# Power the South Bay Project
# Biological Resources Technical Report

May 2024

Prepared For:

LS Power Grid California, LLC

Prepared By:

Heritage Environmental Consultants, LLC

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# 1. Introduction

## 1.1. Project Description

LS Power Grid California, LLC ("LS Power"), a designated California Public Utility, is proposing the Power the South Bay Project ("Proposed Project") located in the Cities of Fremont, Milpitas, Santa Clara, and San José, California (**Figure 1**, *Project Vicinity*). The Proposed Project includes the construction of two new high-voltage direct-current (HVDC) converter terminals ("HVDC terminal") and associated transmission lines between the existing Silicon Valley Power's (SVP) Northern Receiving Station (NRS) substation and the existing Pacific Gas and Electric Company's (PG&E) Newark substation.

## 1.2. Project Area

The Proposed Project is located in the Cities of Fremont, Santa Clara, Milpitas, and San José, California, (refer to **Figure 2**, *Project Location* and **Figure 3**, *Project Overview*).

### 1.2.1. HVDC Terminals

The northern HVDC terminal site is the proposed Albrae terminal, which is located north of Weber Road and west of Boyce Road, approximately 0.8 mile west of Interstate 880 (I-880) and approximately 0.2-mile northeast of the existing PG&E Newark substation. The proposed Albrae terminal site consists of approximately 6.1 acres and is located adjacent to PG&E property. The proposed Albrae terminal site is located within the City of Fremont and is zoned for General Industrial uses. Surrounding land uses consist of industrial facilities – glass and concrete fabrication to the north, an electric utilities distribution center to the east, and a car repair and auction lot to the north and south. **Figure 4**, *Project Route Map*, depicts the Proposed Project features.

The southern HVDC terminal site is the proposed Baylands terminal, which is located approximately 0.5 mile north of State Route 237 (SR-237), approximately 1.8 miles west of I-880, and approximately 1.8 miles northeast of the existing SVP NRS substation (refer to **Figures 3** and **4**). Specifically, the proposed Baylands terminal consists of approximately 9.2 acres and is located south of Los Esteros Road and west of the San José-Santa Clara Regional Wastewater Facility. The site is located within the City of San José and zoned for Planned Development Single Family Residential uses. Surrounding land uses consist of Los Esteros Road and a recycling trash center to the north, San José-Santa Clara Regional Wastewater Facility to the east, and undeveloped land to the south and west.

### 1.2.2. Transmission Lines

The proposed Albrae to Baylands 320 kV DC transmission line is located within the City of Fremont, City of Milpitas, and the City of San José, and would connect the new Albrae terminal to the new Baylands terminal (refer to **Figures 3** and **4**). The underground portion of this transmission line would be located within existing roadways including Weber Road, Boyce Road, Cushing Parkway, Fremont Boulevard, McCarthy Boulevard, and Los Esteros Road. The overhead portion of the proposed Albrae to Baylands 320 kV DC transmission line would traverse from North McCarthy Boulevard (approximately 0.1 mile south from its intersection with Dixon Landing Road) to its intersection with Los Esteros Road, spanning across existing wastewater drying ponds, and includes approximately 11 new transmission line support structures. The proposed Albrae to Baylands 320

kV DC transmission line would transition back underground at Los Esteros Road and turn southeast into the proposed Baylands terminal site, which is located southeast of Los Esteros Road. Approximately 5.5 miles of this proposed alignment are located in the City of Fremont, 0.2 mile is located in the City of Milpitas, and approximately 2.9 miles are located in the City of San José.

The new Newark to Albrae 230 kV Transmission Line would be an approximately 0.4-mile-long alignment connecting the proposed Albrae terminal to the existing PG&E Newark substation. The proposed transmission line would leave the Albrae terminal in an underground position and would then transition to an overhead position consisting of two new transmission support structures to enter into the Newark substation (refer to **Figure 4**). This proposed transmission line would be located within the City of Fremont.

The proposed Baylands to NRS 230 kV transmission line would be constructed to connect the proposed Baylands terminal to the existing NRS substation. The proposed Baylands to NRS 230 kV transmission line would consist of approximately 3.3 miles of underground alignment in roadways such as Los Esteros Road, Disk Drive, Nortech Parkway, and Lafayette Street. In the approximate middle of this line, the alignment would transition to an overhead position for approximately 0.2 mile at the crossing of the Guadalupe River (refer to **Figure 4**). Approximately 2.3 miles of this alignment are located in the City of San José, and approximately 1.2 miles are located in the City of Santa Clara.

## 1.3. Project Components

### 1.3.1. HVDC Terminals

Each new HVDC terminal would include Voltage Source Converter (VSC) HVDC equipment, an AC switchyard using gas-insulated switchgear (GIS) in a breaker-and-a-half (BAAH) configuration, and three single-phase converter transformers including space for an on-site spare. The VSC HVDC equipment and the GIS switchyards would be located within separate enclosures designed to protect the equipment from environmental and physical threats. The VSC HVDC equipment and the GIS switchyards would be located within climate-controlled enclosures designed to protect the equipment from environmental and physical threats. The proposed substations are designed to allow the transfer of up to 1,044 megavolt amperes (MVA), with the planned connection between the proposed Albrae terminal and the proposed Baylands terminal limiting flows to 593 MVA.

All major HVDC terminal equipment (e.g., VSC HVDC equipment, GIS, power transformers, cooling equipment, etc.) would be installed on concrete foundations. Foundations are planned to be a combination of deep, reinforced drilled shafts foundations and slab foundations with spread footings. Below-groundwork would include the construction of the foundations for the substation equipment, oil containment for transformers. The depth of ground disturbance is anticipated to be up to 50 feet for the substation equipment (drilled shafts) foundations and approximately 200 feet for piles.

Each transformer would have an oil containment system consisting of an impervious, lined, open or stone-filled sump area around the transformer. The maximum amount of oil required for the transformers would be approximately 25,000 gallons for each of the three transformers. Transformer oil containment basins are designed to contain the oil volume of the transformers plus a 25-year, 24-hour storm event. The tallest structures within the substations would be the lightning shielding masts with an approximate 100-foot height.

Equipment and enclosures at the proposed HVDC terminal sites would be non-reflective as practicable and neutral gray or neutral earth-tone colors. Enclosure roofs would typically be white.

Lighting would be installed at the proposed HVDC terminal locations and would conform to National Electric Safety Code (NESC) requirements and other applicable outdoor lighting codes. The proposed HVDC terminal facilities are not anticipated to require nighttime illumination. Terminal station lighting would be photocell and motion controlled to provide illumination for security. Light emitting diode (LED) lights would be mounted on A-frames, H-frames, structures, poles, and enclosures as required. All lighting provided would be shielded and pointed down to minimize glare onto surrounding properties and habitats.

The proposed HVDC terminals would be primarily powered by station service transformers located within the facility that would step-down the voltage from the low voltage side of the station power transformers. An electric distribution line would be installed to provide backup power for each terminal from existing PG&E or SVP distribution lines that are near each terminal site.

The main components of the two proposed HVDC terminals are described below.

### 1.3.2. Albrae Terminal

The proposed Albrae terminal would be constructed adjacent to the north of the PG&E property, approximately 0.2-miles from the Newark substation on 6.1-acres within a 26-acre site (portion of Assessor Parcel Number [APN] 531-165-38-4) that would be owned by LS Power. Construction of the Albrae terminal would permanently disturb approximately 6.1 acres of the site. The proposed Albrae terminal would include 230 kV GIS, bus-work, and termination equipment as well as three single-phase 230 kV transformers with an on-site spare.

The new Albrae terminal would be interconnected with the existing PG&E Newark substation via an approximately 0.4-mile new overhead and underground 230 kV transmission line, the majority of which would be located on PG&E-owned land. In order to facilitate the 230 kV transmission line, PG&E would need to move existing structures within their property to accommodate the new connection. Additionally, to provide a point of interconnection for the new 230 kV transmission line (see below), PG&E would add electrical infrastructure to support the termination of the new transmission line within the existing Newark substation. Within the existing Newark substation, PG&E would add a new 230 kV bay with the associated grounding, conduits and wiring, foundations, support structures, bus work, breakers, disconnect switches, jumpers, and protection and control equipment to the existing 230 kV substation yard.

### 1.3.3. Baylands Terminal

The proposed Baylands terminal would be constructed approximately 1.8 miles northeast of the existing SVP NRS substation within a 9.2-acre site located on a larger parcel (APN 015-31-063) that would be leased by LS Power. Construction of the proposed Baylands terminal would permanently disturb the entirety of the approximately 9.2-acre site. The proposed Baylands terminal would include 230 kV GIS, bus-work, and termination equipment as well as three single-phase 230 kV transformers with an on-site spare.

To provide a point of interconnection for the new 230 kV transmission line (see below), SVP needs to add electrical infrastructure to support the termination of the new transmission line within the NRS substation. SVP would add a new 230 kV bay with the associated grounding, conduits and wiring, foundations, support structures, bus-work, breakers, disconnect switches, jumpers, and protection and control equipment to the existing 230 kV substation yard.

### 1.3.4. Albrae to Baylands 320 kV DC Transmission Line

The Proposed Project includes the new Albrae to Baylands 320 kV DC transmission line connecting the proposed Albrae terminal to the proposed Baylands terminal (refer to **Figure 3** and **Figure 4**). The 320 kV DC transmission line would be approximately 8.6 miles in length and includes both overhead and underground segments. The underground alignment starts at the proposed Albrae terminal and continues southeast for approximately 5.7 miles; including an approximate 0.8-mile span of transmission line that would be mounted under the existing Cushing Bridge or placed underground within an existing utility easement adjacent to the bridge. The overhead alignment would be approximately 1.9 miles in length starting south of McCarthy Boulevard (approximately 0.1 mile south from its intersection with Dixon Landing Road) and would continue in a south/southwest direction towards Los Esteros Road to span across the San José-Santa Clara Regional Wastewater Facility's (RWF) existing wastewater drying ponds. The alignment transitions back to underground within Los Esteros Road for approximately 1 mile to its' terminus at the proposed Baylands terminal site.

The 320 kV DC underground transmission line would be encased with a duct bank proposed to have five smaller internal conduits: three eight-inch conduits for conductor (including one spare) and two two-inch conduits for fiber optic cables. The typical depth for the underground transmission line duct bank is approximately five feet, with the top of the duct bank being located approximately three feet beneath the surface. The splice vaults would be installed approximately every 1,500 feet along the underground segment; and would be approximately 30 feet long, 10 feet wide, and 10 feet deep. After construction, all road surfaces would be restored to their original condition, matching thickness and type in kind or in compliance with local requirements.

The 320 kV DC overhead transmission line structures would predominately be direct embedded tubular steel monopoles with a horizontal conductor configuration and two overhead optical ground wires (OPGWs). Dead-end structures would be self-supported tubular steel poles with a vertical conductor configuration supported by deep, reinforced drilled shaft foundations. The overhead transmission line segment would include 11 total tubular steel poles (see DC-1 through DC-11 on **Figure 4**). Structure foundations would have a maximum diameter of 12 feet at the ground line; and with a maximum height 120 feet. The span length would range from 250 to 1,300 feet.

### 1.3.5. Newark to Albrae 230 kV Transmission Line

The Newark to Albrae 230 kV transmission line would be constructed to connect the proposed Albrae terminal to the existing PG&E Newark substation. This new 230 kV transmission line would be approximately 0.4-mile in length (approximately 0.2 mile of underground and 0.2 mile of overhead). Starting from the proposed Albrae terminal, the new transmission line would exit in an underground position and would follow Weber Road south, until turning east and transitioning to an overhead position until connecting with the existing Newark substation (refer to **Figure 4**). The 230 kV overhead transmission line would include two new tubular steel poles which would support the overhead conductor over existing PG&E transmission lines. One new cable pole structure would be constructed to transition the line from underground to overhead and would be located approximately 60 feet northeast of the existing Newark substation entrance at the end of Weber Road. The second new structure would be a dead-end pole located approximately 56 feet north of the existing Newark substation wall and 727 feet southeast of the new cable pole (refer to **Figure 4**). It is anticipated that the new overhead transmission structures would be tubular steel poles supported by deep, reinforced drilled shaft foundations with a maximum depth of approximately 60 feet. The overhead transmission line structures would have range in height from 110 feet to 140 feet. Structures and

foundations would have a maximum diameter of 12 feet at the ground line. The proposed Newark to Albrae 230 kV transmission line would be rated at 1,044 MW.

### 1.3.6. Baylands to NRS 230 kV Transmission Line

The Baylands to NRS 230 kV transmission line would be constructed to connect the proposed Baylands terminal to the existing SVP-owned NRS substation. This new 230 kV transmission line would consist of approximately 0.2 mile of overhead alignment and approximately 3.3 miles of underground alignment (refer to **Figure 4**). The underground portions of the transmission line would be located mainly within existing roads, parking lots, and other disturbed or developed areas. The overhead transmission line would span over the Guadalupe River and would consist of two tubular steel cable poles with a delta configuration and two OPGWs. These poles would be supported by deep, reinforced drilled shaft foundations. The maximum foundation depth is expected to be approximately 60 feet. Structures and foundations would have a maximum diameter of 12 feet at the ground line. The maximum height would be approximately 120 feet.

The typical underground transmission line would be encased in a duct bank with seven internal conduits, comprised of four for conductor, two for fiber, and one for a ground wire. One internal conductor conduit would serve as a spare. The typical width for the underground transmission duct bank is approximately 3 feet. Splice vaults would be installed approximately every 1,500 to 3,000 feet along the underground segment. The splice vaults would be approximately 30 feet long by 10 feet wide by 10 feet deep. The proposed Baylands to NRS 230 kV transmission line would be rated at 593 MW.

### 1.3.7. Below-Ground Conductor/Cable Installations

The typical depth for the underground transmission line duct banks is approximately 5 to 6 feet, with the top of the duct bank being located approximately 3 to 4 feet beneath the surface. The splice vaults would be approximately 10 feet deep. LS Power would install cables in the duct bank once the duct bank and splice vaults are installed. Cable installation activities would occur at all splice vault locations and near the substation termination structures. Splice vaults would generally be installed along the transmission line alignment about every 1,500 to 3,000 feet to facilitate installation of the underground cables.

### 1.3.8. Telecommunications Lines

The Proposed Project includes telecommunications infrastructure that would connect the new HVDC terminals to each other, connect the new HVDC terminals to the existing PG&E and SVP substations, and connect each proposed HVDC terminal to local existing third-party internet providers. It is anticipated that these telecommunication lines would all be co-located with the transmission lines, and no separate overhead lines or wireless connections (e.g., antennas) would be included. Two underground telecommunication paths would be installed along the proposed transmission lines to provide redundant communication paths. An additional telecommunication connection would be made at each new HVDC terminal location, connecting to existing third-party internet service providers. Each telecommunication path would consist of fiber optic cables.

In underground segments, the two co-located telecommunication lines would typically be housed in two two-inch diameter polyvinyl chloride (PVC) conduits, which would be directly buried in the trench duct bank package. Typical depth of the telecommunications lines is three to ten feet below ground surface. For the telecommunication lines in the transmission line duct bank, fiber splices would be

contained within separate underground fiber splice vaults or at the substation termination structures, and fiber splices would not be located within the proposed transmission line splice vaults.

In aboveground locations, telecommunication lines would be attached to overhead structures as OPGW. The overhead OPGW would be installed in a similar manner as the conductor. The splice between two reels of OPGW would be contained within a splice box mounted on a tubular structure.

The local third-party internet connections for the proposed HVDC terminal sites are anticipated to also be located underground and connect to existing telecommunication lines located adjacent to the proposed HVDC terminal sites.

#### 1.3.9. Access Roads

The existing and primary access to the Proposed Project locations for both construction and operations and maintenance would be from existing public roads (refer to **Figure 4**). The existing and primary access to the Albrae terminal for both construction and operation and maintenance would be from Weber Road via Boyce Road. Boyce Road is an existing four-lane minor arterial road and Weber Road is an existing two-lane local street, approximately 22 feet wide. No improvements are expected to be required along Weber Road and Boyce Road.

The existing and primary access to the Baylands terminal for both construction and operation and maintenance would be from Los Esteros Road via Zanker Road. Zanker Road and Los Esteros Road are existing paved public two-lane collector roads, approximately 26 feet wide. No improvements are expected to be required along Zanker Road and Los Esteros Road.

Access to the overhead portion of the Albrae to Baylands 320 kV DC line would be on existing private access roads within the San José-Santa Clara Regional Wastewater Facility (RWF). These roads, shown on **Figure 4**, range from approximately 15 to 70 feet wide and are unpaved but regularly maintained. No improvements to these roads are anticipated as part of the Proposed Project.

The Proposed Project includes one new permanent access road for each of the two HVDC terminals and one new access road to construct new overhead transmission line structure AC-3 as part of the Baylands to NRS transmission line. The access road for the Albrae terminal would be from Weber Road to provide ingress/egress to the site; the access road would be 20 feet wide and approximately 50 feet long. The proposed access road for the Baylands terminal would be provided from Los Esteros Road and would be 20 feet wide and approximately 1,000 feet long. Construction of the new transmission line access road to structure AC-3 would be approximately 500 feet long and 20 feet wide. Construction of these access roads would include grading and rocking per the final Proposed Project design. Permanent gates would be installed at both new terminal driveways along the perimeter wall that would align with the internal access road.

### 1.4. Work Areas

#### 1.4.1. Laydown Yards and Staging Areas

The Proposed Project includes 11 potential temporary construction staging areas (not including the staging areas within the two terminal sites) resulting in a total area of approximately 117.1 acres. While the Proposed Project includes these 11 locations, ultimately only between 2 and 4 sites will be used, not counting the terminal sites. Additional staging areas have been identified because site

availability cannot be ensured for an extended period of time prior to construction. The staging areas would be located along the project alignment (refer to **Figure 3** and **Figure 4**). The staging areas would be fenced and/or gated during the construction phase of the Proposed Project.

Preparation of the staging area would involve clearing, grubbing, and limited grading, as needed. Gravel may be used to line the ground at the staging area to avoid the creation of unsafe conditions and unnecessary sediment transport off site. Perimeter fencing would be installed around the outer limits of the work area and lighting would also be installed for security purposes. Temporary construction power would be provided via existing distribution near the Proposed Project site. Temporary generators may be used as a contingency if distribution power is not available in a timely manner prior to construction.

The staging areas may be used as a refueling area for vehicles and construction equipment; takeoff and landing areas for helicopters; as an equipment wash station; for assemblage; for storage of material and equipment, storage containers, construction trailers, and portable restrooms; and for parking and lighting. Some substation equipment and transmission line equipment would be received and temporarily stored at the staging area prior to installation. Construction workers would typically meet at the staging area each morning and park their vehicles. All construction equipment and vehicles associated with construction would be parked within the staging area while inactive and at the completion of each workday, where practical.

### 1.4.2. Underground Transmission Line Work Areas

Underground transmission line work areas are typically 15 feet on each side of the trench. For the Proposed Project, the underground transmission lines are being installed within existing public and private roadways, such as Cushing Parkway and Fremont Boulevard. In these cases, the construction work areas are limited to the public/roadway right of way (ROW). Refer to **Figure 4** for a depiction of the underground transmission line work areas. Specific to the Cushing Parkway bridge, construction would also access the existing fenced 30-foot O&M easement along the north side of the bridge.

### 1.4.3. Overhead Transmission Line Work Areas

Overhead transmission line work areas are typically 110 feet by 200 feet around each pole structure location; however, work areas at each specific pole may be adjusted based on existing conditions (refer to **Figure 4**). The overhead transmission line is proposed to be installed across the RWF existing drying ponds and across the Guadalupe River. Refer to **Figure 4** for a depiction of the overhead structure work areas.

**Stringing Sites**

Stringing sites are anticipated to be required for all overhead transmission line sections. The location of the stringing sites is depicted on **Figure 4**. Stinging sites would be in direct line with the direction of the overhead conductors and require a length approximately three times the height of the adjacent structure. The dimensions of each stringing site would be approximately 100 feet by 400 feet but can vary depending upon existing conditions at each stringing site.

### Guard Structures

During overhead stringing operations, boom trucks or temporary guard structures would be used to assure that the lead lines and conductors do not present a hazard to passing motor vehicles and/or pedestrians. This activity would occur at road crossings, water crossings, and walking paths.

Guard structures commonly consist of directly embedded wood poles with a cross-beam attached to the embedded wood poles. Where direct embedded wood poles are used, an auger would be used to excavate a hole that would be up to 3 feet in diameter and 10 feet deep. A crane or line truck would lift the poles into place and the excavated soil would be backfilled around the pole. Excess excavated soils would be temporarily stockpiled. No concrete foundations would be required to set the guard poles; no grading or other site work is anticipated. The temporary wooden guard poles would be removed following the completion of conductor stringing and the holes would be backfilled with the excavated soil.

#### 1.4.4. HVDC Terminals

Work areas for the two HVDC terminals would be confined to the terminal property boundaries. During construction, the terminals would be secured with fencing, similar to the staging yards. The terminal sites would also be utilized for construction staging and laydown, as needed (refer to description of laydown yards provided in Section 1.4.1).

## 1.5. Other Potentially Required Facilities

Prior to initiating construction, LS Power would contact Underground Service Alert (USA), also known as USA North 811, to identify underground utilities in the immediate area. In addition, prior to excavating for transmission line construction, LS Power would conduct exploratory excavations (i.e., potholing) in order to verify the locations of existing utility facilities in the ROW. In the event underground utilities are identified that conflict with the Proposed Project, LS Power would work with the owner of those utilities to determine if design changes can be made or if relocation procedures are necessary.

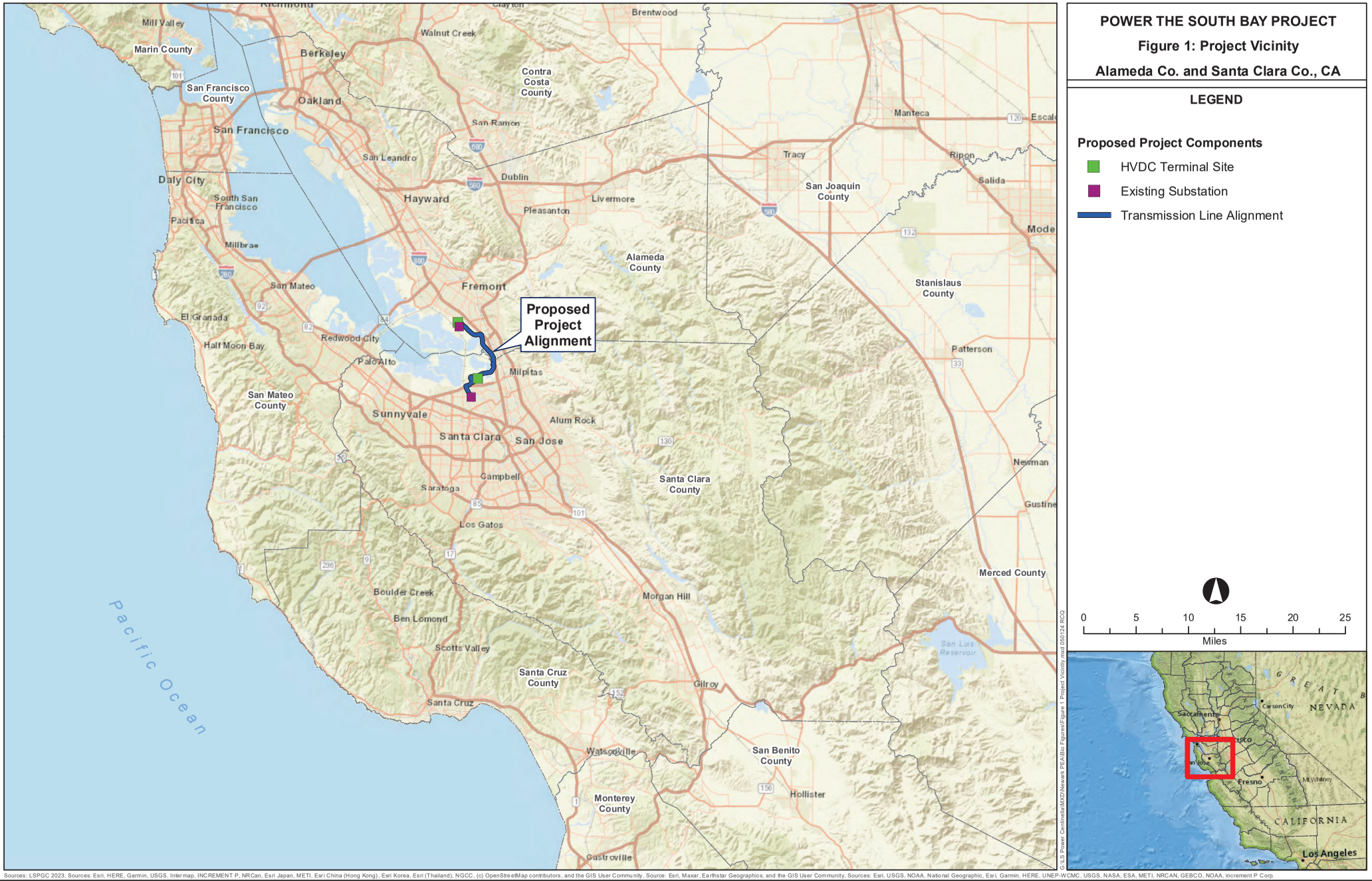
A temporary distribution line would be tapped into from the existing nearby PG&E and SVP overhead lines to provide power for construction for the proposed terminal sites and staging areas. The temporary distribution lines would typically be installed in an overhead position. If temporary power lines are unavailable in a timely manner, diesel generators would be utilized.

At the existing PG&E Newark substation, existing facilities would be modified to allow the interconnection of the new Newark to Albrae 230 kV transmission line. LS Power would construct an approximately 0.2-mile underground line that would transition aboveground to a LS Power-owned transition structure on the west side of Weber Road, as further explained above. PG&E would extend the conductor from the LS Power owned transition structure to a 0.2-mile two-structure overhead transmission line that would be constructed and owned by PG&E. PG&E would extend the conductor from their last overhead structure to the new Newark 230 kV bus position within the existing Newark substation. The point of ownership demarcation for the conductor would be at a transition structure to be owned by LS Power. PG&E would be responsible for bringing in the new circuit from that point to the termination within the existing Newark substation, the final configuration of which would be established through a Transmission Interconnection Agreement (TIA) with PG&E.

One open 230 kV bay at PG&E's existing Newark substation (refer to **Figure 4**) would be modified to accommodate interconnection of the Proposed Project. To accommodate the proposed Newark to Albrae 230 kV transmission line, PG&E would be responsible for installing a new transmission line segment from the Newark 230 kV bus up to the above-described point of ownership demarcation. Additional substation modifications include installation of new circuit breakers, disconnect switches, capacitive voltage transformers, a new dead-end structure, and typical substation equipment, such as structural steel, bus work, conduits, and grounds.

The existing SVP NRS substation facilities would also be modified to allow the interconnection of the new Baylands to NRS 230 kV transmission line. LS Power's scope for the new Baylands to NRS 230 kV transmission line is proposed to stop at a point within 100 feet of the NRS substation property line. SVP would be responsible for installing a new gantry (dead-end) structure within the existing NRS substation, as well as CAISO metering. SVP would also be responsible for installing the new transmission line segment to the new dead-end structure and would install the jumpers between the two line terminations and through the CAISO meters. The new dead-end structure would be owned by SVP.

Preliminarily, the required SVP substation modifications, needed due to the increased load being served, include new line positions, transformer positions, installation of three new 230/115 kV transformers, and removal of one existing 230/115 kV transformer.




