

Draft Initial Study & Mitigated Negative Declaration

Johnson Pier Reconfiguration, Vessel Dock and
Fuel Dock Replacement Project

April 2022



Lead Agency:

San Mateo County Harbor District
PO Box 1449
El Granada, CA 94018

Prepared by:



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LIST OF ACRONYMS AND ABBREVIATIONS

AIA	Airport Influence Area
ALUCP	Airport Land Use Compatibility Plan
BAAQMD	Bay Area Air Quality Management District
BMP	Best Management Practice
CAA	Clean Air Act
CAP	Climate Action Plan
CCA	California Clean Air Act
CCC	California Coastal Commission
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CEQA Guidelines	California Environmental Quality Act Air Quality Guidelines
CH ₄	Methane
<i>the</i> “Community”	Community of Princeton
CNEL	Community Noise Exposure Level
CO ₂	Carbon Dioxide
CO _{2e}	Carbon Dioxide Equivalent
CAPCOA	California Air Pollution Control Officers Association
CNEL	Community Noise Equivalent Level
Cortese list	DTSC’s Hazardous Waste and Substances List
dB	Decibel
dBA	A-weighted Decibel
<i>The</i> “District”	San Mateo County Harbor District
DPM	Diesel Particulate Matter
DTSC	Department of Toxic Substances Control
EECAP	Energy Efficiency Climate Action Plan (San Mateo County)
EFH	Essential fish habitat
EIR	Environmental Impact Report
ESI	Environmental Sensitivity Index
FMP	Fishery Management Plan
GHG	Greenhouse Gas
GWP	Global Warming Potential
IS	Initial Study
IS/MND	Initial Study / Mitigated Negative Declaration
lb	Pound
LRA	Local Responsibility Area



LUST	Leaking Underground Storage Tank
MBUAPCD	Monterey Bay Unified Air Pollution Control District
MND	Mitigated Negative Declaration
MSA	Magnuson-Stevens Fishery Conservation and Management Act
mty	Metric Tons Per Year
Mw	Moment Magnitude
N ₂ O	Nitrous Oxide
ND	Negative Declaration
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NRCS	National Resources Conservation Service
PCB	Polychlorinated Biphenyls
<i>the "Pier"</i>	Johnson Pier
PM ₁₀	Particulates 10 microns or less in diameter
PM _{2.5}	Particulates 2.5 microns or less in diameter
PPH	Pillar Point Harbor
Princeton	Princeton By The Sea
<i>the "Project"</i>	Johnson Pier Improvements Project
RWQCB	Regional Water Quality Control Board
SFBAAB	San Francisco Bay Area Air Basin
SMCTP	San Mateo Countywide Transportation Plan
SR-1	State Route 1
Strategy	San Mateo County Energy and Water Strategy 2025 (Draft)
TAC	Toxic Air Contaminants
TMDL	Total Maximum Daily Load
TPH	Total Petroleum Hydrocarbons
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VMT	Vehicle Miles Traveled
WGCEP	Working Group on California Earthquake Probabilities



1.0 INTRODUCTION

Summary

The San Mateo County Harbor District (District) has determined that the proposed Johnson Pier Improvements Project (Project), and the required discretionary actions of the District for the Project, require compliance with the guidelines and regulations of the California Environmental Quality Act (CEQA). This Initial Study and Mitigated Negative Declaration (IS/MND) addresses the direct, indirect, and cumulative environmental effects associated with the proposed Project.

This IS/MND has been prepared in conformance with the California Environmental Quality Act of 1970, as amended (Public Resources Code Section 21000 *et seq.*); Section 15070 of the State Guidelines for Implementation of the California Environmental Quality Act of 1970 (“CEQA Guidelines”), as amended (California Code of Regulations [CCR], Title 14, Chapter 3, Section 15000 *et seq.*); and applicable requirements of the Lead Agency, the District.

This IS/MND has determined that the proposed Project would result in potentially significant environmental impacts; however, mitigation measures are proposed that would reduce any potentially significant impact to less than significant levels. As such, an IS/MND is deemed as the appropriate document to provide the necessary environmental evaluations and clearance.

Statutory Authority and Requirements

In accordance with CEQA (Public Resources Code Sections 21000-21177) and pursuant to Section 15063 of the CEQA Guidelines set forth at Title 14 of the CCR, District is the Lead Agency for the “Project” undergoing environmental review in this document. Acting in the capacity of CEQA Lead Agency, the District is required to undertake the preparation of an Initial Study (IS) to provide the District with information to use as the basis for determining whether an Environmental Impact Report (EIR), Negative Declaration (ND), or Mitigated Negative Declaration (MND) would be appropriate for providing the necessary environmental documentation for the proposed Project.

The purpose of an IS is to: (1) identify potential environmental impacts; (2) provide the Lead Agency with information to use as the basis for deciding whether to prepare an EIR or ND; (3) enable the project sponsor/applicant or Lead Agency to modify a project, mitigating adverse impacts before an EIR is prepared; (4) facilitate environmental assessment early in the design of a project; (5) provide documentation of the factual basis for the finding in an ND that a project would not have a significant environmental effect; (6) eliminate needless EIRs; (7) determine whether a previously prepared EIR could be used for a project; and (8) assist in the preparation of an EIR, if required, by focusing the EIR on the effects determined to be significant, identifying the effects determined not to be significant, and explaining the reasons for determining that potentially significant effects would not be significant.



Section 15063 of the CEQA Guidelines identifies global disclosure requirements for inclusion in an IS. Pursuant to those requirements, an IS must include: (1) a description of the project, including the location of the project; (2) an identification of the environmental setting; (3) an identification of environmental effects by use of a checklist, matrix or other method, provided that entries on a checklist or other form are briefly explained to indicate that there is some evidence to support the entries; (4) a discussion of ways to mitigate significant effects identified, if any; (5) an examination of whether the project is compatible with existing zoning, plans, and other applicable land use controls; and (6) the name of the person or persons who prepared or participated in the preparation of the IS.

According to Section 15065(a) of the CEQA Guidelines, an EIR must be prepared for a project if any of the following conditions occur:

- The project has 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 an endangered, rare, or threatened species; or eliminate important examples of the major periods of California history or prehistory;
- The project has the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals;
- The project has possible environmental effects that are individually limited but cumulatively considerable. “Cumulatively considerable” means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects;
- The environmental effects of a project will cause substantial adverse effects on human beings, either directly or indirectly.

According to Section 15070(a) of the CEQA Guidelines, an ND is deemed appropriate if the IS shows that there is no substantial evidence, in light of the whole record before the Lead Agency, that the project may have a significant effect on the environment.

According to Section 15070(b), an MND is deemed appropriate if it identifies potentially significant effects, but:

- Revisions in the project plans or proposals made by or agreed to by the sponsor/applicant before a proposed IS/MND is released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur; and



- 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.

Intended Uses of this Initial Study and Mitigated Negative Declaration

This IS/MND is intended to be an informational document for the District as Lead Agency, the general-public, and for responsible agencies to review and use when approving subsequent discretionary actions for the Johnson Pier Improvements Project (herein referred to as the “Project”). The resulting documentation is not a policy document, and its approval and/or certification neither presupposes nor mandates any actions on the part of those agencies from whom permits and other discretionary approvals would be required.

The Notice of Intent (NOI) to adopt an MND and supporting analysis is subject to a **30-day public and agency review period (April 13, 2022 to May 13, 2022)**. The IS/MND can be viewed at the San Mateo County Harbor District Office or on-line (<https://www.smharbor.com/johnson-pier-reconfiguration-vessel-dock-fuel-dock-replacement>) or (<https://www.smharbor.com/replace-dock-g-f-e>). During this review, comments on the document should be addressed to the District. Following review of any comments received, the District will consider these comments as a part of this Project’s environmental review and include them with the IS/MND documentation for consideration by the Harbor Division if needed.

Supportive Documentation

Technical Studies

This IS/MND also utilizes information provided in the following documents:

- Rincon Consultants Inc. 2022. Johnson Pier Expansion and Dock Replacement Project, Biological Resources Assessment, dated January 2022.
- Rincon Consultants Inc. 2022. Johnson Pier Expansion and Dock Replacement Project, Cultural Resources Assessment Report, dated January 2022.



2.0 INITIAL STUDY / ENVIRONMENTAL CHECKLIST

Project Title

Johnson Pier Reconfiguration, Vessel Dock and Fuel Dock Replacement Project

Lead Agency

San Mateo County Harbor District
504 Avenue Alhambra
El Granada, CA 94018

Project Contact

John Moren, Director of Operations
P. O. Box 1449
El Granada, CA 94018
(650) 583-4400

Project Sponsor

San Mateo County Harbor District
504 Avenue Alhambra El Granada, CA 94018

Project Location

The Project site is in the community of Princeton, north of Half Moon Bay, San Mateo County, California.

General Plan / Zoning Designations

Land Use Designation: Recreation, Public Recreation Coastside Commercial Recreation

General Plan Zoning: Coastside Commercial Recreation District, Design Review District, Coastal Development District

Environmental Setting and Surrounding Land Uses

The Project is located at Johnson Pier (Pier) in Pillar Point Harbor in the Community of Princeton (Community), north of Half Moon Bay, San Mateo County, California. The Pier connects to land on the north with a 28-foot-wide and 575-foot-long trestle. The south end of the trestle connects to the Pier terminus, or head, that extends 250 feet west, perpendicular to the trestle. The pier head is 28-foot -wide and widens to 75 feet at the west end where a 2-story wooden building is located. The



The Pier provides access to floating docks, fueling facilities, fish handling, and berthing facilities for fishing boats. The Pier supports large commercial trucks and forklift operations for fish handling. Due to lack of area on the pier head, trucks back onto the south end of the Pier trestle, where they are loaded. Forklift operations are carried out primarily on the pier head. Passenger vehicles park along the east side of the trestle.

The Pier is constructed of concrete. The deck is 12-inch-thick (non-prestressed) precast concrete planks connected to the pile caps with cast-in-place concrete closure pours. Precast prestressed concrete piles support the Pier deck in rows (“bents”) spaced at 24 feet on center. Each bent contains vertical and slanted (“batter”) piles.

There is a 1,650-square foot timber pier and 160 linear feet of floating docks located and accessed on the north side of the pier head. These features are not shown on the original 1961 drawings but were likely added soon after 1962. The timber pier provides additional storage area, and the docks provide a location where boats tie up for maintenance when not actively unloading. The timber pier deck is 3-4 feet lower than the concrete pier and provides support for refrigerated storage units above.

Project Background

Johnson Pier

The Pier was originally designed in 1961 to accommodate single-axle delivery trucks that could access and be loaded at the building on the west side of the pier head. Over time, trucks/semitrailers have been used for delivery from the facility. Additionally, the L-shaped geometry of the pier restricts turning movements for truck/semitrailers, requiring trucks to either back-in or back-out the entire length of the pier, creating safety issues and causing significant delays in operations. This requires forklifts to travel from the boat unloading area on the west of the pier head, to the east side to load the trucks. The pier head is only 28-feet-wide and also has container storage on the north side and a crane located on the south side, resulting in a clear path of less than 12 feet, which must be shared by multiple forklifts operating during busy crab season.

The need for more operating space at the pier head was recognized soon after the Pillar Point Harbor (PPH) docks were constructed in 1984.

Wooden Floating Docks (Docks D, E, F, G, and H)

The wooden floating docks were originally constructed in 1985 and are now nearing the end of their 30-to-40-year functional life span. The docks range from “poor” to “serious” condition and require replacement within 10 years (GHD 2021). They are constructed of ACZA-treated wood framing with polyethylene floatation tubs. The framing has deteriorated over time in the wet environment and has required increased maintenance. Many of the deck boards have lifted or broken and require



replacement. The floating docks are supported by 16-inch concrete guide piles. The docks have exceeded their useful life and it is no longer feasible to maintain them. The Harbor District is proposing to replace all the docks in PPH with more resilient concrete floating docks.

Project Description

The proposed Project would improve the safety of commercial fishing handling operations, eliminate current constraints, increase the life and capacity of commercial docks, and improve dock accessibility by expanding Johnson Pier to allow for truck turn around and replacing existing Docks D, E, F, G, H, and the fuel dock, and adding a work dock (Dock EW)

Johnson Pier Expansion

The North Extension of the existing Johnson pier head will result by filling in the narrow (44-foot-wide) eastern portion to achieve a uniform 72-foot width. This will add approximately 7,200 square feet of deck area needed for fish handling, forklift maneuvering and truck turnaround. Materials and framing similar to the existing pier structure will be utilized including precast prestressed concrete piles, precast concrete planks, and cast-in-place concrete. As part of the North Extension the existing 2,500 sf treated timber wharf and 56, 14-inch treated timber piles will be removed. Treated timber piles proposed for removal may be creosote or ACZA-treated. The proposed pier expansion to the south will add approximately 8,500 sf of area to the pier. This area will allow trucks to pull in forward, turn around, and pull out forward. The South Extension will extend from the southeast side of the existing pier head to allow a truck and semi-trailer to pull in. Similar material and framing as the North Extension will be used. A total of up to 125, 24-inch octagonal piles will be installed as part of the North and South Extension.

Floating Dock Replacement

In addition, to the expansion proposed at Johnson Pier, the existing deteriorated ACZA-treated wood Docks D, E, F, G, and H will be replaced with new floating concrete docks (Figure 1). The replacement of Dock E will include the addition of a 2,500 sf concrete floating work dock (Dock EW) (Figure 1). Dock replacement will result in up to approximately 20,000 sf of additional overwater coverage. In addition, to accommodate the South Extension of the Johnson Pier, the existing fuel dock will need to be removed and replaced. The new Fuel Dock will be designed to connect to Dock H and directly to Johnson Pier and will extend southward beyond the end of Johnson Pier.

Existing docks would be transported to the existing launch ramp, and a land-based crane would hoist them onto trucks to be properly disposed of. Up to approximately 190, 14-inch square concrete guide piles could be removed and replaced with up to approximately 230, 16-inch square concrete guide piles. The existing guide piles will be removed with a vibratory hammer and placed on a floating barge



for proper disposal. New utilities, including fuel pumping facilities, will be provided. The oily water separator will be rerouted from the existing Johnson Pier to Dock EW.

The installation of 230, 16-inch square concrete piles and 125, 24-inch octagonal concrete piles is proposed to be completed by impact pile driving using an impact hammer attached to a crane positioned on a crane barge or on the pier. The impact hammer will be used to drive piles for approximately 80 days, with up to approximately 5 piles driven per day. A vibratory hammer will be used to extract piles for approximately 40 days, with approximately 10 piles extracted per day. In addition, a hydraulic jet may be used to assist in pile installation. The inclusion of hydraulic jetting as another pile driving method allows the selected contractor to modify their pile driving methods if deemed necessary during construction. Hydraulic jetting works by directing pressurized water flow down the pile to the soils directly beneath it. Hydraulic jetting liquefies the soils at the pile tip reducing friction and causing the pile to descend downwards under its own weight. Hydraulic jetting can be used to decrease pile driving time and the number of impact blows required to drive piles. A combination of vibratory, hydraulic jetting, and impact pile driving may, therefore, be used.

Laydown and staging will occur in the upper marina parking lot and Johnson Pier Road and Pillar Point Harbor Boulevard will be used for access. Materials will be delivered via floating barge or by utilizing the existing Pillar Point launch ramp.

Personnel and Equipment List

- Impact pile driver
- Vibratory pile driver/extractor
- Hydraulic jet for pile driving
- Pneumatic tools
- Power (electric and gas) saws
- Power tools
- Hand tools
- Cranes
- Small boat
- A barge-mounted crane (if selected by the construction contractor)



- Land based crane
- A diver (as needed)
- Trucks for transportation of construction equipment and materials
- Floating barge for staging and transporting materials

Other Permits and Approvals

This IS/MND is intended to be an informational document for the District, as Lead Agency, to review and use when approving subsequent discretionary actions for this Project. Table 1 provides a potential, but not exhaustive, list of other responsible agencies, trustee agencies and/or entities that may rely upon this IS/MND to grant subsequent discretionary approvals and/or permits, where applicable, related to Project implementation.

Table 1: Other Permits and Approvals

Agency/Entity	Permit/Approval	Description	Timing
United States Fish and Wildlife Service (USFWS)	Informal Section 7 Consultation (e.g., avian, sea otters, etc.)	Potential impacts to federally-listed Threatened/Endangered Species	Prior to construction
National Marine Fisheries Services (NMFS)	Informal Section 7 Consultation (water-dependent species)	Potential impacts to federally-listed Threatened/Endangered Species	Prior to construction
United States Army Corps of Engineers (USACE)	Section 404 Letter of Permission (LOP) or Individual Permit (IP)	Work within jurisdictional waters from pile removal and pile installation.	Prior to impacts to Waters of the United States
Regional Water Quality Control Board (RWQCB)	401 Water Quality Certification and/or Waste Discharge Requirement	Work within jurisdictional waters from pile removal and pile installation.	Prior to impacts to Waters of the United States/State
California Department of Fish and Wildlife (CDFW)	Informal Section 2080.1 Consultation	Potential impacts to state-listed Threatened/Endangered Species	Prior to construction
California Coastal Commission (CCC)	Consolidated Coastal Development Permit	Work within Coastal Zone.	Prior to construction
California State Lands Commission	State Lands Lease; State Lands Lease Amendment (TBD)	Pile installation and dock widening.	Prior to work in State Lands



Consultation with California Native American Tribe(s)

Coordination between Moffatt & Nichol and the District occurred in November 2021 to identify any tribes that have previously requested to be notified about District projects under AB 52. This coordination effort found that no tribes have requested notification with the District under AB 52. Because no tribes have requested notification or consultation, the District is not required to consult under AB 52.

Environmental Factors Potentially Affected

All the potential environmental impacts listed below are addressed in this IS/MND. Those that are checked below have been identified as involving at least one impact that is a “Potentially Significant Impact” as indicated by the checklist on the following pages for which mitigation measures have been identified to reduce the impact to less than significant.



Johnson Pier Reconfiguration, Vessel Dock and Fuel Dock Replacement Project

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

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 the mitigation measures described on an attached sheet (Appendix F) have been added to the Project. 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” 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, if the effect is a “potentially significant impact” or “potentially significant unless mitigated.” 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, there WILL NOT be a significant effect in this case because all potentially significant effects (a) have been analyzed adequately in an earlier EIR pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed Project, nothing further is required.

Signature:  Date: 4/1/2022
 Printed Name: James B. Penett Title: General Manager



3.0 ENVIRONMENTAL ANALYSIS

The environmental analysis provided below in Section 3.0 is patterned after the IS Checklist recommended by the CEQA Guidelines, as amended, and used by the District in its environmental review process. For the environmental review undertaken as part of this IS preparation, a determination that there is a potential for significant effects indicates the need to more fully analyze the Project's impacts and to identify mitigation.

For the evaluation of potential impacts, the questions in the IS Checklist are stated and an answer is provided according to the analysis undertaken as part of this IS. The analysis considers the short-term, long-term, direct, indirect, and cumulative impacts of the Project. There are four possible responses to each question:

No impact. The Project would not have any measurable environmental impact on the environment.

Less than significant impact. The Project would have the potential to impact the environment, although this impact would be negligible, would be below established thresholds that are considered to be significant and/or would be reduced to less than significant with the implementation of established plans, policies, procedures and/or regulations.

Less than significant with mitigation. The Project would have the potential to generate impacts, which may be considered as a significant effect on the environment, although mitigation measures or changes to the Project's physical or operational characteristics would reduce these impacts to levels that are less than significant.

Potentially significant impact. The Project could have impacts that may be considered significant, and therefore, additional analysis is required to identify mitigation measures that could reduce potentially significant impacts to less than significant levels.

The following is a discussion of potential Project impacts as identified in the Initial Study/Environmental Checklist. Explanations are provided for each item.



Aesthetics

Except as provided in Public Resources Code Section 21099, would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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 type="checkbox"/>	<input checked="" 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"/>

Aesthetics Discussion

a) Would the Project have a substantial adverse effect on a scenic vista?

Less than significant impact. The project site is within an area officially designated as a county scenic corridor by the County of San Mateo (San Mateo County 1986). Public views of the Pier and Pillar Point Harbor are available from Pillar Point Harbor Beach and nearby roadways including Capistrano Road, Pillar Point Harbor Blvd., and Pacific Coast Highway. The project site offers views of Pillar Point Harbor, the Pacific Ocean, and the coastline. Construction of the proposed project would involve demolition of the existing timber pier, construction of a pier infill and extension; replacement of existing Docks D, E, F, G, and H, addition of Dock EW, and replacement of the Fuel Dock. Construction equipment would be temporarily visible on the pier during construction; however, this potential visual impact would be short-term and minor. Therefore, potential impacts are considered less than significant and no mitigation is required.



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

No impact. There are no officially designated scenic highways in the vicinity of the project area (Caltrans 2021). Highway 1 is eligible to become officially designated but is located approximately 0.2 mile from the Project site. In addition, no damage to a scenic resource, including tree removal or rock removal, is proposed. No impacts would occur, and no mitigation is required.

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

No impact. The proposed Project would result in changes to the Pier's existing structure with the expansion of the north and south piers, replacement of existing Docks D, E F, G, and H, addition of Dock EW, and replacement of the Fuel Dock. These proposed changes will not degrade the existing visual character of the Pier or existing public views from the community. In addition, the proposed Project is consistent with the current zoning of the Project site, which is zoned as Coastside Commercial Recreation. No impact is anticipated, and no mitigation is required.

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

No impact. The Project proposes no new sources of substantial light or glare. No new structures are proposed with highly lit or reflective surfaces that could impact day or nighttime views. Construction activities will take place primarily during daytime hours from 7:00 a.m. to 4:00 p.m. Some work may be done during nighttime hours in order to take advantage of tidal conditions; however, any nighttime lighting used would be temporary and would not be necessary for the majority of project construction. No impacts are anticipated, and no mitigation is required.

Cumulative Impacts

No impact. No other projects have been identified associated with Johnson Pier or surrounding area that could cumulatively contribute to a significant aesthetic impact in consideration of the proposed Project. No impacts are anticipated, and no mitigation is required.

Avoidance, Minimization and/or Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.



Sources

San Mateo County General Plan (San Mateo County 1986).

California Department of Transportation (Caltrans 2021). California State Scenic Highway System Map. Available at

<https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aaca>. Accessed December 13, 2021.



Agricultural and Forest Resources

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state’s inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. – Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing agricultural 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"/>

Agricultural and Forest Resources Discussion

a) Would the Project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

No impact. The Project footprint is confined to the existing pier and immediately adjacent lands. No upland work is proposed. According to the California Department of Conservation Farmland



Mapping and Monitoring Program's California Important Farmland Finder, adjacent land is classified as Urban Built-up Land (California Department of Conservation 2021). The Project site would not be located on or encroach upon Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. No existing or planned farming operations occur here. Impacts are not anticipated, and no mitigation is required.

b) Would the Project conflict with existing agriculture zoning for agricultural use, or a Williamson Act contract?

No impact. There are no Williamson Act contracts within the Project site or vicinity (Open San Mateo County 2021). The Project site is not located on land designated or zoned for agricultural use. The zoning for the Project site is Coastside Commercial Recreation District (County of San Mateo 2021); therefore, the Project would not conflict with zoning for agricultural use or a Williamson Act contract. No impacts are anticipated, and no mitigation is required.

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

No impact. As previously discussed, the zoning for the Project site is Coastside Commercial Recreation (County of San Mateo 2021). The Project site is not located on or adjacent to land designated for forest land, timberland, or timberland zoned timberland production. No impacts are anticipated, and no mitigation is required.

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

No impact. See discussion under 3.2.c) above.

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

No impact. As previously discussed, the Project site neither contains forest land nor forest resources. As also discussed above, no existing or planned farming operations occur in or adjacent to the Project site. Therefore, impacts are not anticipated, and no mitigation is required.

Cumulative Impacts

No impact. No agricultural or forest resources are present. No potential for cumulative impacts exists.



Avoidance, Minimization and/or Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

Sources

Farmland Mapping and Monitoring Program (California Department of Conservation 2021).

County of San Mateo Planning and Building Map Viewer (County of San Mateo 2021)

<https://gis.smcgov.org/Html5Viewer/Index.html?configBase=https://gis.smcgov.org/Geocortex/Essentials/REST/sites/publicplanning/viewers/HTML52110/virtualdirectory/Resources/Config/Default> Accessed November 22, 2021.

Open San Mateo County Williamson Act Parcels Map Viewer (Open San Mateo County 2021).

<https://data.smcgov.org/Housing-Development/Williamson-Act-Parcels/sq6e-7j5j> Accessed November 22, 2021.



Air Quality

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. – Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>

Air Quality Discussion

The United States Environmental Protection Agency (USEPA) under amendments to the Federal Clean Air Act (CAA), has classified air basins or portions thereof as either “attainment” or “non-attainment” for each criteria air pollutant, based on whether the national standards have been achieved. Johnson Pier is located within the Pillar Point Marina, which lies within the nine-county San Francisco Bay Area Air Basin (SFBAAB). The Bay Area Air Quality Management District (BAAQMD) is the regional air quality authority within the project area. The California CAA, which is patterned after the Federal CAA, also requires areas to be designated as “attainment” or “non-attainment” for the state standards. Thus, areas in California have two sets of attainment/non-attainment designations: one set with respect to the national standards and one set with respect to the state standards. San Mateo County, including the Bay Area, is currently designated as a non-attainment area for state and national ozone standards, state particulate matter (PM10 and PM2.5) standards, and federal PM2.5 (24-hour) standard (BAAQMD 2021a). Non-attainment status for an air pollutant indicates that the BAAQMD does not meet the standard set by either the USEPA or the California Environmental Protection Agency

In April 2017, the BAAQMD adopted the *2017 Clean Air Plan* (BAAQMD 2017b), which aims to protect public health and protect the climate. The *2017 Clean Air Plan* provides guidance on how the



Bay Area in the county will implement feasible measures to reduce ozone, particulate matter, and toxic air contaminants (TACs) in the SFBAAB in accordance with the requirements of the California CAA. The plan also includes a wide range of proposed control measures that consist of actions to decrease fossil fuel combustion, improve energy efficiency, and decrease greenhouse gas (GHG) emissions.

To fulfill state ozone requirements, the *2017 Clean Air Plan* contains 55 measures to address reduction of ozone precursors, particulate matter, TACs, and GHGs. Control strategies from the plan that are potentially applicable to the project are as follows:

- Stationary source measures
- Transportation control measures; and
- Water control measures.

The BAAQMD published its *California Environmental Quality Act Air Quality Guidelines* (CEQA Guidelines), to assist lead agencies in analysis and mitigation of impacts from projects within the SFBAAB. The most recent approved update to the CEQA Guidelines was published in May 2017 (BAAQMD 2017a). The methodology described in the BAAQMD 2017 CEQA Guidelines was used to evaluate air quality impacts that may result from the proposed project. The BAAQMD CEQA Guidelines establish thresholds of significance for criteria air pollutants that can be used to determine whether emissions from a project would result in significant adverse effects to regional air quality. The existing BAAQMD thresholds of significance were used to determine the significance of each impact discussed in the impact analysis below. However, the existing CEQA Guidelines are currently being updated and are scheduled to be considered for adoption by the BAAQMD in early 2022. This update is needed to review current thresholds of significance criteria and to establish new significance criteria where needed (BAAQMD 2021b).

Sensitive Receptors

Sensitive receptors are defined as a land use that includes members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Schools, hospitals, and daycare centers are examples of sensitive receptors. Residential areas are also considered sensitive receptors, as sensitive individuals may be present at a residence, and because residents are home for prolonged periods of time, which may result in greater exposure to ambient air quality.

Johnson Pier consists of a working fishing pier, an approximate 369-berth marina for pleasure-boat and commercial vessels, and commercial fishing facilities. It is located to the west of State Route 1 (SR-1). The Project is limited to improvement of the Johnson Pier and will not have long-term



influence on traffic operations or vehicles miles traveled (VMT) levels within the local transportation network including SR-1, which is the primary vehicle emissions source in the area.

No sensitive residential receptors in the Bay Area were identified within 1,000 linear feet of the Project. The closest urbanized area to the Project is El Granada. El Granada consists of residential and commercial areas, located to the east of SR-1. The distance from the project area to the nearest edge of the El Granada community is 1,200 linear feet. The unincorporated community of Princeton By The Sea (Princeton) is located west of the Project. The distance between the project area and the center of the town bordering Half Moon Bay is approximately 2,500 linear feet. Princeton's land uses include a mix of light industrial, business, warehouses, and residences.

a) Would the Project conflict with or obstruct implementation of the applicable air quality plan?

No impact. The most recently adopted air quality plan in the Bay Area is the BAAQMD's 2017 Clean Air Plan (BAAQMD 2017b). BAAQMD guidance states that "if approval of a project would not result in significant and unavoidable air quality impacts, after the application of all feasible mitigation (if necessary), the project would be considered consistent with the Clean Air Plan" (BAAQMD 2017b). As indicated in the discussion of criteria "b" and "c," the project would not result in adverse air quality impacts; therefore, no impact is anticipated and no mitigation is required.

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

BAAQMD's guidance considers no single project as sufficient in size, by itself, to result in non-attainment of ambient air quality standards for regional criteria pollutants. Instead, a project's individual emissions can contribute to existing cumulatively significant adverse air quality impacts. If a project's incremental increase in emissions does not exceed the BAAQMD significance thresholds, the project's contribution to the cumulative impacts is determined to be not considerable and the impact would be less than significant.

Construction Emissions – Criteria Air Pollutants

The proposed project would generate short-term construction emissions from a variety of sources, including off-road construction equipment as well as on-road worker vehicles, vendor trucks, and haul trucks. Because construction activity can fluctuate during a project, emissions from construction activities are assessed relative to average daily emissions over the entirety of the construction period (10 months). The average daily emissions approach is consistent with BAAQMD guidance as discussed below.



Emissions from construction emission sources were estimated using the CalEEMod emission estimator model version 2020.4.0. Table 2 summarizes the project’s average daily construction emissions, based on ten months of construction occurring five days per week (excluding holidays). BAAQMD thresholds of significance for PM10 and PM2.5 are for exhaust emissions only, as fugitive particulate emissions (dust) impacts are addressed in the mitigation approach addressed below. BAAQMD thresholds of significance for construction represent average daily emissions and, as shown in Table 2. There would be no impact on emissions of criteria air pollutants.

Table 2: Average Construction Daily Criteria Pollutant Emissions (Pounds/Day)

Emissions Category	ROG	NOx	PM10	PM2.5
Average Daily Construction Emissions	2	11	1	1
BAAQMD Average Daily Thresholds	54	54	82	54
Exceed Thresholds?	No	No	No	No

NOTES:

Pounds per day estimates are based on CalEEMod unmitigated construction emissions in tons per year, converted to an average pounds per day based on 246 days of construction. BAAQMD’s threshold for PM10 and PM2.5 are for exhaust emissions only.

1 ROG – Reactive Organic Gases; NOx – Nitrogen Oxides; PM10 – particulate matter 10 microns or less in diameter; PM2.5 – particulate matter 2.5 microns or less in diameter

SOURCE: BAAQMD 2017b

Construction Emissions – Fugitive Dust

Demolition, excavation, grading, and other construction activities may cause wind-blown dust that could contribute particulate matter into the local atmosphere. Construction-related dust emissions would vary from day to day depending on the level and type of activity, silt content of the soil, and the weather. Much of the construction activity on Johnson Pier is to occur offshore. Individuals that are working or recreating near construction-related activities have the potential for exposure to fugitive dust in short-duration but at a level below any threshold of significance in terms of human health

The BAAQMD does not have a quantitative threshold of significance for construction-related fugitive dust emissions. Instead, the BAAQMD recommends the utilization of current Best Management Practices (BMPs) during project construction. Therefore, BAAQMD-identified BMPs for control of fugitive dust are included as **Mitigation Measure AIR-1**.

Implementation of BAAQMD basic control measures for fugitive dust, which are recommended for every construction project, would reduce impacts associated with fugitive dust emissions to less than significant.



Operational Emissions – Criteria Air Pollutants

After construction is completed, operational maintenance of Johnson Pier, including the areas of improvement, will remain unchanged.

Operational traffic levels, including VMT volumes on roadways in the vicinity of the Johnson Pier, would not be influenced by Project implementation, thus associated air emissions are also determined to be negligible. The Project would facilitate more efficient traffic operation on Johnson Pier due to the improved access and maneuverability of trucks, forklifts, and other heavy equipment used during normal Pier operations.

Mitigation Measure AIR-1: Implement BAAQMD Basic Construction Mitigation Measures

As per BAAQMD, an applicant and/or its construction contractors shall comply with the following applicable BAAQMD basic control measures that are provided in the BAAQMD CEQA Guidelines during project construction:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
3. 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.
4. All vehicle speeds on unpaved roads shall be limited to 15 mph.
5. 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.
6. 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 CCR, Title 13, Section 2485). Clear signage shall be provided for construction workers at all access points.
7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
8. Post a publicly visible sign 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. The Air District's phone number shall also be visible to ensure compliance with applicable regulations (BAAQMD 2021b).

c) Would the Project expose sensitive receptors to substantial pollutant concentrations?

No impact. Site preparation activities such as demolition, excavation, grading, trail construction, and other ground-disturbing construction activity could affect localized air quality during the construction phases of the proposed project, resulting in adverse health impacts to nearby sensitive receptors. Short-term emissions from construction equipment during these activities would include directly emitted PM_{2.5}, PM₁₀, and TACs such as diesel particulate matter (DPM). BAAQMD identifies a 1,000-foot zone of influence from a TAC source such as construction activity, beyond which the impact to a given sensitive receptor is assumed to be less than significant. The distance between the Project and sensitive receptors in this instance is more than 1,000 linear feet. Construction is anticipated to be phased over a 10-month period, thus limiting the potential for both TAC emissions and exposure. Therefore, the Project would have a less than significant impact with respect to exposure of sensitive receptors to substantial pollutant concentrations.

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

Less than significant impact. Typical odor sources of concern include: waste water treatment plants, sanitary landfills, transfer stations, composting facilities, petroleum refineries, asphalt batch plants, chemical manufacturing facilities, fiberglass manufacturing facilities, auto body shops, rendering plants, and coffee roasting facilities. The proposed project does not fall into any of these categories. During construction, diesel exhaust from construction equipment would generate some odors, but these odorous emissions would be temporary and would likely disperse quickly with coastal wind patterns. Additionally, the proposed project would not introduce significant sources of new odors in the vicinity upon project completion. Therefore, odor impacts from the proposed project would be less than significant.

Cumulative Impacts

No impact. The potential for incremental impacts to air quality was assessed in consideration of the past, present and future effects of the Proposed project together with potential air quality impacts from other sources of air pollution emissions. There were no other projects identified having the potential to generate impact air quality. The Project would not have a long-term impact on air quality including the National Ambient Air Quality Standards pollutants; thus, when considered with existing activities would not result in a cumulative manner to air pollution emissions.



Avoidance, Minimization and/or Mitigation Measures

The following mitigation measures would be implemented to avoid and/or minimize potential impacts and to ensure impacts are less than significant:

AIR-1: Implement BAAQMD Basic Construction Mitigation Measures

As per BAAQMD, an applicant and/or its construction contractors shall comply with the following applicable BAAQMD basic control measures that are provided in the BAAQMD CEQA Guidelines during project construction:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
3. 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.
4. All vehicle speeds on unpaved roads shall be limited to 15 mph.
5. 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.
6. 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 CCR, Title 13, Section 2485). Clear signage shall be provided for construction workers at all access points.
7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

Post a publicly visible sign 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. The Air District's phone number shall also be visible to ensure compliance with applicable regulations (BAAQMD 2021b).



Sources

- Bay Area Air Quality Management District (BAAQMD), 2021a. Air Quality Standards and Attainment Status, Available at: <https://www.baaqmd.gov/about-air-quality/research-and-data/air-quality-standards-and-attainment-status>. Accessed December 9, 2021.
- Bay Area Air Quality Management District (BAAQMD), 2021b. CEQA Guidelines Update, Available at: <https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines>. Accessed December 9, 2021.
- Bay Area Air Quality Management District (BAAQMD), 2017. *Draft 2017 Clean Air Plan, Spare the Air, Cool the Climate*. Available at: <https://www.baaqmd.gov/about-air-quality/current-air-quality/air-monitoring-data/#/>. Accessed December 10, 2021.
- Bay Area Air Quality Management District (BAAQMD), 2017b. *California Environmental Quality Act Air Quality Guidelines*. May 2017. Available at: https://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf?la=en. Accessed December 10, 2021.
- Office of Environmental Health Hazard Assessment (OEHHHA), 2015. *Air Toxics Hot Spots Program Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk*, Available: <https://oehha.ca.gov/air/crn/notice-adoption-air-toxics-hot-spots-program-guidance-manual-preparation-health-risk-0>, Accessed December 10, 2021.



Biological Resources

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" 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, and regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input checked="" 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>

Biological Resources Discussion

The analysis and findings presented in this section are based on the Biological Resources Assessment (Rincon 2022), Appendix C of this IS/MND. As part of the Biological Resources Assessment, existing biological resource conditions within the Project Area plus a 100-foot buffer (herein referred to as ‘Study Area’) were initially investigated through a review of pertinent scientific literature and databases including:



- CDFW California Natural Diversity Database (CNDDDB)
- NOAA National Marine Fisheries Service (NMFS) California Species List Tool
- California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants of California
- Biogeographic Information and Observation System (BIOS)
- U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC)
- USFWS Critical Habitat Portal
- NOAA Essential Fish Habitat (EFH) Mapper
- San Mateo County General Plan Policies
- San Mateo County Local Coastal Program Mid-Coast Sensitive Habitats Map
- CDFW Special Animals List
- CDFW Special Vascular Plants, Bryophytes, and Lichens List
- United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey
- and National Wetlands Inventory (NWI) Mapper

A reconnaissance-level field survey was also completed on December 16, 2021 to evaluate existing site conditions and the suitability for special-status marine and terrestrial species to occur in the Study Area. Additional information can be found in the Biological Resources Assessment (Rincon 2022), attached as Appendix C to this IS/MND.

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

Less than significant. Pillar Point Harbor is confined within a breakwater and heavily impacted by vessel traffic and human infrastructure. Shoreline and terrestrial habitat conditions are also generally disturbed, consisting mainly of ruderal, developed and landscaped areas (Figure 3). The Study Area would not be anticipated to provide optimal habitat for candidate, sensitive, or special status species.



Marine habitat types within the Study Area include open water, rock/rip rap, and marine structures (Figure 4). Kelp beds are not present within the Study Area. A small eelgrass bed occurs near the existing boat ramp (Figure 5).

Special Status Terrestrial Wildlife

Eighteen total special status terrestrial wildlife species have the potential to occur in the Study Area. Of these eighteen special status wildlife species, ten have a moderate or high potential of occurring within the Study Area (Table 3). There are no federally listed species with a high potential of occur in the Study Area, four federally listed species with a moderate potential of occur in the Study Area, and two federally listed species with a low potential of occurring in the Study Area. In addition, migratory birds protected under the Migratory Birds Treaty Act (MBTA) have the potential to occur throughout the Project Area.

Table 3. Special Status Wildlife Species with Potential to Occur in Study Area

Common Name	Scientific Name	Protection	Likelihood of Occurrence	Mitigation Measures
California Red Legged Frog	<i>Rana draytonii</i>	Federally threatened	Low	BIO-1, BIO-2, BIO-4, BIO-5
San Francisco garter snake	<i>Thamnophis sirtalis tetrataenia</i>	Federally and state endangered	Low	BIO-1, BIO-2, BIO-4, BIO-5
Santa Cruz black salamander	<i>Aneides (flavipunctatus) niger</i>	CDFW Species of special concern	Low	BIO-1, BIO-2, BIO-4, BIO-5
Burrowing owl	<i>Athene cunicularia</i>	CDFW species of special concern	Low	BIO-1 through BIO-5 and NOI-2
Saltmarsh common yellowthroat	<i>Geothlypis trichas sinuosa</i>	CDFW species of special concern	Low	BIO-1 through BIO-5 and NOI-2
Bank swallow	<i>Riparia riparia</i>	State threatened	Low	BIO-1 through BIO-5 and NOI-2
Pallid bat	<i>Antrozous pallidus,</i>	CDFW species of special concern	Low	BIO-1, BIO-2, BIO-4
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	CDFW species of special concern	Low	BIO-1, BIO-2, BIO-4
Monarch butterfly	<i>Danaus plexippus</i>	Federal candidate	Moderate	N/A
Marbled murrelet	<i>Brachyramphus marmoratus</i>	Federally threatened, state endangered	Moderate	BIO-1 through BIO-5 and NOI-2
Western snowy plover	<i>Charadrius nivosus nivosus</i>	Federally threatened, CDFW species of special concern	Moderate	BIO-1 through BIO-5 and NOI-2



California Least tern	<i>Sterna antillarum browni</i>	Federally and state endangered, state fully protected	Moderate	BIO-1 through BIO-5 and NOI-2
American peregrine falcon	<i>Falco peregrinus anatum</i>	State full protected	Moderate	BIO-1 through BIO-5 and NOI-2
Copper’s hawk	<i>Accipiter cooperii</i>	CDFW watchlist	High	BIO-1 through BIO-5 and NOI-2
White-tailed kite	<i>Elanus leucurus</i>	State fully protected	High	BIO-1 through BIO-5 and NOI-2
Merlin	<i>Falco columbarius</i>	CDFW watchlist	High	BIO-1 through BIO-5
Double-crested cormorant	<i>Phalacrocorax auratus</i>	CDFW watchlist	Present within Study Area	BIO-1 through BIO-5 and NOI-2
California brown pelican		State fully protected	Present within Study Area	BIO-1 through BIO-5 and NOI-2

Reptiles: Impacts to special status reptiles including California Red-legged frog, Santa Cruz black salamander, and San Francisco garter snake are unlikely to occur given the low likelihood of their potential occurrence, lack of suitable breeding habitat, and lack of Project impacts to vegetated areas where these species could occur. Should any of these species occur within the vicinity of Project activities, the implementation of Mitigation Measures **BIO-1**, **BIO-2**, **BIO-4**, and **BIO-5** would reduce any potential impacts to less than significant (Table 3). Mitigation Measure **BIO-1** would require that all Project personnel associated with Project construction attend a worker environmental awareness training conducted by a biologist, to aid workers in recognizing special-status terrestrial and marine species. Mitigation Measure **BIO-2** requires the implementation of Best Management Practices (BMPs) including spill prevention and debris cleanup. Mitigation Measure **BIO-4** requires that temporary disturbances be minimized to the extent practicable, staging occurs in non-vegetated previously disturbed areas, and that materials are stored in a way that prevents spills or leakage. Mitigation Measure **BIO-5** requires the implementation of BMPs to protect jurisdictional waters including spill prevention, re-fueling requirements, and site washout requirements. Within the proposed mitigation measures, impacts to reptiles would be less than significant.

Insects: Impacts to monarch butterflies are unlikely given that there is no suitable roosting habitat within the Study Area, and that the Project would not disturb vegetation. Due to the nature and location of the project, less than significant impacts to monarch are anticipated (Table 3).

Bats: Impacts to special status bat species including the Pallid bat and Townsend’s big-eared bat are considered unlikely given their low potential to occur in the Study Area, marginally suitable roosting habitat within the Study Area, and high level of existing human activity. Furthermore, the majority of the construction activities would be constructed during the daylight hours when bats would not be anticipated to pass through the area. Should special status bat species occur in the Project vicinity,



Mitigation Measures **BIO-1**, **BIO-2**, and **BIO-4** would reduce any potential impacts to less than significant (Table 3).

Birds: Impacts to special-status bird species could occur, but are anticipated to be less than significant with mitigation. California brown pelican and double-crested cormorant are known to occur in the Study Area. Copper's hawk, white-tailed kite, and merlin have a high potential to occur in the Study Area. American peregrine falcon, marbled murrelet, western snowy plover, and least tern have a moderate potential of occurring in the Study Area. Burrowing owl, saltmarsh common yellowthroat, and bank swallow have low likelihood of occurring in the Study Area. In addition, birds protected under the MBTA could occur within the Study Area.

The Study Area is heavily impacted and is not anticipated to provide optimal nesting habitat for identified special-status birds. However, some marginally suitable nesting habitat could occur for some species including Copper's hawk and migratory birds protected under the MBTA. If special-status birds do occur nesting in the area during Project construction activities, noise impacts could occur. Impacts could include nest abandonment. In addition, noise from construction equipment and activities could disturb special-status birds foraging or resting in the Study Area. Therefore, Mitigation Measure **BIO-3** would require that Project construction avoid the nesting season (February 1 to September 15) to the extent feasible. Furthermore, Mitigation Measure **BIO-3**, would require that if project activities occur during the breeding season (February 1 to September 15), preconstruction nesting bird surveys would be completed and applicable nest buffers implemented. In addition, to reduce potential noise impacts to birds, **NOI-2** would require a soft start: technique during pile driving that would allow species to move out of the area before full force pile driving begins. Mitigation Measures **BIO-1**, **BIO-2**, **BIO-4**, and **BIO-5** would also be implemented to avoid significant impacts to special-status bird species. With the proposed mitigation measures, impacts to special-status bird species are anticipated to be less than significant (Table 3).

Special-status Marine and Anadromous Wildlife Species

Sixteen total special-status marine and anadromous wildlife species have the potential to occur in the Study Area (Table 4). Of these sixteen identified special-status marine and anadromous wildlife species, two are known to occur in the Study Area, and the remaining fourteen have a low likelihood of occurring in the Study Area. Ten of these special-status species are federally listed.



Table 4. Marine and Anadromous Wildlife Species with Potential to Occur in Study Area

Common Name	Scientific Name	Protection	Likelihood of Occurrence	Mitigation Measure
Black abalone	<i>Haliotis cracherodii</i>	Federally endangered	Low	BIO-1, BIO-2, BIO-4, BIO-5
Green sturgeon	<i>Acipenser medirostris</i>	Federally threatened, CDFW species of special concern	Low	BIO-1 through BIO-5 and NOI-2
Central California Coast coho	<i>Oncorhynchus kisutch</i>	Federally and state endangered	Low	BIO-1 through BIO-5 and NOI-2
Central California coast steelhead	<i>Oncorhynchus mykiss irideus</i>	Federally threatened	Low	BIO-1 through BIO-5 and NOI-2
Loggerhead sea turtle	<i>Caretta caretta</i>	Federally threatened	Low	BIO-1 through BIO-5 and NOI-2
Green sea turtle	<i>Chelonia mydas</i>	Federally threatened	Low	BIO-1 through BIO-5 and NOI-2
Leatherback sea turtle	<i>Dermochelys coriacea</i>	Federally endangered	Low	BIO-1 through BIO-5 and NOI-2
Short-tailed albatross	<i>Phoebastria albatrus</i>	Federally endangered	Low	BIO-1 through BIO-5 and NOI-2
Humpback whale	<i>Megaptera novaeangliae</i>	Federally endangered, MMPA	Low	BIO-1 through BIO-5 and NOI-2
Southern sea otter	<i>Enhydra lutris nereis</i>	Federally threatened, MMPA	Low	BIO-1 through BIO-5 and NOI-2
Northern elephant seal	<i>Mirounga angustirostris</i>	State fully protected, MMPA	Low	BIO-1 through BIO-5 and NOI-2
Gray whale	<i>Eschrichtius robustus</i>	MMPA	Low	BIO-1 through BIO-5 and NOI-2
Harbor porpoise	<i>Phocoena phocoena</i>	MMPA	Low	BIO-1 through BIO-5 and NOI-2
Common bottlenose dolphin	<i>Tursiops truncatus</i>	MMPA	Low	BIO-1 through BIO-5 and NOI-2
Harbor seal	<i>Phoca truncates</i>	MMPA	Present in Study Area	BIO-1 through BIO-5 and NOI-2
California sea lion	<i>Zalophus californianus</i>	MMPA	Present in Study Area	BIO-1 through BIO-5 and NOI-2

Fish: Identified special status fish species are unlikely to occur foraging in the Pillar Point Harbor given the confined nature of the harbor and high level of human activity. Furthermore, suitable breeding habitat does not occur within the Study Area. Therefore, impacts to identified special status fish species are anticipated to be minor, temporary, and localized. Potential impacts to special-status



marine and anadromous species from the proposed Project could occur due to noise, water quality, and benthic habitat disturbance as discussed below in detail. Impacts are anticipated to less than significant with the proposed Mitigation Measures.

Noise

The main hearing organ in fish is the lateral line system that is sensitive to particle motion. Pressure waves can cause changes in the swim bladder which may cause damage or reduced hearing sensitivity. National Marine Fisheries Service (NMFS) has developed the interim criteria level threshold and a behavioral guideline for assessing potential noise impacts to fish (NMFS 2008, Table 5). These thresholds only apply to impulsive noise sources. If noise levels exceed the interim injury criteria threshold, physical injury may occur. If noise levels exceed the behavioral guideline, behavioral effects may occur. However, the potential for behavioral changes depends on site specific conditions, timing, and duration.

Based on reviewed noise data collected for the impact installation of 16-inch diameter concrete piles and 24-inch diameter concrete piles, the proposed pile driving activities would not be anticipated to exceed the injury criteria threshold for fish (Caltrans 2020). Noise levels could exceed the behavioral guideline. Behavioral impacts could include fleeing of the area, and or ceasing of feeding or spawning in the area. The breakwaters would be anticipated to limit the extent of potential noise impacts. Due to the location of the Project within a confined harbor and temporary nature of the project, impacts associated with exceedances over the behavioral threshold are anticipated to be less than significant. Furthermore, Mitigation Measure **NOI-2** would reduce the risk of potential noise impacts to fish by requiring that a soft start technique be implemented to allow fish and marine mammals the ability to vacate the area before a pile driver reaches full power. In addition, hydraulic jetting may be used to decrease pile driving time and the number of impact blows required to drive piles. Hydraulic jetting works by directing pressurized water flow down the pile to the soils directly beneath it, liquefying the soils at the pile tip, reducing friction, and causing the pile to descend downwards under its own weight. Hydraulic jetting would not be anticipated to produce substantial noise.

Table 5. Noise Criteria Thresholds for Fish

Hearing Group	Interim Injury Criteria Threshold		Behavioral Guideline
	SELcum	dB Peak	dBrms
Fish > 2 grams	187 dB SELcum	206 dB peak	150 dBrms
Fish < 2 grams	183 dB SELcum,	206 dB peak	150 dBrms

Water Quality

Decreased water quality has the potential to directly impact fish through several mechanisms including gill tissue damage, physiological stress, and behavioral changes.. The Project may create focused areas



of minor temporary water quality impacts due to suspended sediments during in-water construction activities. Hydraulic jetting has the greatest potential to cause sediment disturbances, but would not be anticipated to substantially increase turbidity levels. Furthermore, the breakwaters would be anticipated to limit the extent of any potential water quality impacts. Given the nature and location of the proposed Project, any potential direct water quality adverse impacts are anticipated to be minor, temporary, and less than significant.

Benthic habitat disturbance

Impacts to prey species have the potential to cause indirect impacts to their predators through reduced food supply. Special-status fish prey that could be impacted by the Project include crustaceans, invertebrates, and small fish. Temporary benthic disturbance could occur during construction activities associated with the proposed pile installations. Physical injury or mortality of benthic organisms (i.e. polychaetes, oligochaetes, clams, and amphipods) that provide food for special-status fish species can occur during benthic disturbances. Any temporary reduction in benthic habitat at the Project site during construction is anticipated to be minor/negligible and temporary. Recolonization of more mobile and shorter-lived benthic invertebrates (amphipods) will likely occur relatively quickly (Pemberton and MacEachern 1997), followed by the recovery of larger benthic macroinvertebrates (mollusks and larger polychaetes) (Hitchcock et al. 1996). Benthic disturbances could also potentially impact sensitive marine resources such as eelgrass beds, however eelgrass beds would not be anticipated to grow within proximity to the docks where piles would be driven, given the water depth in this area.

With the implementation of Mitigation Measures **BIO-1, BIO-2, BIO-3, BIO-4, BIO-5 and NOI-2** potential impacts to special-status fish species would be anticipated to be less than significant (Table 3).

Marine Mammals: The Project has the potential to impact marine mammals. Harbor seals and sea lions could occur in Pillar Point Harbor, especially during the fishing season. Other marine mammals including gray whale, humpback whale, southern sea otter, northern elephant seal, harbor porpoises, and common bottlenose dolphins all have a low potential of occurring in Pillar Point Harbor due to its enclosed nature of the harbor. Should marine mammals occur within the Study Area, direct impacts could occur due to noise and/or water quality. Indirect impacts could occur due to impacts to prey species.

Noise

Noise has the potential to directly impact marine mammals by causing physical injury or altering behavior when noise threshold levels are exceeded. NOAA NMFS has identified Level A (potential injury) and Level B (potential disturbance) thresholds for marine mammals based on their hearing class (NMFS 2020). Level A harassment is defined under the MMPA as “any act of pursuit, torment,



or annoyance that has the potential to injure a marine mammal or marine mammal stock in the wild”. Level B harassment is defined as “any act of pursuit, torment, or annoyance that has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering, but does not have the potential to injure a marine mammal or marine mammal stock in the wild”. To avoid and/or minimize potential impacts to marine mammals associated with noise threshold exceedances, Mitigation Measure **NOI-2** would require the implementation of a soft start during pile driving activities to allow species to move out of the area before full force pile driving begins. In addition, hydraulic jetting may be used to decrease pile driving time and the number of impact blows required to drive piles. Hydraulic jetting works by directing pressurized water flow down the pile to the soils directly beneath it, liquefying the soils at the pile tip, reducing friction, and causing the pile to descend downwards under its own weight. Hydraulic jetting would not be anticipated to produce substantial noise. **BIO-3** would require that a marine mammal and sea turtle pre-construction survey be completed prior to the start of construction. If marine mammals are identified within the Project area, additional avoidance and mitigation measures will be required and would be determined during permitting. With the proposed Mitigation Measures, noise impacts to marine mammals are anticipated to be less than significant.

Water Quality

Decreased water quality has the potential to directly impact marine mammals. The Project may create minor temporary water quality impacts due to suspended sediments during in-water construction activities. Hydraulic jetting has the greatest potential to cause sediment disturbances, but would not be anticipated to substantially increase turbidity levels. Any turbidity increases from these activities would be minor and localized to the immediate vicinity of the proposed repair. The breakwaters would limit the extent of potential water quality impacts. Given the nature and location of the proposed Project any potential direct water quality adverse impacts are anticipated to be minor, temporary, and less than significant.

Potential Prey Species Impacts

Impacts to prey species have the potential to cause indirect impacts to their predators through reduced food supply. Impacts to marine mammal prey species such as fish, for reasons outlined above, are anticipated to be less than significant with the proposed Mitigation Measures.

The implementation of Mitigation Measures **BIO-1, BIO-2, BIO-3, BIO-4, BIO-5,** and **NOI-2** would reduce potential impacts to marine mammals to less than significant (Table 4).

Sea Turtles: Special status sea turtles including loggerhead, green, and leatherback sea turtles are unlikely to occur in the Study area. Breeding habitat does not occur in the Study Area. **BIO-3** would require that a preconstruction survey for sea turtles be completed prior to construction activities. If



sea turtles are identified in the Project area additional avoidance and mitigation measures will be required. Mitigation Measures **BIO-1, BIO-2, BIO-3, BIO-4, BIO-5,** and **NOI-2** would reduce potential impacts to sea turtles to less than significant (Table 4).

Marine Birds: Short-tailed albatross are rarely seen on the California coast and are anticipated to have a low potential of foraging within the Study Area. Breeding habitat for short-tailed albatross does not occur within the Study Area. If the species is present in the Study Area during construction activities, the implementation of Mitigation Measures **BIO-1, BIO-2, BIO-3, BIO-4, BIO-5,** and **NOI-2** would reduce potential impacts to short-tailed albatross to less than significant (Table 4).

Marine Snails: Black abalone inhabit rocky intertidal and shallow subtidal reefs, a habitat not found within the Study Area. There is a low potential that black abalone could occur on the rock breakwaters within the Study Area. With the implementation of Mitigation Measures **BIO-1, BIO-2, BIO-4, BIO-5** potential impacts to black abalone are anticipated to be less than significant.

Special- status Plant Species

Three total special-status plant species have the potential to occur in the Study Area (Table 5). All of these special-status plant species have a low likelihood of occurring in the Study Area. None of these special-status plant species are federally listed.

Table 6. Special Status Plant Species with Potential to Occur in Study Area

Species Name	Scientific Name	Protection	Likelihood of occurrence	Mitigation Measures
Rose leptosiphon	<i>Leptosiphon rosaceus</i>	California Rare Plant Bank	Low	BIO-4
Ornduff's meadowfoam	<i>Limnanthes douglasii ssp. ornduffii</i>	California Rare Plant Bank	Low	BIO-4
Choris' popcornflower	<i>Plagiobothrys chorisianus var. chorisianus</i>	California Rare Plant Bank	Low	BIO-4

Project impacts will only occur within previously disturbed terrestrial areas, including paved parking lots and roads (**BIO-4**). The proposed Project activities do not have the potential to impact special-status plant species. Therefore, no impacts to special-status plant species would occur.

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

Less than significant. Sensitive plant communities do not occur in the Study Area. Therefore, no impacts would occur. Terrestrial vegetation communities within the study area include ruderal,



landscaped areas, beach shoreline, arroyo willow thicket, reed strand, and iceplant mats (Figure 3), none of which would be characterized as sensitive.

Environmentally sensitive habitats are defined by the California Coastal Act as “any area in which plant or animal life or their habitats are either rare or especially valuable because of their nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments” Environmentally sensitive habitat areas within the Study Area include, a culverted drainage, marine/estuarine habitat, and an eelgrass bed near the existing boat ramp (Figure 4). The culverted drainage is not anticipated to be impacted by the proposed activities. Ground disturbing construction activities would be limited to pile installation adjacent to the existing docks. Due to the water depth in this area, eelgrass would not be anticipated to occur here. Given the nature and location of the proposed Project, impacts to the existing eelgrass bed near the boat ramp are not anticipated.

Critical habitat within the Study Area includes green sturgeon critical habitat (Figure 4). Critical habitat for Central California Coast DPS steelhead exists approximately 0.2 miles northwest of the Project Area, within Dennison Creek (Figure 4). Critical habitat for black abalone occurs approximately 0.18 miles south of the Study Area, outside of the harbor breakwaters (Figure 4). Project impacts are anticipated to be confined to the harbor by the breakwaters and therefore the Project is not anticipated to impact critical habitat outside of the harbor. Given the nature and location of the Project, the Project is not anticipated to modify or impact critical habitat.

The Study area includes designated Essential Fish Habitat (EFH) for coho salmon, groundfish, coastal pelagic species, finfish, and krill. In addition, eelgrass beds are considered EFH and Habitats of Particular Concern (HAPC). Given the high level of existing human infrastructure and vessel traffic within the Study Area, the area is not anticipated to provide optimal EFH or HAPC. Project activities would not be expected to permanently impact any EFH or HAPC. The implementation of Mitigation Measures **BIO-1** through **BIO-5** would reduce potential impacts to EFH and HAPC to less than significant.

c) Would the Project 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?

Less than significant. The Study Area does not include any state or federally protected wetlands. Therefore, the Project would have no impact on wetlands. Jurisdictional waters within the Study Area include a potentially jurisdictional drainage and the Pacific Ocean. The potentially jurisdictional drainage conveys flow in the northern portion of the study area. Direct impacts to this area are not anticipated. Potential direct impacts to the Pacific Ocean include minor short-term temporary increases in turbidity due to in-water construction activities. In addition, if spills were to occur this



could result in impacts to water quality. The implementation of **BIO-4**, and **BIO-5** would reduce any potential impacts to less than significant.

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

Less than significant. An Essential Connectivity Area and a Natural Landscape Block occurs approximately 0.5 miles north of the Study Area. The Study Area may be used as wildlife corridor or nursery area by some resident and migratory fish. However, due to the confined and heavily disturbed nature of Pillar Point Harbor, the Study Area is not anticipated to provide optimal habitat for the movement of fish or wildlife and/or provide optimal nursery areas. Given the baseline level of human activity within the study area, construction activities are not anticipated to substantially interfere with the movements of fish or wildlife species, migratory corridors, or native wildlife nursery sites. With the implementation of Mitigation Measures **BIO-1** through **BIO-5** and **NOI-2** potential impacts would be less than significant.

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

No impact. The San Mateo County General Plan provides policies to protect sensitive habitats, vegetation, water, and fish and wildlife resources. The Biological Resources Assessment (Appendix C, Rincon 2022) outlines the specific policies within this plan. With the implementation of Mitigation Measures **BIO-1** through **BIO-5**, the Project would not be anticipated to conflict the any local policies or ordinances for protecting biological resources.

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

No Impact. The Project is not located in an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, the Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local regional, or state habitat conservation plan.

Cumulative Impacts

Less than significant impact. No other projects have been identified as associated with the improvement of Johnson Pier or the surrounding area that could cumulatively contribute to a significant environmental impact due to impacts to biological resources. With the implementation of



BIO-1 through **BIO-5** and **NOI-2**, Project impacts would be less than significant and no additional mitigation is required.

Avoidance, Minimization and/or Mitigation Measures

The following mitigation measures would be implemented to avoid and/or minimize potential impacts and to ensure impacts are less than significant:

BIO-1: Worker Environmental Awareness Program (WEAP): Prior to initiation of Project activities (including staging and mobilization), all personnel associated with Project construction should attend WEAP training, conducted by a qualified biologist, to aid workers in recognizing special-status terrestrial and marine species, native birds, and other biological resources that may occur in the Project Area. The specifics of this program should include identification and habitats of special-status species with potential to occur at the Project Area, a description of the regulatory status and general ecological characteristics of sensitive resources, and review of the limits of construction and mitigation measures required to reduce impacts to biological resources within the work area. A fact sheet conveying this information should also be prepared for distribution to all contractors, their employers, and other personnel involved with construction. All employees should sign a form provided by the trainer indicating they have attended the WEAP and understand the information presented to them. A WEAP training recorded by a qualified biologist specifically for the Project may be utilized if in-person trainings are restricted due to COVID-19 or if the construction schedule makes it infeasible for a biologist to train each new crew member in person.

BIO-2: General Best Management Practices: The following Best Management Practices (BMPs) should be followed by Project personnel to promote pollution prevention and minimize the introduction of pollutants into coastal waters.

- Project-related vessels should observe the no wake zone limit within limits of the Project.
- During construction, heavy equipment should be operated in accordance with standard BMPs. All equipment should be properly maintained such that no leaks of oil, fuel, or residues will take place. Provisions should be in place to remediate any accidental spills. Materials should be stored at least 50 feet from water features, as feasible, or equipment will utilize secondary containment.
- Spill prevention and control measures should be implemented to ensure the proper handling and storage of petroleum products and other construction materials. Including a designated fueling and vehicle maintenance area with appropriate berms and protection to prevent any spillage of gasoline or related petroleum products or contact with runoff.



- All food-related trash shall be disposed of in closed containers and removed from the Project Area each day during the construction period. Project personnel shall not feed or otherwise attract wildlife to the Project Area.
- At Project completion, all Project-generated debris, vessels, vehicles, building materials, and rubbish shall be removed from the Project footprint.

BIO-3: Special-status Birds, Raptors, and Other Nesting Birds Preconstruction Survey:

Project activities should be restricted to the non-breeding season (September 16 to January 31) when feasible. If Project activities occur during the nesting bird season (February 1 to September 15), the following mitigation measures are recommended to reduce impacts to protected species and other nesting birds protected by CFGC and the MBTA.

- A preconstruction nesting bird survey should be conducted by a qualified biologist no more than 14 days prior to initiation of Project activities. The survey should be conducted within the Project Area and include a 50-foot buffer for passerines and seabirds and a 500-foot buffer for raptors. The survey should be conducted by a biologist familiar with the identification of avian species known to occur in the region and should focus on trees, vegetated areas, and potential nesting habitat on breakwaters, piers, or docks. If nests are found, an appropriate avoidance buffer (typically 50 feet for passerine species and 500 feet for raptors) will be determined and demarcated by the biologist with high visibility material.
- All Project personnel should be notified as to the existence of the buffer zones and to avoid entering buffer zones during the nesting season. No Project activities should occur within the buffer until the avian biologist has confirmed that breeding/nesting is complete and the young have fledged the nest. Encroachment into the buffer should occur only at the discretion of the qualified biologist.
- A preconstruction survey for marine mammals and sea turtles should be conducted by a qualified biologist no more than 48 hours prior to the start of construction, or as otherwise required by NMFS. Should marine mammal or sea turtle species be observed within the Project Area or any portion of the inner Pillar Point Harbor during the preconstruction survey, then further avoidance and mitigation measures will be required. These measures may include marine mammal monitoring during pile driving activities.

This measure may be superseded or added by resource agency permits and incidental take authorizations.



BIO-4: Disturbance Area, Staging, and Materials Storage: Areas of temporary disturbance shall be minimized to the extent practicable. Staging and laydown areas shall be limited to sites that are unvegetated and previously disturbed (e.g., existing parking lots).

Materials shall be stored on impervious surfaces or plastic ground covers to prevent any spills or leakage. Material storage shall be at least 100 feet from the Pacific Ocean and the intermittent stream channel. Any material/spoils from Project activities shall be located and stored 100 feet from potentially jurisdictional areas. Construction materials and spoils shall be protected from stormwater runoff using temporary perimeter sediment barriers such as berms, silt fences, fiber rolls, covers, sand/gravel bags, and straw bale barriers, as appropriate.

BIO-5: Best Management Practices to Protect Jurisdictional Waters: To avoid and/or minimize potential indirect impacts to jurisdictional waters and water quality, the following Best Management Practices shall be implemented within the Project Area:

- Prevent the off-site tracking of loose construction and landscape materials by implementing street sweeping, vacuuming, and rumble plates, as appropriate.
- Prevent the discharge of silt or pollutants off of the site when working adjacent to potentially jurisdictional waters. Install BMPs (e.g., silt barriers, sand bags, straw bales) as appropriate.
- Site washout areas shall be at least 50-feet from a storm drain, open ditch or surface water and ensure that runoff flows from such activities do not enter receiving water bodies.
- All vehicles, vessels, and equipment shall be in good working condition and free of leaks. The contractor shall prevent oil, petroleum products, or any other pollutants from contaminating the soil or entering a watercourse (dry or otherwise). When vehicles or equipment are stationary, mats or drip pans shall be placed below vehicles to contain fluid leaks.
- All re-fueling, cleaning, and maintenance of equipment will occur at least 50 feet from potentially jurisdictional waters, as feasible.
- Any spillage of material will be stopped if it can be done safely. The contaminated area will be cleaned, and any contaminated materials properly disposed. For all spills, the project foreman or other designated liaison will notify the District immediately.
- Adequate spill prevention and response equipment shall be maintained on site and readily available to implement to ensure minimal impacts to the aquatic and marine environments.



Sources

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Cultural Resources

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §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 §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Cultural Resources Discussion

Environmental Setting

The analysis and findings presented in this section are based on the Cultural Resources Assessment (Rincon 2022), Appendix D of this IS/MND. As part of the Cultural Resources Assessment, existing cultural resources within the Area of Potential Effects (APE) plus that area within a 0.5-mile radius of the APE, herein referred to as ‘Study Area’.

A records search was conducted at the Northwest Information Center (NWIC) at Sonoma State University by Rincon Consultants Inc. Archaeologist Elaine Foster on December 15, 2021. NWIC is the official state repository for cultural resources records and reports for San Mateo County where the Project is located. The records search sought to identify previously recorded cultural resources, as well as previously conducted cultural resources studies within the APE and the 0.5-mile radius surrounding the APE. Rincon also reviewed the NRHP, CRHR, the California Historical Landmarks list, the Archaeological Determination of Eligibility (ADOE) list and the Built Environment Resources Directory (BERD) as well as its predecessor the California State Historic Property Data (HPD) File.

Background and archival research conducted by Rincon involved consultation of a variety of primary and secondary sources materials, including but not limited to, historical maps, aerial photographs and written histories of the area. The following sources were utilized to develop an understanding of the APE and its context:

- Original engineering drawings of Johnson Pier provided by Moffatt & Nichol



- Property data and parcel maps obtained through the San Mateo County Assessor's Office
- Historical aerial photographs accessed via NETR Online
- Historical aerial photographs obtained from Environmental Resources Data, Inc.
- Historical aerial photographs accessed via University of California, Santa Barbara Library FrameFinder
- Historical U.S. Geological Survey topographic maps
- Historical newspaper clippings obtained from Newspapers.com, ProQuest Historical Newspapers.com, and the California Digital Newspaper Collection
- Various historical records via Ancestry.com

Rincon's research of CHRIS and NWIC identified 49 cultural resources studies within a 0.5-mile of the APE (Rincon 2022b). Of these, 1 study includes a portion of the APE, S-22092 (USACE, 1996). No cultural resources are recorded within or adjacent to the APE. 9 cultural resources were identified within a 0.5-mile radius of the APE, including prehistoric sites and historic buildings/structures/districts which will not be impacted by project activities.

Rincon conducted a field survey of cultural resources of the APE on January 5, 2022 (Rincon 2022b). The built environment resources were inspected, and overall condition and integrity of the resources assessed. Finally, a pedestrian survey was conducted, and exposed ground surfaces examined for artifacts, ecofacts and other cultural features. No cultural materials or other evidence of past human use or occupation was identified during the survey.

Through the cultural resources analysis, one cultural resource, Pillar Point Harbor, was identified, recorded and evaluated for federal, state and local designation. Due to a lack of historical or architectural associations, the harbor is recommended ineligible for listing in the NRHP, CRHR, or a San Mateo County Landmark. As a result, Pillar Point Harbor is not considered a historic property under Section 106 or a historical resource under CEQA.

Cultural Resources Discussion

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

No Impact. A significant impact would result if the proposed project would cause a substantial, adverse change to a historical resource, defined as historic-era architectural resources or the built



environment, including buildings, structures and objects. Activities which would cause a significant impact include physical demolition, destruction, relocation or alteration of a historical resource.

There are no architectural resources in the project area that could be considered historical resources, as defined by Section 15064.5 of the CEQA guidelines, therefore the proposed project would have no impact on historical resources and no mitigation is required.

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

Less than Significant. Archaeological resources are considered historical resources, according to Section 15064.5 of the CEQA Guidelines, as well as unique archaeological resources, as defined in PRC Section 21083.2(g). A significant impact could occur if the project would cause a substantial adverse change to an archaeological resource through physical demolition, destruction, relocation, or alteration of the resource. There is low potential for encountering intact subsurface archaeological deposits during project activities. However, such discovery cannot be fully discounted and would be a potentially significant impact. This impact would be reduced to a less-than-significant level with implementation of CUL-1. This measure requires avoidance measures or the appropriate treatment of archaeological resources if they are discovered during implementation of the project.

c) Would the Project disturb any human remains, including those interred outside of formal cemeteries?

Less than Significant. No human remains are known to be present within the project site, however, the discovery of human remains is always a possibility during ground disturbing activities and could result in a significant impact. Implementation of **CUL-2** would reduce the impact to a less than significant level. This measure requires avoidance measures, or the appropriate treatment of human remains if discovered.

Cumulative Impacts

Less than Significant. With implementation of Mitigation Measure CUL-1 and Mitigation Measure CUL-2, the Project is not anticipated to affect the cultural or historical integrity of the Harbor. No other projects have been identified associated with the Harbor or surrounding area which could cumulatively contribute to a significant cultural resource impact. No cumulative impacts are therefore anticipated.

Avoidance, Minimization and/or Mitigation Measures

The following mitigation measures would be implemented to avoid and/or minimize potential impacts and to reduce impacts to less than significant.



CUL-1: In the unlikely event that archaeological resources are unexpectedly encountered during ground-disturbing activities, work in the immediate area shall be halted and an archaeologist meeting the U.S. Secretary of the Interior’s Professional Qualification Standards for Archeology, will be contacted immediately to evaluate the find. Following evaluation, the archaeologist will notify the District of their initial assessment. If the find is prehistoric, then a Native American representative will also be contacted to participate in the evaluation of the find. Having reviewed recommendations from a qualified archaeologist and a Native American representative (if the resource is indigenous), the District may determine that the resource may qualify as a historic property (meeting the National Register of Historic Places criteria at 36 CFR 60.4), a historical resource or unique archaeological resource (as defined in CEQA Guidelines Section 15064.5), or a tribal cultural resource (as defined in PRC Section 21080.3), in which case the resource shall be avoided if feasible. If avoidance is not feasible, the District shall consult with appropriate Native American representative (if the resource is indigenous), and other appropriate interested parties to identify treatment measures to avoid, minimize, or mitigate any potential impacts to the resource. Such measures shall include documentation of the resource and may include data recovery (according to PRC Section 21083.2), if deemed appropriate, or other actions such as treating the resource in a culturally appropriate manner and protecting the cultural character and integrity of the resource (according to PRC Section 21084.3).

CUL-2: If human remains are discovered during project activities, all activities within 100 feet of the find shall cease and the District shall follow the provisions of California Health and Human Safety Code (Human Remains) Section 7050.5. This shall include immediate notification of the San Mateo County Coroner who will determine origin and disposition pursuant to Public Resources Code Section 5097.98 and whether an investigation of the cause of death is required. The Native American Heritage Commission will be contacted within 24 hours if it is determined that the remains are Native American. The Commission will then identify the person or persons it believes to be the most likely descendant (MLD) from the deceased Native American, who in turn would make recommendations to the District for the appropriate means of treating the human remains and any grave goods. If the MLD does not make recommendations within 48 hours, the landowner shall reinter the remains in an area of the property secure from subsequent disturbance.

