mountainview.gov/depts/comdev/sustain/renewable_energy.asp. Accessed September 10, 2020.

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

There is no relevant state or local plan that would conflict with minor improvements to stabilize a portion of the shoreline of the lake and replace the aging boat dock facilities. The proposed project would not result in an unnecessary or wasteful use of energy. The proposed project would not conflict with a state or local plan for renewable energy, and therefore there would be **no impact**.

3.7 GEOLOGY AND SOILS

ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
VII.	Geology and Soils. 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 California Geological Survey Special Publication 42.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii)	Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii)	Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv)	Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b)	Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c)	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e)	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.7.1 ENVIRONMENTAL SETTING

Geology and Soils

The project site is in the Coast Ranges Geomorphic Province, which consists of northwest–southeast-trending valleys and ridges that are controlled by folds and faults that resulted from the collision of the Farallon oceanic plate with the Pacific oceanic plate and the North American continental plate. This collision resulted in the subduction of the Farallon plate underneath the Pacific and North American plates, and subsequent strike-slip faulting along the San Andreas Fault System between the Pacific and North American plates.

The project site is in a seismically active area, between the San Andreas Fault to the west and the Hayward Fault to the east. Both faults are part of the San Andreas Fault System. Geologists have determined that the greatest potential for surface fault rupture and strong seismic ground shaking is from “active” faults. Active faults have exhibited evidence of movement during the Holocene epoch (i.e., 11,700 years Before Present [B.P.] to Present Day). Faults classified as “potentially active,” where evidence of movement has occurred in the last 1.6 million years B.P., have a lower potential for surface fault rupture and strong seismic ground shaking. Pre-Quaternary faults (older than 1.6 million years B.P.) are not considered to represent a significant surface fault rupture or strong seismic ground shaking hazard. There are a variety of active and potentially active faults in the project region, including the San Andreas, Hayward, Monte-Vista Shannon, Silver Creek, and Stanford Faults. Table 3.7-1 presents the projected maximum magnitude, slip rate, age of last known fault activity, and approximate distance from the project site for each of these faults.

Table 3.7-1 Regionally Active and Potentially Active Faults

Fault Name	Projected Maximum Magnitude	Slip Rate (millimeters per year)	Age of Last Known Activity (years)	Activity Classification	Distance and Direction from Project Site
San Andreas	8.0	Very High (>9)	<150	Active	8 miles west
Hayward	7.25	High to Very High (1 to >9)	<150	Active	10.25 miles east
Monte Vista-Shannon	7.0	Moderate (0.1 to 1.0)	<15,000	Potentially Active	5 miles west
Silver Creek	7.0	Low to moderate (<0.1 to 1.0)	<1,600,000	Potentially Active	8 miles southeast
Stanford	6.5	Moderate (0.1 to 1.0)	<1,600,000	Potentially Active	2.5 miles west

Notes:

< = less than; > = greater than

Sources:

AECOM. 2019. *Sailing Lake Access Road Improvement Basis of Design, 50% Design*. Prepared by AECOM. Project No. 60548950. Oakland, California.

United States Geological Survey (USGS). 2020. Quaternary Fault and Fold Database. Available online at: <https://earthquake.usgs.gov/hazards/qfaults/>. Accessed September 8, 2020.

Geologic mapping indicates that the project site is underlain by Holocene-age, estuary-derived, Young Bay Mud deposits consisting of soft silt and clay interbedded with thin lenses of silty sands.⁶³ Based on the results of soil borings obtained at the northwestern end of the lake around the dam, the upper soil layers at the project site consist of fill material, which is composed of clayey sand to sandy lean clay ranging from 10.5 to 16 feet below the ground surface (bgs). Deposits of Young Bay Mud, ranging from 5 to 10 feet thick, are present below the embankment fill. The Young Bay Mud is underlain by older alluvial deposits to the maximum depth explored, which was 81 feet bgs. Groundwater was encountered at depths ranging from 23 to 33 feet bgs.⁶⁴

⁶³ Graymer, R.W., B.C. Moring, G.J. Saucedo, C.M. Wentworth, E.E. Brabb, and K.L. Knudsen. 2006. *Geologic Map of the San Francisco Bay Region*. Scientific Investigations Map 2918. United States Geological Survey, Denver, Colorado.

⁶⁴ AECOM. 2019.

Paleontological Resources

Holocene-age materials, which are present at the project site at depths ranging from 15.5 to 26 feet bgs, are too young to contain unique paleontological resources. Older Pleistocene-age alluvial deposits, which are present at depths of 16 to 27 feet bgs at the project site, may contain unique paleontological resources; however, project-related excavation activities would not exceed a depth of approximately 2 to 3 feet bgs.

3.7.2 DISCUSSION

- 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 California Geological Survey Special Publication 42.)**

The project site is not in or adjacent to a fault zoned under the Alquist-Priolo Earthquake Fault Zone Act,⁶⁵ or any other known fault.⁶⁶ The nearest fault zoned under the Alquist-Priolo Act is the San Andreas Fault, approximately 8 miles to the west.⁶⁷ Therefore, there would be **no impact**.

ii) **Strong seismic ground shaking?**

Seismic ground shaking refers to ground motion that results from the release of stored energy during an earthquake. Strong seismic ground shaking can result in damage to or collapse of buildings, bridges, and other structures. The intensity of ground shaking depends on the distance from the earthquake epicenter to the site, the magnitude and depth of the earthquake, and site-specific geologic conditions.

The project site is in a seismically active area. As shown in Table 3.7-1, there are several active and potentially active faults in the project region. The 2014 Working Group on California Earthquake Probabilities estimates that there is a 72 percent chance that an earthquake with a magnitude equal to or greater than 6.7 will occur within the next 30 years in the San Francisco region.⁶⁸

Peak horizontal ground acceleration (PGA), which is a measure of the projected intensity of ground shaking from seismic events, can be estimated by probabilistic methods using a computer model. As part of a seismic deformation analysis performed for the Shoreline Lake Dam, computer modeling performed by AECOM indicated that there is a 1 in 10 probability that within 50 years PGAs of 0.42 and 0.35 would result from earthquakes on the Stanford and San Andreas Faults, respectively.⁶⁹ These calculations indicate that a high level of seismic shaking is anticipated at the project site.

⁶⁵ California Geological Survey (CGS). 2006a. *Earthquake Zones of Required Investigation*. Available online at: <https://maps.conservation.ca.gov/cgs/EQZApp/App/>. Accessed September 8, 2020.

⁶⁶ Jennings, C.W., and W.A. Bryant. 2010. Fault activity map of California: California Geological Survey Geologic Data Map No. 6, map scale 1:750,000.

⁶⁷ CGS. 2006a.

⁶⁸ Field, E.H., and 2014 Working Group on California Earthquake Probabilities. 2015. *UCERF3: A New Earthquake Forecast for California's Complex Fault System*. Fact Sheet 2015–3009. United States Geological Survey, Menlo Park, California.

⁶⁹ AECOM. 2019.

Although strong seismic shaking is likely to occur at the project site at some point in the future, the proposed project does not include housing or other buildings intended for human habitation. Bank armoring with riprap and grading would be designed and engineered using Caltrans specifications for slope, bank, and shore protection.^{70,71} The new boat dock, kayak launch, fixed pier, and sheet pile wall would be designed using standard civil engineering practices. Therefore, this impact would be **less than significant**.

iii) Seismic-related ground failure, including liquefaction?

The project site is in an earthquake zone of required investigation for liquefaction⁷² and has been mapped with a high to very high liquefaction susceptibility.⁷³ Young Bay Mud, which underlies the fill material at the project site, is susceptible to strength loss during earthquake shaking. However, as described in the response to checklist criterion a)ii), above, the proposed project does not include housing or other buildings intended for human habitation. Bank armoring with riprap and grading would be designed and engineered according to Caltrans specifications for slope, bank, and shore protection; and the new boat dock, kayak launch ramp, fixed pier, and sheet pile wall would be designed using standard civil engineering practices. Therefore, this impact would be **less than significant**.

iv) Landslides?

The project site is in a nearly flat area adjacent to San Francisco Bay, where landslides do not represent a hazard.⁷⁴ The proposed minor grading, sediment removal, and replacement of aging boating facilities would not create a landslide hazard. Therefore, there would be **no impact**.

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

The proposed northern shoreline repair, sediment removal, and south beach grading would require minor grubbing of existing vegetation, excavating, and grading. This work would all be accomplished using land-based long-reach excavators; however, sediment removal around the launch ramp and the south beach grading may also require some use of water-based equipment. The proposed new boat dock, kayak launch ramp, fixed pier, and sheet pile wall would all require in-water work.

Disturbance of existing vegetation and soil would mobilize loose soil and could result in soil erosion. Subsequent soil transport during storm events could result in sedimentation both in and downstream of the project site. In addition, wind erosion could occur during the summer months. The in-water work would disturb existing sediment on the lake bottom and result in increased turbidity. Without appropriate sediment control, sediment could be transported through wave action to the lake outfall, which discharges into Permanente Creek and thence into the San Francisco Bay. However, as described in Section 2.8, “Construction Best Management Practices,” the City and/or its construction contractor would implement a variety of BMPs designed to reduce erosion and control sedimentation. These BMPs would include (among others) installation of a turbidity curtain and implementation of a water quality monitoring plan to reduce construction-related sedimentation in the lake during in-water work,

⁷⁰ Caltrans. 2000.

⁷¹ Caltrans. 2018.

⁷² CGS. 2006a.

⁷³ Witter, R.C., K.L. Knudsen, J.M. Sowers, C.M. Wentworth, R.D. Koehler, and C.E. Randolph. 2006. *Maps of Quaternary Deposits and Liquefaction Susceptibility in the Central San Francisco Bay Region, California*. Open-File Report 06-1037. United States Geological Survey, Reston, Virginia.

⁷⁴ CGS. 2006b. *Seismic Hazard Zone Report for the Mountain View 7.5-Minute Quadrangle, Santa Clara, Alameda, and San Mateo Counties, California*. Available online at: <http://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=regulatorymaps>. Accessed September 9, 2020.

implementation of a spill prevention and response plan, preparation of a SWPPP, and implementation of associated BMPs specifically designed to reduce land-based construction-related erosion. The water quality monitoring plan and spill prevention and response plan would be submitted to the City for review and approval prior to the start of construction activities. The SWPPP and BMPs would be submitted to the San Francisco Bay RWQCB, in compliance with the statewide NPDES *General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities* (Order 2009-009-DWQ, as amended by Order 2012-0006-DWQ). Construction techniques that could be implemented to reduce the potential for stormwater runoff include minimizing site disturbance, controlling water flow over the construction site, stabilizing bare soil, and ensuring proper site cleanup. BMPs that could be implemented to reduce erosion may include silt fences, staked straw bales/wattles, silt fences, geofabric, trench plugs, terraces, water bars, soil stabilizers, mulching, and revegetating disturbed areas. Installation of the turbidity curtain and implementation of the water quality monitoring plan, spill prevention and response plan, SWPPP, and BMPs designed to control stormwater runoff and reduce erosion and both land- and water-based sedimentation would result in a **less-than-significant** impact.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

As described previously, based on the results of soil borings obtained at the northwestern end of the lake around the dam, the upper soil layers at the project site consist of fill material, which is composed of clayey sand to sandy lean clay ranging from 10.5 to 16 feet bgs.⁷⁵ Shoreline Lake and the Shoreline Regional Park were constructed in the early 1980s, and the fill material around the lake was designed to meet standard engineering practices for stability. As described in the response to checklist criterion a)ii), above, liquefaction related to the Young Bay Mud that underlies the fill material at the project site could occur. However, the proposed project does not include housing or other buildings intended for human habitation. Bank armoring with riprap and proposed grading would be designed and engineered according to Caltrans specifications for slope, bank, and shore protection; and the new boat dock, kayak launch ramp, fixed pier, and sheet pile wall would be designed using standard civil engineering practices. Therefore, this impact would be **less than significant**.

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

The fill material at Shoreline Lake is composed of clayey sand to sandy lean clay.⁷⁶ Clay tends to expand when wet and contract when dry, resulting in a potential for expansion. However, for the reasons stated in response to checklist criterion c), above, the proposed project as designed would not create substantial risks to life or property from expansive soil. Therefore, this impact would be **less than significant**.

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?

The proposed project involves improvements to portions of the shoreline of Shoreline Lake, as well as the replacement of aging boating facilities, and would not require the use of septic tanks or alternative wastewater

⁷⁵ AECOM. 2019.

⁷⁶ AECOM. 2019.

disposal systems. Portable restrooms would be temporarily provided for construction workers. Therefore, there would be **no impact**.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Soil borings obtained at the Shoreline Lake Dam northwest of the project site⁷⁷ revealed that the project site is underlain by fill material to depths ranging from 10.5 to 16 feet bgs. Deposits of Young Bay Mud, ranging from 5 to 10 feet thick, are present below the fill material. The fill material consists of nonnative materials imported from other locations; any fossils that may have been present in the artificial fill would have been destroyed during the excavation process when the fill material was initially obtained, followed by subsequent grading and compaction at the project site. The Young Bay Mud underlying the project area is of Holocene age, and therefore is too young to contain unique paleontological resources. Because excavations at the project site would not exceed a depth of approximately 2 to 3 feet bgs, older alluvial deposits that could contain unique paleontological resources (below the Young Bay Mud) would not be encountered. Therefore, the proposed project would not directly or indirectly destroy a unique paleontological resource, and there would be **no impact**.

⁷⁷ AECOM. 2019.

3.8 GREENHOUSE GAS EMISSIONS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
VIII.Greenhouse Gas Emissions. Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.8.1 ENVIRONMENTAL SETTING

Certain gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. A portion of the solar radiation that enters the atmosphere is absorbed by the earth's surface, and a smaller portion of this radiation is reflected toward space. This infrared radiation (i.e., thermal heat) is absorbed by GHGs in the atmosphere; as a result, infrared radiation released from the earth that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the "greenhouse effect," is responsible for maintaining a habitable climate on the earth. Without the naturally occurring greenhouse effect, the earth would not be able to support life as we know it. However, GHG emissions associated with human activities are likely responsible for intensifying the greenhouse effect and have led to a trend of unnatural warming of the earth's atmosphere and oceans, with corresponding effects on global circulation patterns and climate.⁷⁸

The most common GHGs are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), water vapor, perfluorocarbons (PFCs), sulphur hexafluoride, and hydrofluorocarbons (HFCs). These gases are released into the atmosphere via a variety of natural and human processes, including:

- combustion of fossil fuels (CO₂ and N₂O);
- fertilization of crops (N₂O);
- off-gassing from agricultural practices and landfills (CH₄);
- refrigeration and cooling (HFCs); and
- aluminum production and semi-conductor manufacturing (PFCs).

Under existing global climate conditions, global warming is theorized to be the major driver responsible for sea-level rise, global weather pattern changes/inconsistencies, ocean acidification, and precipitation rates. Most relevant scientific studies suggest that these extreme climate trends will continue. Natural events and phenomena in California, including the climate, could be adversely affected by these trends. Potential impacts could include increased precipitation and sea-level rise, coastal flooding, mass migration and/or extinction of flora and fauna, and more extreme weather events related to storms and heatwaves.

⁷⁸ Intergovernmental Panel on Climate Change. 2014. Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II, and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Available online at: <https://www.ipcc.ch/report/ar5/syr/>.

The effect of a GHG on the earth's energy balance is expressed in terms of global warming potential (GWP). GWP is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to CO₂. The concept of CO₂ equivalents (CO₂e) is used to account for the different GWP potentials of GHGs to absorb infrared radiation. The GWP of a GHG is based on several factors, including the relative effectiveness of gas in absorbing infrared radiation and the length of time (i.e., lifetime) that the gas remains in the atmosphere ("atmospheric lifetime").

Impacts of GHGs are borne globally, as opposed to localized air quality effects of criteria air pollutants and TACs. The quantity of GHGs that it takes to ultimately result in climate change is not precisely known. Suffice it to say, that quantity is enormous, and no single project alone would measurably contribute to a noticeable incremental change in the global average temperature, or a global, local, or micro-climate. From the standpoint of CEQA, GHG-related effects on global climate change are inherently cumulative.

Regulatory Setting

Executive Order S-3-05

The goal of this Executive Order, signed by Governor Arnold Schwarzenegger on June 1, 2005, is to reduce California's GHG emissions to year 2000 levels by 2010, 1990 levels by 2020, and 80 percent below the 1990 levels by the year 2050. In 2006, this goal was reinforced with the passage of AB 32.

Global Warming Solutions Act of 2006 and Executive Order S-20-06

The Global Warming Solutions Act of 2006 set the same overall GHG emissions reduction goals as that outlined in Executive Order S-3-05. The Act further requires that CARB create a plan that includes market mechanisms and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." Executive Order S-20-06, signed on October 18, 2006, further directed state agencies to begin implementing the Act, including the recommendations made by the State of California's Climate Action Team.

Senate Bill 97

Senate Bill 97 (Chapter 185, Statutes of 2007) required the Governor's Office of Planning and Research to develop recommended amendments to the CEQA Guidelines for addressing GHG emissions. The amendments became effective on March 18, 2010.

BAAQMD CEQA Guidelines

The BAAQMD Air Quality Guidelines supply emissions thresholds for sources of GHG emissions. These thresholds include an emissions threshold of 1,100 metric tons (MT) per year for land-use type projects and 10,000 MT per year for stationary sources. Any projects emitting GHGs above these thresholds would be considered to have a cumulatively considerable significant impact.

City of Mountain View General Plan

The City's General Plan includes a Greenhouse Gas Reduction Program (GGRP),⁷⁹ which contains goals and policies through which the City implements GHG reduction strategies. These strategies are designed to coincide

⁷⁹ City. 2012d. Mountain View Greenhouse Gas Reduction Program. City of Mountain View. Mountain View, California. Available online at: <https://www.mountainview.gov/civicax/filebank/blobdload.aspx?blobid=10700>.

with the statewide GHG reduction targets established by AB 32, which calls for emission reductions to below 1990 levels by 2020, and 80 percent below 1990 levels by 2050.

3.8.2 DISCUSSION

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

Project Construction

Construction-related GHG emissions would be generated by vehicle engine exhaust from construction equipment, haul trips, and construction worker trips. GHG emissions generated by the project would consist primarily of CO₂. Emissions of other GHGs, such as CH₄ and N₂O, are important in regard to global climate change; however, even when considering the higher GWPs of these other GHGs, their contribution to total GHG emissions is small compared with CO₂ emissions from the project's emission sources (i.e., construction equipment and on-road vehicles). However, where appropriate emission factors were available, emissions of CH₄ and N₂O were included in the analysis of the project.

The BAAQMD CEQA Air Quality Guidelines contain methodology and thresholds of significance for evaluating GHG emissions from land use projects. The BAAQMD thresholds were developed specifically for the Bay Area after considering the latest Bay Area GHG inventory and the effects of AB 32 scoping plan measures that would reduce regional emissions. The BAAQMD applies GHG efficiency thresholds to projects with emissions of 1,100 MT of CO₂e or greater. Projects that have emissions below 1,100 MT of CO₂e per year are considered to have less-than-significant GHG emissions. These thresholds are typically applied to long-term operational emissions.