Sources: LSPGC 2023; Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community, Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, Sources: Esri, USGS, NOAA, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

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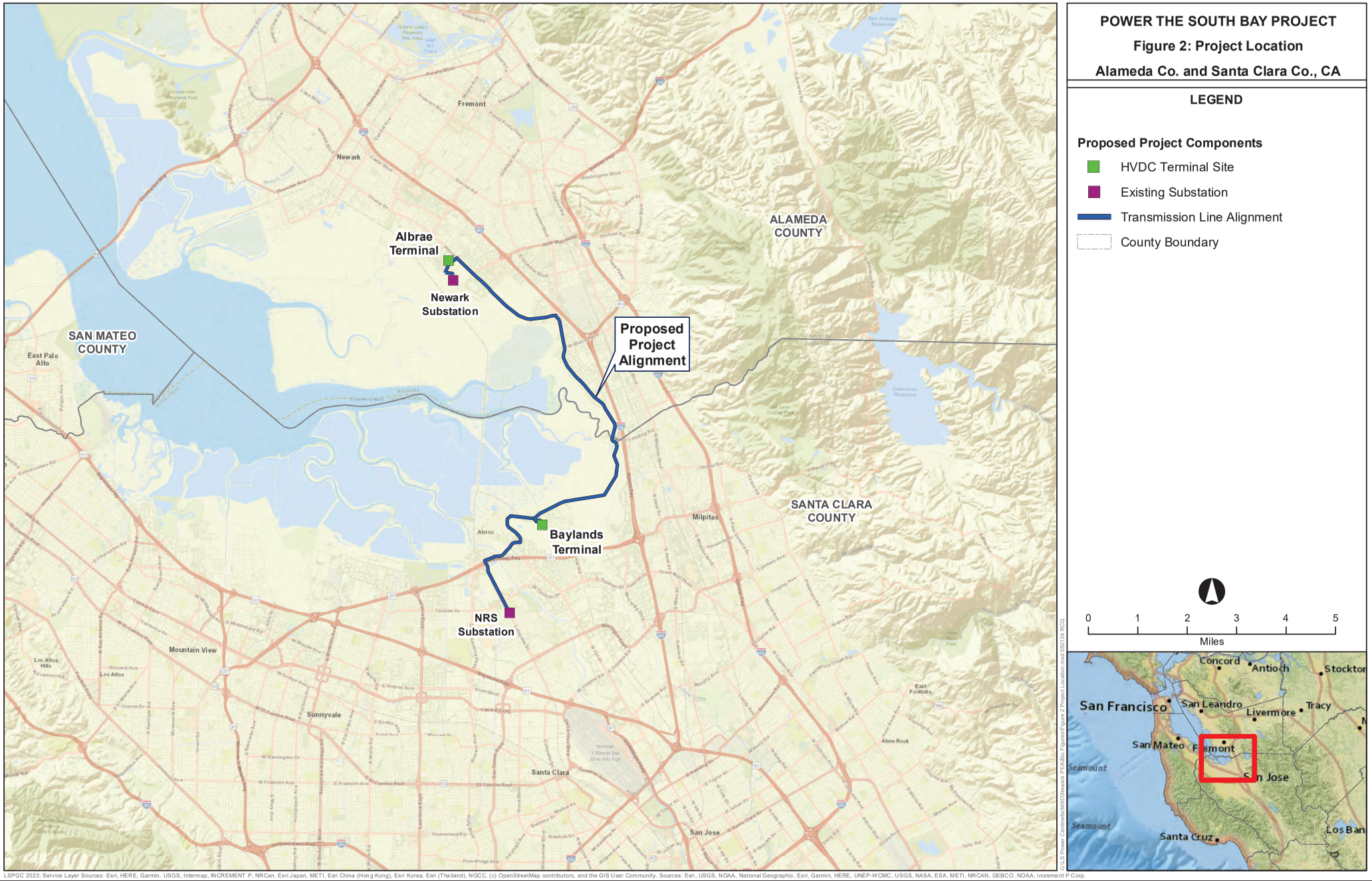
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SAN MATEO COUNTY
Fremont
Newark
East Palo Alto
Milpitas
Mountain View
Sunnyvale
Santa Clara
San Jose
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Miles
Concord
Antioch
Stockton
San Francisco
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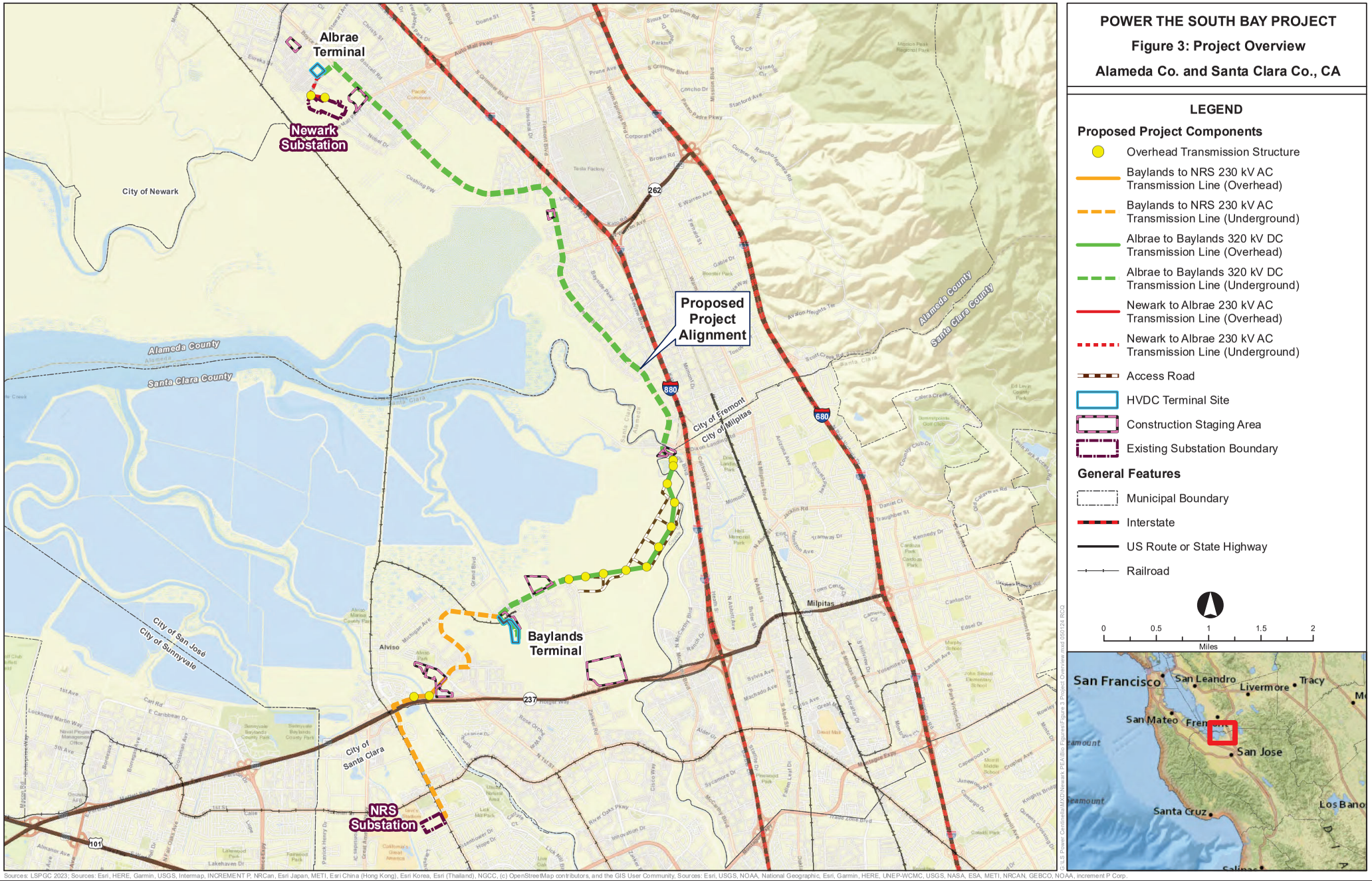


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# POWER THE SOUTH BAY PROJECT

## Figure 4: Project Route Map

## Alameda Co. and Santa Clara Co., CA

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- Biological Resource Survey Area
- Limits of Construction

**General Features**

- Municipal Boundary
- Interstate
- US Route or State Highway
- Railroad



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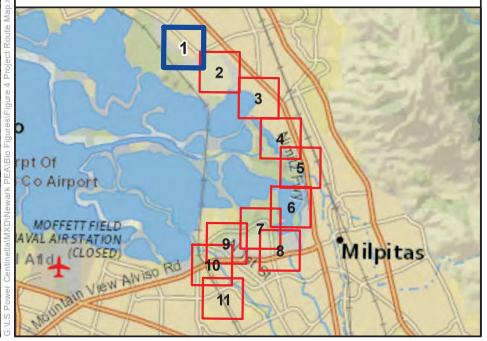


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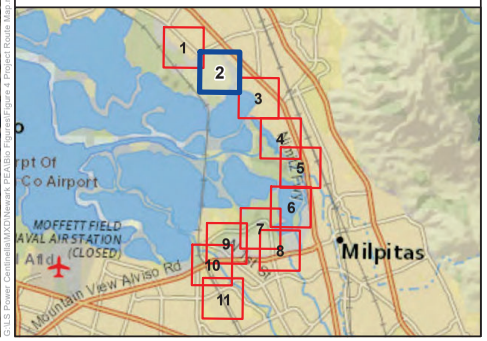


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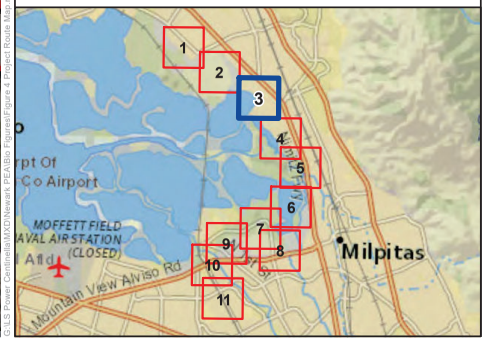


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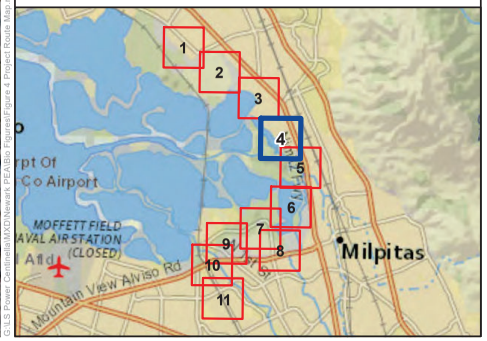


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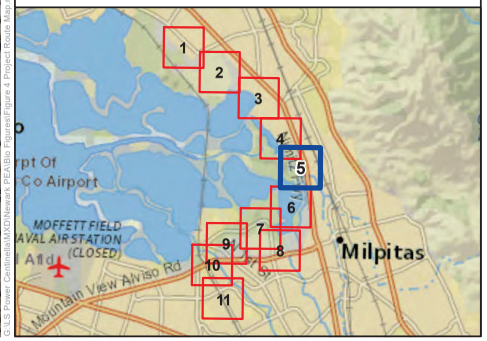


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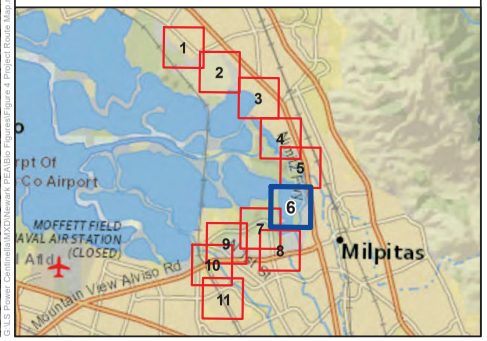


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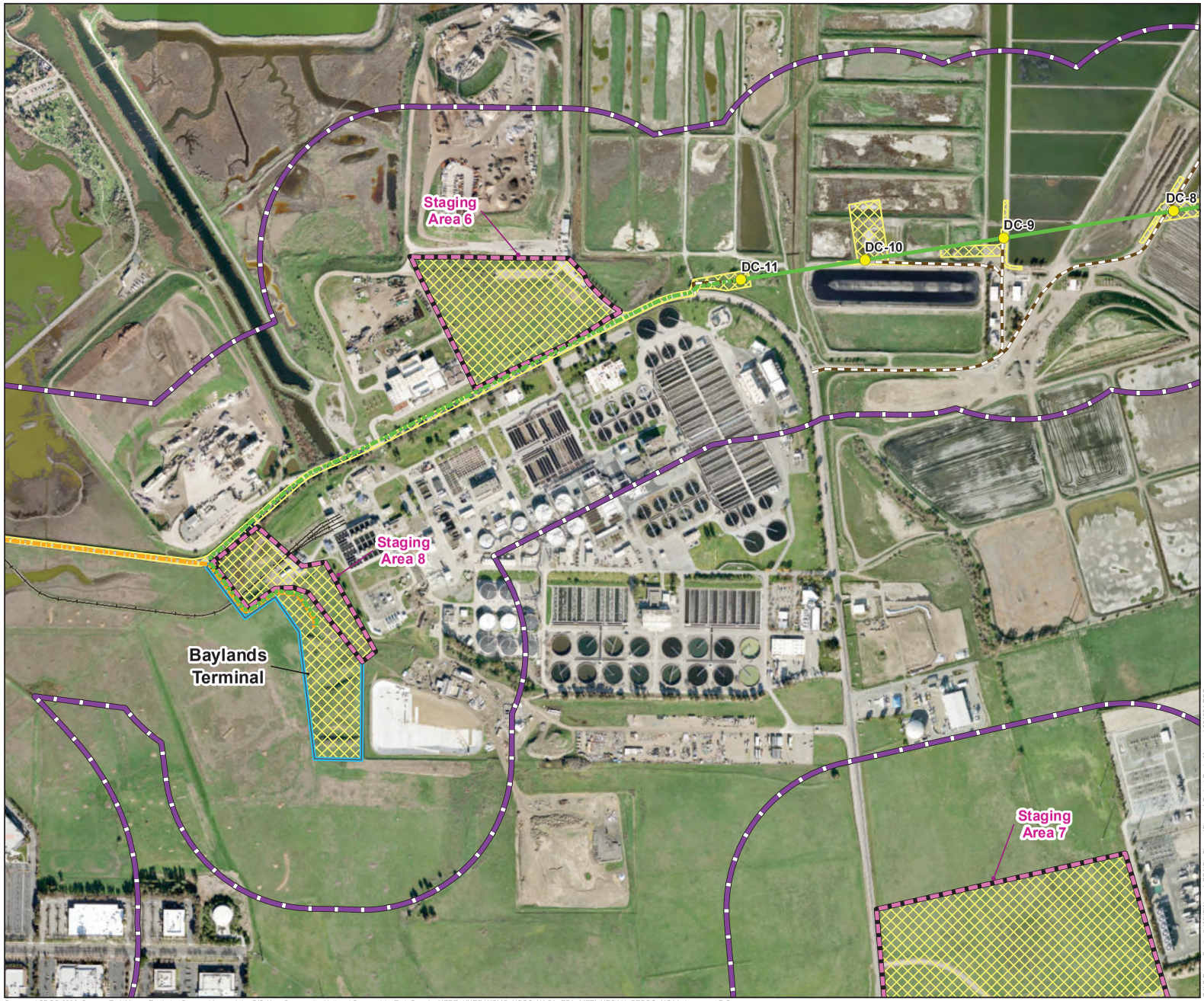


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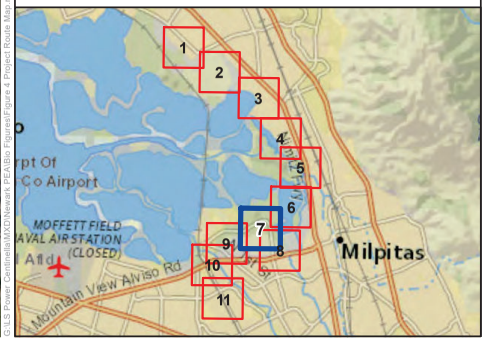


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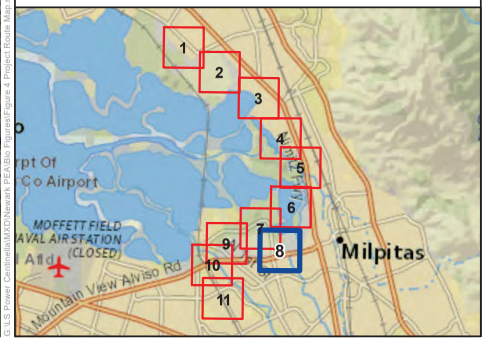


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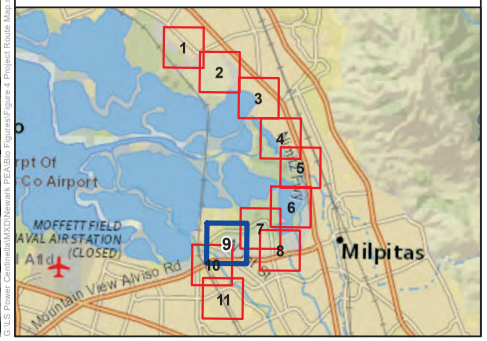


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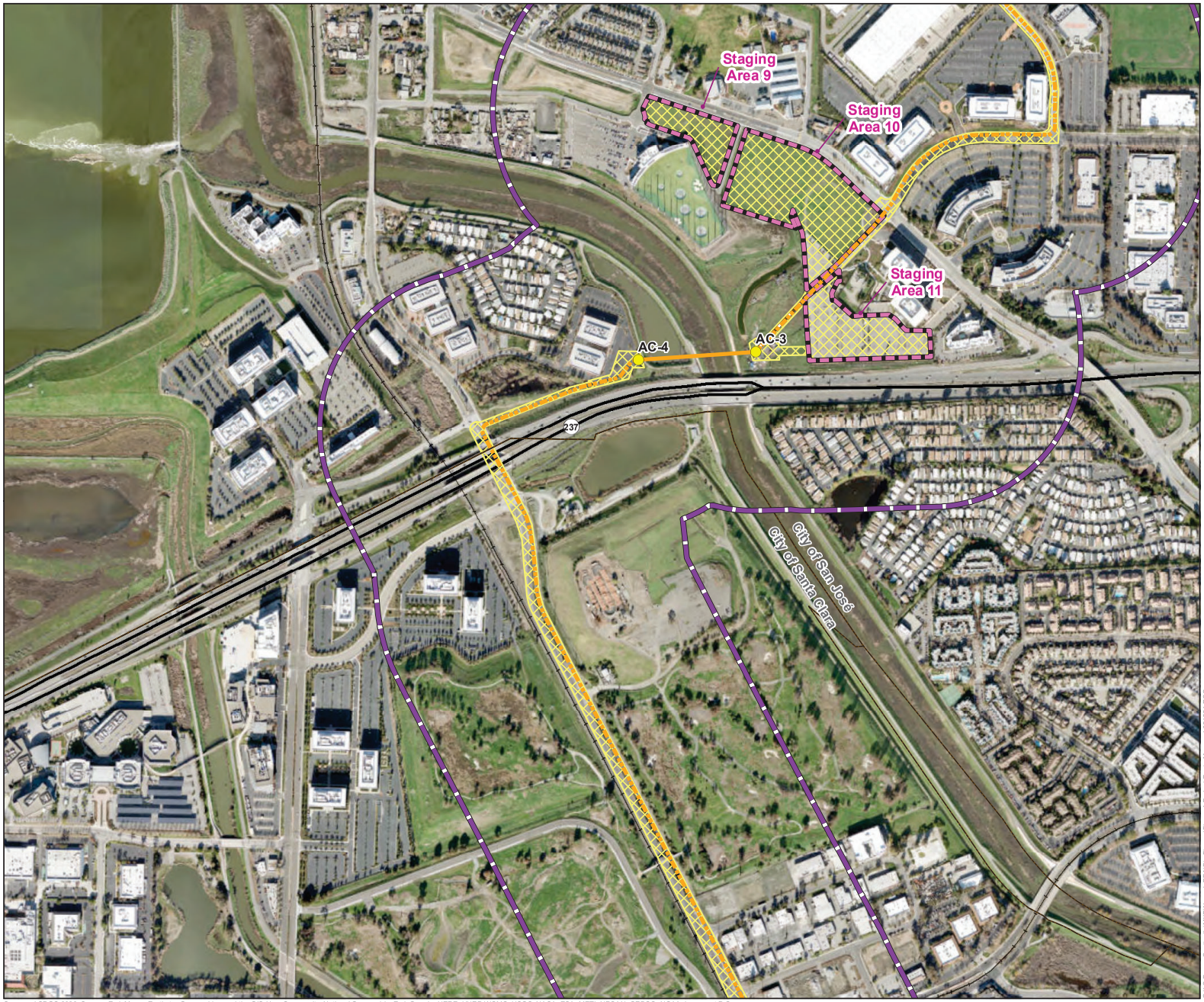


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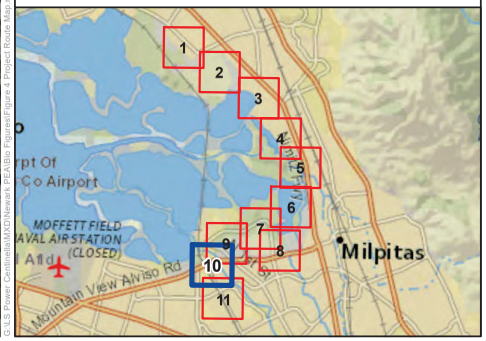


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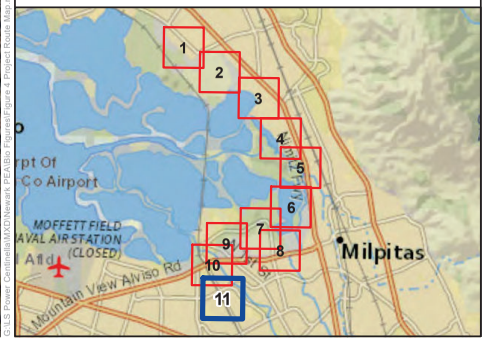


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### 1.6. Agency Consultation

No agency consultation has occurred at this time. Consultation may be required with the California Department of Fish and Wildlife (CDFW), the California Regional Water Quality Control Board (RWQCB), the U.S. Army Corps of Engineers (USACE), National Marine Fisheries Service (NMFS), and/or the U.S. Fish and Wildlife Service (USFWS). Coyote Creek is designated critical habitat for the Central California Coast steelhead (*Oncorhynchus mykiss irideus*) distinct population segment (DPS). If the Proposed Project would require a permit under the Clean Water Act (CWA), the USACE may have to go through Section 7 consultation with NMFS and/or USFWS. If there is no federal nexus, the Proposed Project would have to go through Section 10 consultation with NMFS and/or USFWS.

## 2. Methods

### 2.1. Literature Review

This Biological Resources Technical Report (BRTR) describes all biological resources considered to be within the scope of the BRTR Standards checklist (California Public Utilities Commission [CPUC], 2019). Prior to conducting field surveys, Heritage conducted a literature review and records search for information on occurrences of special-status species in the vicinity of the Proposed Project. The following databases/resources were reviewed for occurrences within five miles of the area (defined by the CPUC as the Project region):

- CDFW's Special Animals List;
- California Natural Diversity Database (CNDDB);
- California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants;
- Western Bat Working Group (WBWG) priority species lists;
- National Wetlands Inventory (NWI);
- United States Geological Survey (USGS) 7.5-minute topographical maps of the Project site and vicinity;
- United States Fish and Wildlife Service (USFWS): Critical Habitat for Threatened and Endangered Species;
- USFWS: Information for Planning and Consultation (IPaC) Project Planning Tool;
- National Marine Fisheries Service (NMFS) National Endangered Species Act (ESA) Critical Habitat Mapper.

Species are considered to have special status if they meet at least one of the following criteria:

- Species listed or proposed for listing as threatened or endangered under the federal ESA (50 CFR § 17.12 [listed plants], 17.11 [listed animals] and various notices in the Federal Register [proposed species]);
- Species that are candidates for possible future listing as threatened or endangered under the federal ESA (61 FR § 40, February 28, 1996);
- Species listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act (CESA) (14 CCR § 670.5);
- Plants listed as rare or endangered under the California Native Plant Protection Act (California Fish and Game Code, Section 1900 et seq.);
- Species that meet the definitions of rare and endangered under CEQA Section 15380;

- Plants considered by the CNPS to be “rare, threatened or endangered in California” (California Rare Plant Rank 1A, 1B, 2A, and 2B) as well as California Rare Plant Rank 3 and 4 plant species (CNPS, 2023a);
- Species designated by CDFW as Fully Protected or a Species of Special Concern;
- Species protected under the federal Bald and Golden Eagle Protection Act (BGEPA);
- Birds of Conservation Concern (BCC) or Watch List species;
- Bats considered by the WBWG to be “high” or “medium” priority (WBWG, 2023a).

Sensitive vegetation communities and habitats include:

- Sensitive vegetation communities/habitats identified in local or regional plans, policies, or regulations, or designated by CDFW or USFWS;
- Areas that provide habitat for locally unique biotic species/communities (e.g., oak woodlands, grasslands, and forests);
- Habitat that contains or supports rare, endangered, or threatened wildlife or plant species as defined by CDFW and USFWS;
- Habitat that supports CDFW Species of Special Concern;
- Areas that provide habitat for rare and endangered species and that meet the definition in CEQA Guidelines Section 15380;
- Existing game and wildlife refuges and reserves;
- Lakes, wetlands, estuaries, lagoons, streams, and rivers;
- Riparian corridors.

The results of the literature review were compiled to create a list of plant and wildlife species and sensitive vegetation communities or habitats that could potentially occur in the Project area. Each species was analyzed for potential to occur in the area (**Section 3**).

## 2.2. Biological Resources Survey Area

The Proposed Project was buffered by 1,000 feet; this is referred to as the Biological Resources Survey Area (“Survey Area”) (approximately 3,889.7 acres; **Figure 5,** *Biological Survey Area*). The biological survey area includes the area in which potential for occurrence of special-status species was analyzed. A large portion of the Survey Area is located within heavily populated urban, developed, or disturbed areas within the Cities of Fremont, Milpitas, Santa Clara, and San José. All of the common species that were observed in the Survey Area were typical species that occur in urban, riparian, estuary, woodland, and grassland habitats. A full list of observed plant and animal species is included in **Appendix C.**




# POWER THE SOUTH BAY PROJECT

## Figure 5: Biological Survey Area

## Alameda Co. and Santa Clara Co., CA

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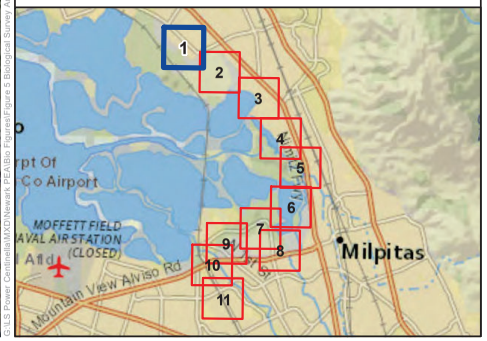


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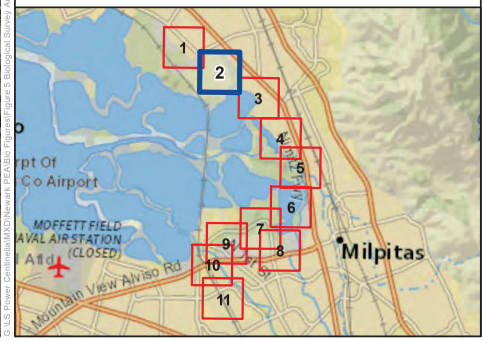


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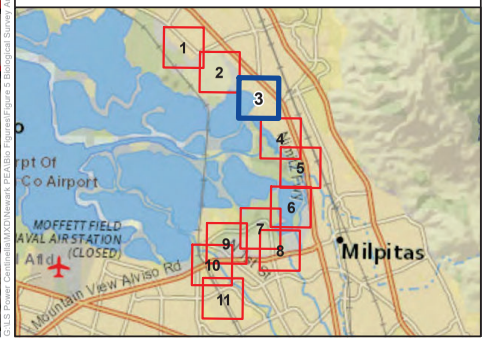


Sources: LSPGC 2023; Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

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# POWER THE SOUTH BAY PROJECT

## Figure 5: Biological Survey Area

## Alameda Co. and Santa Clara Co., CA

### LEGEND

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- Biological Resource Survey Area

**General Features**

- Municipal Boundary
- Interstate
- US Route or State Highway
- Railroad



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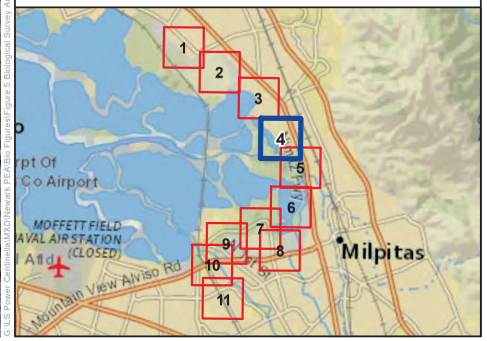


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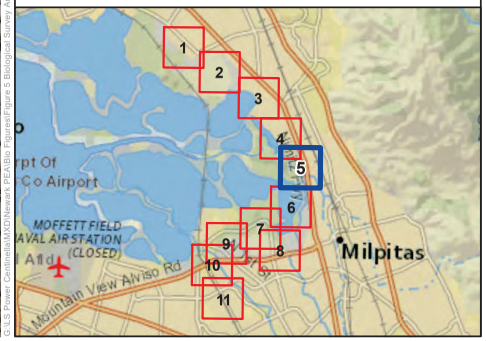


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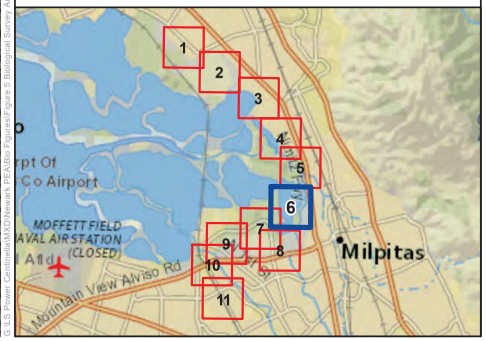


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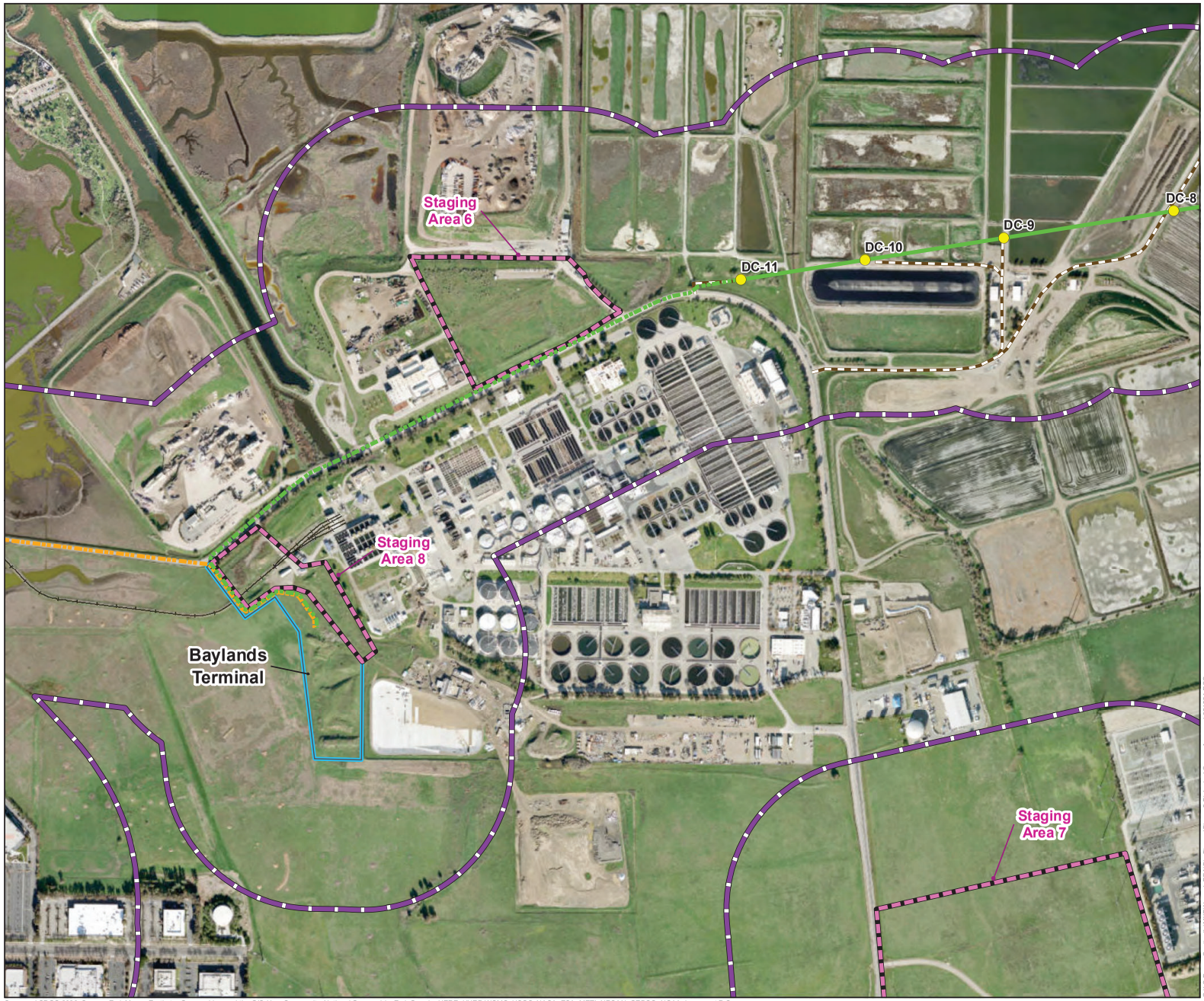