Sources

Rincon Consultants Inc. 2022b. Johnson Pier Expansion and Dock Replacement Project, Cultural Resources Assessment Report.

San Mateo County Harbor District, 2020. Pillar Point Harbor West Trail Living Shoreline Project – Initial Study/Notice of Intent to Adopt A Mitigated Negative Declaration. July 2020.



Energy

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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"/>

Energy Discussion

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

Less than significant impact. The County of San Mateo has a long-standing commitment to the implementation of resource conservation programs and to proactively working to improve energy efficiency and reduce GHG emissions.

The Project proposes structural improvements to Johnson Pier that will improve the safety and operational efficiency of commercial fishing handling operations, eliminate current operational constraints, increase the life and capacity of commercial docks, and improve dock accessibility by expanding Johnson Pier to allow for truck turn around and replacing both the Fuel Dock and Docks D- H. Currently, the L-shaped geometry of the pier restricts turning movements for truck/semitrailers, requiring trucks to either back-in or back-out the entire length of the pier. In many instances this required longer periods of driver maneuvering and unnecessary idling, resulting in substantial delays in pier operations. The pier’s configuration also requires forklifts to travel from the boat unloading area on the west of the pier head to the east side to load the trucks, increasing equipment and fuel or gas usage. The Project aims at improving operational efficiency, which is anticipated to reduce fossil fuel used by trucks and pier equipment, such as forklifts powered by propane gas. Long-term Project operation is not anticipated to result in the wasteful, inefficient, or unnecessary consumption of energy resources.

Temporary increases in energy use would occur during Project construction. Project construction is anticipated to be intermittent for a period of 10 months and is expected to require the use of above



and below water pile drivers, vibratory pile drivers/extractors, pneumatic tools, power tools, hand tools, cranes, a small boat, and a diver as needed. Construction equipment would require consumption of energy resources including fossil fuels and electricity. Use of such equipment is not anticipated to be wasteful, inefficient, or unnecessary and would not result in a potentially significant environmental impact. Less than significant impacts are anticipated, and no mitigation is required.

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

No impact. The County of San Mateo has a long-standing commitment to implementing resource conservation programs and proactively working to improve energy efficiency and reduce GHG emissions. Proposed improvements would increase operational efficiency and is anticipated to reduce the wasteful burning of fossil-fuel and the use of equipment powered by propane gas due to less than adequate maneuverability for both trucks and heavy-duty equipment operations.

The *San Mateo County Energy Strategy 2012* was adopted in 2008. It defined practical actions for San Mateo County about energy, water, alternative generation, and climate protection for both residential and commercial entities. It also recommended a county-wide effort including goals, strategies, actions, and resources.

The draft *San Mateo County Energy and Water Strategy 2025* (Strategy) updated the *San Mateo County Energy Strategy 2012*. The goals, strategies, and actions in the updated Strategy document, provide a comprehensive roadmap for addressing challenges in the energy and water sectors in San Mateo County through 2025.

Project related impacts are not anticipated, and no mitigation is required.

Cumulative Impacts

Less than significant impact. The Project would result in temporary elevations in energy usage during construction. No other projects have been identified associated with the improvement of Johnson Pier or surrounding area that could cumulatively contribute to a significant environmental impact due to unnecessary or wasteful energy use or conflict with a state or local energy plan. Project impacts would be less than significant, and no mitigation is required.

Avoidance, Minimization and/or Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.



Sources

- San Mateo County, 2013. *Energy Efficiency Climate Action Plan*. June, 2013. Available: https://planning.smcgov.org/sites/planning.smcgov.org/files/documents/files/SanMateoCounty_EECAP_FINAL_06-04-2013.pdf. Accessed December 11, 2021.
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Geology and Soils

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a Known fault? Refer to Division of Mines and Geology Special Publication 42.	<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 type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994 or most current edition), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 checked="" type="checkbox"/>	<input type="checkbox"/>



Geology and Soils Discussion

Regional Geology

San Mateo County is located within that geomorphic province of California known as the Coast Ranges. The Coast Ranges are northwest-trending mountain ranges (2,000 to 4,000 feet, and occasionally 6,000 feet, elevation above sea level) and valleys and are subparallel to the active San Andreas Fault. The Coast Ranges are predominantly composed of thick late Mesozoic and Cenozoic (251 million years ago to present) sedimentary rocks. The northern and southern ranges are separated by a depression containing the San Francisco Bay (California Geological Survey 2002).

The northern Coast Ranges are dominated by irregular, knobby, landslide-topography of the Franciscan Complex. In the Sonoma and Clear Lake regions, Pliocene and younger volcanic flows and cones are prominent. In the southern Coast Ranges, granitic and metamorphic rocks of the Salinian block lie to the west of the San Andreas Fault and extend from the southern extremity of the Coast Ranges, north to the Farallon Islands (CGS 2002).

Seismic Hazards

The State of California considers surface fault rupture (or disruption at the ground surface as a result of fault activity) and seismic ground shaking to be primary seismic hazards. The major hazards associated with earthquakes are surface fault rupture (ground displacement), ground motion (or ground shaking), ground failure (e.g., liquefaction), and landslides. The following sections present a discussion of each of these hazards.

Surface Fault Rupture

A definition of seismically induced ground rupture is the physical displacement of surface deposits in response to an earthquake's seismic waves. The magnitude and nature of fault rupture varies for different faults, or even along different strands of the same fault, with ground rupture being considered most likely along active faults. Those existing fault traces that have had Holocene displacement are considered to have the highest potential for surface faulting.

The closest known active faults with historical earthquake events are the San Gregorio and San Andreas. The Pilarcitos fault is located approximately 5 miles from the project area but has not exhibited Holocene displacement and is not considered sufficiently active or well-defined; therefore, the potential is very low that the individual traces of this fault could generate an earthquake and result in surface fault rupture. The San Andreas fault is approximately 7 miles from the proposed project, and the San Gregorio fault transects the project area. According to the California Earthquake Hazards Zone Application (CGS 2019), the portion of the San Gregorio fault that transects the project area is



within an Alquist-Priolo Fault Zone. For this reason, fault ground rupture is considered a hazard in the project area.

Potential Ground Motion

In contrast to surface rupture, ground shaking is not confined to the trace of a fault but propagates into the surrounding areas during an earthquake. Typically, the intensity of ground shaking diminishes with distance from the fault, but ground shaking may be locally amplified or prolonged by some types of substrate materials. The Bay Area region contains both active and potentially active faults and is considered a region of high seismic activity.

Throughout the project area there is a potential for damage from movement along any one of a number of the active Bay Area faults. In 2007, the United States Geological Society (USGS), the CGS, and the Southern California Earthquake Center formed the Working Group on California Earthquake Probabilities (WGCEP) to evaluate the probability of one or more earthquakes of moment magnitude (Mw) 6.7 or higher occurring in the state of California over the next 30 years (WGCEP 2015).

The WGCEP estimates that there is a 72 percent probability of at least one Mw 6.7 or greater earthquake occurring in the San Francisco Bay region over the next 30 years (WGCEP 2015). Within the 72 percent probability, the San Gregorio fault has a 2.69 percent probability of having an earthquake of Mw 6.7 or greater. The Pilarcitos fault has a 0.50 percent probability of having an earthquake of Mw 6.7 or greater.

Liquefaction

Liquefaction is the process in which the soil is transformed to a fluid form during intense and prolonged ground shaking. Areas most prone to liquefaction are those that are water saturated and consist of relatively uniform sands that are of loose to medium density. Liquefaction can lead to severe settlement of foundations and slope failure. Properties such as depth to groundwater, soil texture and density, and sediment within and above the groundwater are the primary factors that determine whether an area is prone to liquefaction. The sediments most susceptible to liquefaction are saturated, unconsolidated sand, and silt soils (particularly Quaternary-age units) with low plasticity within 50 feet of the ground surface (CGS 2008). The project area is within an area mapped as a Liquefaction Zone within the Earthquake Zone of Required Investigation as prepared by CGS (2019).

Earthquake-Induced Settlement

The relatively rapid compaction and settling of subsurface materials (particularly loose, noncompacted, and variable sandy sediments) during prolonged ground shaking can cause settlement of the ground surface. Typically, areas underlain by artificial fills, unconsolidated alluvial sediments, and slope wash and areas with improperly engineered construction fills are susceptible to settlement.



The proposed project is located in an area with the potential to experience stronger earthquake shaking more frequently (DOC 2016).

Slope Instability and Landslides

Slope failures, commonly referred to as landslides, include many phenomena that involve the downslope displacement and movement of material, triggered by either static (i.e., gravity) or dynamic (i.e., earthquake) forces. Exposed rock slopes undergo rockfalls, rockslides, or rock avalanches, while soil slopes experience shallow soil slides, rapid debris flows, and deep-seated rotational slides. The proposed project is located in an area with the potential for landslides (Metropolitan Transportation Commission and Association of Bay Area Governments 2020).

Soils and Soil-Related Hazards

Erosion

Erosion is the detachment and movement of soil materials through natural processes or human activities. In general, rates of erosion can vary depending on the soil resource's capacity to drain water, slope angle and length, extent of ground cover, and human influence. Soils underlying the project area consist of Denison loam, stabilized dune land, coastal beaches, Elkhorn sandy loam, and Elkhorn sandy loam. These soils have low to very high potential for erosion with the stabilized dune land and Coastal beaches having erosion potential from wind and wave action, respectively (National Resources Conservation Service [NRCS] 2020).

Expansive Soils

Expansive soils are characterized by a characteristic called "shrink-swell." Over a long time period, structural damage may result, usually from inadequate soil and foundation engineering or the placement of structures directly on expansive soils. Expansive soils consist primarily of clays, which expand in volume when water is absorbed and shrink when dried. Soil resources in the project area have a low to high shrink-swell potential (NRCS 2020).

Corrosive Soils

Corrosive soils can damage underground pipelines and cables and can weaken roadway structures. The soils in the project area have a low potential to erode concrete and a moderate to high potential to erode steel (NRCS 2020).



Land Subsidence

Subsidence is the gradual lowering of the land surface caused by loss or compaction of underlying materials. Subsidence can result from groundwater, gas, and oil extraction, or from the decomposition of highly organic soils. The soils in the project area have a low potential for subsidence (NRCS 2020).

Paleontological Resources

Paleontological resources are the fossilized evidence of past life found in the geologic record. Despite the tremendous volume of sedimentary rock deposits preserved worldwide, and the enormous number of organisms that have lived through time, the preservation of plant or animal remains as fossils is extremely rare. Because of the infrequency of fossil preservation, particularly vertebrate fossils, they are considered to be nonrenewable resources. Due to the rarity and scientific information they can provide, fossils are important records of ancient life. The proposed project is in an area (San Mateo County Coastal Zone) where paleontological resources are extremely limited (City of Half Moon Bay 2018).

a) Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

No impact. The project area is transected by the San Gregorio fault and, as a result, is located within an Alquist-Priolo Fault Zone. However, the proposed project would not result in the construction or operation of any habitable structures or potentially unstable slopes adjacent to habitable structures. Construction methods would be consistent with current codes and standards. Therefore, the proposed project would not increase the exposure of recreational or commercial users to increased risk of loss, injury, or death in the project area due to fault rupture. The Project would not result in direct or indirect impacts to a known earthquake fault; therefore, no impact is anticipated, and no mitigation is required.

ii) Strong seismic ground shaking?

No impact. The project area is transected by the San Gregorio fault and, as a result, is located within an Alquist-Priolo Fault Zone. However, the proposed project would not result in the construction or operation of any habitable structures or potentially unstable slopes adjacent to habitable structures. Construction methods would be consistent with current codes and standards. Therefore, the proposed project would not increase the exposure of recreational or commercial boat users to increased risk of



loss, injury, or death in the project area due to fault rupture. The Project would not result in strong seismic ground shaking; therefore, no impact is anticipated and no mitigation is required.

iii) Seismic-related ground failure, including liquefaction?

No impact. The project area is within an area known to have the potential for seismic related ground failure, including liquefaction and landslides. Implementation of the proposed project would not create any structures or potentially unstable slopes that could exacerbate existing liquefaction or landslide conditions in the project area. Therefore, the proposed project would not increase the exposure of recreational or commercial boat users to increased risk of loss, injury, or death in the project area due to liquefaction or landslides. No impact is anticipated and no mitigation is required.

iv) Landslides?

No impact. The project area is within an area known to have the potential for seismic related ground failure, including liquefaction and landslides. Implementation of the proposed project would not create any structures or potentially unstable slopes that could exacerbate existing liquefaction or landslide conditions in the project area. Therefore, the proposed project would not increase the exposure of recreational or commercial boat users to increased risk of loss, injury, or death in the project area due to liquefaction or landslides. No impact is anticipated and no mitigation is required.

b) Would the Project result in substantial soil erosion or the loss of topsoil?

No impact. Project construction would involve localized seabed disturbance activities (e.g., demolition and removal of existing piles and decking, installation of new piles). As these activities are occurring in the marine environment, soil erosion will not result. Therefore, no impacts associated with soil erosion would occur.

The project will involve application of BMPs to control run-off from construction work sites. The BMPs could include, but would not be limited to, physical barriers to prevent materials reaching the marine environment, limitations on work periods during storm events, protection of stockpiled materials, and a variety of other measures that would substantially reduce or prevent erosion from occurring during construction.

c) Would the Project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in, on or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?

No impact. The proposed project area has a low to high potential for expansive soils and a low potential for subsidence. Given the depths to which piles would be driven, implementation of the



proposed project would not exacerbate or increase the subsidence or expansive nature of the project area soils and, therefore, no impacts would be anticipated to occur.

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

No impact. The proposed project area has a low to high potential for expansive soils and a low potential for subsidence. Given the depths to which piles would be driven, implementation of the proposed project would not exacerbate or increase the subsidence or expansive nature of the project area soils and, therefore, no impacts would be anticipated to occur.

e) Would the Project 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?

No impact. The proposed project does not involve construction or use of septic tanks or alternative wastewater systems; therefore, no impact would occur

f) Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less than significant impact. The proposed project is in an area (San Mateo County Coastal Zone) where paleontological resources are extremely limited. The proposed project construction would be located in areas that were previously disturbed by past construction of the existing docks and pier. As such, the proposed project is not anticipated to encounter paleontological resources and would not directly or indirectly destroy any unique geologic feature and impacts would be less than significant.

Cumulative Impacts

No impact. No other projects have been identified associated with Johnson Pier or surrounding area that could cumulatively contribute to a significant geological impact in consideration of the proposed Project. No impacts are anticipated, and no mitigation is required.

Avoidance, Minimization and/or Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

Sources

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- San Mateo County Harbor District, 2020b. Pillar Point West Trail Living Shoreline Project, Geomorphic Basis of Design Report. May 2020.
- Working Group on California Earthquake Probabilities (WGCEP), 2015. UCERF3: A new earthquake forecast for California’s complex fault system: U.S. Geological Survey Fact Sheet 2015–3009, March 2015.



Greenhouse Gas Emissions

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<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 type="checkbox"/>	<input checked="" type="checkbox"/>

Greenhouse Gas Emissions Discussion

GHGs trap heat by preventing some of the solar radiation that hits the earth from being reflected into space. Some GHGs occur naturally and are needed to keep the earth’s surface habitable. Over the past 100 years, human activities have substantially increased the concentration of GHGs in our atmosphere. This has intensified the natural greenhouse effect, increasing average global temperatures.

Carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O) are the principal GHGs associated with land use projects. GHG associated with construction projects are generated from fossil fuel combustion from heavy equipment, haul trucks, and worker vehicles. CO₂, CH₄, and N₂O occur both naturally and through human activity.

CO₂ is the reference gas for climate change because it is the predominant GHG emitted. The effect that each of the aforementioned gases can have on global warming is a combination of the mass of their emissions and their global warming potential (GWP). GWP indicates, on a pound-for-pound basis, how much a gas contributes to global warming relative to how much the same mass of CO₂ contributes to global warming. CH₄ and N₂O are substantially more potent GHGs than CO₂, with 100-year GWPs of 28 and 265 times that of CO₂, respectively.

In emissions inventories, GHG emissions are typically reported as metric tons of CO₂ equivalents (CO_{2e}). CO_{2e} are calculated as the product of the mass emitted of a given GHG and its specific GWP. While CH₄ and N₂O have much higher GWPs than CO₂, CO₂ is emitted in such higher quantities that it accounts for the majority of GHG emissions in CO_{2e}.



Approach to Analysis

Both the BAAQMD and the California Air Pollution Control Officers Association (CAPCOA) consider GHG impacts to be cumulative impacts (BAAQMD, 2017; CAPCOA, 2008). Therefore, assessment of significance is based on whether a project's GHG emissions represent a cumulatively considerable contribution to the global atmosphere.

BAAQMD has not established thresholds specifically for construction-related emissions. However, BAAQMD has developed two thresholds of significance for operational emissions: the first for stationary sources that require air permits, equal to 10,000 metric tons CO_{2e} per year; and the second for land use development projects (such as residential and commercial development projects), equal to 1,100 metric tons CO_{2e} per year. In the absence of a threshold of significance for construction related GHG emissions, the BAAQMD's threshold of significance of 1,100 metric tons of CO_{2e} was used to evaluate the significance of construction emissions from the proposed project for checklist item a).

San Mateo County developed the *San Mateo County Energy Efficiency Climate Action Plan* (EECAP) in 2013. The EECAP Measure 15.1 for off-road equipment is intended to reduce GHG emissions within San Mateo County that are often associated with utilization of heavy-duty construction equipment.

EECAP Measure 15.1 reduces GHG by limiting idling and utilizing cleaner fuels, equipment, and vehicles. The measure includes the following strategies to reduce GHG emissions:

- Minimize idling times either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes.
- Require maintenance of construction equipment per manufacturer specifications.
- County staff working with project applicants to limit GHG emissions from construction equipment by selecting measures identified by the BAAQMD. Such measures could include use of Tier 4 engines or compressed natural gas fuel or biodiesel, where available (San Mateo County 2013).

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

Less than significant impact. Construction activities would result in minor generation of GHG emissions from the combustions of diesel fuel. GHG emissions would occur from direct sources such as the use of construction equipment, worker commute trips, and haul truck trips. The Monterey Bay Unified Air Pollution Control District (MBUAPCD) has not adopted its own GHG emission significance thresholds. Therefore, BAAQMD GHG thresholds were used to analyze the significance of Project related GHG emissions. Anticipated Project GHG emissions are presented in Table 3

**Table 7: Annual GHG Emissions**

Source Category	CO ₂ (mty)	CH ₄ (mty)	N ₂ O (mty)	CO _{2e} (mty)
Construction				
Project related emissions	224	0	0	226
BAAQMD significance threshold				None
Operation				
Operational Emissions ¹	7	0	0	8
BAAQMD stationary source significance threshold				10,000
Total GHG Emissions ²	231	0	0	234
Significant?				No
¹ No increase in use or construction of structures that could measurably increase GHG emissions compared to existing baseline conditions. Therefore, operational emissions are not anticipated. ² Total annual GHG emissions are the sum of 9-month construction emissions. Source: CalEEMod Version: CalEEMod.2020.4.0				

Table 3 shows that Project construction would result in an incremental increase in GHG emissions of 234 metric tons per year (mty) over 10 months of intermittent construction. Neither MBUPCAD nor BAAQMD state a significance threshold for construction related GHG emissions; however, the construction related GHG emissions described above are anticipated to be minor and less than significant compared to BAAQMD's threshold. No mitigation is required.

Except for intermittent construction associated with the Project's implementation, operational GHG emissions at Johnson Pier would remain unchanged by the Project. There is no substantial change in local land or transportation uses proposed. The Project proposes structural enhancements to improve safety, access, and vehicle maneuverability on Johnson Pier; thus increasing operational efficiency on the pier. The L-shaped geometry of the pier currently restricts turning movements for truck/semitrailers, requiring trucks to either back-in or back-out the entire length of the pier, creating unneeded idling and safety issues and causing significant delays in operations. This requires forklifts to travel from the boat unloading area on the west of the pier head to the east side to load the trucks. No other structures are proposed that could result in operational GHG emissions. Operational GHG emissions are anticipated to be less than significant.

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

No impact. As stated previously, San Mateo County developed the San Mateo County EECAP in 2013. EECAP measures to reduce GHG emissions within San Mateo County aim to reduce emissions from heavy-duty construction equipment. As described above, minor GHG emissions would be generated during Project construction, and Project operations would continue similar to existing conditions post-construction. Construction of the proposed Project would comply with California Air



Resources Board and BAAQMD requirements. The proposed Project would comply with existing regulations and would, by law, comply with future regulatory requirements. The proposed Project would, therefore, not preclude the State's implementation of the San Mateo Climate Action Plan (CAP). The Project would comply with all applicable GHG emission reduction measures proposed in the CAP, such as expanding recycling efforts of non-hazardous construction debris and sourcing construction materials locally when feasible. The Project would not conflict with any plans, policies, or regulations adopted to reduce GHG emissions. No impacts are anticipated, and no mitigation is required.

Cumulative Impacts

Less than significant impact. Less than significant impacts are anticipated from the Project. The Project would generate short-duration, negligible GHG emissions during construction, but would not result in significant GHG emissions or conflict with existing plans, policies, or regulations. No other projects have been identified associated with the bounds of the Project or surrounding area that could cumulatively contribute to a significant GHG emission impact in consideration of the proposed Project. Less than significant impacts are anticipated, and no mitigation is required.

Avoidance, Minimization and/or Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

Sources

Bay Area Air Quality Management District (BAAQMD), 2017. *California Environmental Quality Act Air Quality Guidelines*. May 2017. Available: <https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines>. Accessed December 11, 2021.

California Air Pollution Control Officers Association (CAPCOA), 2008. *CEQA & Climate Change, Evaluating and Addressing Greenhouse Gas Emissions from projects Subject to the California Environmental Quality Act*, Available: <http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA-White-Paper.pdf>. Accessed December 11, 2021.

San Mateo County, 2013. *Energy Efficiency Climate Action Plan*. June, 2013. Available: https://planning.smcgov.org/sites/planning.smcgov.org/files/documents/files/SanMateoCounty_EECAP_FINAL_06-04-2013.pdf. Accessed December 11, 2021



Hazards and Hazardous Materials

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>

Hazards and Hazardous Materials Discussion

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

Less than significant impact. The Project does not propose the routine transport of hazardous materials. The Project proposes to remove the existing ACZA-treated wood floats, existing ACZA-treated timber pier, and treated timber piles from the marine environment and dispose of them at an



appropriate upland facility. Treated timber piles proposed for removal may be creosote or ACZA-treated. No new creosote treated piles will be introduced into the marine environment. All new and replacement piles will be precast prestressed concrete piles.

The Project proposes no change to existing functions or operations of the Pier. Deterioration and/or damage of piles installed as part of this Project may require pile replacement in the future. In the case that pile replacement is required, concrete piles or otherwise non-toxic piles will be used as approved by the agencies (United States Army Corps of Engineers, CCC, and RWQCB). Replacement piles will not be creosote treated. Impacts from the transport, use, or disposal of hazardous wastes are anticipated to be less than significant, and no mitigation is required.

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

No impact. The Project proposes expansion of the existing Pier, replacement of existing Docks D, E, F, G, and H, addition of Dock EW, and replacement of the Fuel Dock. The Project occurs over Pillar Point Harbor. Little potential exists for encountering hazardous materials or hazardous waste within the Project site.

The Project would result in temporary transport, use, and disposal of hazardous materials and debris generated during Project construction such as ACZA and creosote treated wood, petroleum-based fuels, lubricants, and other similar materials. The potential risk associated with accidental discharge during use and storage of equipment-related hazardous materials would be low since the handling of such materials would be addressed through the implementation of regulatory permit BMPs and requirements. In addition, all transport, handling, use, and disposal of substances such as petroleum products, paints, and solvents related to the operation and maintenance of the Project would comply with all federal, state, and local laws regulating management and use of hazardous materials. With the implementation of BMPs and standard regulations, potential impacts would be less than significant, and no mitigation is required.

A review of the State Water Resources Control Board's Leaking Underground Storage Tank (LUST) Geotracker database and Department of Toxic Substances Control (DTSC) EnviroStor identified seven closed LUST cleanup sites listed within 0.5 mile of the project site, as shown in Table 4.

**Table 8: LUST Cleanup Sites in Project Vicinity**

Site	Potential Contaminant(s) of Concern	Potential Media of Concern	Status
Daher Property	Diesel	Other groundwater (uses other than drinking water)	Completed - Case Closed as of 2008
El Granada Market	Gasoline	Aquifer used for drinking water supply	Completed - Case Closed as of 2020
Portola Pump Station	Diesel	Other groundwater (uses other than drinking water)	Completed - Case Closed as of 2000
Private Residence	Heating Oil/Fuel Oil	Soil	Completed - Case Closed as of 1994
San Mateo County Department of Public Works	Gasoline	Aquifer used for drinking water supply	Completed - Case Closed as of 2010
Westinghouse Corporation	Gasoline	Aquifer used for drinking water supply	Completed - Case Closed as of 1997
Westar Cable	Gasoline	Aquifer used for drinking water supply	Completed - Case Closed as of 2003

The nearest active cleanup site is approximately 2.6 miles northwest of the Pier. The potential media of concern at this site is listed as under investigation. The potential contaminant of concern is heating oil/ fuel oil. The cleanup status is marked as ‘Open – Remediation as of 1/2/2007’.

According to the EnviroStor database, the nearest DTSC cleanup site is approximately 8.0 miles east of the Pier at the PG&E San Mateo Pipeline. The potential media of concern is soil. Potential contaminants of concern include polychlorinated biphenyls (PCBs), total petroleum hydrocarbons (TPH) – motor oil and TPH- diesel. The cleanup status of this site is ‘Certified as of 5/10/2004’.

- The nearest cleanup program site is 1772 Broadway, approximately 14.5 miles southeast of the Pier. The potential media of concern and potential contaminant of concern are both listed as ‘None Specified’. The status of this site is ‘Active as of 5/31/2019’.
- There are no military cleanup sites within 0.5 mile of the Project site.

The nearest active site is the Blue Bird Cleaners, approximately 11.0 miles east of Johnson Pier.

None of the identified sites above are located within or adjacent to the Project site. The proposed Project would be confined to the existing pier and existing floating dock area. The Project does not propose activities that have the potential to disturb contaminants at sites identified on the Geotracker or EnviroStor database. No impacts are anticipated, and no mitigation is required.



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

No impact. The nearest school, Picasso Preschool, is located approximately 0.5 mile west of the Pier and does not occur within a quarter mile of the proposed Project (ERIS 2021). The Project proposes to remove the existing ACZA-treated wood floats, existing ACZA-treated timber pier, and treated timber piles from the marine environment and dispose of them at an appropriate upland facility. Treated timber piles proposed for removal at the existing timber wharf may be creosote or ACZA-treated. ACZA-treated wood floats would be replaced with concrete floats. No impacts are anticipated, and no mitigation is required.

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

No impact. A review of the DTSC's Hazardous Waste and Substances List (Cortese List) indicated that the Project site is not located on any identified hazardous material sites (DTSC 2021). There are no sites identified on the Cortese List within the Project vicinity. A review of the State Water Resources Control Board's LUST Geotracker indicated that the nearest active cleanup program site is 2.6 miles northwest of the site. Review of the DTSC EnviroStor database indicated that the nearest listed hazardous material site is approximately 8.0 miles east of the Pier (SWRCB 2021). No impacts are anticipated, and no mitigation is required.

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

No impact. The proposed project area is approximately 0.5 mile southeast of the Half Moon Bay Airport and is located in the Airport Land Use Compatibility Plan (ALUCP) Airport Influence Area (AIA) (Zone 7)(City/County Association of Governments of San Mateo County 2014). Aircraft accident risk within the AIA zone is low. Development in the AIA zone requires airspace review for objects over 100-feet-tall and there are restrictions on hazards to flight, including land uses such as golf courses or habitat that could attract birds. The project does not include the development of structures over 100-feet-tall or any elements that would create safety hazards associated with airports or air travel and, as such, does not conflict with ALUCP safety requirements. Excessive noise at the Pier due to air traffic is not anticipated. No impacts are anticipated, and no mitigation is required.



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

No impact. The Project would neither physically interfere with nor impair implementation of any existing emergency response plan or emergency evacuation plan. The Project proposes expansion of the existing pier, replacement of existing Docks D, E, F, G, and H, addition of Dock EW, and the replacement of the Fuel Dock. Access to the Pier would be temporarily impacted during construction, but the Project would not block roads that could provide emergency response or evacuation. All major highways would remain fully accessible. No impacts are anticipated, and no mitigation is required.

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

No Impact. The proposed Project would occur at the existing Pier, which extends into Pillar Point Harbor. The Project would not occur in a high fire risk area according to the Cal Fire Very High Fire Hazard Severity Zones in Local Resource Area (LRA) map (Cal Fire 2021). The Project does not propose activities that could exacerbate wildfire risks. The Project only proposes expansion of the existing Pier, replacement of existing Docks D, E, F, G, and H, addition of Dock EW, and the replacement of the Fuel Dock. The Project would not change current topography or wind patterns. No impacts are anticipated, and no mitigation is required.

Cumulative Impacts

No impact. Less than significant impacts are anticipated from the Project. Deteriorated and/or damaged piles installed as part of this Project may require pile replacement in the future. Any pile replacements in the future would be permitted and approved by the agencies. All piles would be disposed of at an appropriate upland facility and are not anticipated to pose a significant hazard. No other projects have been identified associated with Johnson Pier or surrounding area that could cumulatively contribute to a significant hazards and hazardous materials impact in consideration of the proposed Project. No impacts are anticipated, and no mitigation is required.

Avoidance, Minimization and/or Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

Sources

EnviroStor database (DTSC 2021); Geotracker database (SWRCB 2021); Department of Toxic Substances Control Cortese List (DTSC 2021, accessed at

<https://www.envirostor.dtsc.ca.gov/public/search?cmd=search&reporttype=CORTESE&site>



[type=CSITES,FUDS&status=ACT,BKLG,COM&reporttitle=HAZARDOUS+WASTE+AND+SUBSTANCES+SITE+LIST+%28CORTESE%29](#) on December 13, 2021),

ERIS Database Report (ERIS) 2021, accessed on December 17, 2021.

Airport Land Use and Compatibility Plan for the Environs of Half Moon Bay (City/County Association of Governments of San Mateo County, 2014),

California Office of the State Fire Marshal (Cal Fire 2021, accessed at <https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildfire-prevention-engineering/fire-hazard-severity-zones> on December 15, 2021).



Hydrology and Water Quality

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater 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 surface, in a manner which would				
i) result in substantial erosion or siltation on or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<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; or	<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 type="checkbox"/>	<input checked="" 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"/>

Hydrology and Water Quality Discussion

Environmental Setting

The main hydrologic features within the area are San Vicente Creek to the north of the project site, Denniston Creek (which drains to Pillar Point Harbor) south of the Town of Princeton By The Sea, and Pillar Point Marsh. The marsh is fed by groundwater and is also subject to tidal inflows. Together



with the Half Moon Bay Airport, the breakwater within Pillar Point Harbor (San Mateo County 2002) is a manmade alteration that has contributed to the current hydrology in the area.

Surface water quality in the project area is considered to be generally of good quality. Potential sources of water quality degradation include the drainages that drain to the marsh, which may include sediment, urban runoff from the nearby town of Princeton, and chemicals used by landowners within the vicinity of the project area (San Mateo County 2002). The State Water Board total maximum daily load (TMDL) programs are implemented pursuant to Clean Water Act Section 303(d) for impaired waterbodies. The TMDL program lists the Pacific Ocean at Pillar Point Beach as impaired for indicator bacteria (State Water Board 2020).

a) Would the project violate or conflict with any adopted water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Less than significant impact. Construction of the proposed project would involve the use of heavy equipment including, but not limited to, impact pile driver, vibratory pile driver/extractor, hydraulic jets for pile driving, and cranes. Demolition and removal of existing piles, decking, and utility materials could result in higher rates of turbidity within the harbor. In addition, the use of heavy machinery during construction could result in the potential accidental release of fuels, oils, solvents, hydraulic fluid, and other construction-related fluids to the environment, thereby degrading water quality.

BMPs will be implemented for the site and could include, but would not be limited to, physical barriers to prevent construction materials from entering the marine environment, limitations on work periods during storm events, protection of stockpiled materials, and a variety of other measures that would substantially reduce or prevent impacts to the marine environment. Given that the proposed project construction activities would be subject to the numerous regulatory requirements (**HWQ-1**), impacts associated with substantial increases in soil erosion during construction would be less than significant.

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

No impact. The proposed project would not require dewatering during construction nor require groundwater during operation and maintenance. In addition, the proposed project would only result in the addition of a small amount of impervious surface in the proposed expanded pier area and dock areas. Groundwater recharge would not be impeded, nor would groundwater supplies be depleted; therefore, no impacts are anticipated, and no mitigation is required.



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

i) result in substantial erosion or siltation on- or off-site;

No impact. The proposed project would not substantially alter the existing drainage pattern of the area. As the impervious surface will occur overwater, the proposed project would not be tied to an existing or planned stormwater drainage system and no erosion or siltation will occur. Therefore, the proposed project would not result in substantial erosion or siltation on- or off-site post-construction. Further, the proposed project would not result in impeding or redirecting flood flows. Therefore, the proposed project would have no impact and no mitigation is required.

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

No impact. The proposed project would not substantially alter the existing drainage pattern of the area. As the impervious surface will occur overwater, the proposed project would not impact surface runoff that may result in flooding. The proposed project would not result in increasing surface runoff, therefore, no impacts are anticipated and no mitigation is required.

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;

No impact. The proposed project would not substantially alter the existing drainage pattern of the area. As the impervious surface will occur overwater, the proposed project would not be tied to an existing or planned stormwater drainage system and no erosion or siltation will occur. Therefore, the proposed project would not result in substantial erosion or siltation on- or off-site post-construction. Further, the proposed project would not result in impeding or redirecting flood flows. Therefore, the proposed project would have no impact and no mitigation is required.

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

No impact. The proposed project would not use hazardous materials during operation and maintenance, would not be stored on site, and would not be exposed to potential flood or tsunami. Therefore, no impact would occur in relation to the potential risk of release of pollutants due to project inundation and no mitigation is required.



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

Less than significant impact. Construction of the proposed project would involve the use of heavy equipment including, but not limited to, impact pile driver, vibratory pile driver/extractor, hydraulic jet for pile driving, and cranes. Demolition and removal of existing piles, decking, and utility materials could result in higher rates of turbidity within the harbor. In addition, the use of heavy machinery during construction could result in the potential accidental release of fuels, oils, solvents, hydraulic fluid, and other construction-related fluids to the environment, thereby degrading water quality.

BMPs will be implemented for the site and could include, but would not be limited to, physical barriers to prevent construction materials from entering the marine environment, limitations on work periods during storm events, protection of stockpiled materials, and a variety of other measures that would substantially reduce or prevent impacts to the marine environment. Given that the proposed project construction activities would be subject to the numerous regulatory requirements (**HWQ-1**), impacts associated with substantial increases in soil erosion during construction would be less than significant.

Cumulative Impacts

Less than significant impact. Less than significant impacts are anticipated from the Project as water quality impacts would be avoided through compliance with regulatory permits and through the implementation of BMPs. Potential cumulative impacts would be less than significant and no mitigation is required. No other projects have been identified associated with Johnson Pier or surrounding area that could cumulatively contribute to a significant hydrology and water quality impact in consideration of the proposed Project.

Avoidance, Minimization and/or Mitigation Measures

The following mitigation measure would be implemented to avoid and/or minimize potential impacts and to ensure impacts are less than significant:

HWQ-1: The District shall obtain all necessary permits from applicable agencies with jurisdiction over the Project. The contractor will implement and document compliance with permit conditions and best management practices required by the permits per agency requirements and for District records.

Sources

California Department of Water Resources (DWR), 2020. Sustainable Groundwater Management Act (SGMA) Data Viewer. Available: <https://sgma.water.ca.gov/webgis/?appid=SGMA> DataViewer.



California Department of Water Resources (DWR), 2013. California Water Plan Update 2013 – San Francisco Bay Hydrologic Region. San Mateo County, 2002. Fitzgerald Marine Reserve Master Plan. May 2002.

San Mateo County Harbor District, 2020. Pillar Point Harbor West Trail Living Shoreline Project – Initial Study/Notice of Intent to Adopt A Mitigated Negative Declaration. Prepared by ESA Associates. July 2020.

State Water Board, 2020. Final 2014/2016 California Integrated Report (Clean Water Act Section 303(d) List/305(b) Report). Available: https://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2014_2016.shtml. Accessed June 17, 2020.



Land Use and Planning

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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"/>

Land Use and Planning Discussion

a) Would the Project physically divide an established community?

No impact. The Project site is located at Johnson Pier in Pillar Point Harbor. The Project does not propose the construction of structures that could divide a community. The Project is anticipated to benefit the community by improving access to the docks and the safety of commercial fishing handling operations. The Project would not divide the established community. Impacts are not anticipated, and mitigation is not required.

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

No impact. The Project site land use is designated as Coastside Commercial Recreation (County of San Mateo 2021). The Project does not propose any changes to land use and is consistent with the goals of the Pillar Point Harbor Master Plan. The Project proposes improvements that are anticipated to improve the use of the Pier. Upland disposal of any deteriorated and/or damaged piles or other construction debris would be disposed of at an appropriate authorized facility. No impacts are anticipated, and no mitigation is required.

Cumulative Impacts

No impact. No land use impacts are anticipated from the Project. The Project does not propose any changes to the existing land use of the Project site. No other projects have been identified associated with Johnson Pier or surrounding area that could cumulatively contribute to a significant land use and planning impact in consideration of the proposed Project. No impacts are anticipated, and no mitigation is required.



Avoidance, Minimization and/or Mitigation Measures

No impacts were identified, and no mitigation measures are required.

Sources

County of San Mateo Planning and Building Map Viewer (County of San Mateo 2021).

<https://gis.smcgov.org/Html5Viewer/Index.html?configBase=https://gis.smcgov.org/Geocortex/Essentials/REST/sites/publicplanning/viewers/HTML52110/virtualdirectory/Resources/Config/Default>. Accessed November 22, 2021.



Mineral Resources

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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"/>

Mineral Resources Discussion

a) Would the Project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

No impact. According to the San Mateo County General Plan, there are no mineral resource zones within or adjacent to the Project footprint within the Community. (San Mateo County 1986). The nearest identified mine is Dennison Creek mine, approximately 2.5 miles northeast of the Pier (USGS 2021). The USGS Minerals Resource Data System did not identify any critical or major mineral deposits in the Project footprint or in the Community. The nearest mineral deposit is stone at the El Granada Quarry, approximately 1.2 miles away from the Pier. Given the nature of this Project, neither impacts to mineral resources nor the loss of availability of mineral resources are anticipated. No impacts are anticipated, and no mitigation is required

b) Would the Project result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

No impact. As discussed above, there are no mineral resource zones within the Project footprint or the Community sphere of influence. Therefore, the Project is not anticipated to result in the loss of availability of a locally important mineral resource recovery site. No impacts are anticipated, and no mitigation is required.

Cumulative Impacts

No impact. No impacts are anticipated from the Project. No other projects have been identified associated with Johnson Pier or surrounding area that could cumulatively contribute to a significant



mineral impact in consideration of the proposed Project. No impacts are anticipated, and no mitigation is required.

Avoidance, Minimization and/or Mitigation Measures

No impacts were identified, and no mitigation measures are required.

Sources

Mineral Resources Data System (USGS, accessed on November 29, 2021 at <https://mrdata.usgs.gov/mrds/>)

San Mateo County General Plan (San Mateo County 1986).



Noise

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive ground-borne vibration or ground-borne noise levels?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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"/>

Noise Discussion

Environmental Setting

Sound is defined as mechanical energy transmitted by pressure waves through a medium, such as air, and is characterized by various parameters that include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). Sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level. Sound pressure level is measured in decibels (dB), with 0 dB corresponding roughly to the threshold of human hearing, and 120 to 140 dB corresponding to the threshold of pain. Noise is frequently defined as unwanted sound.

Due to the fact that the typical human ear is not equally sensitive to all frequencies of the audible sound spectrum when assessing potential noise impacts, sound is measured using an electronic filter that de-emphasizes the frequencies in a manner corresponding to the human ear's decreased sensitivity to low and extremely high frequencies instead of focusing on the frequency mid-range. This method of frequency weighting is referred to as A-weighting and is expressed in units of A-weighted decibels (dBA). All sound pressure levels and sound power levels reported below are A-weighted.

An individual's noise exposure is a measure of the noise experienced by the individual over a period of time. Noise is primarily the product of many distant noise sources, which constitute a relatively



stable background noise exposure with the individual contributors unidentifiable. Background noise levels change throughout a typical day, but do so gradually, corresponding with the addition and subtraction of distant noise sources and atmospheric conditions. The addition of short duration single event noise sources (e.g., aircraft flyovers, motor vehicles, sirens) makes noise constantly variable throughout a day.

Such successive additions of sound to the noise environment vary the noise level from moment to moment, requiring that noise exposure be measured over a period of time to legitimately characterize a noise environment and evaluate noise impacts. This time-varying characteristic of environmental noise is described using statistical noise descriptors. Different noise descriptors discussed in this analysis are summarized below:

- L_{eq} : The equivalent sound level is used to describe noise over a specified period of time in terms of a single numerical value. The L_{eq} is the constant sound level that would contain the same acoustic energy as the varying sound level during the same time period (i.e., the average noise exposure level for the given time period).
- L_{dn} : The energy average of the A-weighted sound levels occurring during a 24-hour period and which accounts for the greater sensitivity of most people to nighttime noise by weighting noise levels at night (“penalizing” nighttime noises). Noise between 10 p.m. and 7 a.m. is weighted (penalized) by adding 10 dBA to take into account the greater annoyance of nighttime noises.
- CNEL: Similar to the L_{dn} , the Community Noise Equivalent Level (CNEL) adds a 5-dBA “penalty” for the evening hours between 7:00 p.m. and 10:00 p.m. in addition to the 10-dBA penalty between the hours of 10:00 p.m. and 7:00 a.m.
- L_{max} : The instantaneous maximum noise level measured during the measurement period of interest.

With more distance from the source, sound level naturally decreases, an attenuation rate which is referred to as the *geometric spreading loss*. The basic rate of geometric spreading loss depends on whether a given noise source can be characterized as a point source or a line source. Point sources of noise, including stationary mobile sources such as idling vehicles or on-site construction equipment, attenuate at a rate of 6.0 dBA per doubling of distance from the source. In many cases, noise attenuation from a point source increases to 7.5 dBA for each doubling of distance due to ground absorption and reflective wave canceling. These factors are collectively referred to as *excess ground attenuation*. The basic geometric spreading loss rate is used where the ground surface between a noise source and a receiver is reflective, such as parking lots or a smooth body of water. The excess ground attenuation rate (7.5 dBA per doubling of distance) is used where the ground surface is absorptive, such as soft dirt, grass, or scattered bushes and trees.



The table below indicates noise level standards identified in the San Mateo Municipal Code (Noise Level Standards Section 7.30.040(b))

Table 9: Noise Level Standards*

Noise Zone	Time Period	Noise Level (dB)
Noise Zone 1	10 p.m. - 7 a.m.	50
	7 a.m. - 10 p.m.	60
Noise Zone 2	10 p.m. - 7 a.m.	55
	7 a.m. - 10 p.m.	60
Noise Zone 3	10 p.m. - 7 a.m.	60
	7 a.m. - 10 p.m.	65
Noise Zone 4	Anytime	70

* Source: Adapted from "The Model Community Noise Control Ordinance," Office of Noise Control, California Department of Health.

Sensitive Receptors

Human response to noise varies considerably from one individual to another. Effects of noise at various levels can include interference with sleep, concentration, and communication and can cause stress and hearing loss. Given these effects, some land uses are considered more sensitive to ambient noise levels than others. In general, residences, schools, hotels, hospitals, and nursing homes are considered to be the most sensitive to noise. Places such as churches, libraries, and cemeteries, where people tend to pray, study, and/or contemplate are also sensitive to noise. Commercial and industrial uses are considered the least noise sensitive.

The proposed project area is located approximately 1,500 feet southeast of the town of Princeton-By-The-Sea. The land uses in Princeton-By-The-Sea are a mix of light industrial, business, warehouses, and residences. The closest residence is in the eastern portion of the town, approximately 1,500 feet northwest of the westernmost section of Pillar Point Harbor Pier D, where improvements will be made. East of the project area is the town of El Granada. The closest residence in El Granada is located approximately 600 feet to the northeast of the proposed project site (11820 Cabrillo Hwy N. El Granada, CA, 94018). Land uses in El Granada are predominantly residential with some business.

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

Less than significant impact. The proposed project is located within Pillar Point Harbor in western San Mateo County. During construction, the proposed project would increase noise in the vicinity temporarily through its associated construction activities. Section 4.88.330 of the San Mateo County Municipal Code contains exterior noise standards for receiving land uses such as single and multiple



family residences, schools, hospitals, churches, and public library properties. However, noise sources associated with demolition and construction activities are exempt from these standards as long as these activities do not take place between the hours of 6:00 p.m. and 7:00 a.m. weekdays, 5:00 p.m. and 9:00 a.m. on Saturdays, or at any time on Sundays, Thanksgiving, or Christmas (San Mateo County 2020a).

Project construction is expected to begin in spring/summer of 2023, and last for a period of approximately 24-36 months over a five to ten year period. Construction activities would take place primarily during daytime hours between 8:00 a.m. and 5:00 p.m., Monday through Friday. However, some night work may be done to allow for best opportunity to utilize the tidal range and also complete parking lot and trail closures that may be needed during hauling/import of materials to the site. Night work would minimize public recreational impacts during construction. Project construction activities and equipment used are described in detail in Section 2.9, *Project Description*.

Construction would involve use of equipment that generates substantial noise at and adjacent to the proposed project area. The pieces of equipment listed below could be used at any time during construction of the Project.

- Impact pile driver
- Vibratory pile driver/extractor
- Hydraulic jet for pile driving
- Pneumatic tools
- Power (electric and gas) saws
- Power tools
- Hand tools
- Cranes
- Small boat
- A barge-mounted crane (if selected by the construction contractor)
- Land based crane
- A diver (as needed)



- Trucks for transportation of construction equipment and materials
- Floating barge for staging and transporting materials

Noise impacts from construction would depend on the type of activity being undertaken and the distance to the receptor location. Table 10 shows typical noise levels and usage factors for various types of construction equipment that would be used during proposed project construction activities.

Table 10: Construction Equipment – Typical Noise Levels

Type of Equipment	L _{max} , dBA at 50 feet	Usage Factor (%)
Impact Pile Driver	101	20
Vibratory Pile Driver/extractor	101	20
Crane	81	16
Pneumatic tools	85	50
Dump Truck	84	40
Flat Bed Truck	84	40

SOURCE: FHWA, 2006

The noise levels shown in the table above represent maximum noise levels. However, each piece of equipment in the proposed project area would not operate at its maximum capacity constantly throughout the day. This is captured in the usage factor for each equipment. Over a typical work day, equipment would operate at different locations on the proposed project area and would not always be operating concurrently. For a conservative approximation of construction noise levels, consistent with the evaluation approach suggested by the Federal Transit Administration in its Transit Noise and Vibration Manual, it is assumed for this analysis that two of the loudest pieces of construction equipment would be operating at the same time and location in the proposed project area closest to the offsite sensitive receptor (FTA 2018).

Simultaneous operation of an impact pile driver and a pneumatic tool at the pile driving location would generate a noise level of less than 50 dBA L_{eq} at the nearest residence 600 feet away, based on an attenuation rate of 6.0 dBA per doubling of distance from the source. Noise impacts from construction activities tend to be greatest when construction activities occur during the noise-sensitive times of the day (early morning, evening, or nighttime hours) in areas immediately adjacent to sensitive receptors, or when construction noise lasts for extended periods of time. However, as described above, construction associated with the proposed project would take place primarily during the less noise sensitive daytime hours consistent with the San Mateo County Municipal Code and would take place at a distance of at least 600 feet from the nearest sensitive receptor. The County does not specify receiving noise standards for construction activities but the attenuated noise levels at the receptors would be below the short-term noise thresholds specified by other agencies such as the FTA’s daytime



threshold of 90 dBA, L_{eq} as well as the speech interference threshold of 70 dBA, L_{eq} . Therefore, though noise from activity at the pile removal and driving sites could be audible over existing ambient daytime noise levels, it would not exceed standards established in the local general plan or noise ordinance, or applicable standards of other agencies. In addition, **NOI-1** would require that the District implement a pile driving notification plan and **NOI-2** would require the use of a soft start technique during pile driving to reduce the risk of potential noise impacts to sensitive receptors. Hydraulic jetting may also be used to reduce pile driving time and the number of impact blows required to drive piles. Hydraulic jetting would not be anticipated to produce substantial noise. With the proposed mitigation measures the impact of proposed project construction activities on the noise environment at the nearest residences would be less than significant.

Trucks transporting materials to and from the proposed project area would incrementally increase noise levels along haul routes. The majority of the construction materials are anticipated to be transported by barge, however up to 10 truck trips per day could be used to transport materials over a short period of time. As a general rule, it takes a doubling of traffic to increase noise by 3 dBA, and approximately a tripling of traffic to increase noise by 5 dBA. A 3-dBA change is considered a just-perceivable difference, but typically does not cause an adverse human response; a change in level of at least 5 dBA is required before any adverse human response would be expected. The addition of 10 truck trips over the 8-hour workday would not cause a noticeable increase in traffic noise levels along the haul routes, and impacts would be less than significant.

Following completion of construction, it is expected that the upgraded pier and docks would require minimal on-going maintenance, primarily in response to extreme events and long-term trends. Therefore, noise levels associated with these maintenance activities would be less than significant.

b) Would the Project result in generation of excessive ground-borne vibration or ground-borne noise levels?

Less than significant impact. Temporary sources of ground-borne vibration and noise during construction would result from operation of heavy construction equipment. Construction equipment such as vibratory and impact pile drivers generate highest levels of vibration. Caisson drilling and loaded haul trucks can also generate perceptible vibration in the immediate vicinity. Pile driving activities will temporarily expose marine mammals to ground borne vibrations and noise. Marine mammals would likely be able to “sense” the noise; however, the magnitude and intensity of the sources’ sounds are unlikely to result in any substantial changes in behavior. Vibration attenuates rapidly from the source; therefore, the potential for vibration impact would be highest when construction takes place in immediate proximity (within 100 feet) to sensitive receptors. As project-related construction activities would take place over 500 feet from sensitive receptors, vibration levels would attenuate to less-than-significant levels at the nearest sensitive receptors.



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

No impact. Although the proposed project area is located within 2 miles of the Half Moon Bay Airport, it is outside the 65 dBA CNEL contours for the airport (C/CAG of San Mateo County 2014). Consequently, the proposed project would not expose workers at the Project site to excessive noise levels from aircraft operations. Therefore, no impacts are anticipated, and no mitigation is required.

Cumulative Impacts

Less than significant. Less than significant noise impacts are anticipated from the Project with the implementation of mitigations measures **NOI-1** and **NOI-2**. The Project would abide by the permitted construction hours mentioned above. No other projects have been identified associated with the Harbor or surrounding area that could cumulatively contribute to a significant noise impact in consideration of the proposed Project. Therefore, potential cumulative impacts are anticipated to be less than significant.

Avoidance, Minimization and/or Mitigation Measures

The following mitigation measures would be implemented to avoid and/or minimize potential impacts and to ensure impacts are less than significant:

NOI-1 Pile Driving Notification Plan: The District shall implement a pile driving notification plan as described herein to keep residents informed of the Project's pile driving schedule. Prior to pile driving activities and within 2 weeks after award and execution of the construction contract, the Contractor shall provide the District with a pile driving schedule that identifies: (1) start date of pile driving, (2) anticipated weekly work zones by estimated date shown on an aerial map (or plan sheet overview), (3) estimated pile driving completion date, and (4) website address for accessing the pile driving schedule on-line. The Contractor shall be required to post and maintain the schedule onsite. The Contractor shall update the schedule at least every two weeks and provide the schedule to the District by the following day for posting on the District's website.

NOI-2 Pile Driving Operational Measures: A "soft-start" technique will be used to allow fish and marine mammals to vacate the area before the pile driver reaches full power. For vibratory hammers, the contractor will initiate the driving for 15 seconds at reduced energy, followed by a 1-minute waiting period when there has been downtime of 30 minutes or more. This procedure shall be repeated two additional times before continuous driving is started. This procedure would also apply to vibratory pile extraction. For impact driving, an initial set of three strikes would be made by the hammer at 40



percent energy, followed by a 1-minute waiting period, then two subsequent three-strike sets before initiating continuous driving.

Sources

City/County Association of Governments (C/CAG) of San Mateo County, 2014. Airport Land Use Compatibility Plan for the Environs of Half Moon Bay Airport, September 2014. Available: <https://ccag.ca.gov/wp-content/uploads/2014/10/HAF-ALUCP-Final.pdf>.

Federal Highway Administration (FHWA), 2006. Construction Noise Handbook – Final Report, Table 9.1 – RCNM Default Noise Emission Reference Levels and Usage Factors, August 2006. Available: https://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/handbook09.cfm.

Federal Transit Administration (FTA), 2018. Transit Noise and Vibration Impact Assessment Manual, September 2018. Available: <https://www.transit.dot.gov/regulations-and-guidance/environmental-programs/noise-and-vibration>.

San Mateo County Harbor District, 2020a. Pillar Point Harbor West Trail Living Shoreline Project – Initial Study/Notice of Intent to Adopt A Mitigated Negative Declaration. Prepared by ESA Associates. July 2020.

San Mateo County, San Mateo County Code of Ordinances, 2020. Title 4 – Sanitation and Health, Chapter 4.88 – Noise Control, last updated on January 31, 2020. Available: https://library.municode.com/ca/san_mateo_county/codes/code_of_ordinances?nodeId=TTT4SAHE_CH4.88NOCO.



Population and Housing

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Induce substantial upland 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"/>

Population and Housing Discussion:

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

No impact. The Project does not propose the construction of new housing or commercial businesses that would directly induce population growth in the area. The Project would not extend roadways or other infrastructure into new areas that could lead to indirect growth. No impacts are anticipated, and no mitigation is required.

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

No impact. There are no housing units located on the Pier. The Project would not displace housing. The Project does not propose the removal of housing. The Project would not displace people. No impact would occur, and no mitigation is required.

Cumulative Impacts

No impact. None of the proposed activities would impact housing stock or encourage growth. No other projects have been identified associated with the Pier or surrounding area that could cumulatively contribute to a significant population and housing impact in consideration of the proposed Project. No impacts are anticipated, and no mitigation is required.



Avoidance, Minimization and/or Mitigation Measures

No impacts were identified, and no mitigation measures are required.

Sources

Johnson Pier Expansion and Dock Replacement Project Description



Public Services

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following 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 type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Public Services Discussion:

a) **Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered government 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 following public services?**

i) Fire protection

No impact. Fire protection and general rescue services for the project area and vicinity are provided by Coastside Fire Protection District (Coastside FPD) excluding the Pillar Point Air Force Station, which is served by the County (Coastside FPD 2008). In total, Coastside FPD operates three paid fire stations and one headquarters. The nearest fire station is Fire Station 41, which is located at 531 Obispo Road, El Granada, CA 94018. In the event of a fire emergency in the proposed project area, Fire Station 40 and Station 41 would respond.

Due to the short-term nature of construction activities involving a workforce average of 8 to 20 construction workers, project construction would not increase demand for fire protection services



throughout the project vicinity. Similarly, the proposed project would not change long-term use of the project area such that increased risk of fire would result. For these reasons, the project would not be expected to substantially affect Coastside FPD's ability to maintain service ratios, response times, or other performance objectives such that new or physically altered facilities would be required. For these reasons, the project will have no impact with respect to the provision of fire service and no mitigation is required.

ii) Police protection

No impact. Law enforcement services for the project area are provided by the Coastside Patrol Bureau of the San Mateo County Sheriff's Office. The nearest San Mateo County Sheriff's office is the Moss Beach Substation, 500 California Avenue, Moss Beach, CA 94038, which is located approximately 3 miles from the proposed project area (San Mateo County Sheriff's Office 2018).

For the reasons provided in response to the previous item, the proposed project would not be expected to substantially affect the San Mateo County Sheriff's Office's ability to maintain service ratios, response times, or other performance objectives such that new or physically altered facilities would be required. Therefore, no impacts to police protection is anticipated and no mitigation is required.

iii) Schools

No impact. Construction labor for the proposed project would be sourced from existing labor pools in the area and, as such, would not be expected to result in worker immigration into the area and any consequent impact to area school resources or facilities. Project operations would not require hiring new staff or require new or modification of existing school facilities. For these reasons, the project would have no impact to schools and no mitigation is required.

iv) Parks

No impact. The nearest parks or recreational areas to the proposed Project site include the Fitzgerald Marine Reserve, Pillar Point Bluff, Pillar Point Harbor West Trail, Pillar Point Harbor Beach, and Princeton by the Sea Park. For the reasons described in the previous responses, the proposed project would not result in increased population such that there would be additional demand for parks facilities during or after construction. For these reasons, the proposed project would have no impact to parks and no mitigation is required.



v) Other public facilities

No impact. The proposed project would not result in new permanent employees and, therefore, would not increase the use of other public facilities such as libraries or hospitals. For these reasons, the proposed project would have no impact to other public facilities and no mitigation is required.

Cumulative Impacts

No impact. The project may have minor temporary impacts during construction of Johnson Pier. No other projects have been identified that could cumulatively contribute to a significant public services impact in consideration of the proposed Project. No impacts to public services are anticipated and no mitigation is required.

Avoidance, Minimization and/or Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

Sources

Coastside Fire Protection District (Coastside FPD), 2008. Coastside Fire Protection District – Response Area. <https://www.coastsidefire.org/response-area>. Accessed March 31, 2022.

San Mateo County Harbor District, 2020a. Pillar Point Harbor West Trail Living Shoreline Project – Initial Study/Notice of Intent to Adopt A Mitigated Negative Declaration. Prepared by ESA Associates. July 2020.

San Mateo County Sheriff's Office, 2018. Coastside Patrol Bureau. <https://www.smcsheriff.com/patrol-services/coastside-patrol-bureau>. Accessed March 31, 2022.



Recreation

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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 type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Recreation 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?

No impact. The project proposes expansion of the existing pier, replacement of existing Docks D, E, F, G, and H, addition of Dock EW, and the replacement of the Fuel Dock. The Project would improve the safety of operations at the Pier, increase the life and capacity of the commercial docks, and improve accessibility to the docks. The Project proposes no increase in residential development that would increase the demand for parks or other recreational facilities. The Project is also not expected to cause an increase in employment, only temporary construction related jobs. The Project does not propose the construction of new stores or commercial buildings. Therefore, no direct or indirect increase in demand or use of existing parks or recreational facilities would result from Project implementation. Impacts are not anticipated, and no mitigation is required.

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

No impact. The Project does not include recreational facilities or require the construction or expansion of recreational facilities. The replacement of existing Docks D, E, F, G, and H and addition of Dock EW will increase the number of boat slips available at the dock, but these docks primarily serve commercial fishing vessels. Impacts are not anticipated, and no mitigation is required.



Cumulative Impacts

No impact. None of the proposed activities would impact the use of recreational resources. No other projects have been identified associated with the Pier or surrounding area that would cumulatively contribute to a significant impact on recreational resources in consideration of the proposed Project. No impacts are anticipated, and no mitigation is required.

Avoidance, Minimization and/or Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

Sources

Based on the nature of proposed Project activities.



Transportation

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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"/>

Transportation Discussion

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

No Impact. SR-1 is the principal traffic artery providing connection to the Pillar Point Marina and Johnson Pier. SR-1 is a major north - south state highway that runs along most of the coastline of California. Pillar Point Marina and Johnson Pier can be accessed from SR-1 via connection to Pillar Point Harbor Boulevard and Capistrano Road, both of which run between Pillar Point Marina and the highway. Pillar Point Marina can also be accessed by commercial bus or Bay Area Rapid Transit.

Pedestrians and bicyclist can access Pillar Point Marina and Johnson Pier utilizing the California Coastal Trail, San Mateo County Midcoast Pillar Point to Mirada Surf section, which parallels the shoreline located just west of Pillar Point Marina. The Half Moon Bay Coastal Trail is a popular bicycle route located to the south of Johnson Pier.

San Mateo County prepared *Connect the Coastside, a Comprehensive Transportation Management Plan* to improve safety and mobility for residents, businesses, and visitors. The plan focuses on the areas surrounding SR-1, including Pillar Point Marina and the communities of El Granada and Princeton, including the community adjacent to City of Half Moon Bay. *Connect the Coastside* is one of several County efforts to improve mobility along the Midcoast. In conjunction with this study, the



Community developed its *Plan Princeton, Community Plan, Local Coastal Program, and Zoning Regulations Update, Community Visioning Report* in 2013, which aims to enhance and extend the bikeway and trail system from Half Moon Bay to Pillar Point and Johnson Pier.

The *San Mateo Countywide Transportation Plan 2040* (SMCTP) establishes planning goals and objectives to promote consistency and compatibility among transportation plans and programs within the county. SMCTP supports an integrated, system-wide approach to transportation planning that considers the county-wide transportation network, not just in its constituent parts.

The *San Mateo County Comprehensive Bicycle and Pedestrian Plan, 2011* provides detailed goals and objectives to provide an inter-connected system of safe, convenient, and accessible bicycle and pedestrian facilities.

During construction there may be restrictions on vehicular, bicycle, and pedestrian traffic on Johnson Pier to maintain public safety. The Project would not conflict with any circulation plans, ordinances, or policies and would be anticipated to help meet the long-term planning goals of connecting communities to recreational venues and promote economic sustainability.

The Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit roadway, bicycle, and pedestrian facilities.

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

No impact. The Project would not result in a change in vehicle usage on local roadways or VMT because it is not related to roadway transportation or land-use changes. The Project only proposes structural improvements to Johnson Pier. There is no proposed change to land use or transportation.

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

No impact. The Project is aimed at improving geometric design features on Johnson Pier to improve the use of the Pier for commercial and recreational uses. There is no proposed change in land use or the local transportation network. Project-related impacts are not anticipated from the proposed Project, and no mitigation is required.

d) Would the Project result in inadequate emergency access?

No impact. Access to Johnson Pier would be temporarily impacted during construction, but the Project would not block roads that could provide emergency response. Major highways and secondary roadways would remain fully accessible. No impact to emergency access is anticipated and no mitigation is required.



No project-related impacts are anticipated, and no mitigation is required.

Cumulative Impacts

No impact. No impacts are anticipated from the proposed Project. During construction access to the Johnson Pier would be temporarily restricted, but this would not impact the local transportation network. Access to roads that provide emergency response would not be blocked. There is no proposed change in land use or the local transportation network. The Project would be anticipated to improve public access to the Johnson Pier in the long-term. No other projects have been identified associated with the Johnson Pier or surrounding area that could cumulatively contribute to a significant transportation impact in consideration of the proposed Project.

Avoidance, Minimization and/or Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

Sources

County of San Mateo, Connect the Coastside, October 2021, Available at:

<https://planning.smcgov.org/connect-coastside>, Accessed on 12/13/2021.

Plan Princeton, Community Plan, Local Coastal Program, and Zoning Regulation Update, Community Visioning Report, 2013, Available at:

https://planning.smcgov.org/sites/planning.smcgov.org/files/documents/files/community_vision_report_110813.pdf, Accessed on December 13, 2021.

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Transportation Plan – 2040, 2017, Available at: <https://ccag.ca.gov/programs/countywide-transportation-plan/>. Accessed on December 13, 2021.

City/County Association of Governments of San Mateo County, San Mateo County Comprehensive

Bicycle and Pedestrian Plan, 2011, Available at: https://ccag.ca.gov/wp-content/uploads/2014/07/CBPP_Main-Report_Sept2011_FINAL.pdf, Accessed on December 13, 2021.



Tribal Cultural Resources

Would the Project cause a substantial adverse change in the significance of a Tribal Cultural Resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Tribal Cultural Resources Discussion

Would the Project cause a substantial adverse change in the significance of a Tribal Cultural Resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:

- a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or
- b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

No impact. Per the Half Moon Bay Local Coastal Land Use Plan, the Project region was historically occupied by triblets of the Costanoan linguistic group. Descendants of Costanoan speakers prefer to be called by the name of the tribelet from which they are descended. When their heritage is mixed, or



the specifics have been lost over generations, they prefer the use of a native term, Ohlone, rather than the European-imposed term Costanoan (“coastal dwellers”). The Ohlones were composed of 50 or more Tribes in the southern San Francisco Bay Region, 10 of which were situated along the peninsula. The Ohlones were effectively displaced when Mexico won its independence from the Spanish crown in 1821 and California fell under rule of Mexican territorial governors who granted much of the former Spanish mission lands to Mexican subjects. Archaeological resources are defined as the material remains of any area’s pre-historic (aboriginal/Native American) or historic (European and Euro-American) human activity. Archaeological resources are known to occur within the Community study area (Plan Princeton 2014). The Project proposes expansion of the existing Johnson Pier, replacement of existing Docks D, E, F, G, and H, addition of Dock EW and the replacement of the Fuel Dock, which would require excavation and installation of new piles; however, no known archaeological resources that could be considered tribal resources are known to occur at the project site. In addition, the District has confirmed that no local tribes have requested consultation under AB 52.

Cumulative Impacts

No impact. No other projects have been identified in the area that would contribute to a cumulatively significant impact.

Avoidance, Minimization and/or Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

Sources

City of Half Moon Bay Local Coastal Land Use Plan (Half Moon Bay 2020).

Plan Princeton Existing Conditions Report (Plan Princeton 2014).



Utilities and Service Systems

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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 type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's Projected demand in addition to the provider's existing commitments?	<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"/>

Utilities and Service Systems Discussion:

Environmental Setting

The proposed project area is served by water, wastewater, and utility connections. There are trash receptacles located along the Pier. Existing utilities on existing Docks D, E, F, G, H, and the Fuel Dock will be upgraded. New utilities will be added to the improved fuel dock including fuel pumping facilities.



a) Would the Project 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?

Less than significant impact. The proposed project would result in existing utilities on existing Docks D, E, F, G, H, and the Fuel Dock being upgraded. New utilities will be added to the improved Fuel Dock, including fuel pumping facilities. See Plan Sheet Utility Plans for additional information associated with utilities upgrades. To reflect the conclusions of those sections, impacts would be less than significant.

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

No impact. The proposed project would upgrade water connections to local utilities. Project operations would not result in increased water demands. For these reasons, the proposed project would have sufficient water supplies available to serve the project and no impact is anticipated and no mitigation is required.

c) Would the Project result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?

No impact. The proposed project is not served by a wastewater treatment provider and there would be no impact on wastewater demand and no mitigation is required.

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

Less than significant impact. The project would generate approximately 4,000 cubic yards of waste in the form of removed docks and 500 cy of waste in the form of removed concrete piles. Concrete piles may be recycled to the extent feasible. This waste would require off-site disposal, and may use the Corinda Los Trancos Landfill (formerly Ox Mountain), located at 12310 San Mateo Rd (Hwy 92), Half Moon Bay, CA 94019. The landfill has a remaining capacity of 22,180,000 cubic yards as of December 31, 2015 (CalRecycle 2018), the latest date at which remaining capacity estimates were available. The addition of 4,500 cubic yards would be negligible, and not contribute substantially to landfill capacity reduction. The proposed project would also comply with all applicable local, state, and federal regulations concerning solid waste, including the County's Construction and Demolition Debris Ordinance (No. 04099). Therefore, the impact would be less than significant, and no mitigation is required.



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

Less than significant impact. The project would generate approximately 4,500 cubic yards of waste in the form of removed piles and docks. This waste would require off-site disposal, and may use the Corinda Los Trancos Landfill (formerly Ox Mountain), located at 12310 San Mateo Rd (Hwy 92), Half Moon Bay, CA 94019. The landfill has a remaining capacity of 22,180,000 cubic yards as of December 31, 2015 (CalRecycle 2018), the latest date at which remaining capacity estimates were available. The addition of 4,500 cubic yards would be negligible, and not contribute substantially to landfill capacity reduction. The proposed project would also comply with all applicable local, state, and federal regulations concerning solid waste, including the County's Construction and Demolition Debris Ordinance (No. 04099). Therefore, the impact would be less than significant, and no mitigation is required.

Cumulative Impacts

Less than significant impact. Less than significant impacts are anticipated from the proposed Project. The proposed Project would result in solid wastes and some additional utility usage. The Project would not be anticipated to exceed the capacity of current utility and/or solid waste facilities. No other projects have been identified associated with Johnson Pier or surrounding area that could cumulatively contribute to a significant utility and service system impact in consideration of the proposed Project. Therefore, potential cumulative impacts are anticipated to be less than significant.

Avoidance, Minimization and/or Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

Sources

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Available: <https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1561?siteID=3223> Accessed December 15, 2021.

San Mateo County Harbor District, 2020a. Pillar Point Harbor West Trail Living Shoreline Project – Initial Study/Notice of Intent to Adopt A Mitigated Negative Declaration. Prepared by ESA Associates. July 2020.



Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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 checked="" type="checkbox"/>	<input 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"/>

Wildfire Discussion

The Project area is located within an LRA where San Mateo County is responsible for fire suppression activities. According to the Cal Fire Very High Fire Hazard Severity Zones in LRA map (Cal Fire 2021), the Project site is not located in a fire hazard area. The Project is located at the Johnson Pier, which extends into Pillar Point Harbor. The nearest high fire hazard area is approximately 0.85-mile northwest of the Pier. No impacts are anticipated, and no mitigation is required.

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

a) Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

No impact. The Project does not occur in a high fire hazard area. The nearest high fire risk zone occurs approximately 0.85-mile northeast of the Pier. The Project would not temporarily or permanently block roads that could provide emergency response or evacuation from wildfires or other emergency. All major highways would remain open. No impacts are anticipated, and no mitigation is required.



b) Due to slope, prevailing winds, and other factors, would the Project exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

No impact. The Project does not propose the addition of habitable buildings or structures or activities that could exacerbate wildfire risks. The Project proposes improvements to the existing Pier and would not otherwise change topography or wind patterns. No impacts are anticipated, and no mitigation is required.

c) Would the Project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Less than significant impact. The Project does not occur in a high fire hazard area. The Project would require the installation of new utilities, including fuel pumping facilities. Piping that is installed will be double contained per National Fire Protection Association requirements and will be installed dry and tested to ensure that it is tight before introducing fuel into the system. In addition, absorbent booms will be onsite ready to deploy in the event of any spill. Due to these precautions, less than significant impacts are anticipated and no mitigation is required.

d) Would the Project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

No impact. The Project does not occur in a high fire hazard area. The Project does not propose changes to topography such as slope or drainage changes. The Project only proposes improvements to the existing pier. No habitable buildings or structures are proposed or located within the Project footprint. No impacts are anticipated, and no mitigation is required.

Cumulative Impacts

Less than significant impact. No other projects have been identified associated with Johnson Pier or surrounding area that could cumulatively contribute to a significant wildfire impact in consideration of the proposed Project. Due to measures to minimize fire risk from fuel and the absence of high fire risk areas in the Project vicinity, less than significant Project impacts and cumulative Project impacts are anticipated and no mitigation is required.

Avoidance, Minimization and/or Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.



Sources

California Office of the State Fire Marshal (Cal Fire 2021). Available:

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Mandatory Findings of Significance

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Does the Project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Mandatory Findings of Significance 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, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Less than significant impact. The proposed project would be temporary in nature and would involve construction activities to increase operation space on the pier and Fuel Dock in order to improve commercial fishing operational safety, eliminate current constrains, allow truck turnaround, and provide ADA accessibility. The proposed project would not 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, reduce or restrict the range of rare or endangered plants or animals, or eliminate important examples of the major periods of California history or prehistory. Per the analyses provided in this IS, adherence to federal, state, and local regulations and proposed measures would reduce all potentially significant



impacts to air quality, biological, cultural, and tribal cultural resources, as well as to other issue areas analyzed, to less-than-significant levels (Appendix E).

b) Does the Project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a Project are considerable when viewed in connection with the effects of past Projects, the effects of other current Projects, and the effects of probable future Projects)?

Less than significant impact. The potential impacts of the proposed project are restricted to temporary and short-term construction-related impacts and are site-specific. As noted above, all the potential direct and indirect impacts of the proposed project were determined to be avoided or reduced to less than significant (Appendix E). As a result, the potential impacts of the proposed project are not considered cumulatively considerable, and impacts would be less than significant.

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

No impact. The potential impacts of the proposed project are temporary, short-term, and site-specific. These impacts are all localized to the proposed project area and include limited effects on air quality, biological resources, cultural resources, GHG emissions, and water quality. However, the proposed project would not include any activities or uses that may cause substantial adverse effects on human beings, either directly or indirectly, or on the physical environment. The proposed project has been designed to meet federal and state engineering and design standards for harbor and marina improvement projects and would adhere to applicable local codes and regulations. Compliance with applicable local, state, and federal standards, as well as incorporation of project measures, would result in no substantial adverse effects on human beings, either directly or indirectly.