Construction of the project would generate approximately 184 MT CO₂e over the entire construction period, which would last up to 5 months. These would be well below the 1,100 MT per year threshold that is used to judge the significance of GHG emissions from projects. Therefore, this impact would be **less than significant**.

Additional emission modeling assumptions and details (the project's size, land uses, construction schedule, and other CalEEMod inputs) are provided in Appendix A.

Project Operations

Implementation of the project would not require or result in additional operational and maintenance activities above existing conditions. Therefore, **no impact** would occur as a result of the proposed project's operation.

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

Project Construction

None of the measures listed in the CARB *Climate Change Scoping Plan* (2008), which contains the main strategies that California would use to achieve emission reductions necessary to meet the goals of AB 32, relate directly to construction activities. The scoping plan includes some measures that would indirectly address GHG emissions levels associated with construction activity, such as the phasing in of cleaner technology for diesel

engine fleets (including construction equipment) and the development of a low-carbon fuel standard. However, the successful implementation of these measures depends primarily on the development of laws and policies at the state level. It is assumed that those policies formulated under the mandate of AB 32 that apply to construction-related activity, either directly or indirectly, would be implemented during construction of the project if those policies and laws were developed and adopted before the start of project construction. Therefore, project construction is not expected to conflict with the scoping plan.

Also, in August 2012, the City adopted the GGRP, a tool designed to implement the General Plan energy and climate change policies. The GGRP identified five main reduction strategies in transportation, energy, water, solid waste, and carbon sequestration. The Project's consistency with the five strategies is outlined in Table 3.8-1. The project would not conflict with any applicable plan, policy, or regulation for the purpose of reducing GHG emissions. As outlined in Table 3.8-1, the proposed project is consistent with the GGRP's strategies to reduce GHG emissions. Therefore, this construction-related impact would be **less than significant**.

Table 3.8-1 Project Consistency with GGRP GHG Reduction Strategies

Program Strategy	Project Consistency
Energy: The Energy Strategy recommends ways to increase energy efficiency in existing buildings, enhance energy performance for new construction, and increase the use of renewable energy.	Not Applicable. The proposed project does not propose new building construction.
Waste: The Waste Strategy increases waste diversion and recycling, reducing the consumption of materials that otherwise end up in landfills.	Consistent. Proposed project construction would adhere to the City's construction and demolition waste tracking and diversion requirements ⁸⁰ and would not conflict with this strategy.
Water: The Water Strategy promotes the efficient use and conservation of water in buildings and landscapes.	Consistent. The project would comply with established landscaping regulations to reduce water waste.
Transportation: The Transportation Strategy encourages transit, carpooling, walking, and bicycling as viable transportation modes to decrease the need to drive.	Not applicable. The project does not involve improvements to transportation facilities.
Carbon Sequestration: The Carbon Sequestration Strategy uses street trees and urban forestry to capture and store carbon emitted from other sources.	Not Applicable. The proposed project is not related to urban forestry.

Source: City 2012a

Notes:

GGRP = Greenhouse Gas Reduction Program

GHG = greenhouse gas

Project Operations

Project operations would not require or result in additional operational and maintenance activities above existing conditions. Therefore, **no impact** would occur as a result of the proposed project operation.

⁸⁰ City. n.d. "Construction and Demolition Waste Tracking and Diversion Requirements." Available online at: <https://www.mountainview.gov/civicax/filebank/blobload.aspx?BlobID=30741>.

3.9 HAZARDS AND HAZARDOUS MATERIALS

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

3.9.1 ENVIRONMENTAL SETTING

Known Hazardous Materials Sites

AECOM performed a search of publicly available databases maintained under Public Resources Code Section 65962.5 (i.e., the “Cortese List”) to determine whether any known hazardous materials are present either in or within 0.25 mile of the project site. The Hazardous Waste and Substances Site List (the “EnviroStor” database) is maintained by the California Department of Toxic Substances Control (DTSC) as part of the requirements of Public Resources Code Section 65962.5. The State Water Resources Control Board (SWRCB) maintains the GeoTracker database, an information management system for groundwater. The results of records searches from the EnviroStor⁸¹ and GeoTracker⁸² databases indicate that within 0.25 mile of the project site, there

⁸¹ California Department of Toxic Substances Control. 2020. EnviroStor. Available online at: <https://www.envirostor.dtsc.ca.gov/public/>. Accessed September 10, 2020.

⁸² State Water Resources Control Board (SWRCB). 2020. GeoTracker. Available online at: <https://geotracker.waterboards.ca.gov/>. Accessed September 10, 2020.

are no open active cases, and there is one closed case: the Mountain View Shoreline Landfill (MVSL), which is discussed in detail below.

Mountain View Shoreline Landfill

The MVSL is a closed Class III solid waste landfill in Mountain View. The MVSL is integrated in and underlies most of Shoreline Regional Park (Figure 3.9-1). The information presented below related to the MVSL is summarized from the *Shoreline Landfill Master Plan Final Draft*.⁸³ The landfill consists of three distinct and separate sites: the 544-acre waste area, containing approximately 350 acres of waste; the 84-acre Vista Landfill area, containing approximately 65 acres of waste; and the 27-acre Crittenden Landfill area, containing approximately 24 acres of waste. The City established a master plan for the site prior to acceptance of waste that allowed the diversion of selected materials to specific areas, based on the area's intended end use. The waste was recycled and concrete was crushed and sold as aggregate whenever possible. Once the MVSL landfill reached its permitted height, the landfill was closed and engineered to protect human health and the environment by installing a low-permeability cap. The final cover consisted of a compacted clay material immediately adjacent to the waste, followed by a layer of topsoil to support vegetation. The cap prevents human exposure to waste materials underneath Shoreline Regional Park, and also limits the amount of rainfall that can permeate through the waste materials, thereby reducing the amount of leachate in the landfill cells.

544-Acre Waste Area

The 544-acre parcel was purchased in 1970 by the City and was operated as a solid waste disposal facility through 1981. The City accepted 8,450,000 tons of refuse during its operation. The 544-acre waste area was operated under Solid Waste Facilities Permit No. 43-AA-0006. This area received approximately 12,500,000 cy of nonhazardous solid waste in 13 separate waste disposal cells. The waste received included construction/demolition, landscaping, and noncontract municipal waste. Some municipal sludge was accepted and used as a soil amendment. No hazardous wastes, sewage, or grease interceptor wastes were accepted. The 544-acre waste area has been subdivided into the North Shore, Back Nine, Front Nine, and 6A Northeast areas, as shown on Figure 3.9-1.

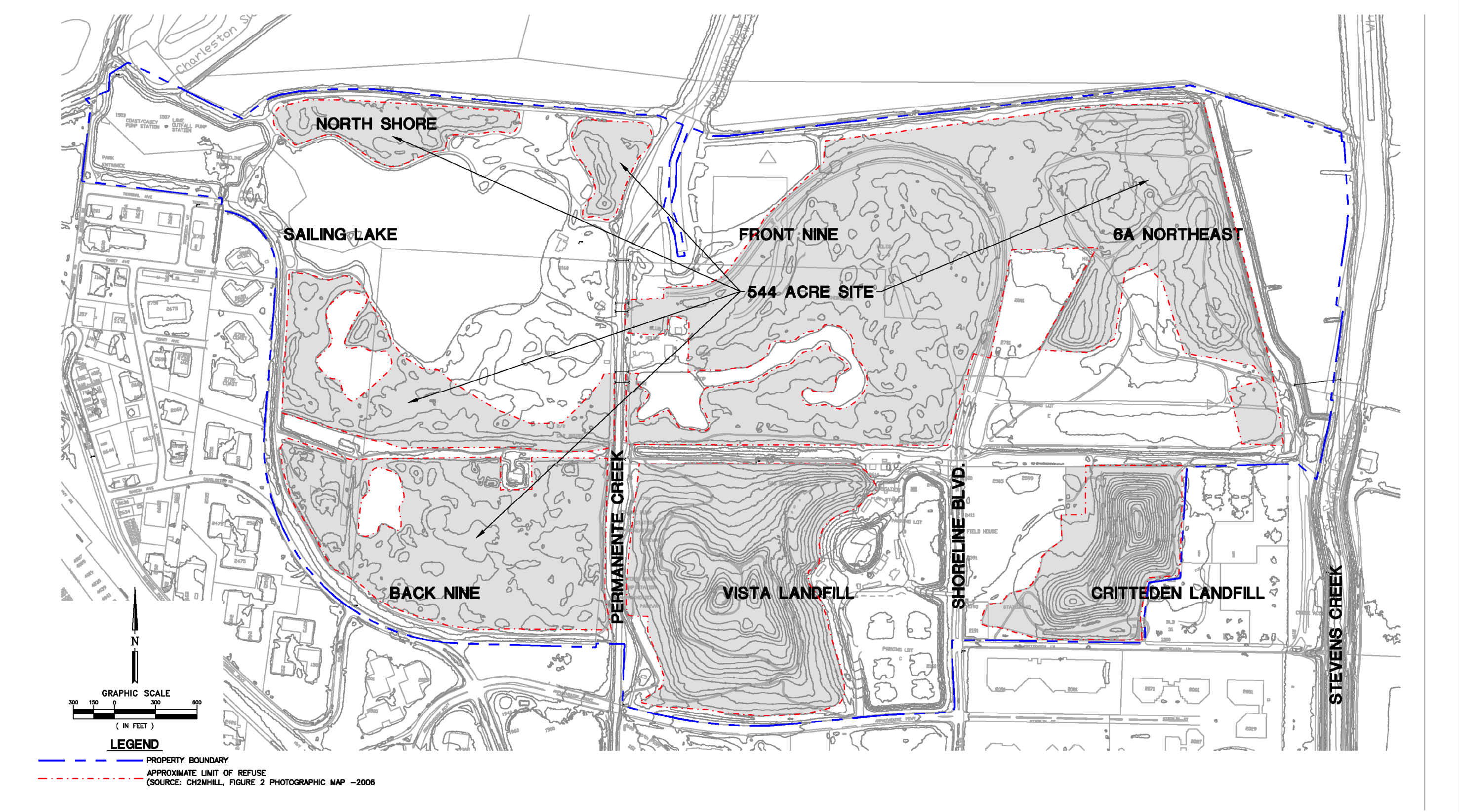
The 544-acre waste area was closed under the prescriptive requirements of the CCR Title 14 in the 1980s, which required a 3- to 4-foot-thick cover with 1-foot-thick clay. Site closure was certified by the San Francisco Bay RWQCB in 1997.

This area includes Shoreline Lake and the project site. However, the project site not within the approximate limits where refuse was placed, as shown in Figure 3.9-1.

Vista Area

The Vista Landfill area encompasses 84 acres and was operated by the City between 1981 and 1993. Approximately 3,840,000 tons of municipal solid waste were deposited during this period. A portion of this area was leased to Shoreline Amphitheatre Partners in 1986 for the development of the Shoreline Amphitheatre. The Vista Landfill area is on a hill with moderate to steep slopes and is southwest of the 544-acre waste area, on the eastern side of Permanente Creek (see Figure 3.9-1).

⁸³ City. 2013. *Shoreline Landfill Master Plan, Final Draft*. Prepared by: Tetra Tech BAS. Project No. 12-39. Oakland, California.



Closure of the Vista Landfill area was approved by the San Francisco Bay RWQCB and CalRecycle (formerly the California Integrated Waste Management Board) under the prescriptive requirements of CCR Title 27, with a cover consisting of three layers: 2 feet of soil adjacent to the waste materials, followed by a 1-foot-thick clay layer, and a 2-foot-thick soil cap on the top.

Crittenden Landfill Area

The 27-acre Crittenden Landfill area accepted approximately 800,000 tons of waste from 1968 through 1988. This area was operated as a privately owned landfill by the Ferrari Brothers starting in 1968 and was acquired by the City in 1984. Some refuse was excavated and reconsolidated in 1995 and 1996 to form the current footprint of this area. The Crittenden Landfill area is on a hill with moderate to steep slopes. It is southeast of the 544-acre site and east of the Vista Landfill site (see Figure 3.9-1).

Closure of the Crittenden Landfill Site was approved by the San Francisco Bay RWQCB and CalRecycle under the prescriptive requirements of CCR Title 27, with a cover consisting of three layers: 1 foot of soil adjacent to the waste materials, followed by a 1-foot-thick clay layer, and 2-foot-thick soil vegetation layer on the top.

Landfill Monitoring and Maintenance

The landfill's post-closure infrastructure includes a below-grade gas collection and control system (GCCS), consisting of three distinct piping networks, typically co-located in the same trench (i.e., landfill gas collection, leachate collection, and compressed air supply); groundwater monitoring network; stormwater control infrastructure; and the leachate and condensate disposal systems.

The City is responsible for the post-closure maintenance and operation of the extensive landfill GCCS. Construction on the initial phase of the GCCS for the 544-acre site (where the project site is located) began in 1977 and was completed in 1978; it was subsequently expanded in 1986, 1989, 1993, 1994, 1995, and 2000. The system at the 544-acre site includes 140 vertical extraction wells and six horizontal trench collectors. The MVSL has perimeter vent trenches that prevent migration of landfill gas beyond the property boundary. Collected landfill gas is directed to the central landfill gas flare station along the northern portion of the Vista Landfill site. The landfill gas is converted into energy by means of micro-turbines, which supply energy for the flare station and the sewage pump station. Pacific Gas and Electric Company purchases some of the excess energy generated by the micro-turbines, and some of the excess energy is also sold to the nearby Google campus. Subsurface landfill fires can occur at any landfill with or without a GCCS. Although landfill fires are infrequent occurrences, they can be difficult and costly to extinguish. Historically, the MVSL has had one subsurface landfill fire every 3 to 5 years.

In accordance with state and federal requirements, including San Francisco Bay RWQCB Order No. R2-2020-0029, groundwater is monitored at MVSL to ensure that waste constituents do not adversely affect groundwater quality. Groundwater monitoring is performed semi-annually at MVSL.

Water that comes into contact with landfill wastes and potentially leaches out contaminants is considered "leachate." Because leachate poses a threat to water quality near landfills, it is pumped and treated where possible. Leachate extraction at the MVSL is performed using dual-purpose gas/leachate extraction wells, which also enhance the facility's gas collection capabilities. The extracted leachate is conveyed by the sanitary sewer system to the Palo Alto Regional Water Pollution Control Plant for treatment.

In addition to leachate, landfill gas condensate is also generated at the MVSL site. Condensate consists of vapors that condense into a liquid due to cooling in the landfill gas extraction system. The leachate and condensate are permitted to be discharged at three different connections to the City's sanitary sewer system for transport to the Palo Alto Regional Water Quality Control Plant under Waste Discharge Permit No. 546 issued for the MVSL.

Schools

The nearest K-12 school is The Girls' Middle School, at 3400 W. Bayshore Road, Palo Alto, approximately 1.1 mile west of the project site (on the western side of U.S. 101).

Airports

The Palo Alto Airport is approximately 1.8 miles northwest of the project site. This public-use airport owned by the City of Palo Alto has one paved runway approximately 2,443 feet long, with 77 aircraft based at the field and an average of 525 flights per day.⁸⁴ The project site is underneath the Runway 31's typical aircraft traffic patterns, but is not in the height-restricted area under Federal Aviation Regulations Part 77, is not in any of the airport safety zones, and is not in the airport influence area.⁸⁵

Moffett Federal Airfield is approximately 1.75 miles southeast of the project site. This private-use airport owned by the National Aeronautics and Space Administration has two paved runways that are 9,197 and 8,122 feet long, respectively. There are 24 aircraft based at the field.⁸⁶ The project site is in the height-restricted area under Federal Aviation Regulations Part 77; the maximum height of any structure is limited to 182 feet above mean sea level (msl). However, the project site is not in any of the designated airport safety zones, nor is it in the airport influence area.⁸⁷

Fire Hazards

The project site is not in a wildland fire hazard area.⁸⁸ Existing fire protection services are provided by the Mountain View Fire Department (MVFD).

3.9.2 DISCUSSION

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

Transportation of hazardous materials on area roadways is regulated by the California Highway Patrol and Caltrans, and use of these materials is regulated by DTSC, as outlined in CCR Title 22. The City and its construction contractors would be required to use, store, and transport hazardous materials in compliance with applicable federal and state regulations during project construction and operation. Because the project would be required to implement and comply with existing hazardous material regulations and because each of these

⁸⁴ AirNav. 2019a. Palo Alto Airport. Available online at: <https://airnav.com/airport/KPAO>. Accessed September 10, 2020.

⁸⁵ Santa Clara County Airport Land Use Commission (ALUC). 2016a. *Comprehensive Land Use Plan Santa Clara County, Palo Alto Airport*. Available online at: <https://www.sccgov.org/sites/dpd/Commissions/ALUC/Pages/ALUC.aspx>. Accessed September 10, 2020.

⁸⁶ AirNav. 2019b. Moffett Federal Airfield. Available online at: <https://airnav.com/airport/KNUQ>. Accessed December 11, 2019.

⁸⁷ ALUC. 2016b. *Comprehensive Land Use Plan Santa Clara County, Moffett Federal Airfield*. Available online at: <https://www.sccgov.org/sites/dpd/Commissions/ALUC/Pages/ALUC.aspx>. Accessed September 10, 2020.

⁸⁸ California Department of Forestry and Fire Protection (CAL FIRE). 2020. *Fire Hazard Severity Zone Viewer*. Available online at: <https://egis.fire.ca.gov/FHSZ/>. Accessed September 10, 2020.

regulations is specifically designed to protect the public health through improved procedures for the handling of hazardous materials, better technology in the equipment used to transport these materials, and a more coordinated quicker response to emergencies, this impact would be **less than significant**.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?

Construction of the proposed project would entail the use of small amounts of hazardous materials such as fuel, oils, and solvents. However, the use of these materials is heavily regulated at both the federal and state level. As stated in Section 2.8, "Construction Best Management Practices," the City or its construction contractor would prepare and implement a spill prevention and response plan, which would include prevention and contingency measures to reduce the potential for accidental spills, along with procedures for implementation of appropriate and timely cleanup activities if spills do occur. Furthermore, construction equipment, materials, and stockpiles would be staged and stored in upland areas (i.e., the existing paved parking lot east of the boathouse/restaurant) to prevent the discharge of leaks or spills into the lake. Therefore, this impact would be **less than significant**.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

There are no K-12 schools within 0.25 mile of the project site; the nearest K-12 school is The Girls' Middle School, approximately 1.1 mile to the west. Furthermore, implementation of the proposed improvements to portions of the shoreline of the lake and replacement of the aging boating facilities would not result in the handling of acutely hazardous materials. Therefore, there would be **no impact**.

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

As described in detail above in the "Environmental Setting," no known open hazardous material sites that are on the Cortese List (i.e., compiled pursuant to Government Code Section 65962.5) are within 0.25 mile of the project site. There is, however, one known closed site: the MVSL, which underlies and is incorporated in the Shoreline Regional Park, where the project site is located. The project site is outside of the approximate limits of refuse placement.

