Appendix C – Biological Resources Technical Report

HELIX Environmental Planning

620 Airport Boulevard Redevelopment Project

Biological Resources Technical Report

October 2021 | 02816.00021.001

Prepared for:

Vassar Properties
433 California Street, Floor 7
San Francisco, CA 94010

Prepared by:

HELIX Environmental Planning, Inc.
11 Natoma Street, Suite 155
Folsom, CA 95630

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ACRONYMS AND ABBREVIATIONS

amsl	above mean sea level
APN	Assessor Parcel Number
BCDC	San Francisco Bay Conservation and Development Commission
BTR	Biological Resources Technical Report
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Ranking System
CSA	California Special Animals
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
DBH	diameter at breast height
EPA	U.S. Environmental Protection Agency
FESA	Federal Endangered Species Act
HELIX	HELIX Environmental Planning, Inc.
IPaC	Information for Planning and Consultation
MBTA	Migratory Bird Treaty Act
NAD	North American Datum
NEPA	National Environmental Policy Act
NPDES	National Pollution Discharge Elimination System
NPPA	Native Plant Protection Act
NRCS	Natural Resource Conservation Service
NWPR	Navigable Waters Protection Rule
OHWM	ordinary high water mark
PCC	prior converted cropland
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SSC	Species of Special Concern
SWRCB	State Water Resources Control Board

ACRONYMS AND ABBREVIATIONS (cont.)

USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WEAP	Worker Environmental Awareness Program
WQC	Water Quality Certification

EXECUTIVE SUMMARY

HELIX Environmental Planning, Inc. (HELIX) prepared this Biological Resources Technical Report (BTR) for the proposed 620 Airport Boulevard Redevelopment Project (Project) located in the City of Burlingame (City), San Mateo County (County), California. The site is located on an unsectionalized portion of the *San Mateo, CA* 7.5-minute USGS quadrangle map. The approximate center of the Study Area is at latitude 37.590060 N. and longitude -122.344547 W., NAD 83.

This document addresses the onsite physical features, habitat types/land covers present, and the common plant and wildlife species occurring in the Study Area. In addition, the suitability of the proposed Study Area to support and/or impact special-status species and sensitive habitats is analyzed and mitigation is proposed to reduce any impacts to special-status species and sensitive habitats that would occur as a result of the proposed project.

The 3.70-acre Study Area is developed as a metered asphalt parking lot to serve the nearby San Francisco Airport. Ornamental landscaping is present around the perimeter of the parking lot. The site is situated in an urban area of San Mateo County and is surrounded by commercial and industrial development. The Study Area is adjacent to the Anza Lagoon and the shoreline San Francisco Bay Trail. The Study Area consists entirely of developed habitat. No special-status plants or special-status wildlife were observed within the Study Area during the biological surveys and none are expected to occur in the Study Area or be impacted by the proposed project. However, the proposed project has the potential to result in indirect impacts to off-site waters of the U.S. and State, result in development within potential San Francisco Bay Conservation and Development Commission (BCDC) jurisdiction, impact protected trees, impact nesting migratory birds and raptors, and result in harm to birds as a result of collisions with the buildings and other project elements. Recommendations for voidance and minimization measures to limit or avoid impacts are included in Section 6.1.

Known or potential biological constraints in the Study Area include:

- Potential indirect impacts to waters of the U.S. and State that are subject to regulation by USACE, RWQCB, and CDFW, specifically Anza Lagoon;
- Potential BCDC Jurisdiction;
- Potential impacts to protected trees;
- Potential nesting habitat for migratory birds and raptors; and
- Potential requirements for bird-friendly building design.

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1.0 INTRODUCTION

HELIX Environmental Planning, Inc. (HELIX) prepared this Biological Resources Technical Report (BTR) for the proposed 620 Airport Boulevard Redevelopment Project (Project) located in the City of Burlingame (City), San Mateo County (County), California. This document addresses the onsite physical features, habitat types/land covers present, and the common plant and wildlife species occurring in the Study Area. In addition, the suitability of the proposed Study Area to support and/or impact special-status species and sensitive habitats is analyzed and mitigation is proposed to reduce impacts to special-status species and habitats that would occur as a result of the proposed project.

1.1 SITE LOCATION AND DESCRIPTION

The approximately 3.70-acre site of the proposed project (hereafter referred to as Study Area) is located on the north side of Airport Boulevard, between Anza Boulevard and Bay View Place (Appendix A, Figure 1). The Study Area is comprised of Assessor Parcel Number (APN) 026-342-330. The Study Area is situated directly south of the Anza Lagoon and the shoreline Bay Trail runs adjacent to the eastern and northern border. The site is located on an unsectionalized portion of the *San Mateo, CA* 7.5-minute USGS quadrangle map. The approximate center of the Study Area is at latitude 37.590060 N. and longitude -122.344547 W., North American Datum (NAD) 83 (Appendix A, Figure 2).

The Study Area is situated in an urban area of San Mateo County and is surrounded by commercial and industrial development. The Study Area consists of a single parcel that is developed as a metered asphalt parking lot to serve the nearby San Francisco Airport. The parking lot is bordered by ornamental landscaping.

1.2 EXISTING CONDITIONS

The Study Area and surrounding area has a history of commercial use to support the nearby San Francisco International Airport and many of the nearby parcels are developed as hotels and parking lots. Based on a review of historic aerial imagery (NETR Online 2021), the Study Area was developed as a parking lot in 2005. Previous to development the Study Area was a vacant field. Figure 3 in Appendix A is an aerial map of the Study Area.

1.3 PROJECT DESCRIPTION

The project proponent is proposing to redevelop the existing airport parking surface lot with a new life science/office development on the 3.70-acre site. The approximately 484,000 square foot project concept consists of two 9-story buildings (6-stories of commercial uses and 3-stories of in-building parking) over a partially subterranean podium level of parking. The top of the podium is designed to be a new integrated plaza level where ground floor activation, building lobbies, amenities and physical connection to the shoreline will occur. The maximum height of the development is proposed at approximately 163 feet with approximately 868 on-site parking spaces. An option for additional parking spaces may be available through a shared parking agreement with the adjacent hotel.

2.0 REGULATORY FRAMEWORK

Federal, State, and local environmental laws, regulations, and policies relevant to the California Environmental Quality Act (CEQA) review process are summarized below. Applicable CEQA significance criteria are also addressed in this section.

2.1 FEDERAL REGULATIONS

2.1.1 Federal Endangered Species Act

The U.S. Fish and Wildlife Service (USFWS) enforces the provisions stipulated within the Federal Endangered Species Act of 1973 (FESA; 16 USC 1531 et seq.). Species identified as federally threatened or endangered (50 CFR 17.11, and 17.12) are protected from take, defined as direct or indirect harm, unless a Section 10 permit is granted to an entity other than a federal agency or a Biological Opinion with incidental take provisions is rendered to a federal lead agency via a Section 7 consultation. Pursuant to the requirements of FESA, an agency reviewing a proposed project within its jurisdiction must determine whether any federally-listed species may be present in the study area and determine whether the proposed project will jeopardize the continued existence of or result in the destruction or adverse modification of critical habitat of such species (16 USC 1536 (a)[3], [4]). Other federal agencies designate species of concern (species that have the potential to become listed), which are evaluated during environmental review under the National Environmental Protection Act or CEQA although they are not otherwise protected under FESA.

2.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) of 1918 established federal responsibilities for the protection of nearly all species of birds, their eggs, and nests. The Migratory Bird Treaty Reform Act of 2004 further defined species protected under the act and excluded all non-native species. Section 16 U.S.C. 703–712 of the Act states "unless and except as permitted by regulations, it shall be unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, kill, attempt to take, capture, or kill" a migratory bird. A migratory bird is any species or family of birds that live, reproduce, or migrate within or across international borders at some point during their annual life cycle. Currently, there are 836 migratory birds protected nationwide by the Migratory Bird Treaty Act, of which 58 are legal to hunt. The U.S. Court of Appeals for the 9th Circuit (with jurisdiction over California) has ruled that the MBTA does not prohibit incidental take (952 F 2d 297 – Court of Appeals, 9th Circuit 1991).

2.1.3 The Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (Eagle Act) prohibits the taking or possession of and commerce in bald and golden eagles with limited exceptions. Under the Eagle Act, it is a violation to "*take, possess, sell, purchase, barter, offer to sell, transport, export or import, at any time or in any manner, any bald eagle commonly known as the American eagle, or golden eagle, alive or dead, or any part, nest, or egg, thereof.*" Take is defined to include pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, destroy, molest, and disturb. Disturb is further defined in 50 CFR Part 22.3 as "*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.*"

2.2 STATE JURISDICTION

2.2.1 California Endangered Species Act

The California Endangered Species Act (CESA) (California Fish and Game Code Sections 2050 to 2097) is similar to the FESA. The California Fish and Wildlife Commission is responsible for maintaining lists of threatened and endangered species under CESA. CESA prohibits the take of listed and candidate (petitioned to be listed) species. "Take" under California law means to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch capture, or kill (California Fish and Game Code, Section 86). The California Department of Fish and Wildlife (CDFW) can authorize take of a state-listed species under Section 2081 of the California Fish and Game Code if the take is incidental to an otherwise lawful activity, the impacts are minimized and fully mitigated, funding is ensured to implement and monitor mitigation measures, and CDFW determines that issuance would not jeopardize the continued existence of the species. A CESA permit must be obtained if a project will result in the "take" of listed species, either during construction or over the life of the project. For species listed under both FESA and CESA requiring a Biological Opinion under Section 7 of the FESA, CDFW may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the Fish and Game Code.

2.2.2 California Code of Regulations Title 14 and California Fish and Game Code

The official listing of endangered and threatened animals and plants is contained in the California Code of Regulations Title 14 §670.5. A state candidate species is one that the California Fish and Game Code has formally noticed as being under review by CDFW to include in the state list pursuant to Sections 2074.2 and 2075.5 of the California Fish and Game Code.

Legal protection is also provided for wildlife species in California that are identified as "fully protected animals." These species are protected under Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fish) of the California Fish and Game Code. These statutes prohibit take or possession of fully protected species at any time. CDFW is unable to authorize incidental take of fully protected species unless any such take authorization is issued in conjunction with the approval of a Natural Community Conservation Plan that covers the fully protected species (California Fish and Game Code Section 2835).

2.2.3 California Environmental Quality Act

Under the California Environmental Quality Act of 1970 (Public Resources Code Section 21000 et seq.), lead agencies analyze whether projects would have a substantial adverse effect on a candidate, sensitive, or special-status species (Public Resources Code Section 21001(c)). These "special-status" species generally include those listed under FESA and CESA, and species that are not currently protected by statute or regulation, but would be considered rare, threatened, or endangered under the criteria included CEQA Guidelines Section 15380. Therefore, species that are considered rare are addressed under CEQA regardless of whether they are afforded protection through any other statute or regulation. The California Native Plant Society (CNPS) inventories the native flora of California and ranks species according to rarity; plants ranked as 1A, 1B, 2A, 2B, and 3 are generally considered special-status species under CEQA.[1]

[1] The California Rare Plant Rank system can be found online at < http://www.cnps.org/cnps/rareplants/ranking.php>

Although threatened and endangered species are protected by specific federal and state statutes, CEQA Guidelines Section 15380(d) provides that a species not listed on the federal or state list of protected species may be considered rare if it can be shown to meet certain specified criteria. These criteria have been modeled after the definition in FESA and the section of the California Fish and Game Code dealing with rare or endangered plants and animals. Section 15380(d) allows a public agency to undertake a review to determine if a significant effect on species that have not yet been listed by either the USFWS or CDFW (i.e., candidate species) would occur.

2.2.4 Native Plant Protection Act

The Native Plant Protection Act (NPPA), enacted in 1977, allows the Fish and Game Commission to designate plants as rare or endangered. The NPPA prohibits take of endangered or rare native plants, with some exceptions for agricultural and nursery operations and emergencies. Vegetation removal from canals, roads, and other sites, changes in land use, and certain other situations require proper advance notification to CDFW.

2.2.5 Nesting Birds

California Fish and Game Code Subsections 3503 and 3800 prohibit the possession, take, or needless destruction of birds, their nests, and eggs, and the salvage of dead nongame birds. California Fish and Game Code Subsection 3503.5 protects all birds in the orders of Falconiformes and Strigiformes (birds of prey). Fish and Game Code Subsection 3513 states that it is unlawful to take or possess any migratory nongame bird as designated in the Migratory Bird Treaty Act or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory Bird Treaty Act. The Attorney General of California has released an opinion that the Fish and Game Code prohibits incidental take.

2.3 JURISDICTIONAL WATERS

2.3.1 Federal Jurisdiction

Any person, firm, or agency planning to alter or work in “waters of the U.S.,” including the discharge of dredged or fill material, must first obtain authorization from the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA; 33 USC 1344). Permits, licenses, variances, or similar authorization may also be required by other federal, state, and local statutes. Section 10 of the Rivers and Harbors Act prohibits the obstruction or alteration of navigable waters of the U.S. without a permit from USACE (33 USC 403).

Waters of the U.S. generally include territorial seas and traditional navigable waters, their tributaries, certain lakes, ponds, and impoundments, and wetlands adjacent to such waters.

Features generally not considered waters of the U.S. include:

- Waters not listed as waters of the U.S.
- Groundwater
- Diffuse stormwater run-off
- Ditches not identified as waters of the U.S.
- Prior converted cropland (PCC)
- Artificially irrigated areas

- Artificial lakes and ponds
- Water-filled depressions incidental to mining or construction activity
- Stormwater control features
- Groundwater recharge, water reuse, and wastewater recycling structures
- Waste treatment systems

With non-tidal waters, in the absence of adjacent wetlands, the extent of USACE jurisdiction extends to the ordinary high water mark (OHWM) – the line on the shore established by fluctuations of water and indicated by a clear, natural line impressed on the bank, shelving, changes in soil character, destruction of terrestrial vegetation, or the presence of litter and debris. Wetlands are defined in 33 CFR Part 328 as:

> *"those areas that are inundated or saturated by surface or ground water at a frequency and duration to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions."*

Federal and state regulations pertaining to waters of the U.S., including wetlands, are discussed below.

Clean Water Act (33 USC 1251-1376). The CWA provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters.

Section 401 requires that an applicant for a federal license or permit that allows activities resulting in a discharge to waters of the U.S. must obtain a state certification that the discharge complies with other provisions of CWA. The Regional Water Quality Control Board (RWQCB) administers the certification program in California and may require State Water Quality Certification before other permits are issued.

Section 402 establishes a permitting system for the discharge of any pollutant (except dredged or fill material) into waters of the U.S.

Section 404 establishes a permit program administered by USACE that regulates the discharge of dredged or fill material into waters of the U.S. (including wetlands). Implementing regulations by USACE are found at 33 CFR Parts 320-332. The Section 404 (b)(1) Guidelines were developed by the USEPA in conjunction with USACE (40 CFR Part 230), allowing the discharge of dredged or fill material for non-water dependent uses into special aquatic sites only if there is no practicable alternative that would have less adverse impacts.

2.3.2 State Jurisdiction

Regional Water Quality Control Board

Any action requiring a CWA Section 404 permit, or a Rivers and Harbors Act Section 10 permit, must also obtain a CWA Section 401 Water Quality Certification. The State of California Water Quality Certification (WQC) Program was formally initiated by the State Water Resources Control Board (SWRCB) in 1990 under the requirements stipulated by Section 401 of the Federal CWA. Although the Clean Water Act is a Federal law, Section 401 of the CWA recognizes that states have the primary authority and responsibility for setting water quality standards. In California, under Section 401, the State and Regional Water Boards are the authorities that certify that issuance of a federal license or permit does not violate California's water quality standards (i.e., that they do not violate Porter-Cologne and the Water Code). The WQC Program currently issues the WQC for discharges requiring USACE's permits for fill and dredge

discharges within Waters of the United States, and now also implements the State's wetland protection and hydromodification regulation program under the Porter Cologne Water Quality Control Act.

On April 2, 2019, the SWRCB adopted a State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Procedures), for inclusion in the forthcoming Water Quality Control Plan for Inland Surface Waters and Enclosed Bays and Estuaries and Ocean Waters of California. The Procedures consist of four major elements: 1) a wetland definition; 2) a framework for determining if a feature that meets the wetland definition is a water of the state; 3) wetland delineation procedures; and 4) procedures for the submittal, review, and approval of applications for Water Quality Certifications and Waste Discharge Requirements for dredge or fill activities. The Office of Administrative Law approved the Procedures on August 28, 2019, and the Procedures became effective May 28, 2020.

Under the Procedures and the State Water Code (Water Code §13050(e)), "Waters of the State" are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state." Unless excluded by the Procedures, any activity that could result in discharge of dredged or fill material to Waters of the State, which includes waters of the U.S. and non-federal Waters of the State, requires filing of an application under the Procedures.

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act, Water Code Section 13000 et seq.) is California's statutory authority for the protection of water quality in conjunction with the federal CWA. The Porter-Cologne Act requires the SWRCB and RWQCBs under the CWA to adopt and periodically update water quality control plans, or basin plans. Basin plans are plans in which beneficial uses, water quality objectives, and implementation programs are established for each of the nine regions in California. The Porter-Cologne Act also requires dischargers of pollutants or dredged or fill material to notify the RWQCBs of such activities by filing Reports of Waste Discharge and authorizes the SWRCB and RWQCBs to issue and enforce waste discharge requirements, National Pollution Discharge Elimination System (NPDES) permits, Section 401 water quality certifications, or other approvals.

California Department of Fish and Wildlife

The CDFW is a trustee agency that has jurisdiction under Section 1600 et seq. of the California Fish and Game Code. Under Sections 1602 and 1603, a private party must notify CDFW if a proposed project will "substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of streambeds…except when the department has been notified pursuant to Section 1601." Additionally, CDFW asserts jurisdiction over native riparian habitat adjacent to aquatic features, including native trees over four inches in diameter at breast height (DBH). If an existing fish or wildlife resource may be substantially adversely affected by the activity, CDFW may propose reasonable measures that will allow protection of those resources. If these measures are agreeable to the parties involved, they may enter into an agreement with CDFW identifying the approved activities and associated mitigation measures. Generally, CDFW recommends submitting an application for a Streambed Alteration Agreement (SAA) for any work done within the lateral limit of water flow or the edge of riparian vegetation, whichever is greater.

2.4 CEQA SIGNIFICANCE

Section 15064.7 of the State CEQA Guidelines encourages local agencies to develop and publish the thresholds that the agency uses in determining the significance of environmental effects caused by projects under its review. However, agencies may also rely upon the guidance provided by the expanded

Initial Study Checklist included in Appendix G of the State CEQA Guidelines. Appendix G provides examples of impacts that would normally be considered significant. Based on these examples, impacts to biological resources would normally be considered significant if the project would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS;

- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS;

- 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;

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

- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and

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

An evaluation of whether or not an impact on biological resources would be substantial must consider both the resource itself and how that resource fits into a regional or local context. Substantial impacts would be those that would diminish or result in the loss of an important biological resource, or those that would obviously conflict with local, State, or federal resource conservation plans, goals, or regulations. Impacts are sometimes locally important but not significant according to CEQA. The reason for this is that although the impacts would result in an adverse alteration of existing conditions, they would not substantially diminish, or result in the permanent loss of, an important resource on a population-wide or region-wide basis.

2.4.1 California Native Plant Society

The CNPS maintains a rank of plant species native to California that have low population numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the *Inventory of Rare and Endangered Vascular Plants of California*. Potential impacts to populations of CNPS-ranked plants receive consideration under CEQA review. The following identifies the definitions of the CNPS California Rare Plant Ranking System (CRPR):

Rank 1A: Plants presumed Extinct in California and either rare or extinct elsewhere

Rank 1B: Plants Rare, Threatened, or Endangered in California and elsewhere

Rank 2A: Plants presumed extirpated in California but common elsewhere

Rank 2B: Plants Rare, Threatened, or Endangered in California, but more common elsewhere

Rank 3: Plants about which we need more information – A Review List

Rank 4: Plants of limited distribution – A Watch List

All plants appearing on CNPS Rank 1 or 2 are considered to meet CEQA Guidelines Section 15380 criteria. While only some of the plants ranked 3 and 4 meet the definitions of threatened or endangered species, the CNPS recommends that all Rank 3 and Rank 4 plants be evaluated for consideration under CEQA. Furthermore, the CNPS Rare Plant Rankings include levels of threat for each species. These threat ranks include the following:

0.1 - Seriously threatened in California (over 80 percent of occurrences threatened/high degree and immediacy of threat);

0.2 - Moderately threatened in California (20 to 80 percent occurrences threatened/moderate degree and immediacy of threat); and

0.3 - Not very threatened in California (less than 20 percent of occurrences threatened/low degree and immediacy of threat or no current threats known).

Threat ranks do not designate a change of environmental protections, so that each species (i.e., CRPR 1B.1, CRPR 1B.2, CRPR 1B.3, etc.) be fully considered during preparation of environmental documents under CEQA.

2.4.2 California Department of Fish and Wildlife Species of Concern

Additional fish, amphibian, reptile, bird, and mammal species may receive consideration by CDFW and lead agencies during the CEQA process, in addition to species that are formally listed under FESA and CESA or listed as fully protected. These species are included on the *Special Animals List*, which is maintained by CDFW. This list tracks species in California whose numbers, reproductive success, or habitat may be in decline. In addition to "Species of Special Concern" (SSC), the *Special Animals List* includes species that are tracked in the California Natural Diversity Database (CNDDB) but warrant no legal protection. These species are identified as "California Special Animals" (CSA).

2.5 LOCAL REGULATIONS/GUIDELINES

2.5.1 San Francisco Bay Conservation and Development Commission Jurisdiction

The San Francisco Bay Conservation and Development Commission (BCDC) is responsible for carrying out the San Francisco Bay Plan, which was developed in 1969 as a requirement of the McAteer-Petris Act (Act; California Government Code 66600-66682). Section 66610 of the Act specified the area and scope of BCDC's authority and established the permit system for the regulation of the Bay and shoreline. The BCDC's jurisdiction under the Act includes the San Francisco Bay, being all areas that are subject to tidal action from the south end of the Bay to the Golden Gate (Point Bonita-Point Lobos) and to the Sacramento River line (a line between Stake Point and Simmons Point, extended northeasterly to the mouth of Marshall Cut), including all sloughs, and specifically, the marshlands lying between mean high tide and five feet above mean sea level (amsl); tidelands (land lying between mean high tide and mean low tide); and submerged lands (land lying below mean low tide). The BCDC's jurisdiction also includes a shoreline band consisting of all territory located between the shoreline of San Francisco Bay as defined above and a line 100 feet landward of and parallel with that line. Other areas under BCDC jurisdiction

include salt ponds and managed wetlands diked off from the bay and certain other waterways tributary to San Francisco Bay, as specified in the Act. A permit is required from BCDC prior to undertaking work in the Bay or within 100 feet of the shoreline, including filling, dredging, dredged sediment disposal, shoreline development and other work.