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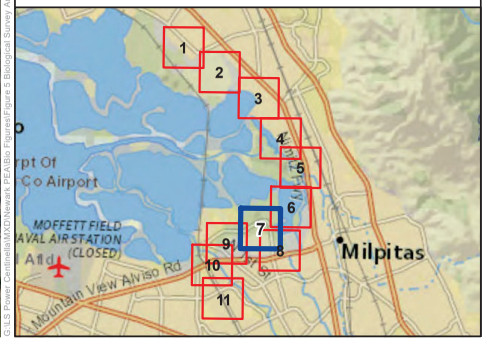


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# POWER THE SOUTH BAY PROJECT

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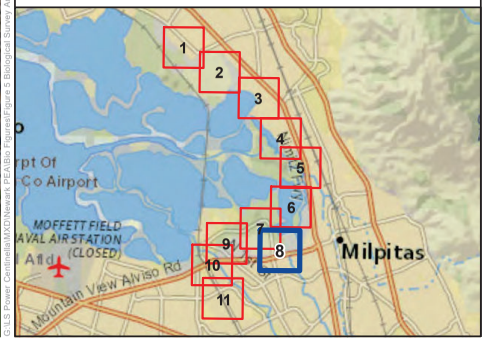


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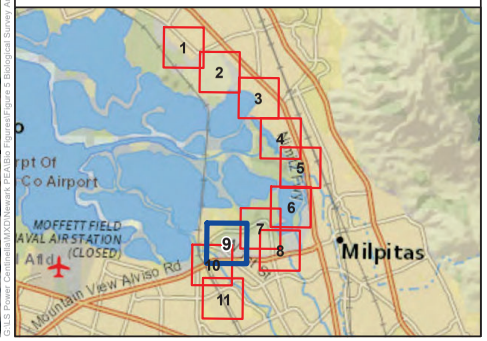


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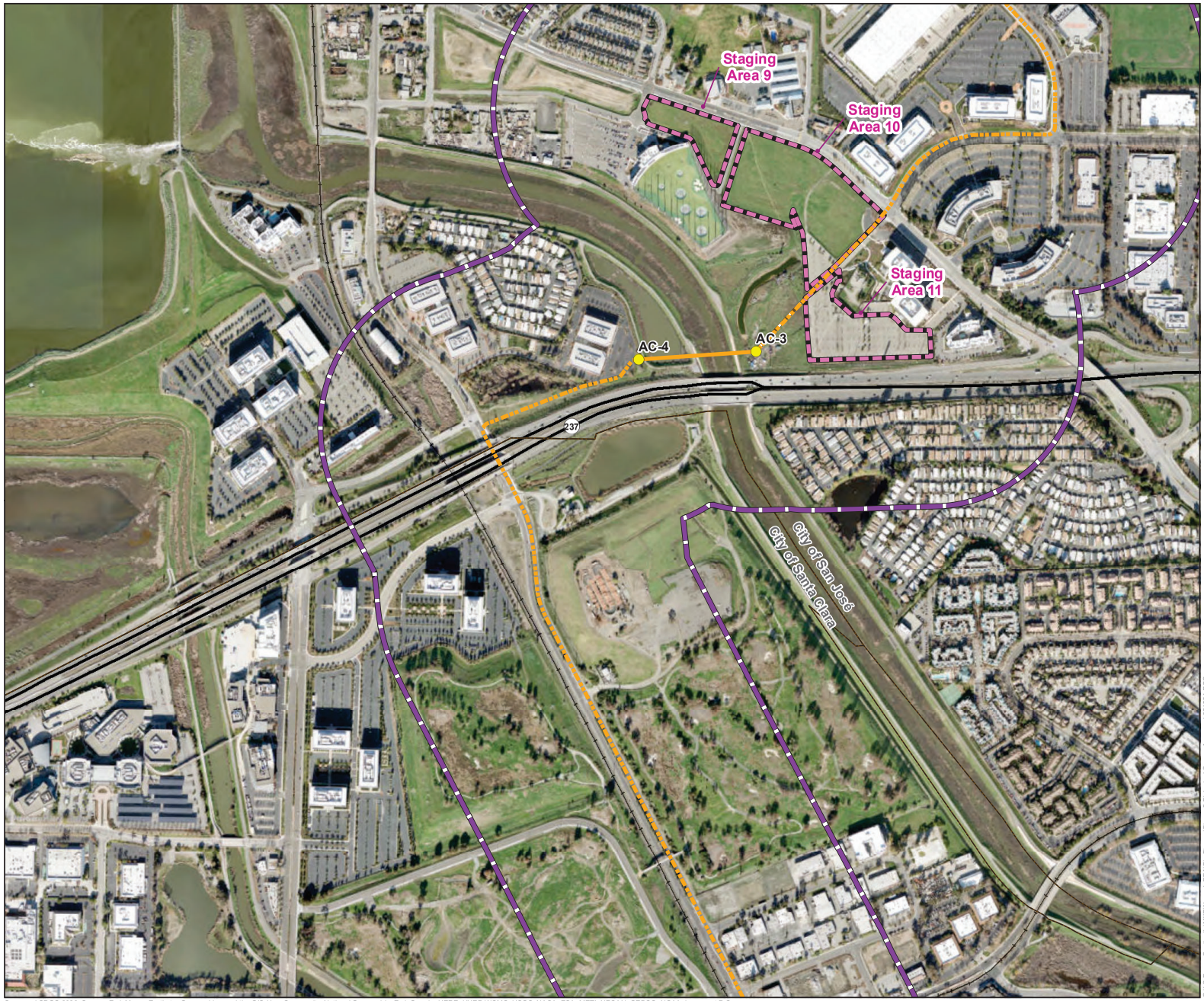


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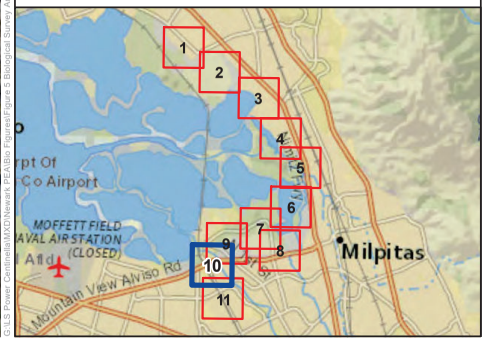


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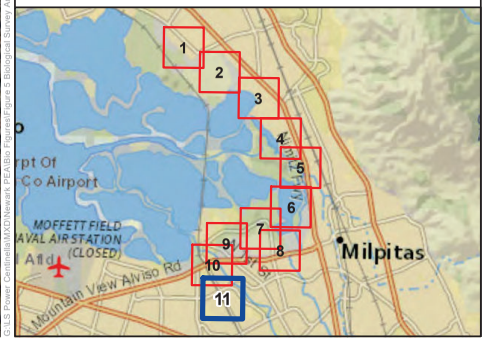


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### 2.3. Biological Surveys

#### 2.3.1. Habitat Assessment and Jurisdictional Waters Mapping Surveys

Biological reconnaissance surveys were conducted over the course of six survey days (September 22, 2023, October 20, 2023, December 19, 2023, January 24 and 25, 2024, and March 23, 2024). The intent of the surveys was to map vegetation communities and analyze the potential for occurrence for special-status species. Potential jurisdictional water features were also investigated and preliminarily mapped throughout the Survey Area. A full formal wetland delineation and mapping was conducted for the jurisdictional water features that had the potential to be impacted by the Proposed Project, which included two areas: the area along Coyote Creek in the vicinity of McCarthy Boulevard and the San José-Santa Clara Regional Wastewater Facility (RWF) (i.e., from the southern side of McCarthy Boulevard bridge to the proposed overhead Structure DC-3), and both north and south sides of Cushing Parkway bridge. A full formal wetland delineation has not been conducted for the remainder of the Proposed Project except within these areas. All areas within native habitats were surveyed where access was granted, and the urban and disturbed areas were surveyed from public roads and paths where possible due to safety concerns and access limitations.

## 3. Regulatory Setting

Several regulations have been established by federal, state, and local agencies to protect and conserve biological resources. The discussion below provides a brief overview of agency regulations that may be applicable to the resources that could occur within the area of the Proposed Project and their respective requirements. The final determination of required permits is made by the regulating agencies.

### 3.1. Federal

#### 3.1.1. Federal Endangered Species Act of 1973

The ESA of 1973 (16 United States Code [U.S.C.] 1531–1544), as amended, protects Federally listed threatened and endangered species from unlawful take. “Take” under the ESA includes activities such as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” The USFWS regulations define harm to include some type of “significant habitat modification or degradation.”

#### 3.1.2. Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703 et seq.) makes it unlawful to pursue, hunt, take, capture, or kill; attempt to take, capture, or kill; possess; offer to or sell, barter, purchase, deliver, or cause to be shipped, exported, imported, transported, carried, or received any native migratory bird, part, nest, egg, or product. Nearly all North American bird species are classified as “migratory birds” and are subject to protection under this act, including all bird species that are discussed in this document.

#### 3.1.3. Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (BGEPA) (16 U.S.C. 668-668c), enacted in 1940 and as amended, prohibits anyone, without a permit issued by the USFWS, from "taking" bald and golden eagles, including their parts, nests, or eggs. The BGEPA defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb." For the purposes of these guidelines, "disturb" means: “to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available:

1. injury to an eagle; or
2. a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior;
3. nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior."

#### 3.1.4. Clean Water Act

The CWA (33 USC 1251 et seq.), as amended, provides a structure for regulating the discharge of pollutants into the waters of the U.S. Through this Act, the Environmental Protection Agency (EPA) is given the authority to implement pollution control programs. These include setting wastewater standards for industry and water quality standards for contaminants in surface waters. The discharge of any pollutant from a point source into navigable waters is illegal unless permitted under the Act’s provisions.

Section 404 of the CWA regulates the discharge of dredged, excavated, or fill material in wetlands, streams, rivers, and other waters of the U.S. The US Army Corps of Engineers (USACE) is the Federal agency authorized to issue Section 404 permits for certain activities conducted in wetlands or other waters of the U.S. Section 401 of the CWA grants each state the right to ensure that the state's interests are protected in relation to any Federally permitted activity resulting in any discharge into navigable waters within the state. In California, the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCBs) are responsible for implementing Section 401 of the CWA. For a proposed project that requires a USACE CWA Section 404 permit, the RWQCB must certify that such discharge complies with state water quality standards through a Water Quality Certification determination under Section 401 of the CWA.

The EPA and USACE have jurisdiction over wetlands and other Waters of the United States (WOTUS; collectively “waters”) that are subject to Section 404 of the CWA or Section 10 of the Rivers and Harbors Act.

### 3.2. State

#### 3.2.1. California Endangered Species Act

The CDFW administers the CESA of 1984, which prohibits the “taking” of listed species except as otherwise provided in state law. Section 86 of the Fish and Game Code defines “take” as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” Under certain circumstances, the CESA applies these take prohibitions to species petitioned for listing (state candidates). Pursuant to the requirements of the CESA, state lead agencies (as defined under CEQA Public Resources Code Section 21067) are required to consult with the CDFW to ensure that any action or project is not likely to jeopardize the continued existence of any endangered or threatened species or result in destruction or adverse modification of essential habitat. Additionally,

the CDFW encourages informal consultation on any proposed project that may impact a candidate species. The CESA requires the CDFW to maintain a list of threatened and endangered species. The CDFW also maintains a list of candidates for listing under the CESA and of species of special concern (or watch list species).

### 3.2.2. State Fully Protected Species

California Fish and Game Code (CFGC) Sections 3511, 4700, 5050 and 5515 designate 37 species of wildlife as Fully Protected in California. The classification of Fully Protected was the State's initial effort in the 1960s to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, mammals, amphibians and reptiles, birds, and mammals. Most Fully Protected species have also been listed as threatened or endangered species under ESA and/or CESA. Fully Protected species may not be taken or possessed at any time, and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the avian species for the protection of livestock.

### 3.2.3. California Fish and Game Code Section 1602

Under Section 1602 of the CFGC, CDFW regulates activities that would divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake that supports fish or wildlife. CDFW has jurisdiction over riparian habitats associated with watercourses. Jurisdictional waters are delineated by the outer edge of riparian vegetation or at the top of the bank of streams or lakes, whichever is wider. Section 1602 of the CFGC requires any person who proposes a project that will substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake or use materials from a streambed to notify the CDFW before beginning the project. If the CDFW determines that the project may adversely affect existing fish and wildlife resources, a Lake or Streambed Alteration Agreement (LSAA) is required.

### 3.2.4. Native Plant Protection Act

The Native Plant Protection Act (NPPA; CFGC Section 1900-1913) prohibits the taking, possessing, or sale within the state of any plant listed by CDFW as rare, threatened, or endangered. An exception to this prohibition allows landowners, under specified circumstances, to take listed plant species, provided that the owners first notify CDFW at least ten days prior to the initiation of activities that would destroy them. The NPPA exempts from “take” prohibition “the removal of endangered or rare native plants from a canal, lateral ditch, building site, or road, or other right of way.”

### 3.2.5. California Environmental Quality Act

CEQA requires lead agencies to evaluate the environmental impact associated with a proposed project. CEQA requires that a local agency prepare an Environmental Impact Report (EIR) on any project it proposes to approve that may have a significant effect on the environment, or a Mitigated Negative Declaration (MND) if the project would not have significant or unmitigable effects. The purpose of a CEQA document is to provide decision-makers, public agencies, and the general public with an objective document that fully discloses the potential environmental effects of a proposed project. The process is specifically designed to objectively evaluate and disclose potentially significant direct, indirect, and cumulative impacts of a proposed project; to identify alternatives that may reduce or eliminate a project's significant effects; and to identify feasible measures that mitigate significant effects of a project.

### 3.2.6. Porter-Cologne Water Quality Control Act

The Porter-Cologne Quality Control Act grants the SWRCB and the RWQCBs power to protect water quality and is the primary vehicle for implementation of California's responsibilities under the Federal CWA. Any person proposing to discharge waste to waters of the state within any region must file a report of waste discharge with the appropriate regional board.

### 3.2.7. California Migratory Bird Protection Act

Assembly Bill (AB)454 is an act to amend, repeal, and add Section 3513 of the California Fish and Game Code, relating to migratory birds. This act was approved by the Governor on September 27, 2019. This AB amends Section 3513 to read: "It is unlawful to take or possess any migratory nongame bird as designated in the Federal Migratory Bird Treaty Act (16 U.S.C. Sec. 703 et seq.) before January 1, 2017, any additional migratory nongame bird that may be designated in that federal act after that date, or any part of a migratory nongame bird described in this section, except as provided by rules and regulations adopted by the United States Secretary of the Interior under that federal act before January 1, 2017, or subsequent rules or regulations adopted pursuant to that federal act, unless those rules or regulations are inconsistent with this code."

### 3.2.8. San Francisco Bay Conservation and Development Commission

The San Francisco Bay Conservation and Development Commission (BCDC) is a California state commission dedicated to the protection, enhancement, and responsible use of the San Francisco Bay. Under the McAteer-Petris Act, BCDC has authority to issue or deny permit applications for placing fill, extracting materials, or changing the use of any land, water, or structure within its jurisdiction (San Francisco BCDC, 2020). The San Francisco Bay Plan was originally completed and adopted by the BCDC in 1968 and was transmitted to the California legislature and the Governor in 1969. BCDC is responsible for implementing and updating the San Francisco Bay Plan, which provides policy guidance for development within its jurisdiction and delineates Priority Use Areas that should be reserved for certain land uses on the San Francisco Bay shoreline. Priority Use Areas include ports, water-related industry, water-oriented recreation, airports, and wildlife refuges. The San Francisco Bay Plan outlines major conclusions and policies, which focus on guiding shoreline development and protecting and enhancing ecosystems that provide aquatic habitat. Major plan proposals include maintaining wildlife refuges such as the Don Edwards San Francisco Bay NWR.

## 3.3. Local

The CPUC has sole and exclusive state jurisdiction over the siting and design of the Proposed Project. Pursuant to CPUC General Order 131-D (GO 131-D), Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters" (CPUC, 2023). Consequently, public utilities are directed to consider local regulations and consult with local agencies, but City and County regulations are not applicable as the City of San José and the County of Santa Clara do not have jurisdiction over the Proposed Project. Because the CPUC has exclusive jurisdiction over the Proposed Project siting, design, and construction, the Proposed Project is not subject to local land use and zoning regulations or discretionary permits. This section includes a summary of local biological resources-related policies, plans, or programs for informational purposes. Although LS Power Grid California,

LLC ("LS Power") is not subject to local discretionary permitting, ministerial permits would be secured as appropriate.

### 3.3.1. City of Fremont General Plan

The following goals and policies from the City of Fremont General Plan (City of Fremont, 2011) are relevant to biological resources and have been provided for informational purposes.

**Goal 7-1** **Biological Resources**. A thriving natural environment with protected habitat that enhances the biological value of the City and preserves the open space frame.

**Policy 7-1.1** **Preservation of Natural Habitat**. Preserve and protect fish, wildlife, and plant species and their habitats including wetlands, creeks, lakes, ponds, saltwater bodies and other riparian areas. Maintain these areas for their critical biological values and to help improve water quality.

**Policy 7-1.2** **Protection of Species**. Preserve and protect rare, threatened, endangered and candidate species and their habitats consistent with State and Federal law.

**Policy 7-1.5** **Promotion of Interagency Coordination**. Promote interagency coordination for the protection and preservation of biological resources.

**Policy 7-1.7** **Mitigate Development Impacts**. Mitigate the impacts of development on the natural environment to the extent possible through sound planning, design, and management of development projects.

**Policy 7-1.8** **Urban Forest**. Promote and protect the City's urban forest and maintain healthy tree resources within the City.

**Goal 7-2** **Water Resources**. A protected water resource system that offers natural habitat and enhances the biological value of the City.

**Policy 7-2.1** **Preservation of Water Resources**. Water resources such as the Niles Cone Groundwater Basin, wetlands, flood plains, recharge zones, riparian areas, open space and native habitats should be identified, preserved and restored as valued assets for flood protection, water quality improvement, groundwater recharge, habitat, and overall long term water resource sustainability.

**Goal 7-3** **Water Quality**. High quality water protected from pollutants and managed to improve the quality of the San Francisco Bay and groundwater resources.

**Policy 7-3.1** **Protect and Improve Water Quality**. Protect and improve water quality in all Fremont's creeks, streams, water courses and water bodies.

### 3.3.2. City of Fremont Municipal Code

The City of Fremont Municipal Code Section 12.30.070 Streets, Sidewalks and Public Property, Maintenance of Street Trees and Sidewalks provides regulation for the removal of street trees.

Section 12.30.080 outlies the criteria for removal permit, which applies to the nonemergency removal of street trees. In accordance with Section 12.30.130 Application for street tree permit (City of Fremont, 2024):

(a) A person desiring to obtain a permit to plant, prune or remove a street tree must submit a complete application in compliance with Section 12.30.130 to the city manager and pay applicable fees as established by the city council.
(b) A person doing business as a public utility, subject to the jurisdiction of the State Public Utilities Commission, and any public agency providing utility service may apply as set forth in subsection (a) of this section for a permit valid for six months from the date of issuance permitting such person to trim, brace, remove, or perform other such acts with respect to trees or shrubs growing adjacent to the public streets of the city or which grow upon private property to the extent that they encroach upon such public streets, as may be necessary to comply with the safety regulations of such commission and as may be necessary to maintain the safe operations of its business. (Ord. 11-2010 § 5, 5-25-10. 1990 Code § 6-2111.)

In accordance with the Municipal Code, only an approved City of Fremont tree contractor can apply for a Tree Permit and perform maintenance on, remove, and/or replace street trees.

### 3.3.3. City of Milpitas General Plan

The following goals and policies from the City of Milpitas General Plan (City of Milpitas, 2021) are relevant to biological resources and have been provided for informational purposes.

**Goal CON-2** Protect and enhance native trees and vegetation throughout the city.

**Policy CON 2-1** Conserve existing native trees and vegetation where possible and integrate regionally native trees and plant species into development and infrastructure projects where appropriate.

**Policy CON 2-3** Avoid removal of large, mature trees that provide wildlife habitat, visual screening, or contribute to the visual quality of the environment through appropriate project design and building siting. If full avoidance is not possible, prioritize planting of replacement trees on-site over off-site locations. Replacement trees for high-quality mature trees should generally be of like kind, and provide for comparable habitat functionality, where appropriate site conditions exist.

**Policy CON 2-5** Facilitate the preservation of existing trees, the planting of additional street trees, and the replanting of trees lost through disease, new construction or by other means.

**Policy CON 2-7** Facilitate planting and retention of street trees in landscaped street medians and along City streets.

**Goal CON-3** Protect and maintain waterways and other sensitive habitat for plant and animal species throughout Milpitas and to protect the health of the San Francisco Bay.

**Policy CON 3-1** Preserve and enhance biological communities that contribute to Milpitas' and the region's biodiversity including, but not limited to, wetlands, riparian areas, and aquatic habitat.

**Policy CON 3-2** Preserve and enhance the aesthetic and habitat value of riparian corridors including, but not limited to Coyote, Berryessa and Penitencia Creeks.

**Policy CON 3-3** Limit the disturbance of natural water bodies and drainage systems in Milpitas by conserving natural open space areas, protecting channels, and minimizing the impacts and pollutants from stormwater and urban runoff.

**Policy CON 3-5** Work with the Santa Clara Valley Water District (SCVWD or "Valley Water") to preserve wetlands, riparian corridors, and buffer zones in Milpitas by continuing to require that new development follow the "Guidelines and Standards for Land Use Near Streams" to protect streams and riparian habitats. Encourage the use of Green Stormwater Infrastructure such as water quality wetlands, bioretention swales, watershed-scale retrofits, and other low-impact development techniques, etc., consistent with the City's Green Stormwater Infrastructure Plan and where such measures are likely to be effective and technically and economically feasible.

### 3.3.4. City of Milpitas Municipal Code

The City of Milpitas Municipal Code Ordinance 201.5, Section 7 requires a permit to be obtained to remove a protected tree on specified property types once it reaches a certain size in circumference. A permit is required to remove a protected tree of any size on residential commercial/industrial, zoning/subdivision and vacant lots. Trees planted in the public right-of-way (ROW) and tree planting easements conform to the City street tree planting standard detail. Street trees are located in the public ROW between the curb and sidewalk. The City's Public Works Department personnel are responsible for removing and pruning street trees. A service request must be submitted to the City's Public Works Department to prune or remove a City street tree (City of Milpitas, 2024).

### 3.3.5. City of San José General Plan

The following goals and policies from the City of San José General Plan (City of San José, 2024a) are relevant to biological resources and have been provided for informational purposes.

**Goal MS-8** **Environmental Stewardship.** Establish San José as a local, regional, and statewide model for responsible management of resources.

**Policy MS-10.8** Minimize vegetation removal required for fire prevention. Require alternative to discing such as mowing to the extent feasible. Where vegetation removal is required for property maintenance purposes, encourage alternatives that limit the exposure of bare soil.

**Goal MS-21** **Community Forest.** Preserve and protect existing trees and increase planting of new trees within San José to create and maintain a thriving Community Forest that contributes to the City's quality of life, its sense of community, and its economic and environmental well-being.

**Policy MS-21.1** Manage the Community Forest to achieve San José's environmental goals for water and energy conservation, wildlife habitat preservation, stormwater retention, heat reduction in urban areas, energy conservation, and the removal of carbon dioxide from the atmosphere.

**Policy MS-21.4** Encourage the maintenance of mature trees, especially natives, on public and private property as an integral part of the community forest. Prior to allowing the removal of any mature tree, pursue all reasonable measures to preserve it.

**Policy MS-21.5** As part of the development review process, preserve protected trees (as defined by the Municipal Code) and other significant trees. Avoid any adverse effect on the health and longevity of protected or other significant trees through appropriate design measures and construction practices. Special priority should be given to the preservation of native oaks and native sycamores. When tree preservation is not feasible, include appropriate tree replacement, both in number and spread of canopy.

**Policy MS-21.6** As a condition of new development, require the planting and maintenance of both street trees and trees on private property to achieve a level of tree coverage in compliance with and that implements City laws, policies, or guidelines.

**Policy MS-21.7** Manage infrastructure to ensure that the placement and maintenance of street trees, streetlights, signs, and other infrastructure assets are integrated. Give priority to tree placement in designing or modifying streets.

**Policy MS-21.9** Where urban development occurs adjacent to natural plant communities (e.g., oak woodland, riparian forest), landscaping plantings shall incorporate tree species native to the area and propagated from local sources (generally from within 5-10 miles and preferably from within the same watershed).

**Policy MS-21.10** Prohibit London plane trees from being planted in the Coyote Planning Area, which is located near the most significant stands of sycamore alluvial woodland in the City. Planting of this species is discouraged elsewhere, particularly near riparian areas. Prohibit holly-leaved oaks from being planted in areas containing stands of native oaks or in proximity to native oak woodland habitat.

**Goal ER-1** **Grassland, Oak Woodlands, Chaparral, and Coastal Scrub.** Preserve, protect, and restore the ecological integrity and scenic characteristics of grasslands, oak woodlands, chaparral, and coastal scrub in hillside areas.

**Policy ER-1.3** Cooperate with other agencies in the preservation and management of native hillside vegetation.

**Policy ER-1.4** Minimize the removal of ecologically valuable vegetation such as serpentine and non-serpentine grassland, oak woodlands, chaparral, and coastal scrub during development and grading for project within the City.

**Policy ER-1.5** Preserve and protect oak woodlands and individual oak trees. Any loss of oak woodland and/or native oak trees must be fully mitigated.

**Goal ER-2** **Riparian Corridors.** Preserve, protect, and restore the City's riparian resources in an environmentally responsible manner to protect them for habitat value and recreational purposes.

**Policy ER-2.1** Ensure that new public and private development adjacent to riparian corridors in San José are consistent with the provisions of the City's Riparian Corridor Policy Study and any adopted Santa Clara Valley Habitat Conservation Plan/Natural Communities Conservation Plan (HCP/NCCP).

**Policy ER-2.2** Ensure that a 100-foot setback from riparian habitat is the standard to be achieved in all but a limited number of instances, only where no significant environmental impacts would occur.

**Policy ER-2.3** Design new development to protect adjacent riparian corridors from encroachment of lighting, exotic landscaping, noise, and toxic substances into the riparian zone.

**Policy ER-2.4** When disturbances to riparian corridors cannot be avoided, implement appropriate measures to restore, and/or mitigate damage and allow for fish passage during construction.

**Policy ER-2.5** Restore riparian habitat through native plant restoration and removal of non-native/invasive plants along riparian corridors and adjacent areas.

**Goal ER-4** **Special-Status Plants and Animals.** Preserve, manage, and restore habitat suitable for special-status species, including threatened and endangered species.

**Policy ER-4.1** Preserve and restore, to the greatest extent feasible, habitat areas that support special-status species. Avoid development in such habitats unless no feasible alternatives exist, and mitigation is provided of equivalent value.

**Policy ER-4.3** Prohibit planting of invasive non-native plant species in natural habitats that support special-status species.

**Policy ER-4.4** Require that development projects incorporate mitigation measures to avoid and minimize impacts to individuals of special-status species.

**Goal ER-5** **Migratory Birds.** Protect migratory birds from injury or mortality.

**Policy ER-5.1** Avoid implementing activities that result in the loss of active native birds' nests, including both direct loss and indirect loss through abandonment, of native birds. Avoidance of activities that could result in impacts to nests during the breeding season or maintenance of buffers between such activities and active nests would avoid such impacts.

**Policy ER-5.2** Require that development projects incorporate measures to avoid impacts to nesting migratory birds.

**Goal ER-6** **Urban Natural Interface.** Minimize adverse effects of urbanization on natural lands adjacent to the City's developed areas.

**Policy ER-6.3** Employ low-glare lighting in areas developed adjacent to natural areas, including riparian woodlands. Any high-intensity lighting used near natural areas will be placed as close to the ground as possible and directed downward or away from natural areas.

**Policy ER-6.7** Include barriers to animal movement within new development and, when possible, within existing development, to prevent movement of animals (e.g., pets and wildlife) between developed areas and natural habitat areas where such barriers will help to protect sensitive species.

**Policy ER-6.8** Design and construct development to avoid changes in drainage patterns across adjacent natural areas and for adjacent native trees, such as oaks.

**Goal ER-7** **Wildlife Movement.** Minimize adverse effects of future development on wildlife movement and remove or reduce existing impediments to wildlife movement.

**Policy ER-7.3** Where new road crossings of streams are constructed, or existing culverts are replaced or improved, design them to allow movement of aquatic species present in any watercourse crossed by the road. Use clear-span bridges in place of culverts where feasible.

### 3.3.6. City of San José Municipal Code

Street trees are those located in the public ROW between the curb and sidewalk; in some locations, the public ROW may be up to 12 feet from the curb. The City's Department of Transportation (DOT) provides permits for pruning street trees and oversees their removal. It is illegal to prune or remove a street tree without a permit (City of San José, 2024b).

### 3.3.7. City of Santa Clara General Plan

The following goals and policies from the City of Santa Clara General Plan (City of Santa Clara, 2010) are relevant to biological resources and have been provided for informational purposes.

**Policy 5.3.1-P10** Provide opportunities for increased landscaping and trees in the community, including requirements for new development to provide street trees and a minimum 2:1 on- or off-site replacement for trees removed as part of the proposal to help increase the urban forest and minimize the heat island effect.

**Goal 5.10.1-G1** The protection of fish, wildlife and their habitats, including rare and endangered species.

**Goal 5.10.1-G2** Conservation and restoration of riparian vegetation and habitat.

**Policy 5.10.1-P1** Require environmental review prior to approval of any development with the potential to degrade the habitat of any threatened or endangered species.

**Policy 5.10.1-P2** Work with Santa Clara Valley Water District and require that new development follow the "Guidelines and Standards for Lands Near Streams" to protect streams and riparian habitats.

**Policy 5.10.1-P4** Protect all healthy cedars, redwoods, oaks, olives, bay laurel and pepper trees of any size, and all other trees over 36 inches in circumference measured from 48 inches above-grade on private and public property as well as in the public right-of-way.

**Policy 5.10.1-P5** Encourage enhancement of land adjacent to creeks in order to foster the reinstatement of natural riparian corridors where possible.

**Policy 5.10.1-P11** Require use of native plants and wildlife-compatible non-native plants, when feasible, for landscaping on City property.

**Policy 5.10.1-P12** Encourage property owners and landscapers to use native plants and wildlife-compatible non-native plants, when feasible.

**Policy 5.10.4-P5** Prohibit new development that would reduce water quality below acceptable State and local standards.

### 3.3.8. City of Santa Clara Municipal Code

The City of Santa Clara Municipal Code Section 12.35.050 provides the following regarding City tree planting, maintenance, and removal that is relevant to the Proposed Project (City of Santa Clara, 2023).