The engineered final cover system at the MVSL ensures the protection of human health and the environment by containing lateral migration of leachate that can contaminate surface water; minimizing the infiltration of precipitation that generates leachate, thereby reducing potential groundwater contamination; and enhancing the collection of landfill gas, which can be used as an energy source or destroyed in the landfill's gas flare system. The final cover functions with minimum maintenance and provides waste containment to protect public health and safety by controlling vectors, fire, odor, litter and landfill gas emissions. The cover also prevents direct human and wildlife contact with landfill refuse. Several factors were taken into consideration in establishing the final cover design for the MVSL, including the geometry of the existing landfill and the local climatic conditions. The final cover is also compatible with post-closure land use and provides a base for vegetation, which reduces drainage velocities and erosion. In addition, the final cover configuration is designed to accommodate waste settlement and subsidence, as well as the effects of seismic events specified in the regulations throughout the

minimum 30-year post-closure maintenance period and beyond. The completed final cover over the MVSL performs the following functions:⁸⁹

- minimizes stormwater infiltration into and through the closed landfill;
- minimizes the venting of gas generated in the facility;
- isolates the buried wastes from the surface;
- promotes drainage;
- minimizes erosion or abrasion of the cover; and
- accommodates settlement and subsidence so that cover integrity and positive drainage is maintained.

The proposed project would avoid any disturbance to the landfill cover, based on the landfill as-built plans. Furthermore, the project-related grading would be sloped from east to west to allow for proper shoreline drainage into the lake, without creating any areas of ponding, in accordance with San Francisco Bay RWQCB Order No. R2-2020-0029. However, the precise limits of the landfill refuse in relationship to project-related construction activities cannot be known with certainty. Therefore, it is possible (although unlikely) that project-related excavation and/or grading could encounter landfill refuse, resulting in a human and environmental health hazard. Furthermore, landfill discharge lines, gas lines, leachate collection lines, and air supply lines are present underground in the project area and could be intercepted by project-related construction activities. Accidental rupture of these lines could result in a human and environmental health hazard. Therefore, this impact is considered potentially significant.

Mitigation Measure HAZ-1: Prepare and Implement a Health and Safety Plan.

Prepare a Health and Safety Plan that is designed to provide processes and procedures to minimize human health effects and environmental contamination resulting from exposure to MVSL refuse, landfill gas, or landfill leachate. The plan shall describe response protocols and address specific needs in the event of an accidental exposure, rupture, release, or spill that poses a threat to the environment or to human health and welfare. The plan shall include, at a minimum, the following requirements:

- implementing construction worker training related to the potential for hazardous materials, including job site briefings to discuss specific measures that will be implemented for spill prevention, reporting, and prompt clean-up;
- educating construction workers regarding the location of existing landfill gas, leachate, and air lines to be avoided during construction activities; and
- proper notification procedures to be followed and actions to be implemented in the event that landfill refuse is encountered or landfill gas or leachate lines are ruptured.

The Health and Safety Plan prepared by the contractor shall be submitted to the MVFD and the City's Public Works Department for review and approval prior to the start of any construction activities.

Implementation of Mitigation Measure HAZ-1 would reduce the impact related to construction in a Cortese-listed site to a less-than-significant level because a Health and Safety Plan would be prepared and implemented that

⁸⁹ City. 2013.

requires construction worker personnel training, and details proper notification procedures and actions to be taken if landfill materials are encountered. Therefore, this impact would be **less than significant with mitigation**.

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

The nearest airports are the Palo Alto Airport and Moffett Field, approximately 1.8 miles north and 1.75 miles southeast of the project site, respectively. Proposed improvements to portions of the shoreline at the lake would have no effect on airport safety hazards because the proposed project would not include tall buildings, would not include nighttime lighting that could be mistaken for airport lighting, and would not result in an increase in waterfowl habitat that could result in birdstrikes. The use of tall cranes during construction activity would not be required. Furthermore, the project site is not in the safety zones or the airport influence areas of either airport. Therefore, there would be **no impact**. (Please see Section 3.13, “Noise,” for an evaluation of noise impacts.)

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

Project-related construction activities would occur along portions of the northeastern and southeastern shoreline of the lake and would not interfere with emergency response or evacuation plans. The construction staging area would be in a portion of the existing paved parking area on the eastern side of the boathouse/restaurant. The staging area would be fenced, and access would be restricted to authorized personnel only. The staging area would not obstruct the drive aisles. Therefore, the proposed project would have no effect on adopted emergency response plans or emergency evacuation plans. Emergency access to Shoreline Lake and the boathouse/restaurant would continue to be provided via North Shoreline Boulevard. Therefore, there would be **no impact**.

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

As discussed in detail in Section 3.20, “Wildfire,” the project site and vicinity are in a local responsibility area (LRA) rather than a state responsibility area (SRA), and are not classified as a very high or high fire hazard severity zone.⁹⁰ The project site is in Shoreline Regional Park, and is surrounded by the Shoreline Golf Links golf course, San Francisco Bay, Coast Casey Forebay, and high-intensity office uses; the project area is not adjacent to any wildlands. Fire protection services would continue to be provided by the MVFD Station No. 5, which has sufficient capacity to serve the proposed project. Therefore, the proposed project would have **no impact** related to exposure of people or structures to wildland fires.

⁹⁰ CAL FIRE. 2020.

3.10 HYDROLOGY AND WATER QUALITY

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

3.10.1 ENVIRONMENTAL SETTING

Surface Water

Shoreline Lake Dam impounds Shoreline Lake—a boating facility that is part of Shoreline Regional Park. Salt water is regularly pumped into the lake by a submersible pump system in Charleston Slough, northwest of the lake. Water is pumped into the lake at two near-surface discharge points positioned along the northern side of the lake. Water is discharged out of eastern side of the lake to Permanente Creek via a box weir, as regulated under a Lake Management Plan approved by the San Francisco Bay RWQCB.⁹¹ Permanente Creek, which is approximately 550 feet east of the project site, discharges into Mountain View Slough.

⁹¹ Nirmal Sajjan, Principal Civil Engineer, City of Mountain View, 2020. Personal communication.

In addition to regular water sampling and analyses, Shoreline Lake operations include regular replenishment of lake waters from Charleston Slough and operation of a SolarBee© system⁹² to improve circulation within the lake, reduce stratification, and increase the dissolved oxygen content in the lake's water column.

The City is authorized by San Francisco RWQCB Order No. 93-120 to discharge up to 3,250 gallons of lake water to the adjacent Coast Casey Forebay, no more than twice each year, to control weed growth and maintain stormwater retention capacity. The discharge mixes with urban stormwater runoff that is pumped into the Palo Alto Flood Control Basin (to the northeast), which in turn discharges to the South San Francisco Bay.

Surface Water Quality

As discussed in detail in Section 3.9, "Hazards and Hazardous Materials," Shoreline Regional Park was constructed at the site of the former MVSL. Shoreline Lake is not underlain by refuse materials; however, refuse surrounds the lake on the northern, eastern, and southern sides (see Figure 3.9-1 in Section 3.9, "Hazards and Hazardous Materials"). Because leachate poses a threat to water quality near landfills, it is pumped and treated where possible. Leachate extraction at the MVSL is performed using dual-purpose gas/leachate extraction wells, which also enhance the facility's gas collection capabilities. The extracted leachate is conveyed by the sanitary sewer system to the Palo Alto Regional Water Pollution Control Plant for treatment. The landfill cap prevents human exposure to waste materials underneath Shoreline Regional Park, and also limits the amount of rainfall that can permeate through the waste materials, thus reducing the amount of leachate in stormwater.

Flooding

Shoreline Regional Park is bounded by a perimeter earthworks levee system that was constructed in the 1970s to separate the former MVSL from former salt evaporator ponds (on the northern side), Stevens Creek (on the eastern side), and Charleston Slough (on the northwestern side). Smaller levees also border the eastern and western sides of Permanente Creek.⁹³ A levee is also present along the northern side of Shoreline Regional Park where it borders the Bay.

According to the most recent Flood Insurance Rate Map prepared by the Federal Emergency Management Agency's (FEMA's) National Flood Insurance Program,⁹⁴ the project site is classified as Zone A—a 100-year flood hazard zone (1 percent annual exceedance probability) where the base flood elevation has not been determined (see Figure 3.10-1). The proposed staging area is not in a 100-year flood hazard zone.

Groundwater

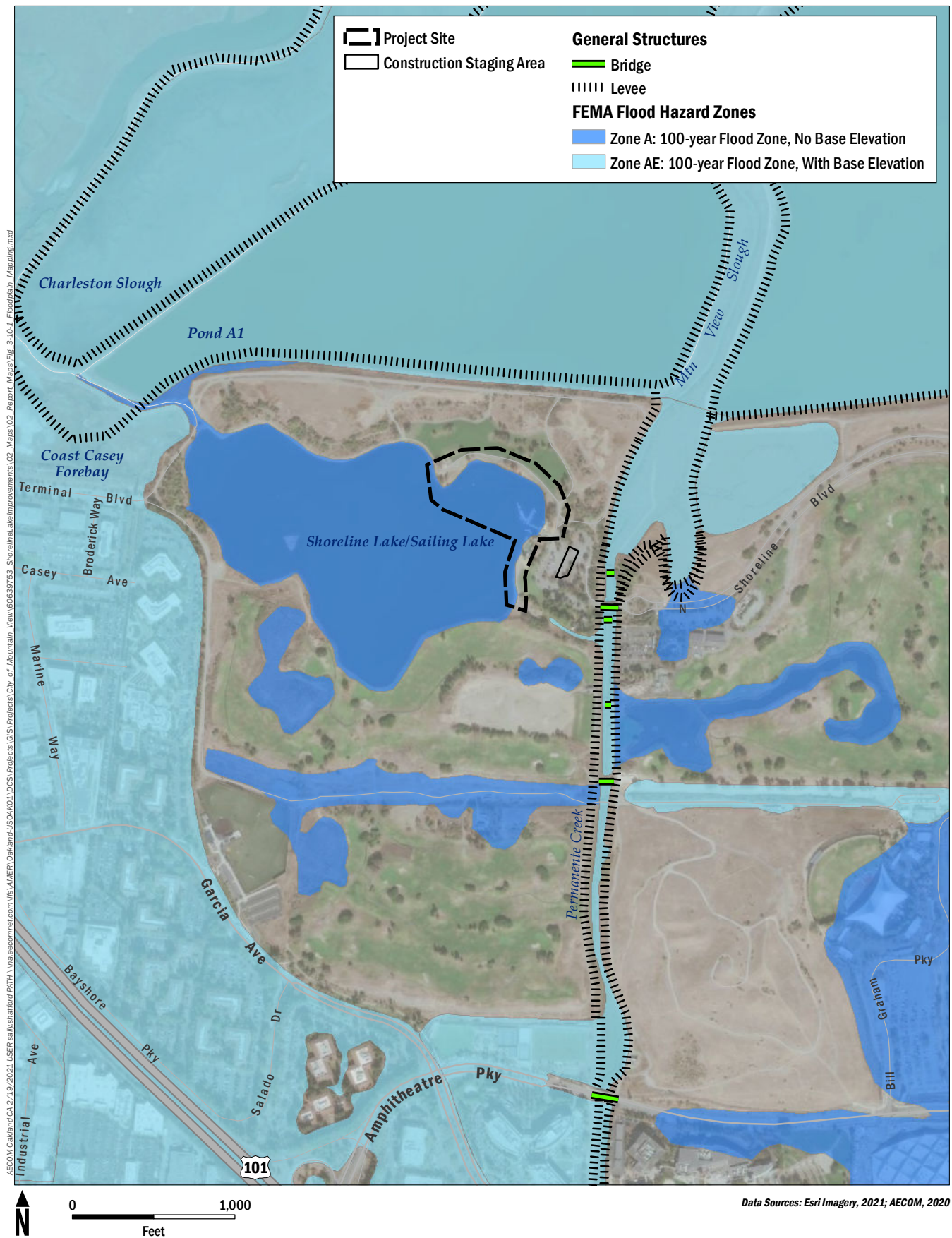
Groundwater at the project site and the immediate vicinity occurs in numerous localized and discontinuous sand and gravel zones representing ancient streambeds, which are now enclosed in a matrix of silt and clay. Groundwater generally flows from upland areas south of Shoreline Regional Park northward toward San Francisco Bay. There are two aquifers underneath Shoreline Regional Park. The upper aquifer is an unconfined unit that occurs at elevations ranging from approximately -5 feet msl to about -70 feet msl. There is an extensive (approximately 70-foot-thick) regional aquitard, which confines the lower aquifer, at an elevation of approximately -140 feet msl.⁹⁵

⁹² A SolarBee® is a small, floating pump powered by solar panels that circulates water at a preset depth.

⁹³ City. 2013.

⁹⁴ Federal Emergency Management Agency (FEMA). 2009. Flood Insurance Rate Map, FEMA Flood Map Service Center. Available online at: <https://msc.fema.gov/portal/home#>. Accessed September 9, 2020.

⁹⁵ City. 2013b.



Groundwater Quality

Radial flow of groundwater into the MVSL facility is maintained using three pumping centers to ensure that leachate from the MVSL does not migrate off site. Most pumping occurs at the Crittenden Sump, which is positioned immediately west of the former Crittenden landfill site (see Section 3.9, “Hazards and Hazardous Materials,” for additional details). Smaller groundwater volumes are pumped along the western side of the Crittenden site by two extraction wells, which discharge to Permanente Creek via a lake discharge pipe from the lake weir outlet. Groundwater control has also been enhanced passively by groundwater infiltration into sewer lines that underlie the MVSL. The influence of these pumping systems overlaps and modifies the local groundwater flow patterns by reducing typical groundwater levels in the area (ranging from approximately 5 to 15 feet bgs) to depths as great as 60 feet, and by inducing radial inward flow from a distance of approximately 1 mile. Groundwater pumped at the Crittenden Sump is discharged to Stevens Creek in accordance with San Francisco Bay RWQCB Order No. R2-2017-0048 (Volatile Organic Compounds and Fuel General Permit).⁹⁶ The Crittenden Sump pumps at an average rate of approximately 70 to 80 gallons per minute. The two extraction wells were designed and positioned near Shoreline Lake, based on numerical modeling performed in 1996 as part of the landfill closure. With their installation in 2004, the two wells act to complement pumping at Crittenden Sump and ensure that groundwater does not flow away from the MVSL. In accordance with state and federal requirements, including San Francisco Bay RWQCB Order No. R2-2020-0029, groundwater monitoring is performed semi-annually at MVSL.⁹⁷

3.10.2 DISCUSSION

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

The proposed project would require construction over an approximately 1.1-acre site. The proposed northern shoreline repair, sediment removal, and south beach grading would require minor grubbing of existing vegetation, excavating, and grading. This work would all be accomplished using land-based long-reach excavators; however, sediment removal around the launch ramp and the south beach grading may also require some use of water-based equipment. The proposed new boat dock system, kayak launch ramp, fixed pier, and sheet pile wall would all require in-water work.

Disturbance of existing vegetation and soil would mobilize loose soil and could result in soil erosion. Subsequent soil transport during storm events could result in sedimentation both in and downstream of the project site. In addition, wind erosion could occur during the summer months. Material stockpiling and storage of equipment at the paved offsite staging area could result in erosion of stockpiled soils and transport of hazardous materials such as fuels and oils from construction equipment in stormwater. The in-water construction work would disturb existing sediment on the lake bottom and result in increased turbidity. Without appropriate controls, sediment could be transported through wave action to the lake outfall, which discharges into Permanente Creek and thence into the San Francisco Bay. In addition, overland stormwater runoff could result in the transport of disturbed soils,

⁹⁶ San Francisco Bay Regional Water Quality Control Board (RWQCB). 2017. *General Waste Discharge Requirements for Discharge or Reclamation of Extracted and Treated Groundwater Resulting from the Cleanup of Groundwater Polluted by Volatile Organic Compounds (VOCs), Fuel Leaks, Fuel Additives, and Other Related Wastes*. Order No. R2-2017-0048 (NPDES No. CAG912002).

⁹⁷ City. 2013b.

soil stockpiles, and accidental spills of hazardous materials into Shoreline Lake and/or Permanente Creek and thence into the San Francisco Bay.

Erosion and construction-related wastes have the potential to degrade water quality and beneficial uses if they enter runoff and flow into waterways, potentially altering the dissolved oxygen content, temperature, pH, suspended sediment and turbidity levels, and/or nutrient content of receiving waters; or causing toxic effects in the aquatic environment. Therefore, project-related construction activities could violate water quality standards or otherwise substantially degrade water quality.

Shoreline Lake is potentially jurisdictional as an Other Water of the United States under Section 404 of the Clean Water Act (33 United States Code [U.S.C.] 1344) and/or historic Section 10 of the Rivers and Harbors Act (33 U.S.C. 403), regulated by USACE, and would be jurisdictional and regulated by the San Francisco Bay RWQCB under the new California Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Water Code §13000 et seq.; Executive Order W-59-93). In some areas, the project would reduce the amount of surface area of the lake (about 1,869 square feet); in others, surface area would be created (about 1,912 square feet). As a result, the project would result in small net increase (about 43 square feet) in lake surface area. The project would result in changes to the substrate of the lake and shoreline associated with excavation (or cut) and placement of materials (fill) in Shoreline Lake. In total, the project would result in cut volumes of about 535 cy and fill volumes of about 278 cy, and would result in net increase of about 257 cy in the lake. The cut and fill activities (in regulatory terms, dredge and fill) would require authorization from the USACE and/or RWQCB, and the City would obtain the necessary permits prior to project construction. Because the project would result in a net increase in surface area and increase in lake volume, the need to offset loss of surface waters through compensatory mitigation is not anticipated at this time.

Water quality in Shoreline Lake is regulated under a Lake Management Plan approved by the San Francisco Bay RWQCB.⁹⁸ Water quality in San Francisco Bay and its tributary streams is regulated by the San Francisco Bay RWQCB under the *San Francisco Bay Basin Water Quality Control Plan* (Basin Plan).⁹⁹

The proposed project is required by law to comply with the provisions of the SWRCB's *NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities* (Order 2009-009-DWQ, as amended by Order 2012-0006-DWQ) (Construction General Permit).¹⁰⁰ The Construction General Permit regulates stormwater discharges for construction activities under the Clean Water Act, and applies to all land-disturbing construction activities that would disturb 1 acre or more. The project applicant must submit a notice of intent to discharge to the San Francisco Bay RWQCB and must prepare and implement a SWPPP that includes BMPs to minimize those discharges. All NPDES permits also have inspection, monitoring, and reporting requirements. Dischargers must also implement construction and operational design features and BMPs that are specifically intended to reduce the potential for downstream hydromodification. The Construction General Permit also requires implementation of BMPs that are designed to prevent accidental spills of hazardous materials during the construction phase to the maximum extent practicable, and the SWPPP must include procedures for immediate cleanup should any releases occur. The San Francisco Bay RWQCB also has the authority to issue

⁹⁸ Nirmal Sajjan, Principal Civil Engineer, City of Mountain View, 2020. Personal communication.

⁹⁹ San Francisco Bay RWQCB. 2019. *San Francisco Bay Basin Water Quality Control Plan*. Available online at: https://www.waterboards.ca.gov/sanfranciscobay/basin_planning.html. Accessed September 9, 2020.