2.5.2 Coastal Zone Management Act

In addition to its permit authority under state law, BCDC exercises authority under Section 307 of the federal Coastal Zone Management Act (CZMA)(16 U.S.C. Section 1456) over federal activities and development projects and non-federal projects that require a federal permit or license or are supported by federal funding. The consistency provisions of Section 307 of the CZMA provide that any federal activity, including a federal development project, that affects any land or water use or natural resource of the BCDC's coastal zone, must be conducted in a manner that is "consistent to the maximum extent practicable" with the enforceable policies of the BCDC's federally-approved coastal management program. Similarly, any nonfederal activity that requires either a federal permit or license or is supported by federal financial assistance that affects the BCDC's coastal zone must be conducted in a manner that is fully consistent with the enforceable policies of the BCDC's federally-approved coastal management program.

BCDC uses its federally-approved Management Program for the San Francisco Bay Segment of the California Coastal Zone (Management Program) to exercise its federal consistency authority under the CZMA. BCDC's Management Program defines the BCDC segment of the California coastal zone as being coextensive with BCDC jurisdiction under state law, incorporates the McAteer-Petris Act, the Suisun Marsh Preservation Act, certain other state laws, and various BCDC plans. The Management Program also provides that BCDC will generally follow its procedures for processing a permit application when it reviews a consistency determination for a federal project or activity, or a consistency certification for a non-federal project subject to consistency review.

2.5.3 City of Burlingame Tree Protection Ordinance

Chapter 11.06 of the Burlingame Municipal Code regulates removal and impacts to protected trees, which includes:

- Any tree with a circumference of forty-eight (48) inches or more when measured fifty-four (54) inches above natural grade,
- A tree or stand of trees so designated as unique and of importance to the public due to its unusual appearance, location, historical significance or other factor, or
- A stand of trees determined to be dependent upon the others for survival.

Removal of a protected tree requires a permit from the City of Burlingame. Mitigation for the removal of protected trees requires replacement at the ratio of three 15-gallon size, one 24-inch box size, or one 36-inch box size landscape tree for each protected tree removed. If replacement trees cannot be planted on the property, payment of equal value is to be made to the City of Burlingame.

2.5.4 City of Burlingame General Plan Policy: Bird Friendly Design

The City of Burlingame General Plan CC-1.14 requires projects in the Bayfront area to incorporate into the development review process design measures that promote bird safety as a means of minimizing adverse effects on native and migratory birds.

3.0 STUDY METHODS

Biological studies conducted for this report consisted of a special-status species evaluation that included a desktop review and database queries to identify known biological resources in the Study Area and vicinity as well as a biological field survey. An arborist inventory was conducted by MacNair and Associates on August 22, 2021 and is included as Appendix F.

3.1 SPECIAL-STATUS SPECIES EVALUATION

For the purposes of this report, special-status species are those that fall into one or more of the following categories, including those:

- Listed as endangered or threatened under the FESA (including candidates and species proposed for listing);
- Listed as endangered or threatened under the CESA; including candidates and species proposed for listing);
- Designated as rare, protected, or fully protected pursuant to California Fish and Game Code;
- Designated as SSC by the CDFW;
- Considered by CDFW to be a Watch List species with potential to become an SSC;
- Defined as rare or endangered under Section 15380 of the CEQA; or
- Having a CRPR of 1A, 1B, 2A, 2B, or 3.

In order to evaluate special-status species and/or their habitats with the potential to occur in the Study Area and/or be impacted by the proposed project, HELIX obtained lists of regionally occurring special-status species from the following information sources:

- California Department of Fish and Wildlife (CDFW). 2021a. *California Natural Diversity Database* (CNDDB); For: *San Francisco South, San Leandro, Hunters Point, Montara Mountain, San Mateo, Redwood Point, Half Moon Bay, Woodside, and Palo Alto* USGS 7.5-minute series quadrangles, Sacramento, CA. Accessed [September 1, 2021];
- California Native Plant Society (CNPS). 2021. *Inventory of Rare and Endangered Plants* (online edition, v8-03 0.39) For: *San Francisco South, San Leandro, Hunters Point, Montara Mountain, San Mateo, Redwood Point, Half Moon Bay, Woodside, and Palo Alto* USGS 7.5-minute series quadrangles, Sacramento, CA. Accessed [September 1, 2021]; and

- U.S. Fish and Wildlife Service (USFWS). 2021a. *Information for Planning and Consultation* (IPaC) *the Proposed Project.* Accessed [September 1, 2021].

Appendix B includes these lists of special-status plant and animal species occurring in the project region and Appendix C includes an evaluation of the potential for these species to occur in the Study Area.

3.2 BIOLOGICAL RECONNAISSANCE SURVEY

The biological reconnaissance survey was conducted on September 2, 2021, by HELIX biologist Stephanie McLaughlin, M.S. The weather during the field survey was warm and sunny with light wind. The Study Area was systematically surveyed on foot to ensure total search coverage. The adjacent Anza Lagoon was also surveyed. Binoculars were used to further extend site coverage and identify species observed. All plant and animal species observed onsite during the surveys were recorded (Appendix D), and all biological communities occurring onsite were characterized. Following the field survey, the potential for each species identified in the database query to occur within the Study Area was determined based on the site survey, soils, habitats present within the Study Area, and species-specific information, as shown in Appendix C.

4.0 RESULTS: ENVIRONMENTAL SETTING

4.1 TOPOGRAPHY

The Study Area is generally flat and level, with a slope along the southern border leading from the edge of the parking lot up to the sidewalk along Airport Boulevard. Elevation on the site ranges from approximately 5 feet amsl in the north to approximately 11 feet amsl in the south.

4.2 HYDROLOGY

The Study Area is situated adjacent to the Anza Lagoon and the San Francisco Bay in the San Francisco Bay Estuaries Hydrological Unit (HUC12 180500041001). Run-off in the Study Area generally drains to the north and exits the site through a municipal stormwater drainage system. Anza Lagoon is a small lagoon north of the Study Area. The lagoon has limited aquatic vegetation surrounding it and has an entirely graveled bottom. Anza Lagoon is hydrologically connected to the San Francisco Bay via an open channel along the northern border of the lagoon. A segment of the San Francisco Bay Trail, a popular paved recreational trail, runs along the southern border of the Anza Lagoon.

4.3 SOILS

Soils on the site consist entirely of Urban land-Orthents, reclaimed complex, 0 to 2 percent slopes, which is frequently found on tidal flats. Urban land-Orthents soils are residuum weathered from sedimentary rock. It consists of variable surface layers to a depth of approximately 40 inches, with silty clay between 40 to 60 inches. This soil type has a depth of more than 80 inches to the water table, is well drained, and the frequency of flooding and ponding is classified as “none” (NRCS 2019). This soil type is on the National List of Hydric Soils for San Mateo County (NRCS 2015). A soil map is included as Figure 4 in Appendix A.

4.4 VEGETATION COMMUNITIES AND LAND COVER

The Study Area consists entirely of developed land (Appendix A, Figure 5). This habitat type is discussed below. A comprehensive list of all plant and wildlife species observed within the Study Area is provided in Appendix D. Representative site photographs are included in Appendix E.

4.4.1 Developed

Developed land is where permanent structures, pavement, hardscape, or other land uses prevent the establishment of vegetation, or where vegetation is associated with maintained landscaping. The entire 3.70-acre Study Area is developed as a metered asphalt parking lot to serve the nearby San Francisco Airport. Ornamental landscaping is present around the perimeter of the parking lot and is dominated by blue gum trees (*Eucalyptus globulus*), bank catclaw (*Acacia redolens*), and New Zealand Christmas tree (*Metrosideros excelsa*). Non-native grasses and forbs were scattered along the edges of the site, including ice plant (*Carpobrotus edulis*), Bermuda grass (*Cynodon dactylon*), and field bindweed (*Convolvulus arvensis*). The developed land cover does not provide any significant habitat value for wildlife.

4.5 WILDLIFE

Due to the disturbed nature of the Study Area, wildlife habitat is of very low quality and wildlife using the site is generally limited to urban-adapted species tolerant of regular human disturbance. Wildlife observed in the Study Area during biological surveys included common bird species such as California gull (*Larus californicus*), white-crowned sparrow (*Zonotrichia leucophrys*), California towhee (*Melozone crissalis*), American crow (*Corvus brachyrhynchos*), and black phoebe (*Sayornis nigricans*). A complete list of wildlife observed in the site is provided in Appendix D.

5.0 DISCUSSION: EVALUATION OF BIOLOGICAL RESOURCES

5.1 SENSITIVE NATURAL COMMUNITIES

Vegetation communities are considered sensitive natural communities if they have limited distributions, have high wildlife value, include sensitive species, or are particularly susceptible to disturbance. CDFW ranks sensitive communities as "threatened" or "very threatened" and keeps records of their occurrences in CNDDB. CNDDB vegetation alliances are ranked 1 through 5, with those alliances ranked globally (G) or statewide (S) as 1 through 3 considered sensitive. Some alliances with the rank of 4 and 5 have also been included in the 2020 sensitive natural communities list under CDFW's revised ranking methodology (CDFW 2021b).

No sensitive natural communities are present in the Study Area. Developed lands are not considered sensitive and have low potential to support special-status species.

5.2 JURISDICTIONAL WETLANDS AND OTHER WATERS

There are no jurisdictional wetlands or other waters in the Study Area. However, Anza Lagoon adjacent to the site is expected to be a waters of the U.S. and State. Indirect impacts to the adjacent Anza Lagoon

could occur as a result of hydrologic alteration and water quality impacts. The alteration of impervious surfaces through the construction of buildings and roadways and the compaction of soil could result in changes in the amount, location, quality, and velocity of stormwater runoff flowing into adjacent aquatic habitats. Stormwater discharged into natural habitats at concentrated levels could increase the likelihood of soil erosion and channelization, and impacts related to water quality. Measures are proposed in Section 6.1.1 below to reduce potential impacts to off-site jurisdictional waters.

5.3 BCDC JURISDICTION

Portions of the Study Area within 100 feet of the edge of Anza Lagoon (100-foot shoreline band) are likely within BCDC jurisdiction. BCDC should be consulted regarding the limits of their jurisdiction within the Study Area and a permit should be obtained if required by BCDC for work within the 100-foot shoreline band as proposed in Chapter 6.1.2.

5.4 PROTECTED TREES

Protected trees are present in the Study Area and the proposed project has the potential to impact trees protected by the City of Burlingame. The arborist inventory conducted by MacNair and Associates (Appendix F) provides detailed data on the species, size and condition of all trees located on or overhanging the Study Area. Removal of protected trees requires a tree removal permit from the City of Burlingame and mitigation through the planting of replacement trees or payment into a mitigation fund as discussed in Chapter 6.1.3.

5.5 SPECIAL-STATUS SPECIES

5.5.1 Special-Status Plants

A total of 70 regionally occurring special-status plant species were identified during the database queries and desktop review. The majority of the special-status plant species are associated with coastal scrub, dunes, marshes, grasslands, vernal pools, meadows and seeps, chaparral, or woodlands and do not have the potential to occur in the Study Area. The Study Area consists entirely of developed habitat and does not provide suitable habitat for any special-status plant species. No potential impacts to special-status plant species were identified as a result of the proposed project. Species determined to have no potential to occur in the Study Area or be impacted by the proposed project (Appendix D) are not discussed further in this report.

5.5.2 Special-Status Animals

A total of 30 regionally occurring special-status wildlife species were identified during the updated database searches and desktop review. The majority of the special-status wildlife species are associated with aquatic habitat, sandy beaches, marshes, cliffs, grasslands, vernal pools, meadows and seeps, chaparral, or woodlands and do not have the potential to occur in the Study Area. The remaining species are associated with specific host plants not found in the Study Area.

The Study Area consists entirely of developed habitat and does not provide suitable habitat for any special-status animal species. An evaluation was also conducted to determine if any of the regionally occurring special-status animal species in the database searches could occur in the adjacent Anza Lagoon or San Francisco Bay habitats and be impacted by the proposed project. As discussed in

Appendix D, no potential impacts to special-status animal species in the Study Area or adjacent habitats were identified as a result of the proposed project, either as a result of direct or indirect impacts. Species determined to have no potential to occur in the Study Area or be impacted by the proposed project (Appendix D) are not discussed further in this report.

5.6 MIGRATORY AND RESIDENT BIRDS

5.6.1 Nesting Birds

Native birds are generally protected by the Migratory Bird Treaty Act, which prohibits direct take of adults, nests, eggs, and chicks, as well as the California Fish and Game Code, which prohibits take or needless destruction of birds, bird parts, nests, and eggs. Disturbance that leads to nest abandonment can be considered take of eggs and chicks. Common bird species found on and adjacent to the Study Area include species that nest in trees and shrubs, on bare ground, on utility poles, and on buildings.

Potential nesting habitat is limited in the Study Area; however, the proposed project may include removal of vegetation that provides potential nesting habitat for nesting birds. Project construction activities would potentially result in impacts to nesting birds if construction of the proposed project commences during the typical nesting period for passerines and other migratory birds. Construction activities and construction-related disturbance (noise, vibration and increased human activity) could adversely affect these species if they were to nest in or adjacent to the project area. Potential effects include physical destruction of nests by construction equipment and/or nest abandonment. Mitigation measures are proposed in Chapter 6.1.4 to reduce impacts to nesting birds.

5.6.2 Migrating Birds

Over 250 species of birds have been documented using San Francisco Bay, which is along the Pacific Flyway and is used by millions of migrating birds during peak migrations (USFWS 2021b). Some of these species are listed as threatened or endangered, including species such as western snowy plover (*Charadrius nivosus nivosus*) and least tern (*Sterna antillarum browni*). Tall buildings with reflective surfaces such as large windows pose a hazard to migrating birds and birds generally because the birds fly into the reflective surfaces. Bird collisions with buildings can be a significant source of mortality; however, incorporating bird friendly design can significantly reduce bird injury and mortality. The City of Burlingame General Plan requires projects in the Bayfront area to incorporate design measures that promote bird safety into the development review process as a means of minimizing adverse effects on native and migratory birds.

5.7 WILDLIFE MOVEMENT CORRIDORS

A wildlife corridor is a link of wildlife habitat, generally native vegetation, which joins two or more larger areas of similar wildlife habitat. Corridors are critical for the maintenance of ecological processes including facilitating the movement of animals and the continuation of viable populations. The Study Area consist of developed habitat surrounded by industrial and commercial land uses. Although the Study Area and vicinity are dominated by an urban landscape, the area is also a portion of the Pacific Flyway, as discussed above. Mitigation measures are proposed in Chapter 6.1.5 to reduce impacts to wildlife corridors.

6.0 CONCLUSIONS AND RECOMMENDATIONS

The 3.70-acre Study Area consists entirely of developed habitat. No potential impacts to special-status species were identified as a result of the proposed project. However, the project has the potential to result in indirect impacts to off-site jurisdictional waters (Anza Lagoon), result in fill within BCDC jurisdiction, result in the removal of protected trees, result in impacts to nesting birds if construction occurs during the nesting season, and impact birds as a result of collisions with buildings. Recommendations, including avoidance and minimization measures to limit or avoid impacts, are included in Section 6.1.

6.1 RECOMMENDATIONS

6.1.1 Jurisdictional Wetlands and Other Waters

No potential waters of the U.S. or State are present in the Study Area and the proposed project would not directly affect any potential waters of the U.S. or State. However, without implementation of BMPs, indirect impacts to waters of the U.S. and State (Anza Lagoon) off-site could occur as a result of the proposed project in the form of hydrological alteration and water quality impacts. The following mitigation measures are recommended to avoid indirect impacts to offsite jurisdictional waters.

- Standard construction BMPs should be implemented throughout construction, in order to avoid and minimize adverse effects to the water quality within the Study Area. Appropriate erosion control measures should be used (e.g., hay bales, filter fences, vegetative buffer strips or other accepted equivalents) to reduce siltation and contaminated runoff from the Study Area. The integrity and effectiveness of the BMPs should be inspected on a daily basis by the resident engineer. Corrective actions and repairs should be carried out immediately.

- Construction by-products and pollutants such as petroleum products, chemicals, or other deleterious materials should not be allowed to enter into offsite waters. A plan for the emergency clean-up of any spills of fuel or other materials should be available when construction equipment is in use.

- Construction vehicles and equipment should be maintained to prevent contamination of soil or water from external grease and oil or from leaking hydraulic fluid, fuel, oil, and grease. Leaking vehicles and equipment should be removed from the site.

- Building materials storage areas containing hazardous or potentially toxic materials such as herbicides and petroleum products should have an impermeable membrane between the ground and the hazardous material and should be bermed to prevent the discharge of pollutants to ground water and runoff water.

- Equipment should be re-fueled and serviced at designated construction staging areas. All construction material and fill should be stored and contained in a designated area that is located away from aquatic habitats to prevent transport of materials into adjacent water bodies. The preferred distance is 100 feet from any water bodies. In addition, a silt fence should be installed to collect any discharge, and adequate materials should be available for spill clean-up and during storm events.

- No litter, debris, or sidecast should be dumped or permitted to enter aquatic habitats. During project activities, all trash that may attract predators should be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and construction debris should be removed from work areas.

6.1.2 BCDC Jurisdiction

Portions of the Study Area within 100 feet of the edge of Anza Lagoon (100-foot shoreline band) may be within BCDC shoreline band jurisdiction. BCDC should be consulted regarding the limits of their jurisdiction within the Study Area and a permit should be obtained if required by BCDC for work within the 100-foot shoreline band and permit requirements should be adhered to.

6.1.3 Protected Trees

If any protected trees are removed, a tree removal permit should be obtained from the City of Burlingame and mitigation should be accomplished through the planting of replacement trees or payment into a mitigation fund.

6.1.4 Nesting Raptors and Migratory Birds

Special-status birds and migratory birds and raptors, which are protected under federal, State, and/or local laws and policies have potential to nest within the Study Area. No active nests were observed at the time of the field survey, but the Study Area has the potential to support nesting birds within various trees, shrubs, bare ground, and herbaceous vegetation within the Study Area. Active nests and nesting birds are protected by the California Fish and Game Code Sections 3503 and 3503.5, 3513 and the MBTA. Ground-disturbing and other development activities including grading, vegetation clearing, tree removal/trim, and construction could impact nesting birds if these activities occur during the nesting season (generally February 1 to August 31). To avoid impacts to nesting birds, all vegetation removal should be completed between September 1 and January 31, if feasible.

If earth work and/or ground disturbing activities are proposed during the nesting season, then a qualified biologist should conduct a nesting bird survey prior to initiation, in order to determine the presence of any active nests within the Study Area. Additionally, the surrounding 500 feet of the Study Area should be surveyed for active raptor nests, where accessible, and with binoculars, as necessary. The nesting bird survey should be conducted within 14 days prior to commencement of ground-disturbing or other development activities. If the nesting bird survey shows that there is no evidence of active nests, then a letter report should be prepared to document the survey and be provided to the project proponent and no additional measures are recommended. If development does not commence within 14 days of the nesting bird survey, or halts for more than 14 days, then an additional survey should be conducted prior to starting or resuming work within the nesting season.

If active nests are found, then the qualified biologist should establish a species-specific buffer to prohibit development activities near the nest to minimize nest disturbance until the young have successfully fledged or the biologist determines that the nest is no longer active. Buffer distances may range from 30 feet for some songbirds up to 500 feet for some birds of prey. Nest monitoring may also be warranted during certain phases of construction to ensure nesting birds are not adversely impacted. If active nests are found within any trees slated for removal, then an appropriate buffer should be established around the tree and all trees within the buffer should not be removed until a qualified biologist determines that the nest has successfully fledged and/or is no longer active.

In addition, a qualified biologist should conduct a Worker Environmental Awareness Program (WEAP) training to all Project-related personnel prior to the initiation of work. The training should include identification of special-status bird species and nests, required practices before the start of construction, general measures that are being implemented to protect the species as they relate to the Project, penalties for non-compliance, and boundaries of the permitted disturbance zones. Upon completion of the training, all construction personnel should sign a form stating that they have attended the training and understand all the measures. Proof of this instruction should be kept on file with the Project proponent.

If construction occurs outside of the nesting bird season (September 1 to January 31) a nesting bird survey and environmental training for nesting birds would not be required.

6.1.5 Bird-Friendly Design

As required by the City of Burlingame General Plan, bird-friendly design should be incorporated into the project to reduce impacts to migrating birds and birds in general due to collisions with the buildings and other infrastructure. Bird-friendly design features could include limiting or avoiding the use of glassy material in the building's design, using protective coatings on windows to avoid reflecting the bay, the sky and surrounding vegetation, incorporating visual cues into reflective facades to make them visible to birds, avoiding or reducing light emissions at night, and pointing building lights downward. Bird friendly design should take into account potential impacts to bird species using Anza Lagoon at night and reduce nighttime lighting impacts by directing lighting downward and away from the lagoon on any poles or structures adjacent to the lagoon.

7.0 REFERENCES

California Department of Fish and Wildlife (CDFW). 2021a. *California Natural Diversity Database* (CNDDB); For: *San Francisco South, San Leandro, Hunters Point, Montara Mountain, San Mateo, Redwood Point, Half Moon Bay, Woodside, and Palo Alto* USGS 7.5-minute series quadrangles, Sacramento, CA. Accessed [September 1, 2021].