4.0 LIST OF PREPARERS

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6.0 FIGURES



Figure 1: Project Regional Vicinity Map

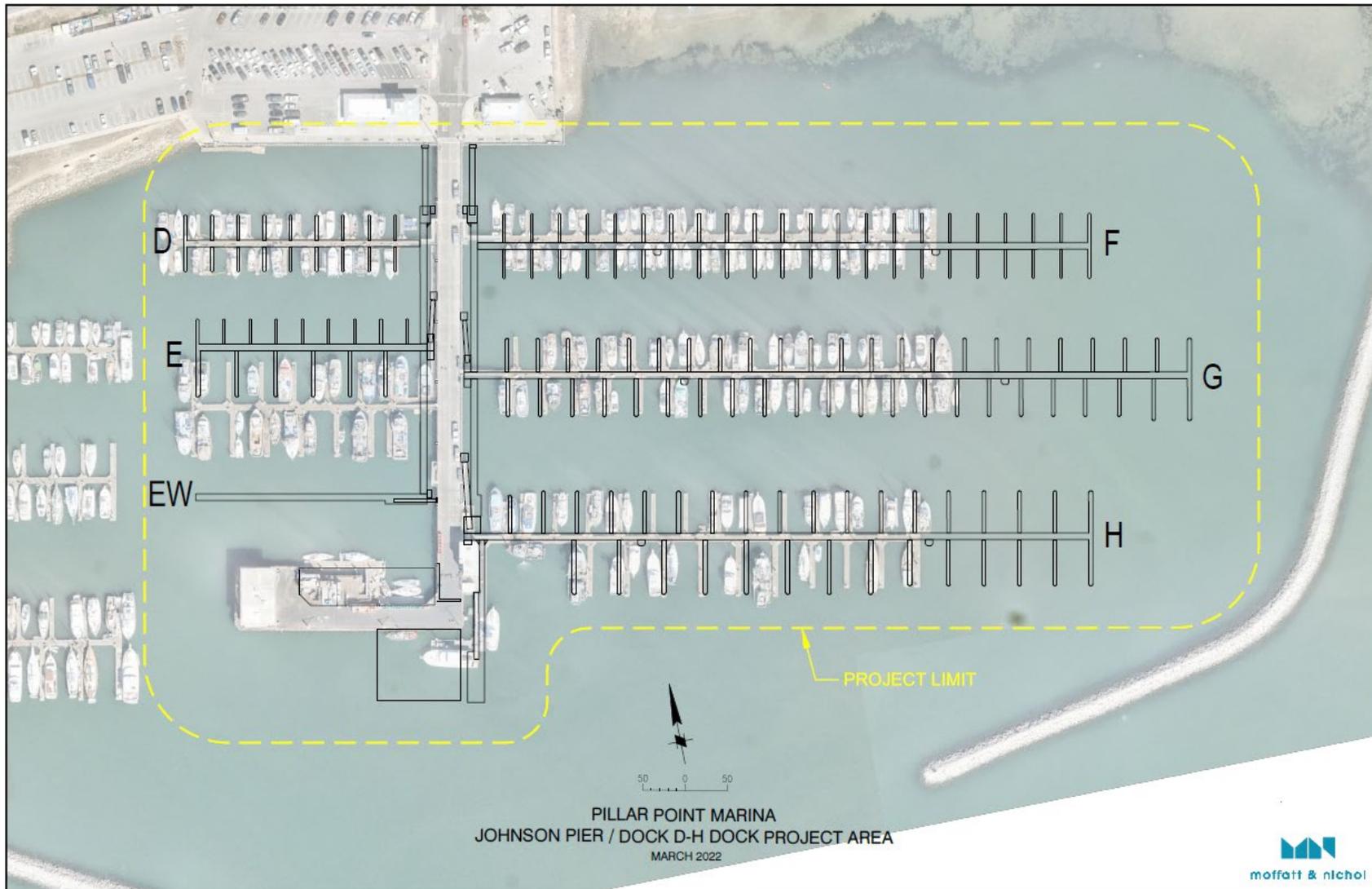
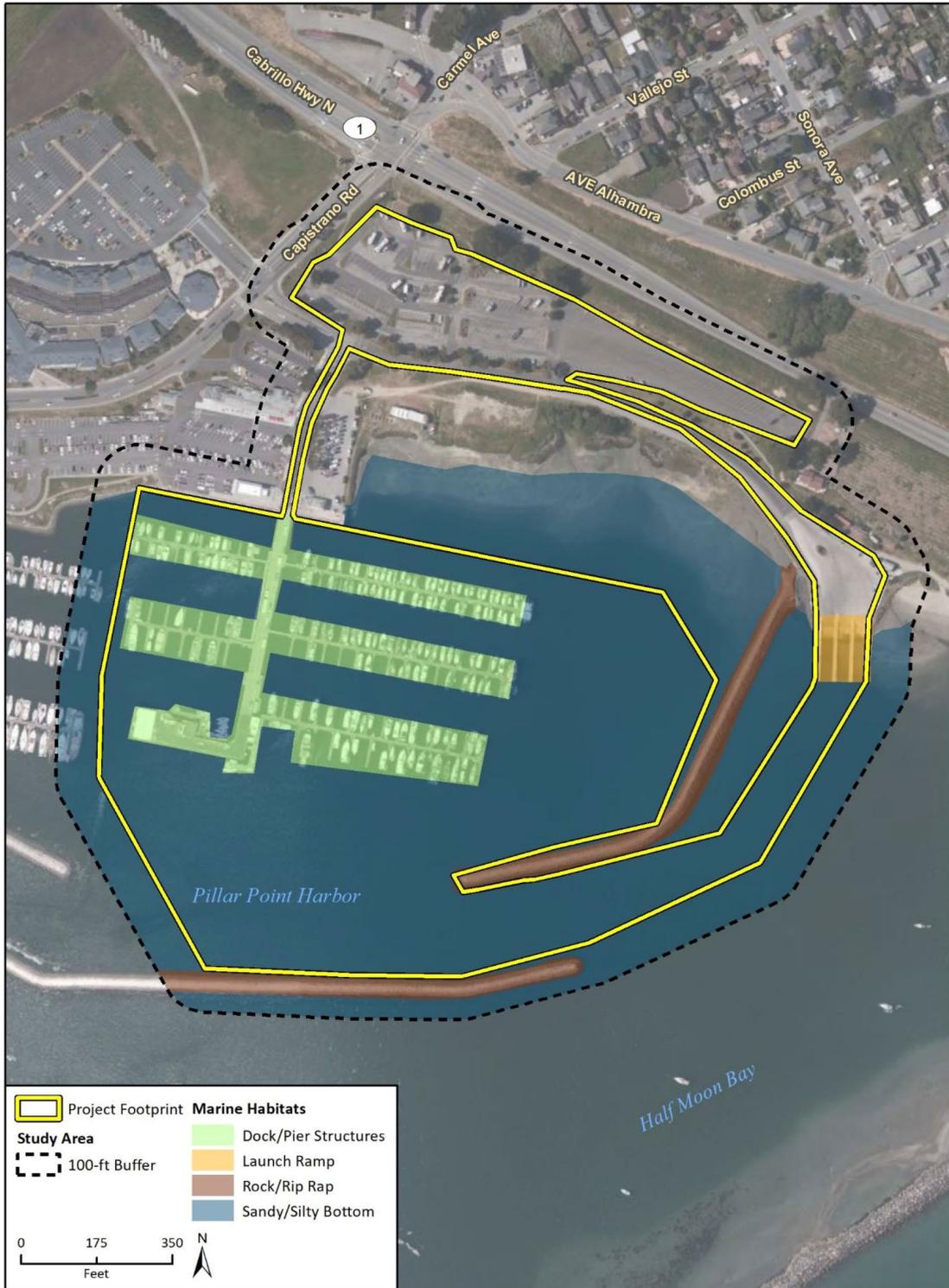


Figure 2: Project Location Map and Project Boundaries



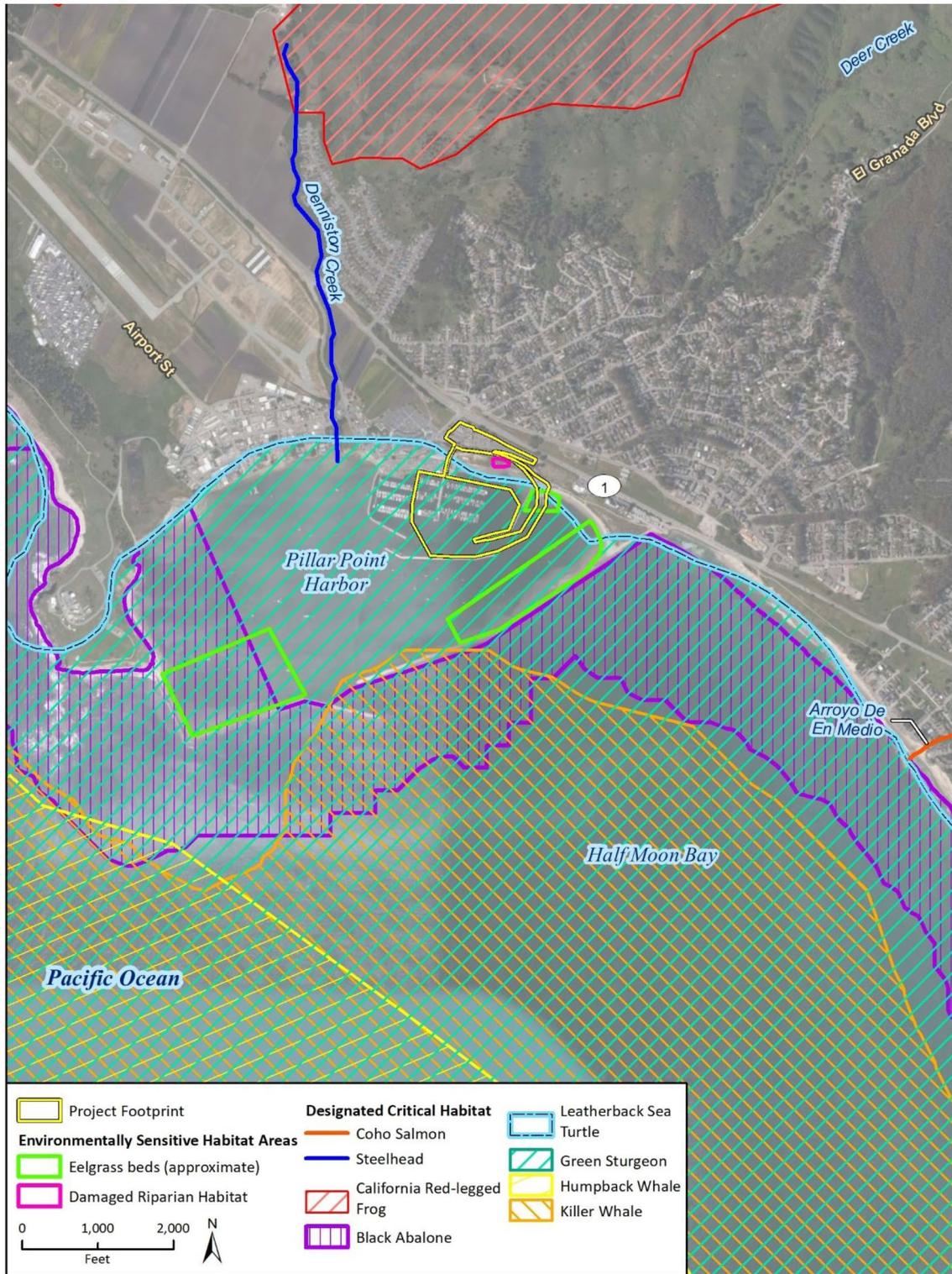
Source: Biological Resource Assessment (Rincon 2022a, Appendix C)

Figure 3. Terrestrial Vegetation



Source: Biological Resources Assessment (Rincon 2022a, Appendix C)

Figure 4. Marine Habitats



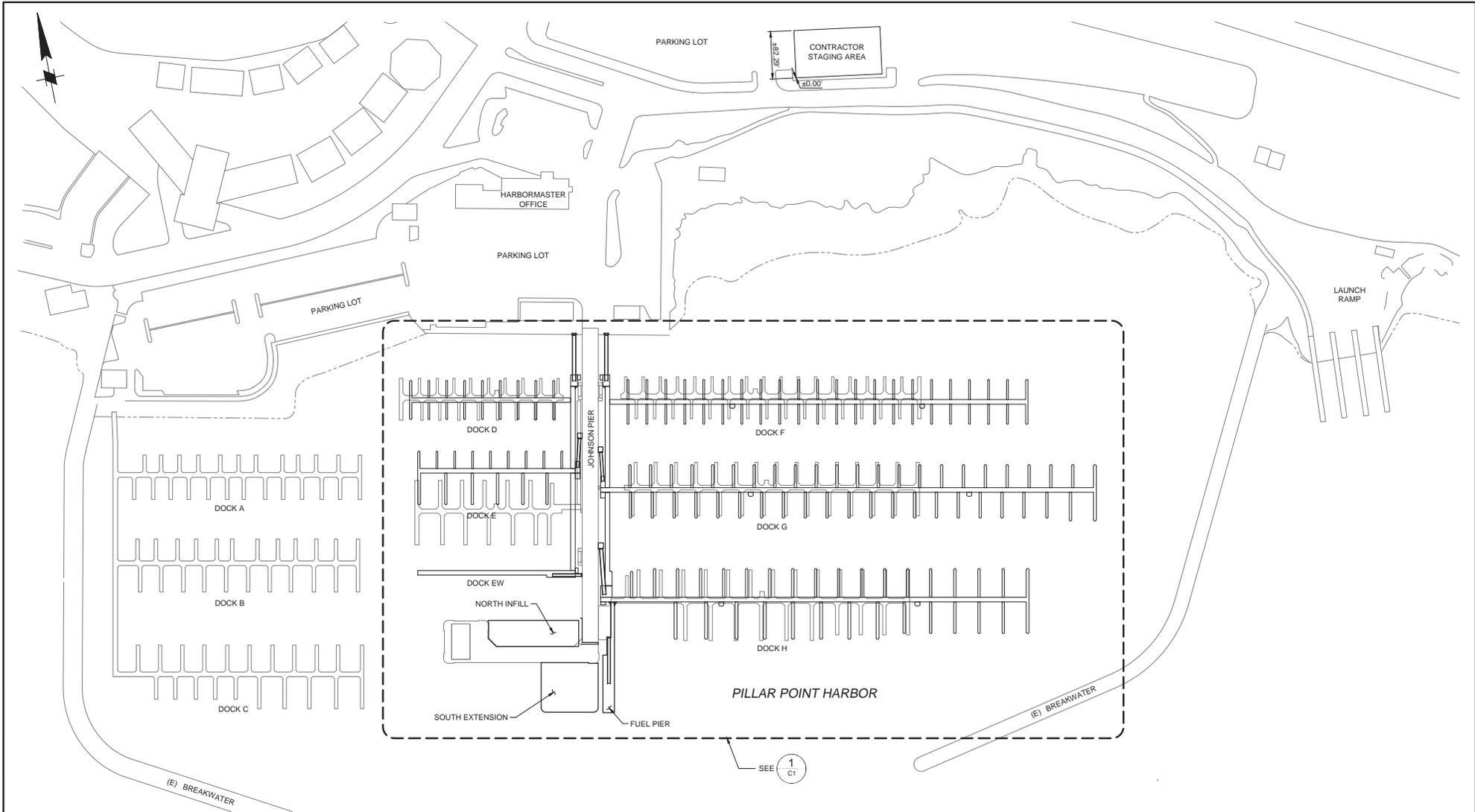
Source: Biological Resources Assessment (Rincon 2022a, Appendix C)

Figure 5. Environmental Sensitive Habitat Areas and Critical Habitat



7.0 APPENDICES

Appendix A Preliminary Design Drawings



SITE PLAN
SCALE: 1" = 80'

30% DESIGN - 5 APR 2022
NOT FOR CONSTRUCTION



SAN MATEO COUNTY HARBOR DISTRICT
504 Avenue Alhambra, 2nd Floor
El Granada, CA 94018
(650) 741-9163

REVISION	DESCRIPTION	BY	DATE

		2185 N. California Blvd., Suite 500 Walnut creek, CA 94596	
DESIGN	SH/NN	OR	AC
CHK	BP		
JOB NO.	9673-09	SUBMITTED BY	TITLE

SAN MATEO COUNTY HARBOR DISTRICT
JOHNSON PIER EXPANSION AND DOCK
REPLACEMENT

DATE 04-05-2022
SHEET 4 OF 27

SITE PLAN

G4



NOTES:

- ① DEMOLISH FLOATING DOCKS AND APPURTENANCES.
- ② CAP EXISTING UTILITIES AT PIER FOR RECONNECTION.
- ③ DEMOLISH TIMBER WHARF.
- ④ DEMOLISH FUEL DOCK CAP LINES AT PIER.

DEMOLITION PLAN
SCALE: 1" = 60'

30% DESIGN - 5 APR 2022
NOT FOR CONSTRUCTION



SAN MATEO COUNTY HARBOR DISTRICT
504 Avenue Alhambra, 2nd Floor
El Granada, CA 94018
(650) 741-9163

REVISION	DESCRIPTION	BY	DATE



2185 N. California Blvd.,
Suite 500
Walnut creek, CA 94596

SAN MATEO COUNTY HARBOR DISTRICT
JOHNSON PIER EXPANSION AND DOCK
REPLACEMENT

DATE 04-05-2022

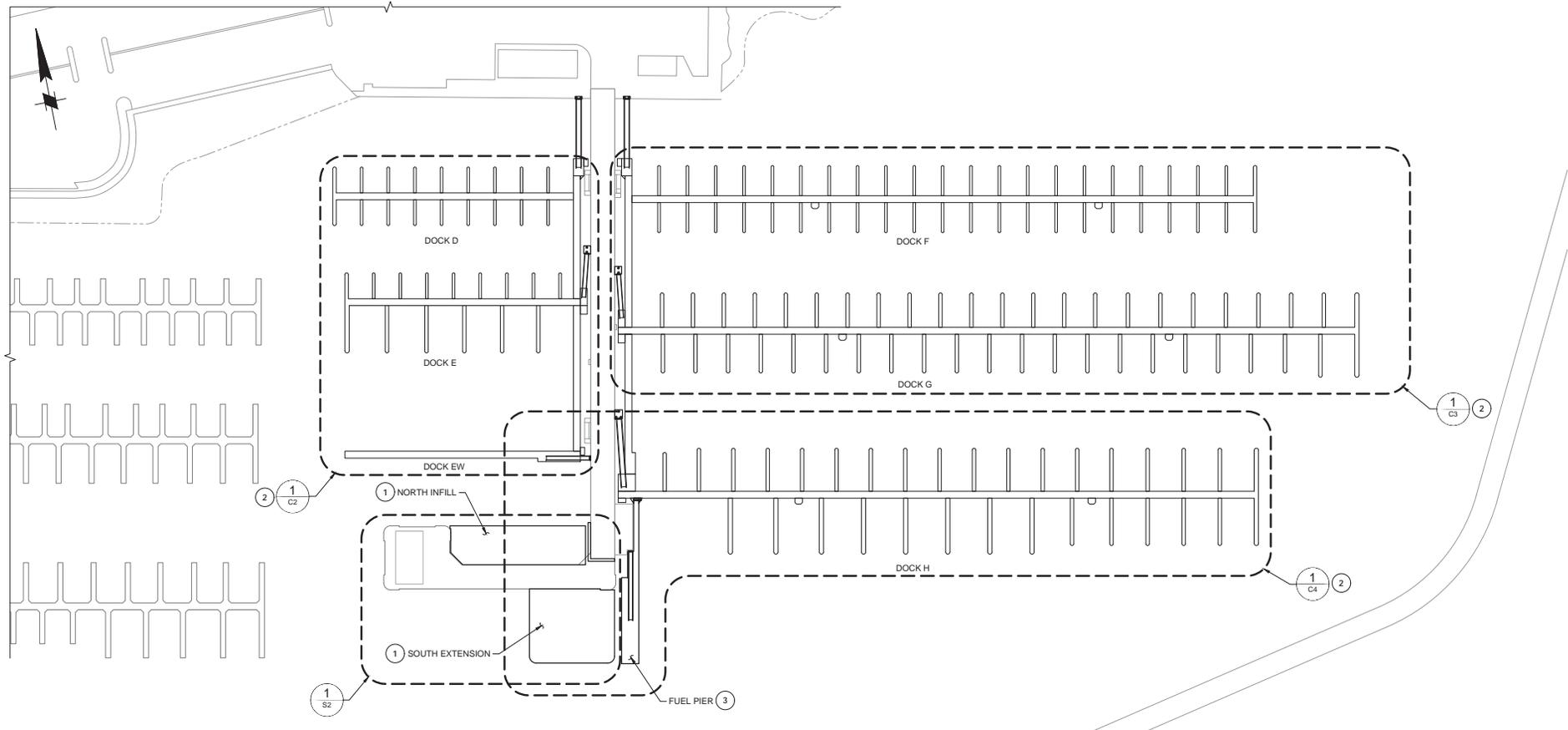
SHEET 5 OF 27

DESIGN	SH/NN	DR	AC	CHECK	BP
JOB NO.	9673-09		SUBMITTED BY	TITLE	

DEMOLITION PLAN

SD1

FILE: C:\18107\18107.dwg PLOT: 18107-09.dwg PLOT DATE: 04/05/2022 10:04:17 AM



1 PLAN
SCALE: 1" = 60'

- KEY NOTES:**
- ① CONSTRUCT CONCRETE PIER.
 - ② CONSTRUCT DOCK REPLACEMENT.
 - ③ CONSTRUCT FUEL DOCK REPLACEMENT.

DOCK	EXISTING							TOTAL SLIPS	TOTAL BERTH (LF)
	30	35	40	45	50	55	65		
D	19	17						36	1165
E					13	12		25	1310
EW								66	2135
F	35	31						66	2135
G			29	27				56	2375
H					26	7	12	45	2465
SLIPS	54	48	29	27	39	19	12	228	
BERTH (LF)	1620	1680	1160	1215	1950	1045	780		9450

DOCK	PROPOSED							TOTAL SLIPS	TOTAL BERTH (LF)
	30	35	40	45	50	55	65		
D	36							36	1080
E	17					12		29	1170
EW								0	0
F		88						88	3080
G			46	41	3			90	3835
H				2	33	11	16	62	3385
SLIPS	53	88	46	43	36	23	16	305	
BERTH (LF)	1590	3080	1840	1935	1800	1265	1040		12550

30% DESIGN - 5 APR 2022
NOT FOR CONSTRUCTION



SAN MATEO COUNTY HARBOR DISTRICT
504 Avenue Alhambra, 2nd Floor
El Granada, CA 94018
(650) 741-9163

REVISION	DESCRIPTION	BY	DATE

moffatt & nichol
2185 N. California Blvd.,
Suite 500
Walnut creek, CA 94596

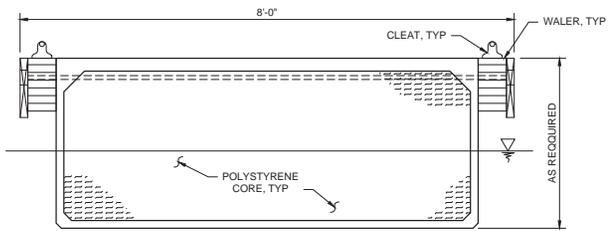
SAN MATEO COUNTY HARBOR DISTRICT
JOHNSON PIER EXPANSION AND DOCK
REPLACEMENT

DATE 04-05-2022
SHEET 6 OF 27

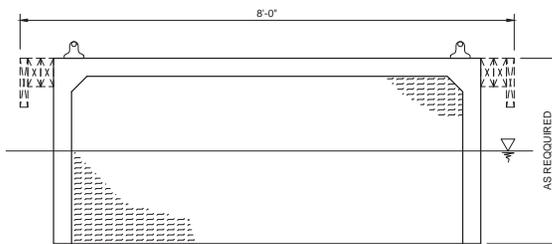
DESIGN: SH/NN	DR: AC	CHECK: BP
JOB NO.: 9673-09	SUBMITTED BY:	TITLE:

OVERALL PLAN **C1**

FILE: S:\18177\18177.dwg USER: SHANNON DATE: 04/05/2022 11:44:41 AM PLOT: 18177.dwg PLOTDATE: 04/05/2022 11:44:41 AM

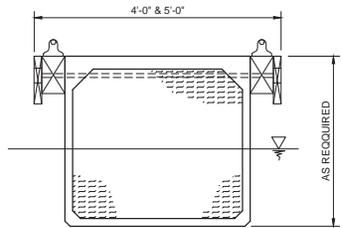


OPTION 1

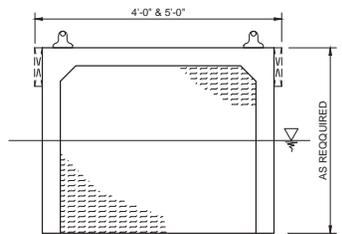


OPTION 2

A SECTION - TYPICAL MAINWALK
SCALE: 1" = 1'-0"

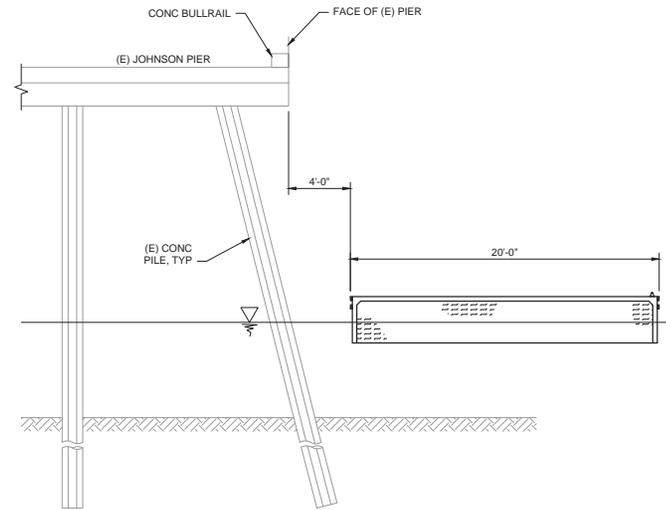


OPTION 1

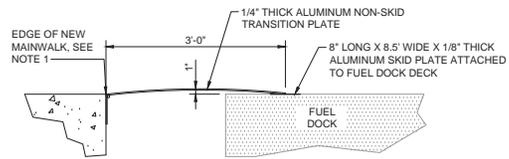


OPTION 2

B SECTION - TYPICAL FINGER DOCK
SCALE: 1" = 1'-0"



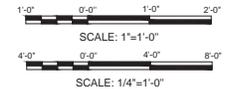
C SECTION AT GANGWAY SUPPORT FLOAT
SCALE: 1/4" = 1'-0"



- NOTES:**
- TRANSITION PLATE FROM MAINWALK TO FUEL DOCK SHALL NOT ENCR OACH INTO MAINWALK.

1 TRANSITION PLATE DETAIL
SCALE: 1/4" = 1'-0"

30% DESIGN - 5 APR 2022
NOT FOR CONSTRUCTION



SAN MATEO COUNTY HARBOR DISTRICT
504 Avenue Alhambra, 2nd Floor
El Granada, CA 94018
(650) 741-9163

REVISION	DESCRIPTION	BY	DATE

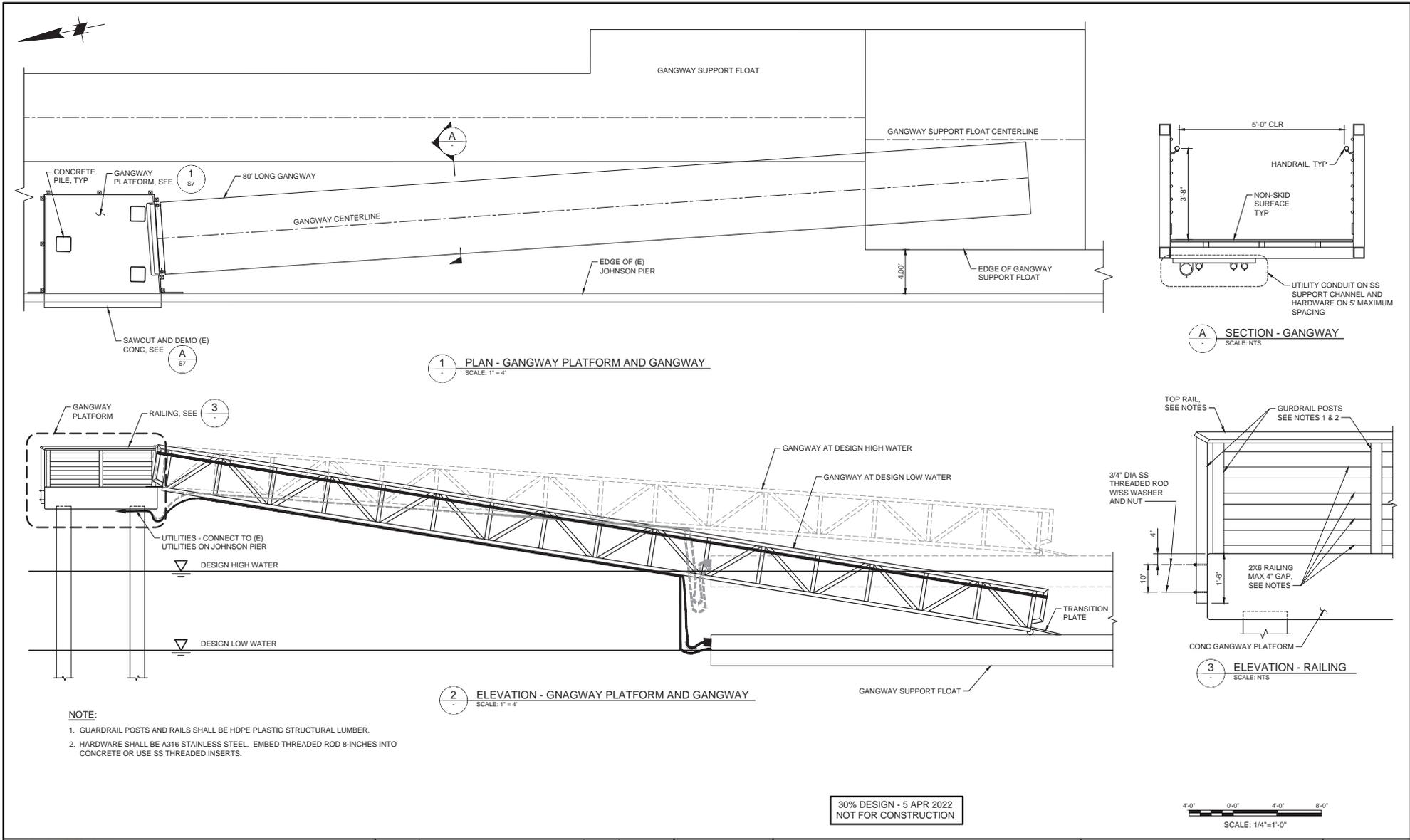
		2185 N. California Blvd., Suite 500 Walnut creek, CA 94596	
DESIGN	SH/NN	DR	AC
		CHK	BP
JOB NO.	9673-09	SUBMITTED BY	TITLE

SAN MATEO COUNTY HARBOR DISTRICT
JOHNSON PIER EXPANSION AND DOCK
REPLACEMENT

DATE 04-05-2022
SHEET 11 OF 27

DOCK DETAILS - SHEET 1 OF 2

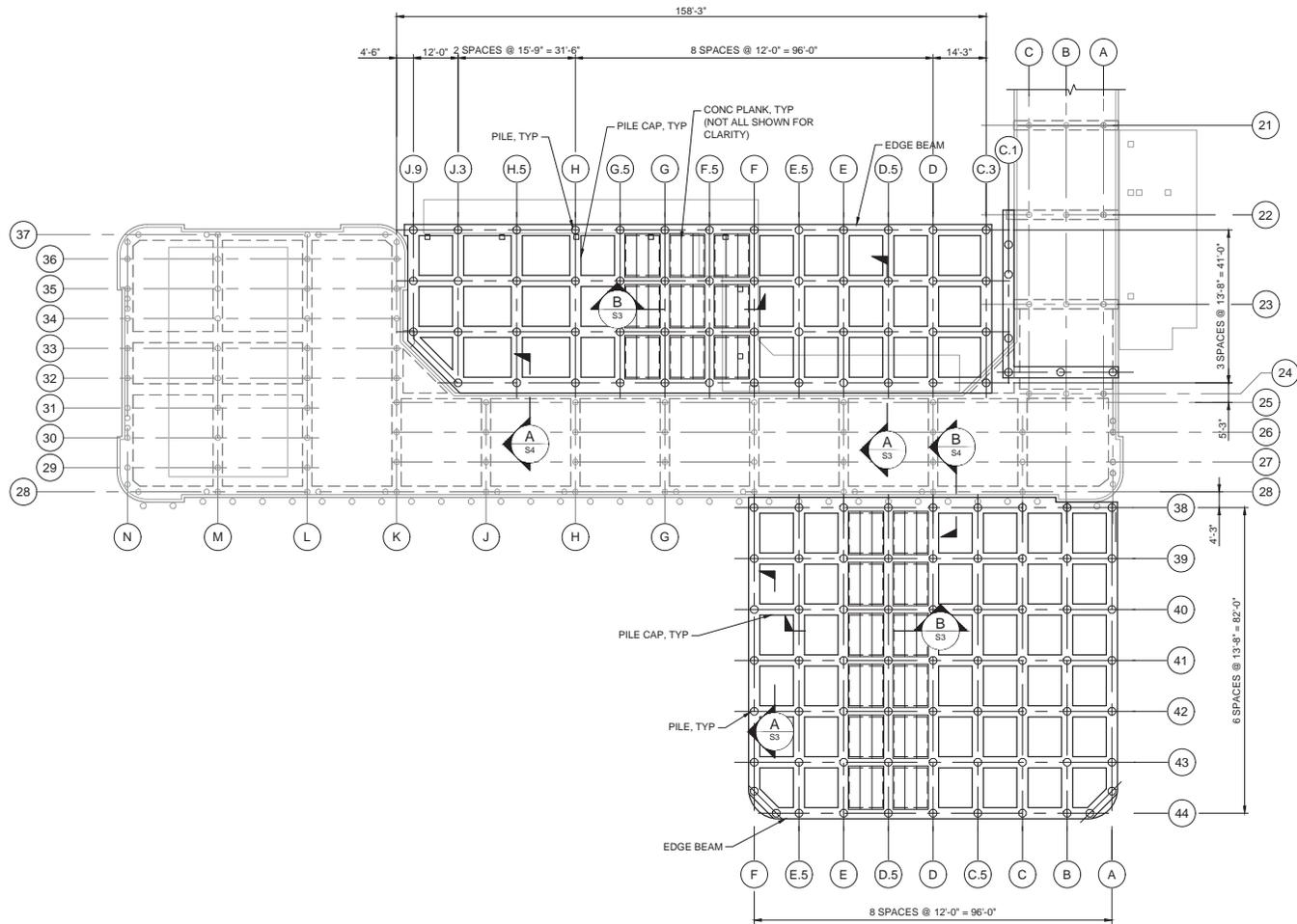
C11



NOTE:
 1. GUARDRAIL POSTS AND RAILS SHALL BE HDPE PLASTIC STRUCTURAL LUMBER.
 2. HARDWARE SHALL BE A316 STAINLESS STEEL. EMBED THREADED ROD 8-INCHES INTO CONCRETE OR USE SS THREADED INSERTS.

30% DESIGN - 5 APR 2022
 NOT FOR CONSTRUCTION

 <p>SAN MATEO COUNTY HARBOR DISTRICT 504 Avenue Alhambra, 2nd Floor El Granada, CA 94016 (650) 741-9163</p>	<table border="1"> <thead> <tr> <th>REVISION</th> <th>DESCRIPTION</th> <th>BY</th> <th>DATE</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	REVISION	DESCRIPTION	BY	DATE													 <p>2185 N. California Blvd., Suite 500 Walnut creek, CA 94596</p>	<p>SAN MATEO COUNTY HARBOR DISTRICT JOHNSON PIER EXPANSION AND DOCK REPLACEMENT</p>	<p>DATE 04-05-2022 SHEET 12 OF 27</p>
	REVISION	DESCRIPTION	BY	DATE																
<table border="1"> <thead> <tr> <th>DESIGN</th> <th>DR</th> <th>CHK</th> </tr> </thead> <tbody> <tr> <td>SH/NN</td> <td>AC</td> <td>BP</td> </tr> </tbody> </table>	DESIGN	DR	CHK	SH/NN	AC	BP	<table border="1"> <thead> <tr> <th>SUBMITTED BY</th> <th>TITLE</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> </tr> </tbody> </table>	SUBMITTED BY	TITLE			<p>GANGWAY PLAN AND ELEVATION</p>	<p>C12</p>							
DESIGN	DR	CHK																		
SH/NN	AC	BP																		
SUBMITTED BY	TITLE																			
<p>JOB NO. 9673-09</p>		<p>SCALE: 1/4"=1'-0"</p>																		



NOTES:
1. DOCKS NOT SHOWN FOR CLARITY.

PIER FRAMING AND PILE PLAN
SCALE: 1/16" = 1'-0"



30% DESIGN - 5 APR 2022
NOT FOR CONSTRUCTION



SAN MATEO COUNTY HARBOR DISTRICT
504 Avenue Alhambra, 2nd Floor
El Granada, CA 94016
(650) 741-9163

REVISION	DESCRIPTION	BY	DATE

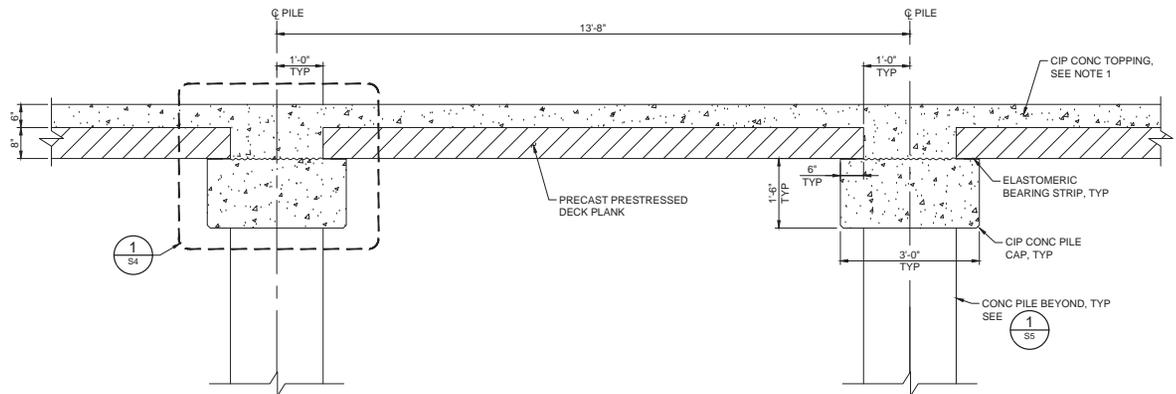
		2185 N. California Blvd., Suite 500 Walnut creek, CA 94596	
DESIGN	SH/NN	DR	AC
CHECK	BP		
JOB NO.	9673-09	SUBMITTED BY	TITLE

SAN MATEO COUNTY HARBOR DISTRICT
JOHNSON PIER EXPANSION AND DOCK
REPLACEMENT

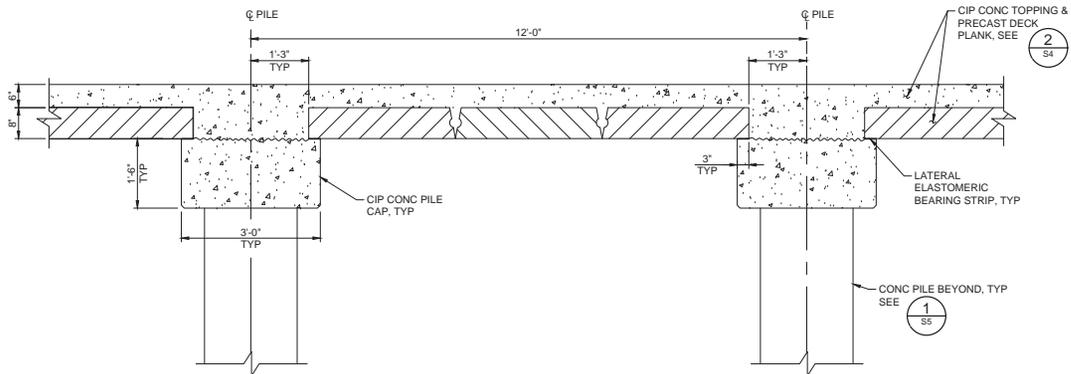
DATE 04-05-2022
SHEET 22 OF 27

STRUCTURAL FRAMING PLAN

S2



A TYPICAL LONGITUDINAL SECTION
SCALE: 3/4" = 1'-0"



B TYPICAL TRANSVERSE SECTION
SCALE: 3/4" = 1'-0"

NOTE:
1. REINFORCEMENT NOT SHOWN FOR CLARITY.

30% DESIGN - 5 APR 2022
NOT FOR CONSTRUCTION



SAN MATEO COUNTY HARBOR DISTRICT
504 Avenue Alhambra, 2nd Floor
El Granada, CA 94018
(650) 741-9163

REVISION	DESCRIPTION	BY	DATE

		2185 N. California Blvd., Suite 500 Walnut creek, CA 94596	
DESIGN	SH/NN	DR	AC
CHK	BP		
JOB NO.	9673-09	SUBMITTED BY	TITLE

SAN MATEO COUNTY HARBOR DISTRICT	DATE 04-05-2022
JOHNSON PIER EXPANSION AND DOCK REPLACEMENT	SHEET 23 OF 27
TYPICAL SECTIONS	S3

FILE: C:\18107010\JOHNSON PIER EXPANSION AND DOCK REPLACEMENT\2303.dwg PLOT DATE: 04/05/2022 11:47:40 AM PLOT BY: DANIELA BELLINI - 48822210301848.PLT ARCHNAME



Appendix B
Air Quality and GHG Emissions Calculation Sheets

Pillar Point Marina - Johnson Pier Improvements - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Pillar Point Marina - Johnson Pier Improvements

Bay Area AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	1.00	1000sqft	0.02	1,000.00	0
Parking Lot	1.00	Acre	1.00	43,560.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	64
Climate Zone	4			Operational Year	2023
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Land Use denotes Johnson's Pier as Industrial. Parking lots adjacent to Pier were added.

Operational Off-Road Equipment -

Table Name	Column Name	Default Value	New Value
tblOperationalOffRoadEquipment	OperLoadFactor	0.50	0.50
tblOperationalOffRoadEquipment	OperLoadFactor	0.40	0.40

2.0 Emissions Summary

Pillar Point Marina - Johnson Pier Improvements - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0173	0.1677	0.1261	2.1000e-004	8.7000e-004	8.8500e-003	9.7300e-003	2.3000e-004	8.2600e-003	8.4900e-003	0.0000	18.6301	18.6301	4.6000e-003	2.0000e-005	18.7518
2022	0.1989	1.4079	1.4322	2.6700e-003	0.0411	0.0649	0.1060	0.0155	0.0625	0.0779	0.0000	224.2827	224.2827	0.0368	2.5100e-003	225.9496
Maximum	0.1989	1.4079	1.4322	2.6700e-003	0.0411	0.0649	0.1060	0.0155	0.0625	0.0779	0.0000	224.2827	224.2827	0.0368	2.5100e-003	225.9496

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0173	0.1677	0.1261	2.1000e-004	8.7000e-004	8.8500e-003	9.7300e-003	2.3000e-004	8.2600e-003	8.4900e-003	0.0000	18.6301	18.6301	4.6000e-003	2.0000e-005	18.7517
2022	0.1989	1.4079	1.4321	2.6700e-003	0.0411	0.0649	0.1060	0.0155	0.0625	0.0779	0.0000	224.2824	224.2824	0.0368	2.5100e-003	225.9493
Maximum	0.1989	1.4079	1.4321	2.6700e-003	0.0411	0.0649	0.1060	0.0155	0.0625	0.0779	0.0000	224.2824	224.2824	0.0368	2.5100e-003	225.9493

Pillar Point Marina - Johnson Pier Improvements - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	12-9-2021	3-8-2022	0.5456	0.5456
2	3-9-2022	6-8-2022	0.4810	0.4810
3	6-9-2022	9-8-2022	0.4808	0.4808
4	9-9-2022	9-30-2022	0.1150	0.1150
		Highest	0.5456	0.5456

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	8.1500e-003	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-005	4.0000e-005	0.0000	0.0000	4.0000e-005
Energy	9.0000e-005	7.9000e-004	6.7000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	3.8637	3.8637	5.0000e-004	7.0000e-005	3.8985
Mobile	1.3600e-003	1.6100e-003	0.0131	3.0000e-005	2.8500e-003	2.0000e-005	2.8700e-003	7.6000e-004	2.0000e-005	7.8000e-004	0.0000	2.5178	2.5178	1.6000e-004	1.2000e-004	2.5581
Offroad	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.2517	0.0000	0.2517	0.0149	0.0000	0.6236
Water						0.0000	0.0000		0.0000	0.0000	0.0734	0.1158	0.1891	7.5500e-003	1.8000e-004	0.4317
Total	9.6000e-003	2.4000e-003	0.0138	3.0000e-005	2.8500e-003	8.0000e-005	2.9300e-003	7.6000e-004	8.0000e-005	8.4000e-004	0.3251	6.4973	6.8224	0.0231	3.7000e-004	7.5120

Pillar Point Marina - Johnson Pier Improvements - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	8.1500e-003	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-005	4.0000e-005	0.0000	0.0000	4.0000e-005
Energy	9.0000e-005	7.9000e-004	6.7000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	3.8637	3.8637	5.0000e-004	7.0000e-005	3.8985
Mobile	1.3600e-003	1.6100e-003	0.0131	3.0000e-005	2.8500e-003	2.0000e-005	2.8700e-003	7.6000e-004	2.0000e-005	7.8000e-004	0.0000	2.5178	2.5178	1.6000e-004	1.2000e-004	2.5581
Offroad	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.2517	0.0000	0.2517	0.0149	0.0000	0.6236
Water						0.0000	0.0000		0.0000	0.0000	0.0734	0.1158	0.1891	7.5500e-003	1.8000e-004	0.4317
Total	9.6000e-003	2.4000e-003	0.0138	3.0000e-005	2.8500e-003	8.0000e-005	2.9300e-003	7.6000e-004	8.0000e-005	8.4000e-004	0.3251	6.4973	6.8224	0.0231	3.7000e-004	7.5120

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	12/9/2021	1/5/2022	5	20	
2	Site Preparation	Site Preparation	1/6/2022	1/7/2022	5	2	

Pillar Point Marina - Johnson Pier Improvements - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3	Grading	Grading	1/8/2022	1/13/2022	5	4
4	Building Construction	Building Construction	1/14/2022	10/20/2022	5	200
5	Paving	Paving	10/21/2022	11/3/2022	5	10
6	Architectural Coating	Architectural Coating	11/4/2022	11/17/2022	5	10

Acres of Grading (Site Preparation Phase): 1.88

Acres of Grading (Grading Phase): 4

Acres of Paving: 1

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,500; Non-Residential Outdoor: 500; Striped Parking Area: 2,614 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37

Pillar Point Marina - Johnson Pier Improvements - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	19.00	7.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	4.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 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	0.0169	0.1674	0.1232	2.0000e-004		8.8500e-003	8.8500e-003		8.2600e-003	8.2600e-003	0.0000	17.9106	17.9106	4.5800e-003	0.0000	18.0251
Total	0.0169	0.1674	0.1232	2.0000e-004		8.8500e-003	8.8500e-003		8.2600e-003	8.2600e-003	0.0000	17.9106	17.9106	4.5800e-003	0.0000	18.0251

Pillar Point Marina - Johnson Pier Improvements - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 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	3.3000e-004	2.5000e-004	2.8700e-003	1.0000e-005	8.7000e-004	1.0000e-005	8.8000e-004	2.3000e-004	0.0000	2.4000e-004	0.0000	0.7195	0.7195	2.0000e-005	2.0000e-005	0.7266
Total	3.3000e-004	2.5000e-004	2.8700e-003	1.0000e-005	8.7000e-004	1.0000e-005	8.8000e-004	2.3000e-004	0.0000	2.4000e-004	0.0000	0.7195	0.7195	2.0000e-005	2.0000e-005	0.7266

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	0.0169	0.1674	0.1232	2.0000e-004		8.8500e-003	8.8500e-003		8.2600e-003	8.2600e-003	0.0000	17.9106	17.9106	4.5800e-003	0.0000	18.0251
Total	0.0169	0.1674	0.1232	2.0000e-004		8.8500e-003	8.8500e-003		8.2600e-003	8.2600e-003	0.0000	17.9106	17.9106	4.5800e-003	0.0000	18.0251

Pillar Point Marina - Johnson Pier Improvements - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 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	3.3000e-004	2.5000e-004	2.8700e-003	1.0000e-005	8.7000e-004	1.0000e-005	8.8000e-004	2.3000e-004	0.0000	2.4000e-004	0.0000	0.7195	0.7195	2.0000e-005	2.0000e-005	0.7266
Total	3.3000e-004	2.5000e-004	2.8700e-003	1.0000e-005	8.7000e-004	1.0000e-005	8.8000e-004	2.3000e-004	0.0000	2.4000e-004	0.0000	0.7195	0.7195	2.0000e-005	2.0000e-005	0.7266

3.2 Demolition - 2022

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	2.5300e-003	0.0249	0.0209	4.0000e-005		1.2600e-003	1.2600e-003		1.1700e-003	1.1700e-003	0.0000	3.1617	3.1617	8.1000e-004	0.0000	3.1818
Total	2.5300e-003	0.0249	0.0209	4.0000e-005		1.2600e-003	1.2600e-003		1.1700e-003	1.1700e-003	0.0000	3.1617	3.1617	8.1000e-004	0.0000	3.1818

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2022

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	5.0000e-005	4.0000e-005	4.7000e-004	0.0000	1.5000e-004	0.0000	1.5000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1231	0.1231	0.0000	0.0000	0.1243
Total	5.0000e-005	4.0000e-005	4.7000e-004	0.0000	1.5000e-004	0.0000	1.5000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1231	0.1231	0.0000	0.0000	0.1243

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	2.5300e-003	0.0249	0.0209	4.0000e-005		1.2600e-003	1.2600e-003		1.1700e-003	1.1700e-003	0.0000	3.1617	3.1617	8.1000e-004	0.0000	3.1818
Total	2.5300e-003	0.0249	0.0209	4.0000e-005		1.2600e-003	1.2600e-003		1.1700e-003	1.1700e-003	0.0000	3.1617	3.1617	8.1000e-004	0.0000	3.1818

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3.2 Demolition - 2022

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	5.0000e-005	4.0000e-005	4.7000e-004	0.0000	1.5000e-004	0.0000	1.5000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1231	0.1231	0.0000	0.0000	0.1243
Total	5.0000e-005	4.0000e-005	4.7000e-004	0.0000	1.5000e-004	0.0000	1.5000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1231	0.1231	0.0000	0.0000	0.1243

3.3 Site Preparation - 2022

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					6.2700e-003	0.0000	6.2700e-003	3.0000e-003	0.0000	3.0000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3100e-003	0.0146	7.0900e-003	2.0000e-005		6.2000e-004	6.2000e-004		5.7000e-004	5.7000e-004	0.0000	1.5115	1.5115	4.9000e-004	0.0000	1.5238
Total	1.3100e-003	0.0146	7.0900e-003	2.0000e-005	6.2700e-003	6.2000e-004	6.8900e-003	3.0000e-003	5.7000e-004	3.5700e-003	0.0000	1.5115	1.5115	4.9000e-004	0.0000	1.5238

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3.3 Site Preparation - 2022

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	2.0000e-005	2.0000e-005	1.9000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0505	0.0505	0.0000	0.0000	0.0510
Total	2.0000e-005	2.0000e-005	1.9000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0505	0.0505	0.0000	0.0000	0.0510

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					6.2700e-003	0.0000	6.2700e-003	3.0000e-003	0.0000	3.0000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3100e-003	0.0146	7.0900e-003	2.0000e-005		6.2000e-004	6.2000e-004		5.7000e-004	5.7000e-004	0.0000	1.5115	1.5115	4.9000e-004	0.0000	1.5238
Total	1.3100e-003	0.0146	7.0900e-003	2.0000e-005	6.2700e-003	6.2000e-004	6.8900e-003	3.0000e-003	5.7000e-004	3.5700e-003	0.0000	1.5115	1.5115	4.9000e-004	0.0000	1.5238

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3.3 Site Preparation - 2022

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	2.0000e-005	2.0000e-005	1.9000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0505	0.0505	0.0000	0.0000	0.0510
Total	2.0000e-005	2.0000e-005	1.9000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0505	0.0505	0.0000	0.0000	0.0510

3.4 Grading - 2022

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					0.0142	0.0000	0.0142	6.8500e-003	0.0000	6.8500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.0800e-003	0.0340	0.0184	4.0000e-005		1.4800e-003	1.4800e-003		1.3700e-003	1.3700e-003	0.0000	3.6205	3.6205	1.1700e-003	0.0000	3.6498
Total	3.0800e-003	0.0340	0.0184	4.0000e-005	0.0142	1.4800e-003	0.0157	6.8500e-003	1.3700e-003	8.2200e-003	0.0000	3.6205	3.6205	1.1700e-003	0.0000	3.6498

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2022

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	5.0000e-005	4.0000e-005	4.8000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1263	0.1263	0.0000	0.0000	0.1275
Total	5.0000e-005	4.0000e-005	4.8000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1263	0.1263	0.0000	0.0000	0.1275

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					0.0142	0.0000	0.0142	6.8500e-003	0.0000	6.8500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.0800e-003	0.0340	0.0184	4.0000e-005		1.4800e-003	1.4800e-003		1.3700e-003	1.3700e-003	0.0000	3.6205	3.6205	1.1700e-003	0.0000	3.6498
Total	3.0800e-003	0.0340	0.0184	4.0000e-005	0.0142	1.4800e-003	0.0157	6.8500e-003	1.3700e-003	8.2200e-003	0.0000	3.6205	3.6205	1.1700e-003	0.0000	3.6498

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3.4 Grading - 2022

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	5.0000e-005	4.0000e-005	4.8000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1263	0.1263	0.0000	0.0000	0.1275
Total	5.0000e-005	4.0000e-005	4.8000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1263	0.1263	0.0000	0.0000	0.1275

3.5 Building Construction - 2022

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	0.1649	1.2503	1.2726	2.2100e-003		0.0589	0.0589		0.0569	0.0569	0.0000	181.5769	181.5769	0.0316	0.0000	182.3675
Total	0.1649	1.2503	1.2726	2.2100e-003		0.0589	0.0589		0.0569	0.0569	0.0000	181.5769	181.5769	0.0316	0.0000	182.3675

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3.5 Building Construction - 2022

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	1.5000e-003	0.0391	0.0114	1.5000e-004	4.5900e-003	4.0000e-004	5.0000e-003	1.3300e-003	3.9000e-004	1.7100e-003	0.0000	14.4167	14.4167	3.1000e-004	2.1400e-003	15.0615
Worker	5.2200e-003	3.7600e-003	0.0454	1.3000e-004	0.0150	8.0000e-005	0.0151	3.9900e-003	7.0000e-005	4.0700e-003	0.0000	11.9973	11.9973	3.7000e-004	3.5000e-004	12.1104
Total	6.7200e-003	0.0429	0.0568	2.8000e-004	0.0196	4.8000e-004	0.0201	5.3200e-003	4.6000e-004	5.7800e-003	0.0000	26.4140	26.4140	6.8000e-004	2.4900e-003	27.1720

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	0.1649	1.2503	1.2726	2.2100e-003		0.0589	0.0589		0.0569	0.0569	0.0000	181.5767	181.5767	0.0316	0.0000	182.3673
Total	0.1649	1.2503	1.2726	2.2100e-003		0.0589	0.0589		0.0569	0.0569	0.0000	181.5767	181.5767	0.0316	0.0000	182.3673

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Building Construction - 2022****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	1.5000e-003	0.0391	0.0114	1.5000e-004	4.5900e-003	4.0000e-004	5.0000e-003	1.3300e-003	3.9000e-004	1.7100e-003	0.0000	14.4167	14.4167	3.1000e-004	2.1400e-003	15.0615
Worker	5.2200e-003	3.7600e-003	0.0454	1.3000e-004	0.0150	8.0000e-005	0.0151	3.9900e-003	7.0000e-005	4.0700e-003	0.0000	11.9973	11.9973	3.7000e-004	3.5000e-004	12.1104
Total	6.7200e-003	0.0429	0.0568	2.8000e-004	0.0196	4.8000e-004	0.0201	5.3200e-003	4.6000e-004	5.7800e-003	0.0000	26.4140	26.4140	6.8000e-004	2.4900e-003	27.1720

3.6 Paving - 2022**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	3.4400e-003	0.0339	0.0440	7.0000e-005		1.7400e-003	1.7400e-003		1.6000e-003	1.6000e-003	0.0000	5.8848	5.8848	1.8700e-003	0.0000	5.9315
Paving	1.3100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	4.7500e-003	0.0339	0.0440	7.0000e-005		1.7400e-003	1.7400e-003		1.6000e-003	1.6000e-003	0.0000	5.8848	5.8848	1.8700e-003	0.0000	5.9315

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3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-004	1.3000e-004	1.5500e-003	0.0000	5.1000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4104	0.4104	1.0000e-005	1.0000e-005	0.4143
Total	1.8000e-004	1.3000e-004	1.5500e-003	0.0000	5.1000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4104	0.4104	1.0000e-005	1.0000e-005	0.4143

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	3.4400e-003	0.0339	0.0440	7.0000e-005		1.7400e-003	1.7400e-003		1.6000e-003	1.6000e-003	0.0000	5.8848	5.8848	1.8700e-003	0.0000	5.9314
Paving	1.3100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	4.7500e-003	0.0339	0.0440	7.0000e-005		1.7400e-003	1.7400e-003		1.6000e-003	1.6000e-003	0.0000	5.8848	5.8848	1.8700e-003	0.0000	5.9314

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3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-004	1.3000e-004	1.5500e-003	0.0000	5.1000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4104	0.4104	1.0000e-005	1.0000e-005	0.4143
Total	1.8000e-004	1.3000e-004	1.5500e-003	0.0000	5.1000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4104	0.4104	1.0000e-005	1.0000e-005	0.4143

3.7 Architectural Coating - 2022

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					
Archit. Coating	0.0143					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0200e-003	7.0400e-003	9.0700e-003	1.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2787
Total	0.0153	7.0400e-003	9.0700e-003	1.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2787

Pillar Point Marina - Johnson Pier Improvements - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2022

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	5.0000e-005	4.0000e-005	4.8000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1263	0.1263	0.0000	0.0000	0.1275
Total	5.0000e-005	4.0000e-005	4.8000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1263	0.1263	0.0000	0.0000	0.1275

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					
Archit. Coating	0.0143					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0200e-003	7.0400e-003	9.0700e-003	1.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2787
Total	0.0153	7.0400e-003	9.0700e-003	1.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2787

Pillar Point Marina - Johnson Pier Improvements - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2022

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	5.0000e-005	4.0000e-005	4.8000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1263	0.1263	0.0000	0.0000	0.1275
Total	5.0000e-005	4.0000e-005	4.8000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1263	0.1263	0.0000	0.0000	0.1275

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Pillar Point Marina - Johnson Pier Improvements - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.3600e-003	1.6100e-003	0.0131	3.0000e-005	2.8500e-003	2.0000e-005	2.8700e-003	7.6000e-004	2.0000e-005	7.8000e-004	0.0000	2.5178	2.5178	1.6000e-004	1.2000e-004	2.5581
Unmitigated	1.3600e-003	1.6100e-003	0.0131	3.0000e-005	2.8500e-003	2.0000e-005	2.8700e-003	7.6000e-004	2.0000e-005	7.8000e-004	0.0000	2.5178	2.5178	1.6000e-004	1.2000e-004	2.5581

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	3.37	2.54	1.24	7,727	7,727
Parking Lot	0.00	0.00	0.00		
Total	3.37	2.54	1.24	7,727	7,727

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
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.552821	0.058334	0.189005	0.121481	0.023262	0.005577	0.010166	0.007476	0.001000	0.000579	0.026545	0.000826	0.002928
Parking Lot	0.552821	0.058334	0.189005	0.121481	0.023262	0.005577	0.010166	0.007476	0.001000	0.000579	0.026545	0.000826	0.002928

Pillar Point Marina - Johnson Pier Improvements - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2.9993	2.9993	4.9000e-004	6.0000e-005	3.0289
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2.9993	2.9993	4.9000e-004	6.0000e-005	3.0289
NaturalGas Mitigated	9.0000e-005	7.9000e-004	6.7000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.8645	0.8645	2.0000e-005	2.0000e-005	0.8696
NaturalGas Unmitigated	9.0000e-005	7.9000e-004	6.7000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.8645	0.8645	2.0000e-005	2.0000e-005	0.8696

Pillar Point Marina - Johnson Pier Improvements - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Industrial Park	16200	9.0000e-005	7.9000e-004	6.7000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.8645	0.8645	2.0000e-005	2.0000e-005	0.8696
Parking Lot	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
Total		9.0000e-005	7.9000e-004	6.7000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.8645	0.8645	2.0000e-005	2.0000e-005	0.8696

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Industrial Park	16200	9.0000e-005	7.9000e-004	6.7000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.8645	0.8645	2.0000e-005	2.0000e-005	0.8696
Parking Lot	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
Total		9.0000e-005	7.9000e-004	6.7000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.8645	0.8645	2.0000e-005	2.0000e-005	0.8696

Pillar Point Marina - Johnson Pier Improvements - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	17170	1.5886	2.6000e-004	3.0000e-005	1.6043
Parking Lot	15246	1.4106	2.3000e-004	3.0000e-005	1.4246
Total		2.9993	4.9000e-004	6.0000e-005	3.0289

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	17170	1.5886	2.6000e-004	3.0000e-005	1.6043
Parking Lot	15246	1.4106	2.3000e-004	3.0000e-005	1.4246
Total		2.9993	4.9000e-004	6.0000e-005	3.0289

6.0 Area Detail

Pillar Point Marina - Johnson Pier Improvements - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	8.1500e-003	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-005	4.0000e-005	0.0000	0.0000	4.0000e-005
Unmitigated	8.1500e-003	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-005	4.0000e-005	0.0000	0.0000	4.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.4300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	6.7200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-005	4.0000e-005	0.0000	0.0000	4.0000e-005
Total	8.1500e-003	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-005	4.0000e-005	0.0000	0.0000	4.0000e-005

Pillar Point Marina - Johnson Pier Improvements - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.4300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	6.7200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-005	4.0000e-005	0.0000	0.0000	4.0000e-005
Total	8.1500e-003	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-005	4.0000e-005	0.0000	0.0000	4.0000e-005

7.0 Water Detail

7.1 Mitigation Measures Water

Pillar Point Marina - Johnson Pier Improvements - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.1891	7.5500e-003	1.8000e-004	0.4317
Unmitigated	0.1891	7.5500e-003	1.8000e-004	0.4317

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	0.23125 / 0	0.1891	7.5500e-003	1.8000e-004	0.4317
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.1891	7.5500e-003	1.8000e-004	0.4317

Pillar Point Marina - Johnson Pier Improvements - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	0.23125 / 0	0.1891	7.5500e-003	1.8000e-004	0.4317
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.1891	7.5500e-003	1.8000e-004	0.4317

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.2517	0.0149	0.0000	0.6236
Unmitigated	0.2517	0.0149	0.0000	0.6236

Pillar Point Marina - Johnson Pier Improvements - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	1.24	0.2517	0.0149	0.0000	0.6236
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		0.2517	0.0149	0.0000	0.6236

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	1.24	0.2517	0.0149	0.0000	0.6236
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		0.2517	0.0149	0.0000	0.6236

9.0 Operational Offroad

Pillar Point Marina - Johnson Pier Improvements - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Bore/Drill Rigs	0	8.00	260	221	0.50	Diesel
Other Material Handling Equipment	0	8.00	260	168	0.40	Diesel

UnMitigated/Mitigated

Equipment Type	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Bore/Drill Rigs	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Material Handling Equipment	0.0000	0.0000	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							

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

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

11.0 Vegetation

Pillar Point Marina - Johnson Pier Improvements - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied



Appendix C

Biological Resources Assessment



Johnson Pier Expansion and Dock Replacement Project

Biological Resources Assessment

prepared for

Moffatt & Nichol

2185 N. California Boulevard, Suite 500

Walnut Creek, California 94956

and

San Mateo County Harbor District

504 Alhambra Avenue

El Granada, California 94018

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January 2022

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Executive Summary

This document provides the findings of a Biological Resources Assessment prepared by Rincon Consultants, Inc. (Rincon) for the Pillar Point Harbor Marine Improvements Project (Project).

This report documents existing conditions within the vicinity of the Project site and provides an assessment of potential impacts to sensitive biological resources based upon proposed Project activities.

The Project is located in Pillar Point Harbor in the County of San Mateo, immediately south of the community of El Granada and north of the City of Half Moon Bay. The approximately 37-acre Project Area includes in-water areas where marina improvements will occur, as well as terrestrial areas for staging, laydown, and access. The Study Area for this analysis includes the Project Area plus a 100-foot buffer.

Rincon assessed the potential for 120 special-status species (61 plant species and 58 wildlife species) to occur within the Study Area. Three non-listed special-status plant species have a low potential to occur on site: rose leptosiphon (*Leptosiphon rosaceus*), Ornduff's meadowfoam (*Limnanthes douglasii* ssp. *ornduffii*), and Choris' popcornflower (*Plagiobothrys chorisianus* var. *chorisianus*). Eighteen special-status wildlife species have potential to occur within terrestrial portions of the Study Area: California red-legged frog (*Rana draytonii*, federally threatened); Santa Cruz black salamander (*Aneides (flavipunctatus) niger*, California Department of Fish and Wildlife [CDFW] Species of Special Concern [SSC]); San Francisco garter snake (*Thamnophis sirtalis tetrataenia*, federally and state endangered); burrowing owl (*Athene cunicularia*, CDFW SSC); saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*, CDFW SSC); bank swallow (*Riparia riparia*, state threatened), pallid bat (*Antrozous pallidus*, CDFW SSC); and Townsend's big-eared bat (*Corynorhinus townsendii*, CDFW SSC) all have a low potential to occur on site. The monarch butterfly (*Danaus plexippus*, federal candidate); marbled murrelet (*Brachyramphus marmoratus*, federally threatened, state endangered); western snowy plover (*Charadrius nivosus nivosus*, federally threatened, CDFW SSC); American peregrine falcon (*Falco peregrinus anatum*, state fully protected); and least tern (*Sterna antillarum browni*, federally and state endangered, state fully protected) all have a moderate potential to occur. Cooper's hawk (*Accipiter cooperii*, CDFW watchlist [WL]); white-tailed kite (*Elanus leucurus*, state fully protected); and merlin (*Falco columbarius* CDFW WL) have a high potential to occur. Double-crested cormorant (*Phalacrocorax auratus*, CDFW WL) and California brown pelican (state fully protected) are present within the Study Area. Nesting special-status bird species and/or nesting birds protected under the Migratory Bird Treaty Act and California Fish and Game Code also have potential to occur throughout the Study Area during the nesting season (February 1 through September 15).

Sixteen special-status marine and anadromous wildlife species have potential to occur within the Study Area. The black abalone (*Haliotis cracherodii*, federally endangered), green sturgeon (*Acipenser medirostris*, federally threatened, CDFW SSC), Central California Coast coho salmon (*Oncorhynchus kisutch*, federally and state endangered), Central California Coast steelhead (*Oncorhynchus mykiss irideus*, federally threatened), loggerhead (*Caretta caretta*, federally threatened), green (*Chelonia mydas*, federally threatened) and leatherback (*Dermochelys coriacea*, federally endangered) sea turtles, and short-tailed albatross (*Phoebastria albatrus*, federally endangered, CDFW SSC) have a low potential to occur within the Study Area. The gray whale (*Eschrichtius robustus*, Marine Mammal Protection Act [MMPA]), humpback whale (*Megaptera*

novaeangliae, federally endangered, MMPA), southern sea otter (*Enhydra lutris nereis*, federally threatened, MMPA), northern elephant seal (*Mirounga angustirostris*, state fully protected, MMPA), harbor porpoise (*Phocoena phocoena*, MMPA), and common bottlenose dolphin (*Tursiops truncatus*, MMPA) also have a low potential to occur within the Study Area. The harbor seal (*Phoca vitulina*, MMPA) and California sea lion (*Zalophus californianus*, MMPA) are both present within the Study Area.

As a result of implementation of the Project, sensitive species (including marine mammals and nesting birds) within the Project Area could be impacted by the loss of/injury to individuals, disturbance of breeding activities, disturbance to habitat, and/or construction noise and other human disturbances. These impacts could be potentially significant but can be reduced to less than significant through implementation of recommended mitigation measures.

Environmentally Sensitive Habitat Areas within the Study Area include one damaged riparian corridor and marine habitat, including eelgrass beds, within Pillar Point Harbor. Essential Fish Habitat exists within the Study Area for coho salmon, groundfish, coastal pelagic species, finfish, and krill. Critical habitat for black abalone and green sturgeon also occurs within the Study Area. Potential impacts to these areas could include changes to water quality, disturbance to habitat, and/or construction noise and other human disturbances. These impacts could be potentially significant but can be reduced to less than significant through implementation of recommended mitigation measures.

Jurisdictional waters within the Study Area include the Pacific Ocean and one potentially jurisdictional drainage. Potential impacts to these features could include changes to water quality or the introduction of sediment or pollutants. These impacts could be potentially significant but can be reduced to less than significant through implementation of recommended mitigation measures.

Project implementation would not interfere with the provisions of any applicable adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan.

1 Introduction

Rincon Consultants, Inc. (Rincon) has prepared this Biological Resources Assessment (BRA) on behalf of Moffat & Nichol and the San Mateo County Harbor District (District) for the Johnson Pier Expansion and Dock Replacement Project (Project). This report presents information on existing conditions, including terrestrial and marine biological resources, jurisdictional waters, and locally protected resources. The biological evaluation herein includes the results of a background literature review and reconnaissance-level field survey conducted by Rincon and provides an assessment of potential impacts to sensitive biological resources that could result from Project activities.

1.1 Project Location

The Project is located in the County of San Mateo (County), at 1 Johnson Pier, Half Moon Bay, California 94019, also known as Pillar Point Harbor Marina (Assessor's Parcel Number [APN] 047-390-020). The entire Project is within the Coastal Zone.

Regionally, the Project is in an unincorporated area in the northwestern portion of the County, immediately south of the community of El Granada and northwest of the City of Half Moon Bay (Figure 1). The Project is depicted on the *Montara Mountain and Half Moon Bay, California* United States Geological Survey (USGS) 7.5-minute topographic quadrangle maps. The approximate center of the Project is located at latitude 37.501884 °N and longitude 122.480486 °W (WGS84 datum).

1.2 Project Description

Pillar Point Harbor is a boat harbor owned by the District that serves both commercial and recreational fishing vessels. The harbor is created by riprap breakwaters that protect boats from the open ocean and wave activity. The construction of the outer riprap breakwater and harbor structures (including Johnson Pier, a bulkhead, a harbor office building, a maintenance and concession building, a boat launch ramp and a parking lot) was completed between 1959 and 1961. The inner breakwaters were built in the 1980s to ameliorate surge problems within the harbor (Vanderwerf 1997). The wooden floating docks were originally constructed in 1985 and are now nearing the end of their 30-to-40-year functional life span. The docks range from "poor" to "serious" condition and require replacement within 10 years (GHD 2021).

The Project proposes to expand Johnson Pier, located in the northern portion of Pillar Point Harbor, and to replace docks attached to the pier. These improvements will extend the life span of the existing docks, update their configuration within the marina, and increase the number of available boat slips. The Project proposes the replacement of existing Docks D, E, F, G, H, and the fuel dock, as well as a north and south expansion to Johnson Pier. The existing docks will be replaced with new concrete docks and the existing dock guide piles will be relocated and/or replaced with prestressed 16-inch square concrete guide piles. The fuel dock will be designed to connect to Dock H and directly to Johnson Pier and will extend south beyond the end of Johnson Pier. New utilities, including fuel pumping facilities, will be installed.