¹⁰⁰ SWRCB. 2012. *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order No. 2012-006-DWQ*. Available online at: https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2012/wqo2012_0006_dwq.pdf. Accessed September 9, 2020.

waivers to waste discharge reports (WDRs) and/or WDRs for broad categories of “low-threat” discharge activities that have minimal potential for adverse water quality effects when implemented according to prescribed terms and conditions. This includes minor discharges of uncontaminated groundwater during construction dewatering, which is regulated by the San Francisco Bay RWQCB under the Construction General Permit.

The project site lies within the jurisdiction of the Santa Clara Valley County Urban Runoff Pollution Prevention Program, which has an NPDES permit to discharge stormwater from municipal separate storm sewer systems (MS4 Permit) issued by the San Francisco Bay RWQCB (Order No. R2-2015-0049).¹⁰¹ The MS4 Permit requires the Santa Clara Valley County Urban Runoff Pollution Prevention Program and its members agencies (including the City) to reduce pollutants in stormwater discharges to the maximum extent practicable and to effectively prohibit nonstormwater discharges. The MS4 Permit contains requirements for implementing urban runoff controls consistent with the Total Maximum Daily Loads¹⁰² (TMDLs) that apply to the watershed boundaries: the San Francisco Bay and Guadalupe River Watershed Mercury TMDL; the San Francisco Bay Polychlorinated Biphenyls TMDL; and the TMDL for Diazinon and Pesticide-Related Toxicity for Urban Creeks. Project proponents are required to incorporate site design measures, specific treatment measures, hydromodification management measures, and operations and maintenance requirements, all of which are specifically intended to reduce erosion and the transport of sediment and other pollutants in stormwater.

As part of the project, the City has proposed a suite of measures to reduce the potential for sediment and pollutants to be discharged into receiving waters (see Section 2.8, “Construction Best Management Practices”). These measures include installation of a turbidity curtain and implementation of a water quality monitoring plan to reduce construction-related sedimentation in the lake (and downstream of the lake via the outfall) during in-water work; implementation of a spill prevention and response plan; and staging of equipment, materials, and stockpiles in upland areas (among others). The water quality monitoring plan and spill prevention and response plan would be submitted to the City for review and approval prior to the start of construction activities. As described above, the City is required by law to implement stormwater design and site-specific measures to control pollutants in stormwater discharges as part of the MS4 Permit, and to prepare and implement a SWPPP with associated BMPs specifically designed to protect beneficial uses of downstream water bodies as part of the Construction General Permit, all in compliance with the federal Clean Water Act, the state Porter-Cologne Water Quality Act, and the regional Basin Plan. Therefore, with implementation of the proposed BMPs in Section 2.8 and compliance with applicable regulations protecting water quality, 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 proposed project does not require the use of groundwater. Minor amounts of water for dust control during construction would be supplied by trucks. Groundwater is present at depths ranging from approximately -5 to -70 feet msl.¹⁰³ Elevations at the project site range from approximately 10 to 13 feet. Project-related excavation activities would extend approximately 2 to 3 feet bgs, and therefore would not encounter groundwater.

¹⁰¹ San Francisco Bay RWQCB. 2015. *Municipal Regional Stormwater NPDES Permit, Order No. R2-2015-0049 (NPDES Permit No. CAS612008)*. Available online at: <https://www.cleanwaterprogram.org/images/uploads/R2-2015-0049.pdf>. Accessed September 9, 2020.

¹⁰² Total Maximum Daily Load (TMDL) is a regulatory term used to describe a plan for restoring impaired waters; it identifies the maximum amount of a pollutant that a body of water can receive while still meeting water quality standards.

¹⁰³ City. 2013b.

Furthermore, Shoreline Lake is saline; it is filled with salt water pumped from the Bay. Therefore, the proposed project would have **no impact** on groundwater supplies or recharge.

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

i) Result in substantial erosion or siltation on- or off-site.

The proposed project includes regrading of the northern and southern shore areas to remove existing scarps that formed as a result of wave erosion, and to redistribute sediment to form an even beach slope for recreational users. In addition, sediment that has accumulated in the boat launch area would be removed to improve boat launch operations. The northern shore would be armored with riprap to prevent further erosion. This work would all be accomplished using land-based long-reach excavators; however, sediment removal around the launch ramp and the south beach grading may also require some use of water-based equipment. In-water work would be required for construction of the new boat dock, kayak launch ramp, boat pier, and sheet pile wall. Both the in-water and land-based work would alter portions of the northern shore, southern shore, and boat launch areas in the project site. The new kayak launch ramp would result in a minor increase in impervious surfaces, consisting of an area approximately 26 by 27 feet.

As part of the project, the City has proposed a suite of measures to reduce the potential for sediment and pollutants to be discharged into receiving waters (see Section 2.8, “Construction Best Management Practices”). These measures include (among others) installation of a turbidity curtain and implementation of a water quality monitoring plan to reduce construction-related sedimentation in the lake during in-water work; implementation of a spill prevention and response plan; and staging of equipment, materials, and stockpiles in upland areas. The water quality monitoring plan and spill prevention and response plan would be submitted to the City for review and approval prior to the start of construction activities. As described above, the City is required by law to implement stormwater design and site-specific measures to control pollutants in stormwater discharges as part of the MS4 Permit, and to prepare and implement a SWPPP with associated BMPs specifically designed to protect beneficial uses of downstream water bodies as part of the Construction General Permit. Therefore, 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.

Proposed regrading, shoreline armoring, and sediment removal at Shoreline Lake would not increase the rate or amount of surface runoff, because these modifications would be constructed of soil, which would continue to allow stormwater to percolate through the ground as it does now. Proposed replacement of the existing public boat dock system with a new floating boat dock, replacement of the existing maintenance boat dock with a new pier, and installation of the new sheet pile wall to prevent sediment migration would occur in the lake, and therefore would have no effect on surface runoff. The new kayak boat launch would be constructed of concrete in an approximately 26- by 27-foot area. The launch facility would be raised above the shoreline with a 10:1 slope so that surface water runoff on the ramp would drain back into the lake; the existing kayak launch area is composed of soil, which also allows surface water runoff to percolate back into the lake.

The proposed staging of construction equipment and materials would occur in the existing paved parking lot east of the Shoreline Lake boathouse/restaurant. Because the staging area is paved, there would be no effect on surface water runoff.

For the reasons stated above, the proposed improvements and use of the proposed staging area would not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite. Therefore, there would be **no impact**.

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

The proposed project would not create or contribute runoff water that would exceed the capacity of stormwater drainage systems. For the same reasons discussed in threshold criteria a) and c) i), above, the proposed project would not provide substantial additional sources of polluted runoff. Therefore, this impact would be **less than significant**.

iv) Impede or redirect flood flows.

As shown in Figure 3.10-1, the project site is classified as Zone A—a 100-year flood hazard zone (1 percent annual exceedance probability) where the base flood elevation has not been determined. The proposed staging area is not in a 100-year flood hazard zone.¹⁰⁴ For the same reasons discussed in threshold criterion a)ii), above, the proposed project would not impede or redirect flood flows. Therefore, there would be **no impact**.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Shoreline Lake is classified by FEMA as a 100-year flood hazard zone; however, the proposed staging area is not in a 100-year flood hazard zone. The project site is not in a tsunami inundation zone.¹⁰⁵ The potential for seiche activity at Shoreline Lake is negligible because the dimensions of the lake are such that it is unlikely to resonate with the periods of the expected earthquake motions.¹⁰⁶ The proposed shoreline improvements and sediment removal would have no effect on the release of pollutants to the environment due to project inundation because there are no pollutants, and would not affect the potential for seiche activity because the change in lake surface area would be nominal. Power boats, which require fuel, are not allowed on Shoreline Lake; consequently, neither the existing nor the replacement boating facilities have fueling stations that could represent a water quality hazard in the event of flood inundation. The proposed staging area where construction materials and equipment would be stored is not in a 100-year flood zone. Therefore, this impact would be **less than significant**.

¹⁰⁴ FEMA. 2009.

¹⁰⁵ California Emergency Management Agency and California Geological Survey. 2009. *Tsunami Inundation Map for Emergency Planning, Mountain View Quadrangle*. Available online at: https://www.conservation.ca.gov/cgs/Documents/Tsunami/Maps/Tsunami_Inundation_Mountain_View_Quad_SantaClara.pdf. Accessed September 14, 2020.

¹⁰⁶ AECOM. 2019.

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

For the reasons described in threshold criteria a) and b), above, the proposed project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. This impact would be **less than significant**.

3.11 LAND USE AND PLANNING

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
XI. Land Use and Planning. Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.11.1 ENVIRONMENTAL SETTING

The project site is in Shoreline Regional Park, adjacent to the shoreline of southwestern San Francisco Bay. Shoreline Lake was constructed as part of the Shoreline Regional Park in 1982. Land uses surrounding the project site consist of the Shoreline Lake boathouse and restaurant (immediately adjacent to the project site to the east), the Shoreline Golf Links (part of Shoreline Regional Park), the Coast Casey Forebay flood detention basin (west of the lake), and high-intensity office buildings (southwest of the lake).

The project site and the proposed staging area are zoned and designated for public facility/regional park use. The area surrounding the project site is zoned and designated for public facility/regional park use, and high-intensity office land uses in the North Bayshore Precise Plan Area.^{107,108}

3.11.2 DISCUSSION

a) Physically divide an established community?

Improvements to the existing shoreline and boating facilities would occur at the eastern end of Shoreline Lake in the regional park. The construction staging area would be in the parking lot on the eastern side of the existing boathouse/restaurant; use of the staging area would be short-term and temporary during the construction period. Therefore, the proposed project would not create a physical barrier that would divide an established community, and there would be **no impact**.

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 proposed project would ensure the continuation of public safety and the protection of environmental resources in the project area by restoring the northeastern and southeastern shoreline of the lake, providing improved erosion protection, and replacing aging boating facilities. The project site would continue to be used for boating activities as part of Shoreline Regional Park, consistent with existing land use and zoning designations. As described in the various topic areas of this IS, the proposed project would not conflict with regulations or

¹⁰⁷ City. 2018a. *General Plan Land Use Map*. Available online at: <https://www.mountainview.gov/civicax/filebank/blobdload.aspx?BlobID=10701>. Accessed September 10, 2020.

¹⁰⁸ City. 2018b. Accessed September 10, 2020.

policies in the City's 2030 General Plan¹⁰⁹ that were adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, there would be **no impact**.

¹⁰⁹ City. 2012a. Accessed September 10, 2020.

3.12 MINERAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
XII.Mineral Resources. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.12.1 ENVIRONMENTAL SETTING

The project site is in the Shoreline Regional Park, near the shoreline of San Francisco Bay. Shoreline Regional Park is underlain by a former landfill, which is covered by an approximately 1-foot-thick compacted clay layer and an approximately 2-foot-thick soil cap.¹¹⁰ Based on the results of soil borings obtained northwest of the project site at Shoreline Lake Dam, the project area is composed of clayey sand to sandy lean clay with gravel fill, overlying Young Bay Mud and older alluvial deposits.¹¹¹ Salt was formerly obtained from evaporation ponds in the project area; however, the area is now being restored to tidal marsh habitat as part of the South Bay Salt Pond Restoration Project.

3.12.2 DISCUSSION

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?

Shoreline Lake is in a regional park, within the limits of a former landfill. As stated in the *City of Mountain View Draft 2030 General Plan and Greenhouse Gas Reduction Program EIR*,¹¹² mineral lands classification performed by the California Geological Survey (CGS) in 1987 included a small area along Stevens Creek, southeast of the project site, which was classified MRZ-3,¹¹³ “areas containing mineral deposits the significance of which cannot be evaluated from the available data.” Based on subsequent mineral land classification performed in 1996, CGS determined that there are no minerals or aggregate resources of statewide importance within the City limits. Evaporative salt mining in the project area is no longer occurring. Therefore, the proposed project would not result in the loss of availability of a regionally important mineral resource, and there would be **no impact**.

¹¹⁰ City. 2013.

¹¹¹ AECOM. 2019.

¹¹² City. 2012e. *City of Mountain View Draft 2030 General Plan and Greenhouse Gas Reduction Program EIR—G. Geology, Soils, and Seismicity*. State Clearinghouse No. 2011012069. Prepared by: LSA Associates, Inc. Available online at: <https://www.mountainview.gov/depts/comdev/planning/regulations/general.asp>. Accessed November 13, 2019.

¹¹³ Regionally significant deposits of mineral resources are classified as MRZ-2.

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?

As described above, there are no locally important mineral resource recovery sites in the City. Therefore, the proposed project would not result in the loss of availability of a locally important mineral resource, and there would be **no impact**.

3.13 NOISE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
XIII. Noise. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.13.1 ENVIRONMENTAL SETTING

The project site is in Shoreline Regional Park, adjacent to southwestern San Francisco Bay. Land uses surrounding the project site consist of the regional park, the Coast Casey Forebay flood detention basin, and high-intensity office buildings.

Sensitive noise receptors include residential parcels, schools, libraries, religious institutions, and hospitals. The nearest sensitive receptor to the project site is the Lord's Grace Christian Church at 1101 San Antonio Road; this facility is approximately 0.5 mile southwest of the project site. The nearest residences to the project site are more than 0.8 mile to the southwest across U.S. 101.

The Palo Alto Airport, a public-use airport, is approximately 1.8 miles northwest of the project site. Moffett Federal Airfield, a private-use airport owned by the National Aeronautics and Space Administration, is approximately 1.75 miles southeast of the project site. The project site is not in the noise influence area for either airport.^{114,115}

The City's Construction Noise Ordinance establishes the noise regulations for construction-related activities in Mountain View. Construction activities in Mountain View are limited to the hours between 7:00 a.m. and 6:00 p.m. on weekdays; construction is not permitted on weekends and holidays unless authorized by the building official. The City does not establish quantitative limits for construction-related noise.¹¹⁶

¹¹⁴ ALUC. 2016a.

¹¹⁵ ALUC. 2016b.

¹¹⁶ City. 2016. Code of Ordinances, Section 8, Article VI – Construction Noise. Adopted November 22, 2016.

3.13.2 DISCUSSION

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?

Construction of the proposed project, which is anticipated to take approximately 4 months, would temporarily generate noise. In accordance with the City's Municipal Code, construction activities for the proposed project would be conducted between 7:00 a.m. and 6:00 p.m., Monday through Friday, and would not occur on weekends or holidays. The City does not establish quantitative limits for construction-related noise.

The project site is surrounded primarily by outdoor use areas and high-intensity office buildings. The nearest sensitive receptor, the Lord's Grace Christian Church, is approximately 0.5 mile southwest the project construction footprint and would be shielded from project construction noise by intervening buildings. Similarly, the closest residences are approximately 0.8 mile southwest of the project site and would not perceive noise generated by the project, given the distance and the intervening buildings and U.S. 101. Therefore, construction activities would not be anticipated to result in a substantial temporary increase in noise levels at nearby noise-sensitive receptors.

In addition to the use of heavy-duty equipment, construction of the project would require the use of on-road vehicles to deliver and haul away materials, and to move construction workers to and from the site. Construction would last for approximately 4 months. During that time, as many as 15 construction worker vehicle trips per weekday and three equipment delivery or material-hauling truck trips per weekday, on average, would be required. Because project construction would involve a relatively small number of on-road trips compared with existing area traffic volumes, there would be no substantial increase in noise from construction traffic.

Operation of the project would not generate new sources of noise; operation and maintenance activities would be similar to those currently performed, and noise generated from these activities and use of improved boating facilities would be similar to those in the baseline conditions.

For these reasons, the proposed project would not expose persons to noise levels in excess of applicable standards, and impacts would be **less than significant**.

b) Generation of excessive groundborne vibration or groundborne noise levels?

The operation of heavy-duty construction equipment can generate localized ground-borne vibration and noise at buildings adjacent to the construction areas. Construction-related vibration would be limited to hauling trucks, heavy equipment, and other construction activities that, based on the distance of the project site from sensitive receptors, as described above, would not be expected to result in perceptible vibration levels that would affect sensitive receptors in the project vicinity. Operation of the proposed project would not generate new sources of groundborne vibration or noise; operation and maintenance activities would be similar to those currently performed, and groundborne vibration and noise generated from these activities would be similar to those in the baseline conditions.

Therefore, there would be **no impact**.

- c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

The project site is not in noise influence areas associated with nearby airports; therefore, there would be **no impact** related to this criterion.

3.14 POPULATION AND HOUSING

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
XIV. Population and Housing. 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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.14.1 ENVIRONMENTAL SETTING

The project site is in Mountain View, in Santa Clara County, along the northeastern and southeastern shoreline of Shoreline Lake. There is a separate 10,000-square-foot staging area in the 750-acre Shoreline Regional Park. The construction staging area would be in the existing parking lot on the eastern side of the Shoreline Lake boathouse/restaurant. There are no existing residential structures on or adjacent to the project site.

3.14.2 DISCUSSION

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)?

The proposed project involves erosion control improvements to portions of the shoreline of the lake, sediment removal, and replacement of aging boating facilities. No new homes or businesses would be built as a result of the proposed project. The proposed improvements at Shoreline Lake would not induce population growth, would not increase the population in the area, and would not contribute to population growth in the area. Therefore, the proposed project would have no effect on population growth, either directly or indirectly, and there would be **no impact**.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

The proposed improvements at Shoreline Lake would not displace any existing residents or housing. Therefore, there would be **no impact**.

3.15 PUBLIC SERVICES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
XV. Public Services. Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.15.1 ENVIRONMENTAL SETTING

Fire Protection

The MVFD has a staff of more than 86 personnel serving its emergency operations center and five fire stations. MVFD fire-fighting equipment includes seven engines, one rescue vehicle, one hazmat vehicle, and one truck.¹¹⁷ The closest fire station to the project site is Station No. 5, at 2195 N. Shoreline Boulevard, approximately 0.75 mile southeast of the project site.

Police Protection

The Mountain View Police Department (MVPD) employs approximately 148 staff, who provide services for approximately 80,000 people in Mountain View.¹¹⁸ Police services are provided in four roughly equal areas (“beats”) in the City. The project site is in Beat 3. The MVPD is at 1000 Villa Street, approximately 2.5 miles south of the project site.

Schools

The project site is in the Mountain View Whisman School District and the Mountain View Los Altos Union High School District. The closest Mountain View public school to the project site is Crittenden Middle School at 1701 Rock Street, approximately 1.4 miles to the south. The closest private school is The Girls’ Middle School at

¹¹⁷ Mountain View Fire Department (MVFD). 2020. Apparatus. Available online at: <https://www.mountainview.gov/depts/fire/emergency/apparatus.asp>. Accessed September 10, 2020.

¹¹⁸ Mountain View Police Department (MVPD). 2018. *Annual Report 2018*. Available online at: <https://www.mountainview.gov/documents/2018%20MVPD%20Annual%20Report.pdf>. Accessed September 10, 2020.