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Appendix A

Figures

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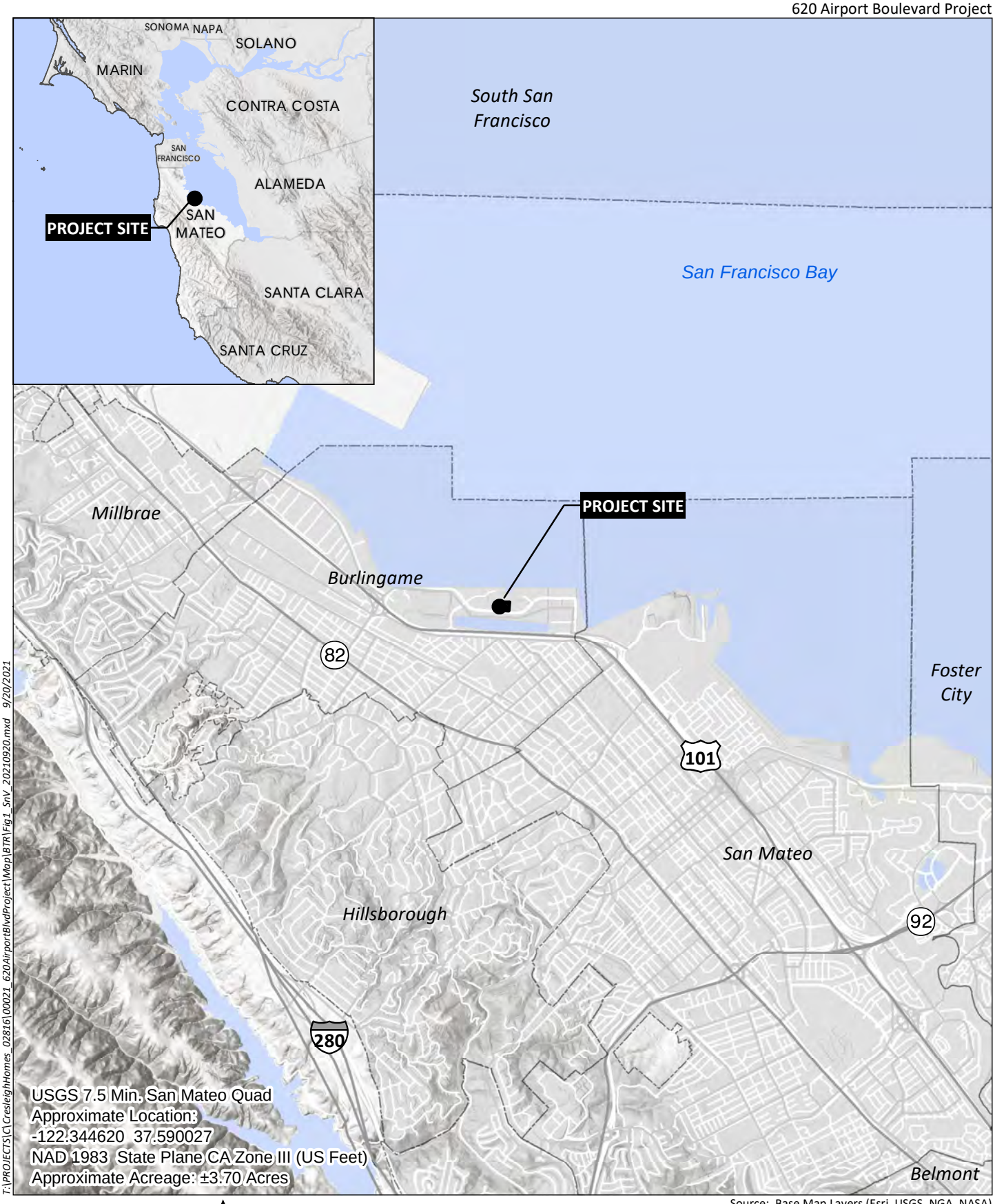

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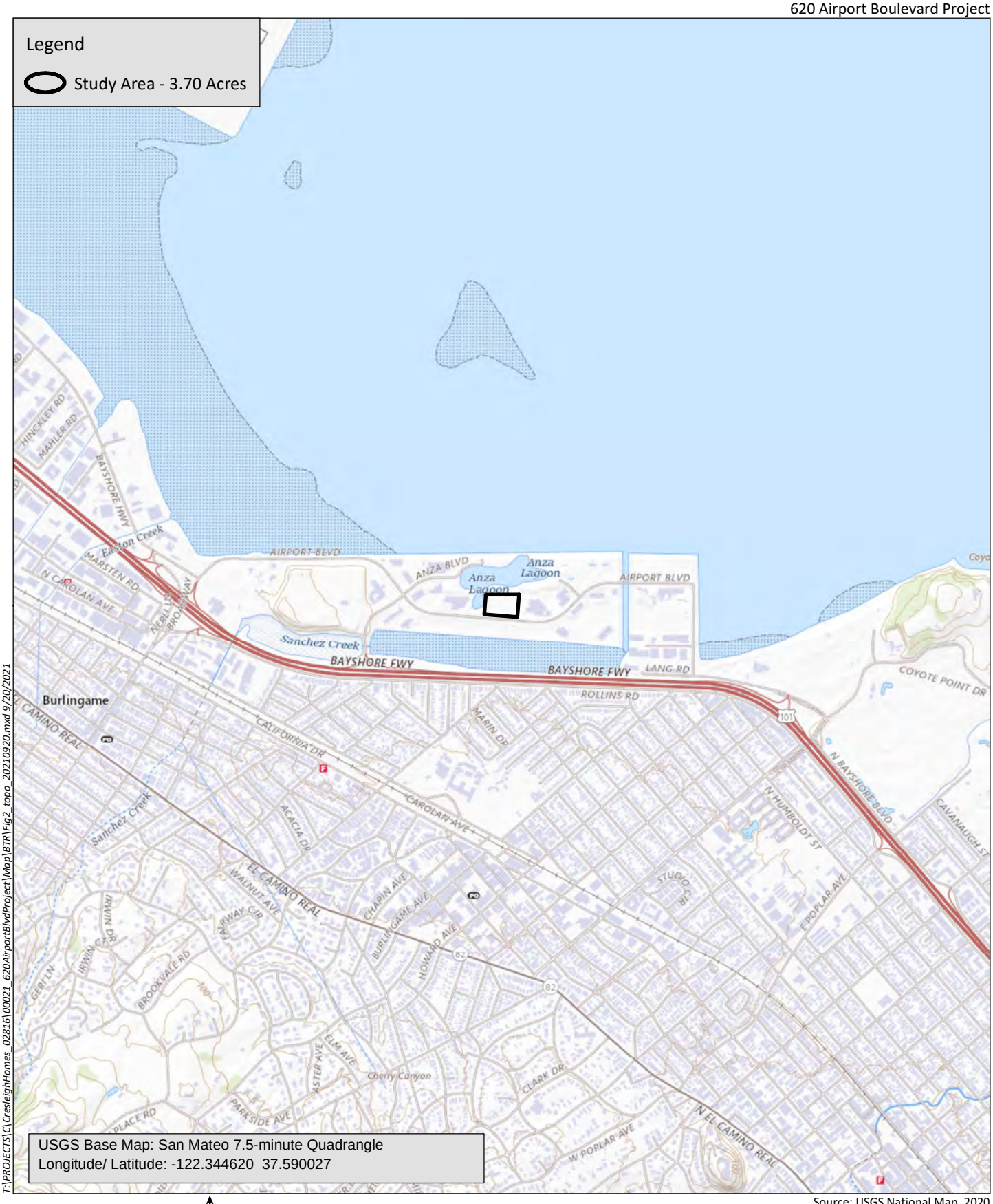
Source: Base Map Layers (Esri, USGS, NGA, NASA)

HELIX Environmental Planning

Vicinity Map

Figure 1



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Source: USGS National Map, 2020

HELIX Environmental Planning

USGS 7.5 Minute Quadrangle Map

Figure 2

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Source: Aerial Imagery (NAIP, 2020)

HELIX Environmental Planning

Aerial Photograph Map

Figure 3

Source: NRCS, 2021; USGS, 2021;Aerial Imagery (NAIP, 2020)

HELIX Environmental Planning

Soils and National Wetland Inventory Map

Figure 4

Source: Aerial Imagery (NAIP, 2020)

HELIX Environmental Planning

Biological Communities Map

Figure 5

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Appendix B

USFWS, CNDDB, and CNPS Lists of Regionally Occurring Special-Status Species

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Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (San Francisco South (3712264) OR San Leandro (3712262) OR Hunters Point (3712263) OR Montara Mountain (3712254) OR San Mateo (3712253) OR Redwood Point (3712252) OR Half Moon Bay (3712244) OR Woodside (3712243) OR Palo Alto (3712242))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Acanthomintha duttonii	PDLAM01040	Endangered	Endangered	G1	S1	1B.1
San Mateo thorn-mint						
Accipiter cooperii	ABNKC12040	None	None	G5	S4	WL
Cooper's hawk						
Adela oplerella	IILEE0G040	None	None	G2	S2	
Opler's longhorn moth						
Agrostis blasdalei	PMPOA04060	None	None	G2	S2	1B.2
Blasdale's bent grass						
Allium peninsulare var. franciscanum	PMLIL021R1	None	None	G5T2	S2	1B.2
Franciscan onion						
Ambystoma californiense pop. 1	AAAAA01181	Threatened	Threatened	G2G3	S2S3	WL
California tiger salamander - central California DPS						
Amsinckia lunaris	PDBOR01070	None	None	G3	S3	1B.2
bent-flowered fiddleneck						
Aneides niger	AAAAD01070	None	None	G3	S3	SSC
Santa Cruz black salamander						
Antrozous pallidus	AMACC10010	None	None	G4	S3	SSC
pallid bat						
Arctostaphylos andersonii	PDERI04030	None	None	G2	S2	1B.2
Anderson's manzanita						
Arctostaphylos franciscana	PDERI040J3	Endangered	None	GHC	S1	1B.1
Franciscan manzanita						
Arctostaphylos imbricata	PDERI040L0	None	Endangered	G1	S1	1B.1
San Bruno Mountain manzanita						
Arctostaphylos montana ssp. ravenii	PDERI040J2	Endangered	Endangered	G3T1	S1	1B.1
Presidio manzanita						
Arctostaphylos montaraensis	PDERI042W0	None	None	G1	S1	1B.2
Montara manzanita						
Arctostaphylos pacifica	PDERI040Z0	None	Endangered	G1	S1	1B.1
Pacific manzanita						
Arctostaphylos regismontana	PDERI041C0	None	None	G2	S2	1B.2
Kings Mountain manzanita						
Ardea herodias	ABNGA04010	None	None	G5	S4	
great blue heron						
Asio flammeus	ABNSB13040	None	None	G5	S3	SSC
short-eared owl						

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Astragalus pycnostachyus var. pycnostachyus coastal marsh milk-vetch	PDFAB0F7B2	None	None	G2T2	S2	1B.2
Astragalus tener var. tener alkali milk-vetch	PDFAB0F8R1	None	None	G2T1	S1	1B.2
Athene cunicularia burrowing owl	ABNSB10010	None	None	G4	S3	SSC
Banksula incredula incredible harvestman	ILARA14100	None	None	G1	S1	
Bombus caliginosus obscure bumble bee	IIHYM24380	None	None	G4?	S1S2	
Bombus crotchii Crotch bumble bee	IIHYM24480	None	Candidate Endangered	G3G4	S1S2	
Bombus occidentalis western bumble bee	IIHYM24250	None	Candidate Endangered	G2G3	S1	
Brachyramphus marmoratus marbled murrelet	ABNNN06010	Threatened	Endangered	G3	S2	
Caecidotea tomalensis Tomales isopod	ICMAL01220	None	None	G2	S2S3	
Calicina minor Edgewood blind harvestman	ILARA13020	None	None	G1	S1	
Callophrys mossii bayensis San Bruno elfin butterfly	IILEPE2202	Endangered	None	G4T1	S3	
Carex comosa bristly sedge	PMCYP032Y0	None	None	G5	S2	2B.1
Centromadia parryi ssp. congdonii Congdon's tarplant	PDAST4R0P1	None	None	G3T1T2	S1S2	1B.1
Centromadia parryi ssp. parryi pappose tarplant	PDAST4R0P2	None	None	G3T2	S2	1B.2
Charadrius nivosus nivosus western snowy plover	ABNNB03031	Threatened	None	G3T3	S2	SSC
Chloropyron maritimum ssp. palustre Point Reyes salty bird's-beak	PDSCR0J0C3	None	None	G4?T2	S2	1B.2
Chorizanthe cuspidata var. cuspidata San Francisco Bay spineflower	PDPGN04081	None	None	G2T1	S1	1B.2
Chorizanthe robusta var. robusta robust spineflower	PDPGN040Q2	Endangered	None	G2T1	S1	1B.1
Cicindela hirticollis gravida sandy beach tiger beetle	IICOL02101	None	None	G5T2	S2	
Circus hudsonius northern harrier	ABNKC11011	None	None	G5	S3	SSC
Cirsium andrewsii Franciscan thistle	PDAST2E050	None	None	G3	S3	1B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Cirsium fontinale var. fontinale fountain thistle	PDAST2E161	Endangered	Endangered	G2T1	S1	1B.1
Cirsium occidentale var. compactum compact cobwebby thistle	PDAST2E1Z1	None	None	G3G4T2	S2	1B.2
Cirsium praeteriens lost thistle	PDAST2E2B0	None	None	GX	SX	1A
Collinsia corymbosa round-headed Chinese-houses	PDSCR0H060	None	None	G1	S1	1B.2
Collinsia multicolor San Francisco collinsia	PDSCR0H0B0	None	None	G2	S2	1B.2
Corynorhinus townsendii Townsend's big-eared bat	AMACC08010	None	None	G4	S2	SSC
Coturnicops noveboracensis yellow rail	ABNME01010	None	None	G4	S1S2	SSC
Danaus plexippus pop. 1 monarch - California overwintering population	IILEPP2012	Candidate	None	G4T2T3	S2S3	
Dicamptodon ensatus California giant salamander	AAAAH01020	None	None	G3	S2S3	SSC
Dipodomys venustus venustus Santa Cruz kangaroo rat	AMAFD03042	None	None	G4T1	S1	
Dirca occidentalis western leatherwood	PDTHY03010	None	None	G2	S2	1B.2
Dufourea stagei Stage's dufourine bee	IIHYM22010	None	None	G1G2	S1	
Elanus leucurus white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
Emys marmorata western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
Erethizon dorsatum North American porcupine	AMAFJ01010	None	None	G5	S3	
Eriophyllum latilobum San Mateo woolly sunflower	PDAST3N060	Endangered	Endangered	G1	S1	1B.1
Eryngium aristulatum var. hooveri Hoover's button-celery	PDAPI0Z043	None	None	G5T1	S1	1B.1
Eryngium jepsonii Jepson's coyote-thistle	PDAPI0Z130	None	None	G2	S2	1B.2
Eucyclogobius newberryi tidewater goby	AFCQN04010	Endangered	None	G3	S3	
Eumetopias jubatus Steller (=northern) sea-lion	AMAJC03010	Delisted	None	G3	S2	
Euphydryas editha bayensis Bay checkerspot butterfly	IILEPK4055	Threatened	None	G5T1	S1	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Falco columbarius merlin	ABNKD06030	None	None	G5	S3S4	WL
Falco peregrinus anatum American peregrine falcon	ABNKD06071	Delisted	Delisted	G4T4	S3S4	FP
Fritillaria biflora var. ineziana Hillsborough chocolate lily	PMLIL0V0M1	None	None	G3G4T1	S1	1B.1
Fritillaria liliacea fragrant fritillary	PMLIL0V0C0	None	None	G2	S2	1B.2
Geothlypis trichas sinuosa saltmarsh common yellowthroat	ABPBX1201A	None	None	G5T3	S3	SSC
Gilia capitata ssp. chamissonis blue coast gilia	PDPLM040B3	None	None	G5T2	S2	1B.1
Gilia millefoliata dark-eyed gilia	PDPLM04130	None	None	G2	S2	1B.2
Gonidea angulata western ridged mussel	IMBIV19010	None	None	G3	S1S2	
Grindelia hirsutula var. maritima San Francisco gumplant	PDAST470D3	None	None	G5T1Q	S1	3.2
Haliaeetus leucocephalus bald eagle	ABNKC10010	Delisted	Endangered	G5	S3	FP
Helianthella castanea Diablo helianthella	PDAST4M020	None	None	G2	S2	1B.2
Hemizonia congesta ssp. congesta congested-headed hayfield tarplant	PDAST4R065	None	None	G5T2	S2	1B.2
Hesperevax sparsiflora var. brevifolia short-leaved evax	PDASTE5011	None	None	G4T3	S3	1B.2
Hesperolinon congestum Marin western flax	PDLIN01060	Threatened	Threatened	G1	S1	1B.1
Heteranthera dubia water star-grass	PMPON03010	None	None	G5	S2	2B.2
Hoita strobilina Loma Prieta hoita	PDFAB5Z030	None	None	G2?	S2?	1B.1
Horkelia cuneata var. sericea Kellogg's horkelia	PDROS0W043	None	None	G4T1?	S1?	1B.1
Horkelia marinensis Point Reyes horkelia	PDROS0W0B0	None	None	G2	S2	1B.2
Hydrochara rickseckeri Ricksecker's water scavenger beetle	IICOL5V010	None	None	G2?	S2?	
Hydroporus leechi Leech's skyline diving beetle	IICOL55040	None	None	G1?	S1?	
Hypogymnia schizidiata island tube lichen	NLT0032640	None	None	G2G3	S2	1B.3

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Ischnura gemina San Francisco forktail damselfly	IIODO72010	None	None	G2	S2	
Lasiurus cinereus hoary bat	AMACC05030	None	None	G3G4	S4	
Lasthenia californica ssp. macrantha perennial goldfields	PDAST5L0C5	None	None	G3T2	S2	1B.2
Lasthenia conjugens Contra Costa goldfields	PDAST5L040	Endangered	None	G1	S1	1B.1
Laterallus jamaicensis coturniculus California black rail	ABNME03041	None	Threatened	G3G4T1	S1	FP
Layia carnosa beach layia	PDAST5N010	Endangered	Endangered	G2	S2	1B.1
Leptosiphon croceus coast yellow leptosiphon	PDPLM09170	None	Endangered	G1	S1	1B.1
Leptosiphon rosaceus rose leptosiphon	PDPLM09180	None	None	G1	S1	1B.1
Lessingia arachnoidea Crystal Springs lessingia	PDAST5S0C0	None	None	G2	S2	1B.2
Lessingia germanorum San Francisco lessingia	PDAST5S010	Endangered	Endangered	G1	S1	1B.1
Lichnanthe ursina bumblebee scarab beetle	IICOL67020	None	None	G2	S2	
Limnanthes douglasii ssp. ornduffii Ornduff's meadowfoam	PDLIM02039	None	None	G4T1	S1	1B.1
Linderiella occidentalis California linderiella	ICBRA06010	None	None	G2G3	S2S3	
Malacothamnus arcuatus arcuate bush-mallow	PDMAL0Q0E0	None	None	G2Q	S2	1B.2
Melospiza melodia pusillula Alameda song sparrow	ABPBXA301S	None	None	G5T2?	S2S3	SSC
Microcina edgewoodensis Edgewood Park micro-blind harvestman	ILARA47010	None	None	G1	S1	
Monardella sinuata ssp. nigrescens northern curly-leaved monardella	PDLAM18162	None	None	G3T2	S2	1B.2
Monolopia gracilens woodland woollythreads	PDAST6G010	None	None	G3	S3	1B.2
Mylopharodon conocephalus hardhead	AFCJB25010	None	None	G3	S3	SSC
Myotis thysanodes fringed myotis	AMACC01090	None	None	G4	S3	
Neotoma fuscipes annectens San Francisco dusky-footed woodrat	AMAFF08082	None	None	G5T2T3	S2S3	SSC

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Northern Coastal Salt Marsh Northern Coastal Salt Marsh	CTT52110CA	None	None	G3	S3.2	
Northern Maritime Chaparral Northern Maritime Chaparral	CTT37C10CA	None	None	G1	S1.2	
Nycticorax nycticorax black-crowned night heron	ABNGA11010	None	None	G5	S4	
Nyctinomops macrotis big free-tailed bat	AMACD04020	None	None	G5	S3	SSC
Oncorhynchus mykiss irideus pop. 8 steelhead - central California coast DPS	AFCHA0209G	Threatened	None	G5T2T3Q	S2S3	
Pentachaeta bellidiflora white-rayed pentachaeta	PDAST6X030	Endangered	Endangered	G1	S1	1B.1
Phalacrocorax auritus double-crested cormorant	ABNFD01020	None	None	G5	S4	WL
Plagiobothrys chorisianus var. chorisianus Choris' popcornflower	PDBOR0V061	None	None	G3T1Q	S1	1B.2
Plebejus icarioides missionensis Mission blue butterfly	IILEPG801A	Endangered	None	G5T1	S1	
Polemonium carneum Oregon polemonium	PDPLM0E050	None	None	G3G4	S2	2B.2
Polygonum marinense Marin knotweed	PDPGN0L1C0	None	None	G2Q	S2	3.1
Potentilla hickmanii Hickman's cinquefoil	PDROS1B370	Endangered	Endangered	G1	S1	1B.1
Rallus obsoletus obsoletus California Ridgway's rail	ABNME05011	Endangered	Endangered	G3T1	S1	FP
Rana boylii foothill yellow-legged frog	AAABH01050	None	Endangered	G3	S3	SSC
Rana draytonii California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
Reithrodontomys raviventris salt-marsh harvest mouse	AMAFF02040	Endangered	Endangered	G1G2	S1S2	FP
Riparia riparia bank swallow	ABPAU08010	None	Threatened	G5	S2	
Rynchops niger black skimmer	ABNNM14010	None	None	G5	S2	SSC
Sanicula maritima adobe sanicle	PDAPI1Z0D0	None	Rare	G2	S2	1B.1
Scapanus latimanus parvus Alameda Island mole	AMABB02031	None	None	G5T1Q	SH	SSC
Senecio aphanactis chaparral ragwort	PDAST8H060	None	None	G3	S2	2B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Serpentine Bunchgrass Serpentine Bunchgrass	CTT42130CA	None	None	G2	S2.2	
Silene scouleri ssp. scouleri Scouler's catchfly	PDCAR0U1MC	None	None	G5T4T5	S2S3	2B.2
Silene verecunda ssp. verecunda San Francisco campion	PDCAR0U213	None	None	G5T1	S1	1B.2
Sorex vagrans halicoetes salt-marsh wandering shrew	AMABA01071	None	None	G5T1	S1	SSC
Spergularia macrotheca var. longistyla long-styled sand-spurrey	PDCAR0W062	None	None	G5T2	S2	1B.2
Speyeria callippe callippe callippe silverspot butterfly	IILEPJ6091	Endangered	None	G5T1	S1	
Speyeria zerene myrtleae Myrtle's silverspot butterfly	IILEPJ608C	Endangered	None	G5T1	S1	
Spirinchus thaleichthys longfin smelt	AFCHB03010	Candidate	Threatened	G5	S1	
Sternula antillarum browni California least tern	ABNNM08103	Endangered	Endangered	G4T2T3Q	S2	FP
Streptanthus albidus ssp. peramoenus most beautiful jewelflower	PDBRA2G012	None	None	G2T2	S2	1B.2
Stuckenia filiformis ssp. alpina northern slender pondweed	PMPOT03091	None	None	G5T5	S2S3	2B.2
Suaeda californica California seablite	PDCHE0P020	Endangered	None	G1	S1	1B.1
Taxidea taxus American badger	AMAJF04010	None	None	G5	S3	SSC
Thamnophis sirtalis tetrataenia San Francisco gartersnake	ARADB3613B	Endangered	Endangered	G5T2Q	S2	FP
Trachusa gummifera San Francisco Bay Area leaf-cutter bee	IIHYM80010	None	None	G1	S1	
Trifolium amoenum two-fork clover	PDFAB40040	Endangered	None	G1	S1	1B.1
Trifolium hydrophilum saline clover	PDFAB400R5	None	None	G2	S2	1B.2
Triphysaria floribunda San Francisco owl's-clover	PDSCR2T010	None	None	G2?	S2?	1B.2
Triquetrella californica coastal triquetrella	NBMUS7S010	None	None	G2	S2	1B.2
Tryonia imitator mimic tryonia (=California brackishwater snail)	IMGASJ7040	None	None	G2	S2	
Usnea longissima Methuselah's beard lichen	NLLEC5P420	None	None	G4	S4	4.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Valley Needlegrass Grassland	CTT42110CA	None	None	G3	S3.1	
Valley Needlegrass Grassland						
Valley Oak Woodland	CTT71130CA	None	None	G3	S2.1	
Valley Oak Woodland						

Record Count: 146

Inventory of Rare and Endangered Plants of California

Search Results

Back Export Results

69 matches found. Click on scientific name for details

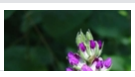
Search Criteria: CRPR is one of [**1A,1B,2A,2B**], Quad is one of [**3712264,3712263,3712262,3712254,3712253,3712252,3712244,3712243,3712242**]