(a) No person shall plant or cause to be planted any tree or plant in a public place, apart from park strip landscaping as indicated in Santa Clara City Code (SCCC) 12.35.060.
(b) The City shall have jurisdiction and control of the planting and placement of all city trees, and shall have supervision, direction, and control of the structural pruning of the canopy, removal determination, relocation, and replacement thereof. Planting and maintenance shall conform to American National Standards Institute (ANSI) A300 standards and follow all tree care best management practices published by International Society of Arboriculture (ISA).
(c) Property owners are responsible for watering city trees within their property, clearing the sidewalk of city tree debris, and removing all debris associated with the normal growth cycle of city trees including, but not limited to, fallen leaves and needles, small fallen branches, fruit debris, and seeds.
(d) Property owners are responsible for notifying the City of hazardous or damaged city trees within their property, and in the park strip in front of their property.
(e) The City shall maintain criteria for evaluating city tree removals that may be updated from time to time.
(h) The City may authorize the pruning or removal of a city tree by a property owner, at the property owner's own expense, if the removal or pruning meets the established criteria but has been deemed a lower priority for action by the City. The City's authorization of such action by a property owner is conditioned upon the property owner first obtaining a permit

from the City. All pruning and removal work must conform to ANSI A300 standards and follow all tree care best management practices published by ISA.

(i) If a vacant site where a street tree was removed is suitable to support a new street tree, the site shall be replanted with a suitable tree species from the City tree list. (Ord. 2036 § 2, 12-7-21).

### 3.3.9. Habitat Conservation Plan

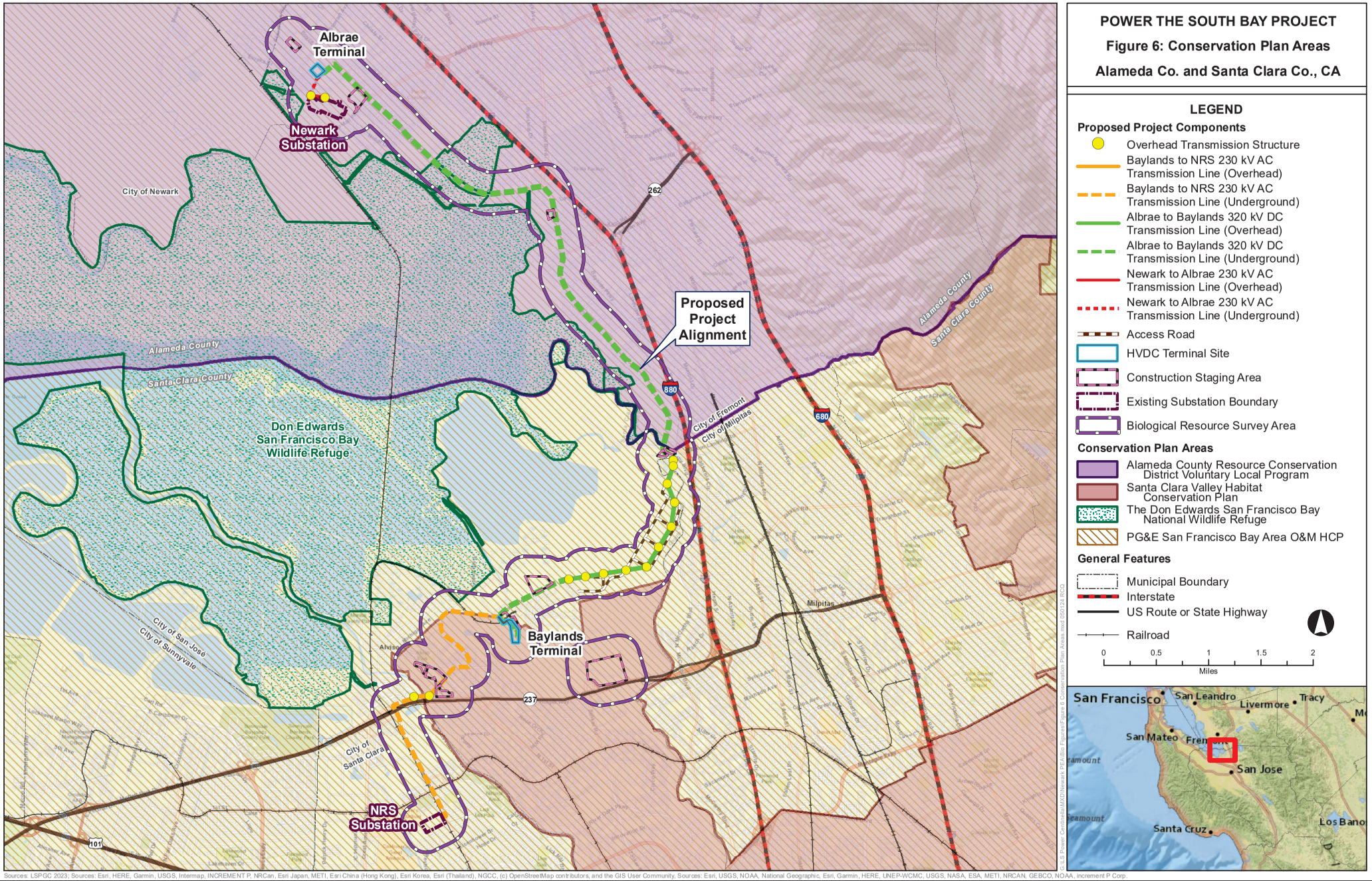
The Proposed Project lies within the Pacific Gas and Electric Company (PG&E) San Francisco Bay Area Operations and Maintenance Habitat Conservation Plan ("Bay Area O&M HCP") (ICF, 2017), the Santa Clara Valley Habitat Conservation Plan (HCP) (County of Santa Clara et al., 2012), the Don Edwards San Francisco Bay NWR CCP (USFWS, 2012), and the Alameda County Resource Conservation District (ACRCD) Voluntary Local Program (VLP) (ACRCD, 2012). **Figure 6**, *Conservation Areas Map* depicts the boundaries of these conservation plans.

**PG&E's San Francisco Bay Area Operations and Maintenance Habitat Conservation Plan**

PG&E's Bay Area O&M HCP for their San Francisco Bay Area activities covers 18 wildlife and 13 plant species, and the purpose is to enable PG&E to continue to conduct current and future O&M activities within the nine counties of the San Francisco Bay Area while avoiding, minimizing, and mitigating for temporary and permanent impacts on threatened- and endangered-species habitat that could result from PG&E's ongoing O&M activities (ICF, 2017). LS Power is not a stakeholder of PG&E's Bay Area O&M HCP. Furthermore, the Bay Area O&M HCP does not cover the type of activities that are associated with the Proposed Project.

**Santa Clara Valley Habitat Conservation Plan**

The Cities of Gilroy, Morgan Hill and San José, the County of Santa Clara, the Santa Clara Valley Transportation Authority and the Santa Clara Valley Water District, in association with the USFWS and the CDFW; conducted a collaborative process to prepare and implement a habitat conservation plan for the Santa Clara Valley HCP. The Santa Clara Valley HCP is intended to promote the recovery of endangered species and enhance ecological diversity and function, while accommodating planned growth on approximately 500,000 acres, or two-thirds of southern Santa Clara County. The Santa Clara Valley Habitat Agency implements the plan. The Santa Clara HCP is a long-range plan to protect and enhance ecological diversity and function within a large section of the county of Santa Clara, while allowing for currently planned development and growth. This HCP provides a framework for the protection of natural resources while streamlining and improving the environmental permitting process for both private and public development, including activities such as road, water, and other infrastructure construction and maintenance work. The Santa Clara Valley HCP is intended to provide environmental benefit by resulting in the creation of a number of new habitats reserves larger in scale and more ecologically valuable than the fragmented, piecemeal habitats yielded by mitigating projects on an individual basis.




Sources: LSPGC 2023; Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community, Sources: Esri, USGS, NOAA, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

The Proposed Project is located within the permit area for the Santa Clara Valley HCP. The Santa Clara Valley HCP covers public and private utility activities within the planning limits of urban growth (as defined by the HCP) such as those that are associated with the Proposed Project. A majority of the Proposed Project occurs within the planning limits of urban growth and may be included as covered activities under this HCP. The Santa Clara Valley HCP requires permits for project-specific impacts on Santa Clara Valley HCP-listed species and removes the need to obtain approvals from the wildlife agencies and reduces the number and scope of required biological studies. The Santa Clara Valley HCP covers public and private utility activities, but coverage of the Proposed Project has not been confirmed. LS Power would confirm whether the Proposed Project is covered by the Santa Clara Valley HCP as the Proposed Project could potentially opt into and be covered by this HCP.

**Don Edwards San Francisco Bay National Wildlife Refuge Comprehensive Conservation Plan**

The USFWS manages the National Wildlife Refuge System and develops CCPs that contain refuge-specific programs for conserving natural resources, stewarding wildlife habitat, and engaging the community in conservation (USFWS, 2012). The National Wildlife Refuge System Improvement Act of 1997 (16 U.S.C. 668dd) requires that all refuges be managed in accordance with an approved CCP by 2012. The Don Edwards San Francisco Bay NWR CCP and accompanying Environmental Assessment (EA) guide refuge management for 15 years and address service legal mandates, policies, goals, and National Environmental Policy Act (NEPA) compliance. As discussed therein, refuges are guided by the purposes of the individual refuge, the mission and goals of the Refuge System, USFWS policy, laws, executive orders (EOs), treaties, interstate compacts, and policies pertaining to the conservation and protection of natural and cultural resources. As described in the CCP's Compatibility Policy, lands within the Refuge System are different from other multiple use public lands in that they are closed to all public uses unless deemed compatible and formally allowed.

Goals, objectives, and strategies outlined in the Don Edwards San Francisco Bay NWR CCP aim for the USFWS to protect and restore the refuge's tidal marsh, mudflat, open bay, vernal pool, grassland, and upland habitats and provide habitat for protected and sensitive species. Objectives provide implementation measures to achieve the CCP's goals to protect and contribute to the recovery of species, conserve, enhance, and create habitats to support migratory birds and native flora and fauna, and increase community stewardship and environmental education. Portions of the Proposed Project would be located adjacent to the Don Edwards San Francisco Bay NWR. The Don Edwards San Francisco Bay NWR CCP does not provide regulations or take authorization for private development or utility infrastructure projects. Therefore, the CCP is provided for informational purposes.

**Alameda County Resource Conservation District Voluntary Local Program**

The ACRCD developed the Alameda County VLP in collaboration with CDFW and the Natural Resources Conservation Service to encourage farmers and ranchers to voluntarily enhance, restore, and maintain habitat for sensitive, candidate, threatened, and endangered species that benefit from habitat maintenance and agricultural activities (ACRCD, 2012). The program was authorized by Senate Bill 231 (Costa, 1997), which required CDFW, in cooperation with the California Department of Food and Agriculture (CDFA), to adopt regulations to create locally designed voluntary programs for agricultural activities on farms or ranches that encourage habitat conservation and minimize take of threatened, endangered, and candidate species, and wildlife in general. The Alameda County VLP provides take authorization, under CESA, to participating farmers

and ranchers while following the management practices for two species listed as threatened in California, the California tiger salamander (CTS) and the Alameda whipsnake. The VLP covers the entire County of Alameda but primarily serves residents conducting routine and on-going agricultural activities in the eastern, rural portion of the County of Alameda and within properties adjoining or encompassing creeks in rural-urban interface areas. The VLP also excludes projects in salt marsh and estuary habitats in the County's bayfront area, including land and waterways under BCDC jurisdiction. As mapped by the VLP Land Use figure, the Proposed Project would be located within Urban and Buildup Land and Other (rural development, mined land, etc.) in the County of Alameda and would not be eligible for participation in the VLP. However, this program is discussed for informational purposes.

# 4. Existing Conditions

## 4.1. Biological Resource Setting

The approximately 3,889.7-acre Survey Area includes the area in which the potential for occurrence of special-status species was analyzed. A large portion of the Survey Area is located within heavily populated urban, developed, or disturbed areas within the Cities of Fremont, Milpitas, San José, and Santa Clara. Photographs of the Survey Area are included in **Appendix A**. All of the common species that were observed in the Survey Area were typical for urban, riparian, estuary, woodland, and grassland habitats. A full list of observed plant and animal species is included in **Appendix C**.

## 4.2. Soils, Topography, and Drainage

Thirty different soil types are located within the Survey Area (U.S. Department of Agriculture National Resource Conservation Service [USDA NRCS], 2023). Seven of these are associated with urban land and five are associated with water features. **Figure 7,** *Soils* shows the soil types within the Survey Area.

The Proposed Project Survey Area ranges in elevation from -10 to 54 feet above mean sea level (amsl), with the highest points at the south end of the Proposed Project near SR-237 and lowest at the south end of the transmission line segment along Fremont Boulevard.

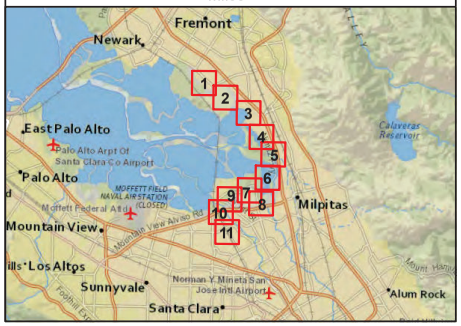
Water in the Proposed Project region flows generally from the east and southeast off the Diablo Range and the Santa Cruz Mountains down into the Santa Clara Valley and then towards the San Francisco Bay to the west and northwest. Water is generally confined to stream courses in the area (primarily Coyote Creek) and the San Francisco Bay. Water that falls within a majority of the Survey Area falls on impervious surfaces or yards associated with urban areas. The water then contributes to stormwater and is guided into storm drains and associated stormwater control features. Santa Clara County has a Mediterranean climate, characterized by extended periods of precipitation during the winter months and virtually no precipitation from spring through autumn. The wet season generally extends from November through April, while rainfall from May through October tends to be minimal. Annual average rainfall varies significantly due to topography and related orographic and rain shadow effects. Increased elevation on coastal oriented slopes (typically west/southwest facing) results in increased precipitation while descending the lee-side interior facing (typically east/northeast facing) results in decreased precipitation. A rainfall transect across the county illustrates this condition. For example, portions of Santa Clara County in the Santa Cruz Mountains receive 40 to 60 inches per year. Moving east, down the lee side of the Santa Cruz range into the rain shadow of the central Santa Clara Valley, precipitation falls an average of 13 to 14 inches in the vicinity of downtown San José (County of Santa Clara et al., 2012).

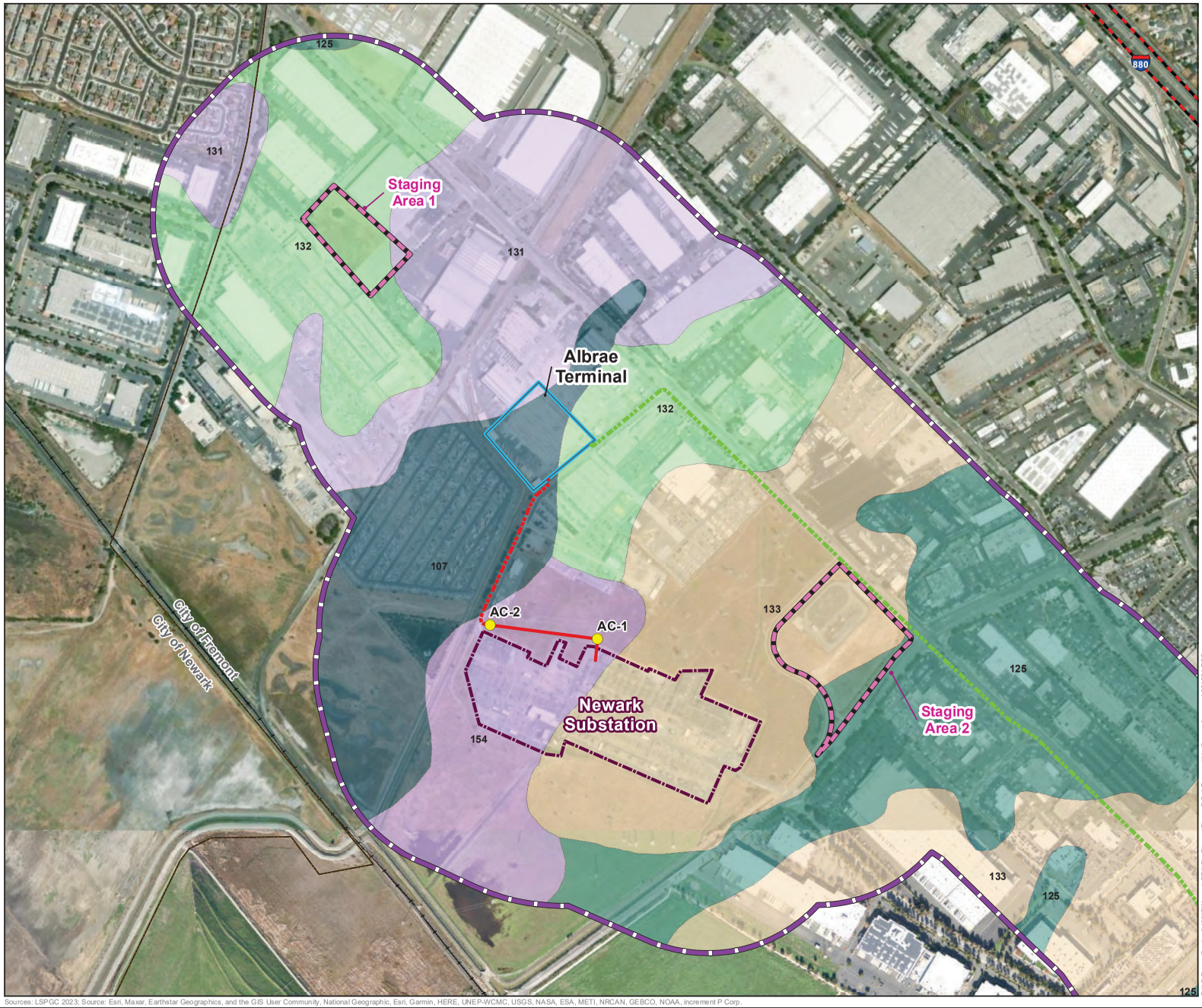
**POWER THE SOUTH BAY PROJECT**
**Figure 7: Soil Types within Survey Area**
**Alameda Co. and Santa Clara Co., CA**

## Soil Types

- 121 - Aquic Xerorthents, bay mud substratum, 2 to 5 percent slopes
- 120 - Aquic Xerorthents, bay mud subtratum, 0 to 2 percent slopes
- 106 - Botella loam, 0 to 2 percent slopes, MLRA 14
- 166 - Campbell silt loam, 0 to 2 percent slopes, protected
- 107 - Clear Lake clay, drained, 0 to 2 percent slopes, MLRA 14
- 161 - Clear Lake silty clay, 0 to 2 percent slopes, drained
- 171 - Elder fine sandy loam, 0 to 2 percent slopes, rarely flooded
- 168 - Elder fine sandy loam, protected, 0 to 2 percent slopes
- 151 - Embarcadero silty clay loam, drained, 0 to 2 percent slopes
- 125 - Marvin silt loam, saline-alkali
- 157 - Novato clay, 0 to 1 percent slopes, protected
- 155 - Novato clay, 0 to 1 percent slopes, tidally flooded
- 137 - Novato clay, tidally flooded
- 131 - Omni silty clay loam, drained
- 132 - Omni silty clay loam, strongly saline
- 133 - Pescadero clay, drained
- 134 - Pescadero clay, ponded
- 139 - Reyes clay, 0 to 2 percent slopes
- 123 - Urban Land-Xerorthents, anthropogenic fill complex, 0 to 2 percent slopes
- 101 - Urban land, 0 to 2 percent slopes, basins
- 165 - Urbanland-Campbell complex, 0 to 2 percent slopes, protected
- 160 - Urbanland-Clear Lake complex, 0 to 2 percent slopes
- 169 - Urbanland-Elder complex, 0 to 2 percent slopes, protected
- 150 - Urbanland-Embarcadero complex, 0 to 2 percent slopes, drained
- 145 - Urbanland-Hangerone complex, 0 to 2 percent slopes, drained
- 162 / W - Water
- 154 - Willows clay, drained
- 122 - Xerorthents, anthropogenic fill, 0 to 2 percent slopes
- 112 - Xerorthents, trash substratum 15 to 30 percent slopes
- 110 - Xerorthents, trash substratum, 0 to 2 percent slopes






# POWER THE SOUTH BAY PROJECT

## Figure 7: Soil Types within Survey Area

## Alameda Co. and Santa Clara Co., CA

### LEGEND

**Proposed Project Components**

- Overhead Transmission Structure
- Baylands to NRS 230 kV AC Transmission Line (Underground)
- Albrae to Baylands 320 kV DC Transmission Line (Overhead)
- Albrae to Baylands 320 kV DC Transmission Line (Underground)
- Newark to Albrae 230 kV AC Transmission Line (Overhead)
- Newark to Albrae 230 kV AC Transmission Line (Underground)
- Optional Trench Location
- Access Road
- HVDC Terminal Site
- Existing Substation Fenceline
- Construction Staging Area
- Biological Resource Survey Area

**General Features**

- Municipal Boundary
- Interstate
- US Route or State Highway
- Railroad



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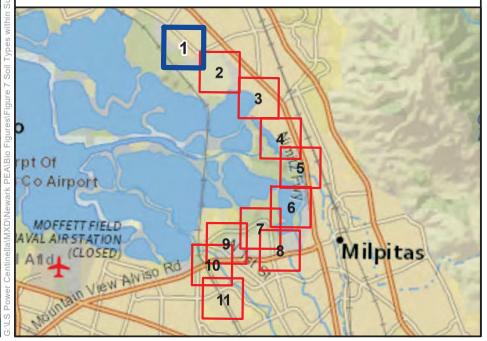
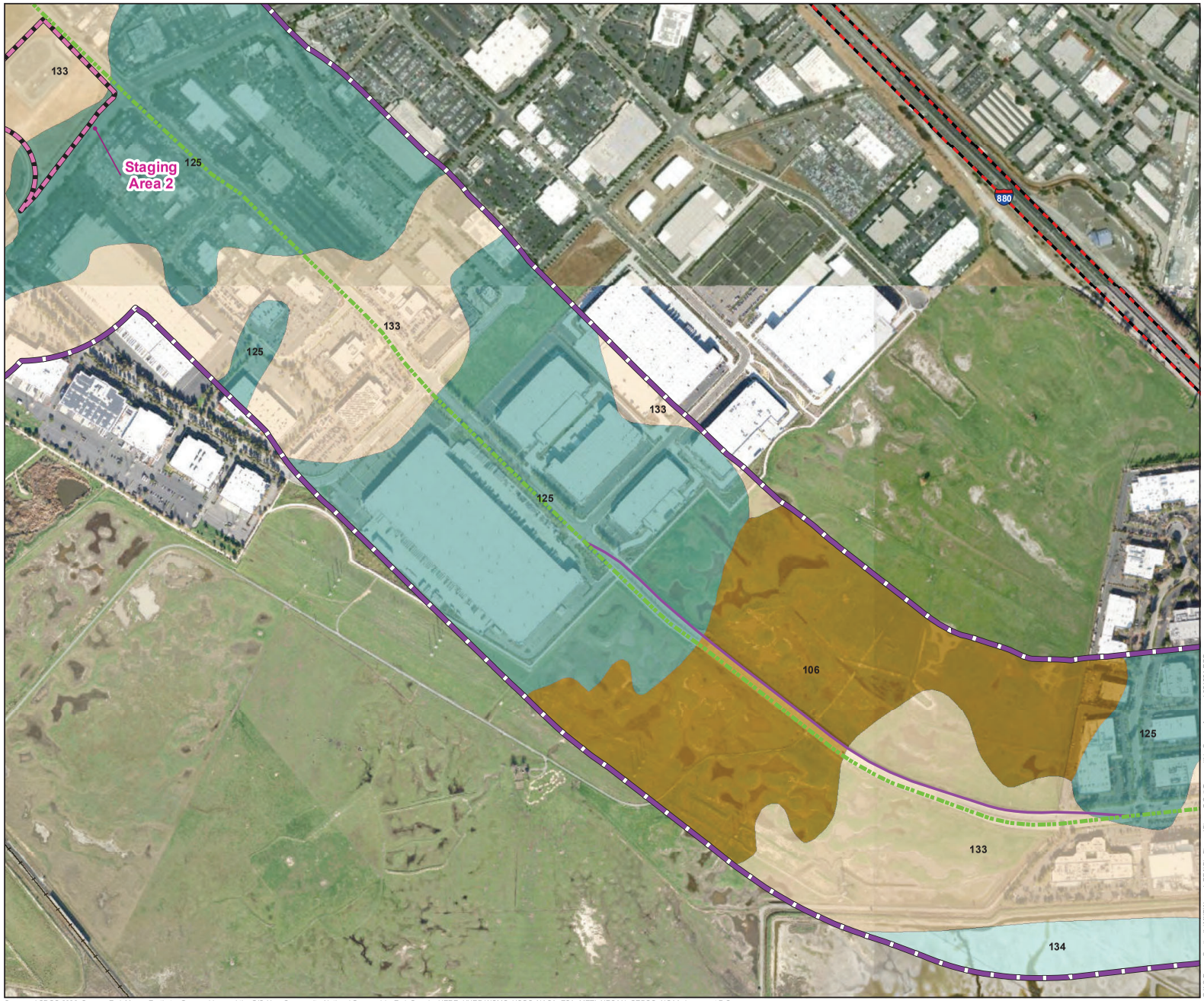
Feet




Sources: LSPGC 2023; Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

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## Alameda Co. and Santa Clara Co., CA

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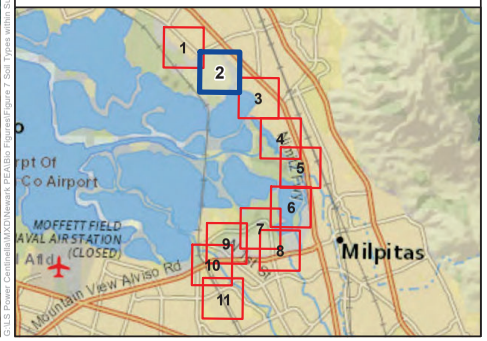


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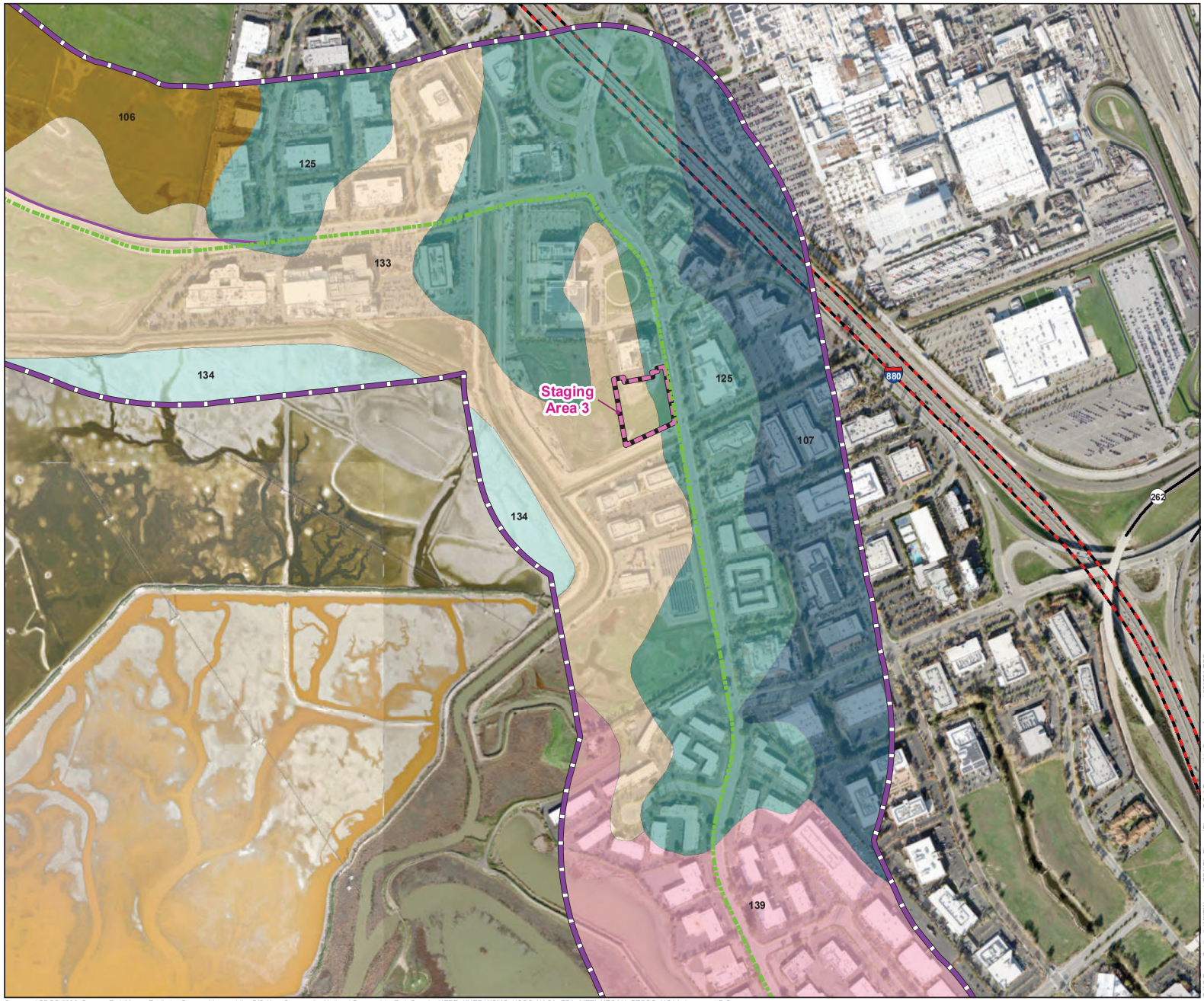


# POWER THE SOUTH BAY PROJECT

## Figure 7: Soil Types within Survey Area

## Alameda Co. and Santa Clara Co., CA

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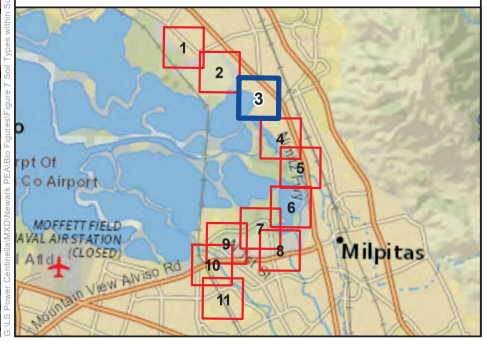
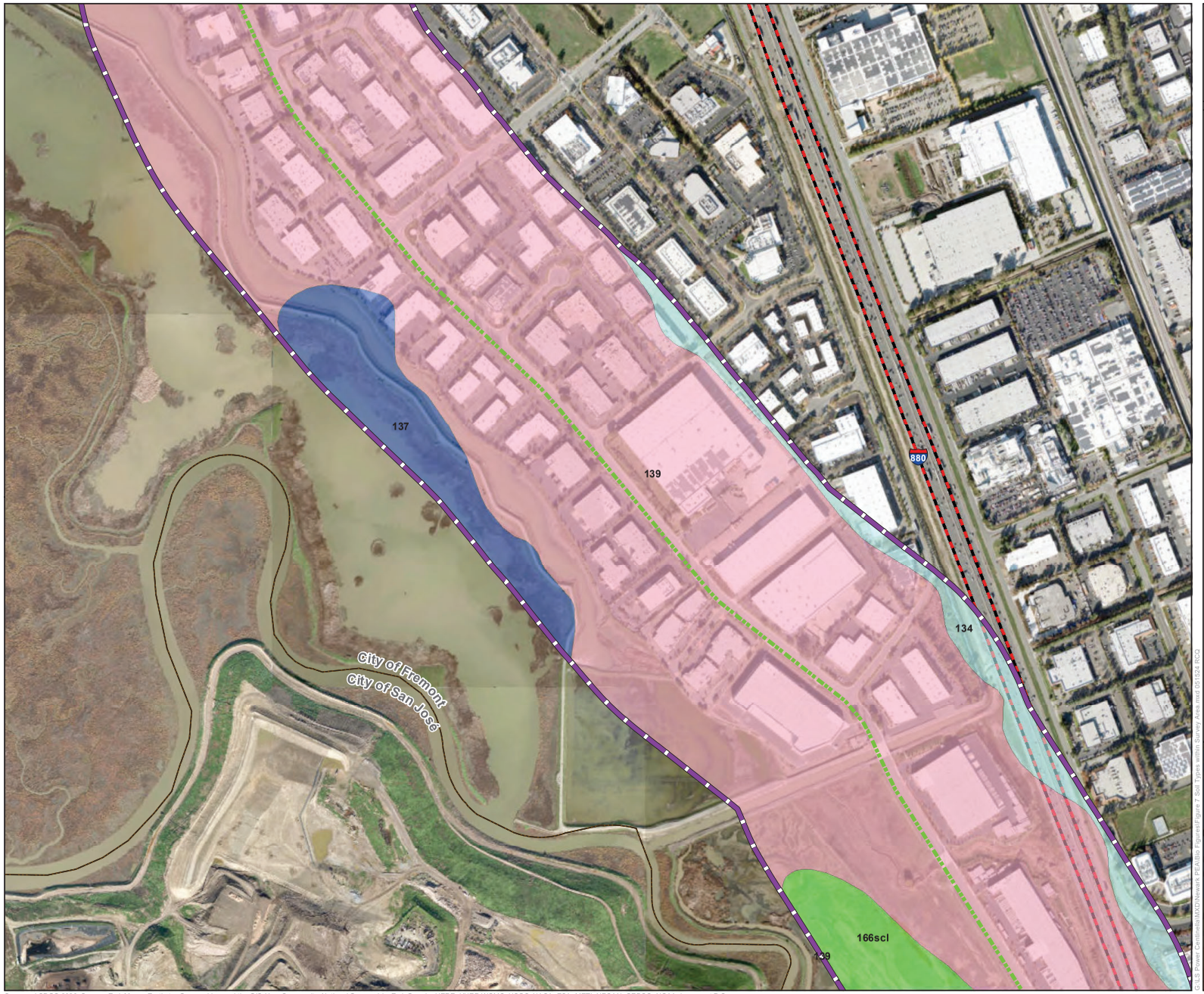
Feet




Sources: LSPGC 2023; Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.