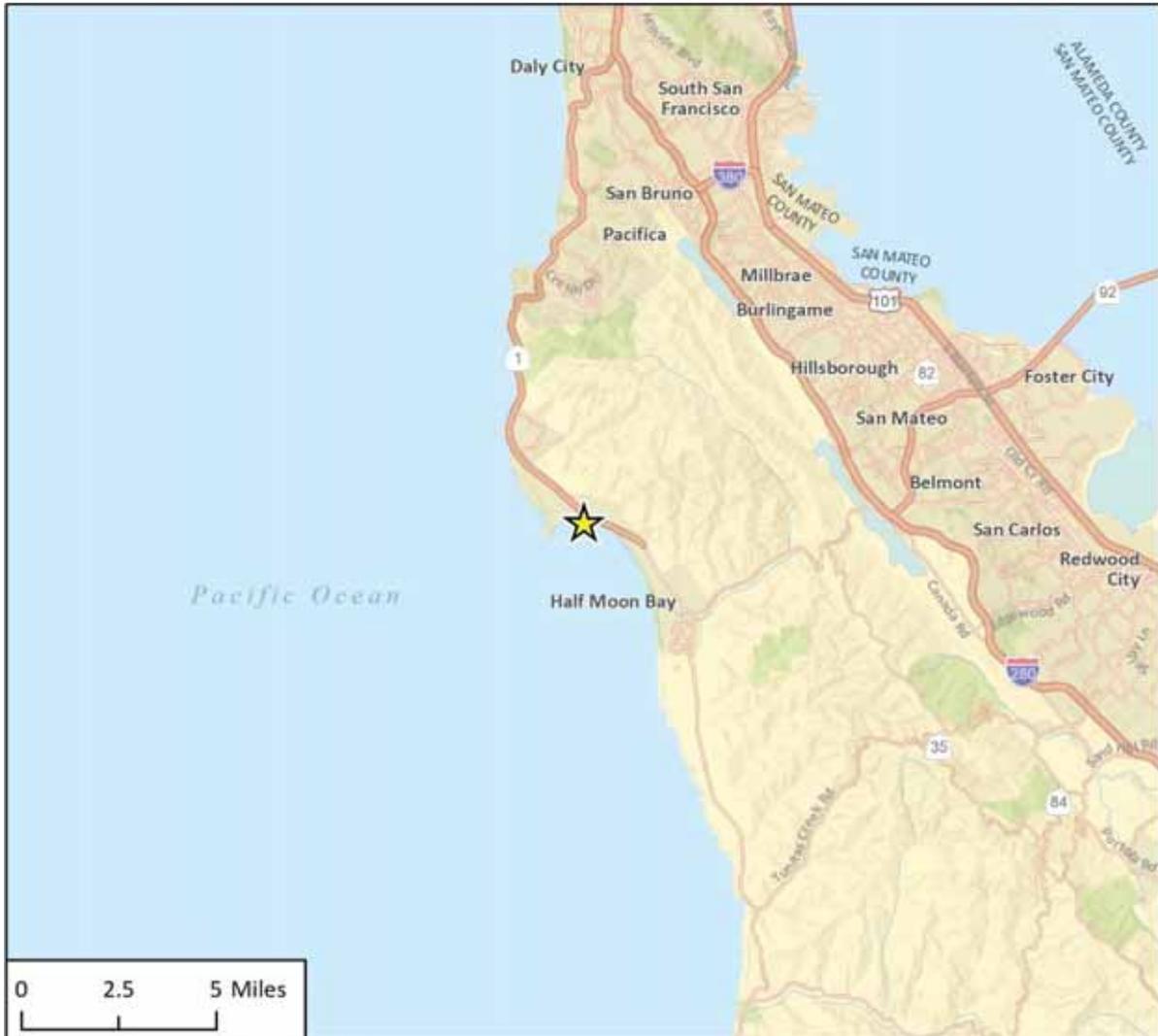
The proposed northern expansion to the Johnson Pier will require the installation of prestressed concrete piles and approximately 7,300 square feet (sq. ft.) of decking, expanding the pier width from 28 feet to a uniform 78-foot width. The northern expansion is proposed to provide additional

space for fish handling, forklift maneuvering, and a truck turnaround. The proposed southern expansion will require the installation of prestressed concrete piles and approximately 6,000 sq. ft. of decking. The southern expansion is proposed to provide additional space for trucks to pull in forward, turn around, and pull out forward. The southern expansion will also allow a truck and semi-trailer to pull in. A total of 230 16-inch square piles and 120 24-inch octagonal prestressed concrete piles will be installed.

The Project proposes to remove the existing docks from guide piles, transport them to the existing launch ramp, and to use a land-based crane to hoist them onto trucks to be properly disposed of. The existing guide piles will be removed with a vibratory hammer and placed on a floating barge for proper disposal. The installation of new prestressed concrete piles is proposed to be completed by impact pile driving using an impact hammer attached to a crane positioned on a crane barge or on the pier. The impact hammer will be used to drive piles for approximately 80 days, with approximately 5 piles driven per day. The vibratory hammer will be used to extract piles for approximately 40 days, with approximately 10 piles extracted per day.

Laydown and staging will occur in the upper marina parking lot and Johnson Pier Road and Pillar Point Harbor Boulevard will be used for access. Materials will be delivered via floating barge or by utilizing the existing Pillar Point launch ramp. The Project Area is defined as the approximately 37-acre area including the existing Johnson Pier, Docks D, E, F, G, H, the fuel dock, the water immediately surrounding the existing harbor features, and a narrow portion of the shoreline north of the harbor, as well as the areas proposed for laydown, staging, and access (Figure 2). For the purposes of this report, the Study Area includes the Project Area and a 100-foot survey buffer (Figure 2).

Figure 1 Regional Location



Imagery provided by Esri and its licensors © 2021.

★ Project Location

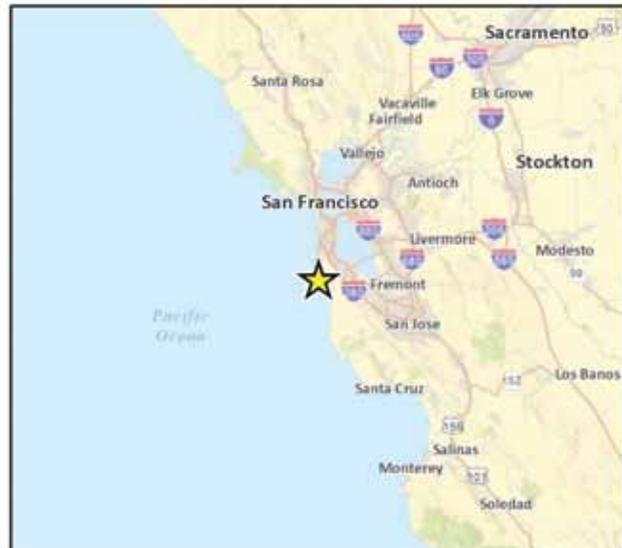


Figure 2 Project Area and Study Area



2 Methodology

2.1 Regulatory Overview

Regulated or sensitive resources studied and analyzed herein include special-status plant and wildlife species, nesting birds and raptors, sensitive plant/aquatic communities, jurisdictional waters and wetlands, wildlife movement, locally protected resources, and locally designated environmentally sensitive habitat areas (ESHAs). Regulatory authority over biological resources is shared by federal, State, and local authorities. Coastal and subtidal areas are also regulated by the California Coastal Commission [CCC] and the California State Lands Commission. Primary authority for regulation of general biological resources lies within the land use control and planning authority of local jurisdictions (in this instance, the County and the Local Coastal Program).

2.1.1 Definition of Special Status Species

For the purposes of this report, special status species include those:

- Listed as threatened or endangered under the federal Endangered Species Act (FESA); species that are under review may be included if there is a reasonable expectation of listing within the life of the Project;
- Listed as candidate, threatened, or endangered under the California Endangered Species Act (CESA);
- Listed as rare under the California Native Plant Protection Act;
- Designated as Fully Protected, Species of Special Concern, or Watch List by the CDFW;
- Designated as a species of concern by the National Oceanic and Atmospheric Administration (NOAA);
- Afforded protection under the MMPA; and
- Designated as locally important by the local agency and/or otherwise protected through local ordinance or policy.

In addition, special-status species are ranked globally (G) and subnationally (S) 1 through 3 based on NatureServe's (2010) methodologies as follows:

- **G1 or S1** - Critically Imperiled Globally or State-wide
- **G2 or S2** - Imperiled Globally or State-wide
- **G3 or S3** - Vulnerable to extirpation or extinction Globally or State-wide

2.1.2 Environmental Statutes

For the purpose of this report, potential impacts to biological resources were analyzed based on the following statutes (Appendix A):

- California Environmental Quality Act (CEQA)
- FESA and CESA
- Federal Clean Water Act (CWA)
- Migratory Bird Treaty Act

- California Fish and Game Code
- The Bald and Golden Eagle Protection Act
- Porter-Cologne Water Quality Control Act
- Natural Communities Conservation Planning Act
- Marine Mammal Protection Act (MMPA)
- Rivers and Harbors Act of 1899
- Magnuson-Stevens Fishery Conservation and Management Act
- Pacific Salmonid Fishery Management Plan
- Pacific Groundfish Fishery Management Plan
- Coastal Pelagic Fishery Management Plan
- Coastal Zone Management Act
- National Invasive Species Act
- Marine Life Protection Act
- Marine Life Management Act
- Marine Invasive Species Act
- California Coastal Act
- County of Santa Mateo General Plan and Local Coastal Plan

2.1.3 Guidelines for Determining CEQA Significance

The following threshold criteria, as defined by the CEQA Guidelines Appendix G Initial Study Checklist, were used to evaluate potential environmental effects. Based on these criteria, the proposed Project would have a significant effect on biological resources if it would:

- a) *Have substantial adverse effects, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.*
- b) *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.*
- c) *Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.*
- d) *Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.*
- e) *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.*
- f) *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan.*

2.2 Literature Review

Prior to conducting the field reconnaissance survey, Rincon reviewed literature to collect baseline information on biological resources potentially occurring at the Study Area. Rincon reviewed the CDFW California Natural Diversity Database (CNDDDB) (CDFW 2022a), NOAA National Marine Fisheries Service (NMFS) California Species List Tool (NOAA 2022c), and California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants of California (CNPS 2022) for special-status species that are known to occur within the *Montara Mountain* and *Half Moon Bay, California* USGS 7.5-minute quadrangles and surrounding four quadrangles¹ (*Hunter's Point, San Francisco South, San Mateo, and Woodside*). In addition, Rincon reviewed the Biogeographic Information and Observation System (BIOS) (CDFW 2022b), U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) (USFWS 2022b), USFWS Critical Habitat Portal (USFWS 2022a), and NOAA Essential Fish Habitat (EFH) Mapper (NOAA 2022b) for the Study Area and regional vicinity.

Rincon also reviewed the following documents and websites for further information on sensitive biological resources within the vicinity of the Study Area: San Mateo County General Plan Policies (County of San Mateo 2013), San Mateo County Local Coastal Program Mid-Coast Sensitive Habitats Map (County of San Mateo 1984), CDFW Special Animals List (CDFW 2021d), CDFW Special Vascular Plants, Bryophytes, and Lichens List (CDFW 2021e), CDFW Wildlife Habitat Relationship System (Zeiner et al. 1988), All About Birds (Cornell Lab of Ornithology 2022a), and eBird (Cornell Lab of Ornithology 2022b). Additionally, Rincon reviewed the following databases for information on existing conditions within the Study Area: United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey (2022a) and the National Wetlands Inventory (NWI) Mapper (USFWS 2022c).

The review also included peer-reviewed journal articles, previous biological studies conducted in the vicinity of the Study Area (e.g., ESA 2020, Johnson 2016, Rincon 2016 and 2018, USACE 2015), standard reference materials (e.g., Allen et al. 2011; Bowers et al. 2004; Sawyer et al. 2009; Stebbins 2003), and agency and public databases. Aerial photographs, topographic maps, soil survey maps, geologic maps, and climatic data for the Study Area were also reviewed. Preliminary desktop mapping of land cover types was completed based on the review of background literature and aerial imagery and was verified and refined during the reconnaissance-level field survey.

Rincon compiled the results of the literature review and database queries into a preliminary list of special-status species with potential to occur within the Project Area, which was then reviewed by Rincon's regional biological experts for accuracy and completeness. The list of special-status biological resources evaluated as part of the BRA was determined based on documented occurrences in the six-quadrangle search area, results from the reconnaissance-level field survey, and species known to occur in the region based on the expert opinions of local biologists. The results and analysis of the database queries were compiled into a table presented as Appendix D and are discussed in detail in this report.

2.3 Reconnaissance-level Field Survey

Rincon Biologists Heather Price Curran and Charleen Rode conducted a reconnaissance-level survey (survey) of the Study Area on December 16, 2021. The survey was conducted to evaluate existing

¹ A six-USGS quadrangle search was conducted instead of a standard nine-quadrangle search due to the oceanic location of the Project Area.

conditions at the Study Area, including marine and terrestrial habitats, and to evaluate the suitability of those habitats for special-status marine and terrestrial species.

Ms. Curran and Ms. Rode surveyed the subtidal portions of the Study Area by conducting a snorkel survey between the hours of 0745 and 0830. The water temperature was approximately 50 degrees Fahrenheit (°F) and visibility was approximately one foot. The survey was conducted during a +5.8-foot tide at 0805 (NOAA Tide Station ID: 9414131, Pillar Point Harbor, CA). During the survey the biologists performed swimming visual transects throughout the inner portions of the harbor (including the shoreline, Dock F, and the eastern breakwater). Due to the limited visibility the biologists were not able to inspect the subtidal portions of the Study Area in water depths greater than two feet. Between the hours of 1430 and 1530, an intertidal survey was conducted, which included a meandering pedestrian survey of the inner harbor, docks, and all intertidal portions of the Study Area. A -0.24-foot tide occurred at 1520 (NOAA Tide Station ID: 9414131, Pillar Point Harbor, CA). Biologists surveyed the extent of habitat types in the intertidal area noting dominant communities, special-status species, and physical attributes of the substrates.

In addition to surveying the subtidal and intertidal portions of the Study Area, Ms. Curran and Ms. Rode surveyed the terrestrial portions of the Study Area between the hours of 1300 and 1430 to document existing conditions, habitats, and potential nesting habitat for passerine and raptor bird species. The survey was conducted outside of the typical breeding season for most avian species (February 1 through September 15) and therefore, nesting behavior was not observed. Binoculars (10 X 42) were used to aid in identification and to achieve visual coverage of all terrestrial and human-made portions of the Study Area. Weather conditions during the terrestrial survey were partly cloudy with an air temperature ranging from 52 °F to 54 °F, 3 to 9 mile per hour northwest winds, and approximately 30% cloud cover.

Photographs were taken to document existing conditions, vegetation communities, fouling communities on dock and pier structures, species sign, or other notable biological resource observations. Representative site photographs are included in Appendix B. All identifiable marine and terrestrial plant and wildlife species observed were documented. A complete list of all plant and wildlife species observed during the survey is included as Appendix C.

3 Existing Conditions

This section provides a discussion on marine and terrestrial components of the Project. Discussions regarding the general environmental setting, habitat types, plant/algae and wildlife species observed, special-status species, and other biological resource constraints observed within the Study Area are presented below.

3.1 Terrestrial Environment

3.1.1 Physical Characteristics

The Study Area is located within the Central Coast geographic subregion of California (Baldwin et al. 2012) along the Pacific Ocean, south of the San Francisco Peninsula and west of San Francisco Bay. The Study Area occurs on the Half Moon Bay coastal terrace, which extends from Montara to Seal Rock between the ocean and the Santa Cruz mountain range (Dyett and Bhatia 2014). The climate in this region is characterized by mild, dry summers and cool, wet winters. The average high temperature during summer months (June through September) is 65 °F and the average low temperature is 50 °F. The average high temperature during the winter months (December through March) is 59 °F and the average low temperature is 42 °F. Average annual precipitation is 26.2 inches, with the majority of rainfall occurring during November through March (Western Regional Climate Center 2021). Pillar Point Harbor is a south-facing harbor protected by Pillar Point to the west and human-made jetties to the south. Sandy beaches stretch along the coast southeast of the harbor and coastal hills rise to the north and east.

3.1.2 Soils

The USDA NRCS Web Soil Survey identifies five soil map units within the terrestrial portions of the Study Area: Denison Clay loam, nearly level; Denison Coarse Sandy Loam, nearly level; Denison Loam, nearly level; Denison Loam, gently sloping; and coastal beaches (USDA NRCS 2021 a). Each of these soil map units is described in detail below.

Denison Clay Loam

Denison clay loam is formed from alluvium derived from granite and occurs on terraces and toeslopes at elevations of 10 to 70 feet. This soil type is moderately well drained, the frequency of flooding and ponding area is none, and the available water supply is moderate (about 8.9 inches).

Denison Course Sandy Loam

Denison course sandy loam is formed from alluvium derived from granite and occurs on terraces and toeslopes at elevations of 20 to 120 feet. This soil type is moderately well drained, the frequency of flooding and ponding area is none, and the available water supply is moderate (about 8.3 inches).

Denison Loam

Denison loam is formed from alluvium derived from granite and occurs on terraces and toeslopes at elevations of 20 to 70 feet. This soil type is moderately well drained, the frequency of flooding and ponding area is none, and the available water supply is high (about 9.6 inches).

Coastal Beaches

Coastal beaches in this area are formed from alluvium and occur at elevations of 0 to 40 feet. Coastal beaches tend to be poorly drained, with frequent flooding.

The above descriptions were taken from information provided on the USDA NRCS Web Soil Survey website (USDA NRCS 2021a). None of the above soil types are listed on the NRCS List of Hydric Soils (USDA NRCS 2021b).

3.1.3 General Wildlife

The Study Area contains habitat suitable for wildlife species that commonly occur in developed areas. Wildlife observed within the Study Area include a variety of bird species, including great blue heron (*Ardea herodias*), red-tailed hawk (*Buteo jamaicensis*), common goldeneye (*Bucephala clangula*), whimbrel (*Numenius phaeopus*), black-bellied plover (*Pluvialis squatarola*), and willet (*Tringa semipalmata*).

3.1.4 Vegetation Communities and Land Cover Types

Vegetation community characterizations for this analysis were based on the classification system presented in *A Manual of California Vegetation, Second Edition* (Sawyer et al. 2009) but have been modified to most accurately reflect existing site conditions. *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986) is still used for reference and historical perspective, though its classifications are no longer supported by the State of California and have been superseded by Sawyer et al. 2009. Plant species nomenclature and taxonomy used for this BRA follow the treatments within the second edition of *The Jepson Manual* (Baldwin et al. 2012). Figure 3 depicts all terrestrial vegetation communities and land cover types documented within the Study Area. The minimum mapping unit applied to this analysis is 0.04 acre. Vegetation community and land cover type descriptions are as follows.

Figure 3 Terrestrial Vegetation Communities and Land Cover Types within the Study Area



Common Reed Stands

This community aligns most closely with the common and giant reed marshes (*Phragmites australis* - *Arundo donax* Herbaceous Semi-Natural Alliance) described in the MCV2 (Sawyer et al. 2009). This alliance occurs along low-gradient streams and ditches in semi-permanently flooded and slightly brackish areas, with common reed (*Phragmites australis*) or giant reed (*Arundo donax*) dominant in the herbaceous layer. Giant reed is highly invasive in California. Common reed is native to California but has become invasive in some portions of the state, where an introduced strain has reduced marsh diversity by forming monospecific clones with high stem density. This community is not included on the CDFW Sensitive Natural Communities List (CDFW 2021f).

Within the Study Area, approximately 0.18 acre of common reed stands exist along the northern perimeter of the beach shoreline around the outlet of the culverted drainage. No *Arundo donax* was observed within the Study Area, and common reed is the only species growing in high density within these stands. Given the monotypic nature of the vegetation, this community within the Study Area is best described as a common reed stand and not a marsh.

Arroyo Willow Thickets

Arroyo willow thickets (*Salix lasiolepis* Shrubland Alliance) are described in the MCV2 (Sawyer et al. 2009) as riparian communities where arroyo willow is dominant, or codominant with other shrub or tree species. This community occurs along stream banks, slope seeps, and drainages from sea level to 2,170 meters (Sawyer et al. 2009). This community is not included on the CDFW Sensitive Natural Communities List (CDFW 2021f).

Within the Study Area, approximately 0.17 acre of arroyo willow thicket is present north of the beach shoreline, on the slope beneath Pillar Point Harbor Boulevard. In addition to arroyo willow, other plant species growing within this community include native California blackberry (*Rubinus ursinus*) and Monterey Pine (*Pinus radiata*, one individual that was likely planted), as well as non-native blackwood (*Acacia melanoxylon*) and boxwood (*Buxus* sp.).

Iceplant Mats

Iceplant mats (*Mesembryanthemum* spp. – *Carpobrotus* spp. Herbaceous Semi-Natural Alliance) are described by Sawyer et al. (2009) as a non-native plant community typically found on bluffs, disturbed land, or sand dunes immediately along the coastline. The community is strongly dominated (> 80% relative cover) by various species of non-native ice plant, including *Carpobrotus edulis*, with iceplant out-competing native coastal plant species. Iceplant (*Carpobrotus edulis*) has a California Invasive Plant Council (Cal-IPC) rank of "High". Iceplant mats cover an approximately 0.04-acre section of the Study Area, between the beach shoreline and ruderal areas.

Beach Shoreline

Beach shoreline exists within the Study Area north of Dock F and south of Pillar Point Harbor Boulevard and the adjacent slope and covers approximately 1.27 acres. This area of sandy beach is exposed at low tide and submerged at high tide. Vegetation within this area is sparse and consists of scattered salt grass (*Distichlis spicata*), pickleweed (*Salicornia pacifica*), and iceplant (*Carpobrotus edulis*). Many shore birds use this area for foraging during low tide. Beach shoreline is not described in the Holland (1986) or Sawyer et al. (2009) classification systems.

Developed

Developed areas are not naturally occurring and are not described in the Holland (1986) or Sawyer et al. (2009) classification systems. Terrestrial developed portions of the Study Area cover approximately 10.29 acres and include the upper and lower paved parking lots, Pillar Point Harbor Boulevard, Johnson Pier Road, portions of Capistrano Road and U.S. Highway 1, the Pillar Point launch ramp, the Pillar Point Harbor Office building, the Half Moon Bay Kayak Company and associated structures, and portions of restaurants and retail stores located directly west of Johnson Pier Road.

Landscaped

Landscaped areas are not naturally occurring and are not described in the Holland (1986) or Sawyer et al. (2009) classification systems. Landscaped portions of the Study Area cover approximately 3.16 acres and occur around the upper marina parking lot and along Johnson Pier Road. Landscaped plant species include blackwood acacia, boxwood, and Monterey cypress (*Hesperocyparis macrocarpa*).

Ruderal

Ruderal areas consist of vegetation that has been heavily disturbed or altered such that natural vegetation has largely been removed and non-native plant species are dominant. These sites do not correspond well with either the Holland (1986) or Sawyer et al. (2009) classification systems. Ruderal portions of the Study Area cover approximately 3.72 acres and exist between Pillar Point Harbor Boulevard and the beach shoreline, between Pillar Point Harbor Boulevard and the upper parking lot, and between the upper parking lot and U.S. Highway 1. Small patches of ruderal vegetation also exist near the shoreline at the eastern and westernmost edges of the Study Area. Plant species within these areas include non-native brome (*Bromus* sp.), wild mustard (*Hirschfeldia incana*), black medick (*Medicago lupulina*), and field marigold (*Calendula arvensis*).

3.2 Marine Environment

3.2.1 Physical Characteristics

Pillar Point Harbor Marina is comprised of an inner harbor and outer harbor. The inner harbor contains 369 dock slips, which berth approximately 180 commercial fishing vessels and 200 recreational boats. Between the inner harbor and the eastern outer breakwater there is a small boat launch ramp. The harbor is heavily used by recreational, fishing, and small commercial vessels. Vessels frequently transit through the Study Area between the docks, inner harbor breakwaters, and launch ramp. Wave action is limited within the harbor due to the breakwaters, though water within the harbor is directly connected to the Pacific Ocean. Water depth within the Study Area ranges from 0 to 13 feet at mean lower low water (MLWW) (NOAA 2021).

3.2.2 Watershed and Drainages

The Study Area is located in Pillar Point Harbor Marina, in the northern portion of Half Moon Bay in the Pacific Ocean. The Study Area occurs within the San Francisco Coastal South Watershed (Hydrologic Unit Code [HUC]: 18050006) and the Denniston Creek-Frontal Pacific Ocean Subwatershed (HUC: 180500060205) (United States Environmental Protection Agency [US EPA] 2022). Pillar Point State Marine Conservation Area and the James V. Fitzgerald Marine Reserve are

located approximately 0.8 mile west of the Study Area, offshore of Pillar Point. The Monterey Bay National Marine Sanctuary lies approximately 0.25 mile south of the Study Area, outside of Pillar Point Harbor. The NWI classifies Pillar Point Harbor as Estuarine and Marine Deepwater habitat. Water quality in Pillar Point Harbor is chronically poor and is listed as impaired by coliform bacteria on the 303(d) list of impaired water bodies by the State Water Resources Control Board (US EPA 2022). In 2013, the San Mateo County Resource Conservation District (SMCRCD) conducted a study to identify the sources of bacteria, and bovine was determined to be the primary fecal pollution source at Deer Creek, which outfall is located on the north side of the boat ramp at Pillar Point Harbor Marina (SMCRCD 2014).

Deer Creek flows northeast of the Study Area and is classified by the NWI as an intermittent stream (USFWS 2022c). Deer Creek conveys runoff from the hills and neighborhood north of the Study Area and likely drains into the northeastern corner of Pillar Point Harbor Marina through the culvert that runs beneath Pillar Point Harbor Boulevard. This culvert also conveys runoff from storm drains in Pillar Point Harbor Boulevard and paved parking areas. Jurisdictional waters within the Study Area are discussed in greater detail in Section 4.3.

3.2.3 Marine Habitat Types

Pillar Point Harbor is heavily impacted by human infrastructure and vessel traffic, but provides habitat for a variety of marine species. Habitat types within the Study Area include Open Water with Sandy/Silty Bottom; Rock/Rip Rap; and Dock, Pier, and Launch Ramp Structures (Figure 4). Each of these habitat types is described in detail below.

Open Water with Sandy/Silty Bottom

Approximately 36.5 acres of marine habitat within the Study Area consists of open water with an unconsolidated sandy or silty bottom. Benthic areas within this habitat type may be occupied by a variety of regionally occurring invertebrates, such as polychaete worms (including *Mediomastus californiensis* and *Polydora kempii*), anemones (*Metridium senile*, *Anthopleura* spp.), shrimp (*Neomysis rayii*, *Bathyleberis* sp., and *Euphilomedes carcharodonta*), crabs (including *Hemigrapsus nudus*), bivalves (including *Macoma secta* and *Transennella tantilla*), seastars (including *Amphiodia* sp.), gammarid amphipods (including *Aoroides columbiae* and *Corophium acherusicum*), and other sessile and suspension feeding organisms (USACE 2015).

Open waters within this habitat type can provide foraging and summer nursery habitat for fish, such as English sole (*Parophrys vetulus*), shiner surfperch (*Cymatogaster aggregate*), Pacific herring (*Clupea harengus*), and rockfish (*Sebastes* spp.). Starry flounder (*Platichthys stellatus*) and topsmelt (*Atherinops affinis*) are abundant in winter, when northern anchovy (*Engraulis mordax*), Pacific sardine (*Sardinops sagax caerulea*), Pacific mackerel (*Scomber japonicus*), and striped bass (*Morone saxatilis*) are also present. A variety of seabirds also feed in this habitat, including California brown pelican (*Pelecanus occidentalis californicus*), common goldeneye, bufflehead (*Bucephala albeola*), and eared grebe (*Podiceps nigricollis*) (USACE 2015).

Several species of marine mammals utilize this habitat within the Study Area. The most common marine mammal at Pillar Point Harbor is the harbor seal. Harbor seals forage on a variety of fish and invertebrate species near the shore in water that is up to sixteen feet deep (USACE 2015). California sea lions are also present and may feed on a variety of fish species within this habitat. Numerous haul-out sites for harbor seals and California sea lions exist within the vicinity of the Study Area, and

marine protected areas north of the harbor are known breeding areas for harbor seals (USACE 2015).

Several harbor seals were observed within the Study Area during the survey, and a California sea lion was observed near the Johnson Pier. Both of these species are protected by the MMPA. Kelp beds are not present within Pillar Point Harbor (USACE 2015), though drifting pieces of giant kelp (*Macrocystis pyrifera*) were observed within the Study Area during the survey. Eelgrass (*Zostera marina*) beds are not known to occur within the inner harbor, and no eelgrass was observed growing, floating, or washed-up on the shoreline during the survey. However, eelgrass beds are known to occur around the launch ramp within the Study Area, and outside of the Study Area within the outer harbor, along the western and eastern outer breakwaters (Marine Taxonomic Services 2020).

Rock/Rip Rap

Approximately 2.41 acres of the Study Area consists of breakwaters constructed of rock and/or rip rap material. This habitat type provides hard substrate for a variety of marine invertebrates and algae, as well as resting areas for seabirds, harbor seals, and California sea lions. However, these human-made structures are not as stable or complex as naturally occurring rocky intertidal areas, nor do they host the same diversity of species. Marine invertebrates observed in this habitat type included limpets (*Lottia* spp. and *Acmaea* spp.) and barnacles (*Balanus* spp. and *Chathalamus* spp.). Algae observed in this habitat type consists of primarily of sea lettuce (*Ulva* spp.). Bird species observed on rock/rip rap habitat within the harbor included California brown pelican and black-bellied plover (*Pluvialis squatarola*).

Dock, Pier, and Launch Ramp Structures

The Johnson Pier, the docks, and the Pillar Point launch ramp encompass approximately 6.7 acres of floating land cover within the Study Area. These human-made structures provide hard substrate for a variety of sessile and mobile marine invertebrate species. Native species observed on docks and pier pilings during the survey included, but not limited to, limpets, anemones (*Metridium senile*, *Corynactis californica*), barnacles, and polychaete worms (*Sabellidae* spp.). Invasive species observed included, but not limited to, bryozoans (*Bugula neritina* and *Watersipora subtorquata*) and blue mussel (*Mytilus edulis*). Algal species observed on these structures included sea lettuce, red branching algae (*Prionitis andersoniana*), and small red algae (*Mazzaella flaccida*). A variety of seabird species may also perch on these structures, including western gull (*Larus occidentalis*), several individuals of which were observed on the Johnson Pier during the survey. There is potential for passerine bird species to nest on the floating structures; however, nesting deterrent methods are often utilized which limit nesting activity.

Figure 4 Marine Habitat Types within the Study Area



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4 Sensitive Biological Resources

Local, state, and federal agencies regulate special-status species and other sensitive biological resources and may require an assessment of their presence or potential presence to be conducted prior to the approval of proposed development. This section discusses the special-status species and sensitive biological resources observed within the Study Area and/or evaluated as having the potential to occur in the Study Area based on the methods described in Section 2. The potential for each special-status species to occur within the Study Area was evaluated according to the following criteria:

- **Not Expected.** Habitat on and adjacent to the site is clearly unsuitable for the species' requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime), and species would have been identifiable on site if present (e.g., oak trees). Protocol surveys (if conducted) did not detect species.
- **Low Potential.** Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site. Protocol surveys (if conducted) did not detect species.
- **Moderate Potential.** Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
- **High Potential.** All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- **Present.** Species is observed on the site or has been recorded (e.g., CNDDDB, other reports) on the site recently (within the last 5 years).

4.1 Terrestrial Sensitive Biological Resources

Rincon evaluated 61 special-status plant species and 56 special-status wildlife species for their potential to occur within terrestrial portions of the Study Area (Appendix D). The Study Area was also evaluated for the presence of sensitive plant communities, designated critical habitat, and ESHAs.

4.1.1 Special-status Plant Species

Sixty-one special-status plant species were evaluated for their potential to occur within the Study Area (Appendix D). Three non-listed special-status plant species have a low potential to occur within the Study Area. Table 1 lists each of these species and their California Rare Plant Rank (CRPR).

Table 1 Special-status Plant Species with Potential to Occur within the Study Area

Scientific Name	Common Name	Status	Potential to Occur
<i>Leptosiphon rosaceus</i>	rose leptosiphon	CRPR 1B.1	Low Potential
<i>Limnanthes douglasii</i> ssp. <i>ornduffii</i>	Ornduff's meadowfoam	CRPR 1B.1	Low Potential
<i>Plagiobothrys chorisianus</i> var. <i>chorisianus</i>	Choris' popcornflower	CRPR 1B.2	Low Potential

CRPR = California Rare Plant Rank

1B = Rare, Threatened, or Endangered in California and elsewhere

.1 = Seriously endangered in California (>80% of occurrences threatened/ high degree and immediacy of threat)

.2 = Moderately threatened in California (20-80% of occurrences threatened/moderate degree and immediacy of threat)

The remaining 58 special-status plant species are not expected to occur within the Study Area based on the absence of suitable habitat types and/or soils and the generally developed and disturbed nature of the site. For the purposes of CEQA analysis, special-status plant species that are not State or federally listed and have a low potential to occur will not be addressed further in this section.

4.1.2 Special-status Wildlife Species

Rincon evaluated 58 special-status wildlife species for their potential to occur within the Study Area (Appendix D), 18 of which have potential to occur within the terrestrial portions of the Study Area. Table 2 lists each of these species, their federal and/or State status, and their potential to occur within the Study Area.

Table 2 Special-status Wildlife Species with Potential to Occur within Terrestrial Portions of the Study Area

Scientific Name	Common Name	Status	Potential to Occur
Invertebrates			
<i>Danaus plexippus</i>	Monarch – California overwintering population	FC	Moderate (non-roosting)
Amphibians			
<i>Rana draytonii</i>	California red-legged frog	FT	Low Potential
Reptiles			
<i>Aneides (flavipunctatus) niger</i>	Santa Cruz black salamander	SSC	Low Potential
<i>Thamnophis sirtalis tetrataenia</i>	San Francisco garter snake	FE/SE	Low Potential
Birds			
<i>Accipiter cooperii</i>	Cooper's hawk	WL	High Potential
<i>Athene cunicularia</i>	burrowing owl	SSC	Low Potential (non-breeding) ²
<i>Brachyramphus marmoratus</i>	marbled murrelet	FT/SE	Moderate Potential (non-breeding)
<i>Charadrius nivosus nivosus</i>	western snowy plover	FT/SSC	Moderate Potential (non-breeding)
<i>Elanus leucurus</i>	white-tailed kite	FP	High Potential (non-breeding)
<i>Falco columbarius</i>	merlin	WL	High Potential (non-breeding)
<i>Falco peregrinus anatum</i>	American peregrine falcon	FP	Moderate Potential (non-breeding)
<i>Geothlypis trichas sinuosa</i>	saltmarsh common yellowthroat	SSC	Low Potential
<i>Pelecanus occidentalis californicus</i>	California brown pelican	FP	Present
<i>Phalacrocorax auritus</i>	double-crested cormorant	WL	Present (non-breeding)
<i>Riparia riparia</i>	bank swallow	ST	Low Potential (non-breeding)
<i>Sterna antillarum browni</i>	least tern	FE/SE/FP	Moderate Potential (non-breeding)
Mammals			
<i>Antrozous pallidus</i>	pallid bat	SSC	Low Potential
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	SSC	Low Potential
FE = Federally Endangered	FT = Federally Threatened	FC = Federal Candidate	
SE = State Endangered	ST = State Threatened	FP = State Fully Protected	
SSC = CDFW Species of Special Concern	WL = CDFW Watch List		

The remaining terrestrial species evaluated are not expected to occur in the Study Area or immediate vicinity based on the absence of riparian, grassland, woodland, chaparral, coastal scrub, vernal pool, or other suitable natural habitats or vegetation communities, and/or because the range of the species does not overlap with the Study Area. Special-status wildlife species that have a moderate or high potential to occur, or are present on site, are discussed in further detail below. State and/or federally listed species with a low potential to occur on-site will also be discussed in

² Non-breeding indicates that nesting habitat for the species is not present within the Study Area and/or the breeding range of the species does not overlap with the Study Area.

further detail. For the purposes of CEQA analysis, special-status species that are not State or federally listed and have a low potential to occur will not be addressed further in this section.

Monarch Butterfly

The California overwintering population of monarch butterfly is a candidate for federal listing. Monarchs overwinter in roost sites that extend along the Pacific coast from northern Mendocino County to Baja California, Mexico. Roosts are located in wind-protected tree groves (typically eucalyptus, Monterey pine, or Monterey cypress), with nectar and water sources nearby (Xerces Society 2022).

Several Monterey cypress and Monterey pine trees are present in the northern portion of the Study Area, near the upper marina parking lot and Pillar Point Harbor Boulevard. However, these individual trees are not present in sufficient density to serve as a winter roosting site. There are three historic overwintering sites documented within one mile of the Study Area (Xerces Society 2022). There are four occurrences of the species documented in the CNDDDB within five miles of the Study Area (CDFW 2022a). No individuals were observed on site during the survey. There is a moderate potential for individuals to pass through the Study Area, but suitable overwintering habitat is not present.

California Red-legged Frog

The California red-legged frog (CRLF) is a federally threatened species that occurs in lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. It typically inhabits quiet pools of streams, marshes, and ponds. All life history stages are most likely to be encountered in and around breeding sites, which include coastal lagoons, marshes, springs, permanent and semi-permanent natural ponds, and ponded and backwater portions of streams, as well as artificial impoundments such as stock ponds, irrigation ponds, and siltation ponds. Eggs are typically deposited in permanent pools, attached to emergent vegetation. This species typically requires 11 to 20 weeks of permanent water for larval development and must have access to estivation habitat. Suitable upland habitat must provide sufficient moisture to prevent desiccation and sufficient cover to provide protection from predators. Typical upland habitat consists of densely vegetated areas, downed woody vegetation, leaf litter, small mammal burrows, and human-made structures (i.e., culverts, livestock troughs, spring-boxes, abandoned sheds) (USFWS 2002).

A limited amount of marginally suitable habitat for the CRLF occurs in the northern portion of the Study Area surrounding the culverted drainage that flows into the harbor. There are twenty-nine occurrences of the species documented in the CNDDDB within five miles of the Study Area (CDFW 2022a), though most of these occur further inland than the extent of the Study Area and the site is surrounded by paved roads and development. The CRLF has a low potential to occur transiently within the Study Area, though the drainage does not provide the permanent pools and emergent vegetation typically required for breeding.

Cooper's Hawk

The Cooper's hawk is a CDFW watchlist species that typically inhabits woodlands and forest edges but can also be found in urban parks and neighborhoods where trees are present. Nests are constructed 25-50 feet high in a variety of tree species, including pines, oaks, beeches, and spruces. Nests are made of sticks and are often lined with bark flakes and green twigs. Cooper's hawks are aerial predators that feed primarily on medium-sized birds, such as mourning dove (*Zenaida*

macroura), American robin (*Turdus migratorius*), California quail (*Callipepla californica*), and European starling (*Sturnus vulgaris*). In addition to preying on adult birds, Cooper's hawks will also occasionally rob nests and hunt rabbits, rodents, and bats (Cornell Lab of Ornithology 2022a).

Suitable foraging habitat for the species is present throughout the Study Area, and suitable nesting habitat for the species exists within Monterey cypress, Monterey pine, and other trees present within the Study Area. There are no occurrences of the species documented in the CNDDB within five miles of the Study Area (CDFW 2022a). Multiple occurrences of the species are documented within one mile of the Study Area in eBird (Cornell Lab of Ornithology 2022b). The Cooper's hawk has a high potential to forage and a moderate potential to nest within the Study Area.

Marbled Murrelet

The marbled murrelet is a federally threatened and state endangered bird that feeds on small fish and zooplankton along the Pacific coast and nests in mossy, old-growth forests from up to six miles inland. In California, the species is only known to breed from the Oregon border to Mendocino County and between Half Moon Bay and Santa Cruz (Cornell Lab of Ornithology 2022a).

There is a moderate potential for the species to fly over or forage within the Study Area. There are multiple non-breeding occurrences of the species documented in Pillar Point Harbor in eBird (Cornell Lab of Ornithology 2022b) and one occurrence of the species is documented in the CNDDB within five miles of the Study Area (CDFW 2022a). No nesting habitat exists for the species within the Study Area, as suitable old-growth forests are not present on site and the site is surrounded by development.

Western Snowy Plover

The western snowy plover is a federally threatened and a CDFW SSC. This small shorebird is about six inches long, with a thin dark bill, pale brown to gray upper parts, white or buff colored belly, and darker patches on its shoulders and head, and white forehead and eyebrow. The Pacific coast population of the western snowy plover breeds primarily on coastal beaches from southern Washington to southern Baja California, Mexico. The population breeds above the high tide line on coastal beaches, sand spits, dune-backed beaches, sparsely vegetated dunes, beaches at creek and river mouths, and salt pans at lagoons and estuaries (USFWS 2022d).

There is a moderate potential for the western snowy plover to fly over or forage within the Study Area, particularly along the shoreline. A very limited amount of sandy beach is present within the Study Area, but it is heavily impacted by recreational use and does not provide suitable breeding habitat for the species. There is one breeding occurrence of the species documented in the CNDDB approximately 2.5 miles southeast of the Study Area, in Half Moon Bay State Beach near the mouth of Pilarcitos Creek (CDFW 2022a). Multiple breeding and non-breeding occurrences of the species are also documented in eBird within five miles of the Study Area (Cornell Lab of Ornithology 2022b). Critical habitat for the species exists approximately 1.75 miles southeast of the Study Area, within San Mateo Coast State Beaches, where known breeding sites for the species exist.

White-tailed Kite

The white-tailed kite is a State fully protected species that occurs in open grasslands, meadows, open woodlands, marshes, and cultivated areas. Nests are built near the top of dense-topped trees. Diet consists primarily of small mammals, and the species hunts by facing into the wind and

hovering (or “kiting”) above the ground while scanning the ground for movement (Cornell Lab of Ornithology 2022a).

The white-tailed kite is unlikely to nest or roost in trees on site given the high level of human activity. However, multiple non-breeding occurrences of the species are documented in eBird within and around the Study Area (Cornell Lab of Ornithology 2022b) and there is a high potential for the species to fly over or forage within the Study Area.

Merlin

The merlin is a CDFW watchlist species that typically occurs in grasslands, open forests, and coastal areas. Breeding historically occurred in shrubs and trees in coastal areas and along rivers, but increasingly, the species lays its eggs in abandoned crow or hawk nests in urban areas. Diet consists primarily of birds, which are typically captured midair during high-speed attacks (Cornell Lab of Ornithology 2022a).

There is a high potential for the merlin to forage for shore birds within the Study Area and there are multiple non-breeding occurrences of the species documented within five miles of the Study Area in eBird (Cornell Lab of Ornithology 2022b). Breeding typically occurs in far northern reaches of North America and the species is therefore not expected to nest within the Study Area.

American Peregrine Falcon

The American peregrine falcon is a federally and State delisted species and a state FP species that occurs in urban areas and open habitats, including coastlines, mudflats, lake edges, and mountain sides (Cornell Lab of Ornithology 2021b). American peregrine falcon populations were nearly exterminated from 1940-1970 due to wide-spread use of organochlorine pesticides. In 1970, the species was listed as federally endangered and conservation efforts began. Following the ban of the pesticide DDT and the implementation of captive breeding programs, American peregrine falcon populations have rebounded, and the species was delisted in 1999 (Center for Biological Diversity 2021). Prey includes a wide variety of bird species and nest sites are typically in rocky cliffs faces, but can also be located on transmission towers, skyscrapers, bridges, or other human-made structures (Cornell Lab of Ornithology 2022a).

Suitable nesting habitat for the species is not present within the Study Area. Multiple occurrences of the species are documented within five miles of the Study Area in eBird (Cornell Lab of Ornithology 2022b) and there is a moderate potential for the species to fly over or forage in the Study Area.

California Brown Pelican

The California brown pelican is a State fully protected species that was both federally and state delisted. The species lives year-round in estuaries and coastal marine habitats along the California coast, and forage, rest, and roost on islands, offshore rocks, breakwaters and other humanmade structures, rocky intertidal areas, mudflats, and beaches. The species generally nests and breeds at offshore Islands in southern California. Diet includes mostly small fish that school near the surface of the water. Brown pelicans spot fish from the air and dive head-first from as high as 65 feet over the ocean before plunging into the water and expanding their throat patch to trap fish (Cornell Lab of Ornithology 2022a).

California brown pelicans were observed on the inner breakwaters in Pillar Point Harbor during the field survey and many non-breeding occurrences of the species are documented in the harbor in eBird (Cornell Lab of Ornithology 2022b). The species is not expected to nest within the Study Area.

Double-crested Cormorant

The double-crested cormorant is a CDFW watchlist species that forms breeding colonies in clusters of trees near large bodies of water. Diet consists primarily of fish, which they catch by diving and chasing their prey underwater with powerful propulsion from webbed feet. After fishing, the birds rest on high, airy perches to dry off and digest (Cornell Lab of Ornithology 2022a).

Multiple double-crested cormorants were observed within the Study Area during the field survey and the species has been frequently documented within Pillar Point Harbor in eBird (Cornell Lab of Ornithology 2022b). Suitable colonial nesting habitat does not exist within the Study Area.

Bank Swallow

The bank swallow is a state threatened species that nests colonially, primarily in riparian and other lowland habitats west of the desert, though increasingly in human-made sites, such as sand and gravel quarries or road cuts. Nesting requires vertical banks or cliffs near water with fine-textured, sandy soils where males can dig burrows. Diet consists primarily of insects and includes bees, wasps, ants, butterflies, and moths (Cornell Lab of Ornithology 2022a).

Suitable banks or cliffs for nesting are not present within the Study Area. Multiple occurrences of the species are documented within five miles of the Study Area in eBird (Cornell Lab of Ornithology 2022b), and the species has a low potential to flyover or forage within the Study Area.

Least Tern

The least tern is a federally endangered and state endangered species that nests along the California coast from San Francisco Bay south to northern Baja California. The species is a colonial breeder on bare or sparsely vegetated, flat substrates, including sandy beaches, alkali flats, and occasionally landfills, agricultural fields, or paved areas. Diet consists almost entirely of small fish, which are caught by diving in shallow water after hovering briefly. Least terns will feed in almost any aquatic habitat with fish, including oceans, bays, rivers, marshes, ponds, and reservoirs (Cornell Lab of Ornithology 2022a).

Some marginally suitable breeding habitat for the species occurs along paved areas and the sandy beach within the Study Area, though the species is not known to breed within the vicinity of Pillar Point Harbor and the high level of human activity in the Study Area would make nesting unlikely. There are several non-breeding occurrences of the species documented in eBird within five miles of the Study Area (Cornell Lab of Ornithology 2022b) and the species has a moderate potential to fly over or forage in the Study Area.

Nesting Birds

Migratory birds protected under the MBTA and nesting birds and raptors protected under CFGC Section 3503 have the potential to breed and forage throughout the Study Area. Nesting habitat could include landscaped *Acacia* trees and boxwood shrubs, native Monterey pine and Monterey cypress trees, willows, other vegetation, human-made structures, and the ground surface.

4.1.3 Sensitive Plant Communities, Critical Habitat, and Environmentally Sensitive Habitat Areas

Plant communities are considered sensitive biological resources if they have limited distributions, have high wildlife value, include sensitive species, or are particularly susceptible to disturbance. Vegetation rarity ranking is based on a rank calculator developed by NatureServe. According to the CDFW Vegetation Program, alliances with State ranks of S1-S3, as well as certain additional associations specifically noted as sensitive in the list, are considered to be imperiled, and thus, potentially of special concern. No sensitive plant communities occur within the Study Area.

There is no terrestrial designated critical habitat within the Study Area. Critical habitat for the Central California Coast distinct population segment (DPS) of steelhead exists within Dennison Creek, which flows into Pillar Point Harbor approximately 0.2 mile northwest of the Study Area. Critical habitat for the California red-legged frog exists approximately 0.5 mile north of the Study Area. Critical habitat for the Central California Coast evolutionarily significant unit (ESU) of coho salmon exists within Arroyo de en Medio Creek, approximately 1.1 miles southeast of the Study Area. Critical habitat for the western snowy plover exists approximately 1.75 miles southeast of the Study Area, within San Mateo Coast State Beaches. (Figure 5). Critical habitat for the marbled murrelet exists approximately 3.5 miles northeast of the Study Area.

The California Coastal Act defines ESHA as “any area in which plant or animal life or their habitats are either rare or especially valuable because of their nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.” Unique plant habitats, rare and endangered plant and animal habitats, wetlands, coastal streams, rocky points, sea cliffs, intertidal areas, and kelp beds are typically considered ESHA. The San Mateo County Local Coastal Program (LCP) defines riparian corridors as “the vegetative and wildlife areas adjacent to perennial and intermittent streams and other freshwater bodies, such as lakes, ponds, and reservoirs” and delineate these riparian corridors by the “limit of riparian vegetation,” i.e., a line determined by the existence of plant species normally found near streams, lakes, and other freshwater bodies (County of San Mateo 2013).

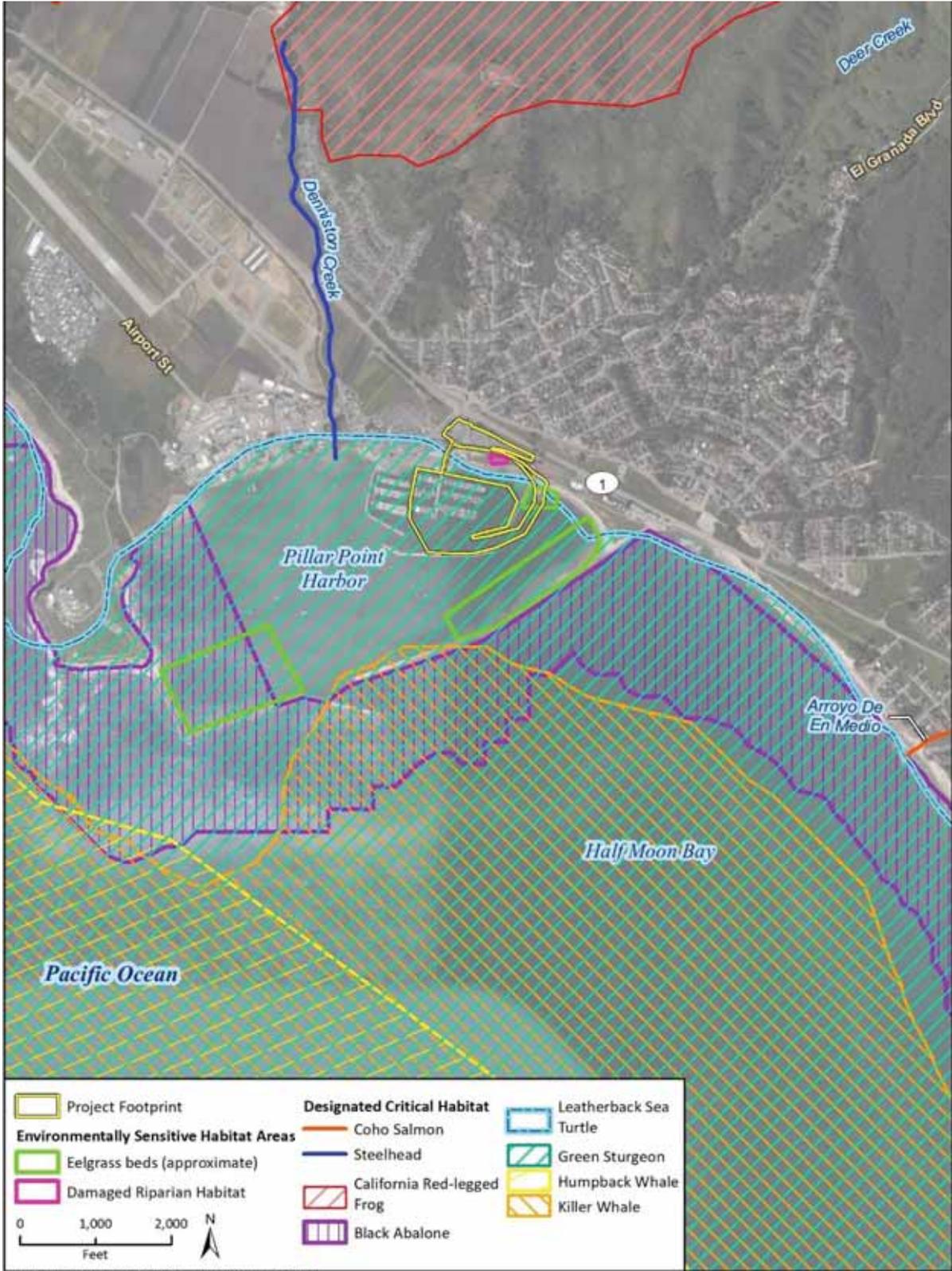
The LCP Mid-Coast Sensitive Habitats Map (County of San Mateo 1984) defines the culverted drainage that flows into Pillar Point Harbor within the Study Area as “damaged riparian habitat,” which is still considered an ESHA. No other terrestrial ESHAs exist within the Study Area. However, the Denniston Creek riparian corridor, the Pillar Point marsh, and the Fitzgerald Marine Reserve occur within 0.5 mile to the north and west of the Study Area and are considered ESHAs.

4.2 Marine Sensitive Biological Resources

4.2.1 Special-status Marine Plant Species

Eelgrass is a flowering marine plant that is designated as a Habitat Area of Particular Concern (HAPC) and EFH by NOAA. Eelgrass was not observed during the survey, as regular dredging likely precludes eelgrass from growing within the inner harbor. However, eelgrass is known to occur within the eastern portion of the Study Area, surrounding the launch ramp. Eelgrass beds are also present south of the Study Area, along the outer harbor breakwaters. The District developed the Pillar Point Harbor-Wide Eelgrass Management and Mitigation Plan in 2020 and restoration efforts are currently being pursued at multiple locations, including Surfer’s Beach, which lies south of the Study Area (Marine Taxonomic Services 2020).

Figure 5 Environmentally Sensitive Habitat Areas and Critical Habitat within the Vicinity of the Study Area



4.2.2 Special-status Marine and Anadromous Wildlife Species

Rincon evaluated 58 wildlife species for their potential to occur within the Study Area. Of these, 16 marine and anadromous species have potential to occur within the Study Area (Appendix D). Table 3 lists each of these species, their federal and state status, and their potential to occur within the marine portion of the Study Area.

Table 3 Special-status Marine and Anadromous Wildlife Species with Potential to Occur within the Study Area

Scientific Name	Common Name	Status	Potential to Occur
Invertebrates			
<i>Haliotis cracherodii</i>	black abalone	FE	Low Potential
Fish			
<i>Acipenser medirostris</i>	green sturgeon – southern DPS	FT/SSC	Low Potential (non-breeding)
<i>Oncorhynchus kisutch</i>	coho salmon - central California coast ESU	FE/SE	Low Potential (non-breeding)
<i>Oncorhynchus mykiss irideus</i>	steelhead - central California coast DPS	FT	Low Potential (non-breeding)
Reptiles			
<i>Caretta caretta</i>	loggerhead sea turtle	FT	Low Potential (non-breeding)
<i>Chelonia mydas</i>	green sea turtle	FT	Low Potential (non-breeding)
<i>Dermochelys coriacea</i>	leatherback sea turtle	FE	Low Potential (non-breeding)
Birds			
<i>Phoebastria albatrus</i>	short-tailed albatross	FE/SSC	Low Potential (non-breeding)
Mammals			
<i>Enhydra lutris nereis</i>	southern sea otter	FT/MMPA	Low Potential
<i>Eschrichtius robustus</i>	gray whale	MMPA	Low Potential
<i>Megaptera novaeangliae</i>	humpback whale	MMPA	Low Potential
<i>Mirounga angustirostris</i>	northern elephant seal	FP/MMPA	Low Potential
<i>Phoca vitulina</i>	harbor seal	MMPA	Present
<i>Phocoena phocoena</i>	harbor porpoise	MMPA	Low Potential
<i>Tursiops truncatus</i>	common bottlenose dolphin	MMPA	Low Potential
<i>Zalophus californianus</i>	California sea lion	MMPA	Present
FE = Federally Endangered	FT = Federally Threatened	SE = State Endangered	
FP = State Fully Protected	MMPA = Marine Mammal Protection Act		

Black Abalone

The black abalone is a federally endangered marine snail that inhabits rocky intertidal and shallow subtidal reefs (to about 18 feet deep) along the Pacific coast. Because they occur in coastal habitats, black abalone can withstand extreme variations in temperature, salinity, moisture, and wave action. Black abalone range from about Point Arena, California, to Bahia Tortugas and Isla Guadalupe, Mexico. They are rarely found north of San Francisco and south of Punta Eugenia. Black abalone adults feed on many types of algae, including giant brown kelp, feather boa kelp (*Egregia menziesii*), and bull kelp (*Nereocystis luetkeana*) (NOAA 2021d).

Critical habitat for the species exists approximately 0.18 mile south of the Study Area, just outside of the outer Pillar Point Harbor breakwaters (NOAA 2021b). Natural rocky intertidal and shallow subtidal reef habitats are not present within the Study Area, but the species has a low potential to occur on rocks in breakwaters within the Study Area.

Southern DPS Green Sturgeon

Green sturgeon are found in nearshore marine waters ranging from Mexico to the Bering Sea. They are common in bays and estuaries along the west coast of the Americas. Although San Francisco Bay and its tributaries are thought to contain a majority of the Southern DPS green sturgeon population, coastal marine waters along the coast are important for seasonal migration of adults and sub-adult green sturgeon from Southern California to Alaska (NOAA 2022d). The Study Area falls within designated critical habitat for the Southern DPS of green sturgeon, which includes all coastal marine waters north of Monterey Bay between mean lower low water (MLLW) and 360 feet (NOAA 2021b). While the species is unlikely to occur within the inner portion of Pillar Point Harbor, there is a low potential for the green sturgeon to transit or forage within the Study Area.

Central California Coast ESU Coho Salmon

The Central California Coast ESU of coho salmon is federally endangered. This ESU includes populations from Punta Gorda to the San Lorenzo River, California and covers the southern extent of the species. Coho are anadromous and spawn in freshwater before entering the ocean to feed for a period of time. Following spawning, juveniles inhabit freshwater for at least one summer before migrating to the ocean to feed, grow, and mature before returning to freshwater to spawn (NOAA 2022d). Coho salmon need cool, clean water that flows unimpaired and unconstrained from its headwaters to the ocean.

Critical habitat for Central California Coast coho has been designated in Arroyo de en Medio Creek, which flows into the Pacific Ocean approximately 1.1 miles southeast of the Study Area. Freshwater spawning habitat for the species does not occur within the Study Area, but there is a low potential for coho salmon to transit and/or feed within waters in or near the Study Area.

Central California Coast DPS Steelhead

The Central California Coast DPS of steelhead is federally threatened. This DPS includes all naturally spawned populations of steelhead (and their progeny) in streams from the Russian River to Aptos Creek, Santa Cruz County, California. Steelhead is the term used to denote the anadromous life-history form of rainbow trout (*O. mykiss*)³. Central California Coast steelhead are winter-run salmonids, meaning that adults enter freshwater between November and April to spawn. Steelhead are capable of surviving in a wide range of temperature conditions within freshwater and estuarine environments, but prefer temperatures less than 57 °F. Eggs tend to experience mortality at temperatures greater than 55 °F, and steelhead appear to have difficulty obtaining sufficient oxygen from water temperatures greater than 70 °F. Elevated summer water temperatures within have been identified as a problem. Steelhead do best where dissolved oxygen concentrations are at least seven parts per million. In streams, deep low-velocity pools are important wintering habitats. Spawning habitat consists of gravel substrates that are free of excessive silt (CDFW 1996).

³ Because both anadromous and resident *O. mykiss* may potentially occur in a given watershed, the term *O. mykiss* is used in situations where distinguishing juvenile steelhead from resident rainbow trout would be problematic. Preservation of both life-history forms is considered a high priority in the *Final Coastal Multispecies Recovery Plan* (NMFS 2016).

Critical habitat for Central California Coast DPS steelhead has been designated in Denniston Creek, which flows into Pillar Point Harbor approximately 0.2 mile west of the Study Area. Freshwater spawning habitat for the species does not occur within the Study Area, but there is a low potential for steelhead to transit and/or feed within waters in or near the Study Area.

Loggerhead, Green, and Leatherback Sea Turtles

The North Pacific DPS of loggerhead sea turtle is federally endangered. Loggerheads occur globally throughout temperate and tropical regions of the Atlantic, Pacific, and Indian Oceans. Within the eastern Pacific Ocean, loggerheads have been reported as far north as Alaska, and as far south as Chile with numerous records off the coast of California (NOAA 2022d).

The East Pacific DPS of green sea turtle is federally threatened. Green sea turtles primarily nest in the Hawaiian Islands, U.S. Pacific Island territories, Puerto Rico, the Virgin Islands, and the east coast of Florida. Adults migrate from foraging areas to nesting beaches and may travel hundreds or thousands of kilometers each way. Green Sea Turtles are occasionally seen along the California Coast, often in El Niño years when the ocean temperature is higher than normal (NOAA 2022d).

The leatherback sea turtle is federally endangered throughout its range, with one Northwest Atlantic DPS a candidate for listing. The species undertake long migrations between breeding and feeding areas and spend most of their lives in the ocean. The species feeds primarily on jellies in both deep and shallow waters off the Pacific coast of North America and migrates across the Pacific for nesting. Critical habitat for the species exists within all marine portions of the Study Area below the extreme low tide line.

Breeding habitat for sea turtles does not occur within the Study Area. There is a low potential for these three species to transit or forage within the Study Area.

Short-tailed Albatross

The short-tailed albatross is a federally endangered species and a CDFW SSC. This pelagic species forages at sea, often in the productive waters in the Gulf of Alaska, Aleutian Islands, and Bering Sea but occasionally along the coast of California. Nesting occurs on small, isolated Pacific islands, including Midway Atoll and Tori-shima Island (Cornell Lab of Ornithology 2022a).

Breeding habitat for the species does not occur within the Study Area and the species is rarely sighted along the California coast. However, several non-breeding occurrences of the species are documented in Pillar Point Harbor in eBird (Cornell Lab of Ornithology 2022b) and the species has a low potential to fly over or forage within the Study Area.

Southern Sea Otter

The southern sea otter is a federally threatened species that is also protected by the MMPA. Southern sea otters are typically found in shallow nearshore marine environments from about Año Nuevo in San Mateo County to Point Conception in Santa Barbara County. They are especially likely to inhabit rocky marine habitats where kelp forests grow, as kelp beds serve as vital resting, foraging, and nursery sites for the species (NOAA 2022d). Sea otters are known for using rocks as tools while eating and forage in kelp forests and rocky intertidal areas for invertebrates such as crabs, clams, barnacles, abalone, and sea urchins. Sea otters lack the blubber that keeps other marine mammals warm and rely on their thick fur coat to protect them from hypothermia. Sea otters must also eat 25% of their body weight each day to maintain their high metabolism. Sea otter breeding peaks between September and November and they most often birth pups between

late February and early April (USFWS 2022e). Sea otters are not common within Pillar Point Harbor but have been previously observed within the inner harbor (USACE 2006). The species has a low potential to transit and/or forage within the Study Area.

Gray Whale and Humpback Whale

The western North Pacific DPS gray whale is listed as FE and the eastern North Pacific DPS population was once listed but has successfully recovered and was delisted in 1994 (NOAA 2022d). Gray whales are found mainly in shallow coastal waters in the North Pacific Ocean and most spend the summers feeding in the northern Bering and Chukchi seas. Some gray whales also feed along the Pacific coast from southeast Alaska to northern California during the summer. Gray whales are primarily bottom feeders that consume a wide range of benthic and epibenthic invertebrates by sucking in sediment from the sea floor and filtering it through coarse baleen plates. In the fall, gray whales migrate from their summer feeding grounds, heading south along the coast of North America to spend the winter in their wintering and calving areas off the coast of Baja California, Mexico. Calves are born during migration or in the shallow lagoons and bays of Mexico from early January to mid-February. From mid-February to May, gray whales can be seen migrating northward along the west coast of California (NOAA 2021d).

Humpback whales are divided into 14 DPSs, four of which are listed as FE, with one listed as FT. The Central American DPS (FE) and Mexico DPS (FT) both feed and travel off the coast of California during the spring, summer, and fall (NOAA 2021d). While calving, humpbacks prefer shallow, warm waters commonly near offshore reef systems or shores. Humpback whale feeding grounds are generally in cold, productive waters. Some humpback whales migrate from Alaska to Hawaii, while others migrate from Alaska to Mexico (NOAA 2021d). Migrations between winter regions and feeding areas off the coast of California do not follow a simple pattern, though humpbacks are most commonly seen feeding in nearshore areas along the California coast during the summer. Critical habitat for the humpback whale exists within the Pacific Ocean, approximately 1.2 miles southwest of the Study Area.

Gray and humpback whales are unlikely to occur within the inner breakwaters in Pillar Point Harbor Marina, but both species have a low potential to transit or forage within the Study Area.

Northern Elephant Seal

The northern elephant seal is State fully protected species and is also protected by the MMPA. Northern elephant seals breed in the Channel Islands and along the central coast of California and give birth from December to March. Individuals may occur on land to breed, rest, and/or molt, typically on sandy or rocky areas along the coastline. The majority of their life is spent in the water diving and foraging for food (NOAA 2022d). Suitable beach habitat for breeding is not present within the Study Area, but the species has a low potential to transit and/or forage within Pillar Point Harbor.

Harbor Seal

The harbor seal is protected by the MMPA and inhabits temperate coastal habitats along the entire coast of California. The species hauls out on rocks, reefs, and beaches to rest, regulate body temperature, give birth, nurse pups, and molt. Harbor seals feed in both deep and shallow coastal waters and their diet consists primarily of fish, crustaceans, and mollusks (NOAA 2022d).

Harbor seals were observed within the Study Area during the field survey and have been frequently documented within Pillar Point Harbor (USACE 2015).

Harbor Porpoise and Common Bottlenose Dolphin

The harbor porpoise is protected by the MMPA and occurs globally in temperate, subarctic, and arctic coastal and offshore waters. The species is commonly found in coastal areas, bays, estuaries, harbors, and fjords and is most often seen in groups of under ten individuals. Diet consists primarily of schooling fish and occasionally includes squid and octopus (NOAA 2022d).

The common bottlenose dolphin is protected by the MMPA and occurs in temperate and tropical waters around the world. The species inhabits a wide variety of habitats, including harbors, bays, gulfs, and estuaries, as well as nearshore coastal waters, deeper waters over the continental shelf, and even far offshore in the open ocean. Diet consists of a variety of prey species, including fish, squid, and crustaceans (NOAA 2022d).

The harbor porpoise and common bottlenose dolphin are unlikely to occur within Pillar Point Harbor due to the breakwaters which separate the harbor from the ocean. However, both of these cetacean species have a low potential to transit or forage within the Study Area.

California Sea Lion

The California sea lion is protected by the MMPA and occurs in the shallow waters of the eastern North Pacific Ocean. The species prefers sandy beaches or rocky coves for breeding and hauling out, though they also occur on marina docks, jetties, and buoys along the west coast. Their primary breeding range is from the Channel Islands to central Mexico. California sea lions primarily feed offshore on a variety of prey species, including squid, anchovies, mackerel, rockfish, and sardines (NOAA 2022d).

California sea lions were observed within the Study Area during the field survey.

4.2.3 Essential Fish Habitat, Critical Habitat, Habitat Areas of Particular Concern, and Environmentally Sensitive Habitat Areas

Essential Fish Habitat

EFH is defined as those waters and substrate necessary to fish for spawning, breeding, feeding, or growing to maturity. Substrate includes the sediment, hard bottom, structures underlying the waters and the associated biological communities. Terrestrial and nearshore portions of the Study Area fall within designated EFH for coho salmon. Marine portions of the Study Area lie within EFH for groundfish, coastal pelagic species, finfish, and krill (*Thysanoessa spinifera*, *Euphausia pacifica*, and other krill species). EFH for groundfish and pelagic species exists from MHHW to a depth of 3,500 meters (NOAA 2022b) and includes all sandy subtidal portions of the Study Area. Eelgrass beds within the Study Area are also considered EFH. Figure 5 depicts the extent of EFH within one mile of the Study Area.

Figure 6 Essential Fish Habitat within the Vicinity of the Study Area



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Additional data provided by NOAA.

Critical Habitat

The Study Area lies within designated critical habitat for Southern DPS green sturgeon, which occurs along the entire Pacific coast from Santa Cruz, California to Washington state. The Study Area also lies within critical habitat for the leatherback sea turtle, which covers the coast of California from Point Sur to Point Arena, from the line of extreme low water offshore to the 3000-meter isobath (NOAA 2021b).

Critical habitat for black abalone lies approximately 0.18 mile south of the Study Area, just outside the outer Pillar Point Harbor breakwaters. Critical habitat occurs along the coastline from mean higher high water (MHHW) to a depth of six meters (NOAA 2021b). No naturally occurring rocky intertidal habitat is present within the Pillar Point Harbor, though there is a low potential for the species to occur on breakwaters within the Study Area.

Critical habitat for the killer whale (*Orcinus orca*) exists within the Pacific Ocean approximately 0.1 mile south of the Study Area and encompasses a small portion of the outer Pillar Point Harbor.

Critical habitat for Central California Coast DPS steelhead occurs within Denniston Creek, which flows into Pillar Point Harbor approximately 0.2 mile west of the Study Area. Critical habitat for Central California Coast ESU coho salmon exists within Arroyo de en Medio Creek, approximately 1.1 miles southeast of the Study Area. Critical habitat for these salmonid species is also present in other freshwater streams within several miles south and east of Pillar Point Harbor.

Critical habitat for the humpback whale exists within the Pacific Ocean approximately 1.2 miles southwest of the Study Area.

Figure 5 depicts all designated critical habitat within one mile of the Study Area.

Habitat Areas of Particular Concern

Two HAPC are mapped by NOAA within Pillar Point Harbor: rocky reefs and estuaries (NOAA 2022b). However, naturally occurring rocky reefs and estuarine habitat are not present within the Study Area, but are located further west within the harbor. Eelgrass beds are also considered HAPC and are known to occur within the eastern portion of the Study Area, surrounding the launch ramp. Eelgrass beds are also present south of the Study Area, along the outer harbor breakwaters (Marine Taxonomic Services 2020). Figure 5 depicts the approximate location of mapped eelgrass beds within Pillar Point Harbor.

Environmentally Sensitive Habitat Areas

The San Mateo County LCP defines marine and estuarine habitats as ESHA. The LCP defines marine and estuarine habitats as "habitats of any marine-dependent plant or animal located in or near the Pacific Ocean or San Francisco Bay, including beaches, offshore reefs, kelp beds, tide pools, sea caves, islets and offshore rocks, sea cliffs, bays and estuaries." ESHA within marine portions of the Study Area therefore include all marine habitat below MHHW, including the eelgrass beds that occur near the Pillar Point Harbor launch ramp (Figure 5). Rocky reefs and kelp beds also occur within 0.5 mile to the northwest of the Study Area.

4.2.4 Species Protected by Fisheries Management Plans

Pacific Salmonid Fishery Management Plan

The current Pacific Salmon Fisheries Management Plan (FMP) provides management protection for natural and hatchery salmon species off the coasts of Washington, Oregon, and California. These species include Chinook (*Oncorhynchus tshawytscha*), coho, pink (*Oncorhynchus gorbuscha*) (in odd-numbered years), and all salmon protected under the ESA except steelhead. The EFH designated for these species includes marine waters from the shoreline to the boundary of the exclusive economic zone (EEZ; 200 miles offshore) and estuarine and freshwater habitat within Washington, Oregon, California, and Idaho. Of the species protected by this FMP, only coho salmon have potential to occur within the Study Area.

Pacific Groundfish Fishery Management Plan

The Pacific Coast Groundfish FMP provides protection for 83 groundfish species throughout the Pacific Coast of the United States. Because groundfish species are widely dispersed during certain life stages, EFH for groundfish species is correspondingly large. Designated EFH for Pacific Coast Groundfish includes all waters from depths less than or equal to 3,500 meters to MHHW or the upriver extent of saltwater intrusion in river mouths along the coasts of Washington, Oregon, and California. The Pacific Coast Groundfish FMP describes seven habitat units that comprise Pacific groundfish EFH: estuarine, rocky shelf, non-rocky shelf, canyon, continental slope and basin, neritic zone, and oceanic zone. Habitat areas of particular concern include estuary, sea grass, kelp canopy, and rocky habitats. Many groundfish species have potential to occur within the Study Area, including rockfish (*Sebastes* spp.) and lingcod (*Ophiodon elongatus*).

Coastal Pelagic Fishery Management Plan

The Coastal Pelagic FMP provides protection for commercial pelagic species, including four finfish: Pacific sardine (*Sardinops sagax*), Pacific mackerel (*Scomber japonicus*), northern anchovy (*Engraulis mordax*), and Jack mackerel (*Trachurus symmetricus*); market squid (*Loligo opalescens*); and various species of krill and other euphausiids. The EFH for the finfish species and squid includes all marine and estuarine waters from the shoreline along the coasts of California, Oregon, and Washington, offshore to the limits of the EEZ where sea surface temperatures range between 50 and 78 °F (i.e., above the thermocline). The EFH for krill extends the length of the West Coast from the shoreline to a depth of approximately 1,300 feet. All of these species have some potential to occur within the Study Area.