Scientific Name | Common Name | Family | Lifeform | Blooming Period | Fed List | State List | Global Rank | State Rank | CA Rare Plant Rank | General Habitats | Micro Habitats | Lowest Elevation | Highest Elevation | CA Endemic | Date Added | Photo

Search:

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	PHOTO
Acanthomintha duttonii	San Mateo thorn-mint	Lamiaceae	annual herb	Apr-Jun	FE	CE	G1	S1	1B.1	No Photo Available
Agrostis blasdalei	Blasdale's bent grass	Poaceae	perennial rhizomatous herb	May-Jul	None	None	G2	S2	1B.2	No Photo Available
Allium peninsulare var. *franciscanum*	Franciscan onion	Alliaceae	perennial bulbiferous herb	(Apr)May-Jun	None	None	G5T2	S2	1B.2	No Photo Available
Amsinckia lunaris	bent-flowered fiddleneck	Boraginaceae	annual herb	Mar-Jun	None	None	G3	S3	1B.2	No Photo Available
Arctostaphylos andersonii	Anderson's manzanita	Ericaceae	perennial evergreen shrub	Nov-May	None	None	G2	S2	1B.2	No Photo Available
Arctostaphylos franciscana	Franciscan manzanita	Ericaceae	perennial evergreen shrub	Feb-Apr	FE	None	GHC	S1	1B.1	No Photo Available
Arctostaphylos imbricata	San Bruno Mountain manzanita	Ericaceae	perennial evergreen shrub	Feb-May	None	CE	G1	S1	1B.1	No Photo Available
Arctostaphylos montana ssp. *ravenii*	Presidio manzanita	Ericaceae	perennial evergreen shrub	Feb-Mar	FE	CE	G3T1	S1	1B.1	No Photo Available
Arctostaphylos montaraensis	Montara manzanita	Ericaceae	perennial evergreen shrub	Jan-Mar	None	None	G1	S1	1B.2	No Photo Available
Arctostaphylos pacifica	Pacific manzanita	Ericaceae	evergreen shrub	Feb-Apr	None	CE	G1	S1	1B.1	No Photo

SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	PHOTO
pacifica	manzanita									No Photo Available
Arctostaphylos regismontana	Kings Mountain manzanita	Ericaceae	perennial evergreen shrub	Dec-Apr	None	None	G2	S2	1B.2	No Photo Available
Astragalus pycnostachyus var. *pycnostachyus*	coastal marsh milk-vetch	Fabaceae	perennial herb	(Apr)Jun-Oct	None	None	G2T2	S2	1B.2	No Photo Available
Astragalus tener var. *tener*	alkali milk-vetch	Fabaceae	annual herb	Mar-Jun	None	None	G2T1	S1	1B.2	No Photo Available
Carex comosa	bristly sedge	Cyperaceae	perennial rhizomatous herb	May-Sep	None	None	G5	S2	2B.1	 Dean Wm. Taylor 1997
Centromadia parryi ssp. *congdonii*	Congdon's tarplant	Asteraceae	annual herb	May-Oct(Nov)	None	None	G3T1T2	S1S2	1B.1	No Photo Available
Centromadia parryi ssp. *parryi*	pappose tarplant	Asteraceae	annual herb	May-Nov	None	None	G3T2	S2	1B.2	No Photo Available
Chloropyron maritimum ssp. *palustre*	Point Reyes salty bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Jun-Oct	None	None	G4?T2	S2	1B.2	No Photo Available
Chorizanthe cuspidata var. *cuspidata*	San Francisco Bay spineflower	Polygonaceae	annual herb	Apr-Jul(Aug)	None	None	G2T1	S1	1B.2	No Photo Available
Chorizanthe robusta var. *robusta*	robust spineflower	Polygonaceae	annual herb	Apr-Sep	FE	None	G2T1	S1	1B.1	No Photo Available
Cirsium andrewsii	Franciscan thistle	Asteraceae	perennial herb	Mar-Jul	None	None	G3	S3	1B.2	No Photo Available
Cirsium fontinale var. *fontinale*	fountain thistle	Asteraceae	perennial herb	(Apr)May-Oct	FE	CE	G2T1	S1	1B.1	No Photo Available
Cirsium occidentale var. *compactum*	compact cobwebby thistle	Asteraceae	perennial herb	Apr-Jun	None	None	G3G4T2	S2	1B.2	No Photo Available
Cirsium praeteriens	lost thistle	Asteraceae	perennial herb	Jun-Jul	None	None	GX	SX	1A	No Photo Available
Collinsia corymbosa	round-headed Chinese-houses	Plantaginaceae	annual herb	Apr-Jun	None	None	G1	S1	1B.2	No Photo Available

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	PHOTO
Collinsia multicolor	San Francisco collinsia	Plantaginaceae	annual herb	(Feb)Mar-May	None	None	G2	S2	1B.2	No Photo Available
Dirca occidentalis	western leatherwood	Thymelaeaceae	perennial deciduous shrub	Jan-Mar(Apr)	None	None	G2	S2	1B.2	No Photo Available
Eriophyllum latilobum	San Mateo woolly sunflower	Asteraceae	perennial herb	May-Jun	FE	CE	G1	S1	1B.1	No Photo Available
Eryngium aristulatum var. *hooveri*	Hoover's button-celery	Apiaceae	annual/perennial herb	(Jun)Jul(Aug)	None	None	G5T1	S1	1B.1	No Photo Available
Eryngium jepsonii	Jepson's coyote-thistle	Apiaceae	perennial herb	Apr-Aug	None	None	G2	S2	1B.2	No Photo Available
Fritillaria biflora var. *ineziana*	Hillsborough chocolate lily	Liliaceae	perennial bulbiferous herb	Mar-Apr	None	None	G3G4T1	S1	1B.1	No Photo Available
Fritillaria liliacea	fragrant fritillary	Liliaceae	perennial bulbiferous herb	Feb-Apr	None	None	G2	S2	1B.2	No Photo Available
Gilia capitata ssp. *chamissonis*	blue coast gilia	Polemoniaceae	annual herb	Apr-Jul	None	None	G5T2	S2	1B.1	No Photo Available
Gilia millefoliata	dark-eyed gilia	Polemoniaceae	annual herb	Apr-Jul	None	None	G2	S2	1B.2	No Photo Available
Helianthella castanea	Diablo helianthella	Asteraceae	perennial herb	Mar-Jun	None	None	G2	S2	1B.2	No Photo Available
Hemizonia congesta ssp. *congesta*	congested-headed hayfield tarplant	Asteraceae	annual herb	Apr-Nov	None	None	G5T2	S2	1B.2	No Photo Available
Hesperevax sparsiflora var. *brevifolia*	short-leaved evax	Asteraceae	annual herb	Mar-Jun	None	None	G4T3	S3	1B.2	No Photo Available
Hesperolinon congestum	Marin western flax	Linaceae	annual herb	Apr-Jul	FT	CT	G1	S1	1B.1	No Photo Available
Heteranthera dubia	water star-grass	Pontederiaceae	perennial herb (aquatic)	Jul-Oct	None	None	G5	S2	2B.2	No Photo Available
Hoita strobilina	Loma Prieta	Fabaceae	perennial herb	May-Jul(Aug-	None	None	G2?	S2?	1B.1	

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	PHOTO
	hoita			Oct)						 © 2004 Janell Hillman
Horkelia cuneata var. *sericea*	Kellogg's horkelia	Rosaceae	perennial herb	Apr-Sep	None	None	G4T1?	S1?	1B.1	No Photo Available
Horkelia marinensis	Point Reyes horkelia	Rosaceae	perennial herb	May-Sep	None	None	G2	S2	1B.2	No Photo Available
Hypogymnia schizidiata	island rock lichen	Parmeliaceae	foliose lichen		None	None	G2G3	S2	1B.3	No Photo Available
Lasthenia californica ssp. *macrantha*	perennial goldfields	Asteraceae	perennial herb	Jan-Nov	None	None	G3T2	S2	1B.2	No Photo Available
Lasthenia conjugens	Contra Costa goldfields	Asteraceae	annual herb	Mar-Jun	FE	None	G1	S1	1B.1	No Photo Available
Layia carnosa	beach layia	Asteraceae	annual herb	Mar-Jul	FE	CE	G2	S2	1B.1	No Photo Available
Leptosiphon croceus	coast yellow leptosiphon	Polemoniaceae	annual herb	Apr-Jun	None	CE	G1	S1	1B.1	No Photo Available
Leptosiphon rosaceus	rose leptosiphon	Polemoniaceae	annual herb	Apr-Jul	None	None	G1	S1	1B.1	No Photo Available
Lessingia arachnoidea	Crystal Springs lessingia	Asteraceae	annual herb	Jul-Oct	None	None	G2	S2	1B.2	No Photo Available
Lessingia germanorum	San Francisco lessingia	Asteraceae	annual herb	(Jun)Jul-Nov	FE	CE	G1	S1	1B.1	No Photo Available
Limnanthes douglasii ssp. *ornduffii*	Ornduff's meadowfoam	Limnanthaceae	annual herb	Nov-May	None	None	G4T1	S1	1B.1	 © 2021 Eva Buxton
Malacothamnus arcuatus	arcuate bush-mallow	Malvaceae	perennial deciduous shrub	Apr-Sep	None	None	G2Q	S2	1B.2	 © 2017 Keir Morse
Monardella sinuata ssp.	northern curly-leaved	Lamiaceae	annual herb	(Apr)May-Jul(Aug-Sep)	None	None	G3T2	S2	1B.2	No Photo

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	PLANT RANK	PHOTO
nigrescens	monardella								CA RARE	Available
Monolopia gracilens	woodland woollythreads	Asteraceae	annual herb	(Feb)Mar-Jul	None	None	G3	S3	1B.2	No Photo Available
Pentachaeta bellidiflora	white-rayed pentachaeta	Asteraceae	annual herb	Mar-May	FE	CE	G1	S1	1B.1	No Photo Available
Plagiobothrys chorisianus var. *chorisianus*	Choris' popcornflower	Boraginaceae	annual herb	Mar-Jun	None	None	G3T1Q	S1	1B.2	No Photo Available
Polemonium carneum	Oregon polemonium	Polemoniaceae	perennial herb	Apr-Sep	None	None	G3G4	S2	2B.2	No Photo Available
Potentilla hickmanii	Hickman's cinquefoil	Rosaceae	perennial herb	Apr-Aug	FE	CE	G1	S1	1B.1	No Photo Available
Sanicula maritima	adobe sanicle	Apiaceae	perennial herb	Feb-May	None	CR	G2	S2	1B.1	No Photo Available
Senecio aphanactis	chaparral ragwort	Asteraceae	annual herb	Jan-Apr(May)	None	None	G3	S2	2B.2	No Photo Available
Silene scouleri ssp. *scouleri*	Scouler's catchfly	Caryophyllaceae	perennial herb	(Mar-May)Jun-Aug(Sep)	None	None	G5T4T5	S2S3	2B.2	No Photo Available
Silene verecunda ssp. *verecunda*	San Francisco campion	Caryophyllaceae	perennial herb	(Feb)Mar-Jul(Aug)	None	None	G5T1	S1	1B.2	No Photo Available
Spergularia macrotheca var. *longistyla*	long-styled sand-spurrey	Caryophyllaceae	perennial herb	Feb-May	None	None	G5T2	S2	1B.2	No Photo Available
Streptanthus albidus ssp. *peramoenus*	most beautiful jewelflower	Brassicaceae	annual herb	(Mar)Apr-Sep(Oct)	None	None	G2T2	S2	1B.2	No Photo Available
Stuckenia filiformis ssp. *alpina*	northern slender pondweed	Potamogetonaceae	perennial rhizomatous herb (aquatic)	May-Jul	None	None	G5T5	S2S3	2B.2	 Dana York (2016)
Suaeda californica	California seablite	Chenopodiaceae	perennial evergreen shrub	Jul-Oct	FE	None	G1	S1	1B.1	No Photo Available
Trifolium amoenum	two-fork clover	Fabaceae	annual herb	Apr-Jun	FE	None	G1	S1	1B.1	No Photo Available

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	PHOTO
Trifolium hydrophilum	saline clover	Fabaceae	annual herb	Apr-Jun	None	None	G2	S2	1B.2	No Photo Available
Triphysaria floribunda	San Francisco owl's-clover	Orobanchaceae	annual herb	Apr-Jun	None	None	G2?	S2?	1B.2	No Photo Available
Triquetrella californica	coastal triquetrella	Pottiaceae	moss		None	None	G2	S2	1B.2	No Photo Available

Showing 1 to 69 of 69 entries

IPaC **U.S. Fish & Wildlife Service**

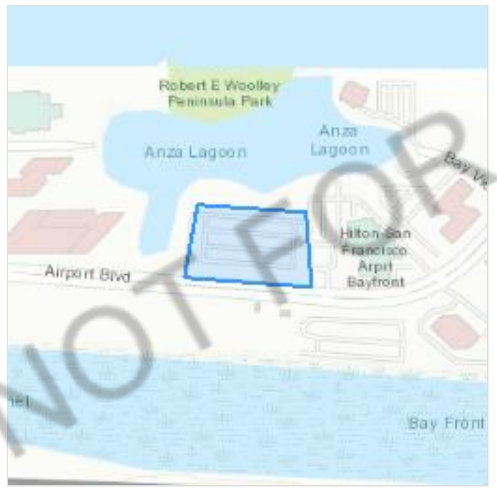
IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

San Mateo County, California



Local office

Sacramento Fish And Wildlife Office

(916) 414-6600
(916) 414-6713

Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS

Salt Marsh Harvest Mouse Reithrodontomys raviventris — Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/613

Birds

NAME	STATUS

California Clapper Rail Rallus longirostris obsoletus — Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/4240

California Least Tern Sterna antillarum browni — Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/8104

Marbled Murrelet Brachyramphus marmoratus — Threatened
There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/4467

Western Snowy Plover Charadrius nivosus nivosus — Threatened
There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/8035

Reptiles

NAME	STATUS

Green Sea Turtle Chelonia mydas — Threatened
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/6199

San Francisco Garter Snake Thamnophis sirtalis tetrataenia — Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/5956

Amphibians

NAME	STATUS

California Red-legged Frog Rana draytonii — Threatened
Wherever found
There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/2891

Fishes

NAME	STATUS

Delta Smelt Hypomesus transpacificus — Threatened
Wherever found
There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/321

Flowering Plants

NAME	STATUS

California Seablite Suaeda californica — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/6310

Fountain Thistle Cirsium fontinale var. fontinale — Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/7939

Marin Dwarf-flax Hesperolinon congestum — Threatened
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/5363

San Mateo Thornmint Acanthomintha obovata ssp. duttonii — Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/2038

San Mateo Woolly Sunflower Eriophyllum latilobum — Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/7791

White-rayed Pentachaeta Pentachaeta bellidiflora — Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/7782

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Black Scoter Melanitta nigra — Breeds elsewhere

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Brown Pelican Pelecanus occidentalis — Breeds Jan 15 to Sep 30

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Common Loon gavia immer — Breeds Apr 15 to Oct 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/4464

Common Murre Uria aalge — Breeds Apr 15 to Aug 15

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Double-crested Cormorant phalacrocorax auritus — Breeds Apr 20 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/3478

Long-tailed Duck Clangula hyemalis — Breeds elsewhere

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/7238

Red-breasted Merganser Mergus serrator — Breeds elsewhere

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Red-necked Phalarope Phalaropus lobatus — Breeds elsewhere

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Red-throated Loon Gavia stellata — Breeds elsewhere

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Ring-billed Gull Larus delawarensis — Breeds elsewhere

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Surf Scoter Melanitta perspicillata — Breeds elsewhere

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

White-winged Scoter Melanitta fusca — Breeds elsewhere

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ

"Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

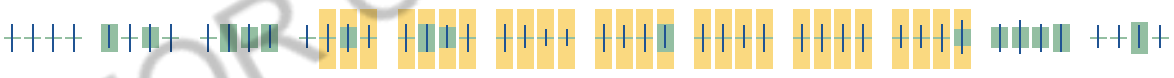
■ probability of presence ■ breeding season | survey effort – no data

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC

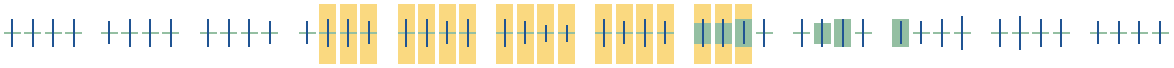
Black Scoter Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)

Brown Pelican Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)

Common Loon Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)



Common Murre
Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)



Double-crested Cormorant
Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)

Long-tailed Duck
Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)

Red-breasted Merganser
Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)

Red-necked Phalarope
Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)

Red-throated Loon
Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)

Ring-billed Gull
Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)

Surf Scoter
Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)

White-winged Scoter
Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

Wildlife refuges and fish hatcheries

REFUGE AND FISH HATCHERY INFORMATION IS NOT AVAILABLE AT THIS TIME

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

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Appendix C

Potential for Special-Status Species in the Region to Occur in the Study Area

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Appendix C
Potential for Special-Status Species in the Region to Occur in the Study Area

Scientific Name/ Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur**	Rationale
Invertebrates				
Bombus crotchii Crotch bumble bee	--/CCE/--	Crotch bumble bee occurs in grassland and scrub habitats (California Department of Fish and Wildlife [CDFW] 2019a). New colonies are initiated by solitary queens, generally in the early spring, which typically occupy abandoned rodent burrows (CDFW 2019a). This species is a generalist forager and have been reported visiting a wide variety of flowering plants. A short-tongued bumble bee; food plants include *Asclepias* spp., *Antirrhinum* spp., *Clarkia* spp., *Eschscholzia* spp., *Eriogonum* spp., *Chaenactis* spp., *Lupinus* spp., *Medicago* spp., *Phacelia* spp., *and Salvia* spp. (Koch et al. 2012). The flight period for queens in California is from February to October. New queens hibernate over the winter and initiate a new colony the following spring (CDFW 2019a). This species is rare throughout its range and in decline in the Central Valley and southern California (CDFW 2019a).	Will not occur	There is no suitable habitat in the Study Area, which consists entirely of developed land.
Bombus occidentalis western bumble bee	--/CCE/--	Occurs in grasslands, meadows, and chaparral habitats. Floral plants such as *Lupinus, Ceanothus, Centaurea, Rubus,* and *Trifolium* are necessary food sources. Queen establishes a colony within an abandoned rodent hole or other underground crevice.	Will not occur	There is no suitable meadow, grassland, or chaparral habitat in the Study Area.
Callophrys mossii bayensis San Bruno elfin butterfly	FE/--/--	Inhabits north-facing slopes on San Bruno Mountain and nearby summits on the Peninsula south of San Francisco. Larvae are restricted to stonecrop (*Sedum spathulifolium*), which grows on steep slopes in chaparral from 50 – 2,500 m amsl (Black and Vaughan 2005).	Will not occur	There is no suitable steep slope chaparral habitat, and the larval food plant does not occur in the Study Area.

Appendix C
Potential for Special-Status Species in the Region to Occur in the Study Area

Scientific Name/ Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur**	Rationale
Danaus plexippus pop. 1 monarch - California overwintering population	FCE/--/--	Roosts in wind protected tree groves, especially with *Eucalyptus* sp., *Pinus radiata*, *Cupressus* sp., with nectar and water sources nearby. Winter roost sites extend along the coast from Mendocino County to Baja California. As caterpillars, monarchs feed exclusively on the leaves of milkweed (*Asclepias* sp.) (Nial et al. 2019)	Will not occur	Although there are *Eucalyptus* trees in the Study Area, they do not provide a suitable protected grove.
Euphydryas editha bayensis Bay checkerspot butterfly	FT/--/--	Inhabits shallow, serpentine-derived soil with current populations in San Francisco, San Mateo and Santa Clara counties. Larvae require dwarf plantain (*Plantago erecta*) initially, and then transfer to exerted Indian paintbrush (*Castilleja exserta*) or purple owl's clover (*Castilleja exserta* spp. *exerta*). Adults emerge in early spring lay eggs during flight season from late February to early May (Black and Vaughan 2005).	Will not occur	The required host plants do not occur in the Study Area.
Plebejus icarioides missionensis Mission blue butterfly	FE/--/--	This species habitat is restricted to six specific areas in the San Francisco Bay region: the Twin Peaks area, Fort Baker, the San Bruno Mountain, the Marin Headlands, Laurelwood Park and Sugarloaf Open Space, and Skyline Ridge. The butterfly depends solely on three species of perennial lupine for its reproduction, the varied lupine (*Lupinus variicolor*), silver lupine (*Lupinus albifrons*), and the summer lupine (*Lupinus formosus*) (USFWS 2017a).	Will not occur	The required host plants do not occur in the Study Area.
Speyeria callippe callippe callippe silverspot butterfly	FE/--/--	This species has one flight of adults per year. It historically inhabited hilly grasslands of seven counties bordering the San Francisco Bay. Since 1998 records have documented at San Bruno Mountain, Signal Hill (San Mateo County), hills near Pleasanton (Alameda County), Sears Point (Sonoma County) and the hills between Vallejo	Will not occur	The required host plants do not occur in the Study Area.

Appendix C
Potential for Special-Status Species in the Region to Occur in the Study Area

Scientific Name/ Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur**	Rationale
		and Cordelia, Ca (Black and Vaughan 2005). Larvae are restricted to Johnny jump-up (*Viola pedunculata*), which grows on grassy slopes, hillsides, chaparral, and oak woodland (Black and Vaughan 2005). Hilltops and ridges are important for mating. Adults lay eggs on the larval host plant or on surrounding debris. Adults feed on the nectar of Johnny jump-up in addition to several other flowers (Black and Vaughan 2005).		
Speyeria zerene myrtleae Myrtle's silverspot butterfly	FE/--/--	Inhabits coastal dune and prairie habitat in sheltered areas below 820 feet above msl and within 3 miles of the coast. Adult feeds on gumplant (*Grindelia rubicaulis*), yellow sand verbena (*Abronia latifolia*) and mint (*Monardella* spp.), bull thistle (*Cirsium vulgare*) and seaside daisy (*Erigeron glaucus*). Larvae are restricted to violets (*Viola adunca*) (USFWS 2017). Considered to be extirpated south of the Golden Gate Bridge in San Mateo County.	Will not occur	There is no suitable coastal dune or prairie habitat in the Study Area.
Fishes				
Eucyclogobius newberryi tidewater goby	FE/--/--	The tidewater goby is a California endemic fish that is primarily found in coastal lagoons, esturaries, and marshes. They have been extirpated from some of their historic range due to drainage/water quality changes, introduced predators, and drought. Its habitat is characterized by brackish water in shallow lagoons and in lower stream reaches where water is fairly still but not stagnant (USFWS 2005).	Will not occur	There is no suitable aquatic habitat in the Study Area or in the adjacent Anza Lagoon or San Francisco Bay. There are no known occurrences of this species in San Francisco Bay south of Lake Merritt in Oakland.