# POWER THE SOUTH BAY PROJECT

## Figure 7: Soil Types within Survey Area

## Alameda Co. and Santa Clara Co., CA

### LEGEND

**Proposed Project Components**

- Overhead Transmission Structure
- Baylands to NRS 230 kV AC Transmission Line (Underground)
- Albrae to Baylands 320 kV DC Transmission Line (Overhead)
- Albrae to Baylands 320 kV DC Transmission Line (Underground)
- Newark to Albrae 230 kV AC Transmission Line (Overhead)
- Newark to Albrae 230 kV AC Transmission Line (Underground)
- Optional Trench Location
- Access Road
- HVDC Terminal Site
- Existing Substation Fenceline
- Construction Staging Area
- Biological Resource Survey Area

**General Features**

- Municipal Boundary
- Interstate
- US Route or State Highway
- Railroad



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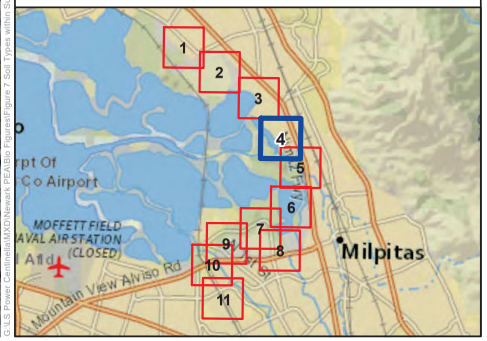
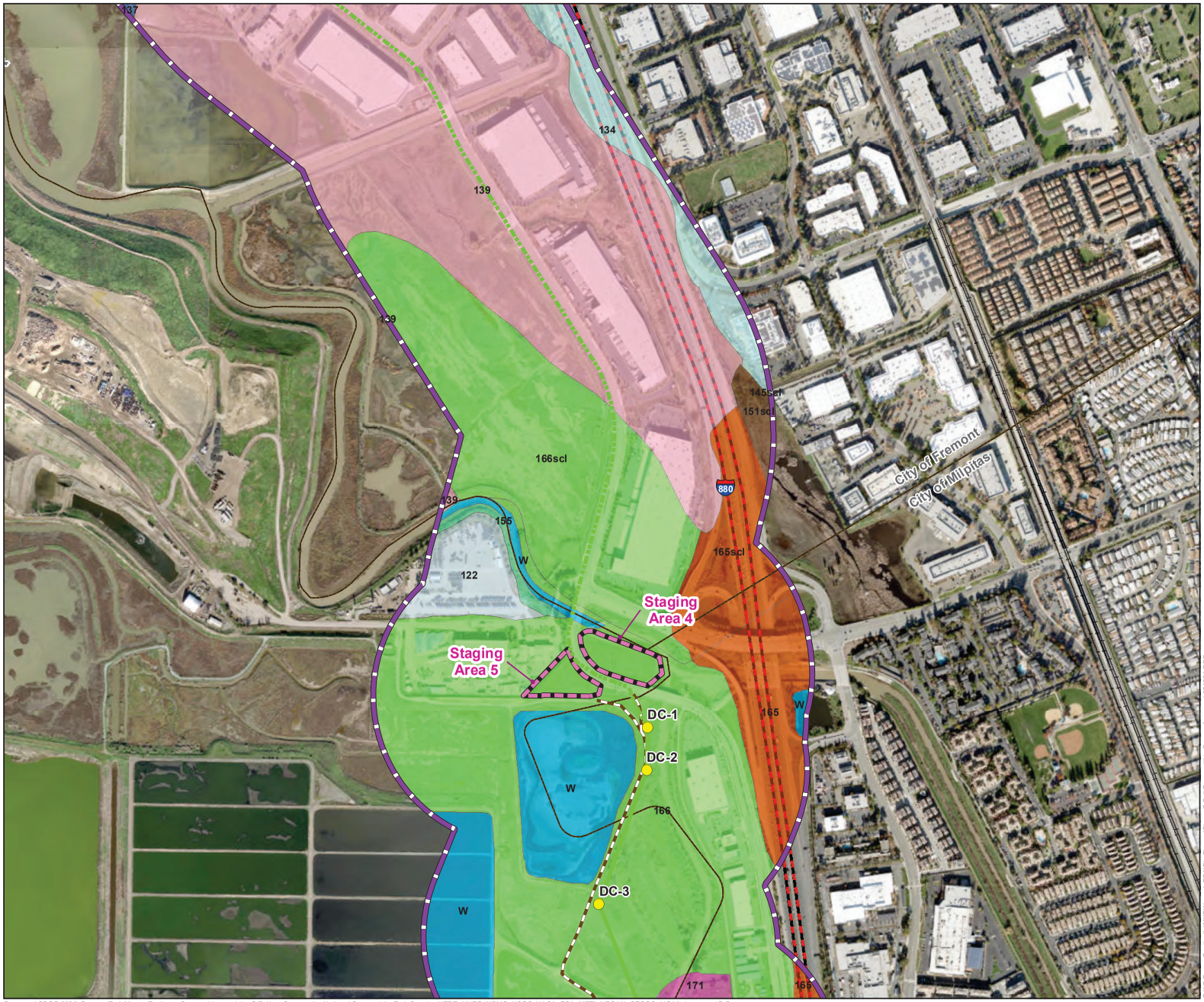



Sources: LSPGC 2023; Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.




# POWER THE SOUTH BAY PROJECT

## Figure 7: Soil Types within Survey Area

## Alameda Co. and Santa Clara Co., CA

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- Biological Resource Survey Area

**General Features**

- Municipal Boundary
- Interstate
- US Route or State Highway
- Railroad



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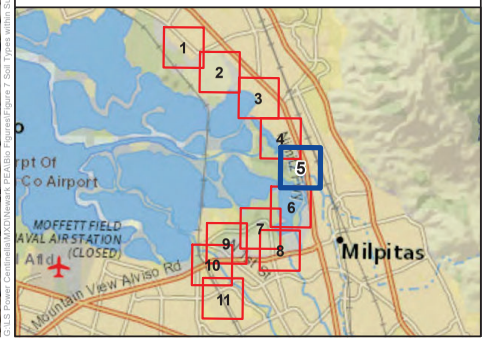
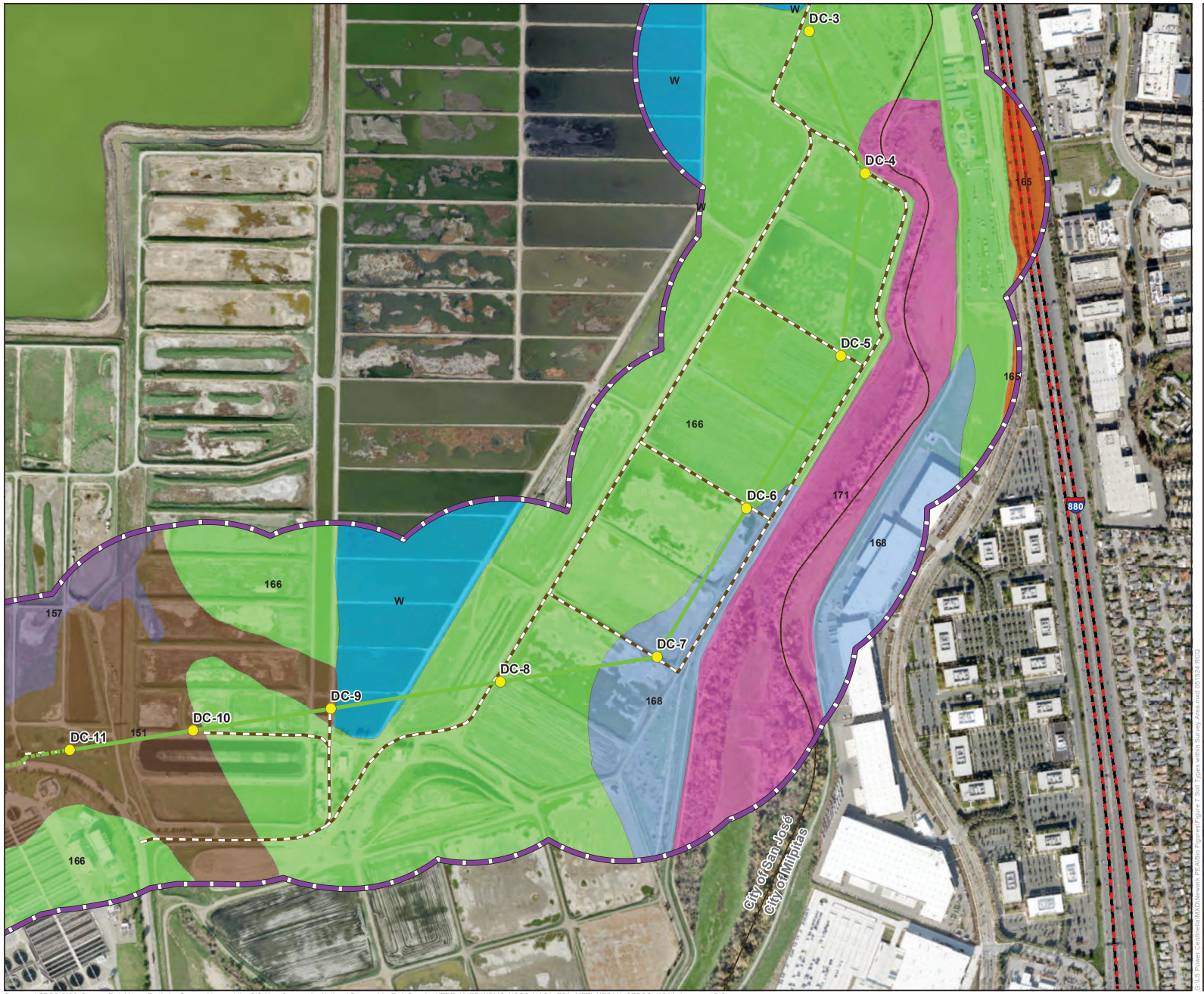



Sources: LSPGC 2023; Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.




# POWER THE SOUTH BAY PROJECT

## Figure 7: Soil Types within Survey Area

## Alameda Co. and Santa Clara Co., CA

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- Existing Substation Fenceline
- Construction Staging Area
- Biological Resource Survey Area

**General Features**

- Municipal Boundary
- Interstate
- US Route or State Highway
- Railroad



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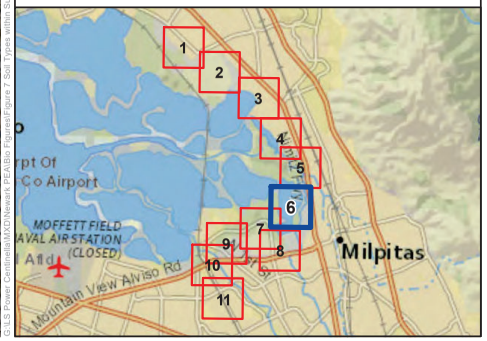


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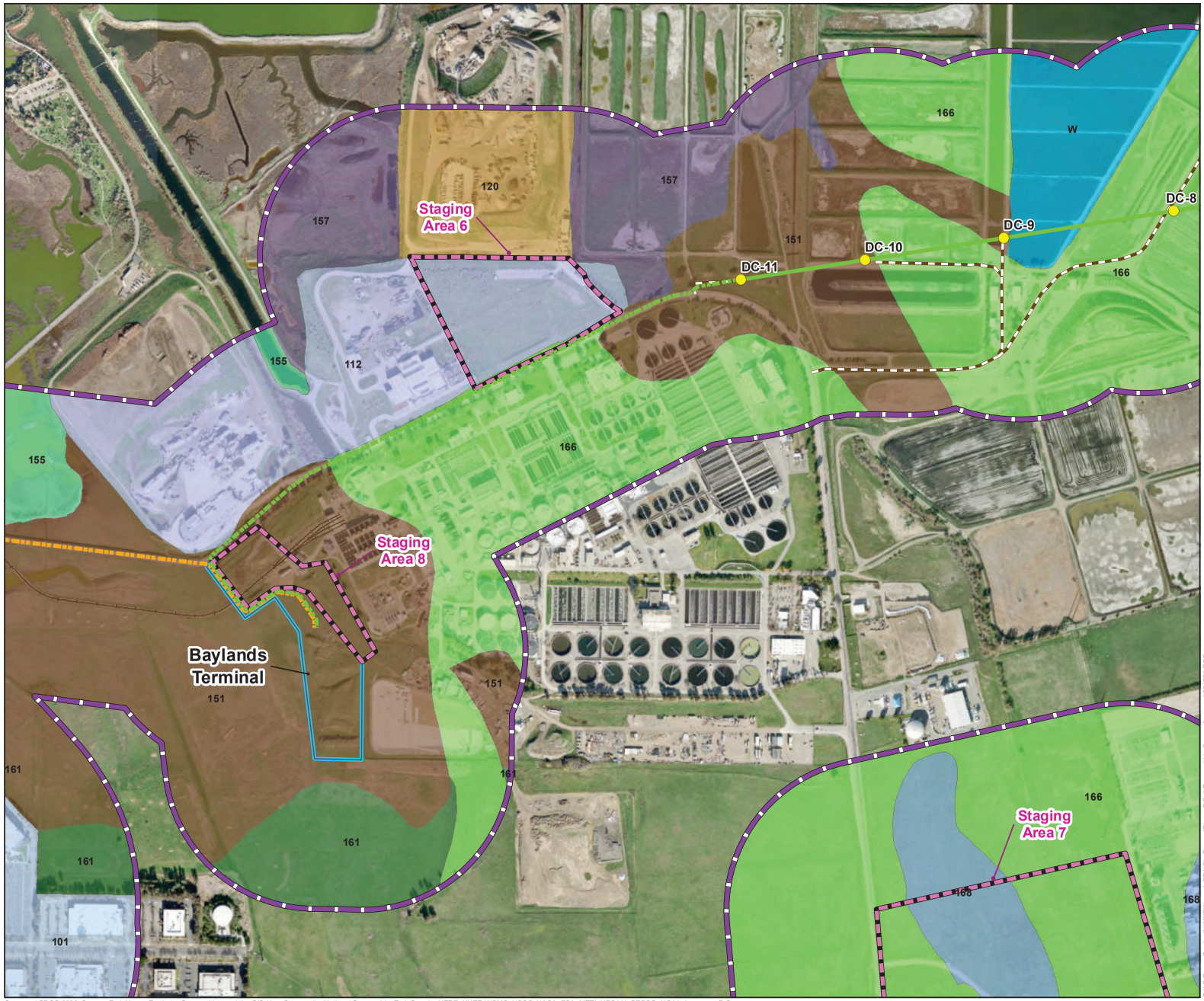


# POWER THE SOUTH BAY PROJECT

## Figure 7: Soil Types within Survey Area

## Alameda Co. and Santa Clara Co., CA

### LEGEND

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**General Features**

- Municipal Boundary
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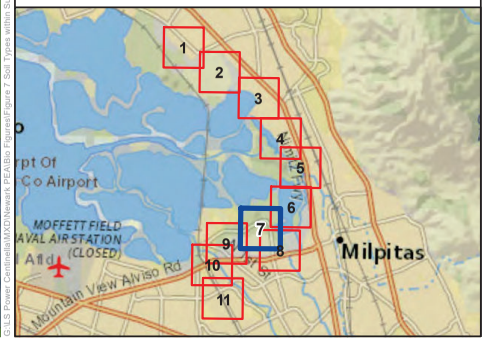


Sources: LSPGC 2023; Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.




# POWER THE SOUTH BAY PROJECT

## Figure 7: Soil Types within Survey Area

## Alameda Co. and Santa Clara Co., CA

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- Optional Trench Location
- Access Road
- HVDC Terminal Site
- Existing Substation Fenceline
- Construction Staging Area
- Biological Resource Survey Area

**General Features**

- Municipal Boundary
- Interstate
- US Route or State Highway
- Railroad



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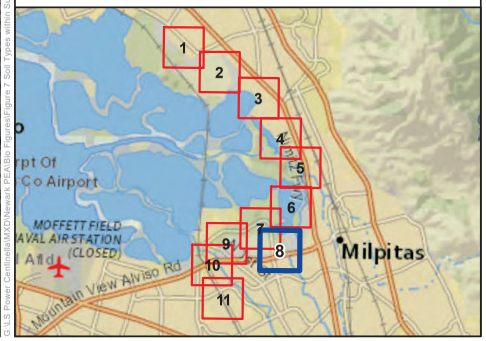


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# POWER THE SOUTH BAY PROJECT

## Figure 7: Soil Types within Survey Area

## Alameda Co. and Santa Clara Co., CA

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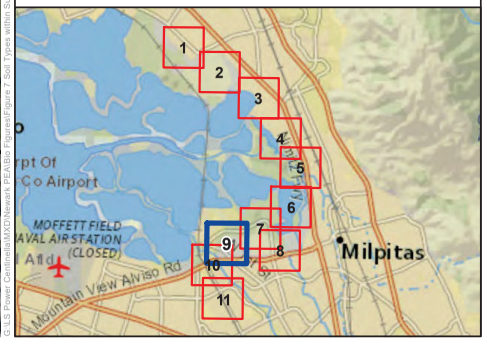


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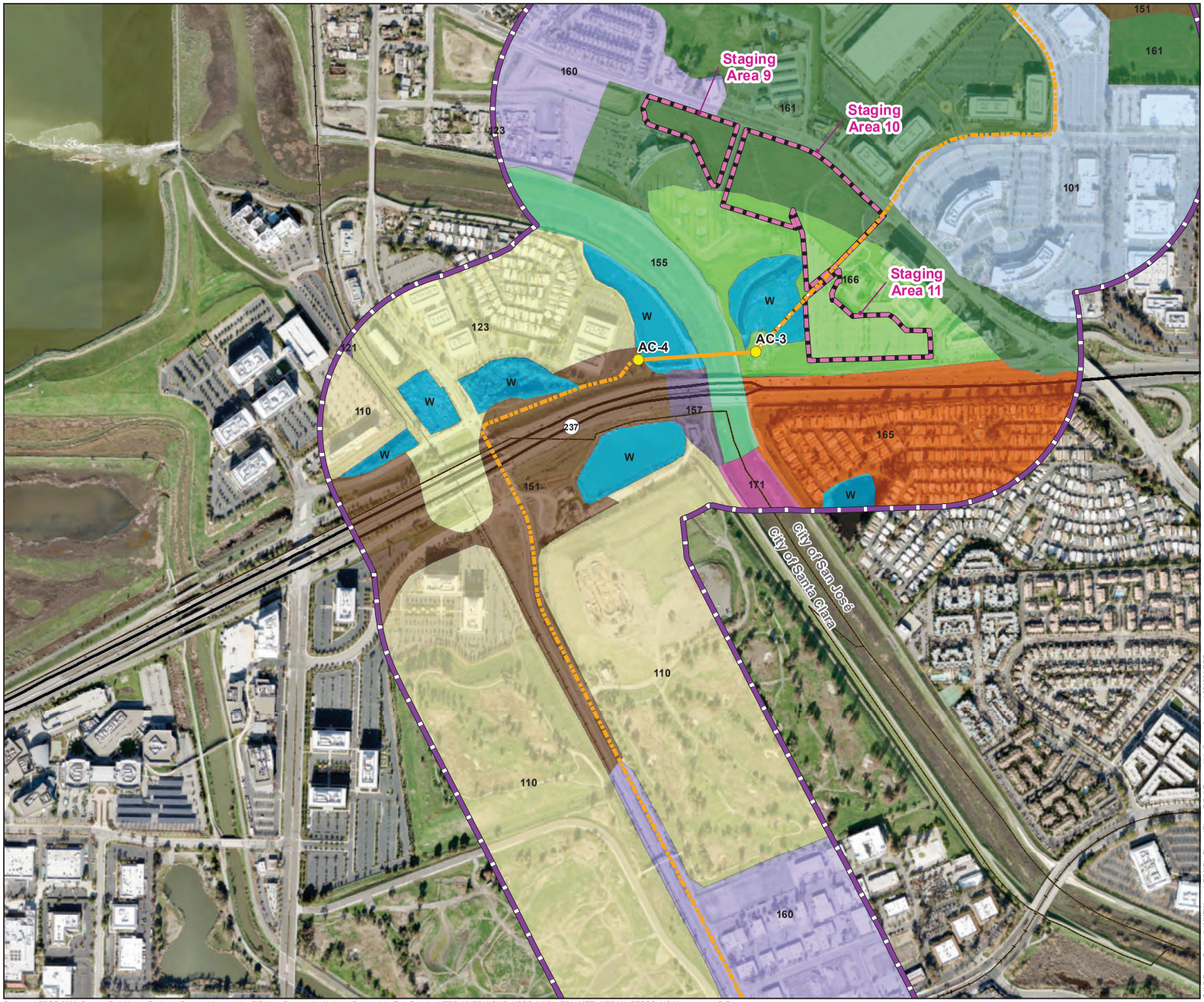


# POWER THE SOUTH BAY PROJECT

## Figure 7: Soil Types within Survey Area

## Alameda Co. and Santa Clara Co., CA

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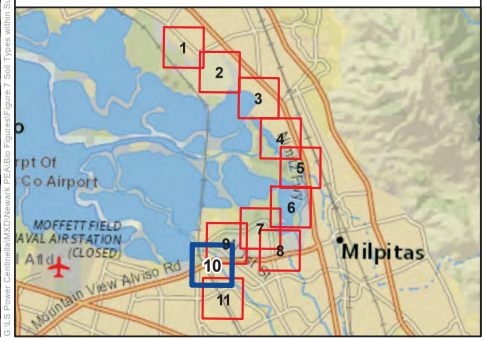




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## Alameda Co. and Santa Clara Co., CA

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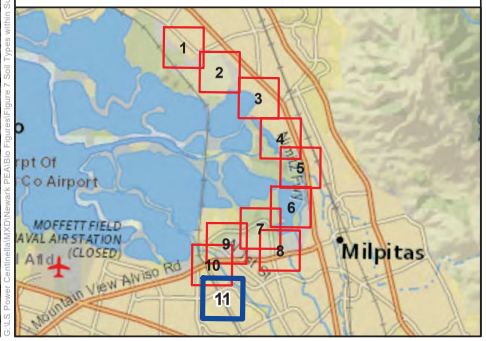


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## 4.3. Vegetation Communities and Land Cover Types

Vegetation community types are based on field observations and the California Department of Forestry and Fire Protection ("CAL FIRE") Fire and Resource Assessment Program (FRAP), in cooperation with California Department of Fish and Wildlife (CDFW) VegCamp program and extensive use of the United States Department of Agriculture (USDA) Forest Service Region 5 Remote Sensing Laboratory (RSL) data and descriptions in the California Native Plant Society (CNPS) Manual of California Vegetation Online (MCV) (CNPS, 2024c). Natural communities were evaluated using NatureServe's Heritage Methodology, which is the same system used to assign global and state rarity ranks for plant and animal species in the California Natural Diversity Database (CNDDB).

The Survey Area supports primarily developed and disturbed, non-vegetated areas or areas that are nonnative and associated with development (i.e., parks, residential and industrial development, and wastewater treatment ponds). There are a few areas of native vegetated habitat throughout the Survey Area primarily in association with the Don Edwards San Francisco Bay National Wildlife Refuge (NWR). The Survey Area is dominated by disturbed/urban areas that are associated with the urban and suburban areas within the Cities of Fremont, Milpitas, San José, and Santa Clara, but there are other vegetation communities, primarily in the vicinity of streams, creeks, rivers, and the Don Edwards San Francisco Bay NWR, including annual grassland, hardwood woodland, riparian, and wetland. The components of the Proposed Project would be located primarily within disturbed/urban areas, but small portions would be located in hardwood woodland and annual grassland land cover types (**Figure 8**, *Vegetation Communities within the Survey Area Map*).

The approximate acreage of each of the vegetation communities and land cover types that were mapped within the Survey Area is summarized in **Table 1**, *Vegetation Communities and Land Cover Types within the Survey Area*. Brief descriptions of each land cover type are provided following the table. Vegetation community and land cover mapping is shown on **Figure 8**.

**Table 1: Vegetation Communities and Land Cover Types within the Survey Area**

| Vegetation Community or Land Cover Type Name | Acreage | Percentage of Total Acreage |
|---|---|---|
| Disturbed / Urban | 2,573.04 | 66% |
| Annual Grassland | 474.21 | 12% |
| Wetland | 263.49 | 7% |
| Wastewater Treatment Pond | 249.07 | 6% |
| Annual Grassland/Wetland | 138.51 | 4% |
| Riparian | 93.08 | 3% |
| Water | 65.50 | 2% |
| Hardwood Woodland | 31.77 | <1% |
| Vernal Pool | 1.06 | <1% |
| **Total** | **3,889.7** | |

## Disturbed/Urban

Disturbed/urban land cover type dominates the Survey Area (approximately 66 percent). Project components that occur within disturbed/urban areas include the proposed Newark substation modification area, the proposed Albrae terminal site, a portion of proposed Staging Areas 2, 6, 7, and 8; Staging Areas 1, 9, 10, and 11; and the NRS substation modification area (**Figure 8**). This cover type includes all areas associated with significant human disturbance, including all urban areas (e.g., buildings, roads, parking lots, substations, San José–Santa Clara RWF infrastructure, railways, etc.), suburban areas (e.g., houses, apartment buildings, lawns, parks, etc.), and disturbed areas (e.g., disturbed fields, vacant lots, etc.). Some native and nonnative trees, shrubs, and grasses may be present in association with the urban/suburban development, primarily as decorative vegetation. Nonnative and invasive weeds may also be present in association with disturbed areas (such as stinkwort [*Dittrichia graveolens*], horseweed [*Erigeron canadensis*], wild oat [*Avena fatua*], Kentucky bluegrass [*Poa pratensis*], stinkwort [*Dittrichia graveolens*], tumbleweed [*Kali tragus* ssp. *tragus*], shortpod mustard [*Hirschfeldia incana*], cheeseweed mallow [*Malva parviflora*], rose clover [*Trifolium hirtum*], star-thistle [*Centaurea* sp.], and smilo grass [*Stipa miliacea*]).

### Annual Grassland

Annual grassland habitat exists in small areas throughout the Survey Area (approximately 12 percent of the Survey Area) associated with the hills to the east and west of the Proposed Project. Project components that occur within annual grassland include proposed overhead structures AC-1 and AC-2 and the overhead Newark to Albrae 230 kV transmission line alignment, overhead structures DC-1 through DC-3 and DC-11, Staging Areas 2 through 8, and the Baylands Terminal (**Figure 8**). These areas are dominated by nonnative and native annual grasses such as wild oat, rat's-tail fescue, cheatgrass, soft brome (*Bromus hordeacus*), and purple needlegrass (*Stipa pulchra*)—the dominant grass species—and many clover species (*Trifolium* sp.), filaree species, mustards, common fiddleneck (*Amsinckia menziesii*), stinkwort (*Dittrichia graveolens*), cheeseweed mallow (*Malva parviflora*), rose clover (*Trifolium hirtum*), smilo grass, and starthistle species (*Centaurea* sp.)—the dominant forb species in this habitat. Some of these areas are moderately disturbed or mowed and may be grazed.