4.3 Jurisdictional Waters and Wetlands

The United States Army Corp of Engineers (USACE) asserts jurisdiction under Section 404 of the Clean Water Act (CWA) over non-wetland (e.g., streams, lakes, oceans) and wetland (e.g., marshes, estuaries) waters of the U.S. that typically exhibit a hydrologic surface connection to traditionally navigable waters. The limits of jurisdiction extend to the Ordinary High Water Mark (OHWM) for non-tidal waters or High Tide Line (HTL) for tidal waters, and to the edge of those wetlands abutting or, in some cases, adjacent to non-wetland waters of the U.S. that exhibit all three criteria defining federal wetlands: hydric soils, hydrophytic vegetation, and wetland hydrology. The Regional Water Quality Control Board (RWQCB) has jurisdiction over waters of the U.S. under Section 401 of the CWA. The RWQCB may also assert jurisdiction over waters of the State, typically considered

“isolated,” under the Porter-Cologne Water Quality Control Act. The CDFW has regulatory authority over activities that divert, obstruct, or alter the channel, bed, or bank of any river, stream, or lake under Section 1600 et seq. of the CFGC. Therefore, perennial, intermittent, and ephemeral streams and associated riparian vegetation also fall under the jurisdiction of the CDFW. Tidally influenced areas are not subject to CDFW jurisdiction. The CCC has a one-parameter definition of wetlands, which states that wetlands must have only one or more of the following three attributes: (1) at least periodically the land supports predominantly hydrophytes; (2) the substrate is predominantly undrained hydric soil; and/or (3) the substrate is non-soil and is saturated with water or covered by shallow water at some time during the growing season of each year. The CCC also regulates activities occurring below the HTL, as does the State Lands Commission.

Since the Study Area includes a portion of the Pacific Ocean, it is also protected under Section 10 of the Rivers and Harbors Act of 1899 (USACE) as well as the plans and policies set forth in the San RWQCB Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan) and the State Water Resources Control Board Ocean Plan. Navigable waters of the U.S. are also regulated under Section 10 of the Rivers and Harbors Act and most proposed activities within the limits defined for navigable waters of the U.S. require a Department of the Army permit, especially if the placement of a new structure or work affects the course, location, or condition of the water body.

Deer Creek is an intermittent stream that historically flowed from the hills northeast of the Study Area into Pillar Point Harbor. The stream has been heavily altered by roadways and other human development, but still conveys runoff from the hills and neighborhood north of the Study Area and likely drains into the northeastern corner of Pillar Point Harbor through the culvert that runs beneath Pillar Point Harbor Boulevard. This culvert also conveys runoff from storm drains in Pillar Point Harbor Boulevard and the upper marina parking areas. Within the Study Area, the intermittent stream has a defined bed and bank and likely only conveys water during and following storm events, though some riparian vegetation (including arroyo willow and California blackberry) is present surrounding the culverted drainage outlet. The drainage is defined as “damaged riparian habitat” by the LCP Mid-Coast Sensitive Habitats Map (County of San Mateo 1984) and is considered ESHA. This culverted drainage within the Study Area may fall under USACE, RWQCB, and CDFW jurisdictions. The drainage and surrounding vegetation may also be considered a wetland under the CCC one-parameter wetland definition, based on the presence of hydrophytes and surface water.

4.4 Wildlife Movement

Wildlife movement corridors, or habitat linkages, are generally defined as connections between areas of suitable habitat that allow for physical and genetic exchange between otherwise isolated wildlife populations. Such linkages may serve a local purpose, such as providing a linkage between foraging and denning areas, or they may be regional in nature. Some habitat linkages may serve as migration corridors, wherein wildlife periodically move away from an area and then subsequently return. Others may be important as dispersal corridors for young wildlife. A group of habitat linkages in an area can form a wildlife corridor network. The California Essential Habitat Connectivity Project, commissioned by the California Department of Transportation (Caltrans) and CDFW, identifies “Natural Landscape Blocks” which support native biodiversity and the “Essential Connectivity Areas” which link them (Spencer et al. 2010).

The northern portion of the Study Area overlaps with an Essential Connectivity Area, and a Natural Landscape Block is mapped approximately 0.5 mile north of the Study Area (Spencer et al. 2010). Terrestrial wildlife movement is limited within the Study Area due to the heavily developed nature

of the site and the presence of major roadways. Small scale habitat corridors exist along roadsides, within ruderal open areas, and within the common reed and arroyo willow stands surrounding the culverted drainage that flows into the harbor. Disturbance-tolerant species, including racoon, coyote, and long-tailed weasel, are most likely to utilize these local wildlife corridors.

Wildlife movement within offshore portions of the Study Area is limited by the Pillar Point Harbor Marina and the inner and outer breakwaters, which separate the harbor from the Pacific Ocean. However, there are resident marine species that move between microhabitats within the harbor and nearshore and pelagic marine species that may utilize the harbor for feeding, rest, or nursery grounds. The Study Area also falls within designated EFH for coho salmon, groundfish, coastal pelagic species, finfish, and krill (*Thysanoessa spinifera*, *Euphausia pacifica*, and other krill species) (NOAA 2022b), and these fish and crustacean species may transit through and/or temporarily seek refuge in Pillar Point Harbor.

4.5 Resources Protected by Local Policies and Ordinances

The Project Area occurs within San Mateo County and the Coastal Zone and is subject to all San Mateo County General Plan and LCP policies and ordinances.

Chapter 1 of the San Mateo County General Plan (County of San Mateo 2013) includes policies to protect vegetative, water, fish, and wildlife resources and includes the following goals and objectives:

1.1 Conserve, Enhance, Protect, Maintain and Manage Vegetative, Water, Fish and Wildlife Resources

Promote the conservation, enhancement, protection, maintenance and managed use of the County's Vegetative, Water, Fish and Wildlife Resources.

1.2 Protect Sensitive Habitats

Protect sensitive habitats from reduction in size or degradation of the conditions necessary for their maintenance.

1.3 Protection and Productive Use of Economically Valuable Vegetative, Water, Fish and Wildlife Resources

Protect the availability and encourage the productive use of the County's economically valuable vegetative, water, fish and wildlife resources in a manner which minimizes adverse environmental impacts.

1.4 Access to Vegetative, Water, Fish and Wildlife Resources

Protect and promote existing rights of public access to vegetative, water, fish and wildlife resources for purposes of study and recreation consistent with the need to protect public rights, rights of private property owners and protection and preservation of such resources.

The following policies offer protections for vegetative, water, and fish and wildlife resources.

1.25 Protect Vegetative Resources

Ensure that development will: (1) minimize the removal of vegetative resources and/or; (2) protect vegetation which enhances microclimate, stabilizes slopes or reduces surface water runoff, erosion or sedimentation; and/or (3) protect historic and scenic trees.

1.26 Protect Water Resources

Ensure that development will: (1) minimize the alteration of natural water bodies, (2) maintain adequate stream flows and water quality for vegetative, fish and wildlife habitats; (3) maintain and improve, if possible, the quality of groundwater basins and recharge areas; and (4) prevent to the greatest extent possible the depletion of groundwater resources.

1.27 Protect Fish and Wildlife Resources

Ensure that development will minimize the disruption of fish and wildlife and their habitats.

Policies 1.28 through 1.33 provide protections for sensitive habitats, which include: the regulation of development within and adjacent to sensitive habitat areas, the establishment of buffer zones adjacent to sensitive habitats, the requirement of permits for land uses and development actions within sensitive habitats and buffer zones, and the establishment of performance criteria and development standards for development permitted within sensitive habitats and buffer zones.

Section 7 of the San Mateo County LCP includes policies to protect Sensitive Habitats, including the following.

7.1 Definition of Sensitive Habitats

Define sensitive habitats as any area in which plant or animal life or their habitats are either rare or especially valuable and any area which meets one of the following criteria: (1) habitats containing or supporting "rare and endangered" species as defined by the State Fish and Game Commission, (2) all perennial and intermittent streams and their tributaries, (3) coastal tide lands and marshes, (4) coastal and offshore areas containing breeding or nesting sites and coastal areas used by migratory and resident water-associated birds for resting areas and feeding, (5) areas used for scientific study and research concerning fish and wildlife, (6) lakes and ponds and adjacent shore habitat, (7) existing game and wildlife refuges and reserves, and (8) sand dunes. Sensitive habitat areas include, but are not limited to, riparian corridors, wetlands, marine habitats, sand dunes, sea cliffs, and habitats supporting rare, endangered, and unique species.

7.2 Designation of Sensitive Habitats

Designate sensitive habitats as including, but not limited to, those shown on the Sensitive Habitats Map for the Coastal Zone.

7.3 Protection of Sensitive Habitats

- a. Prohibit any land use or development which would have significant adverse impact on sensitive habitat areas.
- b. Development in areas adjacent to sensitive habitats shall be sited and designed to prevent impacts that could significantly degrade the sensitive habitats. All uses shall be compatible with the maintenance of biologic productivity of the habitats.

7.4 Permitted Uses in Sensitive Habitats

- a. Permit only resource dependent uses in sensitive habitats. Resource dependent uses for riparian corridors, wetlands, marine habitats, sand dunes, sea cliffs and habitats supporting rare, endangered, and unique species shall be the uses permitted in Policies 7.9, 7.16, 7.23, 7.26, 7.30, 7.33, and 7.44, respectively, of the County Local Coastal Program on March 25, 1986.
- b. In sensitive habitats, require that all permitted uses comply with U.S. Fish and Wildlife and State Department of Fish and Game regulations.

7.5 Permit Conditions

- a. As part of the development review process, require the applicant to demonstrate that there will be no significant impact on sensitive habitats. When it is determined that significant impacts may occur, require the applicant to provide a report prepared by a qualified professional which provides: (1) mitigation measures which protect resources and comply with the policies of the Shoreline Access, Recreation/Visitor-Serving Facilities and Sensitive Habitats Components, and (2) a program for monitoring and evaluating the effectiveness of mitigation measures. Develop an appropriate program to inspect the adequacy of the applicant's mitigation measures.
- b. When applicable, require as a condition of permit approval the restoration of damaged habitat(s) when in the judgment of the Planning Director restoration is partially or wholly feasible.

7.6 Allocation of Public Funds

In setting priorities for allocating limited local, State, or federal public funds for preservation or restoration, use the following criteria: (1) biological and scientific significance of the habitat, (2) degree of endangerment from development or other activities, and (3) accessibility for educational and scientific uses and vulnerability to overuse.

RIPARIAN CORRIDORS

7.7 Definition of Riparian Corridors

Define riparian corridors by the "limit of riparian vegetation" (i.e., a line determined by the association of plant and animal species normally found near streams, lakes and other bodies of freshwater: red alder, jaumea, pickleweed, big leaf maple, narrow-leaf cattail, arroyo willow, broadleaf cattail, horsetail, creek dogwood, black cottonwood, and box elder). Such a corridor must contain at least a 50% cover of some combination of the plants listed.

7.8 Designation of Riparian Corridors

Establish riparian corridors for all perennial and intermittent streams and lakes and other bodies of freshwater in the Coastal Zone. Designate those corridors shown on the Sensitive Habitats Map and any other riparian area meeting the definition of Policy 7.7 as sensitive habitats requiring protection, except for manmade irrigation ponds over 2,500 sq. ft. surface area.

7.9 Permitted Uses in Riparian Corridors

- a. Within corridors, permit only the following uses: (1) education and research, (2) consumptive uses as provided for in the Fish and Game Code and Title 14 of the California Administrative Code, (3) fish and wildlife management activities, (4) trails and scenic overlooks on public land(s), and (5) necessary water supply projects.
- b. When no feasible or practicable alternative exists, permit the following uses: (1) stream dependent aquaculture, provided that non-stream dependent facilities locate outside of corridor, (2) flood control projects, including selective removal of riparian vegetation, where no other method for protecting existing structures in the floodplain is feasible and where such protection is necessary for public safety or to protect existing development, (3) bridges when supports are not in significant conflict with corridor resources, (4) pipelines, (5) repair or maintenance of roadways or road crossings, (6) logging operations which are limited to temporary skid trails, stream crossings, roads and landings in accordance with State and County timber harvesting regulations, and (7) agricultural uses, provided no existing riparian vegetation is removed, and no soil is allowed to enter stream channels.

7.10 Performance Standards in Riparian Corridors

Require development permitted in corridors to: (1) minimize removal of vegetation, (2) minimize land exposure during construction and use temporary vegetation or mulching to protect critical areas, (3) minimize erosion, sedimentation, and runoff by appropriately grading and replanting modified areas, (4) use only adapted native or non-invasive exotic plant species when replanting, (5) provide sufficient passage for native and anadromous fish as specified by the State Department of Fish and Game, (6) minimize adverse effects of waste water discharges and entrainment, (7) prevent depletion of groundwater supplies and substantial interference with surface and subsurface waterflows, (8) encourage waste water reclamation, (9) maintain natural vegetation buffer areas that protect riparian habitats, and (10) minimize alteration of natural streams.

7.11 Establishment of Buffer Zones

- a. On both sides of riparian corridors, from the "limit of riparian vegetation" extend buffer zones 50 feet outward for perennial streams and 30 feet outward for intermittent streams.
- b. Where no riparian vegetation exists along both sides of riparian corridors, extend buffer zones 50 feet from the predictable high water point for perennial streams and 30 feet from the midpoint of intermittent streams.7.4
- c. Along lakes, ponds, and other wet areas, extend buffer zones 100 feet from the high water point except for man-made ponds and reservoirs used for agricultural purposes for which no buffer zone is designated.

7.12 Permitted Uses in Buffer Zones

Within buffer zones, permit only the following uses: (1) uses permitted in riparian corridors; (2) residential uses on existing legal building sites, set back 20 feet from the limit of riparian vegetation, only if no feasible alternative exists, and only if no other building site on the parcel exists; (3) on parcels designated on the LCP Land Use Plan Map: Agriculture, Open Space, or Timber Production, residential structures or impervious surfaces only if no feasible alternative exists; (4) crop growing and grazing consistent with Policy 7.9; (5) timbering in “streamside corridors” as defined and controlled by State and County regulations for timber harvesting; and (6) no new residential parcels shall be created whose only building site is in the buffer area.

7.13 Performance Standards in Buffer Zones

Require uses permitted in buffer zones to: (1) minimize removal of vegetation; (2) conform to natural topography to minimize erosion potential; (3) make provisions (i.e., catch basins) to keep runoff and sedimentation from exceeding pre-development levels; (4) replant where appropriate with native and noninvasive exotics; (5) prevent discharge of toxic substances, such as fertilizers and pesticides; into the riparian corridor; (6) remove vegetation in or adjacent to man-made agricultural ponds if the life of the pond is endangered; (7) allow dredging in or adjacent to man-made ponds if the San Mateo County Resource Conservation District certified that siltation imperils continued use of the pond for agricultural water storage and supply; and (8) limit the sound emitted from motorized machinery to be kept to less than 45-dBA at any riparian buffer zone boundary except for farm machinery and motorboats.

MARINE HABITATS

7.22 Designation of Marine and Estuarine Habitats

Designate all areas containing marine and estuarine habitats as requiring protection, specifically including but not limited to: Fitzgerald Marine Reserve, San Gregorio Estuary, Pescadero Marsh, Pigeon Point, Franklin Point, Año Nuevo Point, and Año Nuevo Island Reserve.

7.23 Permitted Uses in Marine and Estuarine Habitats

In marine and estuarine habitats, permit only the following uses: (1) nature education and research, (2) consumptive uses as provided for in the Fish and Game Code and Title 14 of the California Administrative Code, (3) fishing and (4) fish and wildlife management.

RARE AND ENDANGERED SPECIES

7.32 Designation of Habitats of Rare and Endangered Species

Designate habitats of rare and endangered species to include, but not be limited to, those areas defined on the Sensitive Habitats Map for the Coastal Zone.

7.33 Permitted Uses

- a. Permit only the following uses: (1) education and research, (2) hunting, fishing, pedestrian and equestrian trails that have no adverse impact on the 7.10 species or its habitat, and (3) fish and wildlife management to restore damaged habitats and to protect and encourage the survival of rare and endangered species.

- b. If the critical habitat has been identified by the Federal Office of Endangered Species, permit only those uses deemed compatible by the U.S. Fish and Wildlife Service in accordance with the provisions of the Endangered Species Act of 1973, as amended.

7.34 Permit Conditions

In addition to the conditions set forth in Policy 7.5, require, prior to permit issuance, that a qualified biologist prepare a report which defines the requirements of rare and endangered organisms.

7.35 Preservation of Critical Habitats

Require preservation of all habitats of rare and endangered species using criteria including, but not limited to, Section 6325.2 (Primary Fish and Wildlife Habitat Area Criteria) and Section 6325.7 (Primary Natural Vegetative Areas Criteria) of the Resource Management Zoning District.

7.36 San Francisco Garter Snake (*Thamnophis sirtalis tetrataenia*)

- a. Prevent any development where there is known to be a riparian or wetland location for the San Francisco garter snake with the following exceptions: (1) existing man-made impoundments smaller than one-half acre in surface, and (2) existing man-made impoundments greater than one-half acre in surface providing mitigation measures are taken to prevent disruption of no more than one half of the snake's known habitat in that location in accordance with recommendations from the State Department of Fish and Game.
- b. Require developers to make sufficiently detailed analyses of any construction which could impair the potential or existing migration routes of the San Francisco garter snake. Such analyses will determine appropriate mitigation measures to be taken to provide for appropriate migration corridors.

7.39 Sea Otter (*Enhydra lutris nereis*)

Encourage the appropriate agency to protect, monitor, and enhance sea otter habitats. In the development of mariculture facilities, encourage appropriate State and federal agencies to seek measures to protect them from predation by the sea otter.

UNIQUE SPECIES

7.43 Designation of Habitats of Unique Species

Designate habitats of unique species to include, but not be limited to, those areas designated on the Sensitive Habitats Map for the Coastal Zone.

7.44 Permitted Uses

Permit only the following uses: (1) education and research, (2) hunting, fishing, pedestrian and equestrian trails that have no adverse impact on the species or its habitat, and (3) fish and wildlife management to the degree specified by existing governmental regulations.

7.45 Permit Conditions

In addition to the conditions set forth in Policy 7.5, require, as a condition of permit approval, that a qualified biologist prepare a report which defines the requirements of a unique organism. At minimum, require the report to discuss: (1) animal food, water, nesting or denning sites and reproduction, predation and migration requirements, and (2) plants life histories and soils, climate and geographic requirements.

7.46 Preservation of Habitats

Require preservation of critical habitats using criteria including, but not limited to, Section 6325.2 (Primary Fish and Wildlife Habitat Area Criteria) and Section 6325.7 (Primary Natural Vegetative Areas Criteria) of the Resource Management Zoning District.

7.47 Elephant Seal (*Mirounga angustirostris*)

- a. Encourage affected public agencies to control access to areas where elephant seals congregate.
- b. Enforce trespass laws to restrict access to areas where elephant seals congregate especially during mating, breeding, and molting season.7.13

7.48 Monterey Pine (*Pinus radiata*)

- a. Require any development to keep to a minimum the number of native Monterey pine cut in the natural pine habitat near the San Mateo-Santa Cruz County line.
- b. Allow the commercial cutting of Monterey pine if it: (1) perpetuates the long-term viability of stands, (2) prevents environmental degradation, and (3) protects the viewshed within the Cabrillo Highway Scenic Corridor.
- c. To preserve the productivity of prime agricultural soils, encourage the control of invasive Monterey pine onto the soils.

7.49 California Wild Strawberry (*Fragaria californica*)

Require any development, within one-half mile of the coast, to mitigate against the destruction of any California wild strawberry in one of the following ways:

- a. Prevent any development, trampling, or other destructive activity which would destroy the plant; or
- b. After determining specifically if the plants involved are of particular value, successfully transplant them or have them successfully transplanted to some other suitable site. Determination of the importance of the plants can only be made by a professional doing work in strawberry breeding.

Section 12 of the LCP includes policies related to Commercial Fishing and Recreational Boating.

4.6 Adopted or Approved Plans

The proposed project does not occur within any Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, conservation plans are not addressed further within this analysis.

5 Impact Analysis and Mitigation Measures

This section discusses the potential impacts and effects to special-status species and sensitive biological resources that may occur from implementation of the Project and provides recommended mitigation measures that would reduce those impacts where applicable. The analysis and recommendations are based on the CEQA Guidelines Appendix G Initial Study Checklist; therefore, Section 5 is organized according to the threshold criteria therein.

5.1 Special-status Species

The Project would have a significant effect on biological resources if it would:

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

5.1.1 Special-status Plant Species

Three special-status plant species have a low potential to occur within the Study Area: rose leptosiphon (CRPR 1B.1), Ornduff's meadowfoam (CRPR 1B.1), and Choris' popcornflower (CRPR 1B.2). Project impacts will only occur within previously disturbed terrestrial areas, including paved parking lots and roads. Project activities are not expected to impact any potential habitat for special-status plant species. Therefore, no impacts to special-status plant species would occur and no measures are recommended.

5.1.2 Special-status Wildlife Species

Terrestrial Species

Eighteen special-status wildlife species have potential to occur within terrestrial portions of the Study Area. California red-legged frog (FT), Santa Cruz black salamander (CDFW SSC), San Francisco garter snake (FE, SE), burrowing owl (CDFW SSC), saltmarsh common yellowthroat (CDFW SSC), bank swallow (ST), pallid bat (CDFW SSC), and Townsend's big-eared bat (CDFW SSC) all have a low potential to occur on site. The monarch butterfly (FC), marbled murrelet (FT, SE), western snowy plover (FT, CDFW SSC), American peregrine falcon (FP), and least tern (FE, SE, FP) all have a moderate potential to occur. Cooper's hawk (CDFW WL), white-tailed kite (FP), and merlin (CDFW WL) have a high potential to occur. Double-crested cormorants (CDFW WL) and California brown pelicans (FP) are present within the Study Area. Nesting special-status bird species and/or nesting birds protected under the MBTA and CFGC have potential to occur in the Study Area during the nesting season.

Potential impacts to each of the special-status wildlife species with potential to occur within the Project Area, as well as measures for reducing impacts to less than significant, as necessary, are described below. Adherence to agency permits and/or agreements that will be required for Project implementation will also ensure that any potential impacts to special-status species are reduced to less than significant.

California Red-legged Frog, Santa Cruz Black Salamander, and San Francisco Garter Snake

CRLF has a low potential to occur within the Study Area during dispersal and is most likely to be present near the culverted drainage that flows under Pillar Point Harbor Boulevard and outlets at the harbor. The Santa Cruz black salamander also has a low potential to occur in the Study Area, within leaf litter or woody debris near the culverted drainage. The San Francisco garter snake has a low potential to occur within the Study Area during dispersal and is also most likely to occur near the culverted drainage.

Suitable breeding habitat for these species does not occur in the Project Area. Project activities are not expected to impact any terrestrial habitat outside of paved roads and parking lots. Should any CRLFs, Santa Cruz black salamanders, or San Francisco garter snakes occur within the vicinity of Project activities, implementation of Mitigation Measures BIO-1, BIO-2, BIO-5, and BIO-6 would reduce any potential impacts to less than significant.

Monarch Butterfly

Monarch butterflies have moderate potential to pass through the Study Area, but no suitable roosting habitat for the species is present on site. Therefore, no impacts to the California overwintering population of monarchs are expected.

Special-status Bat Species

The pallid bat and Townsend's big-eared bat have low potential to occur in the Study Area. Marginally suitable roosting habitat for the species exists in trees and buildings within the Study Area, though roosting is not expected due to the high level of human activity. Individuals have a low potential to pass through the Project Area during night hours when project activities are not expected to occur. Should any pallid bats or Townsend's big-eared bats occur within the vicinity of Project activities, implementation of Mitigation Measures BIO-1, BIO-2, and BIO-5 would reduce any potential impacts to less than significant.

Special-status Raptors

The Cooper's hawk, white-tailed kite, and merlin all have a high potential to occur within the Study Area. Of these, only the Cooper's hawk has potential to nest in the Project Area. Potentially suitable nesting habitat for the Cooper's hawk exists within Monterey cypress, Monterey pine, and landscaped trees surrounding roads and parking lots within the Project Area. The American peregrine falcon has a moderate potential to occur and the burrowing owl has a low potential to occur, though neither species has potential to nest in the Project Area. Should these raptor species occur in the Project Area, potential Project impacts could include injury or mortality to individuals. Should the Cooper's hawk nest on site, Project activities could potentially result in nest abandonment. The loss of a nest due to construction activities would be a violation of the MBTA and CFGC Section 3503. Implementation of Mitigation Measures BIO-1 through BIO-6 would reduce potential impacts to special-status raptors to less than significant.

Other Special-status Bird Species

The saltmarsh common yellowthroat and bank swallow both have a low potential to fly through or forage within the Study Area. The marbled murrelet, western snowy plover, and least tern all have a moderate potential to fly over or forage within the Study Area. The double-crested cormorant and

California brown pelican are both present within the Study Area. Suitable nesting habitat does not exist within the Project Area for any of these species. Should these species be present during the Project, potential direct impacts could include mortality or injury of individuals. Implementation of Mitigation Measures BIO-1 through BIO-6 would reduce potential impacts to special-status birds to less than significant.

Nesting Birds

Migratory birds protected under the MBTA and nesting birds and raptors protected under CFGC Section 3503 have the potential to breed throughout the Project Area during the nesting season (February 1 to September 15). Potential nesting habitat on site could include landscaped trees and shrubs including *Acacia* and boxwood, native trees including Monterey pine and Monterey cypress, reeds, willows, and other vegetation, human-made structures, and the ground surface.

Should any birds nest on or near the Project Area, Project activities could directly impact breeding by destroying the nest, or through disruption of normal biological behaviors during construction of the Project resulting in nest failure. Indirect impacts could include disturbance of breeding habitat. The loss of a nest or disturbance of nesting habitat due to construction activities would be a violation of the MBTA and CFGC Section 3503. Implementation of Mitigation Measures BIO-1 through BIO-6 would reduce potential impacts to nesting birds to less than significant.

Marine and Anadromous Species

Fourteen special-status marine and anadromous species have potential to occur within the Study Area. The green sturgeon (FT, CDFW SSC), CCC coho salmon (FE, SE), and CCC steelhead (FT) all have low potential to transit or forage within Pillar Point Harbor, though suitable breeding habitat for these anadromous species does not occur within the Study Area. Loggerhead (FT), green (FT), and leatherback (FE) sea turtles all have a low potential to transit or forage within Pillar Point Harbor, though breeding habitat is not present. The short-tailed albatross (FE, CDFW SSC) has a low potential to fly over or forage within Pillar Point Harbor, though the Study Area is outside of its known breeding range. The gray whale (MMPA), humpback whale (MMPA), southern sea otter (FT, MMPA), northern elephant seal (FP, MMPA), harbor porpoise (MMPA), and common bottlenose dolphin (MMPA) all have a low potential to occur within Pillar Point Harbor. The harbor seal (MMPA) and California sea lion (MMPA) are both present within the Study Area.

Potential impacts to each of the special-status wildlife species with potential to occur within the Project Area, as well as measures for reducing impacts to less than significant, as necessary, are described below. Adherence to agency permits and/or agreements that will be required for Project implementation will also ensure that any potential impacts to marine special-status species are reduced to less than significant.

Anadromous Fishes

Southern DPS green sturgeon, Central California Coast coho salmon, and Central California Coast steelhead all have low potential to transit or forage within Pillar Point Harbor, though suitable breeding habitat for these anadromous species does not occur within the Study Area. Potential impacts to these species could result from Project activities if equipment within the water were to directly injure or kill any individuals. Impacts to water quality (e.g., turbidity, suspended sediment) could also affect fish species by reducing visibility, impairing foraging ability, or clogging gills. Indirect impacts to substrate or benthic prey could also occur from Project activities. However, turbidity from in-water Project activities would be temporary and localized and would be unlikely to

impact foraging or clog gills. Additionally, impacts to any benthic prey would be localized and within the vicinity of existing pier and dock structures and would not result in a long-term effect on potential food sources. Implementation of Mitigation Measures BIO-1 through BIO-6 would reduce potential impacts to special-status fishes to less than significant.

Sea Turtles

Loggerhead, green, and leatherback sea turtles all have a low potential to transit or forage within the Study Area, though breeding habitat is not present. No Project activities are anticipated to have an adverse change to their environment. However, if the species are present in the Project Area during in-water construction, potential impacts could include mortality or injury of individuals. Implementation of Mitigation Measures BIO-1 through BIO-6 would reduce potential impacts to sea turtles to less than significant.

Short-tailed albatross

The short-tailed albatross is rarely seen along the California coast, but has a low potential to fly over or forage within the Study Area. The species breeds in the South Pacific and no breeding habitat for the species occurs within the Study Area. No Project activities are anticipated to have an adverse change to their environment. However, if the species is present in the Project Area during in-water construction, potential impacts could include mortality or injury of individuals. Implementation of Mitigation Measures BIO-1 through BIO-6 would reduce potential impacts to the short-tailed albatross to less than significant.

Marine Mammals

The Study Area contains habitat that supports resident, foraging and transiting special status marine mammals, including both pinnipeds and cetaceans protected under the MMPA. The gray whale, humpback whale, southern sea otter, northern elephant seal, harbor porpoise, and common bottlenose dolphin all have a low potential to occur within the Study Area. The harbor seal and California sea lion are both present within the Study Area. Should marine mammals be present during in-water construction, potential direct impacts could include injury or mortality of individuals, as well as loss of hearing sensitivity or disturbance of normal behavior due to high-intensity noise from pile driving. Marine mammals exposed to high-intensity sound repeatedly or for prolonged periods can experience hearing threshold shift, which is the loss of hearing sensitivity at certain frequency ranges (Kastak et al. 1999). A permanent threshold shift is said to occur when the loss of hearing sensitivity is unrecoverable. Noise can also cause other forms of disturbance when marine mammals alter their normal patterns of behavior to move away from the source. Based on NMFS (2018) Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing, a temporary threshold shift of 6 decibels is considered the minimum threshold shift clearly larger than the animal's normal hearing ability. A temporary threshold shift is a temporary, reversible increase in the threshold of audibility at a specified frequency or portion of an individual's hearing range above a previously established reference level. Indirect impacts to marine mammals could include alteration or disturbance of foraging or haul-out habitat. Implementation of Mitigation Measures BIO-1 through BIO-6 would reduce potential impacts to marine mammals to less than significant.

Recommended Mitigation Measures for Special-status Wildlife Species

BIO-1 Worker Environmental Awareness Program (WEAP)

Prior to initiation of Project activities (including staging and mobilization), all personnel associated with Project construction should attend WEAP training, conducted by a qualified biologist, to aid workers in recognizing special-status terrestrial and marine species, native birds, and other biological resources that may occur in the Project Area. The specifics of this program should include identification and habitats of special-status species with potential to occur at the Project Area, a description of the regulatory status and general ecological characteristics of sensitive resources, and review of the limits of construction and mitigation measures required to reduce impacts to biological resources within the work area. A fact sheet conveying this information should also be prepared for distribution to all contractors, their employers, and other personnel involved with construction. All employees should sign a form provided by the trainer indicating they have attended the WEAP and understand the information presented to them. A WEAP training recorded by a qualified biologist specifically for the Project may be utilized if in-person trainings are restricted due to COVID-19 or if the construction schedule makes it infeasible for a biologist to train each new crew member in person.

BIO-2 General Best Management Practices

The following Best Management Practices (BMPs) should be followed by Project personnel to promote pollution prevention and minimize the introduction of pollutants into coastal waters.

- Project-related vessels should observe the no wake zone limit within limits of the Project.
- During construction, heavy equipment should be operated in accordance with standard BMPs. All equipment should be properly maintained such that no leaks of oil, fuel, or residues will take place. Provisions should be in place to remediate any accidental spills. Materials should be stored at least 50 feet from water features, as feasible, or equipment will utilize secondary containment.
- Spill prevention and control measures should be implemented to ensure the proper handling and storage of petroleum products and other construction materials. Including a designated fueling and vehicle maintenance area with appropriate berms and protection to prevent any spillage of gasoline or related petroleum products or contact with runoff.
- All food-related trash shall be disposed of in closed containers and removed from the Project Area each day during the construction period. Project personnel shall not feed or otherwise attract wildlife to the Project Area.
- At Project completion, all Project-generated debris, vessels, vehicles, building materials, and rubbish shall be removed from the Project footprint.

BIO-3 Preconstruction Surveys for Nesting Birds, Marine Mammals, and Sea Turtles

Project activities should be restricted to the non-breeding season (September 16 to January 31) when feasible. If Project activities occur during the nesting bird season (February 1 to September 15), the following mitigation measures are recommended to reduce impacts to protected species and other nesting birds protected by CFGC and the MBTA.

- A preconstruction nesting bird survey should be conducted by a qualified biologist no more than 14 days prior to initiation of Project activities. The survey should be conducted within the Project Area and include a 50-foot buffer for passerines and seabirds and a 500-foot buffer for

raptors. The survey should be conducted by a biologist familiar with the identification of avian species known to occur in the region and should focus on trees, vegetated areas, and potential nesting habitat on breakwaters, piers, or docks. If nests are found, an appropriate avoidance buffer (typically 50 feet for passerine species and 500 feet for raptors) will be determined and demarcated by the biologist with high visibility material.

All Project personnel should be notified as to the existence of the buffer zones and to avoid entering buffer zones during the nesting season. No Project activities should occur within the buffer until the avian biologist has confirmed that breeding/nesting is complete and the young have fledged the nest. Encroachment into the buffer should occur only at the discretion of the qualified biologist.

- A preconstruction survey for marine mammals and sea turtles should be conducted by a qualified biologist no more than 48 hours prior to the start of construction, or as otherwise required by NMFS. Should marine mammal or sea turtle species be observed within the Project Area or any portion of the inner Pillar Point Harbor during the preconstruction survey, then further avoidance and mitigation measures will be required. These measures may include marine mammal monitoring during pile driving activities.

This measure may be superseded or added to by resource agency permits and incidental take authorizations.

BIO-4 Pile Driving Operational Measures

A “soft-start” technique will be used to allow fish and marine mammals to vacate the area before the pile driver reaches full power. For vibratory hammers, the contractor will initiate the driving for 15 seconds at reduced energy, followed by a 1-minute waiting period when there has been downtime of 30 minutes or more. This procedure shall be repeated two additional times before continuous driving is started. This procedure would also apply to vibratory pile extraction. For impact driving, an initial set of three strikes would be made by the hammer at 40 percent energy, followed by a 1-minute waiting period, then two subsequent three-strike sets before initiating continuous driving.

5.2 Sensitive Natural Communities

The proposed Project would have a significant effect on biological resources if it would:

- b) Have a substantial adverse impact on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.*

Sensitive Plant Communities

Sensitive plant communities do not occur within the Study Area. Therefore, no impacts from the Project will occur to sensitive plant communities.

Species Protected by Fisheries Management Plans

Coho salmon are protected by the Pacific Salmonid FMP and could be present within the Study Area. Multiple groundfish species protected by the Groundfish FMP have potential to occur within the Study Area. Multiple pelagic fish species protected by the Coastal Pelagic FMP have potential to

occur within the Study Area. Project activities are not expected to have any significant impacts to these populations or the fisheries that depend on them; therefore, no measures are recommended.

Critical Habitat

Critical habitat for Southern DPS green sturgeon occurs within the marine portions of the Project Area. Critical habitat for black abalone occurs approximately 0.18 mile south of the Study Area, outside of the outer harbor breakwaters. Critical habitat for Central California Coast DPS steelhead exists approximately 0.2 mile northwest of the Project Area, within Dennison Creek. Project activities are not expected to result in adverse modification or destruction any federally designated critical habitat; therefore, no measures are recommended.

Environmentally Sensitive Habitat Areas

The culverted drainage that occurs in the northeastern portion of the Study Area is considered an ESHA by the San Mateo County LCP. Pillar Point Harbor is considered a marine/estuarine habitat and is therefore defined as an ESHA by the LCP. Eelgrass beds within Pillar Point Harbor are also considered ESHA by the LCP. Project activities are not expected to impact ESHAs; therefore, no measures are recommended.

Essential Fish Habitat and Habitat Areas of Particular Concern

The Study Area falls within designated EFH for coho salmon, groundfish, coastal pelagic species, finfish, and krill. Eelgrass beds, which are also considered EFH and HACP, are present in the northeastern portion of the Study Area.

The Project will occur within portions of Pillar Point Harbor that are already subject to a high level of human activity and vessel traffic. Project activities are not expected to permanently impact any EFH or HACP. Temporary impacts to these protected areas could include changes to water quality (e.g., turbidity, pH, dissolved oxygen), increased noise, and other increased human activity during construction. Implementation of Mitigation Measures BIO-1 through BIO-6 would reduce any potential impacts to EFH and HACP to less than significant.

5.3 Jurisdictional Waters and Wetlands

The proposed Project would have a significant effect on biological resources if it would:

- 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.*

Potential direct impacts to the Pacific Ocean include short-term and temporary increases in water column turbidity during in-water construction activities. Potential indirect impacts from Project activities could occur if sediment or pollutants were allowed to enter the Pacific Ocean.

The culverted drainage that conveys flow into the northern portion of the Study Area is potentially under the jurisdiction of the USACE, CDFW, RWQCB, and CCC. No direct impacts to this area are anticipated, as the only terrestrial Project activities will be staging/laydown of equipment and materials within the upper marina parking lot and access to the Project area on existing paved roads. Potential indirect impacts from Project activities could occur if sediment or pollutants were allowed to enter the waterway and thereby the harbor and/or Pacific Ocean.

Implementation of Mitigation Measures BIO-5 and BIO-6 would reduce any potential impacts to jurisdictional waters and wetlands to less than significant.

BIO-5 Disturbance Area, Staging, and Materials Storage

Areas of temporary disturbance shall be minimized to the extent practicable. Staging and laydown areas shall be limited to sites that are unvegetated and previously disturbed (e.g., existing parking lots).

Materials shall be stored on impervious surfaces or plastic ground covers to prevent any spills or leakage. Material storage shall be at least 100 feet from the Pacific Ocean and the intermittent stream channel. Any material/spoils from Project activities shall be located and stored 100 feet from potentially jurisdictional areas. Construction materials and spoils shall be protected from stormwater runoff using temporary perimeter sediment barriers such as berms, silt fences, fiber rolls, covers, sand/gravel bags, and straw bale barriers, as appropriate.

BIO-6 Best Management Practices to Protect Jurisdictional Waters

To avoid and/or minimize potential indirect impacts to jurisdictional waters and water quality, the following Best Management Practices shall be implemented within the Project Area:

- a. Prevent the off-site tracking of loose construction and landscape materials by implementing street sweeping, vacuuming, and rumble plates, as appropriate.
- b. Prevent the discharge of silt or pollutants off of the site when working adjacent to potentially jurisdictional waters. Install BMPs (e.g., silt barriers, sand bags, straw bales) as appropriate.
- c. Site washout areas shall be at least 50-feet from a storm drain, open ditch or surface water and ensure that runoff flows from such activities do not enter receiving water bodies.
- d. All vehicles, vessels, and equipment shall be in good working condition and free of leaks. The contractor shall prevent oil, petroleum products, or any other pollutants from contaminating the soil or entering a watercourse (dry or otherwise). When vehicles or equipment are stationary, mats or drip pans shall be placed below vehicles to contain fluid leaks.
- e. All re-fueling, cleaning, and maintenance of equipment will occur at least 50 feet from potentially jurisdictional waters, as feasible.
- f. Any spillage of material will be stopped if it can be done safely. The contaminated area will be cleaned, and any contaminated materials properly disposed. For all spills, the project foreman or other designated liaison will notify the District immediately.
- g. Adequate spill prevention and response equipment shall be maintained on site and readily available to implement to ensure minimal impacts to the aquatic and marine environments.

5.4 Wildlife Movement

The proposed Project would have a significant effect on biological resources if it would:

- d) *Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors or impede the use of wildlife nursery sites.*

The northern portion of the Study Area overlaps with an Essential Connectivity Area and a Natural Landscape Block is mapped approximately 0.5 mile north of the Study Area (Spencer et al. 2010). Marine portions of the Study Area provide small-scale wildlife corridors for resident and migratory

fish and wildlife species and some fish species may utilize Pillar Point Harbor as a nursery or refuge site. However, both terrestrial and marine wildlife movement within the Project Area and surrounding land and waters has long been disrupted by development, commercial fishing, and high levels of human activity surrounding Pillar Point Harbor. Given the existing or ambient level of human activity within the Project Area, construction activities are unlikely to substantially interfere with the movement of any fish or wildlife species or to impede the use of wildlife nursery sites. However, implementation of Mitigation Measures BIO 1 through BIO 4 would ensure that any potential impacts would be less than significant.

5.5 Local Policies and Ordinances

The proposed Project would have a significant effect on biological resources if it would:

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

The San Mateo County General Plan includes policies to protect sensitive habitats and vegetative, water, fish and wildlife resources. Specific policies are listed in Section 4.5 and Appendix A.

Implementation of Mitigation Measures BIO-1 through BIO-6 would ensure that Project activities do not adversely impact any sensitive habitats or vegetative, water, or fish and wildlife resources and that the Project is not in conflict with any local policies or ordinances.

5.6 Adopted or Approved Plans

The proposed Project would have a significant effect on biological resources if it would:

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

The Project Area is not included in any adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plans. Therefore, no conflicts would occur and no additional measures are recommended.

6 Limitations, Assumptions, and Use Reliance

This Biological Resources Assessment has been performed in accordance with professionally accepted biological investigation practices conducted at this time and in this geographic area. The biological investigation is limited by the scope of work performed. Surveys following agency protocols for any specific species potentially occurring in the Project Area were not conducted. Reconnaissance-level biological surveys for certain taxa may have been conducted as part of this assessment but were not performed during a particular blooming period, nesting period, or particular portion of the season when positive identification would be expected if present, and therefore, cannot be considered definitive. The biological surveys are limited also by the environmental conditions present at the time of the surveys. In addition, general biological (or protocol) surveys do not guarantee that the organisms are not present and will not be discovered in the future within the site. In particular, mobile wildlife species could occupy the site on a transient basis or re-establish populations in the future. Our field studies were based on current industry practices, which change over time and may not be applicable in the future. No other guarantees or warranties, expressed or implied, are provided. The findings and opinions conveyed in this report are based on findings derived the specified historical and literature sources (Section 2.2) and the field reconnaissance survey. Standard data sources relied upon during the completion of this report, such as the CNDDDB, may vary with regard to accuracy and completeness. In particular, the CNDDDB is compiled from research and observations reported to CDFW that may or may not have been the result of comprehensive or site-specific field surveys. Although Rincon believes the data sources are reasonably reliable, Rincon cannot and does not guarantee the authenticity or reliability of the data sources it has used. Additionally, pursuant to our contract, the data sources reviewed included only those that are practically reviewable without the need for extraordinary research and analysis.

7 References

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Appendix A

Regulatory Setting

Regulatory Setting

The following is a brief summary of the regulatory context under which biological resources are managed at the federal, state, and local levels. A number of federal and state statutes provide a regulatory structure that guides the protection of biological resources. Agencies with the responsibility for protection of biological resources within the project site include the following:

- U.S. Army Corps of Engineers (wetlands and other waters of the United States)
- U.S. Fish and Wildlife Service (federally listed species and migratory birds)
- National Marine Fisheries Service (marine animals and anadromous fishes)
- Central Coast Regional Water Quality Control Board (waters of the State)
- California Department Fish and Wildlife (riparian areas, streambeds, and lakes; state-listed species; nesting birds, marine resources)
- California Coastal Commission
- California Coastal Act
- Santa Cruz County General Plan

United States Army Corps of Engineers

The United States Army Corps of Engineers (USACE), is responsible for administering several federal programs related to ensuring the quality and navigability of the nation's waters.

Clean Water Act Section 404

Congress enacted the CWA "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Section 404 of the Clean Water Act (CWA) authorizes the Secretary of the Army, acting through the USACE, to issue permits regulating the discharge of dredged or fill materials into the "navigable waters at specified disposal sites."

Section 502 of the CWA further defines "navigable waters" as "waters of the United States, including the territorial seas." "Waters of the United States" are broadly defined at 33 CFR Part 328.3 to include navigable waters, perennial and intermittent streams, lakes, rivers, ponds, as well as wetlands, marshes, and wet meadows. In recent years the USACE and US Environmental Protection Agency (USEPA) have undertaken several efforts to modernize their regulations defining "waters of the United States" (e.g., the 2015 Clean Water Rule and 2020 Navigable Waters Protection Rule), but these efforts have been frustrated by legal challenges which have invalidated the updated regulations. Thus, the agencies' longstanding definition of "waters of the United States," which dates from 1986, remains in effect albeit with supplemental guidance interpreting applicable court decisions as described below.

Waters of the U.S.

In summary, USACE and USEPA regulations define “waters of the United States” as follows:

1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
2. All interstate waters including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:
 - i. Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
 - ii. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
 - iii. Which are used or could be used for industrial purpose by industries in interstate commerce;
4. All impoundments of waters otherwise defined as waters of the United States;
5. Tributaries of waters identified in paragraphs (a)(1)-(4) of this section;
6. The territorial sea;
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in items 1-6 above.

Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the USEPA.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA are not waters of the United States.

The lateral limits of USACE jurisdiction in non-tidal waters is defined by the "ordinary high-water mark" (OHWM) unless adjacent wetlands are present. The OHWM is a line on the shore or edge of a channel established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed upon the bank, shelving, changes in the character of soil, destruction of vegetation, or the presence of debris (33 CFR 328.3(e)). As such, waters are recognized in the field by the presence of a defined watercourse with appropriate physical and topographic features. If wetlands occur within, or adjacent to, waters of the United States, the lateral limits of USACE jurisdiction extend beyond the OHWM to the outer edge of the wetlands (33 CFR 328.4 (c)). The upstream limit of jurisdiction in the absence of adjacent wetlands is the point beyond which the OHWM is no longer perceptible (33 CFR 328.4; see also 51 FR 41217.)

Wetlands

The USACE defines wetlands as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil

conditions” (33 CFR 328.3). The USACE’s delineation procedures identify wetlands in the field based on indicators of three wetland parameters: hydrophytic vegetation, hydric soils, and wetland hydrology. The following is a discussion of each of these parameters.

Hydrophytic Vegetation

Hydrophytic vegetation dominates areas where frequency and duration of inundation or soil saturation exerts a controlling influence on the plant species present. Plant species are assigned wetland indicator status according to the probability of their occurring in wetlands. More than fifty percent of the dominant plant species must have a wetland indicator status to meet the hydrophytic vegetation criterion. The USACE published the National Wetland Plant List (USACE 2018), which separates vascular plants into the following four basic categories based on plant species frequency of occurrence in wetlands:

- **Obligate Wetland (OBL)**. Almost always occur in wetlands
- **Facultative Wetland (FACW)**. Usually occur in wetlands, but occasionally found in non-wetlands
- **Facultative (FAC)**. Occur in wetlands or non-wetlands
- **Facultative Upland (FACU)**. Usually occur in non-wetlands, but may occur in wetlands
- **Obligate Upland (UPL)**. Almost never occur in wetlands

The USACE considers OBL, FACW and FAC species to be indicators of wetlands. An area is considered to have hydrophytic vegetation when greater than 50 percent of the dominant species in each vegetative stratum (tree, shrub, and herb) fall within these categories. Any species not appearing on the United States Fish and Wildlife Service’s list is assumed to be an upland species, almost never occurring in wetlands. In addition, an area needs to contain at least 5% vegetative cover to be considered as a vegetated wetland.

Hydric Soils

Hydric soils are saturated or inundated for a sufficient duration during the growing season to develop anaerobic or reducing conditions that favor the growth and regeneration of hydrophytic vegetation. Field indicators of wetland soils include observations of ponding, inundation, saturation, dark (low chroma) soil colors, bright mottles (concentrations of oxidized minerals such as iron), gleying (indicates reducing conditions by a blue-grey color), or accumulation of organic material. Additional supporting information includes documentation of soil as hydric or reference to wet conditions in the local soils survey, both of which must be verified in the field.

Wetland Hydrology

Wetland hydrology is inundation or soil saturation with a frequency and duration long enough to cause the development of hydric soils and plant communities dominated by hydrophytic vegetation. If direct observation of wetland hydrology is not possible (as in seasonal wetlands), or records of wetland hydrology are not available (such as stream gauges), assessment of wetland hydrology is frequently supported by field indicators, such as water marks, drift lines, sediment deposits, or drainage patterns in wetlands.

Applicable Case Law and Agency Guidance

The USACE’s regulations defining “waters of the United States” have been subject to legal interpretation, and two influential Supreme Court decisions have narrowed the definition to exclude

certain classes of waters that bear an insufficient connection to navigable waters. In *Solid Waste Agency of Northern Cook County v. Army Corps of Engineers* (2001), the United States Supreme Court stated that the USACE's CWA jurisdiction does not extend to ponds that "are not adjacent to open water." In reaching its decision, the Court concluded that the "Migratory Bird Rule," which served as the basis for the USACE's asserted jurisdiction, was not supported by the CWA. The Migratory Bird Rule extended CWA jurisdiction to intrastate waters "which are or would be used as habitat by birds protected by Migratory Bird Treaties or which are or would be used as habitat by other migratory birds which cross state lines..." The Court was concerned that application of the Migratory Bird Rule resulted in "reading the term 'navigable waters' out of the statute. Highlighting the language of the CWA to determine the statute's jurisdictional reach, the Court stated, "the term 'navigable' has at least the import of showing us what Congress had in mind as its authority for enacting the CWA: its traditional jurisdiction over waters that were or had been navigable in fact or which could reasonably be so made." This decision stands for the proposition that non-navigable isolated, intrastate waters are not waters of the United States and thus are not jurisdictional under the CWA.

In 2006 the United States Supreme Court decided *Rapanos v. United States* and *Carabell v. United States* (collectively "Rapanos"), which were consolidated cases determining the extent of CWA jurisdiction over waters that carry only an infrequent surface flow. The court issued no majority opinion in Rapanos. Instead, the justices authored five separate opinions including the "plurality" opinion, authored by Justice Scalia (joined by three other justices), and a concurring opinion by Justice Kennedy. To guide implementation of the decision, the USACE and USEPA issued a joint guidance memorandum ("Rapanos Guidance Memorandum") in 2008 stating that "regulatory jurisdiction under the CWA exists over a water body if either the plurality's or Justice Kennedy's standard is satisfied."

According to the plurality opinion in Rapanos, "the waters of the United States include only relatively permanent, standing or flowing bodies of water" and do not include "ordinarily dry channels through which water occasionally or intermittently flows." In addition, while all wetlands that meet the USACE definition are considered adjacent wetlands, only those adjacent wetlands that have a continuous surface connection because they directly abut the tributary (e.g., they are not separated by uplands, a berm, dike, or similar feature) are considered jurisdictional under the plurality standard.

Under Justice Kennedy's opinion, "the USACE's jurisdiction over wetlands depends upon the existence of a significant nexus between the wetlands in question and navigable waters in the traditional sense. Wetlands possess the requisite nexus, and thus come within the statutory phrase 'navigable waters,' if the wetlands, either alone or in combination with similarly situated lands in the region, significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as 'navigable.' When, in contrast, wetlands' effects on water quality are speculative or insubstantial, they fall outside the zone fairly encompassed by the statutory term 'navigable waters.'" Justice Kennedy identified "pollutant trapping, flood control, and runoff storage" as some of the critical functions wetlands can perform relative to other waters. He concluded that, given wetlands' ecological role, "mere adjacency" to a non-navigable tributary was insufficient to establish CWA jurisdiction, and that "a more specific inquiry, based on the significant nexus standard, is therefore necessary."

Interpreting these decisions, and according to the Rapanos Guidance Memorandum, the USACE and USEPA will assert jurisdiction over the following waters:

- Traditional navigable waters;

- Wetlands adjacent to traditional navigable waters;
- Non-navigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months); and,
- Wetlands that directly abut such tributaries.

The USACE and USEPA will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a traditional navigable water:

- Non-navigable tributaries that are not relatively permanent;
- Wetlands adjacent to non-navigable tributaries that are not relatively permanent; and,
- Wetlands adjacent to but that do not directly abut a relatively permanent non-navigable tributary.

Where a significant nexus analysis is required, the USACE and USEPA will apply the significant nexus standard as follows:

- A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical and biological integrity of downstream traditional navigable waters; and,
- Significant nexus includes consideration of hydrologic and ecologic factors.

The USACE and USEPA generally will not assert jurisdiction over the following features:

- Swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent, or short duration flow); and,
- Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water.

Rivers and Harbors Act Section 10

Section 10 of the Rivers and Harbors Act of 1899 requires authorization from the USACE for the construction of any structure in or over any navigable water of the United States. Structures or work outside the limits defined for navigable waters of the United States require a Section 10 permit if the structure or work affects the course, location, or condition of the water body. The law applies to any dredging or disposal of dredged materials, excavation, filling, re-channelization, or any other modification of a navigable water of the United States, and applies to all structures and work. It further includes, without limitation, any wharf, dolphin, weir, boom breakwater, jetty, groin, bank protection (e.g., riprap, revetment, bulkhead), mooring structures such as pilings, aerial or subaqueous power transmission lines, intake or outfall pipes, permanently moored floating vessel, tunnel, artificial canal, boat ramp, aids to navigation, and any other permanent, or semi-permanent obstacle or obstruction. It is important to note that Section 10 applies only to navigable waters, and thus does not apply to work in non-navigable wetlands or tributaries. In some cases, Section 10 authorization is issued by the USACE concurrently with CWA Section 404 authorization, such as when certain Nationwide Permits are used.

Regional Water Quality Control Board

The State Water Resources Control Board (SWRCB) and nine Regional Water Quality Control Boards (RWQCBs) have jurisdiction over “waters of the State,” which are defined as any surface water or groundwater, including saline waters, within the boundaries of the state (California Water Code sec. 13050(e)). These agencies also have responsibilities for administering portions of the CWA.

Clean Water Act Section 401

Section 401 of the CWA requires an applicant requesting a federal license or permit for an activity that may result in any discharge into navigable waters (such as a Section 404 Permit) to provide state certification that the proposed activity will not violate state and federal water quality standards. In California, CWA Section 401 Water Quality Certification (Section 401 Certification) is issued by the RWQCBs and by the SWRCB for multi-region projects. The process begins when an applicant submits an application to the RWQCB and informs the USACE (or the applicable agency from which a license or permit was requested) that an application has been submitted. The USACE will then determine a “reasonable period of time” for the RWQCB to act on the application; this is typically 60 days for routine projects and longer for complex projects but may not exceed one year. When the period has elapsed, if the RWQCB has not either issued or denied the application for Section 401 Certification, the USACE may determine that Certification has been waived and issue the requested permit. If a Section 401 Certification is issued it may include binding conditions, imposed either through the Certification itself or through the requested federal license or permit.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) is the principal law governing water quality regulation in California. It establishes a comprehensive program to protect water quality and the beneficial uses of water. The Porter-Cologne Act applies to surface waters, wetlands, and ground water and to both point and nonpoint sources of pollution. Pursuant to the Porter-Cologne Act (California Water Code section 13000 et seq.), the policy of the State is as follows:

- The quality of all the waters of the State shall be protected
- All activities and factors affecting the quality of water shall be regulated to attain the highest water quality within reason
- The State must be prepared to exercise its full power and jurisdiction to protect the quality of water in the State from degradation

The Porter-Cologne Act established nine RWQCBs (based on watershed boundaries) and the SWRCB, which are charged with implementing its provisions and which have primary responsibility for protecting water quality in California. The SWRCB provides program guidance and oversight, allocates funds, and reviews RWQCB decisions. In addition, the SWRCB allocates rights to the use of surface water. The RWQCBs have primary responsibility for individual permitting, inspection, and enforcement actions within each of nine hydrologic regions. The SWRCB and RWQCBs have numerous nonpoint source related responsibilities, including monitoring and assessment, planning, financial assistance, and management.

Section 13260 of the Porter-Cologne Act requires any person discharging or proposing to discharge waste that could affect the quality of waters of the State to file a Report of Waste Discharge with

the appropriate RWQCB. The RWQCB may then authorize the discharge, subject to conditions, by issuing Waste Discharge Requirements (WDRs). While this requirement was historically applied primarily to outfalls and similar point source discharges, the SWRCB's *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State*, effective May 2020, make it clear that the agency will apply the Porter-Cologne Act's requirements to discharges of dredge and fill material as well. The *Procedures* state that they are to be used in issuing CWA Section 401 Certifications and WDRs, and largely mirror the existing review requirements for CWA Section 404 Permits and Section 401 Certifications, incorporating most elements of the USEPA's *Section 404(b)(1) Guidelines*. Following issuance of the *Procedures*, the SWRCB produced a consolidated application form for dredge/fill discharges that can be used to obtain a CWA Section 401 Water Quality Certification, WDRs, or both.

Non-Wetland Waters of the State

The SWRCB and RWQCBs have not established regulations for field determinations of waters of the state except for wetlands currently. In many cases the RWQCBs interpret the limits of waters of the State to be bounded by the OHWM unless isolated conditions or ephemeral waters are present. However, in the absence of statewide guidance each RWQCB may interpret jurisdictional boundaries within their region and the SWRCB has encouraged applicants to confirm jurisdictional limits with their RWQCB before submitting applications. As determined by the RWQCB, waters of the State may include riparian areas or other locations outside the OHWM, leading to a larger jurisdictional area over a given water body compared to the USACE.

Wetland Waters of the State

Procedures for defining wetland waters of the State pursuant to the SWRCB's *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* went into effect May 28, 2020. The SWRCB defines an area as wetland if, under normal circumstances:

- (i) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both;
- (ii) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and
- (iii) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.

The SWRCB's *Implementation Guidance for the Wetland Definition and Procedures for Discharges of Dredge and Fill Material to Waters of the State* (2020), states that waters of the U.S. and waters of the State should be delineated using the standard USACE delineation procedures, taking into consideration that the methods shall be modified only to allow for the fact that a lack of vegetation does not preclude an area from meeting the definition of a wetland.

United States Fish and Wildlife Service

The United States Fish and Wildlife Service (USFWS) implements several laws protecting the Nation's fish and wildlife resources, including the Endangered Species Act (ESA; 16 United States Code [USC] Sections 153 et seq.), the Migratory Bird Treaty Act (MBTA; 16 USC Sections 703-711) and the Bald and Golden Eagle Protection Act (16 USC Section 668).

Endangered Species Act

The USFWS and National Marine Fisheries Service (NMFS) share responsibility for implementing the ESA. Generally, the USFWS implements the FESA for terrestrial and freshwater species, while the NMFS implements the FESA for marine and anadromous species. Projects that would result in “take” of any threatened or endangered animal species, or a threatened or endangered plant species if occurring on federal land, are required to obtain permits from the USFWS or NMFS through either Section 7 (interagency consultation with a federal nexus) or Section 10 (Habitat Conservation Plan) of the ESA, depending on the involvement by the federal government in funding, authorizing, or carrying out the project. The permitting process is used to determine if a project would jeopardize the continued existence of a listed species and what measures would be required to avoid jeopardizing the species. “Take” under federal definition means to harass, harm (which includes habitat modification), pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Proposed or candidate species do not have the full protection of the ESA; however, the USFWS and NMFS advise project applicants that they could be elevated to listed status at any time.

Migratory Bird Treaty Act

The MBTA of 1918 implements four international conservation treaties that the U.S. entered into with Canada in 1916, Mexico in 1936, Japan in 1972, and Russia in 1976. It is intended to ensure the sustainability of populations of all protected migratory bird species. The law has been amended with the signing of each treaty, as well as when any of the treaties were amended, such as with Mexico in 1976 and Canada in 1995. The MBTA prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the USFWS.

The list of migratory bird species protected by the law, in regulations at 50 CFR Part 10.13, is primarily based on bird families and species included in the four international treaties. A migratory bird species is included on the list if it meets one or more of the following criteria:

1. It occurs in the United States or U.S. territories as the result of natural biological or ecological processes and is currently, or was previously listed as, a species or part of a family protected by one of the four international treaties or their amendments.
2. Revised taxonomy results in it being newly split from a species that was previously on the list, and the new species occurs in the United States or U.S. territories as the result of natural biological or ecological processes.
3. New evidence exists for its natural occurrence in the United States or U.S. territories resulting from natural distributional changes and the species occurs in a protected family.

In 2004, the Migratory Bird Treaty Reform Act limited the scope of the MBTA by stating the MBTA applies only to migratory bird species that are native to the United States or U.S. territories, and that a native migratory bird species is one that is present as a result of natural biological or ecological processes. The MBTRA requires the USFWS to publish a list of all nonnative, human-introduced bird species to which the MBTA does not apply, and an updated list was published in 2020. The 2020 update identifies species belonging to biological families referred to in treaties the MBTA implements but are not protected because their presence in the United States or U.S. territories is solely the result of intentional or unintentional human-assisted introductions.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act prohibits anyone, without a permit issued by the USFWS, from "taking" bald or golden eagles, including their parts (including feathers), nests, or eggs. The Act provides criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof." The Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb."

"Disturb" means "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior."

In addition to immediate impacts, this definition also covers impacts that result from human-induced alterations initiated around a previously used nest site during a time when eagles are not present, if, upon the eagle's return, such alterations agitate or bother an eagle to a degree that interferes with or interrupts normal breeding, feeding, or sheltering habits, and causes injury, death or nest abandonment.

California Department of Fish and Wildlife

The California Department of Fish and Wildlife (CDFW) derives its authority from the Fish and Game Code of California and administers several State laws protecting fish and wildlife resources and the habitats upon which they depend.

California Endangered Species Act

The California Endangered Species Act (CESA) (Fish and Game Code Section 2050 et. seq.) prohibits take of state listed threatened or endangered. Take under CESA is defined as "Hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill" (Fish and Game Code sec. 86). This definition does not prohibit indirect harm by way of habitat modification, except where such harm is the proximate cause of death of a listed species. Where incidental take would occur during construction or other lawful activities, CESA allows the CDFW to issue an Incidental Take Permit upon finding, among other requirements, that impacts to the species have been minimized and fully mitigated. Unlike the federal ESA, CESA's protections extend to candidate species during the period (typically one year) while the California Fish and Game Commission decides whether the species warrants CESA listing.

Native Plant Protection Act

The CDFW also has authority to administer the Native Plant Protection Act (NPPA) (Fish and Game Code Section 1900 et seq.). The NPPA requires the CDFW to establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare, and prohibits the take of listed plant species. Effective in 2015, CDFW promulgated regulations (14 CCR 786.9) under the authority of the NPPA, establishing that the CESA's permitting procedures would be applied to plants listed under the NPPA as "Rare." With this change, there is little practical difference for the regulated public between plants listed under CESA and those listed under the NPPA.

Fully Protected Species Laws

The CDFW enforces Sections 3511, 4700, 5050, and 5515 of the Fish and Game Code, which prohibit take of species designated as Fully Protected. The CDFW is not allowed to issue an Incidental Take Permit for Fully Protected species; therefore, impacts to these species must be avoided. The exception is situations where a Natural Community Conservation Plan (NCCP) is in place that authorizes take of the fully protected species.

Avian Protection Laws

California Fish and Game Code sections 3503, 3503.5, and 3513 describe unlawful take, possession, or destruction of native birds, nests, and eggs. Section 3503.5 of the Code protects all birds-of-prey and their eggs and nests against take, possession, or destruction of nests or eggs. Section 3513 makes it a state-level offense to take any bird in violation of the federal Migratory Bird Treaty Act.

Protection of Lakes and Streambeds

California Fish and Game Code section 1602 states that it is unlawful for any person to "substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake" without first notifying the California Department of Fish and Wildlife (CDFW) of that activity. Thereafter, if CDFW determines and informs the entity that the activity will not substantially adversely affect any existing fish or wildlife resources, the entity may commence the activity. If, however, CDFW determines that the activity may substantially adversely affect an existing fish or wildlife resource, the entity may be required to obtain from CDFW a Streambed Alteration Agreement (SAA), which will include reasonable measures necessary to protect the affected resource(s), before the entity may conduct the activity described in the notification. Upon receiving a complete Notification of Lake/Streambed Alteration, CDFW has 60 days to present the entity with a Draft SAA. Upon review of the Draft SAA by the applicant, any problematic terms are negotiated with CDFW and a final SAA is executed.

The CDFW has not defined the term "stream" for the purposes of implementing its regulatory program under Section 1602, and the agency has not promulgated regulations directing how jurisdictional streambeds may be identified, or how their limits should be delineated. However, four relevant sources of information offer insight as to the appropriate limits of CDFW jurisdiction as discussed below.

- **The plain language of Section 1602 of CFGC** establishes the following general concepts:
 - References "river," "stream," and "lake"
 - References "natural flow"
 - References "bed," "bank," and "channel"
- **Applicable court decisions**, in particular *Rutherford v. State of California* (188 Cal App. 3d 1276 (1987)), which interpreted Section 1602's use of "stream" to be as defined in common law. The Court indicated that a "stream" is commonly understood to:
 - Have a source and a terminus
 - Have banks and a channel
 - Convey flow at least periodically, but need not flow continuously and may at times appear outwardly dry

- Represent the depression between the banks worn by the regular and usual flow of the water
- Include the area between the opposing banks measured from the foot of the banks from the top of the water at its ordinary stage, including intervening sand bars
- Include the land that is covered by the water in its ordinary low stage
- Include lands below the OHWM
- **CDFW regulations** defining “stream” for other purposes, including sport fishing (14 CCR 1.72) and streambed alterations associated with cannabis production (14 CCR 722(c)(21)), which indicate that a stream:
 - Flows at least periodically or intermittently
 - Flows through a bed or channel having banks
 - Supports fish or aquatic life
 - Can be dry for a period of time
 - Includes watercourses where surface or subsurface flow supports or has supported riparian vegetation
- **Guidance documents**, including *A Field Guide to Lake and Streambed Alteration Agreements* (CDFG 1994) and *Methods to Describe and Delineate Episodic Stream Processes on Arid Landscapes for Permitting Utility-Scale Solar Power Plants* (Brady and Vyverberg 2013), which suggest the following:
 - A stream may flow perennially or episodically
 - A stream is defined by the course in which water currently flows, or has flowed during the historic hydrologic course regime (approximately the last 200 years)
 - Width of a stream course can reasonably be identified by physical or biological indicators
 - A stream may have one or more channels (single thread vs. compound form)
 - Features such as braided channels, low-flow channels, active channels, banks associated with secondary channels, floodplains, islands, and stream-associated vegetation, are interconnected parts of the watercourse
 - Canals, aqueducts, irrigation ditches, and other means of water conveyance can be considered streams if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife
 - Biologic components of a stream may include aquatic and riparian vegetation, all aquatic animals including fish, amphibians, reptiles, invertebrates, and terrestrial species which derive benefits from the stream system
 - The lateral extent of a stream can be measured in different ways depending on the particular situation and the type of fish or wildlife resource at risk

The tenets listed above, among others, are applied to establish the boundaries of streambeds in various environments. Importance of each factor may be weighted based on site-specific considerations and the applicability of the indicators to the streambed at hand.

California Coastal Act

The California Coastal Act (Public Resources Code Division 20, 1976) declares that the California coastal zone is a distinct and valuable natural resource of vital and enduring interest to all the people and exists as a delicately balanced ecosystem. As such, development within the coastal zone requires a Coastal Development Permit from either the California Coastal Commission or a local government. Coastal Development Permits are the regulatory mechanism by which proposed developments in the coastal zone are brought into compliance with the policies of Chapter 3 of the Coastal Act. After the Commission certifies a Local Coastal Program, most coastal development permit authority is delegated, and coastal development permit applications are then reviewed and acted on by cities and counties (in this case, the Santa Cruz County Local Coastal Program).

Section 30107.5 of the Coastal Act defines Environmentally Sensitive Habitat Areas (ESHA) as areas in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem, and which could be easily disturbed, degraded, or enhanced by human activities and developments. The Coastal Act states that resource extraction, development, and sales or transfers should be limited or prohibited in ESHA in order to ensure that these areas remain intact (especially Sections 30240, 30233, 30263, and 30609.5). These areas must be protected against habitat disruption, including land use and development that are adjacent to ESHA and may impact such areas. Under the Coastal Act, only uses that are dependent on ESHA resources shall be allowed in ESHA.

The California Coastal Act mandates that local governments prepare a land use plan and schedule of implementing actions to carry out the policies of the Coastal Act. The County of San Mateo Local Coastal Program represents the County's commitment to implement the Coastal Act through policies and identification of detailed land use recommendations.

Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act (FCMA), as amended (16 U.S.C. 1801 et seq.) established:

- A fishery conservation zone between the territorial seas of the United States and 200 nautical miles offshore;
- An exclusive U.S. fishery management authority over fish within the fishery conservation zone (excluding highly migratory species);
- Regulations for foreign fishing within the fishery conservation zone through international fishery agreements, permits, and import prohibitions; and
- National standards for fishery conservation and management and eight regional fishery management councils to apply those national standards in fishery management plans.

Congress enacted the 1996 amendments to the Act, known as the Sustainable Fisheries Act (SFA) (P.L. 104-297), to address the substantially reduced fish stocks that declined as a result of direct and indirect habitat loss. The SFA requires that BOEM and other agencies consult with the National Oceanic and Atmospheric Administration's National Marine Fisheries Service concerning actions that may adversely impact Essential Fish Habitat (EFH).

In 2007, President Bush signed the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006. It mandates the use of annual catch limits and accountability measures to end overfishing, provides for fishery management by a limited access program, and calls for increased international cooperation.

Pacific Salmonid Fishery Management Plan

The current Pacific Salmon FMP provides management protection for natural and hatchery salmon species off the coasts of Washington, Oregon, and California. These species include Chinook (*Oncorhynchus tshawytscha*), coho (*Oncorhynchus kisutch*), pink (*Oncorhynchus gorbuscha*) (in odd-numbered years), and all salmon protected under the ESA except steelhead. The EFH designated for these species includes marine waters from the shoreline to the boundary of the exclusive economic zone (EEZ; 200 miles offshore) and estuarine and freshwater habitat within Washington, Oregon, California, and Idaho.

Pacific Groundfish Fishery Management Plan

The Pacific Coast Groundfish FMP provides protection for 83 groundfish species throughout the Pacific Coast of the United States. Because groundfish species are widely dispersed during certain life stages, EFH for groundfish species is correspondingly large (CSMW, 2015). Designated EFH for Pacific Coast Groundfish includes all waters from depths less than or equal to 3,500 m to MHHW or the upriver extent of saltwater intrusion in river mouths along the coasts of Washington, Oregon, and California. The Pacific Coast Groundfish FMP describes seven habitat units that comprise Pacific groundfish EFH: estuarine, rocky shelf, non-rocky shelf, canyon, continental slope and basin, neritic zone, and oceanic zone. Habitat areas of particular concern include estuary, sea grass, kelp canopy, and rocky habitats.

Coastal Pelagic Fishery Management Plan

The Coastal Pelagic FMP provides protection for commercial pelagic species, including four finfish: Pacific sardine (*Sardinops sagax*), Pacific mackerel (*Scomber japonicus*), northern anchovy (*Engraulis mordax*), and Jack Mackerel (*Trachurus symmetricus*); market squid (*Loligo opalescens*); and various species of krill and euphausiids. The EFH for the finfish species and squid includes all marine and estuarine waters from the shoreline along the coasts of California, Oregon, and Washington, offshore to the limits of the EEZ where sea surface temperatures range between 50 and 78 degrees Fahrenheit (i.e. above the thermocline). The EFH for krill extends the length of the West Coast from the shoreline to a depth of approximately 1,300 feet.

Marine Mammal Protection Act

The Marine Mammal Protection Act (MMPA) was enacted on October 21, 1972. All marine mammals are protected under the MMPA. The MMPA prohibits, with certain exceptions, the “take” of marine mammals in U.S. waters and by U.S. citizens on the high seas, and the importation of marine mammals and marine mammal products into the U.S.

Jurisdiction for MMPA is shared by U.S. Fish and Wildlife Service (Service) and the National Marine Fisheries Service (NMFS). The Service's Branch of Permits is responsible for issuing take permits when exceptions are made to MMPA.

Coastal Zone Management Act

The Coastal Zone Management Act (CZMA), passed in 1972 and administered by NOAA, provides for the management of the nation's coastal resources, including the Great Lakes. The goal is to "preserve, protect, develop, and where possible, to restore or enhance the resources of the nation's coastal zone."

The CZMA outlines three national programs, the National Coastal Zone Management Program, the National Estuarine Research Reserve System, and the Coastal and Estuarine Land Conservation Program (CELCP). The National Coastal Zone Management Program aims to balance competing land and water issues through state and territorial coastal management programs, the reserves serve as field laboratories that provide a greater understanding of estuaries and how humans impact them, and CELCP provides matching funds to state and local governments to purchase threatened coastal and estuarine lands or obtain conservation easements.

National Marine Sanctuaries Act

The National Marine Sanctuaries Act (NMSA) authorizes the Secretary of Commerce to designate and protect areas of the marine environment with special national significance due to their conservation, recreational, ecological, historical, scientific, cultural, archeological, educational or esthetic qualities as national marine sanctuaries.

Day-to-day management of national marine sanctuaries has been delegated by the Secretary of Commerce to NOAA's Office of National Marine Sanctuaries. The primary objective of the NMSA is to protect marine resources, such as coral reefs, sunken historical vessels or unique habitats.

National Invasive Species Act

The Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990, as amended by the National Invasive Species Act of 1996, was enacted to prevent and control infestations of the coastal inland waters of the United States by the zebra mussel and other nonindigenous aquatic nuisance species. The Act was also enacted to reauthorize the National Sea Grant College Program and for other purposes. The Act defines "nonindigenous species" as "any species or other viable biological material that enters an ecosystem beyond its historic range, including any such organisms transferred from one country into another." "Aquatic nuisance species" is defined as "a nonindigenous species that threatens the diversity or abundance of native species or the ecological stability of infested waters, or commercial, agricultural, aquacultural or recreational activities dependent on such waters."