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Scientific Name/ Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur**	Rationale
Hypomesus transpacificus Delta smelt	FT/--/--	Delta smelt spawn in shallow, fresh or slightly brackish water upstream of the mixing zone. Most spawning happens in tidally-influenced backwater sloughs and channel edgewaters. Although spawning has not been observed in the wild, the eggs are thought to attach to substrates such as cattails, tules, tree roots and submerged branches. Delta smelt are found only from the Suisun Bay upstream through the Delta in Contra Costa, Sacramento, San Joaquin, Solano and Yolo counties (USFWS 1995).	Will not occur	There is no suitable fresh or slightly brackish mixing zone habitat in the Study Area. The Study Area is outside the species known range.
Mylopharodon conocephalus hardhead	--/--/SSC	Hardhead are found in low to mid-elevation streams in undisturbed habitats. Prefers large streams with slow water, deep pools, well-oxygenated, clear water with sandy and boulder substrate. This species prefers warmer waters and typically co-occurs with other native fish such as Sacramento pikeminnow or suckers and is typically absent when alien fish species are present. Hardhead is seemingly incapable of passing manmade barriers even when fish ladders for anadromous fish are present. Hardhead are found in most large tributaries of the Sacramento River drainage (Moyle et al. 2015).	Will not occur	There is no suitable habitat slow-moving stream habitat in the Study Area.
Oncorhynchus mykiss irideus central California coast steelhead	FT/--/--	Steelhead spawn in rivers and streams with cool, clear, water and suitable substrate. This distinct population segment includes all naturally spawned anadromous *O. mykiss* (steelhead) populations below natural and manmade impassable barriers from the Russian River to Aptos Creek, Santa Cruz County and their tributaries, including drainages from the San	Will not occur	There is no suitable freshwater spawning habitat or access to suitable spawning streams in the Study Area.

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Scientific Name/ Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur**	Rationale
		Francisco and San Pablo Bays and their tributaries (NOAA 2006).		
Spirinchus thaleichthys longfin smelt	FCE/CT/--	The longfin smelt is an anadromous pelagic estuarine fish that spawns in freshwater and then moves downstream to brackish water to rear. They usually live for 2 years, spawn, and then die, although some individuals may spawn as 1- or 3-year-old fish before dying. They spend their adult life in bays, estuaries, and nearshore coastal areas, and migrate into freshwater rivers to spawn. Spawning occurs primarily from January through March, after which most adults die. Longfin smelt encounter a wide variety of water temperatures and salinities (freshwater to saltwater) during their life cycle but are rarely found in water temperatures greater than 22 degrees C. They are found slightly upstream from Rio Vista (on the Sacramento River in the Delta) including the Cache Slough region and Medford Island (on the San Joaquin River in the Delta) through Suisun Bay and Suisun Marsh as well as in San Pablo Bay and San Francisco Bay (CDFW 2017).	Will not occur	There is no suitable aquatic habitat in the Study Area. There is a record in the CNDDB that includes the entire range of longfin smelt in the south San Francisco Bay and overlaps the site; however, there is no aquatic habitat in the Study Area. Furthermore, Anza Lagoon is generally not suitable habitat for this anadromous estuarine fish. If longfin smelt were to stray into Anza Lagoon, there would be no impacts to this species as a result of the proposed project as the lagoon will not be impacted by the proposed project.
Amphibians				
Ambystoma californiense California tiger salamander	FT/CT/WL	Inhabits vernal pools and seasonal ponds, including constructed stock ponds, in grassland and oak savannah plant communities from sea level to 1,500 feet in central California. Spends the majority of its life in upland areas in the vicinity of suitable breeding ponds, in rodent burrows. Suitable breeding habitat must be present in combination with suitable upland habitat. In the Coastal region, populations are scattered from Sonoma County in the northern	Will not occur	There is no suitable freshwater breeding habitat in the Study Area.

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Scientific Name/ Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur**	Rationale
		San Francisco Bay Area to Santa Barbara County (USFWS 2017b).		
Aneides niger Santa Cruz black salamander	--/--/SSC	Occurs in deciduous woodlands, coniferous forests, grasslands. Typically found under surface debris such as logs, talus, and other debris. Young develop in the egg directly to the terrestrial stage. Endemic to California in the San Francisco Peninsula to southern San Mateo county.	Will not occur	There is no suitable forest or grassland habitat in the Study Area.
Dicamptodon ensatus California giant salamander	--/--/SSC	Endemic to California and occurs in wet coastal forests near clear, cold perennial streams below 3,000 feet above msl. Larval stage transforms to adult stage after approximately 18-24 months. Typically found on the surface on rainy nights or wet days while foraging. Will eat anything that it can overpower and fit into its mouth, such as slugs, rodents, other amphibians and reptiles (Kucera 1997).	Will not occur	There is no suitable stream habitat in the Study Area.
Rana boylii foothill yellow-legged frog	--/CE/SSC	The foothill yellow-legged frog occurs along the coast ranges from Oregon to Los Angeles and along the western side of the Sierra Nevada. This species uses perennial rocky streams in a wide variety of habitats up to 6,400 feet above msl. This species rarely ventures far from water, is usually found basking in the water, or under surface debris or underground within 165 feet of water. Eggs are laid in clusters attached to gravel or rocks along stream margins in flowing water. Tadpoles typically require up to four months to complete aquatic development. Breeding typically follows winter rainfall and snowmelt, which varies based upon location (Jennings and Hayes 1994).	Will not occur	There is no suitable freshwater breeding habitat in the Study Area.

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Scientific Name/ Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur**	Rationale
Rana draytonii California red-legged frog	FT/--/SSC	Adults require dense, shrubby or emergent riparian vegetation closely associated with deep (greater than 2 1/3-foot deep) still or slow moving water. Associated with deep-water pools with dense stands of overhanging willows (*Salix* spp.) and an intermixed fringe of cattails (*Typha latifolia*). Well-vegetated terrestrial areas within the riparian corridor may provide important sheltering habitat during winter. Aestivates in small mammal burrows and moist leaf litter. Have been found up to 100 feet from water in adjacent dense riparian vegetation. Studies have indicated that this species cannot inhabit water bodies that exceed 70° F, especially if there are no cool, deep portions (USFWS 2001).	Will not occur	There are no suitable deep, cool, slack, freshwater bodies on or near the Study Area.
Reptiles				
Chelonia mydas green sea turtle	FT/--/--	Inhabits shallow waters of lagoons, bays, estuaries, mangroves, eelgrass and seaweed beds. Prefers shallow, protected waters with abundant aquatic vegetation. Ranges in tropical waters all over the world and in temperate zone during the summer. Uncommon along the California coast, and typically occurs south of San Quentin Bay in Baja California (NMFS 1998).	Will not occur	There is no suitable habitat in the Study Area. The nearby Anza Lagoon is entirely graveled and devoid of vegetation.
Emys marmorata western pond turtle	--/--/SSC	Inhabits slow-moving water with dense submerged vegetation, abundant basking sites, gently sloping banks, and dry clay or silt soils in nearby uplands. Turtles can lay eggs up to 0.25-mile from water, but typically go no more than 600 feet (Jennings and Hayes 1994).	Will not occur	There is no suitable freshwater breeding habitat in the Study Area.

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Scientific Name/ Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur**	Rationale
Thamnophis sirtalis tetrataenia San Francisco gartersnake	FE/CE/FP	The San Francisco gartersnake prefers densely vegetated pond habitat near basking sites and rodent burrows. The species avoids brackish marsh areas and is frequently found in areas with emergent and bankside vegetation such as cattails (*Typha* spp.), bulrushes (*Scirpus* spp.) and spike rushes (*Juncus* spp. and Eleocharis spp.) (USFWS 2007b) .	Will not occur	There is no suitable aquatic habitat in the Study Area. There are two non-specific records (specific location information is suppressed due to the sensitive nature of the occurrence) in the CNDDB that overlap the Study Area (CDFW 2021); however, there is no suitable habitat in or adjacent to the Study Area for this species.
Birds				
Accipiter cooperii Cooper's hawk	--/--/WL	Nests in woodlands and urban trees. Preys on medium-sized birds and small mammals. Forages in open woodland and habitat edges (Zeiner et al. 1990).	Will not occur	There is no suitable habitat in the Study Area.
Asio flammeus short-eared owl	--/--/SSC	Found in swamp lands, lowland meadows and irrigated fields. Nests on the ground in tall herbaceous vegetation and feeds almost exclusively on voles (*Microtus* spp.). Range and abundance are linked closely to cycles in vole populations (Shuford and Gardali 2008). Will also use manmade structures for nesting or refuge, such as culverts.	Will not occur	There is no suitable meadow or grassland habitat in the Study Area.
Athene cunicularia burrowing owl	--/--/SSC	Inhabits open habitats including arid grasslands, pastures, disturbed areas, and deserts. Occupies burrows of small mammals, especially California ground squirrel (*Otospermophilus beecheyi*), or artificial burrows such as pipes and culverts. Hunts from low perches, fence posts, and mounds. Breeds from Marsh through August (CDFW 2012).	Will not occur	There is no suitable grassland, pasture, or desert habitat or small mammal burrows in the Study Area.

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Scientific Name/ Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur**	Rationale
Brachyramphus marmoratus marbled murrelet	FT/CE/	This species is pelagic, except during nesting season where it will use old-growth, multi-layered canopied forests up to 50 miles inland from the coast. When nesting trees are not present, this species will nest on the ground or amongst rocks. In California, nesting typically occurs in coastal redwood forest or Douglas fir forests (USFWS 1997).	Will not occur	There is no suitable old growth forest habitat in the Study Area.
Charadrius nivosus nivosus western snowy plover	FT/--/SSC	Nests above the high tide line on dune-backed beaches, sand spits, beaches at creek and river mouths, and salt pans at lagoons and estuaries. Nests less often on bluff-backed beaches, dredge spoil sites, salt pond levees, dry salt ponds, and river bars. Populations consist of both year-round residents and migrants. In San Francisco Bay, nests in dry salt ponds managed for wildlife by USFWS and various park districts (USFWS 2007a).	Will not occur	There is no suitable beach or salt pan habitat in or adjacent to the Study Area. The Study Area lacks suitable unvegetated substrates required by this species for nesting.
Circus hudsonius northern harrier	--/--/SSC	Inhabits a variety of treeless habitats including freshwater marsh, brackish- and saltwater marsh, wet meadows, lake margins, grasslands, croplands, desert sinks, and sagebrush flats. Builds nests on large mounds of vegetation between March and August. Forages in most open habitats (Shuford and Gardali 2008).	Will not occur	There is no suitable marsh, meadow, or grassland habitat in the Study Area.
Coturnicops noveboracensis yellow rail	--/--/SSC	Winter resident of tidal marshes in the San Francisco/Suisun Bay area; breeds in extreme northeastern California and northeast to Canada (Shuford and Gardali 2008).	Will not occur	There is no tidal marsh habitat in or adjacent to the site.
Elanus leucurus white-tailed kite	--/--/FP	Forages over open grasslands, savannahs, marshes, and cultivated fields. Nests in trees in a variety of locations including isolated trees, and edges and interior of stands (Zeiner et al. 1990).	Will not occur	There is no suitable open grassland or marsh habitat in the Study Area.

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Scientific Name/ Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur**	Rationale
Falco columbarius merlin	--/--/WL	An uncommon winter migrant in California; breeds in Alaska and Canada. Uses a variety of habitats but requires trees close to water for cover and is usually found near coastlines, lakeshores, and wetlands (Zeiner et al. 1990). Prefers open habitat such as scrub, grasslands, prairies, or open woodlands.	Will not occur	There is no suitable open vegetative habitat in the Study Area.
Falco peregrinus anatum American peregrine falcon	--/--/FP	Raptor that breeds on steep cliff faces near wetlands. Nests are minimal and may consist of a scrape and are located high on protected ledges or cliffs, including manmade structures. Forages on the wing by swooping on flying prey (Zeiner et al. 1990).	Will not occur	There is no suitable nesting habitat in the Study Area. The nearest reported occurrence of this species is 6-miles southwest of the Study Area in a nest box on top of a high rise office building (CDFW 2021). There is a potential for peregrine falcon to nest on top of the nearby high-rise buildings; however, there is no suitable habitat in the Study Area and this species is not expected to utilize the Study Area.
Geothlypis trichas sinuosus saltmarsh common yellowthroat	--/--/SSC	Breeds in brackish- and freshwater marsh and woody swamps between mid-March and late July. Inhabits breeding habitat year-round. Builds nests close to the ground in grasses, tules, cattails, or shrubs (Shuford and Gardali 2008).	Will not occur	There is no suitable marsh or swamp habitat in the Study Area.
Haliaeetus leucocephalus Bald eagle	--/CE/FP	Requires large bodies of water with an abundant fish population. Feeds on fish, carrion, small mammals, and water-fowl. Nests are usually located within a 1-mile radius of water. Nests are most often situated in large trees with a commanding view of the area (Zeiner et al. 1990).	Will not occur	Foraging habitat is present in San Francisco Bay with an abundant source of fish. However, the Study Area and surrounding area is largely developed, and lacks suitable nest sites.

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Scientific Name/ Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur**	Rationale
Laterallus jamaicensis coturniculus California black rail	--/ST/FP	Inhabits brackish marsh, primarily in the upper marsh zone dominated by alkali heath (*Frankenia salina*), cattail, and rush (*Juncus* spp.); prefers lower salinity environments. In the Sierra Nevada foothills, black rail is a year-round resident along wetland edges where water is 1.2 inches or less (Richmond et al. 2010). Black rail is typically associated with perennial wetlands associated with flowing water such as irrigation canals, perennial streams and springs with dense vegetation in the Sierra Nevada foothills (Richmond et al. 2010). Forages on the ground, under cover of dense vegetation (Richmond et al. 2010).	Will not occur	There is no suitable marsh habitat in or adjacent to the Study Area.
Melospiza melodia pusillula Alameda song sparrow	--/--/SSC	Endemic to the tidal salt marshes around the southern margins of San Francisco Bay, especially near Dumbarton Point in Alameda County. Inhabits tidally-influenced areas with vegetation tall enough to keep nests above high tides, and openings to allow foraging on the ground. Adapted to highly saline environments (Shuford and Gardali 2008).	Will not occur	There is no suitable marsh habitat in or adjacent to the Study Area.
Phalacrocorax auritus double-crested cormorant	--/--/WL	A yearlong resident along the entire coast of California and on inland lakes, in fresh, salt and estuarine waters. Rests in daytime and roosts overnight beside water on offshore rocks, islands, steep cliffs, dead branches of tall trees, wharfs, jetties, or even transmission lines (Zeiner et al. 1990).	Will not occur	There is no suitable habitat in the Study Area.

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Scientific Name/ Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur**	Rationale
Rallus longirostris obsoletus Ridgeway's rail	FE/CE/FP	Inhabits tidal and brackish marsh with unrestricted daily tidal flows, well-developed tidal channel networks, and suitable upper marsh zone vegetation for nesting and cover during high tides. Currently restricted to the margins of San Francisco Bay. Nests are built on platforms in areas of intricate channels to allow young to escape predators (USFWS 2013).	Will not occur	There is a reported occurrence in the CNDDB with a one-mile radius that overlaps the Study Area. The reported occurrence documents observations of this species from 1975 in small tidal salt marshes in the City of Burlingame. Surveys in 2006 did not find this species and the reported occurrences is considered possibly extirpated (CDFW 2021). There is no suitable tidal marsh habitat in the Study Area or in portions of the Anza Lagoon or San Francisco Bay adjacent to the Study Area.
Riparia bank swallow	--/CT/--	Primarily inhabits riparian and other lowland habitats west of the deserts during the spring-fall period. In summer, restricted to riparian, lacustrine, and coastal areas with vertical banks, bluffs, and cliffs with fine-textured or sandy soils, into which it digs nesting holes. In California, bank swallow primarily nests from Siskiyou, Shasta and Lassen Counties south along the Sacramento River to Yolo County. Also nests locally across much of state (Zeiner et al. 1990).	Will not occur	There are no suitable vertical banks, bluffs, or cliffs with fine textured soil and holes in or near the Study Area.
Rynchops niger black skimmer	--/--/SSC	Nests on unvegetated sites on gravel bars, low islets and sandy beaches. Nests in colonies of 200 individuals or less (Burger 1981).	Will not occur	There is no suitable gravel bar or beach habitat in or adjacent to the Study Area.

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Scientific Name/ Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur**	Rationale
Sterna antillarum browni California least tern	FE/CE/FP	Breeding season resident of California; typically present between April and August. Naturally nest in large colonies on sandy beaches and dunes, but often displaced to other bare areas such as mud and sand flats, landfills, and airports. Forages on fish from estuaries, lagoons, and nearshore ocean (USFWS 1985).	Will not occur	There is no suitable sandy beach, dune, or mudflat habitat in or adjacent to the Study Area.
Mammals				
Antrozous pallidus pallid bat	--/--/SSC	Occurs throughout California except for the high Sierra Nevada and the northern Coast Ranges. Habitats include grasslands, shrublands, woodlands, and forests from sea level to 6,000 feet. Most common in open, dry habitats with rocky areas for roosting; roosts also include cliffs, abandoned buildings, bird boxes, and under bridges (Bolster, ed. 1998).	Will not occur	There is no suitable roosting habitat in the Study Area.
Corynorhinus townsendii Townsend's big-eared bat	--/--/SSC	Widely distributed throughout California except alpine and subalpine habitats. This species eats moths, beetle and other insects which it catches on the wing or by gleaning from vegetation. Typically found near water since it is poor at concentrating its urine. This species uses caves, mines, tunnels, buildings and human made structures for roosting. Maternity roosts are typically in warm sites. Hibernation sites are typically cold, but not freezing. This species is very sensitive to disturbance and may abandon its roost after one visit (Zeiner et al. 1990).	Will not occur	There is no suitable roosting habitat in the Study Area.
Neotoma fuscipes annectens San Francisco dusky-footed woodrat	--/--/SSC	This species is widespread and inhabits a wide range of habitats in California with canopy closure and a dense understory such as oak woodlands or riparian forests. Builds nests that may be as large as 8 feet wide and 8 feet tall. Nests are typically built at the base of trees,	Will not occur	There is no suitable woodland or forested habitat in the Study Area.

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Scientific Name/ Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur**	Rationale
		stumps, shrubs or other structures. Woodrats will defend their nests from competitors. Diet consists mainly of vegetation, such as leaves, grasses, flowers, and acorns. May also eat fungi (Zeiner et al. 1990).		
Nyctinomops macrotis big free-tailed bat	--/--/SSC	The big free-tailed bat is rare in California. Records of the species are from urban areas of San Diego Co., and vagrants found in fall and winter. Roosts in buildings, caves, and occasionally in holes in trees (Parish and Jones 1999). Also roosts in crevices in high cliffs or rock outcrops. Most likely does not breed in California.	Will not occur	There is no suitable roosting habitat in the Study Area.
Reithrodontomys raviventris salt marsh harvest mouse	FE/CE/FP	Endemic to tidal and brackish marsh habitat in the San Francisco Bay region. Favors dense (100-percent) cover of perennial marsh vegetation 30-50cm tall, at least 60-percent pickleweed (*Sarcocornia* sp.), fat hen (*Atriplex patula*), and alkali heath (*Frankenia salina*), without large amounts of saltgrass (*Distichlis spicata*), brass buttons (*Cotula coronopifolia*), or monocots (*Typha*, *Schoenoplectus*, or *Bolboschoenus*) which do not provide suitable vegetation structure (USFWS 1984). May utilize adjacent grasslands for foraging during spring and early summer. Populations require at least 150 acres of suitable habitat (USFWS 2010).	Will not occur	There is no suitable salt marsh habitat in or adjacent to the Study Area.
Scapanus latimanus parvus Alameda Island mole	--/--/SSC	Only occurs on Alameda Island. Found in annual and perennial grasslands and prefers moist, friable soils and avoids flooded soils (Hall 1981).	Will not occur	The Study Area is outside the species known range. Additionally, there is no suitable grassland habitat in the Study Area.

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Scientific Name/ Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur**	Rationale
Sorex vagrans halicoetes salt-marsh wandering shrew	--/--/SSC	Inhabits the middle zone of coastal salt marsh that is inundated only at high tide and is characterized by a dense cover of pickleweed (*Sarcocornia* sp.) 30-60cm tall, with driftwood and other debris lying directly on the vegetation. Uses high marsh as refuge from spring tides, and forages in low marsh only during low tide. Shares habitat affinities with salt marsh harvest mouse and California clapper rail, but uses a narrower range of habitats (Bolster, ed. 1998). Has not been documented in upland grassy areas adjacent to salt marsh habitat (USFWS 2010).	Will not occur	There is no suitable salt marsh habitat in or adjacent to the Study Area.
Taxidea taxus American badger	--/--/SSC	Inhabits drier open stages of most shrub, forest, and herbaceous habitats with loose, friable soils. Preys on a wide variety of mammals, reptiles, birds, and carrion, and hunts mostly by digging out fossorial prey. Occasionally takes prey on the surface. Not tolerant of cultivation. No longer occur in the Central Valley except in the extreme western edge (Williams 1986).	Will not occur	There is no suitable habitat in the Study Area.
Plants				
Acanthomintha duttonii San Mateo thorn-mint	FE/CE/1B.1	An annual herb found in serpentinite soil in chaparral, and valley and foothill grassland from 50 - 300 meters elevation. Blooms April – June (CNPS 2021).	Will not occur	There is no suitable soils or grassland habitat in the Study Area.
Agrostis blasdalei Blasdale's bent grass	--/--/1B.2	A perennial rhizomatous herb found in coastal bluff scrub, coastal dunes, and coastal prairie from 0 – 150 meters elevation. Blooms from May – July (CNPS 2021).	Will not occur	There is no suitable coastal scrub, dune, or prairie habitat in the Study Area.
Allium peninsulare var. *franciscanum* Franciscan onion	--/--/1B.2	A perennial bulbiferous herb found on volcanic, and often serpentine, clay soils in cismontane woodland and valley and foothill grassland from 52 – 305 meters elevation. Blooms (April) May – June (CNPS 2021).	Will not occur	There is no suitable soils or grassland habitat in the Study Area.

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Scientific Name/ Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur**	Rationale
Amsinckia lunaris bent-flowered fiddleneck	--/--/1B.2	An annual herb found in coastal bluff scrub, cismontane woodland, and valley and foothill grassland from 3 – 500 meters elevation. Blooms March – June (CNPS 2021).	Will not occur	There is no suitable coastal scrub, woodland, or grassland habitat in the Study Area.
Arctostaphylos andersonii Anderson's manzanita	--/--/1B.2	A perennial evergreen shrub found in openings and edges of broadleafed upland forest, north coast coniferous forest, and chaparral from 60 – 760 meters elevation. Blooms November – May (CNPS 2021).	Will not occur	There is no suitable woodland or chaparral habitat in the Study Area.
Arctostaphylos franciscana Franciscan manzanita	FE/--/1B.1	A perennial evergreen shrub found in serpentinite soil in coastal scrub from 60 - 300 meters elevation. Blooms February – April (CNPS 2021).	Will not occur	There is no suitable coastal scrub habitat in the Study Area.
Arctostaphylos imbricata San Bruno Mountain manzanita	--/CE/1B.1	A perennial evergreen shrub found in rocky soils in chaparral and coastal scrub habitat from 275 – 370 meters elevation. Blooms February – May (CNPS 2021).	Will not occur	There is no suitable scrub or chaparral habitat in the Study Area.
Arctostaphylos montana ssp. *ravenii* Presidio manzanita	FE/CE/1B.1	A perennial evergreen shrub found on serpentinite outcrops in chaparral, coastal prairie, and coastal scrub habitat from 45 - 215 meters elevation. Blooms February – March (CNPS 2021).	Will not occur	There is no suitable coastal scrub, chaparral, or prairie habitat in the Study Area.
Arctostaphylos montaraensis Montara manzanita	--/--/1B.2	A perennial evergreen shrub found in maritime chaparral and coastal scrub from 80 - 500 meters elevation. Blooms January – March (CNPS 2021).	Will not occur	There is no suitable coastal scrub or chaparral habitat in the Study Area.
Arctostaphylos pacifica Pacific manzanita	--/CE/1B.1	An evergreen shrub found in chaparral and coastal scrub at 330 meters elevation. Blooms February – April (CNPS 2021).	Will not occur	There is no suitable coastal scrub or chaparral habitat in the Study Area.
Arctostaphylos regismontana Kings Mountain manzanita	--/--/1B.2	A perennial evergreen shrub found on granitic or sandstone soils in broadleafed upland forest, north coast coniferous forest, and chaparral from 305 – 735 meters elevation. Blooms December – April (CNPS 2021).	Will not occur	There is no suitable woodland or chaparral habitat in the Study Area.