### Wetland

Wetland habitat within the Survey Area (approximately seven percent of the Survey Area) occurs in the vicinity of creeks, streams, and estuaries associated with the San Francisco Bay. No Proposed Project components occur within wetlands habitat. However, the following Proposed Project components occur adjacent to or within the vicinity of wetland habitats: Staging Area 6; and the Albrae to Baylands 320 kV DC transmission line (both underground and overhead alignments); and portions of the Baylands to NRS 230 kV transmission line underground segment (**Figure 8**). These areas are typically inundated with water and support hydrophilic vegetation species, such as softstem bulrush, hardstem bulrush (*Schoenoplectus acutus*), tall flatsedge, giant reed, broadleaf cattail, and saltgrass (*Distichlis* sp.). Some tree species, such as willows (*Salix* sp.), elderberry (*Sambucus nigra*), California fan palm (*Washingtonia filifera*), and oaks (*Quercus* sp.), can be located along the wetland edges. The wetland habitat type contains some areas that could include salt marsh habitats, but these areas could not be surveyed in detail to confirm this. Once permission is provided to conduct the survey, salt marsh areas will be clearly delineated.

### Wastewater Treatment Ponds

Wastewater treatment ponds (approximately six percent of the Survey Area) are located in the vicinity of the San José-Santa Clara RWF. Project components that occur within wastewater treatment ponds include approximately 6,000 feet of the Albrae to Baylands 320 kV DC transmission line overhead alignment (**Figure 8**). These ponds range from dirt bottom ponds that are infrequently disturbed to concrete or plastic lined ponds that are frequently disturbed. The dirt bottom ponds support some vegetation species (primarily weed species) along the edges, but these areas are maintained and mowed to keep vegetation from overgrowing the ponds.

### Annual Grassland/Wetland

The annual grassland/wetland habitat type occurs within the Don Edwards San Francisco Bay NWR in the vicinity of the Cushing Parkway bridge (approximately four percent of the Survey Area). Project components that occur adjacent to annual grassland/wetland include approximately 2,000 feet of the Albrae to Baylands 320 kV transmission line underground alignment along Cushing Parkway (**Figure 8**). This area is covered by annual grasses but is also within a floodplain area that contains a mosaic of potential wetlands that are inundated at certain times of the year. These potential wetlands have not been mapped at this time. This habitat type combines the annual grassland and wetland habitat types.

### Riparian

Riparian habitat within the Survey Area (approximately three percent of the Survey Area) is located along the larger creeks, streams, and rivers such as Coyote Creek and the Guadalupe River. The proposed Albrae to Baylands 320 kV transmission line crosses or is adjacent to riparian areas in three locations near Coyote Creek, and the proposed overhead segment of the Baylands to NRS 230 kV transmission line near Guadalupe River (**Figure 8**). These areas have perennially or intermittently running water associated with creeks and streams and support trees and vegetation species that are accustomed to intermittent flooding. These areas generally support less tree species than hardwood woodland areas and are generally more covered by shrubs and grasses/forbs. Tree species may include Fremont cottonwood, narrowleaf willow, red willow, coast live oak, northern California black walnut, western sycamore, and California buckeye. Associated shrub species may include Pacific poison oak, coyote brush, elderberry, Himalayan blackberry, and mulefat. The ground cover consists of forbs (such as dove weed, filaree, and perennial pepperweed) and annual native and nonnative grasses (such as wild oat, rat's-tail fescue, lop grass, wall barley, tufted hairgrass, and cheatgrass). Wetland species may be present as well.

### Water

Water habitats are associated with lakes and ponds within the Survey Area (approximately two percent of the Survey Area). The proposed Baylands to NRS transmission line overhead alignment crosses open water adjacent to overhead structures AC-3 and AC-4 west of Staging Area 11 (**Figure 8**). These areas include large expanses of open water.

### Hardwood Woodland

Hardwood woodland habitat (less than one percent of the Survey Area) includes hardwood trees and associated shrubs and is primarily associated with streams and riparian areas. Hardwood woodland is located along the Cushing Parkway bridge, and east of the proposed Albrae to Baylands 320 kV transmission line overhead alignment (**Figure 8**). Fremont cottonwood (*Populus fremontii*) is the dominant tree species, with a mixture of narrowleaf willow (*Salix exigua*), red willow (*Salix laevigata*), Coast live oak (*Quercus agrifolia*), northern California black walnut (*Juglans hindsii*), western sycamore (*Platanus racemosa*), and California buckeye (*Aesculus californica*) as associated hardwood trees. Associated shrub species include Pacific poison oak (*Toxicodendron diversilobum*), coyote brush (*Bacharris pilularis*), elderberry (*Sambucus nigra*), Himalayan blackberry (*Rubus armeniacus*), and mulefat (*Bacharris salicifolia*). The ground cover consists of forbs (such as dove weed [*Croton setigerus*], filaree [*Erodium* sp.], and perennial pepperweed [*Lepidium latifolium*]) and annual native and nonnative grasses (such as wild oat, rat's-tail fescue [*Vulpia myuros*], lop grass [*Bromus hordeaceus*], wall barley [*Hordeum murinum*], tufted hairgrass [*Deschampsia cespitosa*], and cheatgrass [*Bromus tectorum*]). Some wetland plants are also associated with this habitat type and occur along the margins of the lakes, ponds, and streams (such as softstem bulrush [*Schoenoplectus tabernaemontani*], tall flatsedge [*Cyperus eragrostis*], giant reed [*Arundo donax*], and broadleaf cattail [*Typha latifolia*]).

### Vernal Pools

Vernal pool habitat within the Survey Area (less than one percent of the Survey Area) is located within annual grassland habitats near the existing Newark substation. Project components that occur near vernal pools include the proposed Newark to Albrae 230 kV transmission line overhead alignment and overhead structures AC-1 and AC-2, north of the existing Newark substation (**Figure 8**). Vernal pools are depressions in areas where a hard underground layer prevents rainwater from draining downward into the subsoils. When rain fills the pools in the winter and spring, the water collects and remains in the depressions. In the springtime, the water gradually evaporates away, until the pools become completely dry in the summer and fall. None of the vernal pools in the Survey Area were filled with water during field surveys in October 2023. Vernal pools support many plant species, some of which are wetland plants and some that are characteristic to the surrounding grasslands. The vegetation in vernal pools consists primarily of annuals with low cover and a short life cycle such as *Navarettias* and *Lasthenias*. Vernal pools support a distinctive flora with a high number of endemic and rare species. Once permission is provided to conduct a formal delineation of the vernal pool habitat type, these areas will be clearly delineated.




# POWER THE SOUTH BAY PROJECT

## Figure 8: Vegetation Communities within the Survey Area

### Alameda Co. and Santa Clara Co., CA

**LEGEND**

**Proposed Project Components**

- Overhead Transmission Structure
- Baylands to NRS 230 kV AC Transmission Line (Overhead)
- Baylands to NRS 230 kV AC Transmission Line (Underground)
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- Optional Trench Location
- Access Road
- HVDC Terminal Site
- Existing Substation Fenceline
- Construction Staging Area
- Limits of Construction
- Biological Resource Survey Area

**Vegetation**

- Annual Grassland
- Annual Grassland/Wetland
- Disturbed Annual Grassland/Wetland
- Hardwood Woodland
- Riparian
- Urban/Disturbed
- Vernal Pool
- Wastewater Treatment Pond
- Water
- Wetland

**General Features**

- Municipal Boundary
- Interstate
- US Route or State Highway
- Railroad



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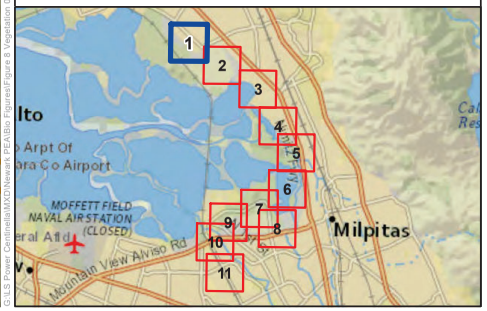
Feet

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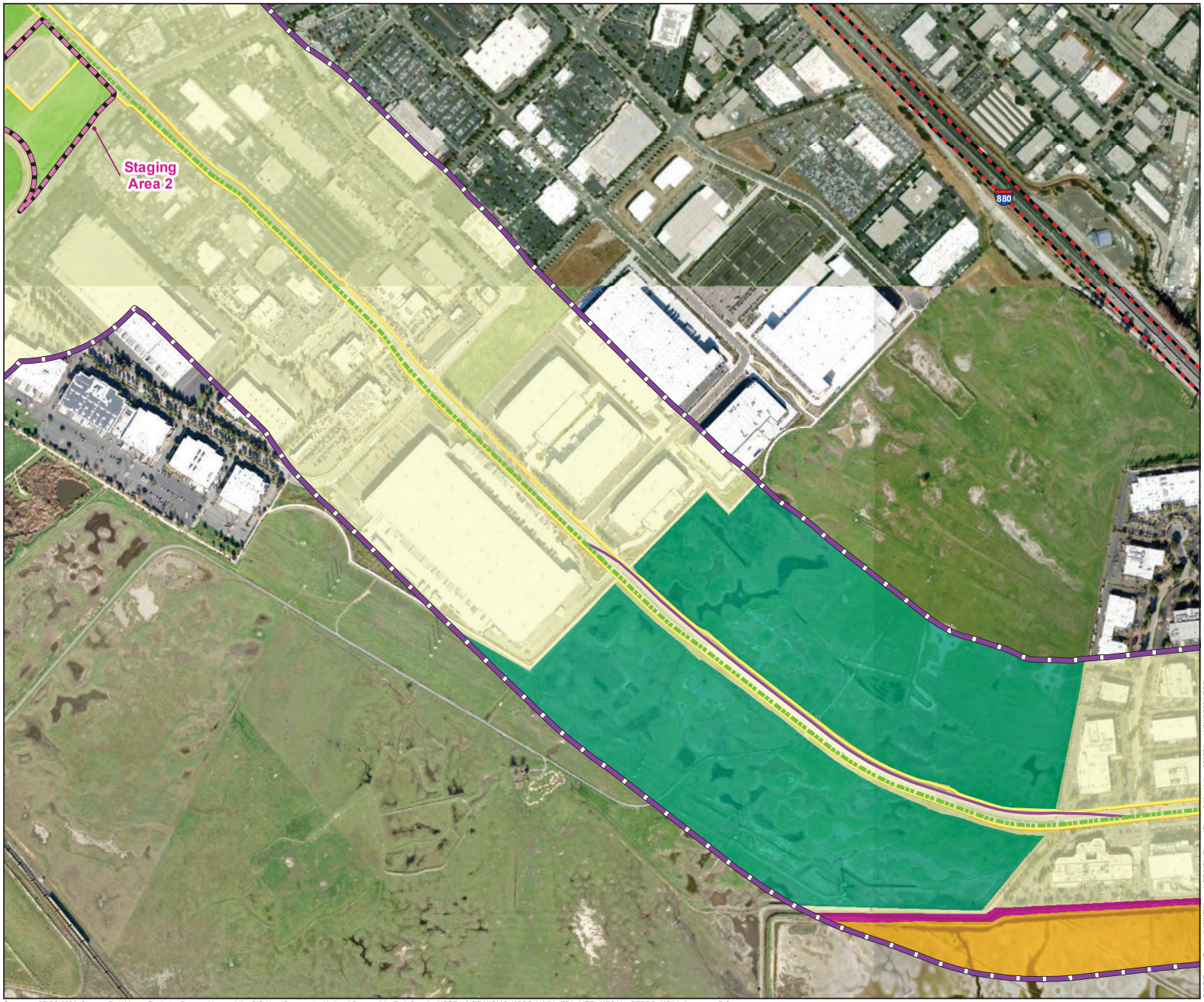



# POWER THE SOUTH BAY PROJECT

## Figure 8: Vegetation Communities within the Survey Area

## Alameda Co. and Santa Clara Co., CA

### LEGEND

**Proposed Project Components**

- Overhead Transmission Structure
- Baylands to NRS 230 kV AC Transmission Line (Overhead)
- Baylands to NRS 230 kV AC Transmission Line (Underground)
- Albrae to Baylands 320 kV DC Transmission Line (Overhead)
- Albrae to Baylands 320 kV DC Transmission Line (Underground)
- Newark to Albrae 230 kV AC Transmission Line (Overhead)
- Newark to Albrae 230 kV AC Transmission Line (Underground)
- Optional Trench Location
- Access Road
- HVDC Terminal Site
- Existing Substation Fenceline
- Construction Staging Area
- Limits of Construction
- Biological Resource Survey Area

**Vegetation**

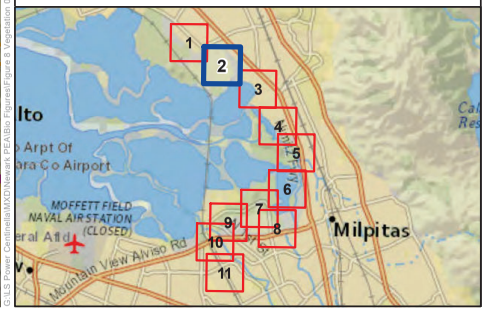
- Annual Grassland
- Annual Grassland/Wetland
- Disturbed Annual Grassland/Wetland
- Hardwood Woodland
- Riparian
- Urban/Disturbed
- Vernal Pool
- Wastewater Treatment Pond
- Water
- Wetland

**General Features**

- Municipal Boundary
- Interstate
- US Route or State Highway
- Railroad

0 500 1,000 1,500 2,000
Feet



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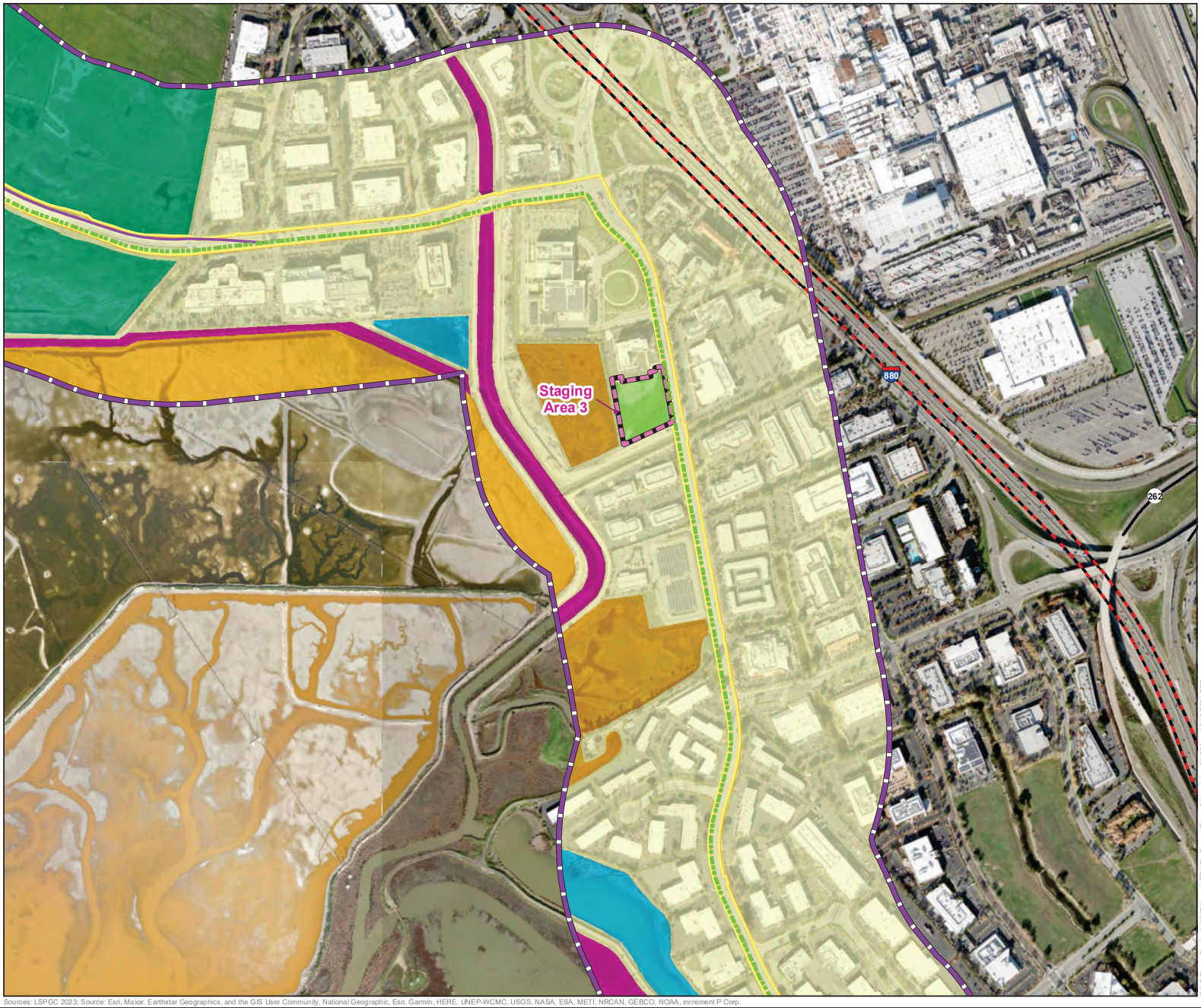
Sources: LSPGC 2023; Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.




# POWER THE SOUTH BAY PROJECT

## Figure 8: Vegetation Communities within the Survey Area

### Alameda Co. and Santa Clara Co., CA

**LEGEND**

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- Riparian
- Urban/Disturbed
- Vernal Pool
- Wastewater Treatment Pond
- Water
- Wetland

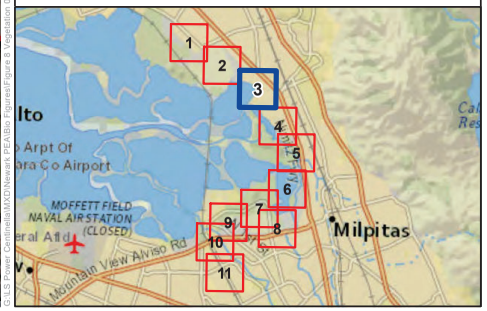
**General Features**

- Municipal Boundary
- Interstate
- US Route or State Highway
- Railroad

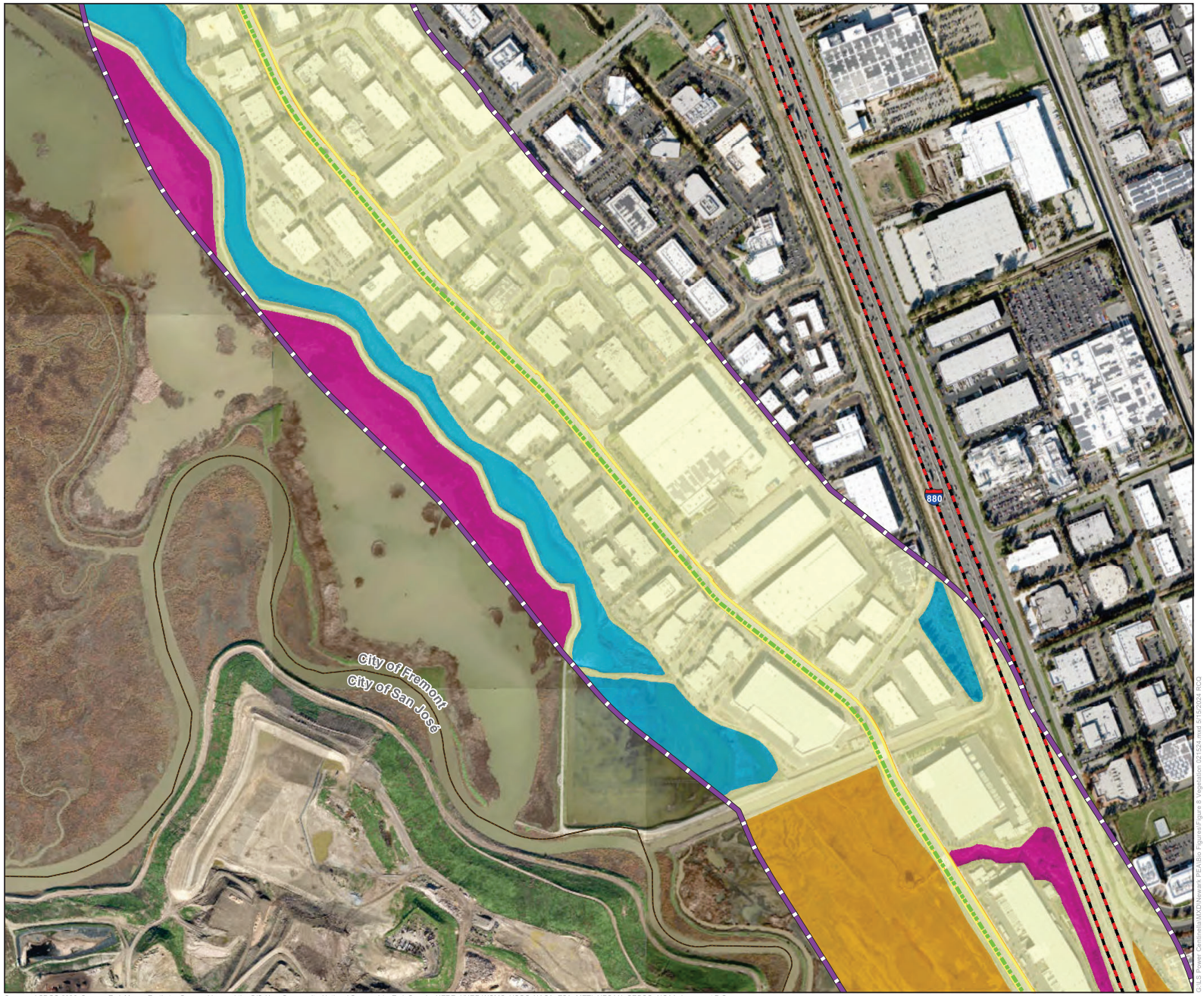


0 500 1,000 1,500 2,000

Feet




Sources: LSPGC 2023; Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.




# POWER THE SOUTH BAY PROJECT

## Figure 8: Vegetation Communities within the Survey Area

### Alameda Co. and Santa Clara Co., CA

**LEGEND**

**Proposed Project Components**

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- Water
- Wetland

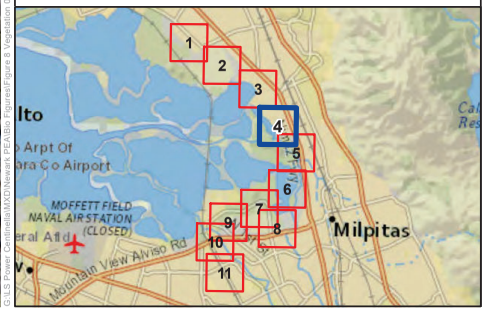
**General Features**

- Municipal Boundary
- Interstate
- US Route or State Highway
- Railroad



0 500 1,000 1,500 2,000

Feet

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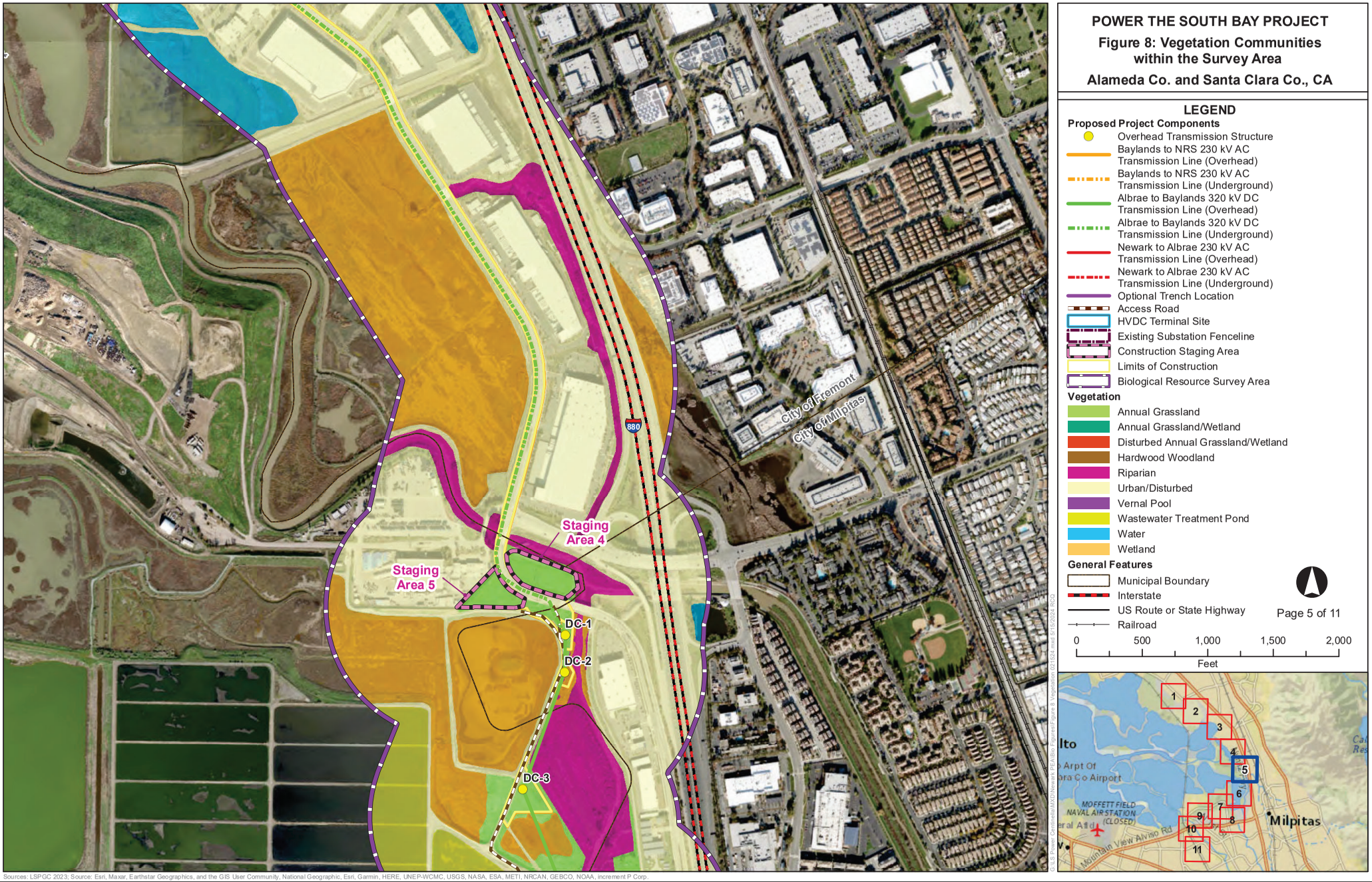
POWER THE SOUTH BAY PROJECT
Figure 8: Vegetation Communities within the Survey Area
Alameda Co. and Santa Clara Co., CA
LEGEND
Proposed Project Components
Overhead Transmission Structure
Baylands to NRS 230 kV AC Transmission Line (Overhead)
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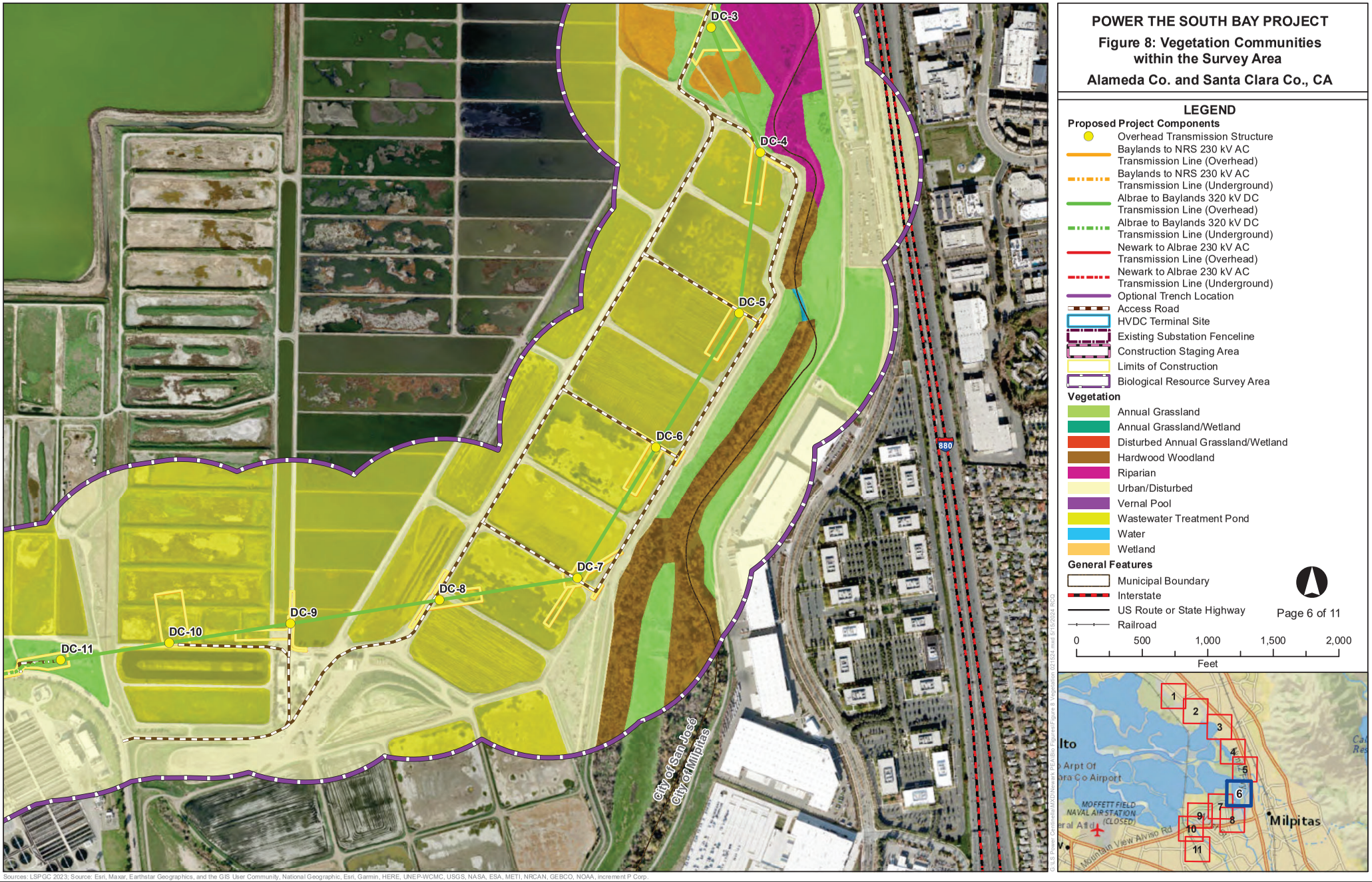
Vernal Pool
Wastewater Treatment Pond
Water
Wetland
General Features
Municipal Boundary
Interstate
US Route or State Highway
Railroad
Staging Area 4
Staging Area 5
DC-1
DC-2
DC-3
880
City of Fremont
City of Milpitas
0
500
1,000
1,500
2,000
Feet
Page 5 of 11
Milpitas
MOFFETT FIELD NAVAL AIR STATION (CLOSED)
Mountain View Alviso Rd
Sources: LSPGC 2023; Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.