3400 W. Bayshore Road, Palo Alto, approximately 1.1 mile west of the project site (on the western side of U.S. 101).^{119,120}

Parks

The project site is in Shoreline Regional Park. Shoreline Lake has an area of approximately 45 acres and is used for a variety of recreational activities, including sailing, windsurfing, paddleboarding, kayaking, and canoeing. There are a boathouse and a restaurant on the eastern side of the project site, and a hiking trail along the lake's northern shore. The southern side of the lake is adjacent to Holes 10 through 12 of the Shoreline Golf Links golf course. A portion of the Bay Trail is approximately 450 feet north of the northern portion of the project site.

3.15.2 DISCUSSION

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

Fire protection?

Shoreline Lake and Shoreline Regional Park are currently served by the MVFD. After the proposed improvements at Shoreline Lake are implemented, the lake and the surrounding area would continue to be served by MVFD, and the improvements at the lake would not increase the need for additional fire-fighting personnel, facilities, or equipment. Therefore, there would be **no impact**.

Police protection?

Shoreline Lake and Shoreline Regional Park are currently served by the MVPD. After the proposed improvements at Shoreline Lake are implemented, the lake and the surrounding area would continue to be served by MVPD, and the improvements at the lake would not increase the need for additional police personnel, facilities, or equipment. Therefore, there would be **no impact**.

Schools?

The project does not include new housing or other improvements that would result in a demand for additional new school facilities and does not require alterations to any existing school facilities. Therefore, there would be **no impact**.

Parks?

The proposed project is in Shoreline Regional Park. Although short-term, temporary closures of the boating facilities at Shoreline Lake would be required during project-related construction facilities, the proposed project would only affect approximately 1.1 acres of the 750-acre regional park. The 10,000-square-foot construction

¹¹⁹ Mountain View Los Altos Union High School District. 2019. About MVLA. Available online at: <https://www.mvla.net/About-MVLA/index.html>. Accessed September 10, 2020.

¹²⁰ Mountain View Whisman School District. 2020. About, Facts and Figures. Available online at: <https://www.mvwsd.org/home>. Accessed September 10, 2020.

staging area would result in short-term, temporary closure of a portion of the parking area on the eastern side of the Shoreline Lake boathouse and restaurant. However, most of the parking area would be available for public use during construction, and other parking areas are available for public use, including parking at the Shoreline Golf Links east of the project site. Because 748 acres of Shoreline Regional Park would still be available for public use during the project's construction phase; other public parking and access to the park is available; and closure of the 1.1-acre project site and a portion of the parking lot for use as a construction staging area would be short-term and temporary, the proposed project would not result in the need for new or altered park facilities in other locations. Therefore, this impact is considered **less than significant**.

Other public facilities?

The proposed project would have no effect on any other public facilities such as libraries or community centers. Therefore, there would be **no impact**.

3.16 RECREATION

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
XVI. Recreation.				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.16.1 ENVIRONMENTAL SETTING

The approximately 1.1-acre project site encompasses the northeastern and southeastern portions of Shoreline Lake, including the boat launch facilities. The approximately 45-acre Shoreline Lake is in the northwestern corner of the 750-acre Shoreline Regional Park. Shoreline Lake offers a variety of recreational activities, including sailing, windsurfing, kayaking, canoeing, and standup paddle boarding. The Shoreline Lake boathouse and restaurant are immediately adjacent to the eastern side of the project site. The facilities at Shoreline Lake, including the restaurant/boathouse, are operated by a concessionaire under a lease from the City. A pedestrian/bicycle trail parallels the northern side of the lake, connecting with the Bay Trail both north and east of the project site. The southern side of Shoreline Lake is adjacent to Holes 10 through 12 of the Shoreline Golf Links golf course.

The proposed staging area would be in the paved parking lot on the eastern side of the Shoreline Lake boathouse/restaurant. This approximately 10,000-square-foot area would be used on a temporary basis for project-related staging and storage of construction equipment and materials.

3.16.2 DISCUSSION

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

A portion of one of the pedestrian/bicycle trails along the northeastern portion of the shoreline of the lake would require temporary closure during construction activities. However, there are two other pedestrian/bicycle trails north of the northeastern shoreline that would continue to remain open during project construction and would continue to provide east-west trail connectivity in the project area. The Bay Trail, which is approximately 450 feet north of the project site, would not be affected by project construction and would remain accessible via the existing nearby trails to the east and west in Shoreline Regional Park, and via a trail along the western side of the Coast Casey Forebay from Terminal Boulevard.

Boating activities on Shoreline Lake would be temporarily suspended during project-related construction activities for a period of approximately 4 months. Construction is planned to occur in the fall/early winter, to avoid the summer peak recreational boating use on the lake.

Use of the 10,000-square-foot construction staging area would result in short-term, temporary closure of a portion of the parking lot on the eastern side of the Shoreline Lake boathouse/restaurant, which currently functions as a public parking area for access to Shoreline Lake facilities. However, most of the parking area would continue to be available for public use during construction, and other parking areas are available for public use, including parking at the Shoreline Golf Links east of the project site.

The City's Recreation Division would post notices on its website informing recreationists of the temporary boating facility closure, the temporary closure of a portion of the Shoreline Lake parking area, and the locations of alternate parking areas. Closure of the 1.1-acre project site and construction staging area would be short-term and temporary; 748 acres of Shoreline Regional Park would still be available for public use during the project's construction phase; and public parking and access to the park and the Bay Trail would continue to be available. For these reasons, the proposed project would not result in an increased use of existing neighborhood and regional parks or other recreational facilities that would require new or altered park facilities. Therefore, this impact is considered **less than significant**.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

The proposed project includes erosion repair, sediment removal, and replacement of aging boating facilities at Shoreline Lake. The physical environmental effects of these improvements are evaluated in each topic area section in this IS, and mitigation measures are incorporated (where necessary) to reduce potentially significant impacts to a less-than-significant level. Therefore, this impact is **less than significant with mitigation incorporated**.

3.17 TRANSPORTATION

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
XVII. Transportation. Would the project:				
a) Conflict with a program plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.17.1 ENVIRONMENTAL SETTING

U.S. 101 is a north-south running highway extending from the City of Los Angeles to Oregon. In Mountain View, U.S. 101 runs in a northwest-southeast direction and includes three mixed-flow lanes and one high-occupancy vehicle lane per direction—except at State Route 85, where two high-occupancy vehicle lanes are provided. From U.S. 101, the project site is accessible via the North Shoreline Boulevard exit by proceeding north on North Shoreline Boulevard for approximately 2 miles to the proposed staging area location. The staging area would be in an approximately 10,000-square foot portion of the parking lot on the eastern side of the Shoreline Lake boathouse/restaurant. This parking lot provides pedestrian/bicycle access to Shoreline Lake and the trails around the lake. A pedestrian/bicycle trail parallels the northern side of the lake, connecting with the Bay Trail at the northern side of the project site and the eastern side of the parking lot.

3.17.2 DISCUSSION

a) Conflict with a program plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Project construction would add vehicle trips to nearby roadways as construction workers and vehicles enter and exit the proposed staging area. Project construction would generate as many as 15 construction worker vehicle trips per weekday and three equipment delivery or material-hauling truck trips per weekday, on average. These construction-related trips represent a small, short-term, and temporary traffic increase in the context of existing local and regional traffic volumes. The addition of these vehicle trips to the project area would be short-term and temporary during construction, and implementation of the proposed project would not permanently affect traffic circulation in the area.

There are several trails running east/west on the northern side of the lake. A portion of the trail that is closest to the northern shore improvements area would require temporary closure during construction activities. However, the other paths approximately 200 feet north would remain open and would continue to provide east-west trail connectivity on the northern side of the lake. The Bay Trail, which passes approximately 450 feet north of the

project site, would not be affected by project construction; nor would the eastern side of the parking lot, where the staging area would be.

The proposed project would implement erosion repair, sediment removal, and replacement of aging boating facilities, and would not significantly increase the number of users accessing the trails or boating facilities in Shoreline Regional Park. The proposed project does not include permanent roadway modifications or other improvements that would interfere with adopted transit policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. This impact would be **less than significant**.

b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

CEQA Guidelines Section 15064.3 describes specific considerations for evaluating a project's transportation impacts. Generally, vehicle miles traveled (VMT) is the most appropriate measure of transportation impacts. For this analysis, "VMT" refers to the amount and distance of automobile travel attributable to the proposed project. As discussed above under Transportation checklist criterion a), construction-related traffic impacts would be small and temporary in nature. The proposed project involves erosion repair, sediment removal, and replacement of aging boating facilities. The project would not include land uses that represent new sources of automobile trips, such as residences and offices, and would not construct facilities (such as additional parking) that would increase vehicle trips to the project area. Therefore, the project would not permanently increase regional miles traveled, and this impact would be **less than significant**.

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

The proposed project would not introduce new dangerous curves, intersections, or incompatible uses to the existing roads/trails, and there would be **no impact**.

d) Result in inadequate emergency access?

Project-related construction activities would occur along portions of the northeastern and southeastern shoreline of the lake and would not interfere with emergency response or evacuation plans. The construction staging area would be in a portion of the existing paved parking area on the eastern side of the boathouse/restaurant. The staging area would not obstruct the drive aisles. Therefore, the proposed project would have no effect on adopted emergency response plans or emergency evacuation plans. Emergency access to Shoreline Lake and the boathouse/restaurant would continue to be provided via North Shoreline Boulevard. Therefore, there would be **no impact**.

3.18 TRIBAL CULTURAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
XVIII. Tribal Cultural Resources. Would the project:				
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 geologically 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 listed in the California Register of Historical Resources, or in local register of historical resources as defined in Public Resources Code section 5020.1(k)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.18.1 ENVIRONMENTAL SETTING

Project Setting and Context

The project site is on the northeastern shore of and partially in Shoreline Lake, which is in the northwestern corner of Shoreline Regional Park. The park, which is owned and operated by the City, opened in 1982 and was constructed on the site of a former sanitary landfill. The project site covers a 1.1-acre area along the northeastern and southeastern shoreline of Shoreline Lake. The project site also includes a separate 10,000-square-foot staging area east of the lake boathouse/restaurant, in a paved parking lot. Historically, the shoreline was approximately 2,000 feet to the south of the project site and the project site was in San Francisco Bay.¹²¹

Data Collection and Review

Baseline historical and archaeological conditions in the project vicinity are based on a review of available ethnographic and historical literature and maps, archaeological base maps and site records, survey reports, and atlases of historic places on file at the NWIC of the CHRIS at Sonoma State University; a review of OHP's Directory of Properties in the HPD File for Santa Clara County;¹²² and a SLF review by the California NAHC

¹²¹ USGS. 1899.

¹²² OHP. 2012.

(November 2020). No cultural resources were identified in the HPD or BERD, nor were resources identified in the SLF search of the project site or adjacent area. The records search (NWIC File No. 20-0866) identified one previously studied area in or adjacent to the current project site.¹²³ See Section 3.5, “Cultural Resources”, for further details of the NWIC records search results.

Native American Outreach

On November 2, 2020, AECOM contacted the NAHC on behalf of the City and requested a search of the SLF and Native American contact list for the project site. On November 4, 2020, the NAHC responded that the SLF search was “negative...[however] a negative response to these searches does not preclude the existence of a tribal cultural resource.” Native American consultation pursuant to AB 52 is being completed by the City. The City sent project notification letters to those Native American representatives listed by the NAHC on February 17, 2021. No responses have been received to date.

3.18.2 DISCUSSION

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 geologically 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 listed in the California Register of Historical Resources, or in local register of historical resources as defined in Public Resources Code section 5020.1(k)?

The proposed project would require a maximum depth of excavation of 12 feet for the installation of the 45-foot-long sheet pile retaining wall adjacent to the new pier. No archaeological resources were identified in the NWIC records search, and the search of the SLF was also negative. Native American outreach identified no tribal cultural resources in the vicinity of the project site. A review of the historical maps of the area depict the current project site in San Francisco Bay, with the historic-era shoreline being more than 2,000 feet to the south of the project site.¹²⁴ Soil borings taken at the northwestern end of the lake indicate that the fill is between 10.5 and 16 feet thick and is underlain by 5 to 10 feet of Young Bay Mud, which was deposited when the project site was underwater.¹²⁵ The potential for encountering undocumented tribal cultural resources in the artificial fill or Young Bay Mud in the project’s subsurface footprint is considered extremely low; there would be **no impact**.

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

No archaeological resources were identified in the NWIC records search, and the search of the SLF was also negative. Native American outreach identified no tribal cultural resources in the vicinity of the project site. A review of the historical maps of the area depict the current project site in San Francisco Bay, with the shoreline being more than 2,000 feet to the south of the project site.¹²⁶ Soil borings taken at the northwestern end of the lake indicate that the fill is between 10.5 and 16 feet thick and is underlain by 5 to 10 feet of Young Bay Mud, which

¹²³ Basin Research Associates 2009.

¹²⁴ USGS. 1899.

¹²⁵ AECOM. 2019.

¹²⁶ USGS. 1899.

was deposited when the project site was underwater.¹²⁷ The potential for encountering undocumented resources, considered significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, in the artificial fill or Young Bay Mud in the project's subsurface footprint is considered extremely low; there would be **no impact**.

¹²⁷ AECOM. 2019.

3.19 UTILITIES AND SERVICE SYSTEMS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
XIX. Utilities and Service Systems. Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Comply with federal, State, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.19.1 ENVIRONMENTAL SETTING

The project site consists of the northeastern and southeastern portions of Shoreline Lake, in Shoreline Regional Park. The project site is traversed by several small irrigation lines along the northern shoreline. Utility lines that supply electricity for the boat docks are also present. Underground potable water lines that serve the park, and utility lines related to management of the underlying former landfill (discharge, gas, leachate collection, and air supply), are present in the project area. Potable water for Shoreline Regional Park facilities is provided by the San Francisco Public Utilities Commission (SFPUC).¹²⁸ Recycled water for irrigation of the Shoreline Regional Park and the Shoreline Golf Links golf course is provided by the Palo Alto Regional Water Quality Control Plant.¹²⁹ Shoreline Lake is a saltwater lake, filled by water from San Francisco Bay that is pumped from an intake and pump station along the levee between Charleston Slough and the Coast Casey Forebay detention basin. Water from the lake is discharged through a gravity outfall immediately south of the project site into Permanente Creek, and then drains back into San Francisco Bay. Electrical power at the Shoreline Maintenance Facility is provided

¹²⁸ City. 2020b. City of Mountain View, Our Water Sources. Available online at: <https://www.mountainview.gov/depts/pw/services/water/sources.asp>. Accessed September 12, 2020.

¹²⁹ City. 2020c. City of Mountain View, Water and Sewer Services, Recycled Water. Available online at: <https://www.mountainview.gov/depts/pw/services/recycled/system.asp>. Accessed September 12, 2020.

via solar energy. SVCE—which delivers 100 percent carbon-free electricity generated from clean, renewable sources—is the official electricity provider for the City, including the project site.¹³⁰

3.19.2 DISCUSSION

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

The portion of the existing irrigation line that is exposed along the northern shore would be reburied or replaced at the conclusion of project-related erosion repair improvements in this area. The existing electrical lines that serve the boat dock and maintenance boat pier would not be modified and would continue to serve these areas.

The proposed project would not involve a population increase or the operation of new buildings that would require utility services; therefore, capacity expansions for water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities would not be required. This impact would be **less than significant**.

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

Minor amounts of water would be used during the construction phase for dust control. Potable water for construction workers would be provided via a bottled water drinking station at the construction trailer. During the project's operational phase, potable water supply for recreationists would continue to be provided by underground supply lines in Shoreline Regional Park, as it is now. Operation of the proposed project would not increase the number of recreationists at Shoreline Lake and therefore would not result in an increased need for water supplies. The SFPUC has sufficient water supplies to serve the small amount of water that would be necessary during project-related construction. Therefore, this impact would be **less than significant**.

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 proposed improvements to repair and stabilize portions of the Shoreline Lake shoreline, remove sediment, and replace the aging boating facilities would have no effect on wastewater treatment. Temporary, portable restrooms would be provided for construction workers. Therefore, there would be **no impact**.

d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Approximately 1,100 cy of sediment would be excavated around the existing boat launch ramp as part of the proposed project. Sediment excavated from the lakebed, along with the old boat facilities, would be transported to the Sunnyvale Materials Recovery and Transfer (SMaRT) Station and ultimately the Kirby Canyon Landfill. The SMaRT Station is at 301 Carl Road in Sunnyvale, and it accepts materials from Mountain View, Palo Alto, and Sunnyvale. Nonrecyclable waste from the SMaRT Station is transported to the Kirby Canyon Landfill, at

¹³⁰ City. 2020a.

910 Coyote Creek Golf Drive in San Jose. Kirby Canyon Landfill has a total estimated permitted capacity of approximately 36 million cy, a remaining estimated capacity of approximately 16 million cy, and an anticipated closure date of 2059. The landfill is permitted to receive a maximum of 2,600 tons of material per day.¹³¹

Because the SMaRT Station and the Kirby Canyon Landfill have the capacity to receive project-related construction waste, and because the proposed project would comply with the City's recycling program, the proposed project would not 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. Therefore, this impact is considered **less than significant**.

e) Comply with federal, State, and local management and reduction statutes and regulations related to solid waste?

Project-related construction and demolition debris would be recycled at the local facilities listed in criterion d), above, in accordance with City requirements. California state law (AB 939) requires that at least 50 percent of construction and demolition waste be diverted from landfills. The City offers recycling through its partnership with Recology Mountain View and the SMaRT Station.¹³² Furthermore, the Recycling and Waste Reduction Commission of Santa Clara County works to assist Countywide cooperative programs to reduce, reuse, and recycle materials that would otherwise be disposed of in landfills.¹³³ The proposed project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste, and therefore this impact is considered **less than significant**.

¹³¹ California Department of Resources Recycling and Recovery. 2020. Solid Waste Information System Detail—Kirby Canyon Recycling and Disposal Facility (43-AN-0008). Available online at: <https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1370?siteID=3393>. Accessed September 12, 2020.

¹³² City. 2020d. City of Mountain View, Businesses, Recycling and Zero Waste. Available online at: <https://www.mountainview.gov/depts/pw/recycling/garbage/businesses.asp>. Accessed September 12, 2020.

¹³³ City. 2012e. *City of Mountain View Draft 2030 General Plan and Greenhouse Gas Reduction Program EIR—M. Utilities and Infrastructure*. State Clearinghouse No. 2011012069. Prepared by: LSA Associates, Inc. Available online at: <https://www.mountainview.gov/depts/comdev/planning/regulations/general.asp>. Accessed September 12, 2020.

3.20 WILDFIRE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
XX. Wildfire. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.20.1 ENVIRONMENTAL SETTING

The project site is at the eastern end of Shoreline Lake, in Shoreline Regional Park. The park consists primarily of turf grass associated with the 18-hole Shoreline Golf Links golf course, which is adjacent to the southern end of the project site. Landscape trees are scattered throughout the park, and there are a few scattered trees in the northern portion of the project site. San Francisco Bay is approximately 500 feet north of the project site. The Shoreline Lake boathouse and restaurant are immediately adjacent to the project site to the east. Office buildings with associated urban landscaping are approximately 1,800 feet southwest of the project site.