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Scientific Name/ Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur**	Rationale
Astragalus pycnostachyus var. *pycnostachyus* coastal marsh milk-vetch	--/--/1B.2	A perennial herb found in mesic coastal dunes, coastal scrub, and coastal salt marshes and swamps from 0-30 meters elevation. Blooms (April) June – October (CNPS 2021).	Will not occur	There is no suitable coastal scrub, dune, or marsh habitat in the Study Area.
Astragalus tener var. *tener* alkali milk vetch	--/--/1B.2	An annual herb found in alkaline playas, clay soils in valley and foothill grasslands, and vernal pools, from 1 to 60 meters in elevation. Currently known to occur in Alameda, Napa, Solano, and Yolo counties. Blooms March to June (CNPS 2021).	Will not occur	There is no suitable playa, grassland, or vernal pool habitat in the Study Area.
Carex comosa bristly sedge	--/--/2B.2	A perennial rhizomatous herb found in coastal prairie, marshes and swamps around lake margins, and valley and foothill grassland from 0 - 625 meters elevation. Blooms May-September (CNPS 2021).	Will not occur	There is no suitable coastal prairie, grassland, or marsh habitat in the Study Area.
Centromadia parryi ssp. *congdonii* Congdon's tarplant	--/--/1B.1	An annual herb found in valley and foothill grassland (alkaline), from 0 to 230 meters in elevation. Currently known to occur in Alameda, Contra Costa, Monterey, San Luis Obispo, Santa Clara, and San Mateo counties. Blooms May to November (CNPS 2021).	Will not occur	There is no suitable grassland habitat in the Study Area.
Centromadia parryi ssp. *parryi* pappose tarplant	--/--/1B.2	An annual herb found in chaparral, coastal prairie, meadows, seeps, coastal salt marshes, and vernally mesic valley and foothill grassland from 0 – 420 meters elevation, often in alkaline microsites. Blooms May – November (CNPS 2021).	Will not occur	There is no suitable chaparral, meadow, seep, marsh, grassland, or prairie habitat in the Study Area.
Chloropyron maritimum ssp. *palustre* Point Reyes salty bird's-beak	--/--/1B.2	An annual hemiparasitic herb found in coastal, salt-water marshes and swamps from 0 – 10 meters elevation. Formerly known from locations in the interior Bay Area, now restricted to the coast. Blooms June – October (CNPS 2021).	Will not occur	There is no suitable marsh or swamp habitat in the Study Area.

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Potential for Special-Status Species in the Region to Occur in the Study Area

Scientific Name/ Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur**	Rationale
Chorizanthe cuspidata var. *cuspidata* San Francisco Bay spineflower	--/--/1B.2	An annual herb found on sandy soils in coastal bluff scrub, coastal dunes, coastal prairie, and coastal scrub from 3 – 215 meters elevation. Blooms April – July (August) (CNPS 2021).	Will not occur	There is no suitable coastal scrub, dune, or prairie habitat in the Study Area.
Chorizanthe robusta var. *robusta* robust spineflower	FE/--/1B.1	An annual herb found on sandy or gravelly soils in maritime chaparral, openings in cismontane woodland, coastal dunes, and coastal scrub from 3 – 300 meters elevation. Currently known only from Santa Cruz and Monterey Counties and possibly San Francisco County. Blooms April – September (CNPS 2021).	Will not occur	There is no suitable chaparral, woodland, coastal scrub, or dune habitat in the Study Area.
Cirsium andrewsii Franciscan thistle	--/--/1B.2	A perennial herb found in mesic microsites in broadleafed upland forest, coastal bluff scrub, coastal prairie, and coastal scrub from 0 – 150 meters elevation. Blooms March – July (CNPS 2021).	Will not occur	There is no suitable forest, coastal scrub, or prairie habitat in the Study Area.
Cirsium fontinale var. *fontinale* fountain thistle	FE/CE/1B.1	A perennial herb found in serpentinite seeps in chaparral openings, cismontane woodlands, meadows, seeps, and valley and foothill grasslands from 45 to 175 meters elevation. Blooms (April) May – October. Known only from the vicinity of Crystal Springs Reservoir (CNPS 2021)	Will not occur	There is no suitable serpentinite seep habitat in the Study Area.
Cirsium occidentale var. *compactum* compact cobwebby thistle	--/--/1B.2	A perennial herb found in chaparral, coastal dunes, coastal prairie, and coastal scrub from 5 - 150 meters elevation. Blooms April – June (CNPS 2021).	Will not occur	There is no suitable chaparral, coastal scrub, prairie, or dune habitat in the Study Area.
Collinsia corymbosa round-headed Chinese-houses	--/--/1B.2	An annual herb found in coastal dunes from 0 – 20 meters elevation. Blooms April – June (CNPS 2021).	Will not occur	There is no suitable coastal dune habitat in the Study Area.
Collinsia multicolor San Francisco collinsia	--/--/1B.2	An annual herb found in closed-cone coniferous forest and coastal scrub from 30 – 250 meters elevation, sometimes on serpentine soil. Blooms (February) March – May (CNPS 2021).	Will not occur	There is no suitable forest or coastal scrub habitat in the Study Area.

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Potential for Special-Status Species in the Region to Occur in the Study Area

Scientific Name/ Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur**	Rationale
Dirca occidentalis western leatherwood	--/--/1B.2	A perennial deciduous shrub found in mesic microsites in broadleafed upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, North Coast coniferous forest, riparian forest, and riparian woodland from 25 – 425 meters elevation. Blooms January – March (April) (CNPS 2021).	Will not occur	There is no suitable forest, chaparral, woodland, or riparian habitat in the Study Area.
Eriophyllum latilobum San Mateo woolly sunflower	FE/CE/1B.1	A perennial herb often found in serpentinite, roadcuts in cismontane woodland, coastal scrub, and lower montane coniferous forest from 45 - 330 meters elevation. Blooms May-June (CNPS 2021).	Will not occur	There is no suitable woodland or coastal scrub habitat in the Study Area.
Eryngium aristulatum var. *hooveri* Hoover's button-celery	--/--/1B.1	An annual or perennial herb found in vernal pools, from 3 to 45 meters in elevation. Currently known to occur in Alameda, San Benito, San Diego, and San Luis Obispo counties. Blooms June to August (CNPS 2021).	Will not occur	There is no suitable vernal pool habitat in the Study Area.
Eryngium jepsonii Jepson's coyote-thistle	--/--/1B.2	A perennial herb on clay soils in vernal pools and valley and foothill grassland from 3 – 300 meters elevation. Blooms April – August (CNPS 2021).	Will not occur	There is no suitable vernal pool or grassland habitat in the Study Area.
Fritillaria biflora var. *ineziana* Hillsborough chocolate lily	--/--/1B.1	A perennial bulbiferous herb found in serpentinite soils in cismontane woodland, and valley and foothill grassland from 150 - 150 meters elevation. Blooms March - April (CNPS 2021).	Will not occur	There is no suitable woodland or grassland habitat in the Study Area.
Fritillaria liliacea fragrant fritillary	--/--/1B.2	A perennial bulbiferous herb that occurs in coastal prairie, coastal scrub, foothill woodland, and valley grassland habitats. Often in serpentine soil. Blooms February – April (CNPS 2021).	Will not occur	There is no suitable grassland, woodland, coastal scrub, or prairie habitat in the Study Area.
Gilia capitata ssp. *chamissonis* blue coast gilia	--/--/1B.1	An annual herb found in coastal dunes and coastal scrub from 2 - 200 meters elevation. Blooms April - July (CNPS 2021).	Will not occur	There is no suitable coastal scrub, or dune habitat in the Study Area.

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Scientific Name/ Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur**	Rationale
Gilia millefoliata dark-eyed gilia	--/--/1B.2	An annual herb found on coastal dunes from 3 – 30 meters elevation. Blooms April – June (CNPS 2021).	Will not occur	There is no suitable coastal dune habitat in the Study Area.
Grindelia hirsutula var. *maritima* San Francisco gumplant	--/--/3.2	A perennial herb found in sandy or serpentinite soils in coastal bluff scrub, coastal scrub, and valley and foothill grassland from 15 - 400 meters elevation. Blooms June - September (CNPS 2021).	Will not occur	There is no suitable coastal scrub, or grassland habitat in the Study Area.
Helianthella castanea Diablo helianthella	--/--/1B.2	A perennial herb that often occurs on rocky, axonal soils. Typically found in chaparral, foothill woodland, coastal scrub, and riparian woodland habitats. Blooms March – June (CNPS 2021).	Will not occur	There is no suitable chaparral, woodland, coastal scrub, or riparian habitat in the Study Area.
Hemizonia congesta ssp. *congesta* congested-headed hayfield tarplant	--/--/1B.2	An annual herb found on valley and foothill grassland, and roadsides. Elevation range is 20 – 560 m amsl. Blooms April – November (CNPS 2021).	Will not occur	There is no suitable grassland habitat in the Study Area.
Hesperevax sparsiflora var. *brevifolia* short-leaved evax	--/--/1B.2	An annual herb found on sandy soils in coastal bluff scrub, coastal dunes, and coastal prairies from 0 – 215 meters elevation. Blooms March – June (CNPS 2021).	Will not occur	There is no suitable coastal scrub, prairie, or dune habitat in the Study Area.
Hesperolinon congestum Marin western flax	FT/CT/1B.1	An annual herb occurs in chaparral, valley and foothill grassland. Usually occurs in serpentinite soil from 5 – 370 meters elevation. Blooms April – July (CNPS 2021).	Will not occur	There is no suitable chaparral or grassland habitat in the Study Area.
Heteranthera dubia water star-grass	--/--/2B.2	A perennial aquatic herb found in alkaline, slightly eutrophic water in marshes and swamps from 30 – 1,495 meters elevation. Blooms July – October (CNPS 2021).	Will not occur	There is no suitable marsh or swamp habitat in the Study Area.
Hoita strobilina Loma Prieta hoita	--/--/1B.1	A perennial herb found usually on serpentine soils in mesic microsites in chaparral, cismontane woodland, and riparian woodland from 30 – 860 meters elevation. Presumed extirpated from Alameda County. Blooms May – July (August – October) (CNPS 2021).	Will not occur	There is no suitable woodland or chaparral habitat in the Study Area.

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Potential for Special-Status Species in the Region to Occur in the Study Area

Scientific Name/ Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur**	Rationale
Horkelia cuneata var. *sericea* Kellogg's horkelia	--/--/1B.1	A perennial herb found in sandy or gravelly openings in closed-cone coniferous forest, maritime chaparral, coastal dunes, and coastal scrub from 10 – 200 meters elevation. Extirpated from the San Francisco Bay Area except for 1 location in San Mateo County. Blooms April – September (CNPS 2021).	Will not occur	There is no suitable woodland, scrub, or chaparral habitat in the Study Area.
Horkelia marinensis Point Reyes horkelia	--/--/1B.2	A perennial herb found in sandy areas within coastal dunes/prairie/scrub from 5-755 meters elevation. Blooms May – September (CNPS 2021).	Will not occur	There is no suitable coastal scrub, prairie, or dune habitat in the Study Area.
Hypogymnia schizidiata island tube lichen	--/--/1B.3	A foliose lichen found on bark and wood of hardwoods and conifers in closed-cone coniferous forest and chaparral from 360 – 405 meters elevation. Often occurs on *Juniperus*, *Pinus*, *Quercus*, and *Simmondsia*. No bloom period (CNPS 2021).	Will not occur	There is no suitable woodland or chaparral habitat in the Study Area.
Lasthenia californica ssp. *macrantha* perennial goldfields	--/--/1B.2	A perennial herb found in coastal bluff scrub, coastal dunes, and coastal scrub from 5 – 520 meters elevation. Blooms January – November (CNPS 2021).	Will not occur	There is no suitable coastal scrub or dune habitat in the Study Area.
Lasthenia conjugens Contra Costa goldfields	FE/--/1B.1	An annual herb found in alkaline playas, valley and foothill grassland, vernal pools, and cismontane woodland, from 0 to 470 meters in elevation. Currently known to occur in Alameda, Contra Costa, Marin, Monterey, Napa, Solano, and Sonoma counties. Blooms March to June (CNPS 2021).	Will not occur	There is no suitable playa, vernal pool, woodland, or grassland habitat in the Study Area.
Layia carnosa beach layia	FE/CE/1B.1	An annual herb found on sandy soils in coastal dunes and coastal scrub from 0 – 60 meters elevation. Blooms March – July (CNPS 2021).	Will not occur	There is no suitable coastal scrub or dune habitat in the Study Area.
Leptosiphon croceus coast yellow leptosiphon	--/--/1B.1	An annual herb found in coastal bluff scrub and coastal prairie from 10 - 150 meters elevation. Blooms April - June (CNPS 2021).	Will not occur	There is no suitable coastal scrub or prairie habitat in the Study Area.

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Scientific Name/ Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur**	Rationale
Leptosiphon rosaceus rose leptosiphon	--/--/1B.1	An annual herb found in coastal bluff scrub from 0 - 100 meters elevation. Blooms April - July (CNPS 2021).	Will not occur	There is no suitable coastal scrub habitat in the Study Area.
Lessingia arachnoidea Crystal Springs lessingia	--/--/1B.2	An annual herb often found in serpentinite soils along roadsides in cismontane woodland, coastal scrub, and valley and foothill grassland from 60 - 200 meters elevation. Blooms July - October (CNPS 2021).	Will not occur	There is no suitable woodland, scrub, or grassland habitat in the Study Area.
Lessingia germanorum San Francisco lessingia	FE/CE/1B.1	An annual herb found in remnant dunes in coastal scrub from 25 - 110 meters elevation. Blooms (June) July - November (CNPS 2021).	Will not occur	There is no suitable coastal dune habitat in the Study Area.
Limnanthes douglasii ssp. *ornduffii* Ornduff's meadowfoam	--/--/1B.1	An annual herb found in meadows and seeps in agricultural fields from 10 - 20 meters elevation. Blooms November - May (CNPS 2021).	Will not occur	There is no suitable meadow or seep habitat in the Study Area.
Malacothamnus arcuatus arcuate bush-mallow	--/--/1B.2	A perennial evergreen shrub found in chaparral and cismontane woodland from 15 to 355 meters elevation. Blooms April to September (CNPS 2021)	Will not occur	There is no suitable woodland or chaparral habitat in the Study Area.
Monardella sinuata ssp. *nigrescens* northern curly-leaved monardella	--/--/1B.2	An annual herb found in chaparral, coastal dunes, coastal scrub, and lower montane coniferous forest, specifically ponderosa pine sandhills from 0 - 300 meters elevation. Blooms (April) May - July (August - September) (CNPS 2021).	Will not occur	There is no suitable coastal scrub, dunes, forest, or chaparral habitat in the Study Area.
Monolopia gracilens woodland woollythreads	--/--/1B.2	An annual herb found on serpentine soils in broadleafed upland forest, chaparral, cismontane woodland, North Coast coniferous forest, and valley and foothill grassland from 100 – 1,200 meters elevation. Blooms (February) March – July (CNPS 2021).	Will not occur	There is no suitable woodland or grassland habitat in the Study Area.
Pentachaeta bellidiflora white-rayed pentachaeta	FE/CE/1B.1	An annual herb often found in serpentinite soils in cismontane woodland, and valley and foothill grassland from 35 - 620 meters elevation. Blooms March - May (CNPS 2021).	Will not occur	There is no suitable woodland or grassland habitat in the Study Area.

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Scientific Name/ Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur**	Rationale
Plagiobothrys chorisianus var. *chorisianus* Choris' popcornflower	--/--/1B.2	An annual herb found in mesic microsites in chaparral, coastal prairie, and coastal scrub from 3 – 160 meters elevation. Currently known from locations on the coast between Salinas and San Francisco. Blooms March – June (CNPS 2021).	Will not occur	There is no suitable coastal scrub, prairie, or chaparral habitat in the Study Area.
Polemonium carneum Oregon polemonium	--/--/2B.2	A perennial herb found in coastal prairie, coastal scrub, and lower montane coniferous forest from 0 – 1,830 meters elevation. Blooms April – September (CNPS 2021).	Will not occur	There is no suitable coastal scrub, prairie, or forest habitat in the Study Area.
Polygonum marinense Marin knotweed	--/--/3.1	An annual herb found in coastal salt- or brackish-water marshes and swamps from 0 – 10 meters elevation. Uncertain taxonomic status; may be a synonym of a non-native species. Blooms (April) May – August (October) (CNPS 2021).	Will not occur	There is no suitable marsh or swamp habitat in the Study Area.
Potentilla hickmanii Hickman's cinquefoil	FE/CE/1B.1	A perennial herb found in coastal bluff scrub, closed-cone coniferous forest, vernally mesic meadows and seeps, and freshwater marshes and swamps from 10 - 149 meters elevation. Blooms April - August (CNPS 2021).	Will not occur	There is no suitable coastal scrub, forest, meadow, or swamp habitat in the Study Area.
Sanicula maritima adobe sanicle	--/CR/1B.1	A perennial herb found on serpentine clay soils in chaparral, coastal prairie, meadows, seeps, and valley and foothill grassland from 30 – 240 meters elevation. Currently known only from Monterey and San Luis Obispo Counties. Blooms February – May (CNPS 2021).	Will not occur	There is no suitable chaparral, coastal prairie, seep, or grassland habitat in the Study Area.
Senecio aphanactis chaparral ragwort	--/--/2B.2	An annual herb found in chaparral, cismontane woodland, and coastal scrub, from 15 to 800 meters in elevation. Currently known to occur in Alameda, Contra Costa, Fresno, Los Angeles, Merced, Monterey, Orange, Riverside, San Benito, Santa Barbara, Santa Clara, Santa Cruz, San Diego, San Luis Obispo, Solano, and Ventura counties. Blooms January to May (CNPS 2021).	Will not occur	There is no suitable chaparral or scrub habitat in the Study Area.

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Scientific Name/ Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur**	Rationale
Silene scouleri ssp. *scouleri* Scouler's catchfly	--/--/2B.2	A perennial herb found in coastal bluff scrub, coastal prairies, and valley and foothill grasslands from 0 – 600 meters elevation. Blooms (March – May) June – August (September) (CNPS 2021).	Will not occur	There is no suitable coastal scrub, prairie, or grassland habitat in the Study Area.
Silene verecunda ssp. verecunda San Francisco campion	--/--/1B.2	A perennial herb found in sandy soils in coastal bluff scrub, chaparral, coastal prairie, coastal scrub, and valley and foothill grassland 30 – 645 meters elevation. Blooms (February) March - July (August) (CNPS 2021).	Will not occur	There is no suitable chaparral, coastal scrub, prairie, or grassland habitat in the Study Area.
Spergularia macrotheca var. *longistyla* long-styled sand-spurrey	--/--/1B.2	A perennial herb found in alkaline meadows, mud flats, meadows, and hot springs (Baldwin et al. 2012).	Will not occur	There is no suitable meadow, mudflat, or hot spring habitat in the Study Area.
Streptanthus albidus ssp. *peramoenus* most beautiful jewelflower	--/--/1B.2	An annual herb found on serpentine soils in chaparral, cismontane woodland, and valley and foothill grassland from 95 – 1,000 meters elevation. Blooms (March) April – September (October) (CNPS 2021).	Will not occur	There is no suitable chaparral, woodland, or grassland habitat in the Study Area.
Stuckenia filiformis ssp. *alpina* slender-leaved pondweed	--/--/2B.2	A perennial herb found in shallow freshwater marshes and swamps, from 300 to 2,150 meters in elevation. Currently known to occur in Alameda, Butte, Contra Costa, El Dorado, Lassen, Mariposa, Merced, Modoc, Mono, Nevada, Placer, San Mateo, Shasta, Sierra, Solano, and Sonoma counties. Blooms May to July (CNPS 2021).	Will not occur	There is no suitable marsh or swamp habitat in the Study Area.
Suaeda californica California seablite	FE/--/1B.1	A perennial evergreen shrub found in coastal salt marshes and swamps from 0 – 15 meters elevation. Nearly extirpated from the Bay Area; most known occurrences are in Morro Bay. Blooms July – October (CNPS 2021).	Will not occur	There is no suitable marsh or swamp habitat in the Study Area.

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Scientific Name/ Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur**	Rationale
Trifolium amoenum two-fork clover	FE/--/1B.1	An annual herb found in wetlands in coastal bluff scrub and valley and foothill grassland from 5 – 415 meters elevation; sometimes on serpentine soils. Most records are historic; recent rediscoveries are uncertain. Blooms April – June (CNPS 2021).	Will not occur	There is no suitable chaparral, coastal scrub, or grassland habitat in the Study Area.
Trifolium hydrophilum saline clover	--/--/1B.2	An annual herb found in marshes and swamps, mesic alkaline valley and foothill grassland, and vernal pools, from 0 to 300 meters in elevation. Currently known to occur in Alameda, Contra Costa, Lake, Monterey, Napa, Sacramento, San Benito, San Joaquin, San Luis Obispo, San Mateo, Santa Clara, Santa Cruz, Solano, Sonoma, and Yolo counties. Blooms April to June (CNPS 2021).	Will not occur	There is no suitable grassland, marsh, or swamp habitat in the Study Area.
Triphysaria floribunda San Francisco owl's-clover	--/--/1B.2	An annual herb generally found in serpentinite soils in coastal prairie, coastal scrub, and valley and foothill grassland from 10 - 160 meters elevation. Blooms April - June (CNPS 2021).	Will not occur	There is no suitable chaparral, coastal scrub, prairie, or grassland habitat in the Study Area.
Triquetrella californica coastal triquetrella	--/--/1B.2	A moss found in coastal bluff scrub and coastal scrub from 10 - 100 meters elevation (CNPS 2021).	Will not occur	There is no suitable chaparral, coastal scrub habitat in the Study Area.
Sensitive Natural Habitats				
Northern Coastal Salt Marsh		A highly productive community of salt-tolerant, winter-dormant species that occurs in areas subject to daily tidal inundation by salt water. Occurs along sheltered margins of bays and estuaries. Vegetation is typically stratified horizontally, with cordgrass (*Spartina*) in the lowest zone, pickleweed (*Sarcocornia*) in the middle zone, and alkali heath (*Frankenia salina*) and gumplant (*Grindelia*) dominant in the upper zone (Holland 1986).	Not present	This habitat type is not present in the Study Area.