# POWER THE SOUTH BAY PROJECT

## Figure 8: Vegetation Communities within the Survey Area

### Alameda Co. and Santa Clara Co., CA

**LEGEND**

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- Wastewater Treatment Pond
- Water
- Wetland

**General Features**

- Municipal Boundary
- Interstate
- US Route or State Highway
- Railroad

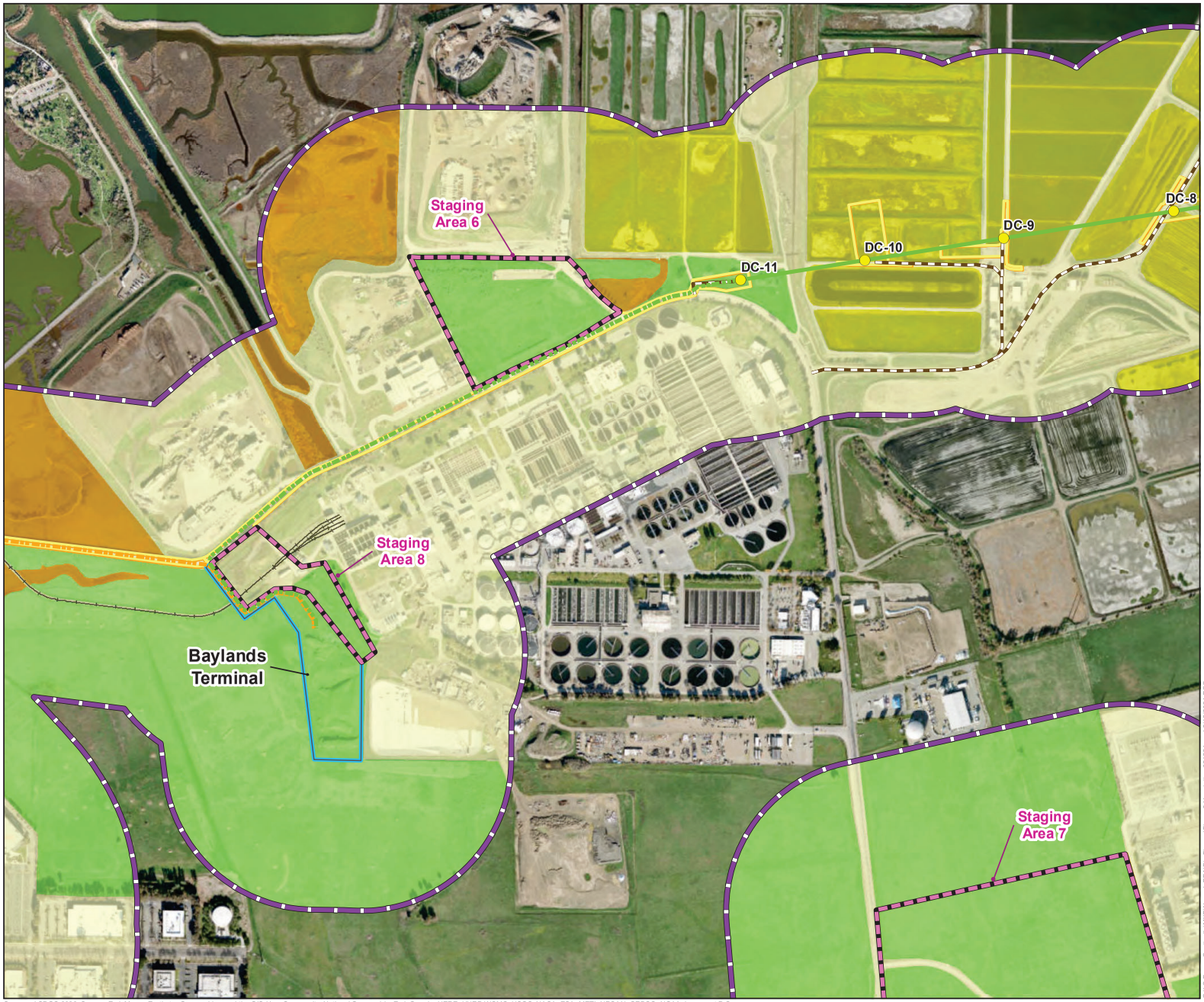


0 500 1,000 1,500 2,000

Feet




Sources: LSPGC 2023; Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.




# POWER THE SOUTH BAY PROJECT

## Figure 8: Vegetation Communities within the Survey Area

### Alameda Co. and Santa Clara Co., CA

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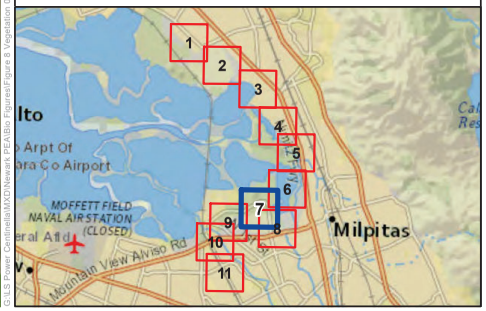
0 500 1,000 1,500 2,000

Feet

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# POWER THE SOUTH BAY PROJECT

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## Alameda Co. and Santa Clara Co., CA

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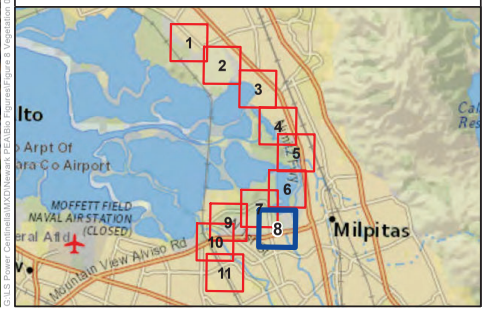
0 500 1,000 1,500 2,000
Feet



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# POWER THE SOUTH BAY PROJECT

## Figure 8: Vegetation Communities within the Survey Area

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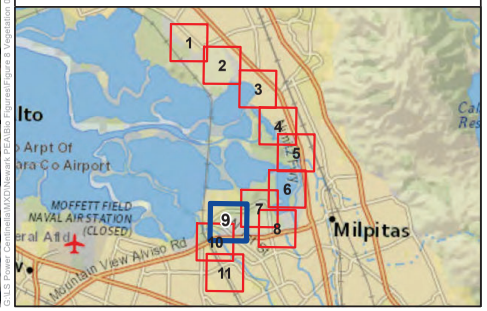
0 500 1,000 1,500 2,000

Feet

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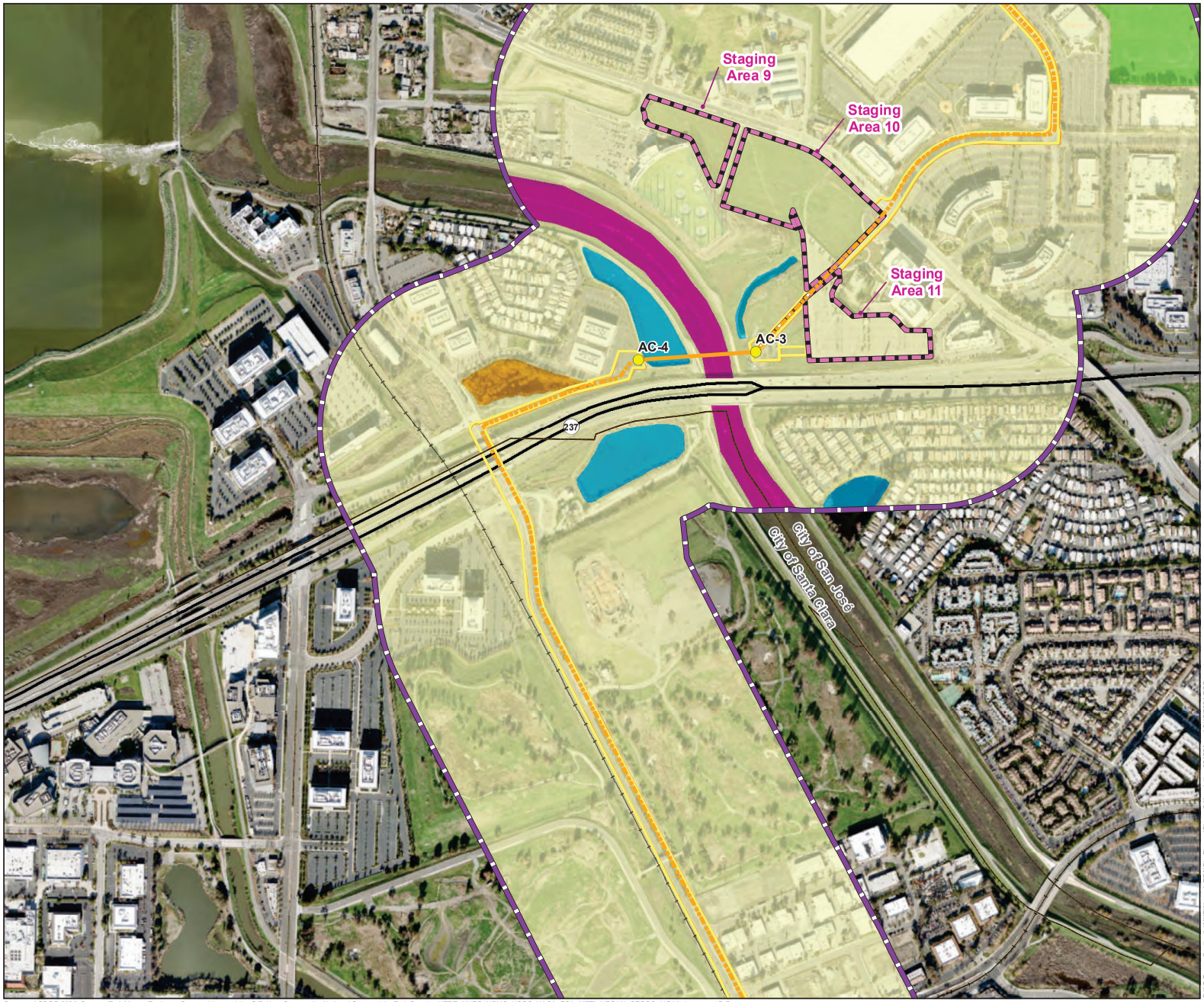


# POWER THE SOUTH BAY PROJECT

## Figure 8: Vegetation Communities within the Survey Area

### Alameda Co. and Santa Clara Co., CA

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0 500 1,000 1,500 2,000

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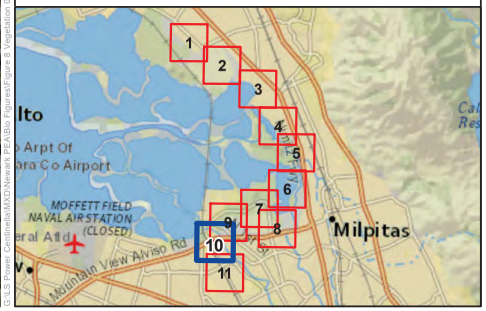


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0 500 1,000 1,500 2,000

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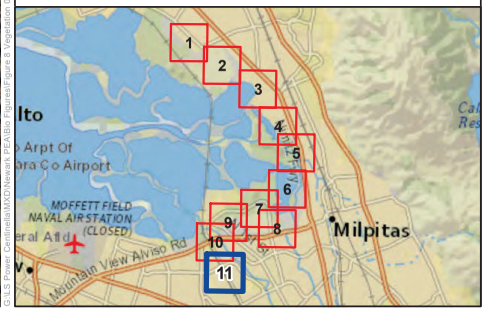


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**Sensitive Natural Vegetation Communities**

Sensitive natural vegetation communities are natural communities with ranks of S1, S2, or S3 (community ranks are listed below). All of the hardwood woodland and wetland habitats associated with riparian corridors, lakes, ponds, wetlands, vernal pools, and streams and all of the estuaries associated with San Francisco Bay would be considered sensitive natural communities.

- **S1 = Critically Imperiled**—Critically imperiled in the State because of extreme rarity (often five or fewer populations) or because of factor(s) such as very steep declines making it especially vulnerable to extirpation from the State.
- **S2 = Imperiled**—Imperiled in the State because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the State.
- **S3 = Vulnerable**—Vulnerable in the State due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation from the State.
- **S4 = Apparently Secure**—Uncommon but not rare in the State; some cause for long-term concern due to declines or other factors.
- **S5 = Secure**—Common, widespread, and abundant in the State.

**Aquatic Features**

Preliminary aquatic resources delineation surveys were conducted on September 22, 2023, and January 24 and 25, 2024, for a large portion of the Survey Area with potential wetlands. These surveys were conducted to generally map where potential aquatic resources occur within the Survey Area. A formal delineation and mapping was conducted along Coyote Creek in the vicinity of McCarthy Boulevard and the San José-Santa Clara RWF on December 12, 2023 (from the southern end of the McCarthy Boulevard bridge to the proposed overhead Structure DC-3). In addition, on March 15, 2024, a formal delineation was performed along the north and south sides of Cushing Parkway as it crosses a marsh on a low bridge. National Wetlands Inventory (NWI) maps were reviewed for the areas (United States Fish and Wildlife Service [USFWS], 2024a), and there are several NWI drainages and wetlands that are mapped within the 1,000-foot buffer Survey Area. These are the only areas that have been mapped in detail. National Wetlands Inventory (NWI) maps were reviewed for the area (United States Fish and Wildlife Service [USFWS], 2024a), and there are several NWI drainages and wetlands that are mapped within the 1,000-foot buffer Survey Area (**Figure 9**, *NWI Wetlands Map*). Most of these features were verified in the field within the Survey Area. Ornamental and water retention ponds and lakes, natural ponds and lakes, wastewater treatment ponds, drainage ditches, swales, floodplain areas, wetlands, vernal pools, unnamed streams and rivers, Mallard Slough, Guadalupe River, Agua Caliente Creek, Lower Penitencia Creek, Coyote Creek, and San Francisco Bay estuaries were mapped using field observations and aerial signatures as well as NWI data (**Figure 10**, *Aquatic Resources Map*).

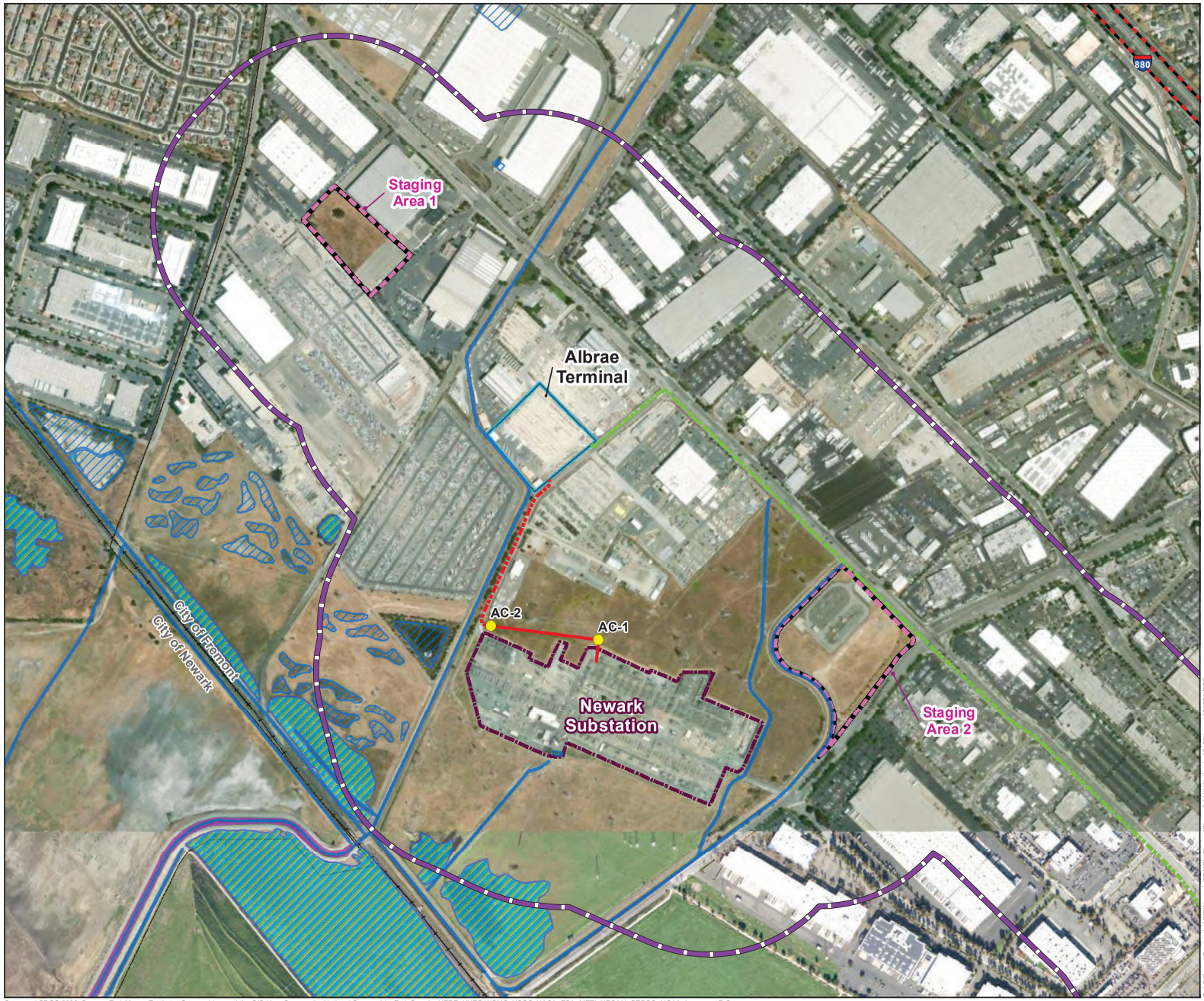
Some of the streams, ponds, and wetlands described above may meet the criteria to be considered jurisdictional under both current State and Federal Clean Water Act (CWA) laws and under CDFW's Lake and Streambed Alteration Program. As required for state and federal wetland permitting, a detailed wetland delineation will be prepared for any areas that may be impacted by the Proposed Project, and verification of this delineation with all applicable agencies would be sought prior to any earth moving activities in potential "waters of the United States" or "waters of the State."

**Habitat Assessment**

Special-status species are plants and wildlife that require special consideration or protection and have been listed as rare, threatened, or endangered by federal, state, or other agencies because of their rarity, vulnerability to habitat loss, population decline, or other factors. Species listed as threatened or endangered are protected under federal or state law. Other species have been designated as special status by state resource agencies or by policy of local agencies to meet conservation objectives.

Special-status plant and wildlife species identified during the literature and database search (five-mile buffer) were analyzed with the following definitions of their potential to occur within the Survey Area:

- **Not Expected; None:** The Survey Area does not support suitable habitat for a particular species, and the known range for a particular species is outside of the Survey Area.
- **Low Potential:** The Survey Area provides limited suitable habitat for a particular species. The known range for a particular species may be outside of the Survey Area.
- **Moderate Potential:** The Survey Area provides some suitable habitat for a particular species or high-quality habitat is located near the Survey Area. The known range for a particular species may include the Survey Area.
- **High Potential:** The Survey Area provides moderate to high quality habitat conditions for a particular species or known populations occur in the immediate vicinity.
- **Present:** Species was observed within the Survey Area during biological surveys or other site visits.




# POWER THE SOUTH BAY PROJECT

## Figure 9: NWI Wetlands

## Alameda Co. and Santa Clara Co., CA

### LEGEND

**Proposed Project Components**

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- Biological Resource Survey Area

**NWI Wetlands**

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Riverine

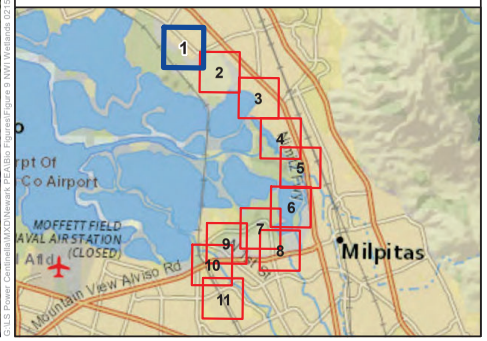
**General Features**

- Municipal Boundary
- Interstate
- US Route or State Highway
- Railroad

0 500 1,000 1,500 2,000

Feet



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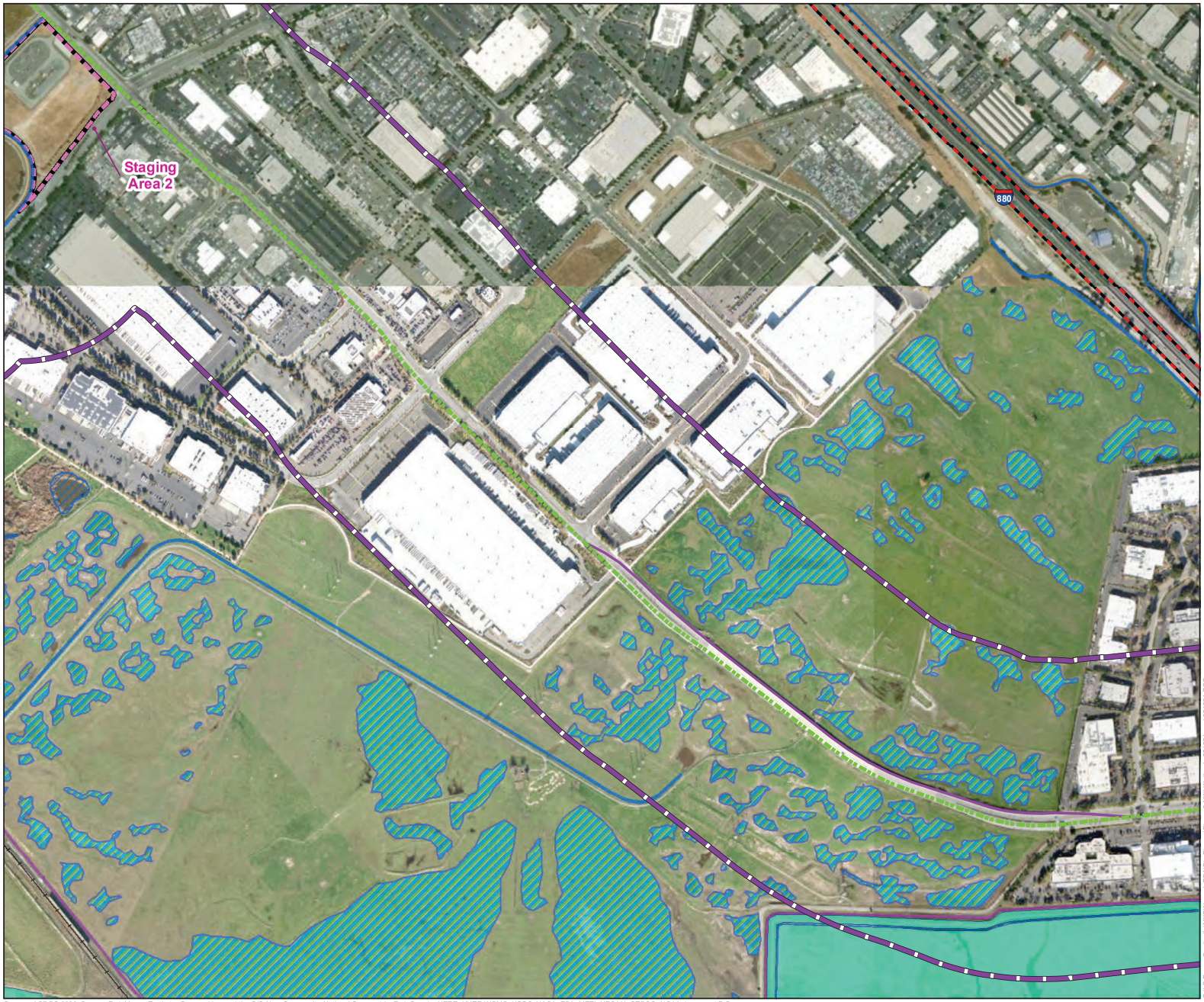



# POWER THE SOUTH BAY PROJECT

## Figure 9: NWI Wetlands

## Alameda Co. and Santa Clara Co., CA

### LEGEND

**Proposed Project Components**

- Overhead Transmission Structure
- Baylands to NRS 230 kV AC Transmission Line (Underground)
- Albrae to Baylands 320 kV DC Transmission Line (Overhead)
- Albrae to Baylands 320 kV DC Transmission Line (Underground)
- Newark to Albrae 230 kV AC Transmission Line (Overhead)
- Newark to Albrae 230 kV AC Transmission Line (Underground)
- Optional Trench Location
- Access Road
- HVDC Terminal Site
- Existing Substation Fenceline
- Construction Staging Area
- Biological Resource Survey Area

**NWI Wetlands**

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Riverine

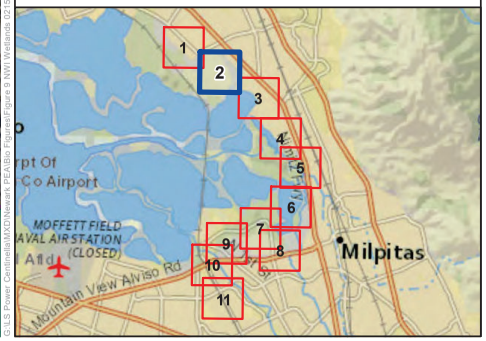
**General Features**

- Municipal Boundary
- Interstate
- US Route or State Highway
- Railroad

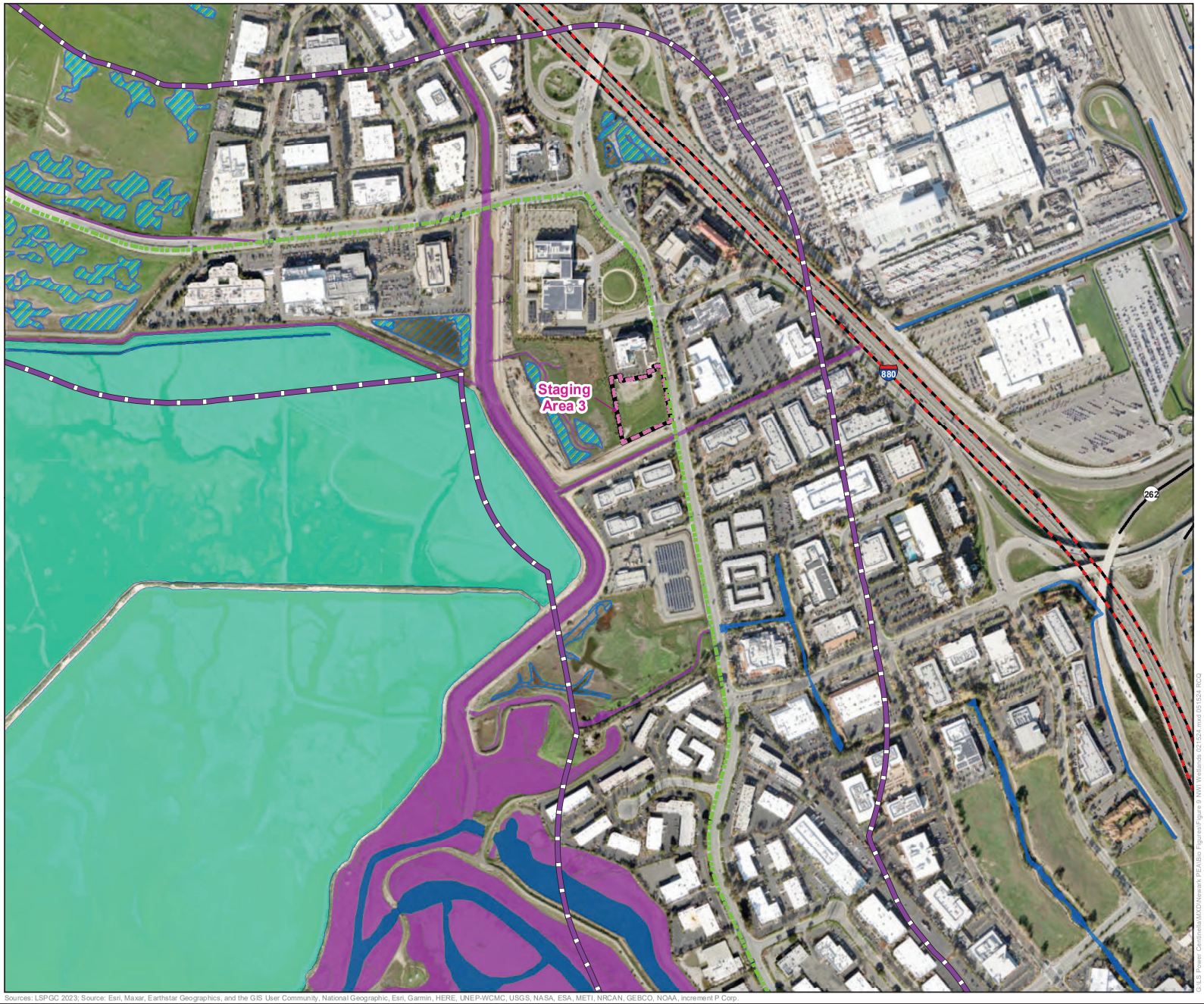
0 500 1,000 1,500 2,000

Feet






Sources: LSPGC 2023; Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.