Public Resources Code Sections 4201 through 4204 and Government Code Sections 51175 through 51189 require identification of fire hazard severity zones in the State of California. The California Department of Forestry and Fire Protection (CAL FIRE) has established a fire hazard severity classification system. Fire prevention areas considered to be under state jurisdiction are referred to as SRAs. In SRAs, CAL FIRE is required to delineate three wildfire hazard ranges: moderate, high, and very high. LRAs, which are under the jurisdiction of local entities (e.g., cities and counties), are required only to identify very high fire hazard severity zones.

The project site is in the heavily urbanized southwestern San Francisco Bay area, and is not in or near an SRA.¹³⁴ The project site and the surrounding area are in an LRA, and CAL FIRE has not designated any very high, high, or moderate fire hazard severity zones at the project site or in the project area.¹³⁵

In addition to the CAL FIRE mapping, local agencies may adopt ordinances that may affect communities' hazard mapping and building code requirements. Local agencies are not required to report such zoning actions to

¹³⁴ CAL FIRE. 2020.

¹³⁵ CAL FIRE. 2020.

CAL FIRE; consequently, locally designated very high fire hazard severity zones may not be reflected on CAL FIRE maps. Based on a review of the *Mountain View 2030 General Plan* Public Safety Element, the City has not specifically designated any areas as wildfire hazard zones.¹³⁶

As discussed in Section 3.15, “Public Services,” the MVFD provides fire-fighting services in Mountain View, including the project site.

3.20.2 DISCUSSION

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

Project-related construction activities would occur along portions of the existing shoreline of the lake and would not interfere with emergency response or evacuation plans. The construction staging area would be in a portion of the existing paved parking area on the eastern side of the Shoreline Lake boathouse/restaurant. The staging area would not obstruct the drive aisles. Therefore, the proposed project would have no effect on adopted emergency response plans or emergency evacuation plans. Emergency access to Shoreline Lake and the boathouse/restaurant would continue to be provided via North Shoreline Boulevard. Furthermore, the MVFD department reviews all new development plans, including building design and access for emergency vehicles, to ensure that they meet fire and safety codes. 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 in a developed area in Shoreline Regional Park, adjacent to San Francisco Bay and high-intensity office land uses. Implementing erosion control improvements along the shoreline and replacing the aging boating facilities would not exacerbate wildfire risks or expose nearby recreationists or office workers to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Therefore, there would be **no impact**.

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?

The proposed project involves implementing erosion control improvements along portions of the shoreline of the lake, sediment removal, and replacing aging boating facilities. The proposed project does not require the installation or maintenance of infrastructure that would exacerbate fire risk or create other ongoing infrastructure or maintenance impacts to the environment. Therefore, 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?

As stated above, the proposed project involves improvements to the existing shoreline and boating facilities at Shoreline Lake, in the existing developed Shoreline Regional Park. The project site is not in an SRA or a fire hazard severity zone. The project site is surrounded by a park and golf course with turf grass, San Francisco Bay, and high-intensity office uses. The proposed improvements at Shoreline Lake would not expose people or

¹³⁶ City. 2012a. Accessed September 10, 2020.

structures to wildfire-related risks, including downslope or downstream flooding or landslides as a result of runoff, post-fire slope instability, or drainage changes. Therefore, there would be **no impact**.

3.21 MANDATORY FINDINGS OF SIGNIFICANCE

ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
XXI.	Mandatory Findings of Significance.				
a)	Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c)	Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Authority: Public Resources Code Sections 21083, 21083.5. Reference: Government Code Sections 65088.4. Public Resources Code Sections 21080(c), 21080.1, 21080.3, 21083, 21083.3, 21083.5, 21093, 21094, 21095, 21151; <i>Sundstrom v. County of Mendocino</i> (1988) 202 Cal.App.3d 296; <i>Leonoff v. Monterey Board of Supervisors</i> (1990) 222 Cal.App.3d 1337; <i>Eureka Citizens for Responsible Govt. v. City of Eureka</i> (2007) 147 Cal.App.4th 357; <i>Protect the Historic Amador Waterways v. Amador Water Agency</i> (2004) 116 Cal.App.4th at 1109; <i>San Franciscans Upholding the Downtown Plan v. City and County of San Francisco</i> (2002) 102 Cal.App.4th 656.					

3.21.1 DISCUSSION

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

As discussed in Section 3.4, “Biological Resources,” if construction occurs during the breeding season, project construction could have an adverse effect on special-status bird species that have the potential to occur in the project site or project area. These impacts would be reduced to a less-than-significant level with the implementation of **Mitigation Measure BIO-1: Nesting Bird Protection Measures**.

As discussed in Section 3.5, “Cultural Resources,” the proposed project would have no impact on historical or archaeological resources.

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.)

This analysis determines whether the proposed project, in combination with other recent or foreseeable development, would result in a cumulative impact and, if so, whether the project’s individual contribution would be cumulatively considerable.

The project would have no impact on agricultural and forestry resources, cultural resources, energy, land use and planning, mineral resources, population and housing, tribal cultural resources, and wildfire. Therefore, the proposed project would not contribute to cumulative impacts related to these topics.

The proposed project would result in construction-related impacts on the following resource areas: aesthetics, air quality, biological resources, geology and soils, water quality, hazards and hazardous materials, noise, public services, recreation, transportation, and utilities and service systems. Impacts from the project construction on each of these resources would be localized, and construction activities that may occur concurrently in the project area would also be expected to produce similar impacts on these resources. Due to the relatively short construction period for the proposed project, any overlap in construction activities with other projects would be short in duration. Other construction projects would be subject to environmental review and permitting processes similar to those for the proposed project, which would include identification of measures to minimize impacts. Furthermore, as described in Sections 3.1 through 3.20, construction BMPs and mitigation measures would be implemented to avoid and minimize impacts so that the proposed project’s contribution to any cumulative effects would not be cumulatively considerable.

Additionally, potential cumulative impacts were identified using the Mountain View General Plan Final EIR¹³⁷ because the proposed project is consistent with the land use planning established therein. The General Plan Final EIR identified the following cumulative impacts:

- violation of air quality standards by increasing VMT greater than the population increase;
- net increase in ozone and particulate matter;
- increased traffic noise levels along some roadway and freeway segments in the City;
- increased daily VMT due to population and employment growth planned in the City;
- increased motor vehicle traffic and congestion, which would result in decreased roadway and freeway segment levels of service on several roadway and freeway study segments; and
- increased motor vehicle traffic outside the City.

As discussed in Section 3.3, “Air Quality,” the proposed project would not result in a cumulatively considerable net increase of criteria air pollutants, including ozone or particulate matter. As discussed in Section 3.13, “Noise,” the proposed project would not result in a permanent increase of noise levels. As discussed in Section 3.17, “Transportation,” the proposed project would not permanently increase traffic levels that would impact the capacity of the local or regional street network. Therefore, the proposed project would not contribute to the cumulative impacts identified in the General Plan Final EIR.

¹³⁷ City. 2012e.

Based on the preceding analysis, with implementation of proposed construction BMPs and mitigation measures, the project would not have impacts that are individually limited, but cumulatively considerable.

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

The discussion in Chapter 3 identifies potentially significant impacts related to air quality, biological resources, hazards and hazardous materials, and recreation. Of these, impacts related to air quality and hazards and hazardous materials have the potential to adversely affect human beings. Mitigation measures have been provided in this initial study to reduce these potentially significant project-level impacts to a less-than-significant level. No project-level potentially significant impacts were identified for the following environmental issue areas: aesthetics, agriculture and forestry resources, cultural resources, energy, geology and soils, greenhouse gas emissions, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, transportation, tribal cultural resources, utilities and service systems, or wildfire. Therefore, with implementation of the mitigation measures specified in Sections 3.1 through 3.20, the proposed project would not result in substantial adverse effects, direct or indirect, on human beings.

4.0 LIST OF PREPARERS

City of Mountain View

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APPENDIX A

AIR QUALITY MODELING OUTPUT

Sailing Lake Access Road Improvements Project - Santa Clara County, Annual

Sailing Lake Access Road Improvements Project

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	1.33	Acre	1.33	57,934.80	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	4			Operational Year	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

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Project Characteristics -

Land Use - Project Description.

Construction Phase - Project Description

Off-road Equipment -

Trips and VMT - Project Description.

Grading - Project Description.

Off-road Equipment - Project Description

Off-road Equipment - Project Description

Off-road Equipment - Project Description

Off-road Equipment - Project Description

Off-road Equipment - Project Description

Off-road Equipment - Project Description

Off-road Equipment - Project Description

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	200.00	22.00
tblConstructionPhase	NumDays	200.00	22.00
tblConstructionPhase	NumDays	200.00	22.00
tblConstructionPhase	NumDays	200.00	22.00
tblConstructionPhase	NumDays	4.00	23.00
tblConstructionPhase	NumDays	2.00	23.00
tblConstructionPhase	PhaseEndDate	4/12/2022	9/30/2021
tblConstructionPhase	PhaseEndDate	4/26/2022	10/31/2021
tblConstructionPhase	PhaseEndDate	7/2/2021	7/31/2021
tblConstructionPhase	PhaseEndDate	7/6/2021	8/31/2021
tblConstructionPhase	PhaseStartDate	7/7/2021	9/1/2021
tblConstructionPhase	PhaseStartDate	4/13/2022	10/1/2021

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tblConstructionPhase	PhaseStartDate	7/3/2021	8/1/2021
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Other Material Handling Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	UsageHours	6.00	4.00
tblTripsAndVMT	HaulingTripNumber	0.00	100.00
tblTripsAndVMT	HaulingTripNumber	0.00	120.00
tblTripsAndVMT	VendorTripNumber	9.00	0.00
tblTripsAndVMT	VendorTripNumber	9.00	20.00
tblTripsAndVMT	VendorTripNumber	9.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	10.00

2.0 Emissions Summary

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr															
2021	0.1428	1.2921	1.0880	2.1200e-003	0.1374	0.0602	0.1976	0.0669	0.0569	0.1238	0.0000	183.0663	183.0663	0.0380	0.0000	184.0158
Maximum	0.1428	1.2921	1.0880	2.1200e-003	0.1374	0.0602	0.1976	0.0669	0.0569	0.1238	0.0000	183.0663	183.0663	0.0380	0.0000	184.0158

[illegible]

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	7-1-2021	9-30-2021	0.7649	0.7649
		Highest	0.7649	0.7649

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	5.5000e-004	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	2.1000e-003	8.7700e-003	0.0237	8.0000e-005	7.3800e-003	7.0000e-005	7.4500e-003	1.9800e-003	6.0000e-005	2.0400e-003	0.0000	7.3720	7.3720	2.5000e-004	0.0000	7.3783
Waste						0.0000	0.0000		0.0000	0.0000	0.0223	0.0000	0.0223	1.3200e-003	0.0000	0.0553
Water						0.0000	0.0000		0.0000	0.0000	0.0000	1.6135	1.6135	7.0000e-005	2.0000e-005	1.6198
Total	2.6500e-003	8.7700e-003	0.0237	8.0000e-005	7.3800e-003	7.0000e-005	7.4500e-003	1.9800e-003	6.0000e-005	2.0400e-003	0.0223	8.9855	9.0078	1.6400e-003	2.0000e-005	9.0535

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2.2 Overall Operational**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	5.5000e-004	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	2.1000e-003	8.7700e-003	0.0237	8.0000e-005	7.3800e-003	7.0000e-005	7.4500e-003	1.9800e-003	6.0000e-005	2.0400e-003	0.0000	7.3720	7.3720	2.5000e-004	0.0000	7.3783
Waste						0.0000	0.0000		0.0000	0.0000	0.0223	0.0000	0.0223	1.3200e-003	0.0000	0.0553
Water						0.0000	0.0000		0.0000	0.0000	0.0000	1.6135	1.6135	7.0000e-005	2.0000e-005	1.6198
Total	2.6500e-003	8.7700e-003	0.0237	8.0000e-005	7.3800e-003	7.0000e-005	7.4500e-003	1.9800e-003	6.0000e-005	2.0400e-003	0.0223	8.9855	9.0078	1.6400e-003	2.0000e-005	9.0535

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

3.0 Construction Detail**Construction Phase**

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	North Shoreline Repair	Building Construction	7/1/2021	7/31/2021	5	22	
2	Dock Replacement	Building Construction	8/1/2021	8/31/2021	5	22	
3	Kayak Launch Facility	Building Construction	9/1/2021	9/30/2021	5	22	
4	Sediment Removal	Trenching	10/1/2021	10/31/2021	5	21	
5	Fixed Pier and Sediment Barrier	Building Construction	11/1/2021	11/30/2021	5	22	
6	South Beach Grading	Grading	12/1/2021	12/31/2021	5	23	
7	Tree Removal	Site Preparation	12/1/2021	12/31/2021	5	23	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
North Shoreline Repair	Excavators	2	8.00	158	0.38
Kayak Launch Facility	Bore/Drill Rigs	1	4.00	221	0.50
Dock Replacement	Other Construction Equipment	2	8.00	172	0.42
North Shoreline Repair	Cranes	1	4.00	231	0.29
Dock Replacement	Other Material Handling Equipment	1	8.00	168	0.40
North Shoreline Repair	Rollers	1	4.00	80	0.38
Fixed Pier and Sediment Barrier	Trenchers	1		78	0.50
Dock Replacement	Cranes	1	6.00	231	0.29
Kayak Launch Facility	Generator Sets	1	8.00	84	0.74

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Fixed Pier and Sediment Barrier	Cranes	1	6.00	231	0.29
Kayak Launch Facility	Cranes	1	6.00	231	0.29
North Shoreline Repair	Forklifts	1	6.00	89	0.20
Kayak Launch Facility	Welders	3	8.00	46	0.45
Dock Replacement	Forklifts	1	6.00	89	0.20
Kayak Launch Facility	Forklifts	1	6.00	89	0.20
Fixed Pier and Sediment Barrier	Forklifts	1	6.00	89	0.20
North Shoreline Repair	Generator Sets	1	8.00	84	0.74
Sediment Removal	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Dock Replacement	Generator Sets	1	8.00	84	0.74
Tree Removal	Graders	1	8.00	187	0.41
Tree Removal	Rubber Tired Dozers	1	7.00	247	0.40
North Shoreline Repair	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Dock Replacement	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Kayak Launch Facility	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Fixed Pier and Sediment Barrier	Generator Sets	1	8.00	84	0.74
South Beach Grading	Graders	1	6.00	187	0.41
South Beach Grading	Rubber Tired Dozers	1	6.00	247	0.40
Fixed Pier and Sediment Barrier	Tractors/Loaders/Backhoes	1	6.00	97	0.37
South Beach Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Tree Removal	Tractors/Loaders/Backhoes	1	8.00	97	0.37
North Shoreline Repair	Welders	3	8.00	46	0.45
Fixed Pier and Sediment Barrier	Welders	1	8.00	46	0.45
Dock Replacement	Welders	3	8.00	46	0.45
Tree Removal	Concrete/Industrial Saws	2	8.00	81	0.73
Tree Removal	Rough Terrain Forklifts	1	8.00	100	0.40

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Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Fixed Pier and Sediment Barrier	6	24.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
North Shoreline Repair	10	24.00	20.00	100.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Kayak Launch Facility	8	24.00	9.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Sediment Removal	1	3.00	0.00	120.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Dock Replacement	10	24.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
South Beach Grading	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Tree Removal	6	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction**3.2 North Shoreline Repair - 2021****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0249	0.1945	0.2186	3.5000e-004		9.9200e-003	9.9200e-003		9.4700e-003	9.4700e-003	0.0000	29.8110	29.8110	6.7500e-003	0.0000	29.9797
Total	0.0249	0.1945	0.2186	3.5000e-004		9.9200e-003	9.9200e-003		9.4700e-003	9.4700e-003	0.0000	29.8110	29.8110	6.7500e-003	0.0000	29.9797

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3.2 North Shoreline Repair - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.9000e-004	0.0134	2.9100e-003	4.0000e-005	8.5000e-004	4.0000e-005	8.9000e-004	2.3000e-004	4.0000e-005	2.7000e-004	0.0000	3.7652	3.7652	1.7000e-004	0.0000	3.7694
Vendor	7.2000e-004	0.0226	6.0200e-003	6.0000e-005	1.4500e-003	5.0000e-005	1.5000e-003	4.2000e-004	5.0000e-005	4.7000e-004	0.0000	5.6987	5.6987	2.5000e-004	0.0000	5.7049
Worker	8.1000e-004	5.6000e-004	6.0400e-003	2.0000e-005	2.0900e-003	1.0000e-005	2.1100e-003	5.6000e-004	1.0000e-005	5.7000e-004	0.0000	1.7333	1.7333	4.0000e-005	0.0000	1.7343
Total	1.9200e-003	0.0365	0.0150	1.2000e-004	4.3900e-003	1.0000e-004	4.5000e-003	1.2100e-003	1.0000e-004	1.3100e-003	0.0000	11.1971	11.1971	4.6000e-004	0.0000	11.2086

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0249	0.1945	0.2186	3.5000e-004		9.9200e-003	9.9200e-003		9.4700e-003	9.4700e-003	0.0000	29.8109	29.8109	6.7500e-003	0.0000	29.9796
Total	0.0249	0.1945	0.2186	3.5000e-004		9.9200e-003	9.9200e-003		9.4700e-003	9.4700e-003	0.0000	29.8109	29.8109	6.7500e-003	0.0000	29.9796

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3.2 North Shoreline Repair - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.9000e-004	0.0134	2.9100e-003	4.0000e-005	8.5000e-004	4.0000e-005	8.9000e-004	2.3000e-004	4.0000e-005	2.7000e-004	0.0000	3.7652	3.7652	1.7000e-004	0.0000	3.7694
Vendor	7.2000e-004	0.0226	6.0200e-003	6.0000e-005	1.4500e-003	5.0000e-005	1.5000e-003	4.2000e-004	5.0000e-005	4.7000e-004	0.0000	5.6987	5.6987	2.5000e-004	0.0000	5.7049
Worker	8.1000e-004	5.6000e-004	6.0400e-003	2.0000e-005	2.0900e-003	1.0000e-005	2.1100e-003	5.6000e-004	1.0000e-005	5.7000e-004	0.0000	1.7333	1.7333	4.0000e-005	0.0000	1.7343
Total	1.9200e-003	0.0365	0.0150	1.2000e-004	4.3900e-003	1.0000e-004	4.5000e-003	1.2100e-003	1.0000e-004	1.3100e-003	0.0000	11.1971	11.1971	4.6000e-004	0.0000	11.2086

3.3 Dock Replacement - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0324	0.2757	0.2728	4.4000e-004		0.0141	0.0141		0.0133	0.0133	0.0000	37.5007	37.5007	9.2300e-003	0.0000	37.7315
Total	0.0324	0.2757	0.2728	4.4000e-004		0.0141	0.0141		0.0133	0.0133	0.0000	37.5007	37.5007	9.2300e-003	0.0000	37.7315

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3.3 Dock Replacement - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.1000e-004	5.6000e-004	6.0400e-003	2.0000e-005	2.0900e-003	1.0000e-005	2.1100e-003	5.6000e-004	1.0000e-005	5.7000e-004	0.0000	1.7333	1.7333	4.0000e-005	0.0000	1.7343
Total	8.1000e-004	5.6000e-004	6.0400e-003	2.0000e-005	2.0900e-003	1.0000e-005	2.1100e-003	5.6000e-004	1.0000e-005	5.7000e-004	0.0000	1.7333	1.7333	4.0000e-005	0.0000	1.7343