Marine Life Protection Act

The Marine Life Protection Act of 1999 directs the state to redesign California's system of marine protected areas (MPAs) to function as a network in order to: increase coherence and effectiveness in protecting the state's marine life and habitats, marine ecosystems, and marine natural heritage,

as well as to improve recreational, educational and study opportunities provided by marine ecosystems subject to minimal human disturbance. Six goals guided the development of MPAs in the MLPA planning process:

- Protect the natural diversity and abundance of marine life, and the structure, function and integrity of marine ecosystems
- Help sustain, conserve and protect marine life populations, including those of economic value, and rebuild those that are depleted
- Improve recreational, educational and study opportunities provided by marine ecosystems that are subject to minimal human disturbance, and to manage these uses in a manner consistent with protecting biodiversity
- Protect marine natural heritage, including protection of representative and unique marine life habitats in CA waters for their intrinsic values
- Ensure California's MPAs have clearly defined objectives, effective management measures and adequate enforcement and are based on sound scientific guidelines
- Ensure the State's MPAs are designed and managed, to the extent possible, as a network

To help achieve these goals, three MPA designations (state marine reserves, state marine parks and state marine conservation areas), one marine managed area (state marine recreational management area) and special closures were used in the MPA planning process. For the purposes of MPA planning, a public-private partnership commonly referred to as the MLPA Initiative was established, and the state was split into five distinct regions (four coastal and the San Francisco Bay) each of which had its own MPA planning process. All four coastal regions have completed these individual planning processes. As a result, the coastal portion of California's MPA network is now in effect statewide. Options for a planning process in the fifth and final region, the San Francisco Bay, have been developed for consideration at a future date.

Marine Life Management Act

The Marine Life Management Act (MLMA), which became law on January 1, 1999, established a fishery management system for four groups of fisheries:

- The nearshore finfish fishery and the white seabass fishery
- Emerging fisheries - new and growing fisheries that are not currently subject to specific regulation
- Those fisheries for which the Fish and Game Commission held some management authority before January 1, 1999. Future regulations affecting these fisheries will need to conform to the MLMA
- Those commercial fisheries for which there is no statutory delegation of authority to the Commission and Department. (In the case of these fisheries, CDFW may prepare, and the Commission may adopt, a fishery management plan, but that plan cannot be implemented without a further delegation of authority through the legislative process)

Borrowing from experience with federal fishery management law, the MLMA initiated a comprehensive approach to fisheries management. The primary vehicle for this approach is the development of fishery management plans for all of the State's major recreational and commercial fisheries.

California Ocean Plan

Ocean standards protect the beneficial uses of California's marine waters through establishing water quality objectives and implementation provisions in statewide water quality control plans and polices. Ocean standards plans and policies include: the Water Quality Control Plan for Ocean Waters of California (Ocean Plan); the Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (California Thermal Plan); and the Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant cooling (Once-Through Cooling Policy).

The Ocean Standards Unit is responsible for developing and updating the statewide plans and policies involving marine waters, and providing scientific support and inter-agency coordination regarding marine pollution and resource management.

Marine Invasive Species Act

The Marine Invasive Species Program began in 1999 with the passage of California's Ballast Water Management for Control of Nonindigenous Species Act, which addressed the threat of species introductions from vessels arriving at California's ports. In 2003, the Marine Invasive Species Act was passed, reauthorizing and expanding the 1999 Act. Subsequent amendments to the Act and additional legislation further expanded the Program's scope.

The Marine Invasive Species Program seeks to reduce the risk of aquatic nonindigenous species introduction into California's waters through:

- The development, implementation, and enforcement of vessel biofouling and vessel ballast water management strategies and polices
- The use of best available technology and peer reviewed science
- Partnerships with stakeholders to improve awareness of invasive species issues and assess program efficacy

County of San Mateo General Plan

Chapter 1. Vegetative, Water, Fish, and Wildlife Resource Policies

1.1 Conserve, Enhance, Protect, Maintain and Manage Vegetative, Water, Fish and Wildlife Resources

Promote the conservation, enhancement, protection, maintenance and managed use of the County's Vegetative, Water, Fish and Wildlife Resources.

1.2 Protect Sensitive Habitats

Protect sensitive habitats from reduction in size or degradation of the conditions necessary for their maintenance.

1.3 Protection and Productive Use of Economically Valuable Vegetative, Water, Fish and Wildlife Resources

Protect the availability and encourage the productive use of the County's economically valuable vegetative, water, fish and wildlife resources in a manner which minimizes adverse environmental impacts.

1.4 Access to Vegetative, Water, Fish and Wildlife Resources

Protect and promote existing rights of public access to vegetative, water, fish and wildlife resources for purposes of study and recreation consistent with the need to protect public rights, rights of private property owners and protection and preservation of such resources.

DEFINITIONS

1.5 Definition of Vegetative Resources

Define vegetative resources as plants and plant communities, including timber but excluding agricultural crops.

1.6 Definition of Water Resources

Define water resources as all surface water bodies, groundwater bodies and recharge areas, including perennial and intermittent streams.

1.7 Definition of Fish and Wildlife Resources

Define fish and wildlife resources as all non-domesticated animals.

1.8 Definition of Sensitive Habitats

Define a sensitive habitat as any area where the vegetative, water, fish and wildlife resources provide especially valuable and rare plant and animal habitats that can be easily disturbed or degraded. These areas include but are not limited to: (1) habitats containing or supporting rare or unique species; (2) riparian corridors; (3) marine and estuarine habitats; (4) wetlands; (5) sand dunes; (6) wildlife refuges, reserves, and scientific study areas; and (7) important nesting, feeding, breeding or spawning areas.

1.9 Definition of Rare or Unique Species

Define rare or unique species as any plant or animal that is determined to be rare, endangered, threatened, unique to the County and adjacent areas or protected by Federal or State law and State and County EIR guidelines.

1.10 Definition of Riparian Corridors

Define riparian corridors as the vegetative and wildlife areas adjacent to perennial and intermittent streams and other freshwater bodies, such as lakes, ponds, and reservoirs. Delineate these riparian corridors by the "limit of riparian vegetation," i.e., a line determined by the existence of plant species normally found near streams, lakes, and other freshwater bodies.

1.11 Definition of Marine and Estuarine Habitats

Define marine and estuarine habitats as habitats of any marine-dependent plant or animal located in or near the Pacific Ocean or San Francisco Bay, including beaches, offshore reefs, kelp beds, tide pools, sea caves, islets and offshore rocks, sea cliffs, bays and estuaries.

1.12 Definition of Wetlands

Define wetland as an area where the water table is at, near, or above the land surface long enough to bring about the formation of hydric soils or to support the growth of plants which normally grow in water or wet ground. Wetlands include 1.3P fresh or salt water marshes, mud flats, brackish, tidal or seasonal wet areas and can occur along the margins of streams, lakes and ponds.

1.13 Definition of Wildlife Refuges, Reserves, and Scientific Study Areas

Define wildlife refuges, reserves, and scientific study areas as those areas designated by public and/or owned by private agencies for the purposes of protecting, maintaining, and studying important vegetative, water, fish and wildlife resources.

1.14 Definition of Buffer Zones

Define Buffer Zones as those areas adjacent to sensitive habitats which are necessary to allow for periodic, seasonal, or ecological changes, including the impacts of climate change, which could affect the boundaries of sensitive habitats.

1.15 Definition of Climate Change

Define climate change as a term to imply a significant change from one climatic condition to another, including natural changes in climate.

1.16 Definition of Productive Uses of Vegetative, Water, Fish and Wildlife Resources

Define productive use as any activity involving the use, removal or alteration of vegetative, water, fish and wildlife resources from their natural environment for human use or economic purposes.

1.17 Definition of Economically Valuable Vegetative, Water, Fish and Wildlife Resources

Define economically valuable vegetative, water, fish and wildlife resources as those resources which are important to the economy because they: 1. Provide income, employment or tax benefits accruing to the landowner or operator; 2. Support experimental or research and development activities which hold future commercial potential; 3. Are essential to the continuance of other economic activity; 4. Are significant components of the scenic quality and uniqueness of San Mateo County which add to the value of property or attract visitors. 1.4P

1.18 Definition of Incompatible Vegetation, Fish and Wildlife

Define incompatible vegetation, fish and wildlife as any plant, fish, or animal, or concentration of plants or animals which are found to be harmful to the surrounding environment or pose a threat to public health, safety and welfare.

1.19 Definition of Development

Define development as the construction, reconstruction, conversion, relocation or enlargement of any structure; the division of a parcel of land into two or more parcels; any mining, excavation, landfill or land disturbance including grading; and changes in land uses.

DESIGNATIONS

1.20 Designation of Sensitive Habitats

Designate as sensitive habitats those areas which meet the definition of sensitive habitats. Recognize the Sensitive Habitats Map (dated December 1984) or subsequent updates or refinements as indicative of the distribution of sensitive habitats within San Mateo County, based upon the best and most current information available.

GENERAL POLICIES

1.21 Importance of Sensitive Habitats

Consider areas designated as sensitive habitats as a priority resource requiring protection.

1.22 Importance of Economically Valuable Vegetative, Water, Fish and Wildlife Resources

Consider Vegetative, Water, Fish and Wildlife Resources which are economically valuable as a priority resource to be enhanced, utilized, managed and maintained for the needs of present and future generations.

REGULATION OF DEVELOPMENT

1.23 Regulate Development to Protect Vegetative, Water, Fish and Wildlife Resources

- a. Regulate land uses and development activities to prevent, and if infeasible mitigate to the extent possible, significant adverse impacts on vegetative, water, fish and wildlife resources.
1.5P
- b. Place a priority on the managed use and protection of vegetative, water, fish and wildlife resources in rural areas of the County.

1.24 Regulate Location, Density and Design of Development to Protect Vegetative, Water, Fish and Wildlife Resources

Regulate the location, density and design of development to minimize significant adverse impacts and encourage enhancement of vegetative, water, fish and wildlife resources.

RESOURCE PROTECTION

1.25 Protect Vegetative Resources Ensure that development will:

- (1) minimize the removal of vegetative resources and/or;
- (2) protect vegetation which enhances microclimate, stabilizes slopes or reduces surface water runoff, erosion or sedimentation; and/or
- (3) protect historic and scenic trees.

1.26 Protect Water Resources

Ensure that development will: (1) minimize the alteration of natural water bodies, (2) maintain adequate stream flows and water quality for vegetative, fish and wildlife habitats; (3) maintain and improve, if possible, the quality of groundwater basins and recharge areas; and (4) prevent to the greatest extent possible the depletion of groundwater resources.

1.27 Protect Fish and Wildlife Resources

Ensure that development will minimize the disruption of fish and wildlife and their habitats.

SENSITIVE HABITATS

1.28 Regulate Development to Protect Sensitive Habitats

Regulate land uses and development activities within and adjacent to sensitive habitats in order to protect critical vegetative, water, fish and wildlife resources; protect rare, endangered, and unique plants and animals from reduction in their range or degradation of their environment; and protect and maintain the biological productivity of important plant and animal habitats.

1.29 Establish Buffer Zones

- a. Establish necessary buffer zones adjacent to sensitive habitats which include areas that directly affect the natural conditions in the habitats and 1.6P areas expected to experience changing vulnerabilities due to impacts of climate change.
- b. As part of Countywide efforts to foster resilience and adapt to impacts of climate changes, establish wildlife corridors in appropriate locations to maintain a functional network of connected wildlands, to support native biodiversity, and to encourage movement of wildlife species.

1.30 Uses Permitted in Sensitive Habitats

Within sensitive habitats, permit only those land uses and development activities that are compatible with the protection of sensitive habitats, such as fish and wildlife management activities, nature education and research, trails and scenic overlooks and, at a minimum level, necessary public service and private infrastructure.

1.31 Uses Permitted in Buffer Zones

Within buffer zones adjacent to sensitive habitats, permit the following land uses and development activities:

- (1) land uses and activities which are compatible with the protection of sensitive habitats, such as fish and wildlife management activities, nature education and research, trails and scenic overlooks, and at a minimum level, necessary public and private infrastructure;
- (2) land uses which are compatible with the surrounding land uses and will mitigate their impact by enhancing or replacing sensitive habitats; and
- (3) if no feasible alternative exists, land uses which are compatible with the surrounding land uses.

1.32 Regulate the Location, Siting and Design of Development in Sensitive Habitats

Regulate the location, siting and design of development in sensitive habitats and buffer zones to minimize to the greatest extent possible adverse impacts, and enhance positive impacts.

1.33 Performance Criteria and Development Standards

Establish performance criteria and development standards for development permitted within sensitive habitats and buffer zones, to prevent and if infeasible mitigate to the extent possible significant negative impacts, and to enhance positive impacts.

PRODUCTIVE USES1.34 Regulate Productive Uses of Vegetative, Water, Fish and Wildlife Resources

Regulate resource productive uses which are subject to local control in order to prevent and if infeasible mitigate to the extent possible significant adverse impacts on vegetative, water, fish and wildlife resources and to maintain and enhance the (1) productivity of forests and other vegetative resources; (2) productive capacity and quality of groundwater basins and recharge areas, streams, reservoirs, and other water bodies; (3) productivity of fisheries and other fish and wildlife resources; and (4) the recreational value and aesthetic value of these areas.

1.35 Protect Productive Uses of Vegetative, Water, Fish and Wildlife Resources

Regulate development in order to protect and promote the managed use of vegetative, water, fish and wildlife resources.

1.36 Protect the Productive Use of Timber Resources

Ensure that land uses and development within timber harvesting areas will not significantly detract from or inhibit the use of the property for the growing and harvesting of timber.

1.37 Protect the Productive Use of Water Resources

Ensure that land uses and development on or near water resources will not impair the quality or productive capacity of these resources.

1.38 Encourage Aquaculture

Encourage the development of aquacultural uses in a manner which minimizes adverse environmental impacts on surrounding vegetative, water, fish and wildlife resources and sensitive habitats.

CONTROL OF INCOMPATIBLE VEGETATIVE, FISH AND WILDLIFE RESOURCES1.39 Control Incompatible Vegetation, Fish and Wildlife

Encourage and support the control of vegetation, fish and wildlife resources which are harmful to the surrounding environment or pose a threat to public health, safety and welfare.

1.40 Minimize Adverse Impacts of Programs Controlling Incompatible Vegetation, and Fish and Wildlife

Minimize the negative impacts and risks of programs controlling incompatible vegetation, fish and wildlife.

RESOURCE MANAGEMENT COORDINATION

1.41 Encourage Coordinated, Countywide Management of Vegetative, Water, Fish and Wildlife Resources

Encourage all Federal, State, regional, County, and city agencies with jurisdiction in San Mateo County to cooperate and coordinate the management and protection of vegetative, water, fish and wildlife resources.

ACQUISITION AND MANAGEMENT OF SENSITIVE HABITATS

1.42 Encourage Public Agencies and Private Groups to Acquire Significant Sensitive Habitats

Encourage public agencies and private groups to acquire and manage significant sensitive habitats because of the (1) biological and scientific significance of the habitat, (2) degree of endangerment from development or other activities, and (3) accessibility for educational and scientific uses and vulnerability to overuse.

PROGRAM RESPONSIBILITIES

ROLE OF THE COUNTY

1.43 Develop a Sensitive Habitat Information Base

Develop and maintain clear, detailed and comprehensive maps and other information identifying sensitive habitats in the unincorporated area of San Mateo County.

1.44 Develop Standard Mitigation Measures

Develop mitigation measures which could be the basis for measures recommended to protect sensitive habitats, vegetative, water, fish and wildlife resources and their productive uses from development activities in the County.

1.45 Improvement of Damaged Resources

Encourage programs which repair and/or enhance damaged vegetative, water, fish and wildlife resources and sensitive habitats, with the goal of returning them to their natural condition.

1.46 Consolidate Regulations Protecting Sensitive Habitats in Rural Areas

- a. Consolidate existing performance criteria and development standards to regulate all development in sensitive habitats in rural areas.
- b. Consider using the consolidated regulations as an overlay zoning district.

1.47 Develop Performance Criteria and Development Standards for Sensitive Habitats in Urban Areas

- a. Develop a set of performance criteria and development standards to protect sensitive habitats in urban areas.
- b. Consider using the regulations as an overlay zoning district.

1.48 Develop Guidelines for Vegetation and Debris Control in Riparian Corridors

Develop guidelines for vegetation and debris control in riparian corridors. Such guidelines should set forth clear direction on procedures to:

- (1) facilitate the abatement of avoidable flood hazards and
- (2) minimize adverse impacts on riparian communities.

1.49 Encourage the Management of Riparian Corridors

Encourage and, to the maximum extent feasible, reward the efforts of those responsible for managing riparian corridors in a manner that is consistent with County and State guidelines.

ROLE OF OTHER PUBLIC AGENCIES

1.50 Support Resource Management Efforts of Other Agencies

Recognize, encourage and cooperate with the efforts of public agencies and private groups which are consistent with the goals, objectives and policies of this chapter.

1.51 Develop Programs to Adapt to the Impacts of Climate Change

- a. Integrate advances in research of the impact of climate change into the assessment of vulnerabilities of sensitive species, sensitive habitats, and vegetative, fish, and wildlife resources.
- b. Protect sensitive habitats and resources from the impacts of climate change.
- c. Coordinate with other local, State, and national agencies to understand and respond to new, exacerbated, or changing vulnerabilities that result from the impacts of climate change.

County of San Mateo Local Coastal Program

SENSITIVE HABITATS COMPONENT

GENERAL POLICIES

*7.1 Definition of Sensitive Habitats

Define sensitive habitats as any area in which plant or animal life or their habitats are either rare or especially valuable and any area which meets one of the following criteria: (1) habitats containing or supporting "rare and endangered" species as defined by the State Fish and Game Commission, (2) all perennial and intermittent streams and their tributaries, (3) coastal tide lands and marshes, (4) coastal and offshore areas containing breeding or nesting sites and coastal areas used by migratory and resident water-associated birds for resting areas and feeding, (5) areas used for scientific study and research concerning fish and wildlife, (6) lakes and ponds and adjacent shore habitat, (7) existing game and wildlife refuges and reserves, and (8) sand dunes.

Sensitive habitat areas include, but are not limited to, riparian corridors, wetlands, marine habitats, sand dunes, sea cliffs, and habitats supporting rare, endangered, and unique species.

7.2 Designation of Sensitive Habitats

Designate sensitive habitats as including, but not limited to, those shown on the Sensitive Habitats Map for the Coastal Zone.

*7.3 Protection of Sensitive Habitats

- a. Prohibit any land use or development which would have significant adverse impact on sensitive habitat areas.
- b. Development in areas adjacent to sensitive habitats shall be sited and designed to prevent impacts that could significantly degrade the sensitive habitats. All uses shall be compatible with the maintenance of biologic productivity of the habitats.

*7.4 Permitted Uses in Sensitive Habitats

- a. Permit only resource dependent uses in sensitive habitats. Resource dependent uses for riparian corridors, wetlands, marine habitats, sand dunes, sea cliffs and habitats supporting rare, endangered, and unique species shall be the uses permitted in Policies 7.9, 7.16, 7.23, 7.26, 7.30, 7.33, and 7.44, respectively, of the County Local Coastal Program on March 25, 1986.7.2
- b. In sensitive habitats, require that all permitted uses comply with U.S. Fish and Wildlife and State Department of Fish and Game regulations.

7.5 Permit Conditions

- a. As part of the development review process, require the applicant to demonstrate that there will be no significant impact on sensitive habitats. When it is determined that significant impacts may occur, require the applicant to provide a report prepared by a qualified professional which provides: (1) mitigation measures which protect resources and comply with the policies of the Shoreline Access, Recreation/Visitor-Serving Facilities and Sensitive Habitats Components, and (2) a program for monitoring and evaluating the effectiveness of mitigation measures. Develop an appropriate program to inspect the adequacy of the applicant's mitigation measures.
- b. When applicable, require as a condition of permit approval the restoration of damaged habitat(s) when in the judgment of the Planning Director restoration is partially or wholly feasible.

7.6 Allocation of Public Funds

In setting priorities for allocating limited local, State, or federal public funds for preservation or restoration, use the following criteria: (1) biological and scientific significance of the habitat, (2) degree of endangerment from development or other activities, and (3) accessibility for educational and scientific uses and vulnerability to overuse.

RIPARIAN CORRIDORS

7.7 Definition of Riparian Corridors

Define riparian corridors by the "limit of riparian vegetation" (i.e., a line determined by the association of plant and animal species normally found near streams, lakes and other bodies of freshwater: red alder, jaumea, pickleweed, big leaf maple, narrow-leaf cattail, arroyo willow, broadleaf cattail, horsetail, creek dogwood, black cottonwood, and box elder). Such a corridor must contain at least a 50% cover of some combination of the plants listed.

7.8 Designation of Riparian Corridors

Establish riparian corridors for all perennial and intermittent streams and lakes and other bodies of freshwater in the Coastal Zone. Designate those corridors shown on the Sensitive Habitats Map and any other riparian area meeting the definition of Policy 7.7 as sensitive habitats requiring protection, except for manmade irrigation ponds over 2,500 sq. ft. surface area.7.3

7.9 Permitted Uses in Riparian Corridors

- a. Within corridors, permit only the following uses: (1) education and research, (2) consumptive uses as provided for in the Fish and Game Code and Title 14 of the California Administrative Code, (3) fish and wildlife management activities, (4) trails and scenic overlooks on public land(s), and (5) necessary water supply projects.
- b. When no feasible or practicable alternative exists, permit the following uses: (1) stream dependent aquaculture, provided that non-stream dependent facilities locate outside of corridor, (2) flood control projects, including selective removal of riparian vegetation, where no other method for protecting existing structures in the floodplain is feasible and where such protection is necessary for public safety or to protect existing development, (3) bridges when supports are not in significant conflict with corridor resources, (4) pipelines, (5) repair or maintenance of roadways or road crossings, (6) logging operations which are limited to temporary skid trails, stream crossings, roads and landings in accordance with State and County timber harvesting regulations, and (7) agricultural uses, provided no existing riparian vegetation is removed, and no soil is allowed to enter stream channels.

7.10 Performance Standards in Riparian Corridors

Require development permitted in corridors to: (1) minimize removal of vegetation, (2) minimize land exposure during construction and use temporary vegetation or mulching to protect critical areas, (3) minimize erosion, sedimentation, and runoff by appropriately grading and replanting modified areas, (4) use only adapted native or non-invasive exotic plant species when replanting, (5) provide sufficient passage for native and anadromous fish as specified by the State Department of Fish and Game, (6) minimize adverse effects of waste water discharges and entrainment, (7) prevent depletion of groundwater supplies and substantial interference with surface and subsurface waterflows, (8) encourage waste water reclamation, (9) maintain natural vegetation buffer areas that protect riparian habitats, and (10) minimize alteration of natural streams.

7.11 Establishment of Buffer Zones

- a. On both sides of riparian corridors, from the "limit of riparian vegetation" extend buffer zones 50 feet outward for perennial streams and 30 feet outward for intermittent streams.
- b. Where no riparian vegetation exists along both sides of riparian corridors, extend buffer zones 50 feet from the predictable high water point for perennial streams and 30 feet from the midpoint of intermittent streams.7.4
- c. Along lakes, ponds, and other wet areas, extend buffer zones 100 feet from the high water point except for man-made ponds and reservoirs used for agricultural purposes for which no buffer zone is designated.

7.12 Permitted Uses in Buffer Zones

Within buffer zones, permit only the following uses: (1) uses permitted in riparian corridors; (2) residential uses on existing legal building sites, set back 20 feet from the limit of riparian vegetation,

only if no feasible alternative exists, and only if no other building site on the parcel exists; (3) on parcels designated on the LCP Land Use Plan Map: Agriculture, Open Space, or Timber Production, residential structures or impervious surfaces only if no feasible alternative exists; (4) crop growing and grazing consistent with Policy 7.9; (5) timbering in “streamside corridors” as defined and controlled by State and County regulations for timber harvesting; and (6) no new residential parcels shall be created whose only building site is in the buffer area.

7.13 Performance Standards in Buffer Zones

Require uses permitted in buffer zones to: (1) minimize removal of vegetation; (2) conform to natural topography to minimize erosion potential; (3) make provisions (i.e., catch basins) to keep runoff and sedimentation from exceeding pre-development levels; (4) replant where appropriate with native and noninvasive exotics; (5) prevent discharge of toxic substances, such as fertilizers and pesticides; into the riparian corridor; (6) remove vegetation in or adjacent to man-made agricultural ponds if the life of the pond is endangered; (7) allow dredging in or adjacent to man-made ponds if the San Mateo County Resource Conservation District certified that siltation imperils continued use of the pond for agricultural water storage and supply; and (8) limit the sound emitted from motorized machinery to be kept to less than 45-dBA at any riparian buffer zone boundary except for farm machinery and motorboats.

WETLANDS

7.14 Definition of Wetland

Define wetland as an area where the water table is at, near, or above the land surface long enough to bring about the formation of hydric soils or to support the growth of plants which normally are found to grow in water or wet ground. Such wetlands can include mudflats (barren of vegetation), marshes, and swamps.

Such wetlands can be either fresh or saltwater, along streams (riparian), in tidally influenced areas (near the ocean and usually below extreme high water of spring tides), marginal to lakes, ponds, and man-made impoundments.

Wetlands do not include areas which in normal rainfall years are permanently submerged (streams, lakes, ponds and impoundments), nor marine or estuarine areas below extreme low water of spring tides, nor vernal wet areas where the soils are not hydric.

In San Mateo County, wetlands typically contain the following plants: cordgrass, pickleweed, jaumea, frankenia, marsh mint, tule, bullrush, narrow-leaf cattail, broadleaf cattail, pacific silverweed, salt rush, and bog rush. To qualify, a wetland must contain at least a 50% cover of some combination of these plants, unless it is a mudflat.

7.15 Designation of Wetlands

- a. Designate the following as wetlands requiring protection: Pescadero Marsh, Pillar Point Marsh (as delineated on Map 7.1), marshy areas at Tunitas Creek, San Gregorio Creek, Pomponio Creek and Gazos Creek, and any other wetland meeting the definition in Policy 7.14.
- b. At the time a development application is submitted, consider modifying the boundary of Pillar Point Marsh (as delineated on Map 7.1) if a report by a qualified professional, selected jointly by the County and the applicant, can demonstrate that land within the boundary does not meet the definition of a wetland.

7.16 Permitted Uses in Wetlands

Within wetlands, permit only the following uses: (1) nature education and research, (2) hunting, (3) fishing, (4) fish and wildlife management, (5) mosquito abatement through water management and biological controls; however, when determined to be ineffective, allow chemical controls which will not have a significant impact, (6) diking, dredging, and filling only as it serves to maintain existing dikes and an open channel at Pescadero Marsh, where such activity is necessary for the protection of pre-existing dwellings from flooding, or where such activity will enhance or restore the biological productivity of the marsh, (7) diking, dredging, and filling in any other wetland only if such activity serves to restore or enhance the biological productivity of the wetland, (8) dredging man-made reservoirs for agricultural water supply where wetlands may have formed, providing spoil disposal is planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation, and (9) incidental public service purposes, including, but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.

7.17 Performance Standards in Wetlands

Require that development permitted in wetlands minimize adverse impacts during and after construction. Specifically, require that: (1) all paths be elevated (catwalks) so as not to impede movement of water, (2) all construction takes place during daylight hours, (3) all outdoor lighting be kept at a distance away from the wetland sufficient not to affect the wildlife, (4) motorized machinery be kept to less than 45-dBA at the wetland boundary, except for farm machinery, (5) all construction which alters wetland vegetation be required to replace the vegetation to the satisfaction of the Planning Director including "no action" in order to allow for natural reestablishment, (6) no herbicides be used in wetlands unless specifically approved by the County Agricultural Commissioner and State Department of Fish and Game, and (7) all projects be reviewed by the State Department of Fish and Game and State Water Quality Board to determine appropriate mitigation measures.

7.18 Establishment of Buffer Zones

Buffer zones shall extend a minimum of 100 feet landward from the outermost line of wetland vegetation. This setback may be reduced to no less than 50 feet only where: (1) no alternative development site or design is possible; and (2) adequacy of the alternative setback to protect wetland resources is conclusively demonstrated by a professional biologist to the satisfaction of the County and the State Department of Fish and Game. A larger setback shall be required as necessary to maintain the functional capacity of the wetland ecosystem.

7.19 Permitted Uses in Buffer Zones

Within buffer zones, permit the following uses only: (1) uses allowed within wetlands (Policy 7.16) and (2) public trails, scenic overlooks, and agricultural uses that produce no impact on the adjacent wetlands.

7.20 Management of Pillar Point Marsh

- a. Define safe yield from the aquifer feeding the marsh as the amount of water that can be removed without adverse impacts on marsh health.
- b. Restrict groundwater extraction in the aquifer to a safe yield as determined by a hydrologic study participated in by the two public water systems (CUC and CCWD). Water system capacity

permitted and the number of building permits allowed in any calendar year shall be limited if necessary by the findings of the study.

- c. Encourage purchase by an appropriate public agency such as the Coastal Conservancy.
- d. Encourage management of the marsh to enhance the biological productivity and to maximize wildlife potential.
- e. All adjacent development shall, where feasible, contribute to the restoration of biologic productivity and habitat.7.7

7.21 Management of Pescadero Marsh

- a. Designate the marsh as a high priority resource management project, requiring additional governmental involvement.
- b. Encourage the State to conduct a thorough hydrological study of the watershed with emphasis on efficient utilization of existing yields through detailed knowledge of diversions, pumping activities and flooding potential as well as existing water control structures in the marsh. Groundwater extraction should be limited to aquifer safe yield.
- c. Require, as a condition of permit, that the Department of Parks and Recreation develop and implement a management plan with the State Department of Fish and Game which maximizes the wildlife potential of Pescadero Marsh and permits only compatible uses.
- d. Assist the San Mateo County Resource Conservation District in developing and implementing a soil management program to control sedimentation throughout the Pescadero/Butano watersheds with special emphasis on anadromous fish spawning and nursery areas in the upper tributaries as well as in agricultural areas adjacent to the marsh. Base the program on the findings of the 208 Best Management Practices Program.
- e. Permit dredging of Pescadero Creek mouth when necessary to protect the viability of the marsh and to protect Pescadero from floods. Dredging at the creek mouth is appropriate only when there is no feasible less environmentally damaging alternative, mitigation measures have been provided to minimize adverse environmental effects, and the functional capacity of the wetland is being maintained or enhanced.
- f. Development shall be limited to: very minor incidental public facilities which only temporarily impact the resources of the area, wetland restoration, and nature study.

MARINE HABITATS

7.22 Designation of Marine and Estuarine Habitats

Designate all areas containing marine and estuarine habitats as requiring protection, specifically including but not limited to: Fitzgerald Marine Reserve, San Gregorio Estuary, Pescadero Marsh, Pigeon Point, Franklin Point, Año Nuevo Point, and Año Nuevo Island Reserve.7.8

7.23 Permitted Uses in Marine and Estuarine Habitats

In marine and estuarine habitats, permit only the following uses: (1) nature education and research, (2) consumptive uses as provided for in the Fish and Game Code and Title 14 of the California Administrative Code, (3) fishing and (4) fish and wildlife management.

7.24 Energy Development

Request that offshore energy developments and require that onshore facilities for offshore oil be designed, constructed and maintained in a manner which minimizes impacts on marine habitats.

SAND DUNES

7.25 Designation of Sand Dune Habitats

Designate the following dune areas as protected sensitive habitats: Pescadero Point, Franklin Point, and Año Nuevo Point. "Dune areas" are defined as those areas indicated above and delineated by both active and stabilized dunes.

7.26 Permitted Uses

In dune areas, permit only the following uses: (1) education and research, and (2) trails.

7.27 Development Standards

- a. Prohibit any activity which alters the profile of an active dune or which results in the disturbance or removal of dune vegetation on active dunes.
- b. Control pedestrian traffic in dune areas.
- c. Prohibit all non-authorized motor vehicles from dune areas.
- d. Post signs informing recreational users not to disturb dunes or their natural vegetation.
- e. Where development is permitted, require revegetation with appropriate stabilizing species (preferably native) as a condition of permit approval.
- f. Prohibit any direct removal or excavation of sand from active dunes.
- g. Require development to locate only landward of the most seaward stabilized dune.7.9
- h. When no feasible or practical alternative exists, permit underground utilities.

7.28 Restoration of Dunes

Encourage projects by agencies and community groups to assist in the stabilization and restoration of dunes, particularly at Año Nuevo Point and Franklin Point.

7.29 Public Acquisition

Encourage public acquisition of the dune habitat at Franklin Point.

SEA CLIFFS

7.30 Permitted Uses

- a. Where nesting or roosting exists, permit only education and research activities.
- b. Where nesting or roosting does not exist, permit only the following uses: (1) education and research, (2) limited foot paths, (3) limited recreational rock climbing, (4) road and underground utility construction where no feasible alternative exists, and (5) intake or outfall lines provided that the habitat is not threatened.

7.31 Development Standards

- a. Restrict pedestrian traffic in bluff and cliff areas and on faces to a limited number of well-defined trails which avoid seabird nesting and roosting sites.
- b. Post signs informing recreational users not to disturb natural vegetation or nesting and roosting sites.

RARE AND ENDANGERED SPECIES

7.32 Designation of Habitats of Rare and Endangered Species

Designate habitats of rare and endangered species to include, but not be limited to, those areas defined on the Sensitive Habitats Map for the Coastal Zone.

7.33 Permitted Uses

- a. Permit only the following uses: (1) education and research, (2) hunting, fishing, pedestrian and equestrian trails that have no adverse impact on the species or its habitat, and (3) fish and wildlife management to restore damaged habitats and to protect and encourage the survival of rare and endangered species.
- b. If the critical habitat has been identified by the Federal Office of Endangered Species, permit only those uses deemed compatible by the U.S. Fish and Wildlife Service in accordance with the provisions of the Endangered Species Act of 1973, as amended.

7.34 Permit Conditions

In addition to the conditions set forth in Policy 7.5, require, prior to permit issuance, that a qualified biologist prepare a report which defines the requirements of rare and endangered organisms. At minimum, require the report to:

- a. Discuss:
 - (1) Animal food, water, nesting or denning sites and reproduction, predation and migration requirements, and
 - (2) Plants life histories and soils, climate and geographic requirements.
- b. Include a map depicting the locations of plants or animals and/or their habitats.
- c. Demonstrate that any development will not impact the functional capacity of the habitat.
- d. Recommend mitigation if development is permitted within or adjacent to identified habitats.

7.35 Preservation of Critical Habitats

Require preservation of all habitats of rare and endangered species using criteria including, but not limited to, Section 6325.2 (Primary Fish and Wildlife Habitat Area Criteria) and Section 6325.7 (Primary Natural Vegetative Areas Criteria) of the Resource Management Zoning District.

7.36 San Francisco Garter Snake (*Thamnophis sirtalis tetrataenia*)

- a. Prevent any development where there is known to be a riparian or wetland location for the San Francisco garter snake with the following exceptions: (1) existing man-made impoundments smaller than one-half acre in surface, and (2) existing man-made impoundments greater than one-half acre in surface providing mitigation measures are taken to prevent disruption of no

more than one half of the snake's known habitat in that location in accordance with recommendations from the State Department of Fish and Game.

- b. Require developers to make sufficiently detailed analyses of any construction which could impair the potential or existing migration routes of the San Francisco garter snake. Such analyses will determine appropriate mitigation measures to be taken to provide for appropriate migration corridors.

7.37 San Francisco Tree Lupine Moth (*Grapholitha edwardsiana*)

Prevent the loss of any large populations (more than 100 plants in a 1/10-acre area) of tree lupine within 1 mile of the coastline.

7.38 Brackish Water Snail (*Tryonia imitator*)

- a. Prevent any development which can have a deleterious effect on the California brackish water snail, including any dredging of its known or potential habitat.
- b. Encourage the State Department of Parks and Recreation to manage Pescadero Marsh in such a manner as to enhance the habitat for the California brackish water snail.

7.39 Sea Otter (*Enhydra lutris nereis*)

Encourage the appropriate agency to protect, monitor, and enhance sea otter habitats. In the development of mariculture facilities, encourage appropriate State and federal agencies to seek measures to protect them from predation by the sea otter.

7.40 Globose Dune Beetle (*Coelus globosus*)

- a. Assess, monitor, and contain the spread of dune grass.
- b. Provide roped-off trails for public access to the beach with the explanation of the dune beetle and its surrounding habitat.

7.41 Rare Plant Search

Encourage a continued search for any rare plants known to have occurred in San Mateo County Coastal Zone but not recently seen. Such search can be done by various persons or groups concerned with such matters. 7.12

7.42 Development Standards

Prevent any development on or within 50 feet of any rare plant population. When no feasible alternative exists, permit development if: (1) the site or a significant portion thereof is returned to a natural state to allow for the reestablishment of the plant, or (2) a new site is made available for the plant to inhabit.

UNIQUE SPECIES

7.43 Designation of Habitats of Unique Species

Designate habitats of unique species to include, but not be limited to, those areas designated on the Sensitive Habitats Map for the Coastal Zone.

7.44 Permitted Uses

Permit only the following uses: (1) education and research, (2) hunting, fishing, pedestrian and equestrian trails that have no adverse impact on the species or its habitat, and (3) fish and wildlife management to the degree specified by existing governmental regulations.

7.45 Permit Conditions

In addition to the conditions set forth in Policy 7.5, require, as a condition of permit approval, that a qualified biologist prepare a report which defines the requirements of a unique organism. At minimum, require the report to discuss: (1) animal food, water, nesting or denning sites and reproduction, predation and migration requirements, and (2) plants life histories and soils, climate and geographic requirements.

7.46 Preservation of Habitats

Require preservation of critical habitats using criteria including, but not limited to, Section 6325.2 (Primary Fish and Wildlife Habitat Area Criteria) and Section 6325.7 (Primary Natural Vegetative Areas Criteria) of the Resource Management Zoning District.

7.47 Elephant Seal (*Mirounga angustirostris*)

- a. Encourage affected public agencies to control access to areas where elephant seals congregate.
- b. Enforce trespass laws to restrict access to areas where elephant seals congregate especially during mating, breeding, and molting season.7.13

7.48 Monterey Pine (*Pinus radiata*)

- a. Require any development to keep to a minimum the number of native Monterey pine cut in the natural pine habitat near the San Mateo-Santa Cruz County line.
- b. Allow the commercial cutting of Monterey pine if it: (1) perpetuates the long-term viability of stands, (2) prevents environmental degradation, and (3) protects the viewshed within the Cabrillo Highway Scenic Corridor.
- c. To preserve the productivity of prime agricultural soils, encourage the control of invasive Monterey pine onto the soils.

7.49 California Wild Strawberry (*Fragaria californica*)

Require any development, within one-half mile of the coast, to mitigate against the destruction of any California wild strawberry in one of the following ways:

- a. Prevent any development, trampling, or other destructive activity which would destroy the plant; or
- b. After determining specifically if the plants involved are of particular value, successfully transplant them or have them successfully transplanted to some other suitable site. Determination of the importance of the plants can only be made by a professional doing work in strawberry breeding.

7.50 Champion Monterey Cypress (*Cupressus macrocarpa*)

Declare the Champion Monterey Cypress Tree a Class I Heritage Tree.

WEEDY, UNDESIRABLE PLANTS

7.51 Voluntary Cooperation

Encourage the voluntary cooperation of private landowners to remove from their lands the undesirable pampas grass, French, Scotch and other invasive brooms. Similarly, encourage landowners to remove blue gum seedlings to prevent their spread.

7.52 Public Agency Requirements

Require public agencies, to the point feasible, to remove the undesirable pampas grass and French, Scotch, and other invasive brooms from their lands.

7.53 Sale Prevention

Encourage the voluntary cooperation of the County's retail nursery trade to prevent the sale of undesirable pampas grass and French, Scotch, and other invasive brooms in the County.

7.54 Weedy Thistle Eradication

Encourage farmers to eradicate weedy thistle, particularly from land adjacent to artichoke fields. Encourage the Agricultural Commissioner to support eradication procedures in cooperation with the Farm Advisor, local farmers, the State Department of Beaches and Parks, CalTrans, and the State Department of Food and Agriculture.

COMMERCIAL FISHING/RECREATIONAL BOATING COMPONENT

12.1 Reservation of Public Works Capacity

Reserve sewer and water capacity on a 50/50 proportional basis for commercial fishing and recreational boating land uses and in accordance with the policies of the Public Works Component.

12.2 Locating Facilities

Limit the location of small craft harbors on the San Mateo County Coast to the eastern portion of Pillar Point Harbor.

12.3 Related Uses

Encourage developments or uses which directly support recreational boating or commercial fishing before all others within one-half mile of the Pillar Point Harbor area on lands designated on the Land Use Plan maps in Commercial Recreation or General Industrial.

12.4 Protection of Sensitive Habitats

- a. Discourage marina development which requires the construction of major breakwaters or dredging and filling.
- b. Prohibit the discharge or disposal of any solid or liquid waste including sanitary waste from boats into sensitive habitat areas.
- c. Any marina development shall be consistent with Policy 7.5 (permit conditions) of the Sensitive Habitat Component for the protection of Pillar Point Marsh, Denniston Creek and harbor tidelands.

12.5 Role of the San Mateo County Harbor District

- a. Encourage the Harbor District to investigate the needs of commercial fishing and recreational boating on an equal basis, and to accommodate those needs accordingly.
- b. Require the District to submit to the County annually a list of proposed development plans recommended for planning or construction during the ensuing fiscal year in accordance with Section 65401 of the Government Code and Policy 2.5 of the Public Works Component. Evaluate projects within County jurisdiction for consistency with the development plan approved as Coastal Permit 133-76.12.2
- c. Encourage the Harbor Master to set minimum use requirements for buying stations leased from the Harbor District.

Appendix B

Site Photographs



Photograph 1. View of the beach shoreline north of Pillar Point Harbor Marina at low tide, facing southeast. Ruderal and landscaped vegetation can be seen in the foreground.



Photograph 2. View of the beach shoreline north of Pillar Point Harbor Marina at low tide, facing northeast. Common reed stands can be seen in the background near the high tide line.



Photograph 3. View of the shoreline north of Pillar Point Harbor Marina at high tide, facing west. Ruderal vegetation can be seen in the foreground, while common reeds, arroyo willow, and landscaped trees can be seen in the background.



Photograph 4. View of the beach shoreline north of Pillar Point Harbor Marina at low tide, facing west. Compared to Photograph 3, the dramatic daily tidal fluctuation within the harbor can be observed.



Photograph 5. View of invertebrate species growing on docks within Pillar Point Marina.



Photograph 6. View of invertebrate species growing beneath Dock G.



Photograph 7. View of Dock F, facing east. Boat slips within Pillar Point Harbor Marina serve primarily commercial fishing vessels.



Photograph 8. View of Johnson Pier, the Pillar Point Harbor Office Building, and surrounding hotel, restaurants, and retail buildings, facing northwest.



Photograph 9. View of the outlet of the culverted drainage flowing into Pillar Point Harbor from Pillar Point Harbor Boulevard, facing north. Common reeds are growing to the left of the drainage, while arroyo willows are growing to the right.



Photograph 10. View of the culvert that conveys water from beneath Pillar Point Harbor Boulevard to Pillar Point Harbor. The drainage is surrounded by several arroyo willows.



Photograph 11. View of the upper marina parking lot, where laydown and staging for the Project will occur. Landscaped trees could provide nesting habitat for a variety of bird species.



Photograph 12. View of Pillar Point Harbor Boulevard, facing west. Ruderal vegetation and arroyo willows can be viewed downslope (left) of the road, while landscaped trees along the parking lot can be viewed in the background to the right.

Appendix C

Floral and Faunal Compendium

Plant and Algae Species Observed within the Study Area on December 16, 2021

Scientific Name	Common Name	Status	Native or Introduced
Herbs			
<i>Carpobrotus edulis</i>	ice plant	None	Introduced, Cal-IPC: High
<i>Malva neglecta</i>	dwarf mallow	None	Introduced
<i>Medicago lupulina</i>	black medick	None	Introduced
<i>Oxalis pes-caprae</i>	Bermuda buttercup	None	Introduced, Cal-IPC: Moderate
<i>Plantago lanceolata</i>	English plantain	None	Introduced, Cal-IPC: Limited
<i>Raphanus sativus</i>	wild radish	None	Introduced, Cal-IPC: Limited
<i>Rubus ursinus</i>	California blackberry	None	Native
<i>Salicornia pacifica</i>	pickleweed	None	Native
<i>Calendula arvensis</i>	field marigold	None	Introduced
<i>Hirschfeldia incana</i>	wild mustard	None	Introduced, Cal-IPC: Moderate
Shrubs			
<i>Buxus</i> sp.	boxwood	None	Introduced
Trees			
<i>Acacia melanoxyylon</i>	blackwood acacia	None	Introduced, Cal-IPC: Limited
<i>Hesperocyparis macrocarpa</i>	Monterey cypress	CRPR 1B.2	Native
<i>Pinus radiata</i>	Monterey pine	CRPR 1B.1	Native
Grasses			
<i>Bromus</i> spp.	brome	None	Introduced
<i>Distichlis spicata</i>	saltgrass	None	Native
<i>Phragmites australis</i>	common reed	None	Native
Algae			
<i>Macrocystis pyrifera</i>	giant brown kelp	None	Native
<i>Mazzaella flaccida</i>	small red algae	None	Native
<i>Prionitis andersoniana</i>	red branching algae	None	Native
<i>Ulva intestinalis</i>	sea lettuce	None	Native

CRPR = California Rare Plant Rank

1B.1 = Plants rare, threatened, or endangered in California and elsewhere; seriously threatened in California

1B.2 = Plants rare, threatened, or endangered in California and elsewhere; fairly threatened in California

Cal-IPC = California Invasive Plant Council Rank

Wildlife Species Observed Within the Study Area on December 16, 2021

Scientific Name	Common Name	Status	Native or Introduced
Birds			
<i>Agelaius phoeniceus</i>	red-winged blackbird	None	Native
<i>Ardea herodias</i>	great blue heron	None	Native
<i>Aythya affinis</i>	lesser scaup	None	Native
<i>Bucephala albeola</i>	bufflehead	None	Native
<i>Bucephala clangula</i>	common goldeneye	None	Native
<i>Buteo jamaicensis</i>	red-tailed hawk	None	Native
<i>Calidris alba</i>	sanderling	None	Native
<i>Cathartes aura</i>	turkey vulture	None	Native
<i>Columba livia</i>	rock pigeon	None	Introduced
<i>Egretta thula</i>	snowy egret	None	Native
<i>Euphagus cyanocephalus</i>	Brewer's blackbird	None	Native
<i>Fulica americana</i>	American coot	None	Native
<i>Gavia immer</i>	common loon	None	Native
<i>Larus occidentalis</i>	western gull	None	Native
<i>Nannopterum auritum</i>	double-crested cormorant	None	Native
<i>Numenius phaeopus</i>	whimbrel	None	Native
<i>Pelecanus occidentalis</i>	brown pelican	None	Native
<i>Pluvialis squatarola</i>	black-bellied plover	None	Native
<i>Podiceps nigricollis</i>	eared grebe	None	Native
<i>Sturnus vulgaris</i>	European starling	None	Introduced
<i>Tringa semipalmata</i>	willet	None	Native
Mammals			
<i>Phoca vitulina</i>	harbor seal	MMPA	Native
<i>Zalophus californianus</i>	California sea lion	MMPA	Native
Invertebrates			
<i>Acmaea</i> spp.	true limpets	None	Native
<i>Balanus glandula</i>	acorn barnacle	None	Native
<i>Botrylloides violaceus</i>	orange sheath tunicate	None	Native
<i>Bugula neritina</i>	common bugula	None	Introduced
<i>Chthalamus</i> sp.	buckshot/acorn barnacles	None	Native
<i>Corynactis californica</i>	strawberry anemone	None	Native
<i>Crassadoma gigantea</i>	rock scallop	None	Native
<i>Lottia gigantea</i>	owl limpet	None	Native
<i>Lottia pelta</i>	shield limpet	None	Native
<i>Lottia scabra</i>	rough limpet	None	Native
<i>Megabalanus californicus</i>	California barnacle	None	Native
<i>Metridium senile</i>	frilled anemone	None	Native
<i>Mytilus californianus</i>	California mussel	None	Native

Scientific Name	Common Name	Status	Native or Introduced
<i>Mytilus edulis</i>	blue mussel	None	Introduced
<i>Nuttallina fluxa</i>	spiny chiton	None	Native
Invertebrates			
<i>Sabellidae</i> sp.	feather duster worm	None	Native
<i>Styela montereyensis</i>	stalked tunicate	None	Native
<i>Tetraclita rubescens</i>	volcano barnacle	None	Native
<i>Watersipora subtorquata</i>	wavy red bryozoan	None	Introduced

MMPA = Marine Mammal Protection Act

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Appendix D

Special-status Species Potential to Occur Evaluations

Special-status Plant and Lichen Species in the Regional Vicinity of the Study Area

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
<i>Acanthomintha duttonii</i> San Mateo thorn-mint	FE/SCE G1/S1 1B.1	Chaparral, Valley and foothill grassland. Serpentinite 50-300m. Blooms Apr-Jun.	Not Expected	Suitable chaparral and grassland habitat is not present within the Study Area, nor are serpentinite soils or suitable elevations.
<i>Agrostis blasdalei</i> Blasdale's bent grass	None/None G2/S2 1B.2	Coastal bluff scrub, Coastal dunes, Coastal prairie. Sandy or gravelly soil close to rocks; often in nutrient-poor soil with sparse vegetation. 0-150m. Blooms May-Jul.	Not Expected	Suitable coastal bluff scrub, dunes, or coastal prairie habitat does not occur within the Study Area. There is one occurrence of the species documented in the CNDDDB within five miles of the Study Area (CDFW 2022b).
<i>Allium peninsulare</i> var. <i>franciscanum</i> Franciscan onion	None/None G5T2/S2 1B.2	Cismontane woodland, Valley and foothill grassland. Clay, Serpentinite (often), Volcanic 52-305m. Blooms (Apr)May-Jun.	Not Expected	Cismontane woodland and valley and foothill grassland habitats are not present within the Study Area, nor are suitable elevations or soils.
<i>Amsinckia lunaris</i> bent-flowered fiddleneck	None/None G3/S3 1B.2	Cismontane woodland, Coastal bluff scrub, Valley and foothill grassland. 3-500m. Blooms Mar-Jun.	Not Expected	Cismontane woodland, coastal bluff scrub and valley and foothill grassland habitats do not exist within the Study Area and there are no documented occurrences within five miles (CDFW 2022a, Calflora 2022).
<i>Arctostaphylos andersonii</i> Anderson's manzanita	None/None G2/S2 1B.2	Broadleafed upland forest, Chaparral, North Coast coniferous forest. Edges, Openings 60-760m. Blooms Nov-May.	Not Expected	Suitable habitat does not occur within the Study Area and no manzanita species were observed during the site survey.
<i>Arctostaphylos franciscana</i> Franciscan manzanita	FE/None GHC/S1 1B.1	Coastal scrub. Serpentine outcrops in chaparral. 60-300m. Blooms Feb-Apr.	Not Expected	Suitable habitat does not occur within the Study Area and no manzanita species were observed during the site survey.
<i>Arctostaphylos imbricata</i> San Bruno Mountain manzanita	None/SCE G1/S1 1B.1	Chaparral, Coastal scrub. Rocky 275-370m. Blooms Feb-May.	Not Expected	Suitable habitat does not occur within the Study Area and no manzanita species were observed during the site survey.
<i>Arctostaphylos montana</i> ssp. <i>ravenii</i> Presidio manzanita	FE/SCE G3T1/S1 1B.1	Chaparral, Coastal prairie, Coastal scrub. Open, rocky serpentine slopes. 45-215m. Blooms Feb-Mar.	Not Expected	Suitable habitat does not occur within the Study Area and no manzanita species were observed during the site survey.
<i>Arctostaphylos montaraensis</i> Montara manzanita	None/None G1/S1 1B.2	Chaparral, Coastal scrub. Slopes and ridges. 80-500m. Blooms Jan-Mar.	Not Expected	Suitable habitat does not occur within the Study Area and no manzanita species were observed during the site survey.

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Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
<i>Arctostaphylos pacifica</i> Pacific manzanita	None/SCE G1/S1 1B.1	Chaparral, Coastal scrub. 320 m. 330-330m. Blooms Feb-Apr.	Not Expected	Suitable habitat does not occur within the Study Area and no manzanita species were observed during the site survey.
<i>Arctostaphylos regismontana</i> Kings Mountain manzanita	None/None G2/S2 1B.2	Broadleafed upland forest, Chaparral, North Coast coniferous forest. Granitic, Sandstone 305-730m. Blooms Dec-Apr.	Not Expected	Suitable habitat does not occur within the Study Area and no manzanita species were observed during the site survey.
<i>Astragalus pycnostachyus</i> var. <i>pycnostachyus</i> coastal marsh milk-vetch	None/None G2T2/S2 1B.2	Coastal dunes, Coastal scrub, Marshes and swamps. Mesic sites in dunes or along streams or coastal salt marshes. 0-30m. Blooms (Apr)Jun-Oct.	Not Expected	Some suitable habitat for the species historically occurred within the Study Area, but the last documented occurrence within five miles of the Study Area is from 1902 (CDFW 2022a, Calflora 2022).
<i>Astragalus tener</i> var. <i>tener</i> alkali milk-vetch	None/None G2T1/S1 1B.2	Playas, Valley and foothill grassland, Vernal pools. Alkaline 1-60m. Blooms Mar-Jun.	Not Expected	Playas, vernal pools, and valley and foothill grasslands are not present within the Study Area and there are no documented occurrences within five miles (CDFW 2022a, Calflora 2022).
<i>Carex comosa</i> bristly sedge	None/None G5/S2 2B.1	Coastal prairie, Marshes and swamps, Valley and foothill grassland. Lake margins, wet places; site below sea level is on a Delta island. - 0-625m. Blooms May-Sep.	Not Expected	Coastal prairie, freshwater marsh, and grassland habitats are not present within the Study Area and there are no documented occurrences of the species within San Mateo County (CDFW 2022a, Calflora 2022).
<i>Centromadia parryi</i> ssp. <i>parryi</i> pappose tarplant	None/None G3T2/S2 1B.2	Chaparral, Coastal prairie, Marshes and swamps, Meadows and seeps, Valley and foothill grassland. Alkaline (often). 0-420m. Blooms May-Nov.	Not Expected	Chaparral, coastal prairie, freshwater marsh, meadows, and grasslands do not occur within the Study Area and there are no documented occurrences within five miles (CDFW 2022a, Calflora 2022).
<i>Chloropyron maritimum</i> ssp. <i>palustre</i> Point Reyes salty bird's-beak	None/None G4?T2/S2 1B.2	Marshes and swamps. Usually in coastal salt marsh with <i>Salicornia</i> , <i>Distichlis</i> , <i>Jaumea</i> , <i>Spartina</i> , etc. 0-10m. Blooms Jun-Oct.	Not Expected	Some marginally suitable habitat for the species occurs within the Study Area, but the nearest documented occurrence is 11 miles away and was documented in 1893 (Calflora 2022).
<i>Chorizanthe cuspidata</i> var. <i>cuspidata</i> San Francisco Bay spineflower	None/None G2T1/S1 1B.2	Coastal bluff scrub, Coastal dunes, Coastal prairie, Coastal scrub. Sandy soils. 3-215m. Blooms Apr-Jul (Aug).	Not Expected	Coastal bluff scrub, coastal dunes, coastal prairie, and coastal scrub habitats do not occur within the Study Area and there are no documented occurrences of the species within five miles (CDFW 2022a, Calflora 2022).

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
<i>Chorizanthe robusta</i> var. <i>robusta</i> robust spineflower	FE/None G2T1/S1 1B.1	Chaparral, Cismontane woodland, Coastal dunes, Coastal scrub. Gravelly (sometimes), Sandy (sometimes) 3-300m. Blooms Apr-Sep.	Not Expected	Chaparral, cismontane woodland, coastal dunes, and coastal scrub habitats do not occur within the Study Area and there are no documented occurrences of the species within five miles (CDFW 2022a, Calflora 2022).
<i>Cirsium andrewsii</i> Franciscan thistle	None/None G3/S3 1B.2	Broadleafed upland forest, Coastal bluff scrub, Coastal prairie, Coastal scrub. Mesic, Serpentinite (sometimes) 0-150m. Blooms Mar-Jul.	Not Expected	Forests, coastal bluff scrub, coastal prairie, and coastal scrub habitats do not occur within the Study Area, nor do mesic or serpentinite sites. There is one documented occurrence of the species approximately 4.7 miles northeast of the Study Area (CDFW 2022a, Calflora 2022).
<i>Cirsium fontinale</i> var. <i>fontinale</i> fountain thistle	FE/SCE G2T1/S1 1B.1	Chaparral, Cismontane woodland, Meadows and seeps, Valley and foothill grassland. Seeps, Serpentinite 45-175m. Blooms (Apr) May-Oct.	Not Expected	Chaparral, cismontane woodland, meadows and grasslands do not occur within the Study Area. There are no documented occurrences within five miles of the Study Area (CDFW 2022a, Calflora 2022).
<i>Cirsium occidentale</i> var. <i>compactum</i> compact cobwebby thistle	None/None G3G4T2/S2 1B.2	Chaparral, Coastal dunes, Coastal prairie, Coastal scrub. On dunes and on clay in chaparral; also in grassland. 5-150m. Blooms Apr-Jun.	Not Expected	Chaparral, coastal dunes, coastal prairie, coastal scrub and grassland habitats do not occur within the Study Area and there are no documented occurrences within five miles (CDFW 2022, Calflora 2022).
<i>Collinsia corymbosa</i> round-headed Chinese- houses	None/None G1/S1 1B.2	Coastal dunes. 0-20m. Blooms Apr-Jun.	Not Expected	Coastal dunes do not occur within the Study Area and there are no documented occurrences within five miles (CDFW 2022, Calflora 2022).
<i>Collinsia multicolor</i> San Francisco collinsia	None/None G2/S2 1B.2	Annual herb. Blooms March-May. Closed-cone coniferous forest, coastal scrub. On decomposed shale (mudstone) mixed with humus. 30-250m (100-820ft).	Not Expected	Closed-cone coniferous forest and coastal scrub habitats are not present within the Study Area. There is one documented occurrence of the species (from 1900) within five miles of the Study Area (CDFW 2022a, Calflora 2022).
<i>Dirca occidentalis</i> western leatherwood	None/None G2/S2 1B.2	Broadleafed upland forest, Chaparral, Cismontane woodland, Closed-cone coniferous forest, North Coast coniferous forest, Riparian forest, Riparian woodland. Mesic sites. 25-425m. Blooms Jan-Mar (Apr).	Not Expected	Forests and woodlands are not present within the Study Area. There are five documented occurrences of the species within five miles of the Study Area, though all occur within inland, forested habitats east of the coastline (CDFW 2022a, Calflora 2022).

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Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
<i>Eriophyllum latilobum</i> San Mateo woolly sunflower	FE/SCE G1/S1 1B.1	Cismontane woodland, Coastal scrub, Lower montane coniferous forest. Often on roadcuts; found on and off of serpentine. 45-330m. Blooms May-Jun.	Not Expected	Woodland, forest, and coastal scrub habitats do not occur within the Study Area, and there are no documented occurrences of the species within five miles (CDFW 2022, Calflora 2022).
<i>Eryngium jepsonii</i> Jepson's coyote-thistle	None/None G2/S2 1B.2	Valley and foothill grassland, Vernal pools. Clay. 3-300m. Blooms Apr-Aug.	Not Expected	Valley and foothill grasslands and vernal pools do not occur within the Study Area and there are no documented occurrences of the species within five miles (CDFW 2022, Calflora 2022).
<i>Fritillaria biflora</i> var. <i>ineziana</i> Hillsborough chocolate lily	None/None G3G4T1/S1 1B.1	Cismontane woodland, Valley and foothill grassland. Probably only on serpentine; most recent site is in serpentine grassland. 150-150m. Blooms Mar-Apr.	Not Expected	Cismontane woodlands and valley and foothill grasslands do not occur within the Study Area, nor do serpentine soils. There are no documented occurrences of the species within five miles (CDFW 2022, Calflora 2022).
<i>Fritillaria liliacea</i> fragrant fritillary	None/None G2/S2 1B.2	Cismontane woodland, Coastal prairie, Coastal scrub, Valley and foothill grassland. Often on serpentine; various soils reported though usually on clay, in grassland. 3-410m. Blooms Feb-Apr.	Not Expected	Cismontane woodlands, coastal prairie, coastal scrub, and valley and foothill grassland habitats do not occur within the Study Area, nor do serpentine soils. There is one documented occurrence (1931) of the species within five miles of the Study Area (CDFW 2022, Calflora 2022).
<i>Gilia capitata</i> ssp. <i>chamissonis</i> blue coast gilia	None/None G5T2/S2 1B.1	Coastal dunes, Coastal scrub. 2-200m. Blooms Apr-Jul.	Not Expected	Coastal dunes and coastal scrub habitats do not occur within the Study Area and there are no documented occurrences of the species within five miles (CDFW 2022, Calflora 2022).
<i>Gilia millefoliata</i> dark-eyed gilia	None/None G2/S2 1B.2	Coastal dunes. 2-30m. Blooms Apr-Jul.	Not Expected	Coastal dunes do not occur within the Study Area and there are no documented occurrences of the species within five miles (CDFW 2022, Calflora 2022).
<i>Helianthella castanea</i> Diablo helianthella	None/None G2/S2 1B.2	Broadleafed upland forest, Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland, Valley and foothill grassland. Azonal soils, Partial Shade (often), Rocky (usually) 60-1300m. Blooms Mar-Jun.	Not Expected	Forest, woodland, coastal scrub, and grassland habitats do not occur within the Study Area and there are no documented occurrences of the species within five miles (CDFW 2022, Calflora 2022).

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
<i>Hemizonia congesta</i> ssp. <i>congesta</i> congested-headed hayfield tarplant	None/None G5T2/S2 1B.2	Valley and foothill grassland. Grassy valleys and hills, often in fallow fields; sometimes along roadsides. 20-560m. Blooms Apr-Nov.	Not Expected	Grassland habitat does not occur within the Study Area and there are no documented occurrences of the species within five miles (CDFW 2022, Calflora 2022).
<i>Hesperevax sparsiflora</i> var. <i>brevifolia</i> short-leaved evax	None/None G4T3/S3 1B.2	Coastal bluff scrub, Coastal dunes, Coastal prairie. Sandy bluffs and flats. 0-215m. Blooms Mar-Jun.	Not Expected	Coastal bluff scrub, coastal dunes, and coastal prairie do not occur within the Study Area. There is one occurrence of the species documented within the <i>Montara Mountain</i> USGS quadrangle (Calflora 2022).
<i>Hesperolinon congestum</i> Marin western flax	FT/SCT G1/S1 1B.1	Chaparral, Valley and foothill grassland. In serpentine barrens and in serpentine grassland and chaparral. 5-370m. Blooms Apr-Jul.	Not Expected	Chaparral and grassland habitats do not occur within the Study Area, nor do serpentine soils. There are no documented occurrences of the species within five miles (CDFW 2022, Calflora 2022).
<i>Heteranthera dubia</i> water star-grass	None/None G5/S2 2B.2	Marshes and swamps. Alkaline, still or slow-moving water. Requires a pH of 7 or higher, usually in slightly eutrophic waters. 30-1495m. Blooms Jul-Oct.	Not Expected	The Study Area is lower than the elevation range of the species and there are no documented occurrences of the species within five miles (CDFW 2022, Calflora 2022).
<i>Horkelia cuneata</i> var. <i>sericea</i> Kellogg's horkelia	None/None G4T1?/S1? 1B.1	Chaparral, Closed-cone coniferous forest, Coastal dunes, Coastal scrub. Old dunes, coastal sandhills; openings. Sandy or gravelly soils. 10-200m. Blooms Apr-Sep.	Not Expected	Chaparral, forest, coastal dunes, and coastal scrub habitats do not occur within the Study Area. There are two documented occurrences of the species within five miles of the Study Area (CDFW 2022, Calflora 2022).
<i>Horkelia marinensis</i> Point Reyes horkelia	None/None G2/S2 1B.2	Coastal dunes, Coastal prairie, Coastal scrub. Sandy flats and dunes near coast; in grassland or scrub plant communities. 5-755m. Blooms May-Sep.	Not Expected	Coastal dunes, coastal prairie, coastal scrub, and grassland habitats do not occur within the Study Area. There are no documented occurrences of the species within five miles of the Study Area (CDFW 2022, Calflora 2022).
<i>Hypogymnia schizidiata</i> island tube lichen	None/None G2G3/S2 1B.3	Chaparral, Closed-cone coniferous forest. On bark and wood of hardwoods and conifers. 360-405m.	Not Expected	Chaparral and forest habitats do not occur within the Study Area. There are three documented occurrences of the species within five miles of the Study Area (CDFW 2022, Calflora 2022). All occurrences were documented growing on plant species that do not occur within the Study Area.

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Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
<i>Lasthenia californica</i> ssp. <i>macrantha</i> perennial goldfields	None/None G3T2/S2 1B.2	Coastal bluff scrub, Coastal dunes, Coastal scrub. 5-520m. Blooms Jan-Nov.	Not Expected	Coastal bluff scrub, coastal dunes, and coastal scrub do not occur within the Study Area. There are two documented occurrences of the species within five miles of the Study Area (CDFW 2022a, Calflora 2022), both in marine terrace coastal bluff habitat.
<i>Layia carnos</i> beach layia	FE/SCE G2/S2 1B.1	Coastal dunes, Coastal scrub. On sparsely vegetated, semi-stabilized dunes, usually behind foredunes. 0-60m. Blooms Mar-Jul.	Not Expected	Coastal dunes and coastal scrub habitats do not occur within the Study Area and there are no documented occurrences of the species within five miles of the Study Area (CDFW 2022a, Calflora 2022).
<i>Leptosiphon croceus</i> coast yellow leptosiphon	None/SCE G1/S1 1B.1	Coastal bluff scrub, Coastal prairie. 10-150m. Blooms Apr-Jun.	Not Expected	Coastal bluff scrub and coastal prairie habitats do not occur within the Study Area. There are four documented occurrences of the species within five miles of the Study Area (CDFW 2022a, Calflora 2022), all northwest of the Study Area in coastal bluff or coastal prairie habitat.
<i>Leptosiphon rosaceus</i> rose leptosiphon	None/None G1/S1 1B.1	Coastal bluff scrub. 0-100m. Blooms Apr-Jul.	Low Potential	Coastal bluff scrub does not occur within the Study Area, though there is low potential for the species to occur in ruderal areas. There are twelve documented occurrences of the species within five miles of the Study Area (CDFW 2022a, Calflora 2022), all north and/or west of the Study Area on coastal bluffs.
<i>Lessingia arachnoidea</i> Crystal Springs lessingia	None/None G2/S2 1B.2	Cismontane woodland, Coastal scrub, Valley and foothill grassland. Grassy slopes on serpentine; sometimes on roadsides. 60-200m. Blooms Jul-Oct.	Not Expected	Woodland, coastal scrub, and grassland habitats do not occur within the Study Area, nor do serpentine soils. There are no documented occurrences of the species within five miles of the Study Area (CDFW 2022a, Calflora 2022).
<i>Lessingia germanorum</i> San Francisco lessingia	FE/SCE G1/S1 1B.1	Coastal scrub. On remnant dunes. Open sandy soils relatively free of competing plants. 25-110m. Blooms (Jun)Jul-Nov.	Not Expected	Coastal scrub habitat and remnant dunes do not occur within the Study Area and there are no documented occurrences of the species within five miles of the Study Area (CDFW 2022a, Calflora 2022).

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
<i>Limnanthes douglasii</i> ssp. <i>ornduffii</i> Ornduff's meadowfoam	None/None G4T1/S1 1B.1	Meadows and seeps. 10-20m. Blooms Nov-May.	Low Potential	There is low potential for the species to occur near the culverted drainage in the northern portion of the Study Area. There are two occurrences of the species documented in the CNDDDB (CDFW 2022a) and multiple occurrences documented in Calflora (Calflora 2022) within five miles of the Study Area.
<i>Malacothamnus arcuatus</i> arcuate bush-mallow	None/None G2Q/S2 1B.2	Chaparral, Cismontane woodland. Gravelly alluvium. 15-355m. Blooms Apr-Sep.	Not Expected	Chaparral and cismontane woodland habitats do not occur within the Study Area. One occurrence of the species is documented in the CNDDDB within five miles of the Study Area, but was observed in 1902 in Spring Valley (CDFW 2022a), approximately 4.7 miles northeast of the Study Area.
<i>Monardella sinuata</i> ssp. <i>nigrescens</i> northern curly-leaved monardella	None/None G3T2/S2 1B.2	Chaparral, Coastal dunes, Coastal scrub, Lower montane coniferous forest. Sandy soils. 0-300m. Blooms (Apr)May-Jul(Aug-Sep).	Not Expected	Chaparral, coastal dunes, coastal scrub and lower montane coniferous forests do not occur within the Study Area, nor do suitable sandy soils. There are no documented occurrences of the species within five miles of the Study Area (CDFW 2022a, Calflora 2022).
<i>Monolopia gracilens</i> woodland woollythreads	None/None G3/S3 1B.2	Broadleafed upland forest, Chaparral, Cismontane woodland, North Coast coniferous forest, Valley and foothill grassland. Grassy sites, in openings; sandy to rocky soils. Often seen on serpentine after burns, but may have only weak affinity to serpentine. 100-1200m. Blooms (Feb)Mar-Jul.	Not Expected	Forest, chaparral, and grassland habitats do not occur within the Study Area. There is one occurrence of the species documented within five miles of the Study Area (CDFW 2022a). This occurrence was documented in 1949 near Pilarcitos Lake, approximately 4.5 miles northeast of the Study Area.
<i>Pentachaeta bellidiflora</i> white-rayed pentachaeta	FE/SCE G1/S1 1B.1	Cismontane woodland, Valley and foothill grassland. Open dry rocky slopes and grassy areas, often on soils derived from serpentine bedrock. 35-620m. Blooms Mar-May.	Not Expected	Woodland and grassland habitats do not occur within the Study Area, nor do rocky slopes or serpentine soils. The Study Area is also lower than the elevation range of the species and there are no documented occurrences of the species within five miles of the Study Area (CDFW 2022a, Calflora 2022).

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Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
<i>Plagiobothrys chorisianus</i> var. <i>chorisianus</i> Choris' popcornflower	None/None G3T1Q/S1 1B.2	Chaparral, Coastal prairie, Coastal scrub. Mesic sites. 3-160m. Blooms Mar-Jun.	Low Potential	Chaparral, coastal prairie, and coastal scrub habitats do not occur within the Study Area. Four occurrences of the species are documented within the CNDDDB (CDFW 2022a) and multiple occurrences of the species are documented in Calflora (Calflora 2022) within five miles of the Study Area. All of these occurrences are at least two miles from the Study Area, within open areas with limited disturbance.
<i>Polemonium carneum</i> Oregon polemonium	None/None G3G4/S2 2B.2	Coastal prairie, Coastal scrub, Lower montane coniferous forest. 0-1830m. Blooms Apr-Sep.	Not Expected	Coastal prairie, coastal scrub, and forest habitats do not occur within the Study Area. There is one occurrence of the species (from 1916) documented in the CNDDDB within five miles of the Study Area (CDFW 2022a).
<i>Potentilla hickmanii</i> Hickman's cinquefoil	FE/SCE G1/S1 1B.1	Closed-cone coniferous forest, Coastal bluff scrub, Marshes and swamps, Meadows and seeps. Freshwater marshes, seeps, and small streams in open or forested areas along the coast. 10-149m. Blooms Apr-Aug.	Not Expected	Coniferous forest, coastal bluff scrub, freshwater marshes and streams, and meadows are not present within the Study Area. Two occurrences of the species are documented in the CNDDDB within five miles of the Study Area (CDFW 2022a), both more than two miles northwest of the Study Area.
<i>Sanicula maritima</i> adobe sanicle	None/SCR G2/S2 1B.1	Chaparral, Coastal prairie, Meadows and seeps, Valley and foothill grassland. Moist clay or ultramafic soils. 30-240m. Blooms Feb-May.	Not Expected	Chaparral, coastal prairie, meadows, and grassland do not occur within the Study Area. There are no documented occurrences of the species within five miles of the Study Area (CDFW 2022a, Calflora 2022).
<i>Senecio aphanactis</i> chaparral ragwort	None/None G3/S2 2B.2	Chaparral, Cismontane woodland, Coastal scrub. Drying alkaline flats. 15-800m. Blooms Jan-Apr (May).	Not Expected	Chaparral, cismontane woodland, and coastal scrub habitats do not exist within the Study Area, nor do drying alkaline flats. There are no documented occurrences of the species within five miles of the Study Area (CDFW 2022a, Calflora 2022).
<i>Silene scouleri</i> ssp. <i>scouleri</i> Scouler's catchfly	None/None G5T4T5/S2S3 2B.2	Coastal bluff scrub, Coastal prairie, Valley and foothill grassland. 0-600m. Blooms (Mar-May) Jun-Aug(Sep).	Not Expected	Coastal bluff scrub, coastal prairie, and grassland habitats do not occur within the Study Area. One occurrence of the species is documented within five miles of the Study Area (CDFW 2022a, Calflora 2022), approximately two miles northeast of the Study Area within undisturbed habitat.