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Scientific Name/ Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur**	Rationale
Northern Maritime Chaparral		Northern Maritime Chaparral forms a nearly impenetrable shrub cover composed of several species of manzanitas, wild lilac, and chamise. In some places, silver-leaved manzanita forms the dominant vegetation (CNPS 2021).	Not present	This habitat type is not present in the Study Area.
Valley Needlegrass Grassland		A mid-height grassland dominated by tussock-forming purple needlegrass (*Stipa pulchra*) on fine textured to clay soils. This grassland may also contain native and non-native annuals between the bunch grass, which may exceed the bunchgrass in cover. This grassland often interdigitates with adjacent oak woodlands on moister and better drained sites. Vegetation typically consists purple needlegrass, nodding needlegrass (*Stipa cernua*), or other perennial bunchgrasses and native and non-native grasses and forbs (Holland 1986).	Not present	This habitat type is not present in the Study Area.

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Scientific Name/ Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur**	Rationale
Valley Oak Woodland		Savannah-like to forest-like stands. Canopy is dominated by valley oaks (Quercus lobata). Ground cover consists of annual grasses and forbs.	Not present	This habitat type is not present in the Study Area.

Note: Bold font indicates a species with the potential to occur in the Study Area; these species are evaluated in detail in the body of the report.

*FESA=Federal Endangered Species Act; CESA=California Endangered Species Act; FE – FESA endangered; FT – FESA threatened; FC – FESA candidate; FD – FESA delisted; SE – CESA endangered; ST – CESA threatened; SSC – state species of special concern; CRPR – California Rare Plant Rank (see definitions of CRPR rankings below)

CNPS ratings:

1A = Presumed extirpated in California and rare elsewhere

1B = Rare, threatened, or endangered in California and elsewhere

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

1B.2 = Fairly endangered in California (20-80% occurrences threatened)

1B.3 = Not very endangered in California (fewer than 20% of occurrences threatened)

2B = Rare, threatened, or endangered in California but more common elsewhere.

2B.2 = Fairly endangered in California (20-80% occurrences threatened)

Global and State rankings in descending order of sensitivity (1=critically imperiled; 5=demonstrably secure).

Potential to occur in the Study Area is assessed as follows. **Not Present: Natural community does not occur in the Study Area; **Will Not Occur**: Species is either sessile (i.e., plants) or so limited to a particular habitat that it cannot disperse on its own and/or habitat suitable for its establishment and survival does not occur in the Study Area; **Not Expected**: Species moves freely and might disperse through or across the Study Area, but suitable habitat for residence or breeding does not occur in the Study Area, potential for an individual of the species to disperse through or forage in the site cannot be excluded with 100% certainty; **Presumed Absent:** Habitat suitable for residence and breeding occurs in the Study Area; however, focused surveys conducted for the current project were negative; **May Occur**: Habitat suitable for residence and breeding occurs in the Study Area but the species has not been recorded recently in or near the Study Area and was not observed during surveys for the current project; **High**: Habitat suitable for residence and breeding occurs in the Study Area and the species has been recorded recently in or near the Study Area, but was not observed during surveys for the current project; **Present**: The species was observed during biological surveys for the current project and is assumed to occupy the Study Area.

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Potential for Special-Status Species in the Region to Occur in the Study Area

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Potential for Special-Status Species in the Region to Occur in the Study Area

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Appendix D

Plant Species Observed in the Study Area and Animal Species Observed or Detected

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Appendix D
Plant Species Observed in the Study Area and Animal Species Observed or Detected

Table D-1. Plant Species Observed in the Study Area

Family	Species Name	Common Name	Status
Native			**CRPR[1]**
Asteraceae	*Baccharis pilularis*	coyote brush	--
Fabaceae	*Lotus corniculatus*	birdfoot trefoil	--
Onagraceae	*Epilobium brachycarpum*	willowherb	--
Rhamnaceae	*Ceanothus thyrsiflorus*	blue blossom ceanothus	
Non-Native			**Cal-IPC[2]**
Agapanthoideae	*Agapanthus praecox*	African lily	--
Aizoaceae	*Carpobrotus edulis*	ice plant	High
Amaranthaceae	*Atriplex prostrata*	spear-leaved orache	--
	Salsola soda	oppositeleaf Russian thistle	Moderate
Apiaceae	*Foeniculum vulgare*	wild fennel	Moderate
Araliaceae	*Hedera helix*	English ivy	High
Asteraceae	*Cirsium vulgare*	spear thistle	Moderate
	Erigeron bonariensis	wavy-leaf fleabane	--
	Helminthotheca echioides	bristly ox-tongue	Limited
	Sonchus oleraceus	common sowthistle	--
Brassicaceae	*Raphanus sativus*	wild radish	Limited
Convolvulaceae	*Convolvulus arvensis*	field bindweed	--
Escalloniaceae	*Escallonia rubra*	redclaws	--
Geraniaceae	*Geranium molle*	crane's bill geranium	--
Mimosoideae	*Acacia dealbata*	silver wattle	Moderate
	Acacia redolens	bank catclaw	--
Myrtaceae	*Eucalyptus globulus*	blue gum	Limited
	Eucalyptus sideroxylon	black ironbark	--
	Metrosideros excelsa	New Zealand Christmas tree	--
Pinaceae	*Pinus halepensis*	Aleppo pine	--
Plantaginaceae	*Plantago lanceolata*	English plantain	Limited
Poaceae	*Avena fatua*	wild oats	Moderate
	Cynodon dactylon	Bermuda grass	Moderate
	Festuca perennis	Italian ryegrass	Moderate
Rosaceae	*Rubus armeniacus*	Himalayan blackberry	High
Salicaceae	*Salix babylonica*	weeping willow	--
Scrophulariaceae	*Myoporum laetum*	mousehole tree	Moderate

[1] California Rare Plant Rank

[2] California Invasive Plant Council invasiveness rating

Appendix D
Plant Species Observed in the Study Area and Animal Species Observed or Detected

Table D-2. Animal Species Observed or Detected

Order/Family	Species Name	Common Name	Status*
Birds			
Caprimulgiformes			
Trochilidae	*Calypte anna*	Anna's hummingbird	--
Charadriiformes			
Laridae	*Larus californicus*	California gull	--
Passeriformes			
Columbidae	*Zenaida macroura*	mourning dove	--
Corvidae	*Corvus brachyrhynchos*	American crow	--
Emberizidae	*Zonotrichia leucophrys*	white-crowned sparrow	--
Fringillidae	*Haemorhous mexicanus*	house finch	--
Icteridae	*Euphagus cyanocephalus*	Brewer's blackbird	--
Passerellidae	*Melozone crissalis*	California towhee	--
Sturnidae	*Sturnus vulgaris*	European starling	--
Tyrannidae	*Sayornis nigricans*	black phoebe	--
Mammals			
Carnivora			
Procyonidae	*Procyon lotor*	common raccoon (scat)	--

* Status for animal species: -- = No special status.

Appendix E

Representative Site Photos

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Photo 1. View of the parking lot and ornamental landscaping along the northern border of the Study Area. Taken September 2, 2021.

Photo 2. View of the parking lot and ornamental landscaping along the southern border of the Study Area. Taken September 2, 2021.

Photo 3. View of gravel fill and chain-link fencing along the northern border of the Study Area. Taken September 2, 2021.

Photo 4. View of the ornamental landscaping and San Francisco Bay Trail surrounding Anza Lagoon. Taken September 2, 2021.

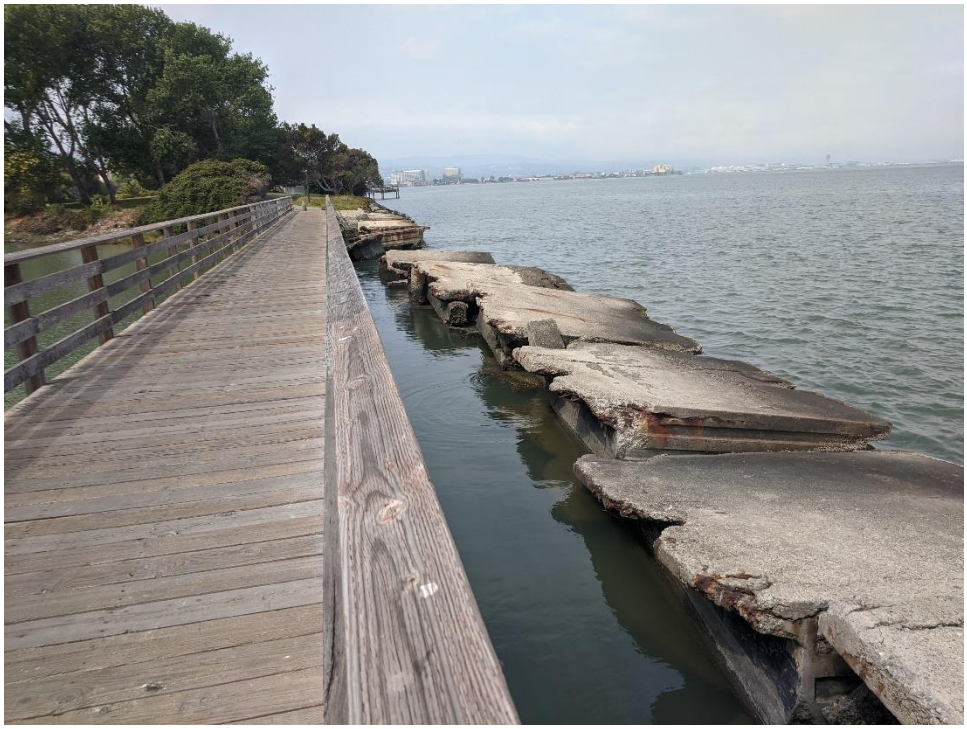

Photo 5. View of a pedestrian bridge spanning the inlet where Anza Lagoon connects with the San Francisco Bay. Taken September 2, 2021.

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Appendix F

Arborist Inventory Report

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MACNAIR
&
ASSOCIATES
CONSULTING ARBORISTS AND HORTICULTURISTS

August 22, 2021

Jeremy Lui
Vassar Properties
433 California Street, Floor 7
San Francisco, CA 94104

RE: 620 Airport Blvd., Burlingame- Tree Inventory and Evaluation

Dear Mr. Lui,

According to your request, this report documents the trees growing within and adjacent to the commercial property at 620 Airport Blvd. in Burlingame, CA. The adjacent properties are a hotel with a line of eucalyptus growing at the west property line and trees within the State of California property along the tidal area shoreline.

The purpose of this evaluation is to:

- Conduct an inventory of trees growing within and adjacent to the project limits (an existing parking lot and perimeter landscape areas).
- Assess the health and structural condition of the trees.
- Document the canopy overhang of trees on the adjacent property over the proposed project area.
-

Site and Tree Summary Discussion:

The project site is a commercial parking lot with perimeter landscape plantings. The topography is flat, with no buildings occupying the site. Fifty-six (56) trees are evaluated as part of this report. Tree species occurring within the project are four weeping willows (*Salix babylonica*) and seven New Zealand Christmas trees (*Metrosideros excelsa*). There is also a dense planting of the arboreal shrub myoporum (*Myoporum laetum*) in the site's northeast corner.

The California State property includes three species of acacia (*Acacia dealbata*, *A. longifolia*, and *A. melanoxylon*), flowering pear (*Pyrus calleryana*), cherry plum (*Prunus cerasifera*), one weeping willow, one coast live oak (*Quercus agrifolia*), and one European white birch (*Betula pendula*).

The hotel property on the east side has a row of eucalyptus planted along the property line fence that includes one red flowering yellow gum (*Eucalyptus leucoxylon* 'Rosea'), 20 pink ironbarks (*E. sideroxylon* 'Rosea'), and seven white peppermint gum (*E. pulchella*) (tentatively identified).

Appendix A of this report provides the individual tree data, including health and structural ratings, suitability for preservation ratings, and canopy overhang measurements of the property line trees. Also attached are the topographical survey sheets (3) showing tree locations and tag numbers. Images of the trees are also included as part of this report.

Health and Structural Condition:

The trees' general health and structural condition vary, with many trees rated in marginal structural condition. None of the trees appear to be actively managed, and the eucalyptus all have a history of topping (pruning). Detailed observations are provided in Appendix A Tree Data Matrix.

Construction Impact:

Construction grading and utility plans have not been reviewed. Tree protection procedures and an assessment of construction impact can be provided on request.

Individual Tree Evaluations

Following is a description of the various data used in the evaluations.

Tree #:

The trees are assigned a number as indicated on the Tree Location and Numbering Plan (GPS waypoint).

Common and Botanical Name (Species):

The botanical name and common name are provided for each tree.

Trunk and # of Trunks:

Trunk diameter refers to the measurement of the trunk diameter at 54 inches above grade. The # of trunks notes single or multiple trunk trees. Trunks must occur at or below 54 inches above grade for a tree to be considered to have multiple trunks for measurement purposes. Trunk measurements may differ from those shown on the plans due to the method and date of measurement.

Height and Crown Diameters:

These fields are approximate measurements of the tree's height and crown spread. Accuracy is within plus or minus 10% of the indicated estimate. Additionally, the eucalyptuses along the project's east side have the canopy extension distance beyond the fence line.

Health and Structural Ratings and Descriptions:

The following chart describes the health and structural rating system used in the evaluation. It is a rating of relative conditions such as vigor, the extent of decay, structure, and insect or

disease problems. Good and moderate ratings indicate limited structural problems, acceptable vigor, and an absence of significant pest or disease problems. Poor and marginal ratings indicate serious health or structural problems, especially if the tree is situated near structures or public areas. Trees rated as poor or marginal are often hazardous.

Rating Chart:

3.0	Moderate (or better) condition	Normal and correctable problems of structure or pests and diseases.
2.5	Fair condition	Typically indicates moderately low vigor and foliage density with limited branch or twig dieback. Significant but correctable structural defects may be present.
2.0	Marginal condition	Indicates serious problems with health, structure, decay, or significant insect or disease problems.
1.0	Poor condition	Indicates very poor health, vigor, or hazardous structural condition.

Trees may be rated between two conditions, such as 2.5 or 3.5, which indicates the tree does not precisely meet the criteria for either of the two categories and allows the rating system to be used as a continuum.

The comments and observations describe the basis for the health and structural ratings. The specific pests, diseases, and structural defects observed are described and identified, if possible.

This evaluation is of the above-ground structure only, and additional defects may exist at the root collar. Large mature and over-mature trees often require a root collar examination to evaluate the primary structural roots and root collar for decay and disease. In addition, an aerial inspection of the limb structure may be required.

Comments/Observations:

This is a summary discussion of the health and structural ratings and identification of any significant pest or disease issues or structural defects.

Suitability for Preservation Ratings:

Rating Factors:

Tree Health: Vigorous and healthy trees are better able to tolerate construction impacts, including root loss or injury,

Structural Condition: Preserved trees should be structurally sound or have defects that can be effectively abated in areas near structures or high-use areas.

Tree Age and Species: Older trees may have a reduced ability to tolerate construction impacts and adapt to changed site conditions. Additionally, individual tree species have varying tolerances to environmental impacts and changes.

Rating Scale:

Good: Trees in good health and structural condition with high potential for longevity.

Moderate: Trees in fair health and/or with structural defects that can be abated with treatment.

Fair: Trees in marginal health or structural condition that could possibly be mitigated or improved.

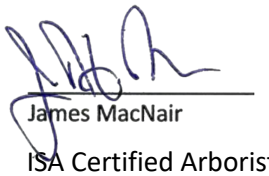
Poor: Trees in poor health and/or structural condition that probably cannot be effectively abated.

Protected Tree Status:

Protected status trees as defined by the City of Burlingame Urban Reforestation and Tree Protection Ordinance. All private trees with a trunk circumference of 48 inches or larger (15-inch diameter) qualify as protected trees.

Please contact me if additional information is required.

Sincerely,



James MacNair

ISA Certified Arborist WE-0603A
ISA Tree Risk Assessment Qualified
ASCA Tree and Plant Appraisal Qualified

Tree Images:

Part of the massing of myoporum shrubs in the northwest corner of the parking lot within the proposed project limits.

Tree #1, a weeping willow located within the project limits.

Tree #2, a weeping willow located within the project limits.

The north section of the eucalyptus row including four trees that extend beyond the project fence corner (trees #3-#6).

Tree #3, a red flowering yellow gum with arrows indicating old topping cut locations.

A portion of the row of pink ironbark. Note the irregular and contorted limb structures. The two trees on the left are in poor health with branch and limb dieback.

The southern portion of the row of the pink ironbarks.

The white peppermint gums are located adjacent to the fence line, with the crowns extending over the proposed project limits.

The row of white peppermint gums is next to the parking structure.

The trees were previously topped and now have extended limb forms.

One of the seven New Zealand Christmas trees is located in the Airport Blvd. frontage.

New Zealand Christmas trees are in variable condition, with this one in an area where the irrigation is apparently not functioning.

One of the two weeping willows is located on the west side of the parking lot. The third tree is dead.

The golden wattle is located on the state property (tree #35).

The glossy privet (tree #36). Likely originated as a volunteer seedling.

A young coast live oak, also likely a volunteer tree (#37).

Several trees and shrubs have declined in this area. The volunteer Canary Island date palm was not included in the inventory (arrow).

A cherry plum is growing next to the pathway (#38).

A group of three silver wattles (acacia). Two of the trees have collapsed in the past.

The largest of the silver wattles is tree #39.

One of the three flowing pears is located along the pathway (tree #42).

A mature blackwood acacia (tree #43).

The low, co-dominant trunk structure of the blackwood acacia.

Thickets of blackwood acacia have established within the area. Blackwood acacia is considered an invasive species.

Tree #45, a flowering pear with a significant trunk lean.

Tree #46, a white birch in decline.

Tree #47, a weeping willow with a trunk lean.

Two Monterey pines (trees #50 and #51) are located in the northeast corner of the state property.

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Appendix A

Individual Tree Evaluation Data Matrix

620 Airport Tree Evaluation Matrix

Health and Structural Rating Key: 3.0 = moderate or better condition

2.5 = fair condition

2.0 = marginal condition

1.5 = poor to marginal condition

1.0 = poor condition

Suitability for Preservation Ratings: Good: Trees in good health and structural condition with high potential for longevity.

Moderate: Trees in fair health and/or with structural defects that can usually be abated with treatment.

Fair: Trees in marginal health or structural condition that could possibly be mitigated or improved.

Poor: Trees in poor health and/or structural condition that probably cannot be effectively abated.

Tree Tag #	Species	Trunk Diameter @4.5' (inches)	# of Trunks	Crown Height	Crown Diameter	Crown Extension Over Project Limits	Health Rating	Structural Rating	Comments/Observations	Protected Tree Status (48" trunk circumference/ 15" diameter)	Suitability for Preservation (Based on Condition)
no tag	Myoporum shrub (*Myoporum laetum*)			15'±	15'±		3.0	3.0	Mass planting of myoporum on the northeast side of the parking lot. Multiple trunk form.	No	Moderate to Good
1	weeping willow (*Salix babylonica*)	7	1	18'±	20'±	n/a	2.0	2.5	Smaller tree with significant upper crown dieback. Tree structure is marginal with closely spaced, multiple limb attachments.	No	Fair
2	weeping willow	8	1	18'±	25'±	n/a	2.5	2.5	Smaller tree with sporadic upper crown dieback. Tree structure is marginal with closely spaced, multiple limb attachments.	No	Fair
3	red flowering yellow gum (*Eucalyptus leucoxylon* 'Rosea')	20.5	1	45'-50'±	40'±	20.5'	3.0	2.0	Mature tree with closely spaced, multiple limb attachments forming at 12'. Tree Was previously topped. Extended limbs with possible history of limb failure. Vigor and foliage density are moderate.	Yes	Fair

Tree Tag #	Species	Trunk Diameter @4.5' (inches)	# of Trunks	Crown Height	Crown Diameter	Crown Extension Over Project Limits	Health Rating	Structural Rating	Comments/Observations	Protected Tree Status (48" trunk circumference/ 15" diameter)	Suitability for Preservation (Based on Condition)
4	pink ironbark (*Eucalyptus sideroxylon* 'Rosea')	9	1	30'-45'±	20'-35'±	10'-15'	2.5	2.0	The pink ironbarks have irregular and contorted trunk and limb forms that have not been maintained. Vigor and foliage density are generally low to moderately low except for the specific trees noted. The trees appear to have chronic drought stress. Located in narrow planters adjacent to parking.	No	Poor to Fair
5	pink ironbark	11.5	1	30'-45'±	20'-30'±	10'-15'	2.5	2.0	See above description (tree #4).	No	Poor to Fair
6	pink ironbark	21	1	30'-45'±	20'-30'±	20'	2.5	2.0	See above description (tree #4).	Yes	Poor to Fair
7	pink ironbark	19	1	30'-45'±	20'-30'±	10'-15'	2.5	2.0	See above description (tree #4).	Yes	Poor to Fair
8	pink ironbark	10	1	30'-45'±	20'-30'±	10'	2.5	2.0	See above description (tree #4).	No	Poor to Fair
9	pink ironbark	10.5	1	30'-45'±	20'-30'±	15'	2.5	2.0	See above description (tree #4).	No	Poor to Fair
10	pink ironbark	13	1	30'-45'±	20'-30'±	15'	2.5	2.0	See above description (tree #4).	No	Poor to Fair
11	pink ironbark	15.5	1	30'-45'±	20'-30'±	11'	2.5	2.0	See above description (tree #4).	Yes	Poor to Fair
12	pink ironbark	13	1	30'-45'±	20'-30'±	5'	2.5	2.0	See above description (tree #4).	No	Poor to Fair
13	pink ironbark	9.5	1	30'-45'±	20'-30'±	12'	1.5	2.0	Significant limb and branch dieback occurring.	No	Poor
14	pink ironbark	12	1	30'-45'±	20'-30'±	9'	1.5	2.0	Significant limb and branch dieback occurring.	No	Poor
15	pink ironbark	7	1	30'-45'±	20'-30'±	2'	1.5	2.0	Significant limb and branch dieback occurring.	No	Poor to Fair
16	pink ironbark	14	1	30'-45'±	20'-30'±	8'	2.5	2.0	See above description (tree #4).	No	Poor to Fair
17	pink ironbark	8	1	30'-45'±	20'-30'±	10'	1.5	2.0	Significant limb and branch dieback occurring.	No	Poor
18	pink ironbark	9	1	30'-45'±	20'-30'±	1'	1.5	2.0	Significant limb and branch dieback occurring.	No	Poor
19	pink ironbark	9	1	30'-45'±	20'-30'±	0'	2.5	2.0	See above description (tree #4).	No	Poor to Fair
20	pink ironbark	9.5	1	30'-45'±	20'-30'±	6'	2.5	2.0	See above description (tree #4).	No	Poor to Fair
21	pink ironbark	10.5	1	30'-45'±	20'-30'±	13'	2.5	2.0	See above description (tree #4).	No	Poor to Fair
22	pink ironbark	12	1	30'-45'±	20'-30'±	9'	2.5	2.0	See above description (tree #4).	No	Poor to Fair
23	pink ironbark	11	1	30'-45'±	20'-30'±	5'	2.5	2.0	See above description (tree #4).	No	Poor to Fair