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0324	0.2757	0.2728	4.4000e-004		0.0141	0.0141		0.0133	0.0133	0.0000	37.5006	37.5006	9.2300e-003	0.0000	37.7315
Total	0.0324	0.2757	0.2728	4.4000e-004		0.0141	0.0141		0.0133	0.0133	0.0000	37.5006	37.5006	9.2300e-003	0.0000	37.7315

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3.3 Dock Replacement - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.1000e-004	5.6000e-004	6.0400e-003	2.0000e-005	2.0900e-003	1.0000e-005	2.1100e-003	5.6000e-004	1.0000e-005	5.7000e-004	0.0000	1.7333	1.7333	4.0000e-005	0.0000	1.7343
Total	8.1000e-004	5.6000e-004	6.0400e-003	2.0000e-005	2.0900e-003	1.0000e-005	2.1100e-003	5.6000e-004	1.0000e-005	5.7000e-004	0.0000	1.7333	1.7333	4.0000e-005	0.0000	1.7343

3.4 Kayak Launch Facility - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0214	0.1666	0.1533	2.9000e-004		8.0300e-003	8.0300e-003		7.7300e-003	7.7300e-003	0.0000	24.5210	24.5210	5.0400e-003	0.0000	24.6469
Total	0.0214	0.1666	0.1533	2.9000e-004		8.0300e-003	8.0300e-003		7.7300e-003	7.7300e-003	0.0000	24.5210	24.5210	5.0400e-003	0.0000	24.6469

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3.4 Kayak Launch Facility - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.2000e-004	0.0102	2.7100e-003	3.0000e-005	6.5000e-004	2.0000e-005	6.7000e-004	1.9000e-004	2.0000e-005	2.1000e-004	0.0000	2.5644	2.5644	1.1000e-004	0.0000	2.5672
Worker	8.1000e-004	5.6000e-004	6.0400e-003	2.0000e-005	2.0900e-003	1.0000e-005	2.1100e-003	5.6000e-004	1.0000e-005	5.7000e-004	0.0000	1.7333	1.7333	4.0000e-005	0.0000	1.7343
Total	1.1300e-003	0.0107	8.7500e-003	5.0000e-005	2.7400e-003	3.0000e-005	2.7800e-003	7.5000e-004	3.0000e-005	7.8000e-004	0.0000	4.2977	4.2977	1.5000e-004	0.0000	4.3014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0214	0.1666	0.1533	2.9000e-004		8.0300e-003	8.0300e-003		7.7300e-003	7.7300e-003	0.0000	24.5210	24.5210	5.0400e-003	0.0000	24.6469
Total	0.0214	0.1666	0.1533	2.9000e-004		8.0300e-003	8.0300e-003		7.7300e-003	7.7300e-003	0.0000	24.5210	24.5210	5.0400e-003	0.0000	24.6469

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3.4 Kayak Launch Facility - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.2000e-004	0.0102	2.7100e-003	3.0000e-005	6.5000e-004	2.0000e-005	6.7000e-004	1.9000e-004	2.0000e-005	2.1000e-004	0.0000	2.5644	2.5644	1.1000e-004	0.0000	2.5672
Worker	8.1000e-004	5.6000e-004	6.0400e-003	2.0000e-005	2.0900e-003	1.0000e-005	2.1100e-003	5.6000e-004	1.0000e-005	5.7000e-004	0.0000	1.7333	1.7333	4.0000e-005	0.0000	1.7343
Total	1.1300e-003	0.0107	8.7500e-003	5.0000e-005	2.7400e-003	3.0000e-005	2.7800e-003	7.5000e-004	3.0000e-005	7.8000e-004	0.0000	4.2977	4.2977	1.5000e-004	0.0000	4.3014

3.5 Sediment Removal - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.9700e-003	0.0199	0.0237	3.0000e-005		1.1700e-003	1.1700e-003		1.0800e-003	1.0800e-003	0.0000	2.8662	2.8662	9.3000e-004	0.0000	2.8894
Total	1.9700e-003	0.0199	0.0237	3.0000e-005		1.1700e-003	1.1700e-003		1.0800e-003	1.0800e-003	0.0000	2.8662	2.8662	9.3000e-004	0.0000	2.8894

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3.5 Sediment Removal - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.7000e-004	0.0161	3.5000e-003	5.0000e-005	1.0200e-003	5.0000e-005	1.0700e-003	2.8000e-004	5.0000e-005	3.3000e-004	0.0000	4.5182	4.5182	2.1000e-004	0.0000	4.5233
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	7.0000e-005	7.2000e-004	0.0000	2.5000e-004	0.0000	2.5000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2068	0.2068	0.0000	0.0000	0.2069
Total	5.7000e-004	0.0161	4.2200e-003	5.0000e-005	1.2700e-003	5.0000e-005	1.3200e-003	3.5000e-004	5.0000e-005	4.0000e-004	0.0000	4.7250	4.7250	2.1000e-004	0.0000	4.7303

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.9700e-003	0.0199	0.0237	3.0000e-005		1.1700e-003	1.1700e-003		1.0800e-003	1.0800e-003	0.0000	2.8662	2.8662	9.3000e-004	0.0000	2.8894
Total	1.9700e-003	0.0199	0.0237	3.0000e-005		1.1700e-003	1.1700e-003		1.0800e-003	1.0800e-003	0.0000	2.8662	2.8662	9.3000e-004	0.0000	2.8894

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3.5 Sediment Removal - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.7000e-004	0.0161	3.5000e-003	5.0000e-005	1.0200e-003	5.0000e-005	1.0700e-003	2.8000e-004	5.0000e-005	3.3000e-004	0.0000	4.5182	4.5182	2.1000e-004	0.0000	4.5233
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	7.0000e-005	7.2000e-004	0.0000	2.5000e-004	0.0000	2.5000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2068	0.2068	0.0000	0.0000	0.2069
Total	5.7000e-004	0.0161	4.2200e-003	5.0000e-005	1.2700e-003	5.0000e-005	1.3200e-003	3.5000e-004	5.0000e-005	4.0000e-004	0.0000	4.7250	4.7250	2.1000e-004	0.0000	4.7303

3.6 Fixed Pier and Sediment Barrier - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0133	0.1168	0.1041	1.9000e-004		5.9000e-003	5.9000e-003		5.6400e-003	5.6400e-003	0.0000	15.8294	15.8294	3.0300e-003	0.0000	15.9050
Total	0.0133	0.1168	0.1041	1.9000e-004		5.9000e-003	5.9000e-003		5.6400e-003	5.6400e-003	0.0000	15.8294	15.8294	3.0300e-003	0.0000	15.9050

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3.6 Fixed Pier and Sediment Barrier - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.1000e-004	5.6000e-004	6.0400e-003	2.0000e-005	2.0900e-003	1.0000e-005	2.1100e-003	5.6000e-004	1.0000e-005	5.7000e-004	0.0000	1.7333	1.7333	4.0000e-005	0.0000	1.7343
Total	8.1000e-004	5.6000e-004	6.0400e-003	2.0000e-005	2.0900e-003	1.0000e-005	2.1100e-003	5.6000e-004	1.0000e-005	5.7000e-004	0.0000	1.7333	1.7333	4.0000e-005	0.0000	1.7343

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0133	0.1168	0.1041	1.9000e-004		5.9000e-003	5.9000e-003		5.6400e-003	5.6400e-003	0.0000	15.8294	15.8294	3.0300e-003	0.0000	15.9050
Total	0.0133	0.1168	0.1041	1.9000e-004		5.9000e-003	5.9000e-003		5.6400e-003	5.6400e-003	0.0000	15.8294	15.8294	3.0300e-003	0.0000	15.9050

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3.6 Fixed Pier and Sediment Barrier - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.1000e-004	5.6000e-004	6.0400e-003	2.0000e-005	2.0900e-003	1.0000e-005	2.1100e-003	5.6000e-004	1.0000e-005	5.7000e-004	0.0000	1.7333	1.7333	4.0000e-005	0.0000	1.7343
Total	8.1000e-004	5.6000e-004	6.0400e-003	2.0000e-005	2.0900e-003	1.0000e-005	2.1100e-003	5.6000e-004	1.0000e-005	5.7000e-004	0.0000	1.7333	1.7333	4.0000e-005	0.0000	1.7343

3.7 South Beach Grading - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0565	0.0000	0.0565	0.0290	0.0000	0.0290	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0148	0.1648	0.0728	1.6000e-004		7.3400e-003	7.3400e-003		6.7500e-003	6.7500e-003	0.0000	14.2412	14.2412	4.6100e-003	0.0000	14.3564
Total	0.0148	0.1648	0.0728	1.6000e-004	0.0565	7.3400e-003	0.0639	0.0290	6.7500e-003	0.0358	0.0000	14.2412	14.2412	4.6100e-003	0.0000	14.3564

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3.7 South Beach Grading - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	2.0000e-004	2.1000e-003	1.0000e-005	7.3000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6040	0.6040	1.0000e-005	0.0000	0.6044
Total	2.8000e-004	2.0000e-004	2.1000e-003	1.0000e-005	7.3000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6040	0.6040	1.0000e-005	0.0000	0.6044

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0565	0.0000	0.0565	0.0290	0.0000	0.0290	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0148	0.1648	0.0728	1.6000e-004		7.3400e-003	7.3400e-003		6.7500e-003	6.7500e-003	0.0000	14.2412	14.2412	4.6100e-003	0.0000	14.3563
Total	0.0148	0.1648	0.0728	1.6000e-004	0.0565	7.3400e-003	0.0639	0.0290	6.7500e-003	0.0358	0.0000	14.2412	14.2412	4.6100e-003	0.0000	14.3563

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3.7 South Beach Grading - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	2.0000e-004	2.1000e-003	1.0000e-005	7.3000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6040	0.6040	1.0000e-005	0.0000	0.6044
Total	2.8000e-004	2.0000e-004	2.1000e-003	1.0000e-005	7.3000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6040	0.6040	1.0000e-005	0.0000	0.6044

3.8 Tree Removal - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0667	0.0000	0.0667	0.0340	0.0000	0.0340	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0282	0.2888	0.1980	3.8000e-004		0.0135	0.0135		0.0127	0.0127	0.0000	33.2518	33.2518	7.4700e-003	0.0000	33.4386
Total	0.0282	0.2888	0.1980	3.8000e-004	0.0667	0.0135	0.0802	0.0340	0.0127	0.0467	0.0000	33.2518	33.2518	7.4700e-003	0.0000	33.4386

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3.8 Tree Removal - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5000e-004	2.5000e-004	2.6300e-003	1.0000e-005	9.1000e-004	1.0000e-005	9.2000e-004	2.4000e-004	1.0000e-005	2.5000e-004	0.0000	0.7550	0.7550	2.0000e-005	0.0000	0.7555
Total	3.5000e-004	2.5000e-004	2.6300e-003	1.0000e-005	9.1000e-004	1.0000e-005	9.2000e-004	2.4000e-004	1.0000e-005	2.5000e-004	0.0000	0.7550	0.7550	2.0000e-005	0.0000	0.7555

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0667	0.0000	0.0667	0.0340	0.0000	0.0340	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0282	0.2888	0.1980	3.8000e-004		0.0135	0.0135		0.0127	0.0127	0.0000	33.2517	33.2517	7.4700e-003	0.0000	33.4385
Total	0.0282	0.2888	0.1980	3.8000e-004	0.0667	0.0135	0.0802	0.0340	0.0127	0.0467	0.0000	33.2517	33.2517	7.4700e-003	0.0000	33.4385

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3.8 Tree Removal - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5000e-004	2.5000e-004	2.6300e-003	1.0000e-005	9.1000e-004	1.0000e-005	9.2000e-004	2.4000e-004	1.0000e-005	2.5000e-004	0.0000	0.7550	0.7550	2.0000e-005	0.0000	0.7555
Total	3.5000e-004	2.5000e-004	2.6300e-003	1.0000e-005	9.1000e-004	1.0000e-005	9.2000e-004	2.4000e-004	1.0000e-005	2.5000e-004	0.0000	0.7550	0.7550	2.0000e-005	0.0000	0.7555

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

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.1000e-003	8.7700e-003	0.0237	8.0000e-005	7.3800e-003	7.0000e-005	7.4500e-003	1.9800e-003	6.0000e-005	2.0400e-003	0.0000	7.3720	7.3720	2.5000e-004	0.0000	7.3783
Unmitigated	2.1000e-003	8.7700e-003	0.0237	8.0000e-005	7.3800e-003	7.0000e-005	7.4500e-003	1.9800e-003	6.0000e-005	2.0400e-003	0.0000	7.3720	7.3720	2.5000e-004	0.0000	7.3783

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	2.51	30.26	22.26	19,851	19,851
Total	2.51	30.26	22.26	19,851	19,851

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.610498	0.036775	0.183084	0.106123	0.014413	0.005007	0.012610	0.021118	0.002144	0.001548	0.005312	0.000627	0.000740

5.0 Energy Detail

Historical Energy Use: N

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5.1 Mitigation Measures Energy

[illegible]

5.2 Energy by Land Use - NaturalGas

Unmitigated

[illegible]

5.2 Energy by Land Use - NaturalGas

Mitigated

Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	tons/yr					MT/yr				
										Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e				
City Park	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			
Land Use	kBtu/yr										MT/yr								
Total		0.0000	0.0000	0.0000			0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

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

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail**6.1 Mitigation Measures Area**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	5.5000e-004	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Unmitigated	5.5000e-004	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

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6.2 Area by SubCategory

Unmitigated

	SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Architectural Coating	0.0000						0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	Consumer Products	5.4000e-004						0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	Landscaping	0.0000	0.0000	1.0000e-005	0.0000			0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
	Total	5.4000e-004	0.0000	1.0000e-005	0.0000			0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
	SubCategory	tons/yr															
		MT/yr															

Mitigated

	SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Architectural Coating	0.0000						0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	Consumer Products	5.4000e-004						0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	Landscaping	0.0000	0.0000	1.0000e-005	0.0000			0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
	Total	5.4000e-004	0.0000	1.0000e-005	0.0000			0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
	SubCategory	tons/yr															
		MT/yr															

7.0 Water Detail

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7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1.6135	7.0000e-005	2.0000e-005	1.6198
Unmitigated	1.6135	7.0000e-005	2.0000e-005	1.6198

7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 1.58467	1.6135	7.0000e-005	2.0000e-005	1.6198
Total		1.6135	7.0000e-005	2.0000e-005	1.6198

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7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 1.58467	1.6135	7.0000e-005	2.0000e-005	1.6198
Total		1.6135	7.0000e-005	2.0000e-005	1.6198

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

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0223	1.3200e-003	0.0000	0.0553
Unmitigated	0.0223	1.3200e-003	0.0000	0.0553

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8.2 Waste by Land Use
Unmitigated

Waste Disposed	Land Use	tons	MT/yr			
			Total CO ₂	CH ₄	N ₂ O	CO ₂ e
	City Park	0.11	0.0223	1.3200e-003	0.0000	0.0553
	Total		0.0223	1.3200e-003	0.0000	0.0553

Mitigated

Waste Disposed	Land Use	tons	MT/yr			
			Total CO ₂	CH ₄	N ₂ O	CO ₂ e
	City Park	0.11	0.0223	1.3200e-003	0.0000	0.0553
	Total		0.0223	1.3200e-003	0.0000	0.0553

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

Sailing Lake Access Road Improvements Project - Santa Clara County, Summer

Sailing Lake Access Road Improvements Project

Santa Clara County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	1.33	Acre	1.33	57,934.80	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	4			Operational Year	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Sailing Lake Access Road Improvements Project - Santa Clara County, Summer

Project Characteristics -

Land Use - Project Description.

Construction Phase - Project Description

Off-road Equipment -

Trips and VMT - Project Description.

Grading - Project Description.

Off-road Equipment - Project Description

Off-road Equipment - Project Description

Off-road Equipment - Project Description

Off-road Equipment - Project Description

Off-road Equipment - Project Description

Off-road Equipment - Project Description

Off-road Equipment - Project Description

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	200.00	22.00
tblConstructionPhase	NumDays	200.00	22.00
tblConstructionPhase	NumDays	200.00	22.00
tblConstructionPhase	NumDays	200.00	22.00
tblConstructionPhase	NumDays	4.00	23.00
tblConstructionPhase	NumDays	2.00	23.00
tblConstructionPhase	PhaseEndDate	4/12/2022	9/30/2021
tblConstructionPhase	PhaseEndDate	4/26/2022	10/31/2021
tblConstructionPhase	PhaseEndDate	7/2/2021	7/31/2021
tblConstructionPhase	PhaseEndDate	7/6/2021	8/31/2021
tblConstructionPhase	PhaseStartDate	7/7/2021	9/1/2021
tblConstructionPhase	PhaseStartDate	4/13/2022	10/1/2021

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tblConstructionPhase	PhaseStartDate	7/3/2021	8/1/2021
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Other Material Handling Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	UsageHours	6.00	4.00
tblTripsAndVMT	HaulingTripNumber	0.00	100.00
tblTripsAndVMT	HaulingTripNumber	0.00	120.00
tblTripsAndVMT	VendorTripNumber	9.00	0.00
tblTripsAndVMT	VendorTripNumber	9.00	20.00
tblTripsAndVMT	VendorTripNumber	9.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	10.00

2.0 Emissions Summary

Unmitigated Construction

Year	lb/day										lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2021	3.7956	39.4814	25.4028	0.0487	10.8619	1.8132	12.6751	5.5186	1.6958	7.2144	0.0000	4,692.3915	4,692.3915	1.1610	0.0000	4,721.4159
Maximum	3.7956	39.4814	25.4028	0.0487	10.8619	1.8132	12.6751	5.5186	1.6958	7.2144	0.0000	4,692.3915	4,692.3915	1.1610	0.0000	4,721.4159

[illegible]

Sailing Lake Access Road Improvements Project - Santa Clara County, Summer

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.0000e-003	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.9000e-004	2.9000e-004	0.0000		3.1000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0433	0.1520	0.4424	1.5300e-003	0.1366	1.2300e-003	0.1379	0.0365	1.1500e-003	0.0376		154.0277	154.0277	5.0400e-003		154.1537
Total	0.0463	0.1520	0.4425	1.5300e-003	0.1366	1.2300e-003	0.1379	0.0365	1.1500e-003	0.0376		154.0280	154.0280	5.0400e-003	0.0000	154.1540

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.0000e-003	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.9000e-004	2.9000e-004	0.0000		3.1000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0433	0.1520	0.4424	1.5300e-003	0.1366	1.2300e-003	0.1379	0.0365	1.1500e-003	0.0376		154.0277	154.0277	5.0400e-003		154.1537
Total	0.0463	0.1520	0.4425	1.5300e-003	0.1366	1.2300e-003	0.1379	0.0365	1.1500e-003	0.0376		154.0280	154.0280	5.0400e-003	0.0000	154.1540