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
<i>Silene verecunda</i> ssp. <i>verecunda</i> San Francisco campion	None/None G5T1/S1 1B.2	Chaparral, Coastal bluff scrub, Coastal prairie, Coastal scrub, Valley and foothill grassland. Often on mudstone or shale; one site on serpentine. 30-645m. Blooms (Feb) Mar-Jul (Aug).	Not Expected	Chaparral, coastal bluff scrub, coastal prairie, coastal scrub, and grassland habitats do not occur within the Study Area. One occurrence of the species (from 1900) is documented in the CNDDDB approximately two miles northeast of the Study Area near Montara Mountain (CDFW 2022a). Several occurrences are documented in Calflora in the <i>Montara Mountain</i> USGS quadrangle, all more than three miles north of the Study Area.
<i>Suaeda californica</i> California seablite	FE/None G1/S1 1B.1	Marshes and swamps. Margins of coastal salt marshes. 0-15m. Blooms Jul-Oct.	Not Expected	Some marginally suitable habitat for the species occurs around the drainage that flows into the harbor along the northern shoreline. However, there are no documented occurrences of the species within five miles of the Study Area (CDFW 2022a, Calflora 2022).
<i>Trifolium amoenum</i> two-fork clover	FE/None G1/S1 1B.1	Coastal bluff scrub, Valley and foothill grassland. Sometimes on serpentine soil, open sunny sites, swales. Most recently cited on roadside and eroding cliff face. 5-415m. Blooms Apr-Jun.	Not Expected	Coastal bluff scrub and grassland habitats do not occur within the Study Area. There are no documented occurrences of the species within five miles of the Study Area (CDFW 2022a, Calflora 2022).
<i>Trifolium hydrophilum</i> saline clover	None/None G2/S2 1B.2	Marshes and swamps, Valley and foothill grassland, Vernal pools. Mesic, alkaline sites. 0-300m. Blooms Apr-Jun.	Not Expected	Suitable marsh and grassland habitat for the species does not occur within the Study Area. There are no documented occurrences of the species within five miles of the Study Area (CDFW 2022a, Calflora 2022).
<i>Triphysaria floribunda</i> San Francisco owl's-clover	None/None G2?/S2? 1B.2	Coastal prairie, Coastal scrub, Valley and foothill grassland. On serpentine and non-serpentine substrate (such as at Pt. Reyes). 10-160m. Blooms Apr-Jun.	Not Expected	One occurrence of the species (from 1900) is documented in the CNDDDB within five miles of the Study Area (CDFW 2022a).
<i>Triquetrella californica</i> coastal triquetrella	None/None G2/S2 1B.2	Coastal bluff scrub, Coastal scrub. Grows within 30m from the coast in coastal scrub, grasslands and in open gravels on roadsides, hillsides, rocky slopes, and fields. On gravel or thin soil over outcrops. 10-100m.	Not Expected	Coastal bluff scrub and coastal scrub habitats do not occur within the Study Area. There is one occurrence of the species documented within the <i>Montara Mountain</i> USGS quadrangle (Calflora 2022) approximately 4.5 miles northeast of the Study Area.

Regional Vicinity refers to within a 6-quad search radius of the Study Area.

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Status (Federal/State)

FE = Federal Endangered
FT = Federal Threatened
FPE = Federal Proposed Endangered
FPT = Federal Proposed Threatened
FD = Federal Delisted
FC = Federal Candidate
SE = State Endangered
ST = State Threatened
SCE = State Candidate Endangered
SCT = State Candidate Threatened
SR = State Rare
SD = State Delisted
SSC = CDFW Species of Special Concern
FP = CDFW Fully Protected
WL = CDFW Watch List

CRPR (CNPS California Rare Plant Rank)

1A = Presumed extirpated in California, and rare or extinct elsewhere
1B = Rare, Threatened, or Endangered in California and elsewhere
2A = Presumed extirpated in California, but common elsewhere
2B = Rare, Threatened, or Endangered in California, but more common elsewhere

CRPR Threat Code Extension

.1 = Seriously endangered in California (>80% of occurrences threatened/
high degree and immediacy of threat)
.2 = Moderately threatened in California (20-80% of occurrences threatened/
moderate degree and immediacy of threat)
.3 = Not very endangered in California (<20% of occurrences threatened/
low degree and immediacy of threat)

Other Statuses

G1 or S1 Critically Imperiled Globally or Subnationally (state)
G2 or S2 Imperiled Globally or Subnationally (state)
G3 or S3 Vulnerable to extirpation or extinction Globally or Subnationally (state)
G4/5 or S4/5 Apparently secure, common and abundant
GH or SH Possibly Extirpated – missing; known from only historical occurrences but still some hope of rediscovery

Additional notations may be provided as follows

T – Intraspecific Taxon (subspecies, varieties, and other designations below the level of species)
Q – Questionable taxonomy that may reduce conservation priority
? – Inexact numeric rank

Special-status Wildlife Species in the Regional Vicinity of the Study Area

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
Invertebrates				
<i>Bombus occidentalis</i> western bumble bee	None/SCE* G2G3/S1	Once common & widespread, species has declined precipitously from central CA to southern B.C., perhaps from disease. Occurs at elevations of 0 to 2,000 meters. Require suitable nesting sites, overwintering sites for the queens, and nectar and pollen resources throughout the spring, summer, and fall.	Not Expected	Suitable foraging habitat and nesting sites are not present within the Study Area. One historical occurrence (1953) of the species is documented in the CNDDDB within five miles of the Study Area (CDFW 2022a).
<i>Callophrys mossii bayensis</i> San Bruno elfin butterfly	FE/None G4T1/S3	Coastal, mountainous areas with grassy ground cover, mainly in the vicinity of San Bruno Mountain, San Mateo County. Colonies are located on steep, north-facing slopes within the fog belt. Larval host plant is <i>Sedum spathulifolium</i> .	Not Expected	Suitable mountainous areas with steep slopes do not occur within the Study Area. There are three occurrences of the species (2017 and 2018) documented in the CNDDDB within five miles of the Study Area (CDFW 2022a). The larval host plant was not observed within the Study Area.
<i>Danaus plexippus</i> pop. 1 monarch - California overwintering population	FC/None G4T2T3/S2S3	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts are located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.	Moderate Potential (non-roosting)	Several Monterey cypress trees are present just north of the Study Area, though not in sufficient density to serve as a winter roosting site. There are three overwintering sites documented within one mile of the Study Area. There are four occurrences of the species documented in the CNDDDB within five miles of the Study Area (CDFW 2022a). No individuals were observed on site during the field survey. There is a moderate potential for individuals to fly over, but the Study Area is not expected to be utilized as an overwintering site.
<i>Euphydryas editha bayensis</i> Bay checkerspot butterfly	FT/None G5T1/S1	Restricted to native grasslands on outcrops of serpentine soil in the vicinity of San Francisco Bay. <i>Plantago erecta</i> is the primary host plant; <i>Orthocarpus densiflorus</i> and <i>O. purpurascens</i> are the secondary host plants.	Not Expected	Native grasslands and serpentine outcrops do not occur within the Study Area.

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Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
<i>Haliotis cracherodii</i> black abalone	FE/None SC (NMFS) G3/S1S2	Primarily found in rocky intertidal and shallow subtidal reefs along the Pacific coast.	Low Potential	Natural rocky intertidal and shallow subtidal reef habitats are not present within the Study Area, but the species has a low potential to occur on rocky rip rap in breakwaters within the Study Area. Critical habitat for the species exists approximately 0.18 mile south of the Study Area.
<i>Speyeria callippe callippe</i> callippe silverspot butterfly	FE/None G5T1/S1	Restricted to the northern coastal scrub of the San Francisco peninsula. Host plant is <i>Viola pedunculata</i> . Most adults found on east facing slopes; males congregate on hilltops in search of females.	Not Expected	Northern coastal scrub habitat is not present within the Study Area.
<i>Speyeria zerene myrtleae</i> Myrtle's silverspot butterfly	FE/None G5T1/S1	Restricted to the foggy, coastal dunes/hills of the Point Reyes peninsula; extirpated from coastal San Mateo County. Larval foodplant thought to be <i>Viola adunca</i> .	Not Expected	The species has been extirpated from San Mateo County and the presumed larval foodplant is not present within the Study Area.
Fish				
<i>Acipenser medirostris</i> green sturgeon – southern DPS	FT/None G3/S1 SSC	These are the most marine species of sturgeon. Abundance increases northward of Point Conception. Spawns in the Sacramento, Klamath, and Trinity Rivers. Spawns at temps between 8-14 C. Preferred spawning substrate is large cobble, but can range from clean sand to bedrock.	Low Potential (non-breeding)	The species could transit or feed within Pillar Point Harbor, though no connection to suitable freshwater spawning grounds exists within the Study Area. Critical habitat for the species occurs within the Study Area.
<i>Eucyclogobius newberryi</i> northern tidewater goby	FE/None G3/S3	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels.	Not Expected	Suitable protected lagoon and lower stream habitat does not occur within the Study Area. The species is absent from areas where the coastline is steep and streams do not form lagoons or estuaries. An apparently natural gap in distribution occurs south of San Francisco Bay to San Gregorio Creek (USFWS 2005). San Gregorio Creek lies approximately five miles south of the Study Area and the species is therefore not expected to occur.

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
<i>Hypomesus transpacificus</i> Delta smelt	FT/SE G1/S1	Sacramento-San Joaquin Delta. Seasonally in Suisun Bay, Carquinez Strait and San Pablo Bay. Seldom found at salinities > 10 ppt. Most often at salinities < 2 ppt.	Not Expected	The Study Area is outside of the known range of the species and water within Pillar Point Harbor is above the species' preferred salinity.
<i>Mylopharodon conocephalus</i> hardhead	None/None G3/S3 SSC	Low to mid-elevation streams in the Sacramento-San Joaquin drainage. Also present in the Russian River. Clear, deep pools with sand-gravel-boulder bottoms and slow water velocity. Not found where exotic centrarchids predominate.	Not Expected	Suitable freshwater habitat for the species is not present within the Study Area.
<i>Oncorhynchus kisutch</i> pop. 4 coho salmon - central California coast ESU	FE/SE G5T2T3Q/S2	Federal listing = pops between Punta Gorda and San Lorenzo River. State listing = pops south of Punta Gorda. Require beds of loose, silt-free, coarse gravel for spawning. Also need cover, cool water and sufficient dissolved oxygen.	Low Potential (non-breeding)	No suitable stream habitat for the species occurs within the Study Area. There is a low potential for the species to occur within the harbor during feeding or migration. The Study Area falls within designated EFH for the species and designated critical habitat occurs within freshwater streams within the vicinity of the Study Area.
<i>Oncorhynchus mykiss irideus</i> pop. 8 steelhead - central California coast DPS	FT/None G5T2T3Q/S2S 3	DPS includes all naturally spawned populations of steelhead (and their progeny) in streams from the Russian River to Aptos Creek, Santa Cruz County, California (inclusive). Also includes the drainages of San Francisco and San Pablo Bays.	Low Potential (non-breeding)	No suitable stream habitat for the species occurs within the Study Area. There is a low potential for the species to occur within the harbor during feeding or migration. There are three occurrences of the species documented in the CNDDDB within five miles of the Study Area (CDFW 2022a). Critical habitat for the species occurs within freshwater streams within the vicinity of the Study Area.
<i>Spirinchus thaleichthys</i> longfin smelt	FC/ST G5/S1	Euryhaline, nektonic and anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefer salinities of 15-30 ppt, but can be found in completely freshwater to almost pure seawater.	Not Expected	Suitable estuary habitat is not present within the harbor.

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Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
Amphibians				
<i>Ambystoma californiense</i> pop. 1 California tiger salamander - central California DPS	FT/ST G2G3/S3 WL	Lives in vacant or mammal-occupied burrows throughout most of the year; in grassland, savanna, or open woodland habitats. Need underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding.	Not Expected	Suitable vernal pools or upland grassland habitats are not present, and the site is isolated by development.
<i>Aneides niger</i> Santa Cruz black salamander	None/None G3/S3 SSC	Mixed deciduous and coniferous woodlands and coastal grasslands in San Mateo, Santa Cruz, and Santa Clara counties. Adults found under rocks, talus, and damp woody debris.	Low Potential	Suitable freshwater or mesic wooded upland habitats are not present, and the site is isolated by development. There is a low potential for the species to occur within damp woody debris around the drainage that flows into the northern portion of the Study Area.
<i>Dicamptodon ensatus</i> California giant salamander	None/None G3/S2S3 SSC	Known from wet coastal forests near streams and seeps from Mendocino County south to Monterey County, and east to Napa County. Aquatic larvae found in cold, clear streams, occasionally in lakes and ponds. Adults known from wet forests under rocks and logs near streams and lakes.	Not Expected	Suitable freshwater or mesic wooded upland habitats are not present, and the site is isolated by development. There is one occurrence (1997) of the species documented in the CNDDDB within five miles of the Study Area (CDFW 2022a).
<i>Rana boylei</i> foothill yellow-legged frog	None/SE G3/S3 SSC	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis.	Not Expected	Suitable freshwater streams are not present, and the site is isolated by development.
<i>Rana draytonii</i> California red-legged frog	FT/None G2G3/S2S3 SSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	Low Potential	Limited habitat for the species is present around the drainage that flows into the northern portion of the Study Area. There are twenty-nine occurrences of the species documented in the CNDDDB within five miles of the Study Area (CDFW 2022a), though these occurrences are almost all inland of the coast and the Study Area is surrounded by development. Critical habitat for the species occurs approximately 0.5 mile north of the Study Area.

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
Reptiles				
<i>Actinemys pallida</i> (<i>Emys marmorata</i>) southwestern pond turtle	None/None G3G4/S3 SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	Not Expected	Suitable freshwater habitat and basking sites are not present within the Study Area.
<i>Caretta caretta</i> loggerhead turtle – North Pacific DPS	FE/None	Occurs throughout temperate and tropical regions of the Atlantic, Pacific, and Indian Oceans. The species is known to occur in the eastern Pacific from Alaska to Chile, though the range in California is generally south of Point Conception.	Low Potential (non-breeding)	There is a low potential for the species to occur within the Study Area while migrating and/or foraging.
<i>Chelonia mydas</i> green sea turtle	FT/None G3/S4	Marine species that requires adequate supply of seagrasses and algae.	Low Potential (non-breeding)	There is a low potential for the species to occur within the Study Area while migrating and/or foraging.
<i>Dermochelys coriacea</i> leatherback sea turtle	FE/None	Thoroughly marine species that feeds primarily on jellies in both deep and shallow waters. Nests on beaches in Mexico, Costa Rica, and Indonesia. Migrates and feeds along the west coast of North America.	Low Potential (non-breeding)	There is a low potential for the species to occur within the Study Area while migrating and/or foraging. Critical habitat for the species occurs within the Study Area.
<i>Lepidochelys olivacea</i> Olive Ridley sea turtle	FT/None	Occurs throughout the Pacific Islands and the southeast and west coasts of the United States.	Not Expected	The species rarely occurs at latitudes as far north as the Study Area and is unlikely to occur within Pillar Point Harbor.
<i>Thamnophis sirtalis tetrataenia</i> San Francisco gartersnake	FE/SE G5T2Q/S2 FP	Vicinity of freshwater marshes, ponds and slow-moving streams in San Mateo County and extreme northern Santa Cruz County. Prefers dense cover and water depths of at least one foot. Upland areas near water are also very important.	Low Potential	Dense vegetative cover and freshwater of at least one foot depth are not present within the Study Area, though the species has a low potential to occur around the culverted drainage that flows into the northern portion of the harbor. There are nineteen occurrences of the species documented in the CNDDDB within five miles of the Study Area (CDFW 2022a).
Birds				

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Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
<i>Accipiter cooperii</i> Cooper's hawk	None/None G5/S4 WL	Woodland, chiefly of open, interrupted or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.	High Potential	There are numerous occurrences of the species documented in eBird (Cornell Lab of Ornithology 2022b) within and around the Pillar Point Harbor. The species has a high potential to fly over or forage within the Study Area and a low potential for the species to nest within trees on-site.
<i>Athene cunicularia</i> burrowing owl	None/None G4/S3 SSC	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Low Potential (non-breeding)	Suitable dry upland grassland habitat with ground squirrel burrows is not present within the Study Area. Multiple occurrences of the species are documented within five miles of the Study Area in eBird (Cornell Lab of Ornithology 2022b).
<i>Brachyramphus marmoratus</i> marbled murrelet	FT/SE G3/S2	Feeds near-shore; nests inland along coast from Eureka to Oregon border and from Half Moon Bay to Santa Cruz. Nests in old-growth redwood-dominated forests, up to six miles inland, often in Douglas-fir.	Moderate Potential (non-breeding)	There is a moderate potential for the species to fly over or forage within the Study Area. There are multiple occurrences of the species documented in Pillar Point Harbor in eBird (Cornell Lab of Ornithology 2022b) and one occurrence of the species is documented in the CNDDDB within five miles of the Study Area (CDFW 2022a). No nesting habitat exists for the species within the Study Area, as suitable old-growth redwood forests are not present, and the site is surrounded by development.
<i>Charadrius nivosus nivosus</i> western snowy plover	FT/None G3T3/S2 SSC	Sandy beaches, salt pond levees and shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting. Often nests in coastal dune habitat.	Moderate Potential (non-breeding)	There is a moderate potential for the species to fly over or forage within the Study Area, particularly along the shoreline. A very limited amount of sandy beach is present within the north of the harbor, but it is heavily impacted by recreational use and development and does not provide suitable breeding habitat for the species. There is one occurrence of the species documented in the CNDDDB (CDFW 2022a) and multiple occurrences documented in eBird within five miles of the Study Area. Critical habitat for the species exists

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
				approximately 1.75 miles southeast of the Study Area, within San Mateo Coast State Beaches.

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Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
<i>Elanus leucurus</i> white-tailed kite	None/None G5/S3S4 FP	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	High Potential (non-breeding)	The species is unlikely to nest or roost in trees onsite given the high level of human activity. However, multiple occurrences of the species are documented in eBird within and around the Study Area (Cornell Lab of Ornithology 2022b) and there is a high potential for the species to fly over or forage within the Study Area.
<i>Falco columbarius</i> merlin	None/None G5/S3S4 WL	Seacoast, tidal estuaries, open woodlands, savannahs, edges of grasslands and deserts, farms and ranches. Clumps of trees or windbreaks are required for roosting in open country.	High Potential (non-breeding)	There is a high potential for the species to forage for shore birds within the Study Area and there are multiple occurrences of the species documented within five miles of the Study Area in eBird (Cornell Lab of Ornithology 2022b). Breeding typically occurs in far northern reaches of North America and the species is not expected to nest within the Study Area.
<i>Falco peregrinus anatum</i> American peregrine falcon	FD/SD G4T4/S3S4 FP	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures. Nest consists of a scrape or a depression or ledge in an open site, often on rocky cliffs or buildings.	Moderate Potential (non-breeding)	Suitable nesting habitat for the species is not present within the Study Area. Multiple occurrences of the species are documented within five miles of the Study Area in eBird (Cornell Lab of Ornithology 2022b) and there is a moderate potential for the species to fly over or forage on-site.

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
<i>Geothlypis trichas sinuosa</i> saltmarsh common yellowthroat	None/None G5T3/S3 SSC	Resident of the San Francisco Bay region, in fresh and saltwater marshes. Requires thick, continuous cover down to water surface for foraging; tall grasses, tule patches, willows for nesting.	Low Potential	Some suitable habitat for the subspecies occurs within willows and common reeds north of the shoreline within the Study Area. The site is within the known breeding range of the subspecies (Shuford and Gardali 2008) and there are three occurrences documented in the CNDDDB within five miles of the Study Area (CDFW 2022a), all from 1990. The limited amount of marsh habitat and the level of human activity within the Study Area make it unlikely that the species would forage or breed on-site.
<i>Laterallus jamaicensis coturniculus</i> California black rail	None/ST G3G4T1/S1 FP	Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	Not Expected	Suitable freshwater marshlands are not present within the Study Area. There are no documented occurrences of the species within five miles of the Study Area (Cornell Lab of Ornithology 2022b, CDFW 2022a).
<i>Melospiza melodia pusillula</i> Alameda song sparrow	None/None G5T2?/S2S3 SSC	Resident of salt marshes bordering south arm of San Francisco Bay. Inhabits Salicornia marshes; nests low in Grindelia bushes (high enough to escape high tides) and in Salicornia.	Not Expected	The Study Area is outside of the known range of the species, which lies to the east within San Francisco Bay. There are no documented occurrences of the species within five miles of the Study Area (Cornell Lab of Ornithology 2022b, CDFW 2022a).
<i>Pelecanus occidentalis californicus</i> California brown pelican	FD/SD G4T3T4/S3 FP	Lives year-round in estuaries and coastal marine habitats along the California coast, and forages, rests, and roosts on islands, offshore rocks, breakwaters and other humanmade structures, rocky intertidal areas, mudflats, and beaches. Generally nests and breeds at offshore Islands in Southern California. Diet includes mostly small fish that school near the surface of the water.	Present	The species was observed within the Study Area during the field survey and is well documented within Pillar Point Harbor in eBird (Cornell Lab of Ornithology 2022b).

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Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
<i>Phalacrocorax auritus</i> double-crested cormorant	None/None G5/S4 WL	Colonial nester on coastal cliffs, offshore islands, and along lake margins in the interior of the state. Nests along coast on sequestered islets, usually on ground with sloping surface, or in tall trees along lake margins.	Present	Double-crested cormorants were observed within the Study Area during the site survey and have been frequently documented within Pillar Point Harbor in eBird (Cornell Lab of Ornithology 2022b).
<i>Phoebastria albatrus</i> short-tailed albatross	FE/None G1/S1 SSC	Pelagic species that forages at sea, often in the productive waters in the Gulf of Alaska, Aleutian Islands, and Bering Sea but occasionally along the coast of California. Nests on small, isolated Pacific islands, including Midway Atoll and Tori-shima Island.	Low Potential (non-breeding)	There is no potential for the species to nest within the Study Area and a low potential for the species to fly over or forage within the Study Area. There is one occurrence of the species documented in Pillar Point Harbor in eBird from 2009 (Cornell Lab of Ornithology 2022b).
<i>Rallus obsoletus obsoletus</i> California Ridgway's rail	FE/SE G3T1/S1 FP	Salt water and brackish marshes traversed by tidal sloughs in the vicinity of San Francisco Bay. Associated with abundant growths of pickleweed, but feeds away from cover on invertebrates from mud-bottomed sloughs.	Not Expected	Suitable marsh habitat is not present within the Study Area and there are no documented occurrences of the species within five miles (CDFW 2022a, Cornell Lab of Ornithology 2022b).
<i>Riparia riparia</i> bank swallow	None/ST G5/S2	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	Low Potential (non-breeding)	Suitable banks or cliffs for nesting are not present. Multiple occurrences of the species are documented within five miles of the Study Area in eBird (Cornell Lab of Ornithology 2022b), and the species has a low potential to flyover or forage within the Study Area.
<i>Sterna antillarum browni</i> least tern	FE/ SE G4T2T3Q/S2 FP	Nests along the coast from San Francisco Bay south to northern Baja California. Colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, landfills, or paved areas.	Moderate Potential (non-breeding)	Some marginally suitable breeding habitat for the species occurs along paved areas and the sandy beach within the Study Area, though the species is not known to breed within the vicinity of Pillar Point Harbor. There are several non-breeding occurrences of the species documented in eBird within five miles of the Study Area (Cornell Lab of Ornithology 2022b).

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
Mammals				
<i>Antrozous pallidus</i> pallid bat	None/None G4/S3 SSC	Found in a variety of habitats including deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts in crevices of rock outcrops, caves, mine tunnels, buildings, bridges, and hollows of live and dead trees which must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	Low Potential	The Study Area does not contain rock outcrops, caves, or the open, arid habitat favored by the species. There is a low potential for the species to roost in buildings and trees within the Study Area.
<i>Arctocephalus townsendi</i> Guadalupe fur seal	FT MMPA	Guadalupe fur seals live in the waters off southern California and the Pacific coast of Mexico. During the breeding season, they are found in coastal rocky habitats and caves. Little is known about their whereabouts during the non-breeding season.	Not Expected	The Study Area lies well north of the breeding grounds for the species, which are almost entirely on Guadalupe Island, Mexico, with a few small populations breeding off Baja California and San Miguel Island. The species is not common along the California Coast, though individuals have been documented as far north as Washington State (NOAA 2022d).
<i>Balaenoptera borealis</i> sei whale	FE MMPA	Found in subtropical, temperate, and subpolar waters, however, temperate waters in the mid-latitudes are preferred. They are typically observed in deeper waters far from the coastline.	Not Expected	The deep water habitat preferred by the species does not exist within the Study Area and the breakwaters surrounding the harbor would preclude the species from occurring within the Study Area.
<i>Balaenoptera musculus</i> blue whale	FE MMPA	Blue whales migrate seasonally between summer feeding grounds and winter breeding grounds. They prefer deep waters, though can be found in more shallow coastal waters when migrating or following food supplies. The North Pacific blue whales live off the California coast and migrate to waters off the coast of Mexico and Central America in winter.	Not Expected	The deep water habitat preferred by the species does not exist within the Study Area and the breakwaters surrounding the harbor would preclude the species from occurring within the Study Area.
<i>Balaenoptera physalus</i> fin whale	FE MMPA	Primarily found in deep, offshore waters of all major oceans, primarily in temperate to polar latitudes. Most migrate from the Arctic and Antarctic feeding areas in the summer to tropical breeding and calving areas in the winter.	Not Expected	The deep water habitat preferred by the species does not exist within the Study Area and the breakwaters surrounding the harbor would preclude the species from occurring within the Study Area.

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Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	None/None G4/S2 SSC	Occurs throughout California in a wide variety of habitats. Most common in mesic sites, typically coniferous or deciduous forests. Roosts in the open, hanging from walls and ceilings in caves, lava tubes, bridges, and buildings. This species is extremely sensitive to human disturbance.	Low Potential	Buildings and trees within the Study Area could provide roosting habitat for the species, though it is unlikely given the level of human disturbance.
<i>Enhydra lutris nereis</i> southern sea otter	FT/ MMPA	Requires canopies of giant kelp and bull kelp for rafting and feeding. Prefers rocky substrates with abundant invertebrates. Nearshore marine environments from about Año Nuevo, San Mateo County to Point Conception, Santa Barbara County.	Low Potential	Kelp canopies are not present within the Study Area and the species is rare within Pillar Point Harbor.
<i>Eschrichtius robustus</i> gray whale	MMPA	Breeding occurs in lagoons in Baja California in the fall. Migration occurs northward along the west coast from mid-February to May.	Low Potential	The inner and outer breakwaters would likely preclude the species from occurring within Pillar Point Harbor, but there is a low potential for the species to transit or forage within the Study Area.
<i>Eubalaena japonica</i> northern Pacific right whale	FE MMPA	Although migration patterns are unknown, it is thought the whales spend the summer in far northern feeding grounds and migrate south to warmer waters, such as southern California, during the winter. Nursery areas are in shallow, coastal waters.	Not Expected	The breakwaters surrounding the harbor would preclude the species from occurring within the Study Area.
<i>Megaptera novaeangliae</i> humpback whale	FE MMPA	Feeding and migration occurs off the coast of California during spring, summer, and fall.	Low Potential	The inner and outer breakwaters would likely preclude the species from occurring within Pillar Point Harbor, but there is a low potential for the species to transit or forage within the Study Area. Critical habitat for the species occurs outside of Pillar Point Harbor, southwest of the Study Area.
<i>Mirounga angustirostris</i> northern elephant seal	FP MMPA	Breeding occurs in Channel Islands and birth occurs from December to March. May occur on land in sandy or rocky areas along coastline. Ocean dive depths can be up to 300-800 meters.	Low Potential	There is low potential for the species to occur within the Study Area, though it is unlikely given the presence of the breakwaters and the high level of human activity.

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
<i>Neotoma fuscipes</i> <i>annectens</i> San Francisco dusky-footed woodrat	None/None G5T2T3/S2S3 SSC	Typically found in forest habitats with moderate to dense understory. Can occur in chaparral, riparian woodlands, and coniferous forests, particularly redwood. Builds middens out of grasses, leaves, and woody debris. This subspecies is found only in the San Francisco Bay region.	Not Expected	Forest habitat and adequate nesting materials are not present within the Study Area.
<i>Nyctinomops macrotis</i> big free-tailed bat	None/None G5/S3 SSC	Low-lying arid areas in Southern California. Need high cliffs or rocky outcrops for roosting sites. Feeds principally on large moths.	Not Expected	Suitable habitat for the species is not present within the Study Area.
<i>Orcinus orca</i> southern resident killer whale	FE MMPA	During the spring, summer, and fall, the range of Southern Resident killer whales includes the inland waterways of Washington State and the transboundary waters between the United States and Canada. Less is known about their winter movements and range. They have been spotted as far south as central California during the winter months and as far north as Southeast Alaska.	Not Expected	Orcas do exist in shallow, coastal waters along the California coast, but the breakwaters surrounding the harbor would preclude the species from occurring within the Study Area. Critical habitat for the species occurs approximately 0.1 mile south of the Study Area.
<i>Phoca vitulina</i> harbor seal	MMPA	Temperate coastal habitats along the coast of California. Rest on rocks, reefs, beaches.	Present	Harbor seals were observed within Pillar Point Harbor during the site survey.
<i>Phocoena phocoena</i> harbor porpoise	MMPA	Found in temperate, subarctic, and arctic coastal and offshore waters. Commonly found in coastal areas, bays, estuaries, harbors, and fjords. Most often seen in groups of under 10. Feed on schooling fish and occasionally squid and octopus.	Low Potential	There is low potential for harbor porpoises to transit or feed within Pillar Point Harbor.
<i>Physeter microcephalus</i> sperm whale	FE	Primarily found in deep, offshore waters. In some mid-latitudes, sperm whales seem to generally migrate north and south depending on the seasons, moving toward the poles in the summer. However, in tropical and temperate areas, there appears to be no obvious seasonal migration.	Not Expected	The deep water habitat preferred by the species does not exist within the Study Area and the breakwaters surrounding the harbor would preclude the species from occurring within the Study Area.

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Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
<i>Reithrodontomys raviventris</i> salt-marsh harvest mouse	FE/SE G1G2/S1S2 FP	Only in the saline emergent wetlands of San Francisco Bay and its tributaries. Pickleweed is primary habitat, but may occur in other marsh vegetation types and in adjacent upland areas. Does not burrow; builds loosely organized nests. Requires higher areas for flood escape.	Not Expected	Suitable salt marsh habitat is not present within the Study Area and the site is outside of the species' known current range.
<i>Taxidea taxus</i> American badger	None/None G5/S3 SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	Not Expected	Suitable open habitat and prey base for the species are not present within the Study Area. The site is also isolated by the ocean and urban development. One historic occurrence (1948) of the species is documented in the CNDDDB within five miles of the Study Area (CDFW 2022a).
<i>Tursiops truncatus</i> common bottlenose dolphin	MMPA	Bottlenose dolphins are found in temperate and tropical waters around the world. They inhabit a wide variety of habitats, including harbors, bays, gulfs, and estuaries, as well as nearshore coastal waters, deeper waters over the continental shelf, and even far offshore in the open ocean.	Low Potential	There is low potential for bottlenose dolphins to transit or feed within Pillar Point Harbor.

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
<i>Zalophus californianus</i> California sea lion	MMPA	Shallow waters in temperate coastal habitats along the coast of California. Rest on beaches, docks, buoys, and jetties. Prefer sandy beaches or rocky coves for breeding and haul-out sites.	Present	California sea lions were observed within the Study Area during the field reconnaissance surveys, swimming around and beneath Johnson Pier and the surrounding docks.

Regional Vicinity refers to within a 6-quad search radius of the Study Area.

*The western bumble bee (*Bombus occidentalis*) was designated as SCE in 2019. However, this designation was invalidated in a California court in 2019 on the basis that insects are not eligible for CESA listing. This decision is currently being appealed and the future CESA status of the western bumble bee remains uncertain.

Status (Federal/State)

- FE = Federal Endangered
- FT = Federal Threatened
- FPE = Federal Proposed Endangered
- FPT = Federal Proposed Threatened
- FD = Federal Delisted
- FC = Federal Candidate
- SE = State Endangered
- ST = State Threatened
- SCE = State Candidate Endangered
- SCT = State Candidate Threatened
- SR = State Rare
- SD = State Delisted
- SSC = CDFW Species of Special Concern
- FP = CDFW Fully Protected
- WL = CDFW Watch List

CRPR (CNPS California Rare Plant Rank)

- 1A = Presumed extirpated in California, and rare or extinct elsewhere
- 1B = Rare, Threatened, or Endangered in California and elsewhere
- 2A = Presumed extirpated in California, but common elsewhere
- 2B = Rare, Threatened, or Endangered in California, but more common elsewhere
- 3 = Need more information (Review List)
- 4 = Limited Distribution (Watch List)

CRPR Threat Code Extension

- .1 = Seriously endangered in California (>80% of occurrences threatened/ high degree and immediacy of threat)
- .2 = Moderately threatened in California (20-80% of occurrences threatened/ moderate degree and immediacy of threat)
- .3 = Not very endangered in California (<20% of occurrences threatened/ low degree and immediacy of threat)

Other Statuses

- G1 or S1 Critically Imperiled Globally or Subnationally (state)
- G2 or S2 Imperiled Globally or Subnationally (state)
- G3 or S3 Vulnerable to extirpation or extinction Globally or Subnationally (state)
- G4/5 or S4/5 Apparently secure, common and abundant
- GH or SH Possibly Extirpated – missing; known from only historical occurrences but still some hope of rediscovery

Additional notations may be provided as follows

- T – Intraspecific Taxon (subspecies, varieties, and other designations below the level of species)
- Q – Questionable taxonomy that may reduce conservation priority
- ? – Inexact numeric rank



Appendix D

Cultural Resources Assessment



Johnson Pier Expansion and Dock Replacement Project

Cultural Resources Assessment Report

prepared for

Moffatt & Nichol

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and

San Mateo County Harbor District

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Appendices

Appendix A Northwest Information Center CHRIS Record Search Results

Appendix B California Department of Parks 523 Series Forms

Executive Summary

Purpose and Scope

Rincon Consultants, Inc. was retained by Moffatt & Nichol (M&N) to conduct a cultural resources assessment for the San Mateo County Harbor District (District) Johnson Pier Expansion and Dock Replacement Project (Project). Located in the unincorporated community of Princeton-by-the-Sea in San Mateo County, the Project will expand Johnson Pier within the Pillar Point Harbor Marina and replace the docks attached to the pier. It is anticipated the Project will require a permit from the United States Army Corps of Engineers (USACE) in accordance with the Clean Water Act and Rivers and Harbors Act and therefore would be subject to Section 106 of the National Historic Preservation Act (Section 106) with the USACE acting as the federal lead agency. The Project is also subject to the California Environmental Quality Act (CEQA) with the San Mateo Harbor District acting as the lead agency under CEQA. This cultural resources assessment was prepared to support compliance with Section 106 and CEQA and included a cultural resources records search, field survey, and preparation of this technical report.

Summary of Findings

The background research and cultural resources survey identified one historic age property in the APE, Pillar Point Harbor, which was recorded and evaluated for listing in the National Register of Historic Places (NRHP) and the California Register of Historical Resources (CRHR), and for designation to the County of San Mateo Historic Register. The harbor is recommended ineligible for federal, state, and local designation due to a lack of historic significance or architectural merit. Pillar Point Harbor is not considered a historic property for the purposes of Section 106 or a historical resource under CEQA.

This assessment did not identify any archaeological resources or archaeological deposits within the Area of Potential Effects (APE); however, three prehistoric archaeological sites have been recorded within a 0.5-mile radius of the APE. The lack of surface evidence of archaeological materials does not preclude their subsurface existence. However, the absence of substantial prehistoric or historic-period archaeological remains within the immediate vicinity, along with the existing level of disturbance in the project area, suggest there is a low potential for encountering intact subsurface archaeological deposits. As a result, Rincon recommends a mitigation measure to address unanticipated discoveries during construction.

Based on the information summarized above, Rincon recommends a finding for the proposed undertaking of *no historic properties affected under Section 106 of the NHPA* and *no impact to historical or archaeological resources under CEQA*. As standard best management practices under CEQA, Rincon has recommended measures in the unlikely event of an unanticipated discovery during project construction.

1 Introduction

Rincon Consultants, Inc. was retained by Moffatt & Nichol (M&N) to conduct a cultural resources assessment for the San Mateo County Harbor District (District) Johnson Pier Expansion and Dock Replacement Project (Project). Located in the unincorporated community of Princeton-by-the-Sea in San Mateo County, the Project will expand Johnson Pier within the Pillar Point Harbor Marina and replace the docks attached to the pier. It is anticipated the Project will require a permit from the United States Army Corps of Engineers (USACE) in accordance with the Clean Water Act and Rivers and Harbors Act and therefore would be subject to Section 106 of the National Historic Preservation Act with the USACE acting as the federal lead agency. The Project is also subject to the California Environmental Quality Act (CEQA) with the San Mateo Harbor District acting as the lead agency under CEQA. This cultural resources assessment was prepared to support compliance with Section 106 and CEQA and included a cultural resources records search, field survey, and preparation of this technical report.

1.1 Project Location and Description

The Project is located in Pillar Point Harbor in the County of San Mateo, just south of the community of El Granada and north of the City of Half Moon Bay (Figure 1 and Figure 2). The Project occurs within the *Montara Mountain and Half Moon Bay, California* United States Geological Survey (USGS) 7.5-minute topographic quadrangle.

The proposed Project involves the North and South expansions to Johnson Pier, and the replacements of D, E, F, G and H Dock and the existing fuel dock (Figure 3). The Johnson Pier North Expansion of the existing pier head will result by filling in the narrow (28-foot wide) east portion to achieve a uniform 78-foot width. This will add approximately 7,300 square feet of deck area needed for fish handling, forklift maneuvering and truck turnaround. Similar material and framing as the existing pier structure will be utilized: precast prestressed concrete piles, precast concrete plans, and cast-in-place concrete closure pours. The piles will be driven with an impact hammer from a crane barge or from a crane on the pier. Piles will be delivered to the site on a barge. The proposed Johnson Pier expansion to the south will add approximately 6,000 square feet of area to the pier. This area will allow trucks to pull in forward, turn around, and pull out forward. The expansion will extend south from the southeast side of the existing pier head to allow a truck and semi-trailer to pull in. Similar material and framing as the North expansion will be used.

The replacement of docks D, E, F, G and H will reconfigure the existing docks and expand the number of boat slips, primarily serving commercial fishing vessels. Dock demo will be performed by removing the pile guides from the docks and floating the docks to the launch ramp to hoist them onto trucks to be removed offsite and disposed of. The existing piles to be removed will be extracted with a vibratory hammer. The fuel dock will be designed to connect to H Dock and directly to Johnson Pier and will extend southward beyond the end of Johnson Pier. New utilities, including fuel pumping facilities, will be provided. Laydown and staging will be performed in the upper parking lot on the north side of the site.

1.2 Area of Potential Effects

The Area of Potential Effects (APE) is the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties. Determination of the APE is influenced by the Project's setting, the scale and nature of the undertaking, and the different kinds of effects that may result from the undertaking (36 CFR 800.16[d]).

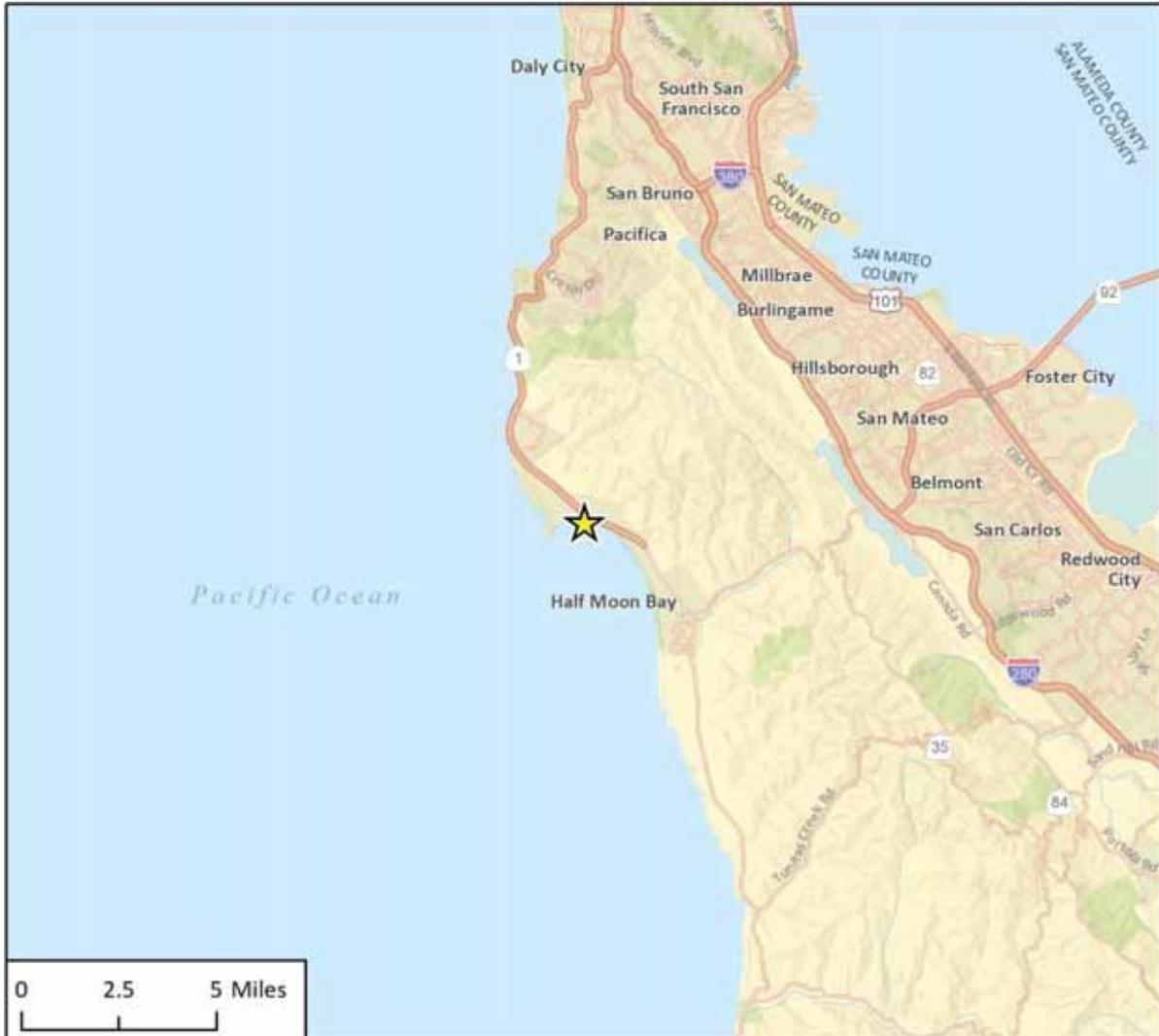
The APE was developed by Rincon to identify resources in the area that have potential for historic significance, that should be evaluated for eligibility for the NRHP, and that may be directly or indirectly affected by the undertaking, in compliance with 36 CFR 800.16(d).

The APE was established to include the direct project footprint, as well as the larger Pillar Point Harbor (Figure 2). The direct project footprint is approximately 37 acres and includes Johnson Pier, Docks D, E, F, G, H, the existing fuel dock, and the water immediately surrounding these marina features. A narrow portion of shoreline north of the marina is also included in the project Area, as well as the upper marina parking lot, where laydown and staging will occur, the Pillar Point launch ramp, and Johnson Pier Road and Pillar Point Harbor Boulevard, which will be used for access. In addition to the direct project footprint, the APE was delineated to include the larger Pillar Point Harbor. The harbor is approximately 72.8 acres and contains a number of functionally related buildings and structures, many of which are over 50 years of age. No adjacent parcels outside of the harbor were included in the APE, as there is no potential for the improvements to result in indirect effects to any properties. Although the new docks will be constructed as part of the Project, the docks will not alter the setting of the surrounding area.

1.3 Personnel

Rincon Senior Architectural Historian Steven Treffers, MHP, provided management oversight for this cultural resources study. Architectural Historian Ashley Losco, MSHP, conducted property research, and is the primary author of this report. Archaeologist, Elaine Foster, MA, Registered Professional Archaeologist (RPA), conducted the cultural resources records search and field survey, with additional reporting completed by Archaeologist Courtney Montgomery, MA. This report was reviewed by Principal Shannon Carmack for quality assurance/quality control. All of these individuals meet the Secretary of the Interior's Professional Qualifications Standards for history and architectural history (36 CFR Part 61). Geographic Information Systems Analyst Allysen Valencia prepared the figures found in this report.

Figure 1 Vicinity Map



Imagery provided by Esri and its licensors © 2021.

★ Project Location

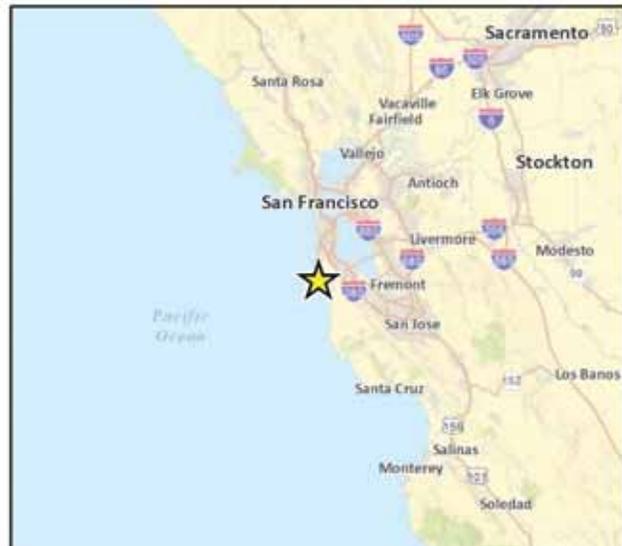
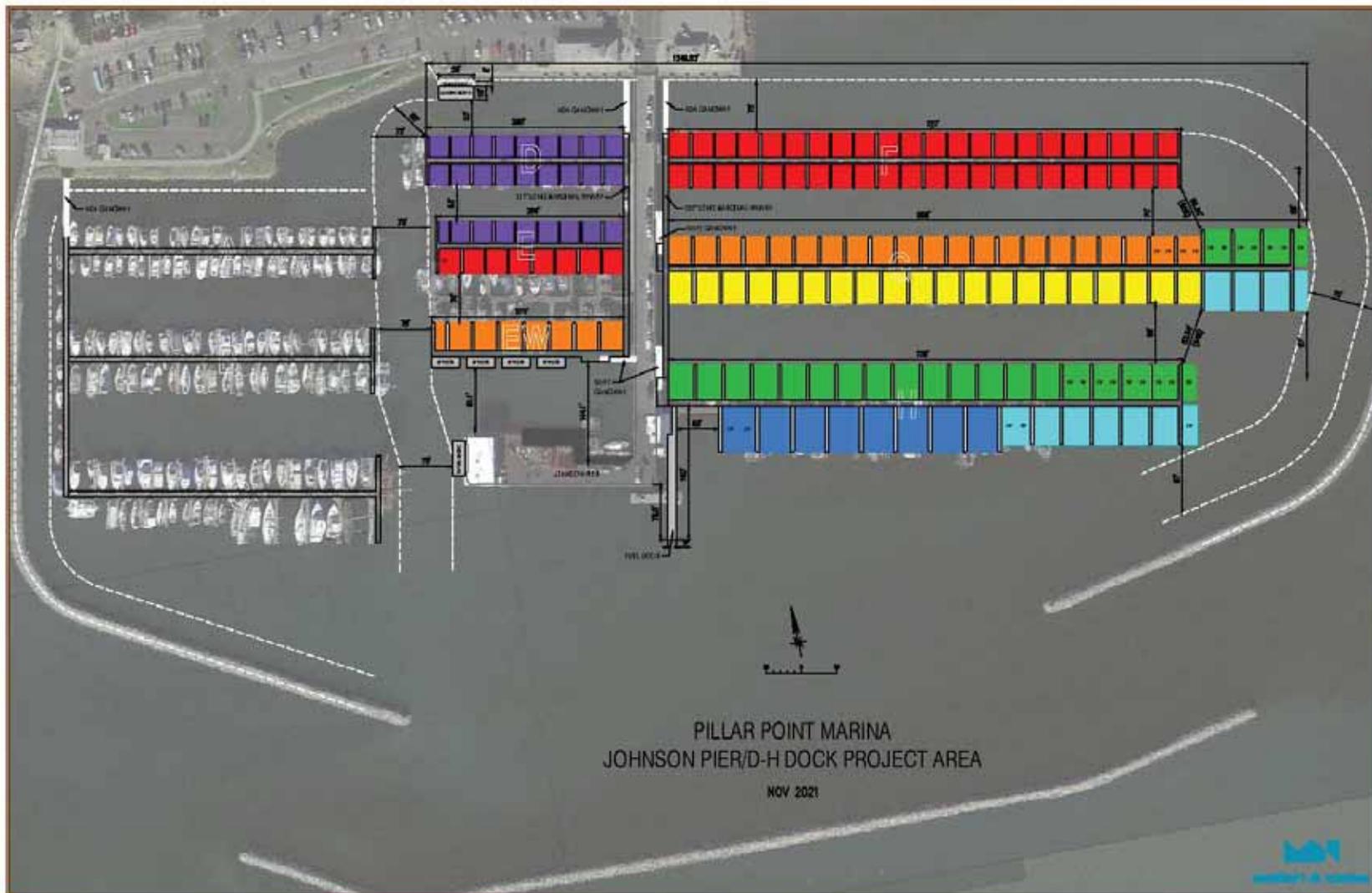


Figure 2 Area of Potential Effects Map



Imagery provided by Microsoft Bing and its licensors © 2022.

Figure 3 Proposed Project Plans



2 Regulatory Setting

This section includes a discussion of the applicable federal, state, and local laws, ordinances, regulations, and standards governing cultural resources, which must be adhered to before and during implementation of the proposed Project.

2.1 Federal Regulations

This Project involves a federal permit from the USACE in accordance with the Clean Water Act and Rivers and Harbors Act. Projects that involve federal funding or permitting (i.e., have a federal nexus) must comply with the provisions of the National Historic Preservation Act of 1966 (NHPA), as amended (16 United States Code [USC] 470f). The NHPA of 1966 established a federal program for the preservation of historic properties, including built environment, archaeological, and traditional cultural resources. Towards this end, the NHPA establishes both institutions and defined processes to direct federal agencies and support state and local governments in their historic preservation programs and activities. These institutions and processes include the Advisory Council on Historic Preservation (ACHP), State Historic Preservation Officers (SHPO), the National Register of Historic Places (NRHP), and the Section 106 review process.

2.1.1 Section 106 of the NHPA

Section 106 (16 United States Code 470f) requires federal agencies to account for the effects of their undertakings on historic properties, and to afford the ACHP a reasonable opportunity to comment on such undertakings. Historic properties are defined as buildings, structures, districts, sites, or objects which are included in or eligible for inclusion in the NRHP. Section 106 is implemented through 36 CFR Part 800, which outlines the process for historic preservation review, including participants, identification efforts, and the assessment and resolution of adverse effects. Per 36 CFR 800.16(y), a federal undertaking is defined as any project requiring or receiving a federal permit, license, approval, or funding. Federal agencies must take steps to determine if the undertaking would result in adverse effect to historic properties and take measures to avoid or resolve those effects as feasible.

2.1.2 National Register of Historic Places

Authorized by Section 101 of the NHPA, the NRHP is the nation's official list of cultural resources worthy of preservation. The NRHP recognizes the quality of significance in American, state, and local history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects. Per 36 CFR Part 60.4, a property is eligible for listing in the NRHP if it meets one or more of the following criteria:

- Criterion A:** Are associated with events that have made a significant contribution to the broad patterns of our history
- Criterion B:** Are associated with the lives of persons significant in our past
- Criterion C:** Embody the distinctive characteristics of a type, period, or method of installation, or that represent the work of a master, or that possess high artistic values, or that

represent a significant and distinguishable entity whose components may lack individual distinction

Criterion D: Have yielded, or may be likely to yield, information important in prehistory or history

In addition to meeting at least one of the above designation criteria, resources must also retain integrity. The National Park Service recognizes seven aspects or qualities that, considered together, define historic integrity. To retain integrity, a property must possess several, if not all, of these seven qualities, defined in the following manner:

Location: The place where the historic property was constructed or the place where the historic event occurred

Design: The combination of elements that create the form, plan, space, structure, and style of a property

Setting: The physical environment of a historic property

Materials: Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property

Workmanship: The physical evidence of the crafts of a particular culture or people during any given period in history or prehistory

Feeling: A property's expression of the aesthetic or historic sense of a particular period of time

Association: The direct link between an important historic event or person and a historic property

Certain properties are generally considered ineligible for listing in the NRHP, including cemeteries, birthplaces, graves of historical figures, properties owned by religious institutions, relocated structures, or commemorative properties. Additionally, a property must be at least 50 years of age to be eligible for listing in the NRHP. The National Park Service states that 50 years is the general estimate of the time needed to develop the necessary historical perspective to evaluate significance (National Park Service 1997:41). Properties which are less than 50 years must be determined to have "exceptional importance" to be considered eligible for NRHP listing.

2.2 State Regulations

2.2.1 California Environmental Quality Act

California Public Resources Code (PRC) Section 21804.1 requires lead agencies determine if a project could have a significant impact on historical or unique archaeological resources. As defined in PRC Section 21084.1, a historical resource is a resource listed in, or determined eligible for listing in, the California Register of Historical Resources (CRHR), a resource included in a local register of historical resources or identified in a historical resources survey pursuant to PRC Section 5024.1(g), or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant. PRC Section 21084.1 also states resources meeting the above criteria are presumed to be historically or cultural significant unless the preponderance of evidence demonstrates otherwise. Resources listed in the National Register of Historic Places (NRHP) are

automatically listed in the CRHR and are, therefore, historical resources under CEQA. Historical resources may include eligible built environment resources and archaeological resources of the precontact or historic periods.

CEQA Guidelines Section 15064.5(c) provides further guidance on the consideration of archaeological resources. If an archaeological resource does not qualify as a historical resource, it may meet the definition of a “unique archaeological resource” as identified in PRC Section 21083.2. PRC Section 21083.2(g) defines a unique archaeological resource as an artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria: 1) it contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information, 2) has a special and particular quality such as being the oldest of its type or the best available example of its type, or 3) is directly associated with a scientifically recognized important prehistoric or historic event or person.

If an archaeological resource does not qualify as a historical or unique archaeological resource, the impacts of a project on those resources will be less than significant and need not be considered further (CEQA Guidelines Section 15064.5[c][4]). CEQA Guidelines Section 15064.5 also provides guidance for addressing the potential presence of human remains, including those discovered during the implementation of a project.

According to CEQA, an impact that results in a substantial adverse change in the significance of a historical resource is considered a significant impact on the environment. A substantial adverse change could result from physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be materially impaired (CEQA Guidelines §15064.5 [b][1]). Material impairment is defined as demolition or alteration in an adverse manner [of] those characteristics of a historical resource that convey its historical significance and that justify its inclusion in, or eligibility for inclusion in, the CRHR or a local register (CEQA Guidelines §15064.5[b][2][A]).

If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that resources cannot be left undisturbed, mitigation measures are required (PRC §21083.2[a][b]).

Section 15126.4 of the CEQA Guidelines stipulates an EIR shall describe feasible measures to minimize significant adverse impacts. In addition to being fully enforceable, mitigation measures must be completed within a defined time period and be roughly proportional to the impacts of the project. Generally, a project which is found to comply with the Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings (the Standards) is considered to be mitigated below a level of significance (CEQA Guidelines Section 15126.4 [b][1]). For historical resources of an archaeological nature, lead agencies should also seek to avoid damaging effects where feasible. Preservation in place is the preferred manner to mitigate impacts to archaeological sites; however, data recovery through excavation may be the only option in certain instances (CEQA Guidelines Section 15126.4[b][3]).

California Register of Historical Resources

The CRHR was established in 1992 and codified by PRC §§5024.1 and 4852. The CRHR is an authoritative listing and guide to be used by state and local agencies, private groups, and citizens in

identifying the existing historical resources of the state and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change (Public Resources Code, 5024.1(a)). The criteria for eligibility for the CRHR are consistent with the NRHP criteria but have been modified for state use in order to include a range of historical resources that better reflect the history of California (Public Resources Code, 5024.1(b)). Unlike the NRHP however, the CRHR does not have a defined age threshold for eligibility; rather, a resource may be eligible for the CRHR if it can be demonstrated sufficient time has passed to understand its historical or architectural significance (California Office of Historic Preservation 2006). Furthermore, resources may still be eligible for listing in the CRHR even if they do not retain sufficient integrity for NRHP eligibility (California Office of Historic Preservation 2006). Generally, the California Office of Historic Preservation recommends resources over 45 years of age be recorded and evaluated for historical resources eligibility (California Office of Historic Preservation 1995:2).

A properties is eligible for listing in the CRHR if it meets one of more of the following criteria:

- Criterion 1:** Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage
- Criterion 2:** Is associated with the lives of persons important to our past
- Criterion 3:** Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values
- Criterion 4:** Has yielded, or may be likely to yield, information important in prehistory or history

California Assembly Bill 52 of 2014

As of July 1, 2015, Assembly Bill (AB) 52 was enacted and expands CEQA by defining a new resource category, "tribal cultural resources". AB 52 establishes, "a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment" (PRC Section 21084.2). It further states the CEQA lead agency shall establish measures to avoid impacts that would alter the significant characteristics of a tribal cultural resource, when feasible (PRC Section 21084.3).

PRC Section 21074 (a)(1)(A) and (B) define tribal cultural resources as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe" and that meets at least one of the following criteria, as summarized in CEQA Guidelines Appendix G:

- 1) Listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in PRC Section 5020.1(k)
- 2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying these criteria, the lead agency shall consider the significance of the resource to a California Native American tribe.

AB 52 also establishes a formal consultation process with California Native American tribes that must be completed before a CEQA document can be certified. Under AB 52, lead agencies are required to "begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project." California Native American tribes to be included in the process are those that have requested notice of projects proposed within the jurisdiction of the lead agency.

2.2.2 California Health and Safety Code

Section 7050.5 of the California Health and Safety Code states that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the remains are discovered has determined if the remains are subject to the Coroner's authority. If the human remains are of Native American origin, the coroner must notify the NAHC within 24 hours of this identification.

2.2.3 California Public Resources Code §5097.98

Section 5097.98 of the California Public Resources Code states that the NAHC, upon notification of the discovery of Native American human remains pursuant to Health and Safety Code §7050.5, shall immediately notify those persons (i.e., the Most Likely Descendant [MLD]) that it believes to be descended from the deceased. With permission of the landowner or a designated representative, the MLD may inspect the remains and any associated cultural materials and make recommendations for treatment or disposition of the remains and associated grave goods. The MLD shall provide recommendations or preferences for treatment of the remains and associated cultural materials within 48 hours of being granted access to the site.

2.3 Local Regulations

2.3.1 County of San Mateo Historic Preservation Ordinance

The County of San Mateo Historic Preservation Ordinance (Ordinance No. 2894 [1984], amended by Ordinance Nos. 3214 [1990] and 3304 [1991]) authorizes the Historic Resources Advisory Board to designate local landmarks and districts, as approved by Planning Commission and Board of Supervisors, by the procedures outlined in the ordinances. The Board of Supervisors may designate a structure as an historic landmark or an area as an historic district pursuant to section 7733 of this chapter if it meets the following criteria:

Section 7732.1. It exemplifies or reflects elements of the County's cultural, social, economic, political, aesthetic, engineering, or architectural history; or

Section 7732.2. It has special aesthetic or artistic interests or values; or

Section 7732.3. It is identified with persons or events significant in local, State, or national history; or

Section 7732.4. It embodies distinctive architectural characteristics of a style, type, period, or method of construction, or is a valuable example of the use of indigenous materials or craftsmanship; or

Section 7732.5. It is representative of the notable work of a master builder, designer, or architect.

3 Methods

This section presents the methods for each task completed during the preparation of this assessment.

3.1 Background and Archival Research

3.1.1 California Historical Resources Information System Records Search

On December 15, 2021, Rincon Archaeologist Elaine Foster conducted a records search at the Northwest Information Center (NWIC) at Sonoma State University (Appendix A). The NWIC is the official state repository for cultural resources records and reports for the county in which the Project falls. The purpose of the records search was to identify previously recorded cultural resources, as well as previously conducted cultural resources studies within the APE and a 0.5-mile radius surrounding it. Rincon also reviewed the NRHP, CRHR, the California Historical Landmarks list, and the Built Environment Resources Directory (BERD), as well as its predecessor the California State Historic Property Data (HPD) File. Additionally, Rincon reviewed the Archaeological Determination of Eligibility (ADOE) list. Results of the records search can be found in Appendix A of this cultural resources assessment.

3.1.2 Archival Research

Rincon completed background and archival research in support of this assessment in December 2021. A variety of primary and secondary source materials were consulted. Sources included, but were not limited to, historical maps, aerial photographs, and written histories of the area. The following sources were utilized to develop an understanding of the APE and its context:

- Original engineering drawings of Johnson Pier provided by M&N
- Property data and parcel maps obtained through the San Mateo County Assessor's Office
- Historical aerial photographs accessed via NETR Online
- Historical aerial photographs obtained from Environmental Resources Data, Inc.
- Historical aerial photographs accessed via University of California, Santa Barbara Library FrameFinder
- Historical U.S. Geological Survey topographic maps
- Historical newspaper clippings obtained from Newspapers.com, ProQuest Historical Newspapers.com, and the California Digital Newspaper Collection
- Various historical records via Ancestry.com

3.2 Field Survey

Rincon Archaeologist Elaine Foster, MA, RPA conducted a cultural resources survey of the APE on January 5, 2022. Under the direction of Senior Architectural Historian Steven Treffers, Ms. Foster recorded built environment resources within the APE, including buildings, structures and associated

features were visually inspected. In accordance with OHP Guidelines (California OHP 1995:2), properties over 45 years of age were evaluated for listing in the NRHP, CRHR, and local listing and recorded on California Department of Parks (DPR) 523 series forms. Overall condition and integrity of these resources were documented and assessed. Site characteristics and conditions were documented using notes and digital photographs which are maintained at the Rincon San Luis Obispo Office.

Additionally, Ms. Foster conducted a pedestrian survey where accessible within the APE using transect intervals spaced 5 meters and oriented generally from east to west. Exposed ground surfaces were examined for artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools, ceramics, fire-affected rock [FAR]), ecofacts (marine shell and bone), soil discoloration that might indicate the presence of a cultural midden, soil depressions, and features indicative of the former presence of structures or buildings (e.g., standing exterior walls, postholes, foundations) or historic debris (e.g., metal, glass, ceramics). Ground disturbances such as burrows and drainages were also visually inspected. Survey accuracy was maintained using a handheld GPS unit and a georeferenced map of the project site. Site characteristics and survey conditions were documented using field records and a digital camera.

4 Cultural Setting

This section provides background information pertaining to the cultural context of the APE. It provides an overview of regional indigenous history, local ethnography, and post-contact history. This background information describes the distribution and type of cultural resources documented within the vicinity of the APE to inform the cultural resources sensitivity assessment and the context within which resources have been evaluated.

4.1 Cultural Setting

4.1.1 Indigenous History

The proposed Project/undertaking lies in the San Francisco Bay Area archaeological region (Milliken et al. 2007, Moratto 1984). Milliken et al. (2007) generally divided the prehistoric chronology of the Bay Area into five periods: The Early Holocene (8,000-3,500 BCE), Early Period (3,500-500 BCE), Lower Middle Period (500 BCE to CE 430 CE), the Upper Middle Period (430-1050 CE), and the Late Period (1050 CE-contact).

It is presumed that early Paleoindian groups lived in the area prior to 8,000 BCE; however, no evidence for that period has been discovered in the Bay Area to date (Milliken et al. 2007). Sites dating to this period may be submerged or deeply buried as a result of rising sea levels and widespread sediment deposition that has occurred since the Terminal Pleistocene (Byrd et al. 2017). For this reason, the Terminal Pleistocene Period (ca. 11,700-8,000 BCE) is not discussed here.

The earliest intensive study of archaeology of the San Francisco Bay Area began with N. C. Nelson of the University of California, Berkeley, between 1906 and 1908. He documented over 400 shell mounds throughout the area. Nelson was the first to identify the Bay Area as a discrete archaeological region (Moratto 1984).

4.1.1.1 Early Holocene (8000-3500 BCE)

Archaeological evidence from the early Holocene is limited as many sites dating to this period are likely buried under Holocene alluvial deposits (Moratto 1984; Ragir 1972). The available data suggest that the Early Holocene in the San Francisco Bay Area is characterized by a mobile forager pattern and the presence of millingslabs, handstones, and a variety of leaf-shaped projectile points. Two archaeological sites (CA-CCO-696 and CA-CCO-637) that date to this period have been identified in Contra Costa County at the Los Vaqueros Reservoir. The earliest date for the Early Holocene comes from the CA-CCO-696, approximately 7000 BCE (Milliken et al. 2007).

4.1.1.2 Early Period (3500-600 BCE)

The Early Period saw increased sedentism with the introduction of new ground stone technologies (i.e., mortar and pestle), an increase in regional trade, and the first cut shell beads. The earliest evidence for the use of the mortar and pestle dates to 3800 BCE and comes from CA-CCO-637. By 1500 BCE, mortars and pestles had almost completely replaced millingslabs and handstones. The advent of the mortar and pestle indicates a greater reliance on processing nuts, especially acorns.

Faunal evidence from various sites indicates a diverse faunal exploitation pattern based on mussel and other shellfish, marine mammals, terrestrial mammals, and birds (D'Oro 2009).

The earliest cut bead horizon is also associated with this period. Rectangular *Haliotis* spp. (abalone) and *Olivella* (*Callianax biplicata*) (Vellanoweth et al. 2014)(snail) beads have been identified at several Early Period sites, including CA-CCO-637, CA-SCL-832 in Sunnyvale, and CA-ALA-307 in Berkeley (Milliken et al. 2007). These early examples of cut beads were recovered from mortuary contexts.

4.1.1.3 Lower Middle Period (500 BCE-430 CE)

The Lower Middle Period saw numerous changes from the previous period. The presence of chipped stone points and bone tools became typical. Rectangular shell beads, common during the Early Period, disappear completely and are replaced by split-beveled and saucer *Olivella* beads. In addition to the changes in beads, *Haliotis* spp. ornaments, bone tools and ornaments, and basketry awls also became typical, indicating the development of coiled basketry technology. Mortars and pestles continued to be the dominant grinding tool (Luby and Gruber 1999; Milliken et al. 2007).

Evidence for the Lower Middle Period in the Bay Area comes from sites such as the Emeryville shell mound (CA-ALA-309) and Ellis Landing (CA-CCO-295). CA-ALA-309 is one of the largest shell mounds in the Bay Area and contains multiple cultural sequences. The lower levels of the site, which date to the Middle Period, contain flexed burials with bone implements, chert bifaces, charmstones, and oyster shells (Moratto 1984).

4.1.1.4 Upper Middle Period (430-1050 CE)

Around 430 CE, *Olivella* saucer bead trade networks that had been established during earlier periods collapsed and over half of known sites occupied during the Lower Middle Period were abandoned. *Olivella* saucer beads were replaced with *Olivella* saddle beads. New types of material culture appear within these sites, including elaborate, decorative blades, fishtail charmstones, new *Haliotis* ornament forms, and mica ornaments. Sea otter bones became more abundant, while salmon and other fish became less abundant, suggesting changes in faunal exploitation patterns from earlier periods (Milliken et al. 2007; Simons and Carpenter 2009). Excavations at CA-ALA-309 indicate that a shift from mussels to oysters to clams may have occurred (Gifford 1916), and isotopic analysis confirms that San Francisco Bay individuals shifted from hunting higher-trophic-level foods in the Early Period to gathering foods like plants and shellfish in the Middle and Upper Periods (Burns et al. 2012). Subsistence analyses at various sites dating to this period indicate a diverse diet that included numerous species of fish, mammals, birds, shellfish, and plant resources that varied by location in the Bay Area (Hylkema 2002).

4.1.1.5 Late Period (1050 CE-contact)

The Late Period saw an increase in social complexity, indicated by differences in burials and an increased level of sedentism relative to preceding periods, as evidenced by mortars weighing up to 90.7 kg (Lentz 2012:198). An increase in imported Napa Valley obsidian occurred during this time for the production of smaller points, preforms and simple flake tools. Small, finely worked projectile points of the Stockton Serrated series associated with bow and arrow technology appear around 1250 CE. *Olivella* shell beads disappeared and were replaced with *Olivella* lipped and spire -lopped beads in the south bay and clamshell disk beads in the north bay, where thicker and larger beads

indicated higher affluence. The toggle harpoon, hopper mortar, and magnesite tube beads also appeared during this period (Milliken et al. 2007; Lentz 2012; Von Der Porten et al. 2014). This period saw an increase in the intensity of resource exploitation that correlates with an increase in population (Moratto 1984). Many of the well-known sites of earlier periods, such as the Emeryville shell mound (CA-ALA-309) and the West Berkeley site (CA-ALA-307), were abandoned, as indicated by the lack of Late Period elements. Researchers have suggested that the abandonment of these sites may have resulted from fluctuating climates and drought that occurred throughout the Late Period (Lightfoot and Luby 2002).

4.1.2 Ethnographic Setting

The project site/APE lies within an area traditionally occupied by the Ohlone (or Costanoan) people. Ohlone territory extends along the California coast from the point where the San Joaquin and Sacramento Rivers merge into the San Francisco Bay to Point Sur. Their inland boundary was limited to the interior Coast Ranges (Kroeber 1925:462). The Ohlone language belongs to the Penutian family, with several distinct dialects throughout the region (Kroeber 1925:462). It is divided into eight regional dialects: Karkin, Chochenyo, Ramaytush, Awaswas, Taymen, Mutsun, Rumsen, and Chalon (Jones 2015)

The pre-contact Ohlone were semi-sedentary, with a settlement system characterized by base camps and seasonal reserve camps composed of tule reed houses with thatched roofs made of matted grass (Schick 1994; Skowronek 1998). Just outside base camps, large sweat houses were built into the ground near stream banks used for spiritual ceremonies and possibly hygiene (Schick 1994, Jones 2015). Villages were divided into small polities, each of which was governed by a chief responsible for settling disputes, acting as a war leader during times of conflict, and supervising economic and ceremonial activities (Skowronek 1998; Kroeber 1925:468). Social organization appeared flexible to ethnographers and any sort of social hierarchy was not apparent to mission priests (Skowronek 1998).

Archaeological investigations inform Ohlone mortuary rituals. Cemeteries were set away from villages and visited during the annual Mourning Anniversary (Leventhal and DiGiuseppe 2009). Ceremonial human grave offerings might include Olivella beads, as well as tools like drills, mortars, pestles, hammerstones, bone awls, and utilized flakes (Leventhal and DiGiuseppe 2009). Ohlone mythology included animal characterization and animism, which was the basis for several creation narratives. Ritually burying of animals, such as a wolf, squirrel, deer, mountain lion, gray fox, elk, badger, grizzly bear, blue goose, and bat ray, was commonly practiced. Similar to human burials, ceremonial offerings were added to ritual animal graves like shell beads, ornaments, and exotic goods (Kroeber 1925; Field and Leventhal 2003; Jones 2010).

Ohlone subsistence strategies were based on hunting, gathering, and fishing (Kroeber 1925:467, Skowronek 1998). Larger animals, like bears, might be avoided, but smaller game was hunted and snared on a regular basis (Schick 1944:17). Like the rest of California, the acorn was an important staple and was prepared by leaching acorn meal in openwork baskets and in holes dug into the sand (Kroeber 1925:467). The Ohlone also practiced controlled burning to facilitate plant growth (Kroeber 1925:467, Skowronek 1998). During specific seasons or in times of drought, the reserve camps would be utilized for gathering seasonal food and accessing food storage (Schick 1994). Fishing would be done with nets and gorge hooks out of tule reed canoes (Schick 1994:16-17). Mussels were a particularly important food resource. Sea mammals such as sea lions and seals were hunted and beached whales were exploited (Kroeber 1925:467).

Seven Franciscan missions were built within Ohlone territory in the late 1700s, and all members of the Ohlone group were eventually brought into the mission system (Kroeber 1925:462, Skowronek 1998). After the establishment of the missions, Ohlone population dwindled from roughly 10,000 people in 1770 to 1,300 by 1814 (Skowronek 1998). In 1973, the population of people with Ohlone descent was estimated at fewer than 300. The descendants of the Ohlone united in 1971 and have since arranged political and cultural organizations to revitalize aspects of their culture (Skowronek 1998).

4.1.3 Post-Contact Setting

4.1.3.1 *History*

Post-Contact history for the state of California is generally divided into three periods: the Spanish Period (1769–1822), Mexican Period (1822–1848), and American Period (1848–present). Although Spanish, Russian, and British explorers visited the area for brief periods between 1529 and 1769, the Spanish Period in California begins with the establishment in 1769 of a settlement at San Diego and the founding of Mission San Diego de Alcalá, the first of 21 missions constructed between 1769 and 1823. Independence from Spain in 1821 marks the beginning of the Mexican Period, and the signing of the Treaty of Guadalupe Hidalgo in 1848, ending the Mexican-American War, signals the beginning of the American Period when California became a territory of the United States.