Tree Tag #	Species	Trunk Diameter @4.5' (inches)	# of Trunks	Crown Height	Crown Diameter	Crown Extension Over Project Limits	Health Rating	Structural Rating	Comments/Observations	Protected Tree Status (48" trunk circumference/ 15" diameter)	Suitability for Preservation (Based on Condition)
24	white peppermint gum (*Eucalyptus pulchella*) (tentative identification)	17	1	40'-45'±	30'-40'±	20'-25'	3.0	2.5	Mature trees with generally symmetrical crown forms. Located next to parking structure. In narrow planter along fence line. The trees have 30% to 35% live crown to height ratios. Upright limb structures that were topped in the past. No significant indications of limb breakage observed. Vigor and foliage density are moderate.	Yes	Moderate
25	white peppermint gum	20	1	40'-45'±	30'-40'±	20'-25'	3.0	2.5	See above description (tree #24).	Yes	Moderate
26	white peppermint gum	13	1	40'-45'±	30'-40'±	20'-25'	3.0	2.5	See above description (tree #24).	No	Moderate
27	white peppermint gum	11	1	40'-45'±	30'-40'±	20'-25'	3.0	2.5	See above description (tree #24).	No	Moderate
28	white peppermint gum	12	1	40'-45'±	30'-40'±	20'-25'	3.0	2.5	See above description (tree #24).	No	Moderate
29	white peppermint gum	11.5; 14.5	2	40'-45'±	30'-40'±	20'-25'	3.0	2.5	See above description (tree #24).	Yes	Moderate
30	white peppermint gum	20 (low)	1	40'-45'±	30'-40'±	20'-25'	3.0	2.5	See above description (tree #24).	Yes	Moderate
31	New Zealand Christmas tree (*Metrosideros excelsa*)	5	1	10'±	8'±	n/a	2.0	3.0	Small tree appears moderately stunted from water stress. No significant structural defects.	No	Fair
32	New Zealand Christmas tree	3.5	1	10'±	6'±	n/a	3.0	3.0	This tree has more moderate vigor and foliage density.	No	Moderate
no tag	New Zealand Christmas tree	6	1	8'±	8'±	n/a	3.0	3.0	This tree has more moderate vigor and foliage density.	No	Moderate
no tag	New Zealand Christmas tree	3	1	7'±	6.5'±	n/a	2.5	3.0	This tree has more moderate vigor and foliage density.	No	Moderate
no tag	New Zealand Christmas tree	4	1	10'±	6'±	n/a	2.5	3.0	This tree has more moderate vigor and foliage density.	No	Moderate
no tag	New Zealand Christmas tree	3.5	1	8'±	5'±	n/a	2.0	3.0	Low vigor and foliage density.	No	Fair
no tag	New Zealand Christmas tree	3.5	1	8'±	5'±	n/a	2.5	3.0	This tree has more moderate vigor and foliage density.	No	Moderate
33	weeping willow	9.5	1	12'±	22'±	n/a	3.0	2.0	Semi-mature tree with moderate vigor and foliage density. Marginal structure. Tree has not been maintained.	No	Fair

Tree Tag #	Species	Trunk Diameter @4.5' (inches)	# of Trunks	Crown Height	Crown Diameter	Crown Extension Over Project Limits	Health Rating	Structural Rating	Comments/Observations	Protected Tree Status (48" trunk circumference/ 15" diameter)	Suitability for Preservation (Based on Condition)
34	weeping willow	11	1	15'±	20'±	n/a	3.0	2.0	Semi-mature tree with moderate vigor and foliage density. Marginal structure. Tree has not been maintained.	No	Fair
35	golden wattle (*Acacia longifolia*)	9	low	20'±	20'±	n/a	3.0	3.0	Arboreal shrub species in good vigor and foliage density. No significant structural issues.	No	Moderate to Good
36	glossy privet (*Ligustrum lucidum*)	2 to 3	10	20'±	25'±	n/a	3.0	2.0	Low, multiple trunk structure. Likely a volunteer seedling. Vigor and foliage density are good. Considered invasive.	No	Fair
37	coast live oak (*Quercus agrifolia*)	4	1	18'±	8'±	n/a	3.0	3.0	Young tree with no significant structural issues. vigor and foliage density are good. Likely a volunteer seedling.	No	Good
38	plum (*Prunus cerasifera*)	1 to 4	15±	20'±	25'±	n/a	3.0	2.0	Dense multiple trunk structure. Possibly originated as a volunteer seedling. Vigor and foliage density are moderate.	?	Fair
39	silver wattle (Acacia dealbata)	23	1	35'-40'±	40'±	n/a	3.0	2.5	Mature tree with symmetrical crown form and extended limb structure. Vigor and foliage density are moderate. Classified as an invasive species.	Yes	Fair to Moderate
40	silver wattle	11	1	20'±	20'±	?	3.0	1.5	Collapsed tree located at fence line. Portion may extend past fence.	No	Poor
41	silver wattle	9; 12	2	30'±	25'±	10'	3.0	2.0	Old, partially collapsed tree located at fence line. Single trunk structure. Vigor and foliage density are moderate.	Yes	Fair
42	flowering pear (*Pyrus calleryana*)	3 to 6	6	15'±	20'±	n/a	3.0	2.0	Low, multiple trunk structure. Vigor and foliage density are moderate.	No	Fair
43	blackwood acacia (*Acacia melanoxylon*)	2 to 6	thicket	20'±	40'±	n/a	3.0	2.0	Dense thicket of volunteer seedlings and root sprouts. This species is considered invasive.	No	Poor to Fair

Tree Tag #	Species	Trunk Diameter @4.5' (inches)	# of Trunks	Crown Height	Crown Diameter	Crown Extension Over Project Limits	Health Rating	Structural Rating	Comments/Observations	Protected Tree Status (48" trunk circumference/ 15" diameter)	Suitability for Preservation (Based on Condition)
44	blackwood acacia	23; 24	2	45'±	50'±	n/a	3.0	2.5	Mature tree with low, two trunk structure. Symmetrical crown form/. One included limb attachment. Vigor and foliage density are moderate.	Yes	Moderate
45	flowering pear	9.5	1	20'±	20'±	n/a	3.0	2.0	Leaning tree, possible old, partial root failure. Marginal limb structure. Vigor and foliage density are moderate.	No	Fair
46	European white birch (*Betula pendula*)	4	1	15'±	10'±	n/a	1.5	2.0	Declining tree with significant trunk decay and branch dieback.	No	Poor
47	weeping willow	16.5	1	20'±	30'±	n/a	3	2.5	Low, crown with significant lean. Windswept form. Vigor and foliage density are moderate.	Yes	Fair to Moderate
48	blackwood acacia	2 to 10	thicket	40'±	50'±	n/a	3	2.5	Dense thicket of volunteer seedlings and root sprouts.	No	Poor to Fair
49	flowering pear	12.5	1	20'±	20'±	n/a	3	2	Marginal structure with closely spaced, multiple limb attachments. Vigor and foliage density are moderate.	No	Fair
50	Monterey pine (*Pinus radiata*)	20	1	25'±	40'±	n/a	2.5	2	Low, wide crown form. Lower trunk covered in ivy. Moderately low vigor and foliage density. Possible pine pitch canker infection.	Yes	Fair
51	Monterey pine	8 low	3	20'±	30'±	n/a	2.5	2	Low, multiple trunk structure. Moderately low vigor and foliage density. Possible pine pitch canker infection.	No	Fair

1" = 20'

GRAPHIC SCALE
20 0 20 40

LEGEND

- FOUND 1.5" BRASS DISK IN MON WELL, UNLESS OTHERWISE NOTED
- SITE BENCHMARK
- CONTROL POINT, AS NOTED
- AREA LIGHT
- BACKFLOW PREVENTER
- BOLLARD
- FIRE HYDRANT
- JOINT POLE
- SANITARY SEWER MANHOLE
- SIGN
- TREE
- VALVE, AS NOTED

LINETYPES

- SUBJECT BOUNDARY LINE
- LOT LINE
- HISTORIC LOT LINE
- EASEMENT LINE
- BUILDING STRUCTURE
- CONCRETE LINE
- FENCE LINE
- MONUMENT LINE
- PARKING SPACE
- ROAD CENTERLINE
- SANITARY SEWER PIPE
- STORM DRAIN PIPE
- TOP OF CURB

ABBREVIATIONS

A/C	AIR CONDITIONING	EP	EDGE OF PAVEMENT
AC	ASPHALTIC CONCRETE	EV	ELECTRIC VAULT
AL	AREA LIGHT	FC	FACE OF CURB
APN	ASSESSOR'S PARCEL NUMBER	FH	FIRE HYDRANT
BOL	BOLLARD	FL	FLOWLINE
BW	BACK OF WALK	FNC	FENCE
CB	CATCH BASIN	HB	HOSE BIBB
CND	CONDUIT	HDB	HEADERBOARD
COMM	COMMUNICATION	IP	IRON PIPE
CONC	CONCRETE	JP	JOINT POLE
COR	CORNER	LG	LIP OF GUTTER
DI	DRAIN INLET	LSCP	LANDSCAPING
DN	DOCUMENT NUMBER	MON	MONUMENT
DWY	DRIVEWAY	PL	PROPERTY LINE
EB	ELECTRIC BOX	PTR	PRELIMINARY TITLE REPORT
ELEC	ELECTRIC	PVC	POLYVINYL CHLORIDE
(R#)	DENOTES RECORD REFERENCE		
R/W	RIGHT-OF-WAY		
RCP	REINFORCED CONCRETE PIPE		
RSM	RECORD SUBDIVISION MAPS		
SD	STORM DRAIN		
SLB	STREET LIGHT BOX		
SQ. FT.	SQUARE FEET		
SSCO	SANITARY SEWER CLEANOUT		
TC	TOP OF CURB		
TM	PARKING TICKET MACHINE		
TRAN	TRANSFORMER		
UB	UTILITY BOX		
WB	WATER BOX		
W-T	TOP OF WALL		
WV	WATER VALVE		

SURVEYOR'S STATEMENT

THIS MAP CORRECTLY REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECTION, IN CONFORMANCE WITH THE REQUIREMENTS OF THE PROFESSIONAL LAND SURVEYORS' ACT.

DAVID JUNGMANN, P.L.S. 9267 — 06/24/2021 DATE

PROFESSIONAL LAND SURVEYOR · DAVID C. JUNGMANN · No. 9267 · STATE OF CALIFORNIA

BENCHMARK

THE ELEVATIONS SHOWN HEREON ARE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AND ARE BASED UPON NETWORK GNSS OBSERVATIONS PERFORMED BY BKF, UTILIZING THE CALIFORNIA SURVEY AND DRAFTING SUPPLY REAL-TIME NETWORK (CSDS RTN).

BKF POINT #213, A SET MAG NAIL & WASHER ON TOP OF CURB, AS SHOWN HEREON, WAS TAKEN AS THE SITE BENCHMARK FOR THIS SURVEY.

ELEVATION = 5.80 FEET

BASIS OF BEARINGS

THE BASIS OF THIS SURVEY IS THE NORTH AMERICAN DATUM OF 1983 (NAD83)(2011) EPOCH 2010.00, CALIFORNIA ZONE III AS DETERMINED BY BKF USING REDUNDANT GNSS FIELD OBSERVATIONS UTILIZING THE CALIFORNIA SURVEY AND DRAFTING SUPPLY REAL-TIME NETWORK (CSDS RTN). THE BEARING OF SOUTH 60°55'49" EAST BETWEEN BKF POINT #212 AND BKF POINT #213, AS SHOWN HEREON, WAS TAKEN AS THE BASIS OF BEARINGS FOR THIS SURVEY. DISTANCES SHOWN HEREON ARE GROUND DISTANCES.

RECORD MAP REFERENCES

(R1) GRANT DEED RECORDED OCTOBER 9, 1998 AS DOCUMENT NUMBER 98-164293, OFFICIAL RECORDS OF SAN MATEO COUNTY.

(R2) PARCEL MAP ENTITLED "PARCEL MAP BEING A RESUBDIVISION OF LOTS #4, #5, #6, #7 AND #8, BLOCK 6 ANZA AIRPORT PARK UNIT NO. 6" RECORDED DECEMBER 31, 1997 IN BOOK 70 OF PARCEL MAPS, AT PAGE 32, OFFICIAL RECORDS OF SAN MATEO COUNTY.

(R3) MAP ENTITLED "ANZA AIRPORT PARK - UNIT NO. 6" RECORDED FEBRUARY 27, 1970 IN BOOK 70 OF MAPS, AT PAGES 33 THROUGH 35, OFFICIAL RECORDS OF SAN MATEO COUNTY.

ANZA LAGOON

PTR PARCEL
LANDS OF BOCA LAKE OFFICE, INC.
(DN 98-164293)
(PARCEL A)
(70 PM 32)
APN: 026-342-330

LANDS OF STATE OF CALIFORNIA APN: 026-342-350

LANDS OF HARBOR VIEW HOTELS, INC. (DN 94050585) (LOT D) (49 PM 67)

BASIS OF BEARINGS S60°55'49"E 511.72'

(N89°43'01"E)(R2)(R3) S89°04'43"E 501.58' (501.56')(R2)(R3)

POINT #212 3/4" IP WITH GINTZLER TACK

Tree Location and Numbering Plan
#1of 3
8/22/21
MacNair and Associates

SEE SHEET 2

SEE SHEET 3

BKF
255 SHORELINE DR., SUITE 200
REDWOOD CITY, CA 94065
(650) 482-6300
www.bkf.com

TOPOGRAPHIC SURVEY
OF THE LANDS OF
BOCA LAKE OFFICE, INC.
COUNTY OF SAN MATEO CALIFORNIA
BURLINGAME

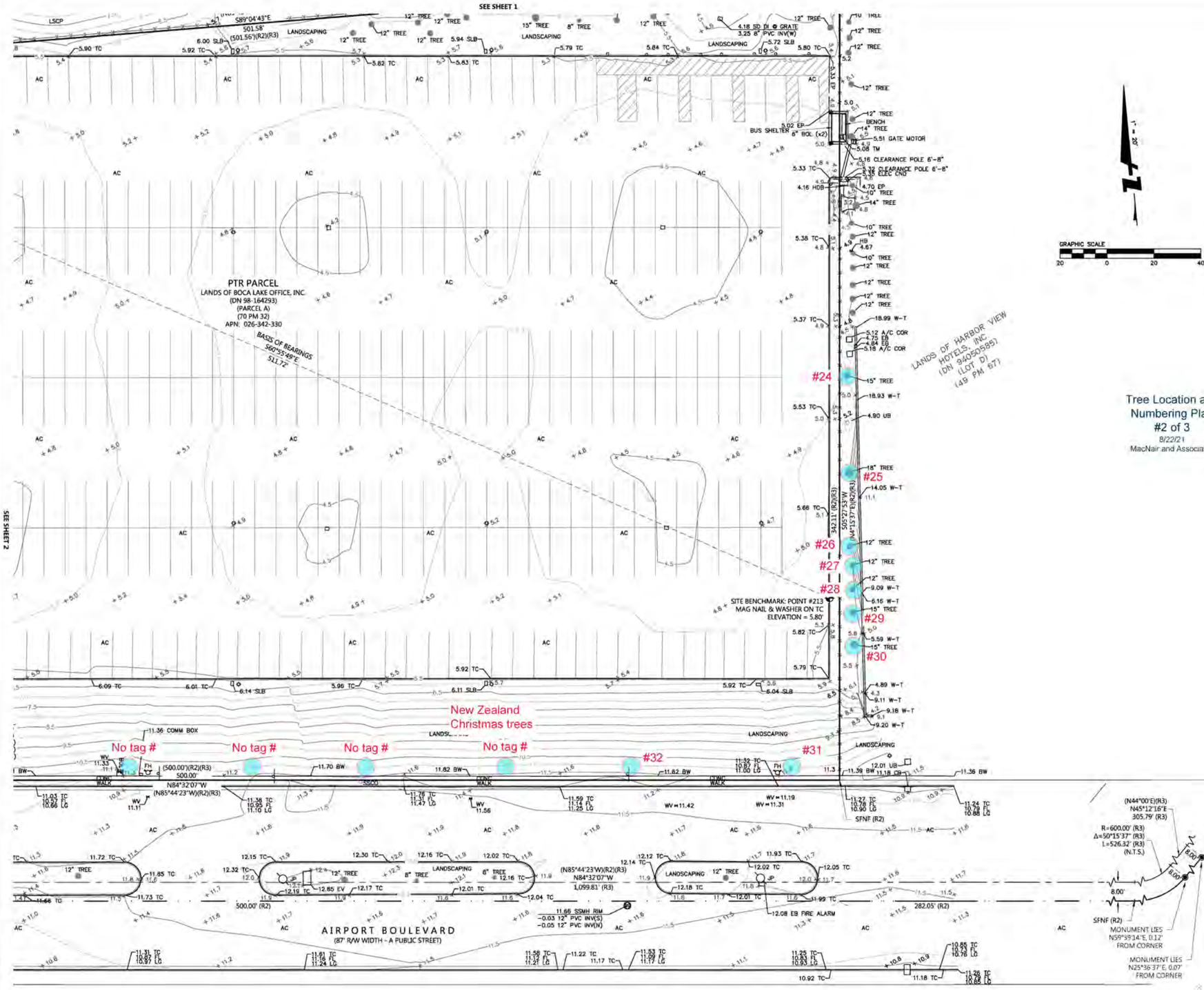
Revisions

No.			

Date: 2021-06-24
Scale: 1" = 20'
Design: JMS
Drawn: AJD
Approved:
Job No.210283-50

Drawing Number:
210283
1 OF 3

DRAWING NAME: K:\2021\210283_BKF Airport_Blvd_Survey\Submittals\Topo\210283_Topo_2021-06-24.dwg
PLOT DATE: 06-24-21 PLOTTED BY: Mary



GRAPHIC SCALE
20 0 20 40
1" = 20'

Tree Location and Numbering Plan
#2 of 3
8/22/21
MacNair and Associates

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▭	BACKFLOW PREVENTER
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BKF
255 SHORELINE DR., SUITE 200
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TOPOGRAPHIC SURVEY OF THE LANDS OF BOCA LAKE OFFICE, INC.

COUNTY OF SAN MATEO CALIFORNIA

BURLINGAME

No.	Revisions

Date: 2021-06-24
Scale: 1" = 20'
Design: JMS
Drawn: AJD
Approved:
Job No 20210283-50

Drawing Number:
210283
3 OF 3

DRAWING NAME: G:\2021\210283_BOL_Airport_Blvd_San Mateo\SURVEY\Dwg\210283_Topo_2021-06-24.dwg
PLOT DATE: 06-24-21 PLOTTED BY: ajay

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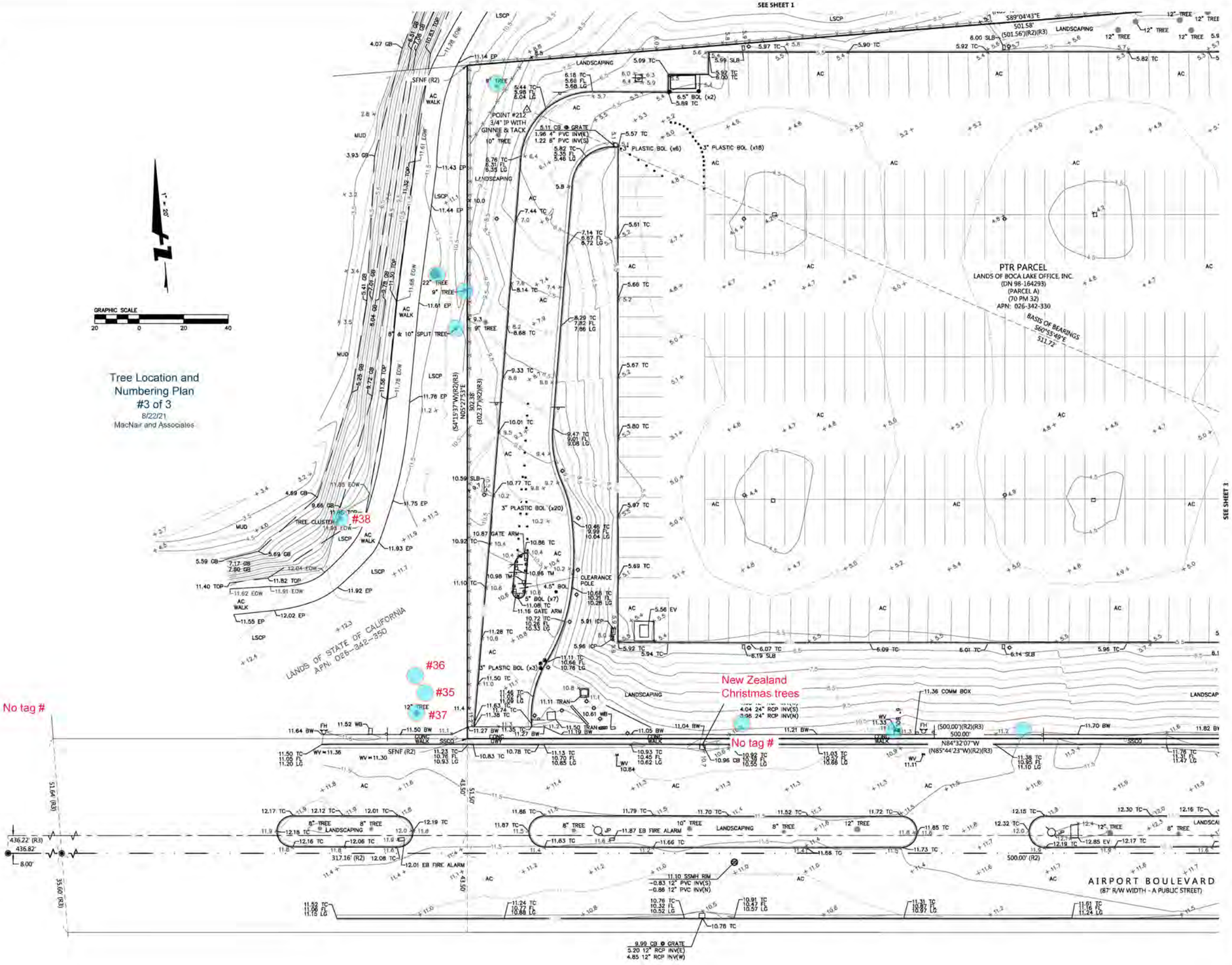
Tree Location and Numbering Plan
#3 of 3
8/22/21
MacNair and Associates



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COUNTY OF SAN MATEO CALIFORNIA

BURLINGAME

No.	Revisions

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Design: JMS
Drawn: AJD
Approved:
Job No: 210283-50

Drawing Number:
210283
2 OF 3

DRAWING NAME: s:\2021\210283_426_Airport_Blvd_Burl\Survey\Dwg\210283_Topo_2021-06-24.dwg
PLOT DATE: Jun 24, 21 PLOTTED BY: ajay