Sailing Lake Access Road Improvements Project - Santa Clara County, Summer

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	North Shoreline Repair	Building Construction	7/1/2021	7/31/2021	5	22	
2	Dock Replacement	Building Construction	8/1/2021	8/31/2021	5	22	
3	Kayak Launch Facility	Building Construction	9/1/2021	9/30/2021	5	22	
4	Sediment Removal	Trenching	10/1/2021	10/31/2021	5	21	
5	Fixed Pier and Sediment Barrier	Building Construction	11/1/2021	11/30/2021	5	22	
6	South Beach Grading	Grading	12/1/2021	12/31/2021	5	23	
7	Tree Removal	Site Preparation	12/1/2021	12/31/2021	5	23	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
North Shoreline Repair	Excavators	2	8.00	158	0.38
Kayak Launch Facility	Bore/Drill Rigs	1	4.00	221	0.50
Dock Replacement	Other Construction Equipment	2	8.00	172	0.42

Sailing Lake Access Road Improvements Project - Santa Clara County, Summer

North Shoreline Repair	Cranes	1	4.00	231	0.29
Dock Replacement	Other Material Handling Equipment	1	8.00	168	0.40
North Shoreline Repair	Rollers	1	4.00	80	0.38
Fixed Pier and Sediment Barrier	Trenchers	1		78	0.50
Dock Replacement	Cranes	1	6.00	231	0.29
Kayak Launch Facility	Generator Sets	1	8.00	84	0.74
Fixed Pier and Sediment Barrier	Cranes	1	6.00	231	0.29
Kayak Launch Facility	Cranes	1	6.00	231	0.29
North Shoreline Repair	Forklifts	1	6.00	89	0.20
Kayak Launch Facility	Welders	3	8.00	46	0.45
Dock Replacement	Forklifts	1	6.00	89	0.20
Kayak Launch Facility	Forklifts	1	6.00	89	0.20
Fixed Pier and Sediment Barrier	Forklifts	1	6.00	89	0.20
North Shoreline Repair	Generator Sets	1	8.00	84	0.74
Sediment Removal	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Dock Replacement	Generator Sets	1	8.00	84	0.74
Tree Removal	Graders	1	8.00	187	0.41
Tree Removal	Rubber Tired Dozers	1	7.00	247	0.40
North Shoreline Repair	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Dock Replacement	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Kayak Launch Facility	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Fixed Pier and Sediment Barrier	Generator Sets	1	8.00	84	0.74
South Beach Grading	Graders	1	6.00	187	0.41
South Beach Grading	Rubber Tired Dozers	1	6.00	247	0.40
Fixed Pier and Sediment Barrier	Tractors/Loaders/Backhoes	1	6.00	97	0.37
South Beach Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Tree Removal	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Sailing Lake Access Road Improvements Project - Santa Clara County, Summer

North Shoreline Repair	Welders	3	8.00	46	0.45
Fixed Pier and Sediment Barrier	Welders	1	8.00	46	0.45
Dock Replacement	Welders	3	8.00	46	0.45
Tree Removal	Concrete/Industrial Saws	2	8.00	81	0.73
Tree Removal	Rough Terrain Forklifts	1	8.00	100	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Fixed Pier and Sediment Barrier	6	24.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
North Shoreline Repair	10	24.00	20.00	100.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Kayak Launch Facility	8	24.00	9.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Sediment Removal	1	3.00	0.00	120.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Dock Replacement	10	24.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
South Beach Grading	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Tree Removal	6	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Sailing Lake Access Road Improvements Project - Santa Clara County, Summer

3.2 North Shoreline Repair - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2612	17.6805	19.8756	0.0322		0.9021	0.9021		0.8611	0.8611		2,987.3589	2,987.3589	0.6762		3,004.2641
Total	2.2612	17.6805	19.8756	0.0322		0.9021	0.9021		0.8611	0.8611		2,987.3589	2,987.3589	0.6762		3,004.2641

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0352	1.1921	0.2569	3.5600e-003	0.0795	3.7700e-003	0.0832	0.0218	3.6100e-003	0.0254		380.0323	380.0323	0.0168		380.4520
Vendor	0.0638	2.0332	0.5124	5.4600e-003	0.1354	4.5000e-003	0.1399	0.0390	4.3000e-003	0.0433		577.2385	577.2385	0.0241		577.8399
Worker	0.0773	0.0458	0.6048	1.8700e-003	0.1972	1.2000e-003	0.1984	0.0523	1.1000e-003	0.0534		186.7226	186.7226	4.2400e-003		186.8287
Total	0.1763	3.2710	1.3741	0.0109	0.4120	9.4700e-003	0.4215	0.1131	9.0100e-003	0.1221		1,143.9935	1,143.9935	0.0451		1,145.1206

Sailing Lake Access Road Improvements Project - Santa Clara County, Summer

3.2 North Shoreline Repair - 2021**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2612	17.6805	19.8756	0.0322		0.9021	0.9021		0.8611	0.8611	0.0000	2,987.3589	2,987.3589	0.6762		3,004.2641
Total	2.2612	17.6805	19.8756	0.0322		0.9021	0.9021		0.8611	0.8611	0.0000	2,987.3589	2,987.3589	0.6762		3,004.2641

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0352	1.1921	0.2569	3.5600e-003	0.0795	3.7700e-003	0.0832	0.0218	3.6100e-003	0.0254		380.0323	380.0323	0.0168		380.4520
Vendor	0.0638	2.0332	0.5124	5.4600e-003	0.1354	4.5000e-003	0.1399	0.0390	4.3000e-003	0.0433		577.2385	577.2385	0.0241		577.8399
Worker	0.0773	0.0458	0.6048	1.8700e-003	0.1972	1.2000e-003	0.1984	0.0523	1.1000e-003	0.0534		186.7226	186.7226	4.2400e-003		186.8287
Total	0.1763	3.2710	1.3741	0.0109	0.4120	9.4700e-003	0.4215	0.1131	9.0100e-003	0.1221		1,143.9935	1,143.9935	0.0451		1,145.1206

Sailing Lake Access Road Improvements Project - Santa Clara County, Summer

3.3 Dock Replacement - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9471	25.0603	24.7980	0.0402		1.2774	1.2774		1.2064	1.2064		3,757.9457	3,757.9457	0.9254		3,781.0814
Total	2.9471	25.0603	24.7980	0.0402		1.2774	1.2774		1.2064	1.2064		3,757.9457	3,757.9457	0.9254		3,781.0814

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0773	0.0458	0.6048	1.8700e-003	0.1972	1.2000e-003	0.1984	0.0523	1.1000e-003	0.0534		186.7226	186.7226	4.2400e-003		186.8287
Total	0.0773	0.0458	0.6048	1.8700e-003	0.1972	1.2000e-003	0.1984	0.0523	1.1000e-003	0.0534		186.7226	186.7226	4.2400e-003		186.8287

Sailing Lake Access Road Improvements Project - Santa Clara County, Summer

3.3 Dock Replacement - 2021**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9471	25.0603	24.7980	0.0402		1.2774	1.2774		1.2064	1.2064	0.0000	3,757.9457	3,757.9457	0.9254		3,781.0814
Total	2.9471	25.0603	24.7980	0.0402		1.2774	1.2774		1.2064	1.2064	0.0000	3,757.9457	3,757.9457	0.9254		3,781.0814

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0773	0.0458	0.6048	1.8700e-003	0.1972	1.2000e-003	0.1984	0.0523	1.1000e-003	0.0534		186.7226	186.7226	4.2400e-003		186.8287
Total	0.0773	0.0458	0.6048	1.8700e-003	0.1972	1.2000e-003	0.1984	0.0523	1.1000e-003	0.0534		186.7226	186.7226	4.2400e-003		186.8287

Sailing Lake Access Road Improvements Project - Santa Clara County, Summer

3.4 Kayak Launch Facility - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9416	15.1474	13.9364	0.0268		0.7302	0.7302		0.7030	0.7030		2,457.251 2	2,457.251 2	0.5048		2,469.870 1
Total	1.9416	15.1474	13.9364	0.0268		0.7302	0.7302		0.7030	0.7030		2,457.251 2	2,457.251 2	0.5048		2,469.870 1

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0287	0.9149	0.2306	2.4600e-003	0.0609	2.0200e-003	0.0630	0.0175	1.9300e-003	0.0195		259.7573	259.7573	0.0108		260.0280
Worker	0.0773	0.0458	0.6048	1.8700e-003	0.1972	1.2000e-003	0.1984	0.0523	1.1000e-003	0.0534		186.7226	186.7226	4.2400e-003		186.8287
Total	0.1060	0.9607	0.8354	4.3300e-003	0.2581	3.2200e-003	0.2613	0.0698	3.0300e-003	0.0729		446.4800	446.4800	0.0151		446.8566

Sailing Lake Access Road Improvements Project - Santa Clara County, Summer

3.4 Kayak Launch Facility - 2021**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9416	15.1474	13.9364	0.0268		0.7302	0.7302		0.7030	0.7030	0.0000	2,457.251 2	2,457.251 2	0.5048		2,469.870 1
Total	1.9416	15.1474	13.9364	0.0268		0.7302	0.7302		0.7030	0.7030	0.0000	2,457.251 2	2,457.251 2	0.5048		2,469.870 1

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0287	0.9149	0.2306	2.4600e-003	0.0609	2.0200e-003	0.0630	0.0175	1.9300e-003	0.0195		259.7573	259.7573	0.0108		260.0280
Worker	0.0773	0.0458	0.6048	1.8700e-003	0.1972	1.2000e-003	0.1984	0.0523	1.1000e-003	0.0534		186.7226	186.7226	4.2400e-003		186.8287
Total	0.1060	0.9607	0.8354	4.3300e-003	0.2581	3.2200e-003	0.2613	0.0698	3.0300e-003	0.0729		446.4800	446.4800	0.0151		446.8566

Sailing Lake Access Road Improvements Project - Santa Clara County, Summer

3.5 Sediment Removal - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1873	1.8958	2.2602	3.1100e-003		0.1118	0.1118		0.1028	0.1028		300.9001	300.9001	0.0973		303.3330
Total	0.1873	1.8958	2.2602	3.1100e-003		0.1118	0.1118		0.1028	0.1028		300.9001	300.9001	0.0973		303.3330

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0443	1.4986	0.3229	4.4700e-003	0.0999	4.7400e-003	0.1046	0.0274	4.5300e-003	0.0319		477.7549	477.7549	0.0211		478.2825
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	9.6600e-003	5.7200e-003	0.0756	2.3000e-004	0.0246	1.5000e-004	0.0248	6.5400e-003	1.4000e-004	6.6700e-003		23.3403	23.3403	5.3000e-004		23.3536
Total	0.0540	1.5043	0.3985	4.7000e-003	0.1245	4.8900e-003	0.1294	0.0339	4.6700e-003	0.0386		501.0953	501.0953	0.0216		501.6361

Sailing Lake Access Road Improvements Project - Santa Clara County, Summer

3.5 Sediment Removal - 2021**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1873	1.8958	2.2602	3.1100e-003		0.1118	0.1118		0.1028	0.1028	0.0000	300.9001	300.9001	0.0973		303.3330
Total	0.1873	1.8958	2.2602	3.1100e-003		0.1118	0.1118		0.1028	0.1028	0.0000	300.9001	300.9001	0.0973		303.3330

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0443	1.4986	0.3229	4.4700e-003	0.0999	4.7400e-003	0.1046	0.0274	4.5300e-003	0.0319		477.7549	477.7549	0.0211		478.2825
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	9.6600e-003	5.7200e-003	0.0756	2.3000e-004	0.0246	1.5000e-004	0.0248	6.5400e-003	1.4000e-004	6.6700e-003		23.3403	23.3403	5.3000e-004		23.3536
Total	0.0540	1.5043	0.3985	4.7000e-003	0.1245	4.8900e-003	0.1294	0.0339	4.6700e-003	0.0386		501.0953	501.0953	0.0216		501.6361

Sailing Lake Access Road Improvements Project - Santa Clara County, Summer

3.6 Fixed Pier and Sediment Barrier - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2072	10.6183	9.4617	0.0169		0.5361	0.5361		0.5126	0.5126		1,586.2646	1,586.2646	0.3032		1,593.8454
Total	1.2072	10.6183	9.4617	0.0169		0.5361	0.5361		0.5126	0.5126		1,586.2646	1,586.2646	0.3032		1,593.8454

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0773	0.0458	0.6048	1.8700e-003	0.1972	1.2000e-003	0.1984	0.0523	1.1000e-003	0.0534		186.7226	186.7226	4.2400e-003		186.8287
Total	0.0773	0.0458	0.6048	1.8700e-003	0.1972	1.2000e-003	0.1984	0.0523	1.1000e-003	0.0534		186.7226	186.7226	4.2400e-003		186.8287

Sailing Lake Access Road Improvements Project - Santa Clara County, Summer

3.6 Fixed Pier and Sediment Barrier - 2021**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2072	10.6183	9.4617	0.0169		0.5361	0.5361		0.5126	0.5126	0.0000	1,586.2646	1,586.2646	0.3032		1,593.8454
Total	1.2072	10.6183	9.4617	0.0169		0.5361	0.5361		0.5126	0.5126	0.0000	1,586.2646	1,586.2646	0.3032		1,593.8454

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0773	0.0458	0.6048	1.8700e-003	0.1972	1.2000e-003	0.1984	0.0523	1.1000e-003	0.0534		186.7226	186.7226	4.2400e-003		186.8287
Total	0.0773	0.0458	0.6048	1.8700e-003	0.1972	1.2000e-003	0.1984	0.0523	1.1000e-003	0.0534		186.7226	186.7226	4.2400e-003		186.8287

Sailing Lake Access Road Improvements Project - Santa Clara County, Summer

3.7 South Beach Grading - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9145	0.0000	4.9145	2.5256	0.0000	2.5256			0.0000			0.0000
Off-Road	1.2884	14.3307	6.3314	0.0141		0.6379	0.6379		0.5869	0.5869		1,365.0648	1,365.0648	0.4415		1,376.1020
Total	1.2884	14.3307	6.3314	0.0141	4.9145	0.6379	5.5524	2.5256	0.5869	3.1125		1,365.0648	1,365.0648	0.4415		1,376.1020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0258	0.0153	0.2016	6.2000e-004	0.0657	4.0000e-004	0.0661	0.0174	3.7000e-004	0.0178		62.2409	62.2409	1.4100e-003		62.2762
Total	0.0258	0.0153	0.2016	6.2000e-004	0.0657	4.0000e-004	0.0661	0.0174	3.7000e-004	0.0178		62.2409	62.2409	1.4100e-003		62.2762

Sailing Lake Access Road Improvements Project - Santa Clara County, Summer

3.7 South Beach Grading - 2021**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9145	0.0000	4.9145	2.5256	0.0000	2.5256			0.0000			0.0000
Off-Road	1.2884	14.3307	6.3314	0.0141		0.6379	0.6379		0.5869	0.5869	0.0000	1,365.0648	1,365.0648	0.4415		1,376.1020
Total	1.2884	14.3307	6.3314	0.0141	4.9145	0.6379	5.5524	2.5256	0.5869	3.1125	0.0000	1,365.0648	1,365.0648	0.4415		1,376.1020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0258	0.0153	0.2016	6.2000e-004	0.0657	4.0000e-004	0.0661	0.0174	3.7000e-004	0.0178		62.2409	62.2409	1.4100e-003		62.2762
Total	0.0258	0.0153	0.2016	6.2000e-004	0.0657	4.0000e-004	0.0661	0.0174	3.7000e-004	0.0178		62.2409	62.2409	1.4100e-003		62.2762

Sailing Lake Access Road Improvements Project - Santa Clara County, Summer

3.8 Tree Removal - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	2.4493	25.1164	17.2142	0.0332		1.1744	1.1744		1.1081	1.1081		3,187.2848	3,187.2848	0.7163		3,205.1923
Total	2.4493	25.1164	17.2142	0.0332	5.7996	1.1744	6.9740	2.9537	1.1081	4.0618		3,187.2848	3,187.2848	0.7163		3,205.1923

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0322	0.0191	0.2520	7.8000e-004	0.0822	5.0000e-004	0.0827	0.0218	4.6000e-004	0.0223		77.8011	77.8011	1.7700e-003		77.8453
Total	0.0322	0.0191	0.2520	7.8000e-004	0.0822	5.0000e-004	0.0827	0.0218	4.6000e-004	0.0223		77.8011	77.8011	1.7700e-003		77.8453

Sailing Lake Access Road Improvements Project - Santa Clara County, Summer

3.8 Tree Removal - 2021**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	2.4493	25.1164	17.2142	0.0332		1.1744	1.1744		1.1081	1.1081	0.0000	3,187.2848	3,187.2848	0.7163		3,205.1923
Total	2.4493	25.1164	17.2142	0.0332	5.7996	1.1744	6.9740	2.9537	1.1081	4.0618	0.0000	3,187.2848	3,187.2848	0.7163		3,205.1923

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0322	0.0191	0.2520	7.8000e-004	0.0822	5.0000e-004	0.0827	0.0218	4.6000e-004	0.0223		77.8011	77.8011	1.7700e-003		77.8453
Total	0.0322	0.0191	0.2520	7.8000e-004	0.0822	5.0000e-004	0.0827	0.0218	4.6000e-004	0.0223		77.8011	77.8011	1.7700e-003		77.8453

4.0 Operational Detail - Mobile

Sailing Lake Access Road Improvements Project - Santa Clara County, Summer

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0433	0.1520	0.4424	1.5300e-003	0.1366	1.2300e-003	0.1379	0.0365	1.1500e-003	0.0376		154.0277	154.0277	5.0400e-003		154.1537
Unmitigated	0.0433	0.1520	0.4424	1.5300e-003	0.1366	1.2300e-003	0.1379	0.0365	1.1500e-003	0.0376		154.0277	154.0277	5.0400e-003		154.1537

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	2.51	30.26	22.26	19,851	19,851
Total	2.51	30.26	22.26	19,851	19,851

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.610498	0.036775	0.183084	0.106123	0.014413	0.005007	0.012610	0.021118	0.002144	0.001548	0.005312	0.000627	0.000740

Sailing Lake Access Road Improvements Project - Santa Clara County, Summer

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Sailing Lake Access Road Improvements Project - Santa Clara County, Summer

5.2 Energy by Land Use - Natural Gas

Unmitigated

		Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	lb/day	lb/day																
City Park	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated

		Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day
City Park	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.0000e-003	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.9000e-004	2.9000e-004	0.0000		3.1000e-004
Unmitigated	3.0000e-003	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.9000e-004	2.9000e-004	0.0000		3.1000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.9800e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.9000e-004	2.9000e-004	0.0000		3.1000e-004
Total	2.9900e-003	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.9000e-004	2.9000e-004	0.0000		3.1000e-004

Sailing Lake Access Road Improvements Project - Santa Clara County, Summer

6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.9800e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.9000e-004	2.9000e-004	0.0000		3.1000e-004
Total	2.9900e-003	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.9000e-004	2.9000e-004	0.0000		3.1000e-004

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

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

Sailing Lake Access Road Improvements Project - Santa Clara County, Summer

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

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

Equipment Type	Number
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11.0 Vegetation