4.1.3.2 *Spanish Period (1769 – 1822)*

Spanish explorers made sailing expeditions along the coast of what was then known as Alta (upper) California between the mid-1500s and mid-1700s. In 1542, while in search of the legendary Northwest Passage, Juan Rodríguez Cabrillo recorded a visit to the Santa Barbara area. Sebastian Vizcaíno also conducted exploration of the coast in 1602 and named the Santa Barbara Channel when his ship entered it on the feast day of Saint Barbara (Kyle 2002). The Spanish crown laid claim to Alta California based on the surveys conducted by Cabrillo and Vizcaíno (Bancroft 1885; Gumprecht 1999).

By the 18th century, Spain developed a three-pronged approach to secure its hold on the territory and counter against other foreign explorers. The Spanish established military forts known as presidios, as well as missions and pueblos (towns) throughout Alta California. The 1769 overland expedition by Captain Gaspar de Portolá marks the beginning of California's Historic period, occurring just after the King of Spain installed the Franciscan Order to direct religious and colonization matters in assigned territories of the Americas. Portolá established the Presidio of San Diego as the first Spanish settlement in Alta California in 1769. Franciscan Father Junípero Serra also founded Mission San Diego de Alcalá that same year, the first of the 21 missions that would be established in Alta California by the Spanish and the Franciscan Order between 1769 and 1823. The Santa Barbara presidio was established in 1782, and the Santa Barbara Mission was founded four years later (Graffy 2010).

The mission and presidio relied on Chumash labor; eventually, the majority of the native population lived at the mission complex (Cole 1999). Construction of missions and associated presidios was a major emphasis during the Spanish Period in California to integrate the Native American population into Christianity and communal enterprise. Incentives were also provided to bring settlers to pueblos or towns; just three pueblos were established during the Spanish Period, only two of which were successful and remain as California cities (San José and Los Angeles).

Spain began making land grants in 1784, typically to retiring soldiers, although the grantees were only permitted to inhabit and work the land. The land titles technically remained property of the Spanish king (Livingston 1914).

4.1.3.3 *Mexican Period (1822 – 1848)*

Several factors kept growth within Alta California to a minimum, including the threat of foreign invasion, political dissatisfaction, and unrest among the indigenous population. After more than a decade of intermittent rebellion and warfare, New Spain won independence from Spain in 1821. In 1822, the Mexican legislative body in California ended isolationist policies designed to protect the Spanish monopoly on trade, and decreed California ports open to foreign merchants (Dallas 1955).

Extensive land grants were established in the interior during the Mexican Period, in part to increase the population inland from the more settled coastal areas where the Spanish had first concentrated their colonization efforts. The secularization of the missions following Mexico's independence from Spain resulted in the subdivision of former mission lands and establishment of many additional ranchos. Commonly, former soldiers and well-connected Mexican families were the recipients of these land grants, which now included the title to the land. Forty-one ranchos were granted between 1835 and 1846 in what would become Santa Barbara County (Graffy 2010).

During the supremacy of the ranchos (1834–1848), landowners largely focused on the cattle industry and devoted large tracts to grazing. Cattle hides became a primary southern California export, providing a commodity to trade for goods from the east and other areas in the United States and Mexico. The number of nonnative inhabitants increased during this period because of the influx of explorers, trappers, and ranchers associated with the land grants. The rising California population contributed to the introduction and rise of diseases foreign to the Native American population, who had no associated immunities.

4.1.3.4 *American Period (1848 – Present)*

The United States went to war with Mexico in 1846. During the first year of the war, John C. Fremont traveled from Monterey to Los Angeles with reinforcements for Commodore Stockton, and evaded Californian soldiers in Santa Barbara's Gaviota Pass by taking the route over the San Marcos grade instead (Kyle 2002). The war ended in 1848 with the Treaty of Guadalupe Hidalgo, ushering California into its American Period.

California officially became a state with the Compromise of 1850, which also designated Utah and New Mexico (with present-day Arizona) as US territories (Waugh 2003). Horticulture and livestock, based primarily on cattle as the currency and staple of the rancho system, continued to dominate the southern California economy through 1850s. The discovery of gold in the northern part of the state led to the Gold Rush beginning in 1848, and with the influx of people seeking gold, cattle were no longer desired mainly for their hides but also as a source of meat and other goods. During the 1850s cattle boom, rancho vaqueros drove large herds from southern to northern California to feed that region's burgeoning mining and commercial boom.

A severe drought in the 1860s decimated cattle herds and drastically affected rancheros' source of income. In addition, property boundaries that were loosely established during the Mexican era led to disputes with new incoming settlers, problems with squatters, and lawsuits. Rancheros often were encumbered by debt and the cost of legal fees to defend their property. As a result, much of

the rancho lands were sold or otherwise acquired by Americans. Most of these ranchos were subdivided into agricultural parcels or towns (Dumke 1944).

4.1.3.5 *Local History*

The land on which the communities of Half Moon Bay and Princeton-by-the-Sea developed was part of Mexican-era ranchos that were granted to prominent individuals in the mid-1800s. Rancho Corral de Tierra was divided, with the northern portion granted to Francisco Guerrero y Palomares, a former alcalde (mayor and magistrate) of San Francisco. Today this land would include Princeton-by-the-Sea, Montara, Moss Beach, and El Granada. The southern portion of the rancho was granted to Tiburcio Vasquez, a member of the Anza Expedition, soldier, and majordomo of Mission Dolores. Located slightly to the south, Rancho Arroyo de los Pilarcitos was granted to a military officer, Candelario Miramontes, whose last name was also applied to the rancho. This grant included what is today the southern part of Half Moon Bay, the old Spanishtown section, Arleta Park, Wavcrest, and Ocean Colony. Miramontes built an adobe in 1848 and moved his large family onto the rancho, calling it San Benito (in honor of Saint Benedict). Vasquez and Miramontes, whose homes were in close proximity to each other, hired a contractor to build seven adobe homes using Native Americans as laborers. These adobes formed the nucleus of the village that became known as San Benito, named after Miramontes' rancho. Thus, San Benito was the first name applied to the community that would later be known as Half Moon Bay (Cresson 2009).

Rancho Miramontes was surveyed and subdivided in 1863 as part of a foreclosure lawsuit. The platted town site was called Spanishtown in reference to the concentration of Spanish speakers in the vicinity. The community later took the name of Half Moon Bay as had been designated to the coastal area by government geographic surveys. The first known instance of the name being applied occurred on the 1854 United States Coastal Survey map (Cresson 2009). In 1856 San Mateo County split from San Francisco County (Manning and Crow 2004).

Early settlers in the Half Moon Bay area encountered difficulties with shipping and receiving supplies due to the topography of the land. Mountain ranges prevented easy access to the area. Farmers that kept domesticated cattle and cultivated the land needed to get their products to markets; eventually stage routes, roads, and water routes were created to shorten shipping time to the large population center of San Francisco. The advancements in transportation also brought more residents to the coast (Manning and Crow 2004).

The Ocean Shore Railroad was an influential factor in the development of communities along the San Mateo County coastline. The railroad construction began about 1906 and spurred land sales along its route. One example is Frank Brophy's purchase of property near Pillar Point, on which he built the Princeton Inn and established the town site for what is now Princeton-by-the-Sea (Cresson 2009; Half Moon Bay Coastside Chamber of Commerce, n.d.). Although originally planned for residential use, the growth of commercial fishing led to a re-zoning of the Princeton coastal area for industrial use to support maritime-related development (*San Mateo Times* 1944). The Ocean Shore Railroad failed as a business venture, and the train stopped running in 1920 (Cresson 2009).

5 Findings

5.1 Documented Cultural Resources Studies

The CHRIS records search and background research through the NWIC identified 49 cultural resources studies within a 0.5-mile mile of the APE (Appendix A). Of these studies, 1 includes a portion of the APE, S-22092, and none include areas directly adjacent to the APE. Approximately 100 percentage of the APE has been studied and approximately 100 percentage has been surveyed within the last 26 years. Known studies that occurred within or adjacent to the APE are discussed in further detail below.

5.1.1 S-22092

The CHRIS records search identified one cultural resources study within the project area, S-22092. In 1996, the study was prepared by the USACE for navigational improvements within Pillar Point Harbor including a channel deepening for a navigational channel and a disposal site. Three alternatives were prepared by the USACE and maps for each were included in the study. The report did not find any prehistoric or historic sites within its project area which included the subject APE. As the Johnson Pier was only approximately 30 years old when the study was performed, it was not evaluated as part of the study.

5.2 Documented Cultural Resources

The CHRIS records search and background research also identified 9 cultural resources within a 0.5-mile of the APE. Resources recorded in the search radius are listed in Table 1 below. No resources are recorded within or adjacent to the APE. The records search also identified shipwrecks in surrounding area of the APE; however, none were identified adjacent to or within the APE.

Table 1 Previously Recorded Cultural Resources within 0.5-Mile of the APE

Primary Number	Trinomial	Resource Type	Description	Recorder(s) and Year(s)	Eligibility Status	Relationship to APE
P-41-000065	CA-SMA-000061	Prehistoric Site	Prehistoric Site	Nels Nelson, 1907	Unevaluated	Outside
P-41-000066	CA-SMA-000062	Prehistoric Site	Prehistoric Site	Nels Nelson, 1907	Unevaluated	Outside
P-41-000067	CA-SMA-000063	Prehistoric Site	Prehistoric Site	Nels Nelson, 1907	Unevaluated	Outside
P-41-000180	CA-SMA-000180H	Historical Building	Princeton Inn/Hotel	Dorothy F. Regnery, 1978 J. Cooper, 1979 San Mateo County Planning, 1981	Listed on the NRHP	Outside

Primary Number	Trinomial	Resource Type	Description	Recorder(s) and Year(s)	Eligibility Status	Relationship to APE
P-41-000194	CA-SMA-000194H	Historic-Period Building	Granada Station	T. McGregor, 1979	Unevaluated	Outside
P-41-000531	CA-SMA-000365H	Historic-Period Building	Hotel El Granada	Suzanne Baker, 1999	Unevaluated	Outside
P-41-000549	–	Historic-Period Building	Frederic Lane Relator/ El Granada Ocean Shore RR Station	None, 1980	Recommended Eligible	Outside
P-41-000550	–	Historic District	Town of El Granada	San Mateo Urban/Rural Conservation, 1981	7W: Submitted to OHP for action – withdrawn or inactive	Outside
P-41-002641	–	Historic-Period Structure	Princeton-By-The-Sea Pier/ Romeo Pier and Cannery Facility	San Mateo County Planning, 1980 Rincon Consultants Inc., 2016	5S3: Appears to be individually eligible for local listing or designation through survey evaluation.	Outside

Source: Northwestern Information Center, 2021

*7W:

5.3 Aerial Imagery and Historical Topographic Maps Review

Rincon completed a review of historical topographic maps and aerial imagery to ascertain the development history of the project site. Historical topographic maps from 1896 to 1913 depict the project site as undeveloped land east of Miramontes and Pillar Point with only a few buildings and Cabrillo Highway annotated (NETR Online 2021; USGS 2021). From 1915 to 1954, historical topographic maps still depict little development in the area; however, the Southern Pacific Railroad is shown starting in 1915 (NETR Online 2021; USGS 2021). Even though the topographic maps do not depict development in the area, aerial images from 1946 and 1948 do show some residential development and the platting of roads in Princeton-by-the-Sea and El Granada (NETR Online 2021). They also show three wharfs around Princeton-by-the-Sea east of Pillar Point (NETR Online 2021). By 1956, there was a boom in development in El Granada and some further residential growth in Princeton-by-the-Sea (NETR Online 2021). A 1956 topographic map of the area confirms this developmental boom with the depiction of the city grid of El Granada (USGS 2021). More residential neighborhoods appear north of the project area between 1960 and 1980, along with construction of the breakwaters around Pillar Point Harbor (NETR Online 2021). Based on aerial imagery, the surrounding area has remained relatively the same since the 1980s (NETR Online 2021).

5.4 Survey Results

5.4.1 Archaeological Resources

The following section summarizes the results of all background research and fieldwork as they pertain to archaeological resources that may qualify as historical resources and/or unique archaeological resources.

The field survey did not identify any archaeological resources in the APE. Ground visibility ranged from poor (0 to 15 percent) throughout the project site. Ground visibility was observed by paving of the parking lots, heavy grass, and water elevation. Soils within the APE consist of sandy loam with some shell (Figure 4). The shell present was identified as an ecofact due to the adjacent bay and ocean and was not identified as a cultural resource. The project site has been heavily disturbed due to the development of the Pillar Point Harbor. An underwater archaeological survey was not conducted as part of this effort.

Figure 4 Overview of Soils and Gasses within APE, Facing North



5.4.2 Built-Environmental Resources

The following section summarizes the results of all background research and fieldwork as they pertain to built environment resources. The field work and background research resulted in the identification of one historic-age property (45 years) within the APE, Pillar Point Harbor. The approximately 72.8 acre property includes five buildings, a pier, and associated docks all within breakwaters and a boat slip just outside one of the breakwaters. Described in further detail below,

this property was recorded and evaluated for NRHP, CRHR, and local listing eligibility on DPR series forms, which are included in Appendix B and summarized below.

Pillar Point Harbor

Physical Description

Pillar Point Harbor, is located within Half Moon Bay in unincorporated territory of San Mateo County between the communities of El Granada and Princeton-by-the-Sea. Owned and managed by the San Mateo County Harbor District, Pillar Point Harbor is accessible from Pillar Point Harbor Boulevard and Capistrano Road. The surrounding area is largely rural with the two small communities made up of residential houses and some commercial uses directly adjacent to the harbor.

The property was initially constructed in 1962 and includes one pier, multiple floating docks, a boat slip, three large parking lots and five buildings: two bathrooms, an office building, a commercial mixed-use building, and a storage building. The one-story, hipped roof commercial building sits near Capistrano Road and houses a restaurant, bar, and surf shop (Figure 5). To the west, is a one-story storage building with a hipped roof, stucco cladding, and a metal roll-up door. South of the commercial building is a large parking lot, with the office building and a bathroom building situated along the bulkhead wall and adjacent to the shore. The offices house the San Mateo County Harbor District and are one-story, clad in horizontal siding, with a second-story tower on the right also clad in horizontal siding with a hipped roof (Figure 6). The bathroom building is also one-story with a hipped roof and a decorative concrete block wall and porthole windows (Figure 7). The second bathroom building is located along the shoreline at the western end of the property and is also one-story and capped by a hipped roof. Extending from the shoreline near the western bathroom building is a long north-south trending, floating dock with three ancillary docks (Docks A, B, and C). Located at the opposite (eastern) end of the property is a boat slip with four boat ramps (Figure 8).

Retaining its original design, the L-shaped Johnson Pier extends approximately 572-feet from the concrete deadman / public fishing area into Half Moon Bay in a north-south trending orientation and runs approximately 268-feet east-west at the end (

Figure 9). The pier is constructed of precast concrete decking panels supported by prestressed concrete piles. The north-south section of the pier is approximately 30-feet wide while the east-west portion is approximately 72-feet wide to accommodate the fishery building at the end of the pier and space for trucks to turn around. A concrete curb painted red runs along the edge of the pier connected to wood railings consisting of three horizontal rails, added at an unidentified time; metal light posts also run along the side of the pier.

At the end of the pier is a rectilinear-shaped fishery building with a low-pitched side gable roofline and a wide eave overhang (Figure 10). The two-story building is sheathed in horizontal board and stucco siding at the first floor and board and batten siding at the second floor, all painted light blue with dark blue accent trim. The first floor of the primary elevation has three large openings for loading and unloading supplies, while the second floor has three sets of triple paired windows with a fixed unit in the middle and sash windows on either side.

Attached to Johnson Pier are five floating docks, two on the left (west) side (Docks D and E) and three on the right (east) side (Docks F, G, and H). The docks have boat slips on each side, each slip large enough to fit two boats. The docks are constructed of north-south trending rows of wood planks and accessible from Johnson Pier by concrete ramps (Figure 11). At the southern end of

Johnson Pier adjacent to one of the docks is a L-shaped, concrete fuel landing dock with a two-story metal building and a one-story metal store building (Figure 12).

Figure 5 Commercial Building, South and East Elevations, Facing Northwest



Figure 6 SMCHD Office, South and West Elevations, Facing Northeast



Figure 7 Public Bathrooms Office, South and West Elevations, Facing Northeast



Figure 8 Boat Slip, Facing Southwest



Figure 9 Johnson Pier, Facing Southwest



Figure 10 Fishing Building at the end of Johnson Pier, Facing West



Figure 11 Floating dock attached to Johnson Pier, Facing East

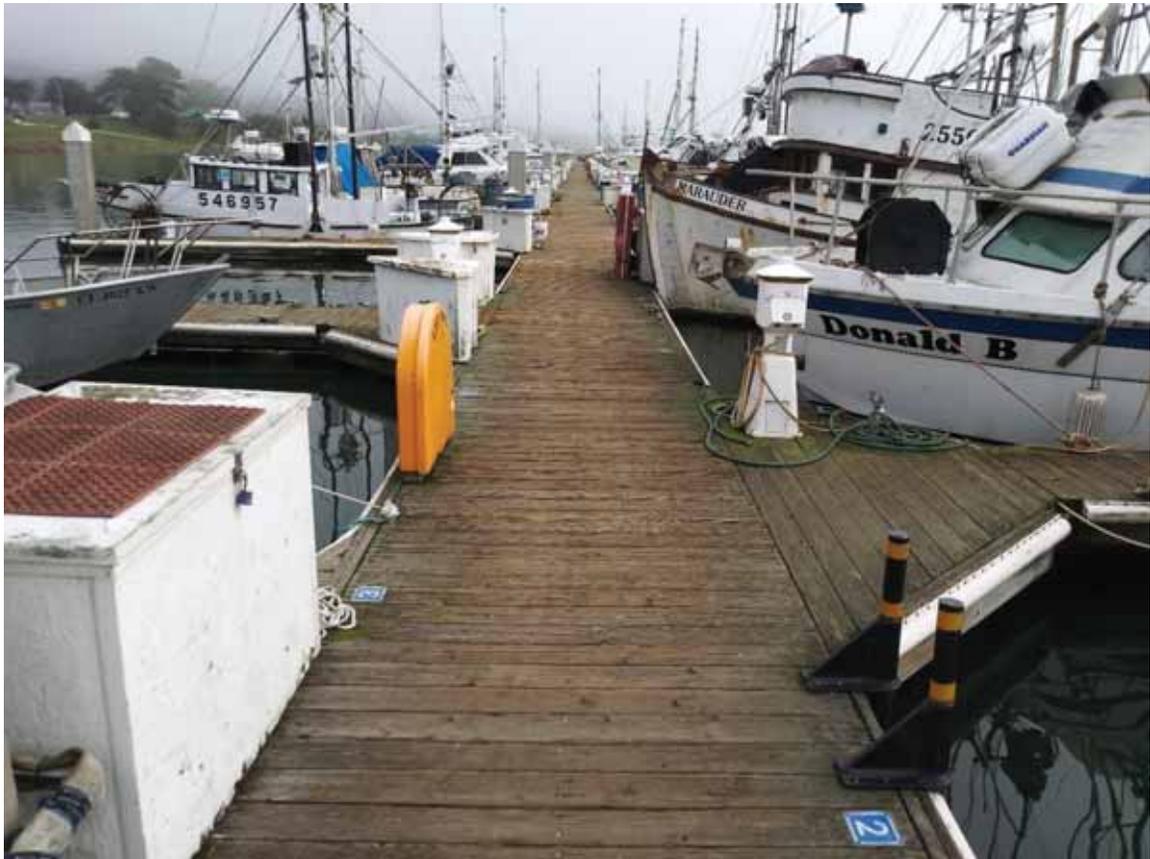


Figure 12 Fueling dock attached to Johnson Pier, Facing Northeast



Developmental History

Before construction of the Pillar Point Harbor in 1962, the surrounding area, El Granada and Princeton-by-the-Sea, were small fishing villages off Highway 1 (Cabrillo Highway) between San Francisco and Santa Cruz. The Romeo Pier just northwest of the project area was constructed in 1944 for fishing and canning. Two other wharfs were also located on the bay in Princeton-by-the-Sea, and only a handful of houses and the Half Moon Bay Airport were located nearby in the 1940s (NETRonline, 1946). These small towns suffered greatly from intense ocean surges during storms. Fisherman had to sail to San Francisco to find shelter for their boats during every storm, or the boats would be badly damaged. One pier between Romeo Pier and Pillar Point Harbor was completely destroyed in a storm in the late 1950s. To address this problem, the San Mateo County Harbor District (the District), led by their chairman Admiral S. B. Johnson, planned for the construction of breakwaters and a harbor. In 1960, the breakwaters were constructed at the tip of Pillar Point to the west and El Granada Beach to the east which prevented surges and created a safe harbor for boats (*The Times*, August 4, 1960).

After completion of the breakwaters, the District began construction of the Pillar Point Harbor, also referred to as a wharf or dock at this time; it would not be referred to as a pier until the 1970s. The L-shaped wharf with a warehouse at the end and a small fueling dock was designed by Earl & Wright, Inc., a San Francisco-based engineering firm, and Noble Harbor Engineering of Newport Beach (*The Times*, August 24, 1960). Constructed by Ben C. Gerwick and Company of San Francisco,

the project was financed by San Mateo County and ultimately \$100,000 over budget (*Pacifica Tribune*, August 24, 1961). The project included dredging and building out the land for the wharf (now referred to as Johnson Pier) and the construction of the three buildings and parking lot on the shore. The wharf was completed in 1962 and was officially named the Pillar Point Harbor in 1964 (*The San Francisco Examiner*, April 22, 1962 and *The Times*, March 14, 1964). It was developed for fishing, both commercially and recreationally, boating, and events.

When construction was completed, disagreements began over the future of the District. It was originally formed as a temporary governing body to oversee the construction of the Pillar Point Harbor and other harbors in the area; however, the District felt they should continue running the pier while others felt the County of San Mateo or California Parks and Recreation should run it. In 1966, the District was dissolved through a voting ballot and the wharf became overseen by the County (*The Times*, January 25, 1968). In 1969, though, the commission was reinstated after an appellate court appealed the decision (*The Times*, July 16, 1969).

During this period, it was determined the eastern and western breakwaters were not sufficient to protect the harbor and they were ultimately extended to their current alignment in 1967 (*The Times*, March 3, 1967). More concerns began in 1969 when a new "old town fishing village" was proposed for development around the harbor including a new marina with 1,000 berths, a hotel, restaurants, and entertaining spaces. The project was debated for 10 years and concluded with no village and the construction of only approximately 400 berths onto Johnson Pier, the current configuration of Pillar Point Harbor, by M&B Construction (*Pacifica Tribune*, January 1, 1975). During this period, the wharf began to be referred to as a pier called Johnson Pier, most likely after Admiral Johnson. By 1982, Docks D and E were partially constructed and a new breakwater directly to the south of the harbor was constructed (NETRonline, 1982); docks A, B, C, F, G, and H were constructed by 1987 (NETRonline, 1987). The fueling station dock at the end of the pier was also updated during this period. Other alterations include removal of the original railings along Johnson Pier and replacement with new railings at an unidentified date. No known alterations have occurred to the site since this time.

Historic Resources Evaluation

The Pillar Point Harbor and its associated resources are recommended ineligible for listing in the NRHP, CRHR, and the San Mateo County Local Register (Local), under any significance criteria. The Pillar Point Harbor, constructed in 1962, is not associated with events that have made a significant contribution to local or regional history. The pier was constructed after the development of the surrounding communities of Princeton-by-the-Sea and El Granada. Both communities prospered in the early 1900s from fishing and canneries; however, Pillar Point Harbor was constructed after this period and is therefore not associated with this part of the local communities' history or any other events which can be considered significant in the history of the region, state, or nation. Therefore, Pillar Point Harbor is recommended ineligible under NRHP Criterion A/CRHR Criterion 1/Local Criterion 1.

Though Pillar Point Harbor is associated with local individuals such as Admiral S. B. Johnson, chairman of the San Mateo County Harbor District during construction of the harbor and breakwaters, there is no information to suggest he or any other individuals associated with the harbor can be considered significant in local, state, or national history. Therefore, the property is not recommended eligible under NRHP Criterion B/CRHR Criterion 2/Local Criterion 3.

With regards to its architectural or engineering merit, Pillar Point Harbor was constructed in the early 1960s and does not represent an innovative method of construction or technology. Pillar Point

Harbor was designed by engineering firms Earl & Wright, Inc. and Noble Harbor Engineering and was constructed by Ben C. Gerwick and Company. All three were notable companies for their respective work: Earl & Wright Inc. and Noble Harbor Engineering both designed several harbors throughout California from the 1940s to 1960s. Ben C. Gerwick and Company constructed several of the bridges in the Bay Area including the Richmond-San Rafael Bridge and the San Mateo-Hayward Bridge. Though Pillar Point Harbor is associated with these companies, it is not a good representative of their respective works. It was a common and small project compared to their other identified project and the reinforced, and prestressed concrete utilized in construction of Johnson Pier was in use in the United States since the 1930s and was a common form of construction by the 1960s. The designs of Johnson Pier and the three Modern buildings are also common for their respective time periods and are not exceptional examples of any architectural styles. Therefore, the property is recommended ineligible under NRHP Criterion C/CRHR Criterion 3/Location Criteria 2, 4, and 5.

Based on the cultural resources records search and background research, the Pillar Point Harbor property also has not yielded and is unlikely to yield information important to the prehistory or history of the local area, California, or the nation. It is not recommended ineligible under NRHP Criterion D/CRHR Criterion 4; the local register does not have a similar criterion.

6 Conclusions and Recommendations

The following sections present our recommended findings under Section 106 of the NHPA and CEQA.

This assessment did not identify any archaeological resources or archaeological deposits within the APE; however, three prehistoric archaeological sites have been recorded within a 0.5-mile radius of the APE. The lack of surface evidence of archaeological materials does not preclude their subsurface existence. However, the absence of substantial prehistoric or historic-period archaeological remains within the immediate vicinity, along with the existing level of disturbance in the project area, suggest there is a low potential for encountering intact subsurface archaeological deposits.

As a result of the background research and field survey, one cultural resource, Pillar Point Harbor was identified, recorded, and evaluated for federal, state, and local designation. Due to a lack of historical or architectural associations, the harbor is recommended ineligible for listing in the NRHP, CRHR, or a San Mateo County Landmark. As a result, Pillar Point Harbor is not considered a historic property under Section 106 or a historical resource under CEQA.

6.1.1 Section 106 of the NHPA

Section 106 Recommendations

Because Pillar Point Harbor is not considered a historic property, and no other historic properties were identified within the APE, Rincon recommends a finding of *no historic properties affected* under Section 106 of the NHPA for the current undertaking.

6.1.2 CEQA

The impact analysis included here is organized based on the cultural resources thresholds included in CEQA Guidelines Appendix G: Environmental Checklist Form:

- a) Would the project cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?
- b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?
- c) Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

Threshold A broadly refers to historical resources. To more clearly differentiate between archaeological and built environment resources, we have chosen to limit analysis under Threshold A to built environment resources. Archaeological resources, including those that may be considered historical resources pursuant to Section 15064.5 and those that may be considered unique archaeological resources pursuant to Section 21083.2, are considered under Threshold B.

Historical Built Environment Resources

This assessment identified a single built environment resource on the APE and Rincon has recommended it ineligible for listing in the NRHP, CRHR, and local listing, as discussed above; the

resource therefore does not qualify as a historical resource under CEQA. Based on the results of this study, Rincon recommends a finding of *no impact to historical resources*.

Historical and Unique Archaeological Resources

As detailed above, there is a low potential for encountering intact subsurface archaeological deposits. Rincon presents the following recommended mitigation measure for unanticipated discoveries during construction. With adherence to this measure, Rincon recommends a finding of *no impact to archaeological resources* under CEQA. As standard best management practices under CEQA, Rincon recommends the following measures in the unlikely event of an unanticipated discovery during project construction.

Unanticipated Discovery of Cultural Resources

In the unlikely event that archaeological resources are unexpectedly encountered during ground-disturbing activities, work in the immediate area should be halted and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archeology (National Park Service 1983) should be contacted immediately to evaluate the find. If the find is prehistoric, then a Native American representative should also be contacted to participate in the evaluation of the find. If necessary, the evaluation may require preparation of a treatment plan and archaeological testing for CRHR eligibility. If the discovery proves to be eligible for the CRHR and cannot be avoided by the modified project, additional work, such as data recovery excavation, may be warranted to mitigate any significant impacts to historical resources.

Human Remains

No human remains are known to be present within the APE. However, the discovery of human remains is always a possibility during ground disturbing activities. If human remains are found, the State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the County Coroner must be notified immediately. If the human remains are determined to be of Native American origin, the Coroner will notify the Native American Heritage Commission, which will determine and notify a most likely descendant (MLD). The MLD has 48 hours from being granted site access to make recommendations for the disposition of the remains. If the MLD does not make recommendations within 48 hours, the landowner shall reinter the remains in an area of the property secure from subsequent disturbance. With adherence to existing regulations, Rincon recommends a finding of *less than significant impact to human remains* under CEQA.

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- 2014 An Olivella Grooved Rectangle Bead Cluster from San Nicolas Island, California. *Journal of California and Great Basin Anthropology*, 2014, Vol. 34, No. 2 (2014), pp. 229-246.
Electronic document available at <http://www.jstor.com/stable/45154987>, accessed September 2021.

Waugh, John C.

- 2003 *On the Brink of Civil War: The Compromise of 1850 and How it Changed the Course of American History*. Wilmington, Delaware: Scholarly Resources Inc.

Appendix A

Northwest Information Center CHRIS Record Search Results

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
S-022092		1996	Thomas R. Kendall	Pillar Point Harbor in San Mateo County, California (letter report)	U.S. Army Corps of Engineers	

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
S-003082	Voided - E-81 SMA	1970	Stephen A. Dietz and Thomas L. Jackson	An Archaeological and Historical Reconnaissance of a Portion of the San Mateo County Coastside	Adan E. Treganza Anthropology Museum, San Francisco State College	41-000027, 41-000073, 41-000074, 41-000076, 41-000082, 41-000084, 41-000112, 41-000117, 41-000129, 41-000130, 41-000131, 41-000132, 41-000133, 41-000134, 41-000135, 41-000136, 41-000137, 41-000138, 41-000139, 41-000140, 41-000141, 41-000142, 41-000143, 41-000144, 41-000145, 41-000146, 41-000147, 41-000148, 41-000171, 41-000188, 41-000189, 41-000190, 41-000191, 41-000192, 41-000194, 41-000195, 41-000196, 41-000206, 41-000564, 41-000595, 41-000599, 41-000606, 41-001487, 41-001498, 41-001829
S-003136	Voided - E-141 SMA	1980	Steven A. Brandt	Cultural Resources Investigation of Operating Projects, Half Moon Bay - Pillar Point Harbor	U.S. Army Corps of Engineers	
S-003158	Voided - E-166 SMA	1980	Suzanne Baker	Archaeological Reconnaissance of the Proposed Corporation Yard Area Near Half Moon Bay Airport, Princeton, California	Archaeological Consultants	
S-004890	Caltrans - 04210-103410	1981	Margaret Buss	Archaeological Survey Report for a Proposed Shoulder Widening on Portions of 04-SM-1 30.9/35.0, 04210-103410	Caltrans District 04	41-000151, 41-000203
S-005395	Voided - E-114 SMA	1976	Karen M. Nissen and Sean Swezey	Assessment of Archaeological Resources, San Mateo County Mid-Coastside Waste-Water Management Plan for Thomas Reid Associates, Palo Alto, California.	University of California, Berkeley	41-000027, 41-000112, 41-000137, 41-000138, 41-000139, 41-000140, 41-000141, 41-000142, 41-000143, 41-000145, 41-000151, 41-000152
S-009369		1987		Cultural Resource Evaluation of the Apodaca/Hanscom Project in the Town of El Granada, County of San Mateo	Archaeological Resource Management	
S-009370		1987		Cultural Resource Evaluation of the Agius Project in the Town of El Granada, County of San Mateo	Archaeological Resource Management	
S-009371		1987	Archaeological Resource Management	Cultural Resource Evaluation of the Hannon (A and B) Project in the Town of El Granada, County of San Mateo	Archaeological Resource Management	
S-009373		1987	Robert Cartier	Cultural Resource Evaluation of the Belous Project in the Town of Princeton-By-The-Sea, County of San Mateo	Archaeological Resource Management	

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
S-009374		1987	Robert Cartier	Cultural Resource Evaluation of the B & M/Nolan Project in the Town of Princeton-By-The-Sea, County of San Mateo	Archaeological Resource Management	
S-009447		1987	Archaeological Resource Management	Cultural Resource Evaluation of a Parcel on Balboa Avenue (APN 47-105-21) in the Town of El Granada, County of San Mateo	Archaeological Resource Management	
S-009450		1987		Cultural Resource Evaluation of a Parcel on San Carlos Avenue (APN 47-107-04) in the Town of El Granada, County of San Mateo	Archaeological Resource Management	
S-009601		1987	Gary S. Breschini and Charles R. Smith	Preliminary Cultural Resources Reconnaissance of Two Parcels of Land (Assessor's Parcel Numbers 047-035-060 & 070), Princeton-By-The-Sea, San Mateo County, California	Archaeological Consulting	
S-009602		1987	Gary S. Breschini and Charles R. Smith	Preliminary Cultural Resources Reconnaissance of a Parcel of Land (Assessor's Parcel Number 047-015-020), Princeton-By-The-Sea, San Mateo County, California	Archaeological Consulting	
S-009725		1988		Cultural Resource Evaluation of 307 Valencia Avenue in the Town of El Granada, County of San Mateo	Archaeological Resource Management	
S-009928		1988	Stephen A. Dietz	Archaeological Reconnaissance, Pillar Point Boat Yard Well (letter report)	Archaeological Consulting and Research Services, Inc.	
S-010177		1988	Matthew R. Clark	Archaeological Reconnaissance of the Lands of Pepper in the Community of Princeton-By-The-Sea, San Mateo County, California	MRC Consulting	
S-010512		1988		Cultural Resource Evaluation of a Parcel (APN 47-25-24) on the Cabrillo Highway in the Town of El Granada, County of San Mateo	Archaeological Resource Management	
S-010761	Caltrans - 4336-121900	1989	Mark G. Hylkema	Archaeological Survey Report, proposed shoulder widening, pavement resurfacing, and widening of the Pilarcitos Creek Bridge on Route 1, 04-SMA-1 P.M. 26.4/35.4, 04-SMA-92 P.M. 0.0/0.2, 4336-121900	California Department of Transportation, District 4	

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
S-010965		1989	Matthew R. Clark	Archaeological Reconnaissance of Marchant Enterprises' Proposed Hotel Project Site and Coastside County Water District "Local Improvement District 1989-1 Water Extension Project" in El Granada, San Mateo County, California	MRC Consulting	
S-011127		1981	Mark Rudo	Cultural Resources Survey, Pillar Point Harbor Navigational Improvements	U.S. Army Corps of Engineers	
S-011127a		1980	Steven A. Brandt	Cultural Resources Investigation of Operating Projects, Half Moon Bay - Pillar Point Harbor	Army Corps. Of Engineers	
S-013475	Caltrans - 04336-130420	1990	Patricia M. Dolan	Archaeological Survey Report, cross culvert on Route 1, 04-SM-1 P.M. 32.65 04336-130420	California Department of Transportation	
S-014522		1992	Matthew R. Clark	Archaeological Reconnaissance of the Proposed "Harbor House Bed & Breakfast" Project Area, 346 Princeton Avenue, Princeton-by-the-Sea, San Mateo County, California	MRC Consulting	
S-015969		1994	Matthew R. Clark	Archaeological Reconnaissance of a Parcel at 238 Columbus Street, El Granada, San Mateo County, California	MRC Consulting	
S-016130		1994	Matthew R. Clark	Archaeological Reconnaissance of a Proposed San Mateo County Harbor District Overflow Parking Lot for Pillar Point Harbor at Highway One and Capistrano Road, Princeton, San Mateo County, California	MRC Consulting	
S-016475		1994	Matthew R. Clark	Archaeological Reconnaissance of a Parcel at 431 Valencia Avenue, El Granada, San Mateo County, California	MRC Consulting	
S-016701		1994		Cultural Resource Evaluation of 223 Coronado Street, El Granada, CA	Archaeological Resource Management	
S-017903		1996	Matthew R. Clark	An Archaeological Reconnaissance of the Beach House Inn Phase 2 Project Area (APN 047-252-270, -280, & -290), Half Moon Bay, San Mateo County, California	MRC Consulting	

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
S-019316		1997	Matthew R. Clark	Archaeological Evaluation of Four Parcels on Avenue Alhambra Between Avenue Balboa and Ferdinand Avenue (APNs 047-205-170, 047-205-210, 047-205-230, 047-205-240) in the Community of El Granada, San Mateo County, California	MRC Consulting	41-000531
S-019593		1997	Matthew R. Clark	An Archaeological Reconnaissance of the "West Point Project Area" at West Point Avenue and Ocean Boulevard in the Community of Princeton-by-the-Sea, San Mateo County, California	MRC Consulting	
S-021026		1998	Matthew R. Clark	An Archaeological Reconnaissance of the Andreini Property at 154 California Avenue in the Community of Princeton-By-The-Sea, San Mateo County, California	MRC Consulting	
S-022306		1999	Suzanne Baker	Archaeological Monitoring of the Hotel El Granda Site, El Granada Townhomes (APN 047-205-230 and APN 047-205-240), El Granada, California	Archaeological/Historical Consultants	41-000531
S-022383		1999	Carolyn Losee	Archaeological Survey for Polovina Property, APN No. 047-125-240: Negative Results (letter report)	Phase One Archaeology	
S-022387		2000	Carolyn Losee	Archaeological Survey for Wright Property, APN No. 047-103-080: Negative Results (letter report)	Phase One Archaeology	
S-023398		2000	Stuart A. Guedon and Colin I. Busby	Cultural Resources Assessment - Half Moon Bay Airport, San Mateo County, California (letter report)	Basin Research Associates, Inc.	
S-024205		2000	Robert R. Cartier	Cultural Resource Evaluation of the Coastal Access Sites Project, County of San Mateo	Archaeological Resource Management	
S-025600		2002	Benjamin Ananian	Archaeological study, APN: 047-074-010 El Granada, CA (letter report)	Ananian Associates	
S-030539	CAL FIRE - 1-04NTMP-011-SCR	2004	Nadia Hamey	Confidential Archaeological Addendum for the Big Basin Water Company NTMP, Santa Cruz County, California	Big Creek Lumber Company	
S-035392		2008	Madeleine Bray	Negative Survey Report for the SAM Wet Weather Flow Management Project, Near El Granada, San Mateo County (CA)	ESA	

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
S-036461		2009	Heidi Koenig	Review of Cultural Resources Sites and Studies in Regards to the Sewer Authority Mid-Coastside (SAM) Wet Weather Flow Management Project	ESA	
S-043974	OHP PRN - FAA 110916 A; Submitter - PL 2506-01	2011		Half Moon Bay Airport Taxiway and Access Road Improvements Project, Cultural Resources Survey and Evaluation Report	Pacific Legacy, Inc.	
S-043974a		2011	Caprice Harper, Samantha Murray, and Francescoa Smith	Cultural Resources Survey Report for the Half Moon Bay Airport Taxiway and Access Road Improvements Project, San Mateo County, California	SWCA Environmental Consultants	
S-043974b		2012	Leroy Laurie	Supplemental Cultural Resources Survey Report for the Half Moon Bay Airport Taxiway and Access Road Improvements Project, San Mateo County, California (letter report)	SWCA Environmental Consultants	
S-047522	Other - PM No. 31005840	2015	Esme Hammerle	Cultural Resources Constraints Report, Half Moon Bay 1101 Targeted Circuit (Circuit No.: Half Moon Bay 1101), San Mateo County, PM No. 31005840	Garcia and Associates	41-000001, 41-000065, 41-000066, 41-000067, 41-000151, 41-000550
S-049638	OTIS Report Number - COE_2016_0610_001; Submitter - 15-02192	2016	Ashlee M. Bailey and Christopher Duran	Cultural Resources Records Search and Technical Memorandum for the Romeo Pier Removal Project, Pillar Point Harbor, Princeton-by-the-Sea, San Mateo County, California (letter report)	Rincon Consultants, Inc	41-002641
S-049638a		2016	Susan Zamudio-Gurrola, Shannon Carmack, Christopher A. Duran, and Ashlee Bailey	Cultural Resources Assesment, San Mateo County Harbor District, Romeo Pier	Rincon Consultants, Inc	
S-049638b		2016	Aaron O. Allen and Julianne Polanco	COE_2016_0610_001, San Mateo County Harbor District Romeo Pier Removal (2015-00347S), Princeton-by-the Sea, San Mateo County, California	U.S. Army Corps of Engineers, San Francisco District; Office of Historic Preservation	

Resource List

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-41-000065	CA-SMA-000061	Resource Name - Nelson 412	Site	Prehistoric	AP01	1907 (Nels Nelson, UC Archaeological Survey)	S-047522
P-41-000066	CA-SMA-000062	Resource Name - Nelson 413	Site	Prehistoric	AP01	1907 (Nels Nelson, UC Archaeological Survey)	S-047522
P-41-000067	CA-SMA-000063	Resource Name - Nelson 414	Site	Prehistoric	AP01	1907 (Nels Nelson, UC Archaeological Survey)	S-047522
P-41-000180	CA-SMA-000180H	Resource Name - Princeton Hotel; Other - Princeton Inn; OHP Property Number - 005176; OHP PRN - NPS-79000543-0000; Voided - P-41-000554; OHP PRN - 4018-0006-0000	Building	Historic	HP05	1978 (Dorothy F. Regnery, California Financial Resources); 1979 (J. Cooper, [none]); 1981 (U/RC, San Mateo County Planning)	S-003088
P-41-000194	CA-SMA-000194H	Resource Name - Granada Station	Building	Historic	AH15	1979 (T. McGregor, [none])	S-003082
P-41-000531	CA-SMA-000365H	Resource Name - Hotel El Granada; Other - AC-144	Building	Historic	HP05	1999 (Suzanne Baker, Archaeological/Historical Consultants)	S-019316, S-022306
P-41-000549		Other - Frederick Lane Realtor; OHP Property Number - 005171; OHP PRN - 4018-0001-0002; Resource Name - El Granada Ocean Shore RR Station	Building	Historic	HP17	1980 ([none], [none])	
P-41-000550		Resource Name - El Granada; OHP PRN - 4018-0001-9999; OHP PRN - 41-0016	District	Historic	HP39	1981 ([none], San Mateo Urban/Rural Conservation)	S-047522
P-41-002641		Resource Name - Romeo Pier and Cannery Facility; Other - Princeton-by-the-Sea Pier; OHP Property Number - 005175; OTIS Resource Number - 408130; OHP PRN - 4018-0005-0000; Voided - 41-000553	Structure	Historic	AH13; HP11	1980 (U/RC, San Mateo County Planning); 2016 (S. Zamudio- Gurrola, Rincon Consultants)	S-049638

Appendix B

California Department of Parks 523 Series Forms

Other Listings
Review Code Reviewer Date

*Resource Name or #: Pillar Point Harbor

P1. Other Identifier: Johnson Pier, Pillar Point Harbor Marina

***P2. Location:** Not for Publication Unrestricted ***a. County:** San Mateo

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad:** San Mateo and Santa Cruz **Date:** 1975 **T;** **R** ; **¼ of** **¼ of Sec** ; M.D. **B.M.**

c. Address: 1 Johnson Pier

City: Half Moon Bay

Zip: 94019

d. UTM: Zone: ; mE/ mN (G.P.S.)

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation:

APN: 047-390-020

***P3a. Description:** Pillar Point Harbor is located within Half Moon Bay in unincorporated territory of San Mateo County between the communities of El Granada and Princeton-by-the-Sea. Owned and managed by the San Mateo County Harbor District, Pillar Point Harbor is accessible from Pillar Point Harbor Boulevard and Capistrano Road. The surrounding area is largely rural with the two small communities made up of residential houses and some commercial uses directly adjacent to the harbor. Description continued on page 4 of the Continuation Sheet.

***P3b. Resource Attributes:** HP6. 1-3 story commercial building; HP11. Engineering structure

***P4. Resources Present:** Building Structure Object Site District Element of District Other (Isolates, etc.)

P5a. Photo or Drawing



P5b. Description of Photo: (View, date, accession #)
Johnson Pier and associated buildings at Pillar Point Harbor, View Northeast

***P6. Date Constructed/Age and Sources:** Historic
 Prehistoric Both
1962 (The San Francisco Examiner, April 22, 1962)

***P7. Owner and Address:**
San Mateo County Harbor District
P.O. Box 1449, 504 Avenue
Alhambra, 2nd Floor, El Granada
CA 94018

***P8. Recorded by:** (Name, affiliation, and address)
Ashley Losco
Rincon Consultants, Inc.
180 N. Ashwood
Ventura, CA 93003

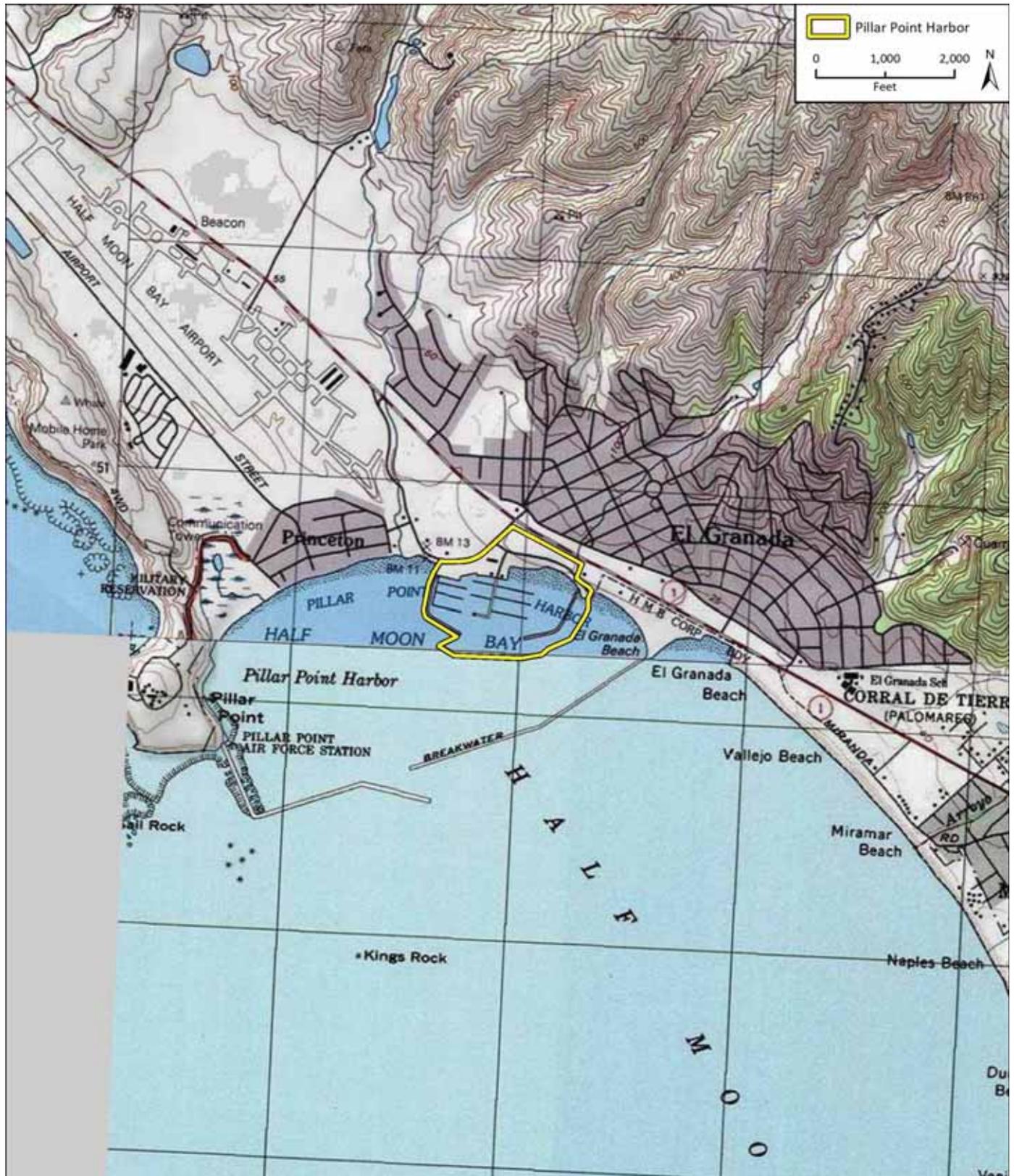
***P9. Date Recorded:** 1/12/2022

***P10. Survey Type:** Pedestrian

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")

Losco, A., S. Treffers, C. Montgomery and S. Carmack. *Johnson Pier Terminus Expansion and Docks D-H Replacement Project: Cultural Resources Assessment, San Mateo County, California*. Rincon Consultants Project No. 21-12218. Report on file at the Northwest Information Center, Sonoma State University, California. 2022.

***Attachments:** NONE Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (List):



BUILDING, STRUCTURE, AND OBJECT RECORD

*Resource Name or # Pillar Point Harbor

- B1. Historic Name: Pillar Point Harbor
- B2. Common Name: Pillar Point Harbor, Johnson Pier
- B3. Original Use: wharf
- B4. Present Use: wharf/pier/marina

*B5. Architectural Style: N/A

*B6. Construction History: (Construction date, alterations, and date of alterations)
Pillar Point Harbor was constructed in 1962 by the San Mateo County Harbor District (*The San Francisco Examiner*, April 22, 1962). By 1982, Docks D and E were partially constructed and a new breakwater directly to the south of the harbor was constructed (NETRonline, 1982); docks A, B, C, F, G, and H were constructed by 1987 (NETRonline, 1987). The fueling station dock at the end of the pier was also updated during this period. Other alterations include removal of the original railings along Johnson Pier and replacement with new railings at an unidentified date.

*B7. Moved? No Yes Unknown Date: Original Location:

*B8. Related Features:

B9a. Architect: Earl & Wright, Inc. and Noble Harbor Engineering b. Builder: Ben C. Gerwick and Company

*B10. Significance: Theme: N/A

Area: San Mateo County / Half Moon Bay

Period of Significance: N/A

Property Type: Harbor / Marina

Applicable Criteria: N/A

Before construction of the Pillar Point Harbor in 1962, the surrounding area, El Granada and Princeton-by-the-Sea, were small fishing villages off Highway 1 (Cabrillo Highway) between San Francisco and Santa Cruz. The Romeo Pier just northwest of the project area was constructed in 1944 for fishing and canning. Two other wharfs were also located on the bay in Princeton-by-the-Sea, and only a handful of houses and the Half Moon Bay Airport were located nearby in the 1940s (NETRonline, 1946). These small towns suffered greatly from intense ocean surges during storms. Fisherman had to sail to San Francisco to find shelter for their boats during every storm, or the boats would be badly damaged. One pier between Romeo Pier and Pillar Point Harbor was completely destroyed in a storm in the late 1950s. To address this problem, the San Mateo County Harbor District (the District), led by their chairman Admiral S. B. Johnson, planned for the construction of breakwaters and a harbor. In 1960, the breakwaters were constructed at the tip of Pillar Point to the west and El Granada Beach to the east which prevented surges and created a safe harbor for boats (*The Times*, August 4, 1960).

After completion of the breakwaters, the District began construction of the Pillar Point Harbor, also referred to as a wharf or dock at this time; it would not be referred to as a pier until the 1970s. The L-shaped wharf with a warehouse at the end and a small fueling dock was designed by Earl & Wright, Inc., a San Francisco-based engineering firm, and Noble Harbor Engineering of Newport Beach (*The Times*, August 24, 1960). Constructed by Ben C. Gerwick and Company of San Francisco, the project was financed by San Mateo County and ultimately \$100,000 over budget (*Pacifica Tribune*, August 24, 1961). The project included dredging and building out the land for the wharf (now referred to as Johnson Pier) and the construction of the three buildings and parking lot on the shore. The wharf was completed in 1962 and was officially named the Pillar Point Harbor in 1964 (*The San Francisco Examiner*, April 22, 1962 and *The Times*, March 14, 1964). It was developed for fishing, both commercially and recreationally, boating, and events. Continued on page 4 of the continuation sheet.

B11. Additional Resource Attributes: (List attributes and codes)

*B12. References:

See Continuation Sheet for a list of references.

B13. Remarks:

*B14. Evaluator: Ashley Losco, Architectural Historian, Rincon

*Date of Evaluation: 1/12/2022

(This space reserved for official comments.)



CONTINUATION SHEET

Recorded By: Rincon Consultants, Inc.

*Date: 01/12/2022

Continuation Update

***P3a. Description Continued from page 1:**

The property was initially constructed in 1962, and includes one pier, multiple floating docks, a boat slip, three large parking lots and five buildings: two bathrooms, an office building, a commercial mixed-use building, and a storage building. The one-story, hipped roof commercial building sits near Capistrano Road and houses a restaurant, bar, and surf shop. To the west, is a one-story storage building with a hipped roof, stucco cladding, and a metal roll-up door. South of the commercial building is a large parking lot, with the office building and a bathroom building situated along the bulkhead wall and adjacent to the shore. The offices house the San Mateo County Harbor District and are one-story, clad in horizontal siding, with a second-story tower on the right also clad in horizontal siding with a hipped roof. The bathroom building is also one-story with a hipped roof and a decorative concrete block wall and porthole windows. The second bathroom building is located along the shoreline at the western end of the property and is also one-story and capped by a hipped roof. Extending from the shoreline near the western bathroom building is a long north-south trending, floating dock with three ancillary docks (Docks A, B, and C). Located at the opposite (eastern) end of the property is a boat slip with four boat ramps.

Retaining its original design, the L-shaped Johnson Pier extends approximately 572-feet from the concrete deadman / public fishing area into Half Moon Bay in a north-south trending orientation and runs approximately 268-feet east-west at the end. The pier is constructed of precast concrete decking panels supported by prestressed concrete piles. The north-south section of the pier is approximately 30-feet wide while the east-west portion is approximately 72-feet wide to accommodate the fishery building at the end of the pier and space for trucks to turn around. A concrete curb painted red runs along the edge of the pier connected to wood railings consisting of three horizontal rails, added at an unidentified time; metal light posts also run along the side of the pier.

At the end of the pier is a rectilinear-shaped fishery building with a low-pitched side gable roofline and a wide eave overhang. The two-story building is sheathed in horizontal board and stucco siding at the first floor and board and batten siding at the second floor, all painted light blue with dark blue accent trim. The first floor of the primary elevation has three large openings for loading and unloading supplies, while the second floor has three sets of triple paired windows with a fixed unit in the middle and sash windows on either side.

Attached to Johnson Pier are five floating docks, two on the left (west) side (Docks D and E) and three on the right (east) side (Docks F, G, and H). The docks have boat slips on each side, each slip large enough to fit two boats. The docks are constructed of north-south trending rows of wood planks and accessible from Johnson Pier by concrete ramps. At the southern end of Johnson Pier adjacent to one of the docks is a L-shaped, concrete fuel landing dock with a two-story metal building and a one-story metal store building.

***B10. Significance:**

When construction was completed, disagreements began over the future of the District. It was originally formed as a temporary governing body to oversee the construction of the Pillar Point Harbor and other harbors in the area; however, the District felt they should continue running the pier while others felt the County of San Mateo or California Parks and Recreation should run it. In 1966, the District was dissolved through a voting ballot and the wharf became overseen by the County (The Times, January 25, 1968). In 1969, though, the commission was reinstated after an appellate court appealed the decision (The Times, July 16, 1969).

During this period, it was determined the eastern and western breakwaters were not sufficient to protect the harbor and they were ultimately extended to their current alignment in 1967 (The Times, March 3, 1967). More concerns began in 1969 when a new "old town fishing village" was proposed for development around the harbor including a new marina with 1,000 berths, a hotel, restaurants, and entertaining spaces. The project was debated for 10 years and concluded with no village and the construction of only approximately 400 berths onto Johnson Pier, the current configuration of Pillar Point Harbor, by M&B Construction (Pacifica Tribune, January 1, 1975). During this period, the wharf began to be referred to as a pier called Johnson Pier, most likely after Admiral Johnson. By 1982, Docks D and E were partially constructed and a new breakwater directly to the south of the harbor was constructed (NETRonline, 1982); docks A, B, C, F, G, and H were constructed by 1987 (NETRonline, 1987). The fueling station dock at the end of the pier was also updated during this period. Other alterations include removal of the original railings along Johnson Pier and replacement with new railings at an unidentified date. No known alterations have occurred to the site since this time.

Evaluation

The Pillar Point Harbor and its associated resources are recommended ineligible for listing in the NRHP, CRHR, and the San Mateo County Local Register (Local), under any significance criteria. The Pillar Point Harbor, constructed in 1962, is not associated with events that have made a significant contribution to local or regional history. The pier was constructed after the development of the surrounding communities of Princeton-by-the-Sea and El Granada. Both communities prospered in the early 1900s from fishing and canneries; however, Pillar Point Harbor was constructed after this period and is therefore not associated with this part

Recorded By: Rincon Consultants, Inc.

*Date: 01/12/2022

Continuation Update

of the local communities' history or any other events which can be considered significant in the history of the region, state, or nation. Therefore, Pillar Point Harbor is recommended ineligible under NRHP Criterion A/CRHR Criterion 1/Local Criterion 1.

Though Pillar Point Harbor is associated with local individuals such as Admiral S. B. Johnson, chairman of the San Mateo County Harbor District during construction of the harbor and breakwaters, there is no information to suggest he or any other individuals associated with the harbor can be considered significant in local, state, or national history. Therefore, the property is not recommended eligible under NRHP Criterion B/CRHR Criterion 2/Local Criterion 3.

With regards to its architectural or engineering merit, Pillar Point Harbor was constructed in the early 1960s and does not represent an innovative method of construction or technology. Pillar Point Harbor was designed by engineering firms Earl & Wright, Inc. and Noble Harbor Engineering and was constructed by Ben C. Gerwick and Company. All three were notable companies for their respective work: Earl & Wright Inc. and Noble Harbor Engineering both designed several harbors throughout California from the 1940s to 1960s. Ben C. Gerwick and Company constructed several of the bridges in the Bay Area including the Richmond-San Rafael Bridge and the San Mateo-Hayward Bridge. Though Pillar Point Harbor is associated with these companies, it is not a good representative of their respective works. It was a common and small project compared to their other identified project and the reinforced, and prestressed concrete utilized in construction of Johnson Pier was in use in the United States since the 1930s and was a common form of construction by the 1960s. The designs of Johnson Pier and the three Modern buildings are also common for their respective time periods and are not exceptional examples of any architectural styles. Therefore, the property is recommended ineligible under NRHP Criterion C/CRHR Criterion 3/Location Criteria 2, 4, and 5.

Based on the cultural resources records search and background research, the Pillar Point Harbor property also has not yielded and is unlikely to yield information important to the prehistory or history of the local area, California, or the nation. It is not recommended ineligible under NRHP Criterion D/CRHR Criterion 4; the local register does not have a similar criterion.

***B12. References;**

Nationwide Environmental Title Research (NETR) Online

2021 Historic aerial photographs of the vicinity of the project area. Accessed at www.historicaerials.com, December 2021.

Pacifica Tribune

1961 "Coastside Unincorporated," August 24. Page 11. Accessed at newspapers.com, December 16, 2021.

1975 "Harbor Changes," January 1. Page 20. Accessed at newspapers.com, December 16, 2021.

The San Francisco Examiner

1962 "Half Moon Bay Project Dedication," April 22. Page 13. Accessed at newspapers.com, December 16, 2021.

The Times

1960 August 4. Page 87. Accessed at newspapers.com, December 16, 2021.

1960 "Master Plan Ready for New Harbor," August 24. Page 14. Accessed at newspapers.com, December 16, 2021.

1964 "Harbor Given Official Name," March 14. Page 13. Accessed at newspapers.com, December 16, 2021.

1967 "Seawall Extension is Nearly Completed," March 3. Page 40. Accessed at newspapers.com, December 16, 2021.

1968 "Admiral S. B. Johnson Dies," January 25. Page 27. Accessed at newspapers.com, December 16, 2021.

1969 "S.M. Harbor District Rule is Appealed," July 15. Page 60. Accessed at newspapers.com, December 16, 2021.



Appendix E Mitigation Monitoring and Reporting Program



Johnson Pier Reconfiguration, Vessel Dock and Fuel Dock Replacement Project

MITIGATION MONITORING AND REPORTING PROGRAM (MMRP)

Introduction

This document is the Mitigation Monitoring and Reporting Program (MMRP) for the Johnson Pier Terminus Expansion and Docks D-H Replacement (Project). This MMRP has been prepared pursuant to Section 21081.6 of the California Public Resources Code, which requires public agencies to “adopt a reporting and monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment.” A MMRP is required for the proposed Project because the Initial Study/Mitigated Negative Declaration (IS/MND) has identified mitigation measures to reduce potential impacts to less than significant.

Mitigation Monitoring and Reporting Program

As the lead agency, San Mateo County Harbor District (SMCHD) will be responsible for monitoring compliance with all mitigation measures. Different departments within SMCHD are responsible for aspects of the Project. It is expected that one or more departments will coordinate efforts to ensure compliance. The MMRP is presented in tabular form on the following pages. The components of the MMRP are described briefly below:

- **Mitigation Measure:** The mitigation measure(s) are taken from the IS/MND, in the same order that they appear in the IS/MND.
- **Method of Verification:** Identifies the potential method(s) that will be used to confirm that each mitigation measure has been implemented.
- **Timing of Verification:** Identifies at which stage of the Project the mitigation must be completed.
- **Monitoring Responsibility:** Identifies SMCHD as responsible for mitigation monitoring and other parties potentially needed to facilitate implementation.
- **Verification (Date and Initials):** Provides a contact who reviewed the mitigation measure and the date the measure was determined complete.



Mitigation Monitoring and Reporting Program (MMRP)				
Mitigation/Avoidance Measure	Method(s) of Verification	Timing of Verification	Monitoring Responsibility	Verification (Date/Initials)
Air Quality				
<p>AIR-1 Implement BAAQMD Basin Construction Mitigation Measures</p> <p>As per BAAQMD, an applicant and/or its construction contractors shall comply with the following applicable BAAQMD basic control measures that are provided in the BAAQMD CEQA Guidelines during project construction:</p> <ol style="list-style-type: none"> 1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. 2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered. 3. 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. 4. All vehicle speeds on unpaved roads shall be limited to 15 mph. 5. 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. 6. 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 CCR, Title 13, Section 2485). Clear signage shall be provided for construction workers at all access points. 7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer’s specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. 8. Post a publicly visible sign 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. The Air District’s phone number shall also be visible to ensure compliance with applicable regulations (BAAQMD 2021b). 	Contractor work logs	During Construction	SMCHD/ SMCHD Contractor	
Biological Resources				
<p>BIO-1 Worker Environmental Awareness Program (WEAP): Prior to initiation of Project activities (including staging and mobilization), all personnel associated with Project construction should attend WEAP training, conducted by a qualified biologist, to aid workers in recognizing special-status terrestrial and marine species, native birds, and other biological resources that</p>	Biologist compliance documentation (e.g. record)	Prior to initiation of Project	SMCHD Biologist	



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may occur in the Project Area. The specifics of this program should include identification and habitats of special-status species with potential to occur at the Project Area, a description of the regulatory status and general ecological characteristics of sensitive resources, and review of the limits of construction and mitigation measures required to reduce impacts to biological resources within the work area. A fact sheet conveying this information should also be prepared for distribution to all contractors, their employers, and other personnel involved with construction. All employees should sign a form provided by the trainer indicating they have attended the WEAP and understand the information presented to them. A WEAP training recorded by a qualified biologist specifically for the Project may be utilized if in-person trainings are restricted due to COVID-19 or if the construction schedule makes it infeasible for a biologist to train each new crew member in person.	date and time of training)			
<p>BIO-2 General Best Management Practices: The following Best Management Practices (BMPs) should be followed by Project personnel to promote pollution prevention and minimize the introduction of pollutants into coastal waters.</p> <ol style="list-style-type: none"> 1. Project-related vessels should observe the no wake zone limit within limits of the Project. 2. During construction, heavy equipment should be operated in accordance with standard BMPs. All equipment should be properly maintained such that no leaks of oil, fuel, or residues will take place. Provisions should be in place to remediate any accidental spills. Materials should be stored at least 50 feet from water features, as feasible, or equipment will utilize secondary containment. 3. Spill prevention and control measures should be implemented to ensure the proper handling and storage of petroleum products and other construction materials. Including a designated fueling and vehicle maintenance area with appropriate berms and protection to prevent any spillage of gasoline or related petroleum products or contact with runoff. 4. All food-related trash shall be disposed of in closed containers and removed from the Project Area each day during the construction period. Project personnel shall not feed or otherwise attract wildlife to the Project Area. 5. At Project completion, all Project-generated debris, vessels, vehicles, building materials, and rubbish shall be removed from the Project footprint. 	Contractor agreement and work logs	Prior to and during work	SMCHD/ SMCHD Contractor	



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<p>BIO-3 Special-status Birds, Raptors, and Other Nesting Birds Preconstruction Survey: Project activities should be restricted to the non-breeding season (September 16 to January 31) when feasible. If Project activities occur during the nesting bird season (February 1 to September 15), the following mitigation measures are recommended to reduce impacts to protected species and other nesting birds protected by CFGC and the MBTA.</p> <ul style="list-style-type: none"> • A preconstruction nesting bird survey should be conducted by a qualified biologist no more than 14 days prior to initiation of Project activities. The survey should be conducted within the Project Area and include a 50-foot buffer for passerines and seabirds and a 500-foot buffer for raptors. The survey should be conducted by a biologist familiar with the identification of avian species known to occur in the region and should focus on trees, vegetated areas, and potential nesting habitat on breakwaters, piers, or docks. If nests are found, an appropriate avoidance buffer (typically 50 feet for passerine species and 500 feet for raptors) will be determined and demarcated by the biologist with high visibility material. • All Project personnel should be notified as to the existence of the buffer zones and to avoid entering buffer zones during the nesting season. No Project activities should occur within the buffer until the avian biologist has confirmed that breeding/nesting is complete and the young have fledged the nest. Encroachment into the buffer should occur only at the discretion of the qualified biologist. • A preconstruction survey for marine mammals and sea turtles should be conducted by a qualified biologist no more than 48 hours prior to the start of construction, or as otherwise required by NMFS. Should marine mammal or sea turtle species be observed within the Project Area or any portion of the inner Pillar Point Harbor during the preconstruction survey, then further avoidance and mitigation measures will be required. These measures may include marine mammal monitoring during pile driving activities. <p>This measure may be superseded or added by resource agency permits and incidental take authorizations.</p>	Biologist compliance documentation	No more than 14 days prior to construction, if construction occurs during the nesting season (February 1-September 15)	SMCHD/ SMCHD Biologist	
<p>BIO-4 Disturbance Area, Staging, and Materials Storage: Areas of temporary disturbance shall be minimized to the extent practicable. Staging and laydown areas shall be limited to sites that are unvegetated and previously disturbed (e.g., existing parking lots).</p> <p>Materials shall be stored on impervious surfaces or plastic ground covers to prevent any spills or leakage. Material storage shall be at least 100 feet from the Pacific Ocean and the intermittent stream channel. Any material/spoils from Project activities shall be located and stored 100 feet from potentially jurisdictional areas. Construction materials and spoils shall be protected from</p>	Contractor agreement and work logs	During construction	SMCHD/ SMCHD Contractor	



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stormwater runoff using temporary perimeter sediment barriers such as berms, silt fences, fiber rolls, covers, sand/gravel bags, and straw bale barriers, as appropriate.				
<p>BIO-5 Best Management Practices to Protect Jurisdictional Waters: To avoid and/or minimize potential indirect impacts to jurisdictional waters and water quality, the following Best Management Practices shall be implemented within the Project Area:</p> <ul style="list-style-type: none"> • Prevent the off-site tracking of loose construction and landscape materials by implementing street sweeping, vacuuming, and rumble plates, as appropriate. • Prevent the discharge of silt or pollutants off of the site when working adjacent to potentially jurisdictional waters. Install BMPs (e.g., silt barriers, sand bags, straw bales) as appropriate. • Site washout areas shall be at least 50-feet from a storm drain, open ditch or surface water and ensure that runoff flows from such activities do not enter receiving water bodies. • All vehicles, vessels, and equipment shall be in good working condition and free of leaks. The contractor shall prevent oil, petroleum products, or any other pollutants from contaminating the soil or entering a watercourse (dry or otherwise). When vehicles or equipment are stationary, mats or drip pans shall be placed below vehicles to contain fluid leaks. • All re-fueling, cleaning, and maintenance of equipment will occur at least 50 feet from potentially jurisdictional waters, as feasible. • Any spillage of material will be stopped if it can be done safely. The contaminated area will be cleaned, and any contaminated materials properly disposed. For all spills, the project foreman or other designated liaison will notify the District immediately. • Adequate spill prevention and response equipment shall be maintained on site and readily available to implement to ensure minimal impacts to the aquatic and marine environments. 	Contractor agreement and work logs	During construction	SMCHD/ SMCHD Contractor	
Cultural Resources				
<p>CUL-1 Archaeological Resource Discovery: In the unlikely event that archaeological resources are unexpectedly encountered during ground-disturbing activities, work in the immediate area shall be halted and an archaeologist meeting the U.S. Secretary of the Interior’s Professional Qualification Standards for Archeology, will be contacted immediately to evaluate the find. Following evaluation, the archaeologist will notify the District of their initial assessment. If the find is prehistoric, then a Native American representative will also be contacted to participate in the evaluation of the find. Having reviewed recommendations from a qualified archaeologist</p>	Contractor agreement and work logs	During construction	SMCHD/ SMCHD Contractor	



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and a Native American representative (if the resource is indigenous), the District may determine that the resource may qualify as a historic property (meeting the National Register of Historic Places criteria at 36 CFR 60.4), a historical resource or unique archaeological resource (as defined in CEQA Guidelines Section 15064.5), or a tribal cultural resource (as defined in PRC Section 21080.3), in which case the resource shall be avoided if feasible. If avoidance is not feasible, the District shall consult with appropriate Native American representative (if the resource is indigenous), and other appropriate interested parties to identify treatment measures to avoid, minimize, or mitigate any potential impacts to the resource. Such measures shall include documentation of the resource and may include data recovery (according to PRC Section 21083.2), if deemed appropriate, or other actions such as treating the resource in a culturally appropriate manner and protecting the cultural character and integrity of the resource (according to PRC Section 21084.3).				
CUL-2 Human Remains Discovery: If human remains are discovered during project activities, all activities within 100 feet of the find shall cease and the District shall follow the provisions of California Health and Human Safety Code (Human Remains) Section 7050.5. This shall include immediate notification of the San Mateo County Coroner who will determine origin and disposition pursuant to Public Resources Code Section 5097.98 and whether an investigation of the cause of death is required. The Native American Heritage Commission will be contacted within 24 hours if it is determined that the remains are Native American. The Commission will then identify the person or persons it believes to be the most likely descendant (MLD) from the deceased Native American, who in turn would make recommendations to the District for the appropriate means of treating the human remains and any grave goods. If the MLD does not make recommendations within 48 hours, the landowner shall reinter the remains in an area of the property secure from subsequent disturbance.	Contractor agreement and work logs	During construction	SMCHD/ SMCHD Contractor	
Hydrology and Water Quality				
HWQ-1 Obtain Required Permits: The City shall obtain all necessary permits from applicable agencies with jurisdiction over the Project. The contractor will implement and document compliance with permit conditions and best management practices required by the permits per agency requirements and for City records.	e.g. before and after photos; receipts and/or Contractor work logs	Prior to and during work	SMCHD/ SMCHD Contractor	



Noise				
<p>NOI-1 Pile Driving Notification Plan: The District shall implement a pile driving notification plan as described herein to keep residents informed of the Project’s pile driving schedule. Prior to pile driving activities and within 2 weeks after award and execution of the construction contract, the Contractor shall provide the District with a pile driving schedule that identifies: (1) start date of pile driving, (2) anticipated weekly work zones by estimated date shown on an aerial map (or plan sheet overview), (3) estimated pile driving completion date, and (4) website address for accessing the pile driving schedule on-line. The Contractor shall be required to post and maintain the schedule onsite. The Contractor shall update the schedule at least every two weeks and provide the schedule to the District by the following day for posting on the District’s website.</p>	<p>Pile driving schedule posted on site and on the SMCHD’s website</p>	<p>Prior to pile driving and within 2 weeks after award and execution of the construction contract</p>	<p>SMCHD/ SMCHD Contractor</p>	
<p>NOI-2 Pile Driving Operational Measures: A “soft-start” technique will be used to allow fish and marine mammals to vacate the area before the pile driver reaches full power. For vibratory hammers, the contractor will initiate the driving for 15 seconds at reduced energy, followed by a 1-minute waiting period when there has been downtime of 30 minutes or more. This procedure shall be repeated two additional times before continuous driving is started. This procedure would also apply to vibratory pile extraction. For impact driving, an initial set of three strikes would be made by the hammer at 40 percent energy, followed by a 1-minute waiting period, then two subsequent three-strike sets before initiating continuous driving.</p>	<p>Contractor work logs and/or Biologist compliance documentation</p>	<p>During pile driving</p>	<p>SMCHD/ SMCHD Biologist/ SMCHD Contractor</p>	