# POWER THE SOUTH BAY PROJECT

## Figure 9: NWI Wetlands

## Alameda Co. and Santa Clara Co., CA

### LEGEND

**Proposed Project Components**

- Overhead Transmission Structure
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**NWI Wetlands**

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- Estuarine and Marine Wetland
- Riverine

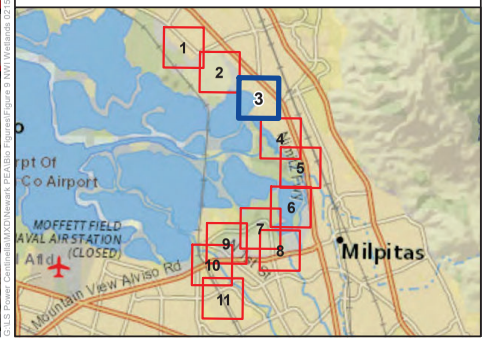
**General Features**

- Municipal Boundary
- Interstate
- US Route or State Highway
- Railroad

0 500 1,000 1,500 2,000

Feet



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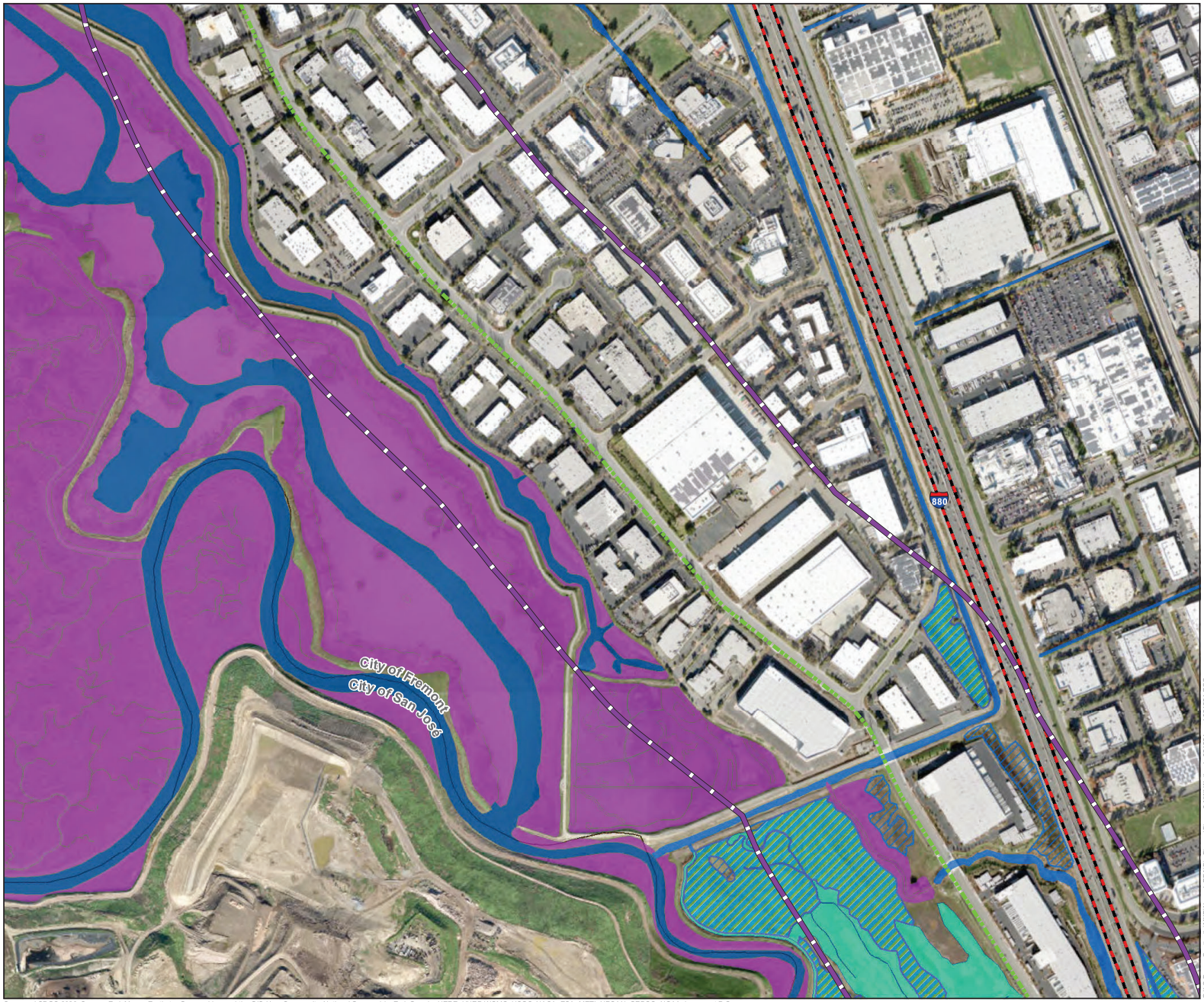


# POWER THE SOUTH BAY PROJECT

## Figure 9: NWI Wetlands

## Alameda Co. and Santa Clara Co., CA

### LEGEND

**Proposed Project Components**

- Overhead Transmission Structure
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- Estuarine and Marine Wetland
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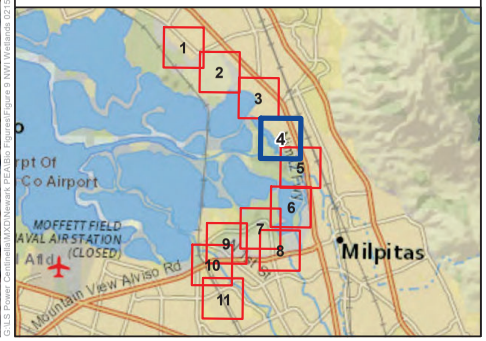
**General Features**

- Municipal Boundary
- Interstate
- US Route or State Highway
- Railroad

0 500 1,000 1,500 2,000

Feet



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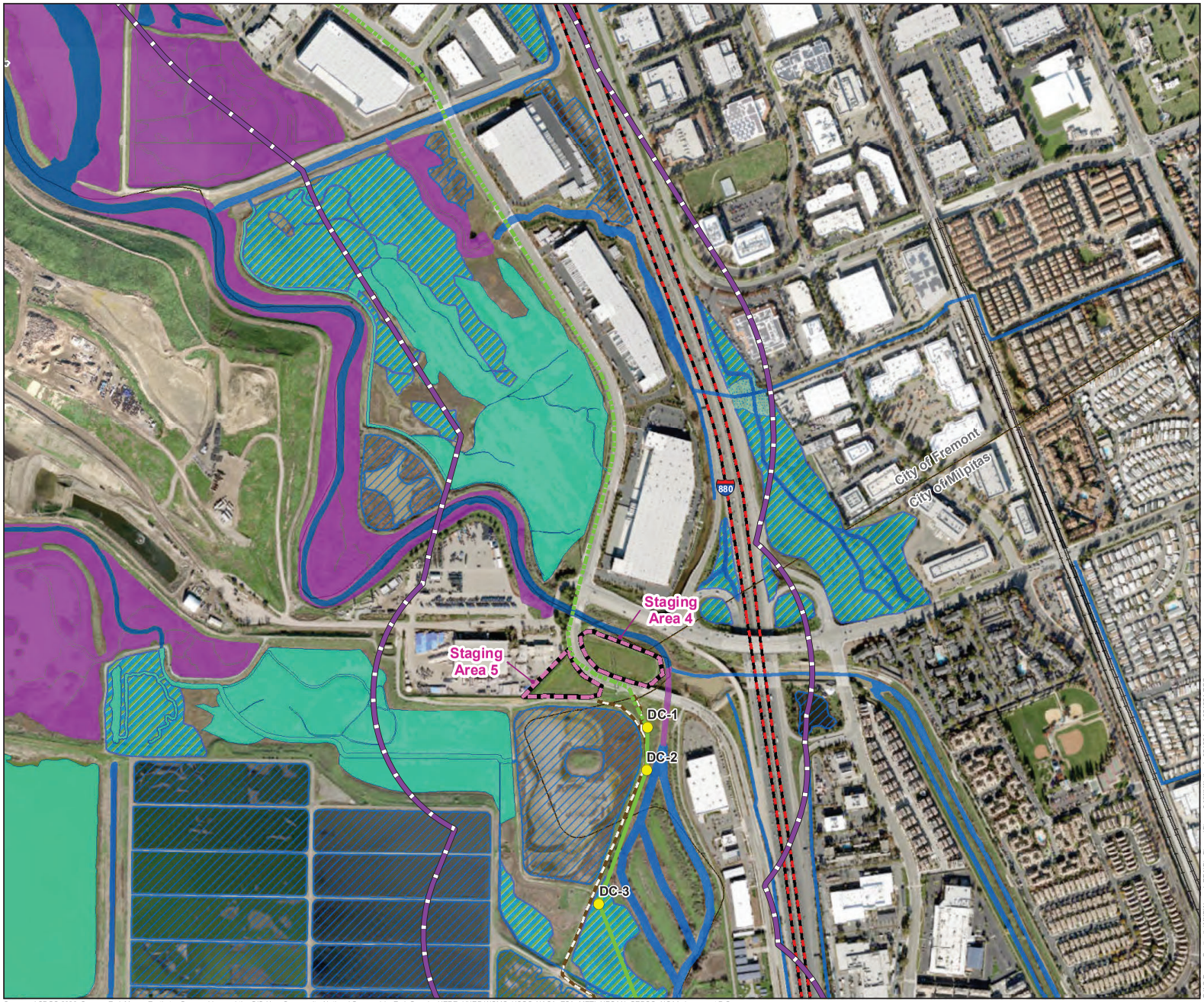


# POWER THE SOUTH BAY PROJECT

## Figure 9: NWI Wetlands

## Alameda Co. and Santa Clara Co., CA

### LEGEND

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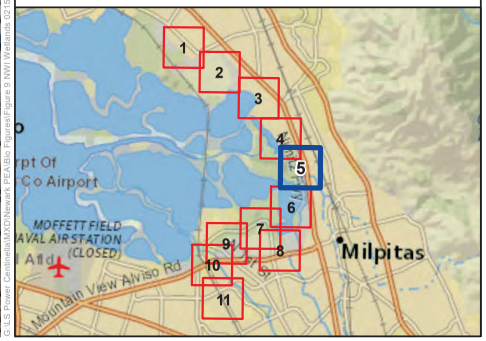
0 500 1,000 1,500 2,000

Feet



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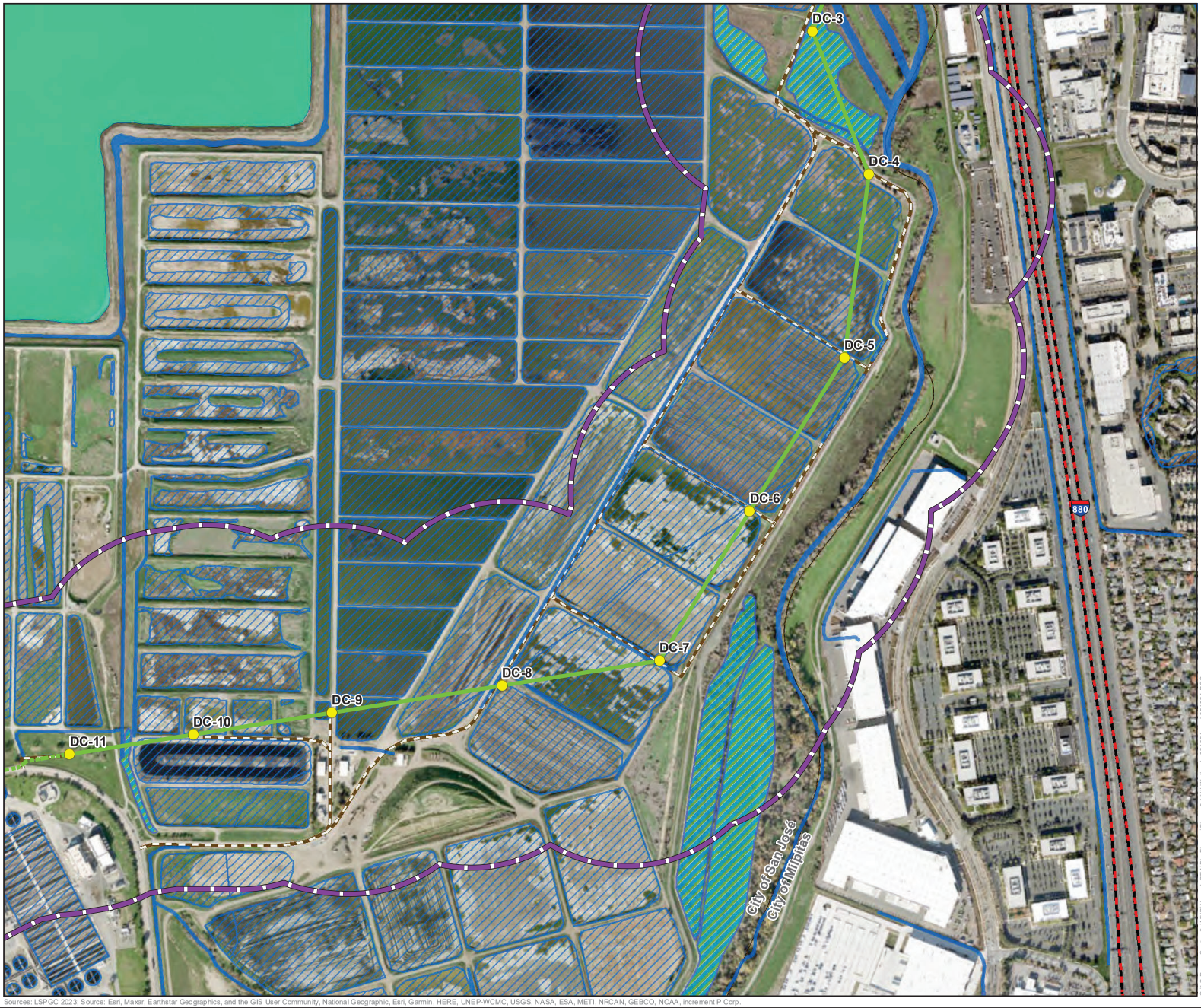


# POWER THE SOUTH BAY PROJECT

## Figure 9: NWI Wetlands

## Alameda Co. and Santa Clara Co., CA

### LEGEND

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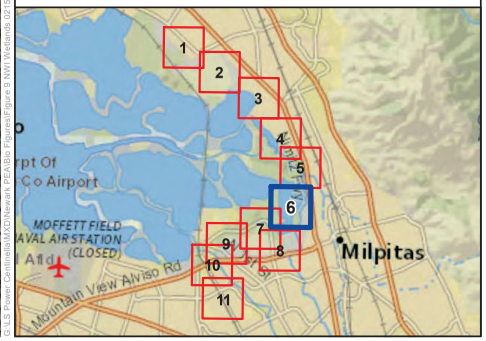
0 500 1,000 1,500 2,000

Feet



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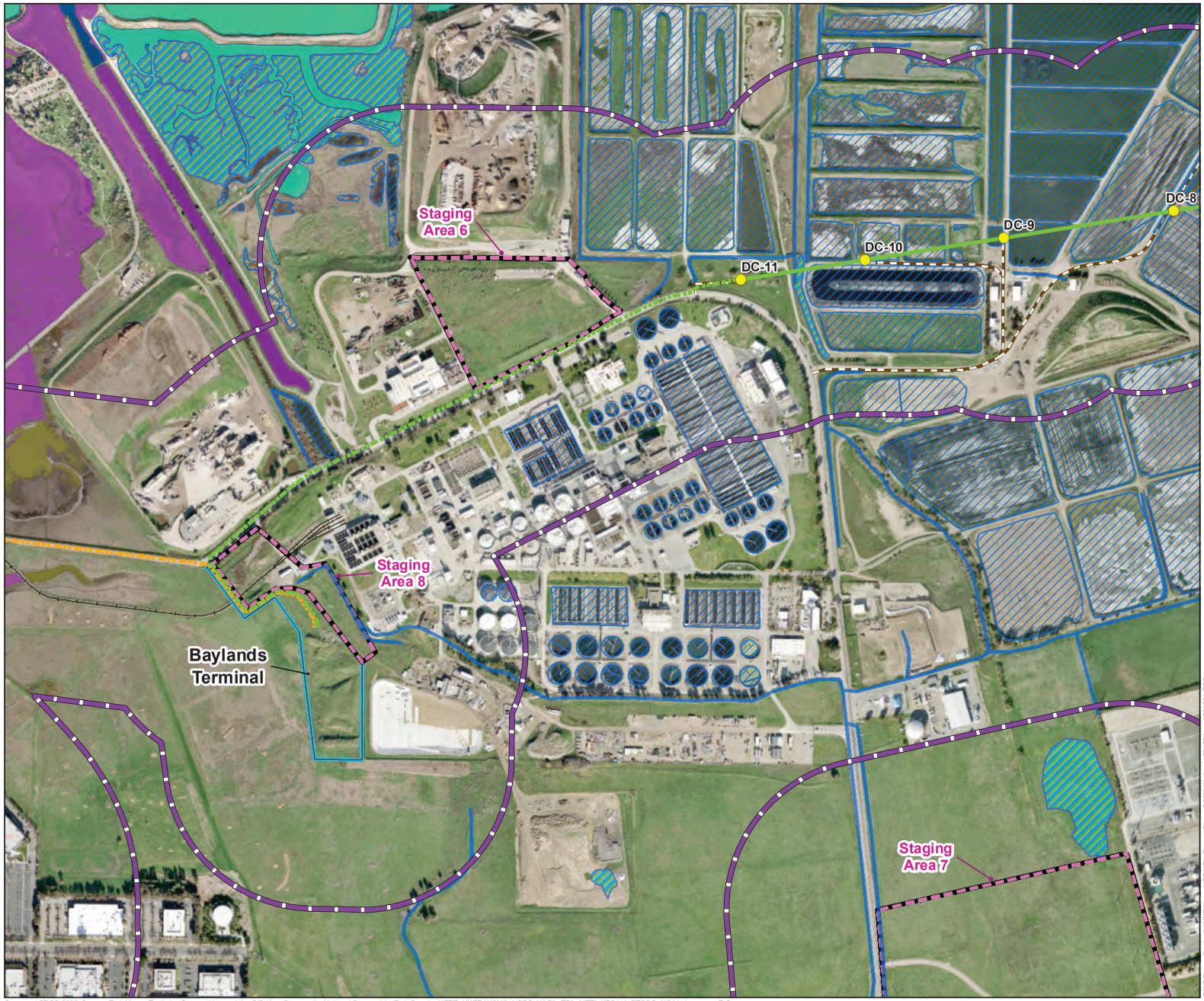


# POWER THE SOUTH BAY PROJECT

## Figure 9: NWI Wetlands

## Alameda Co. and Santa Clara Co., CA

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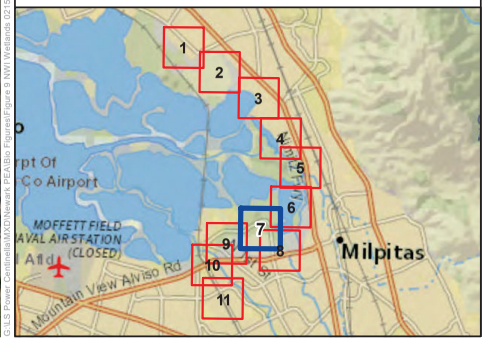
0 500 1,000 1,500 2,000

Feet



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# POWER THE SOUTH BAY PROJECT

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## Alameda Co. and Santa Clara Co., CA

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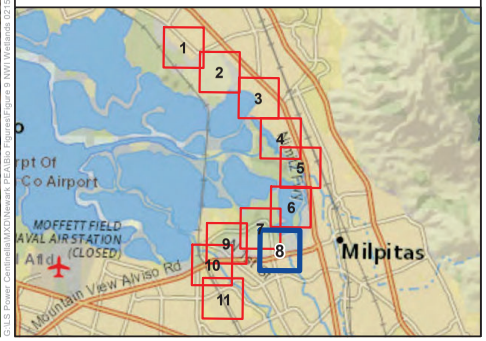
0 500 1,000 1,500 2,000

Feet



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# POWER THE SOUTH BAY PROJECT

## Figure 9: NWI Wetlands

## Alameda Co. and Santa Clara Co., CA

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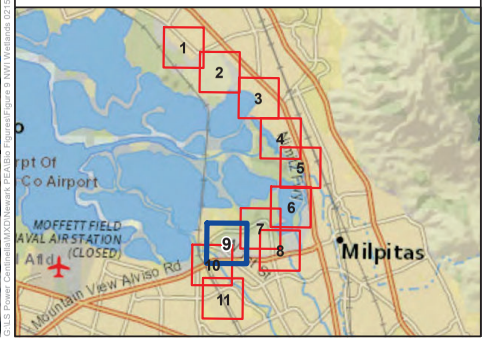
0 500 1,000 1,500 2,000

Feet



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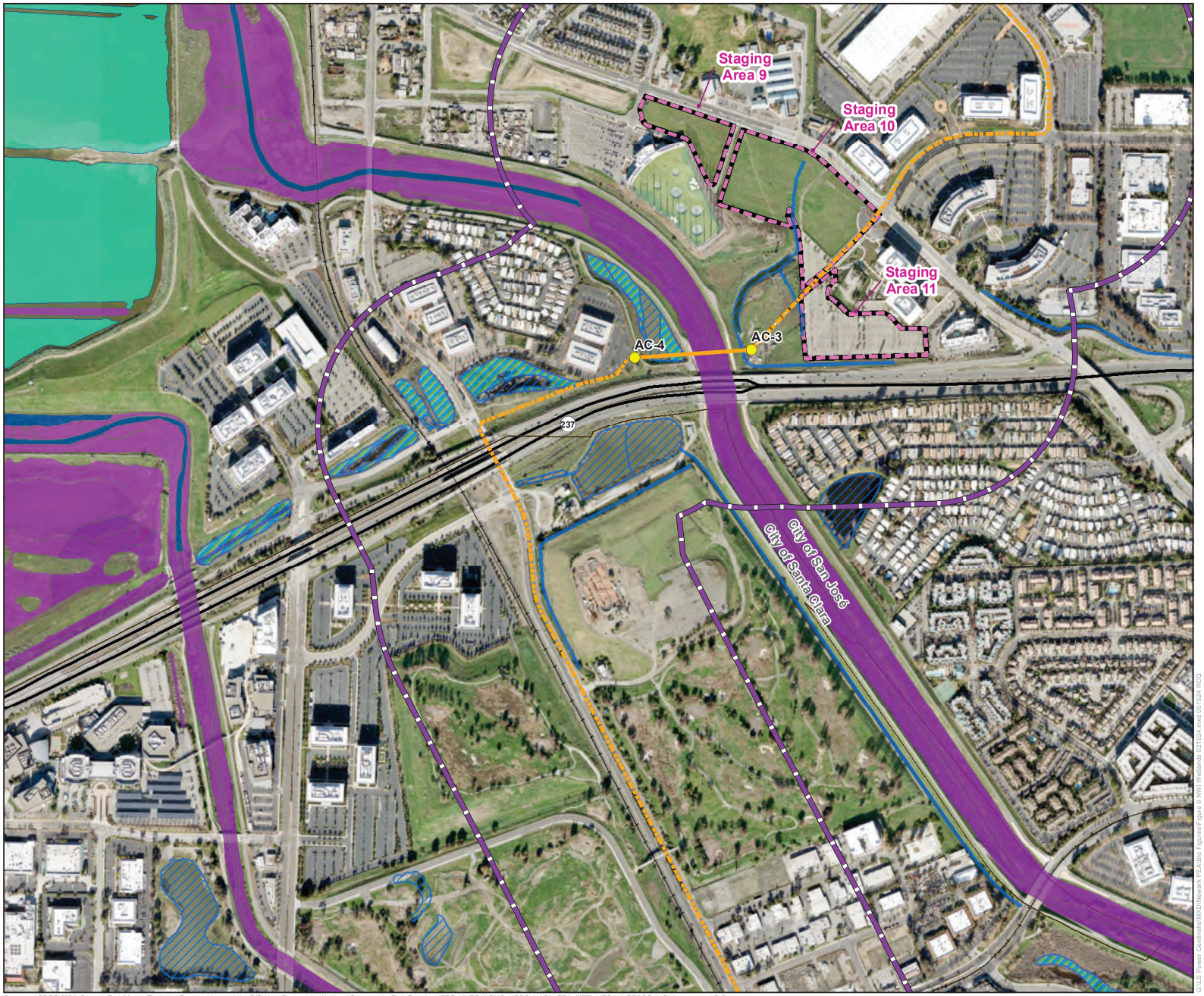


# POWER THE SOUTH BAY PROJECT

## Figure 9: NWI Wetlands

## Alameda Co. and Santa Clara Co., CA

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**General Features**

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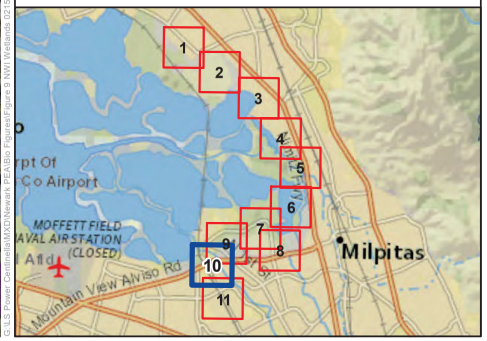
0 500 1,000 1,500 2,000

Feet



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# POWER THE SOUTH BAY PROJECT

## Figure 9: NWI Wetlands

## Alameda Co. and Santa Clara Co., CA

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**General Features**

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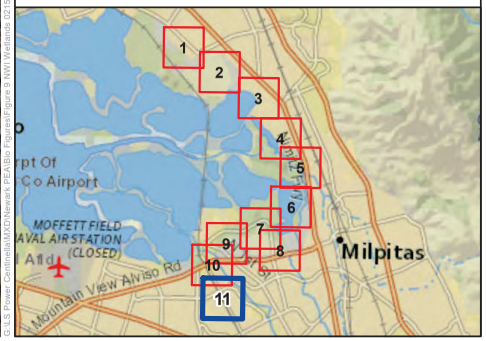
0 500 1,000 1,500 2,000

Feet



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# POWER THE SOUTH BAY PROJECT

## Figure 10: Aquatic Resources

## Alameda Co. and Santa Clara Co., CA

### LEGEND

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- Overhead Transmission Structure
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**Aquatic Resources**

- River or Stream
- Drainage Ditch
- Floodplain Area with Multiple Potential Ponds Wetlands/Streams
- Floodplain Area with Multiple Ponds/Wetlands
- Floodplain Area with Multiple Wetlands
- Floodplain Area with Multiple streams/wetlands
- Floodplain Area with Numerous Potential Wetlands
- Floodplain Area with Ponds/Wetlands
- Floodplain Area with multiple streams/wetlands/ponds
- Pond/Lake
- Pond/Wetland
- CDFW / USACE Jurisdictional Limits
- Potential Vernal Pool
- Potential Wetland
- San Francisco Bay Estuary
- Swale
- Wastewater Treatment Pond
- Delineated Wetland

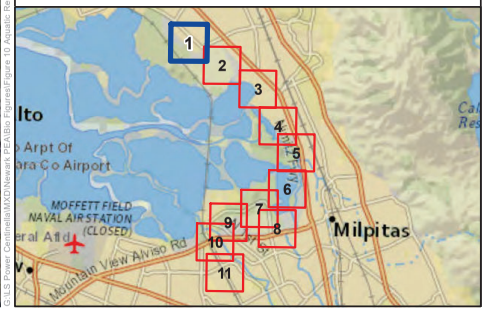
**General Features**

- Municipal Boundary
- Interstate
- US Route or State Highway
- Railroad



0 500 1,000 1,500 2,000

Feet

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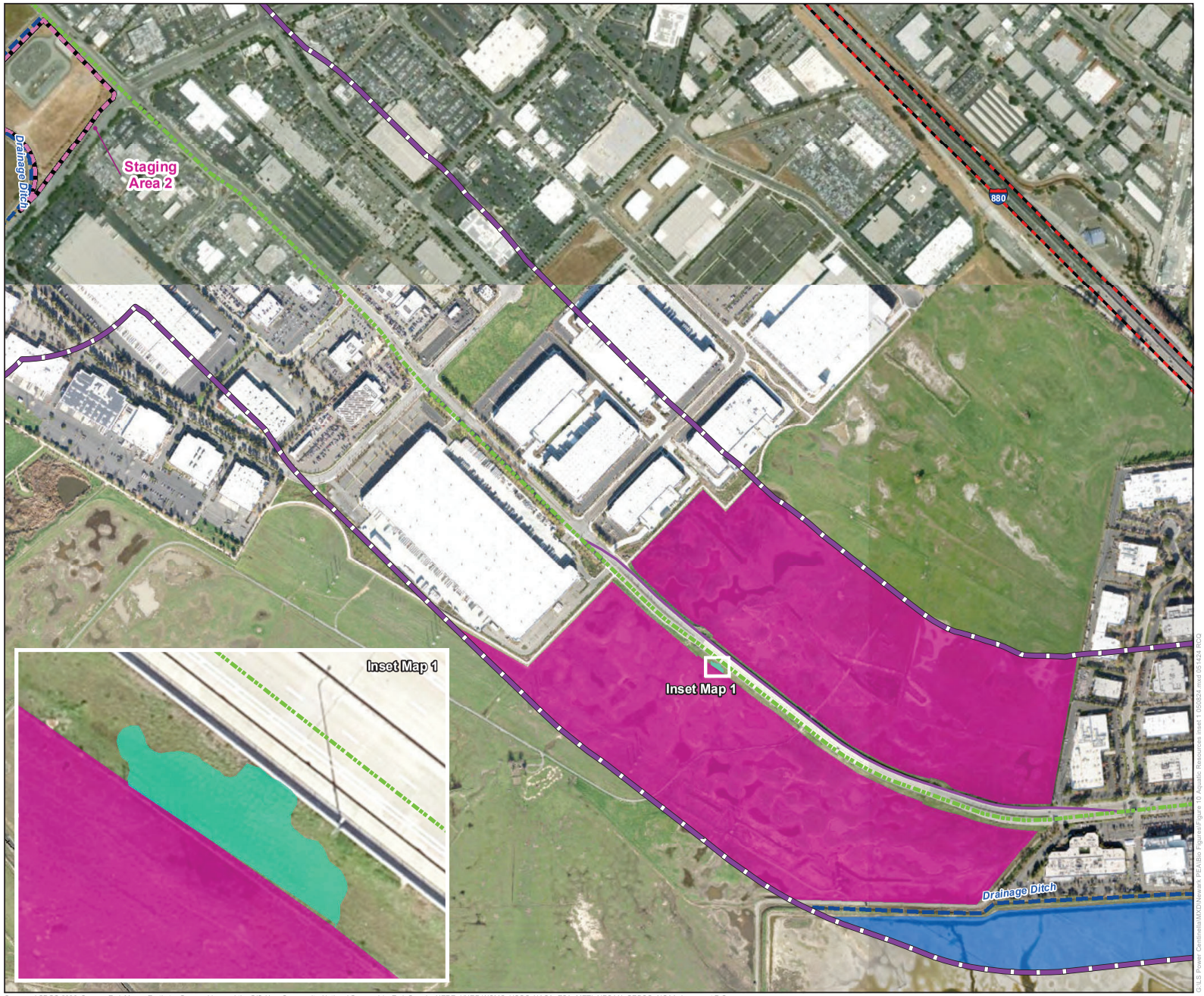


# POWER THE SOUTH BAY PROJECT

## Figure 10: Aquatic Resources

## Alameda Co. and Santa Clara Co., CA

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**Aquatic Resources**

- River or Stream
- CDFW / USACE Jurisdictional Limits
- Drainage Ditch
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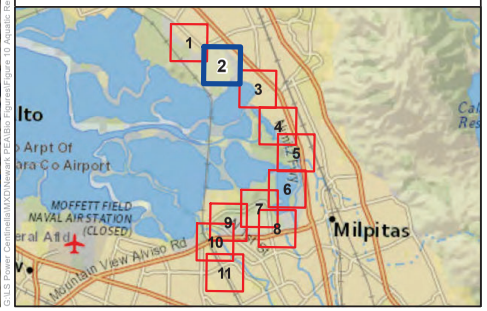
0 500 1,000 1,500 2,000

Feet

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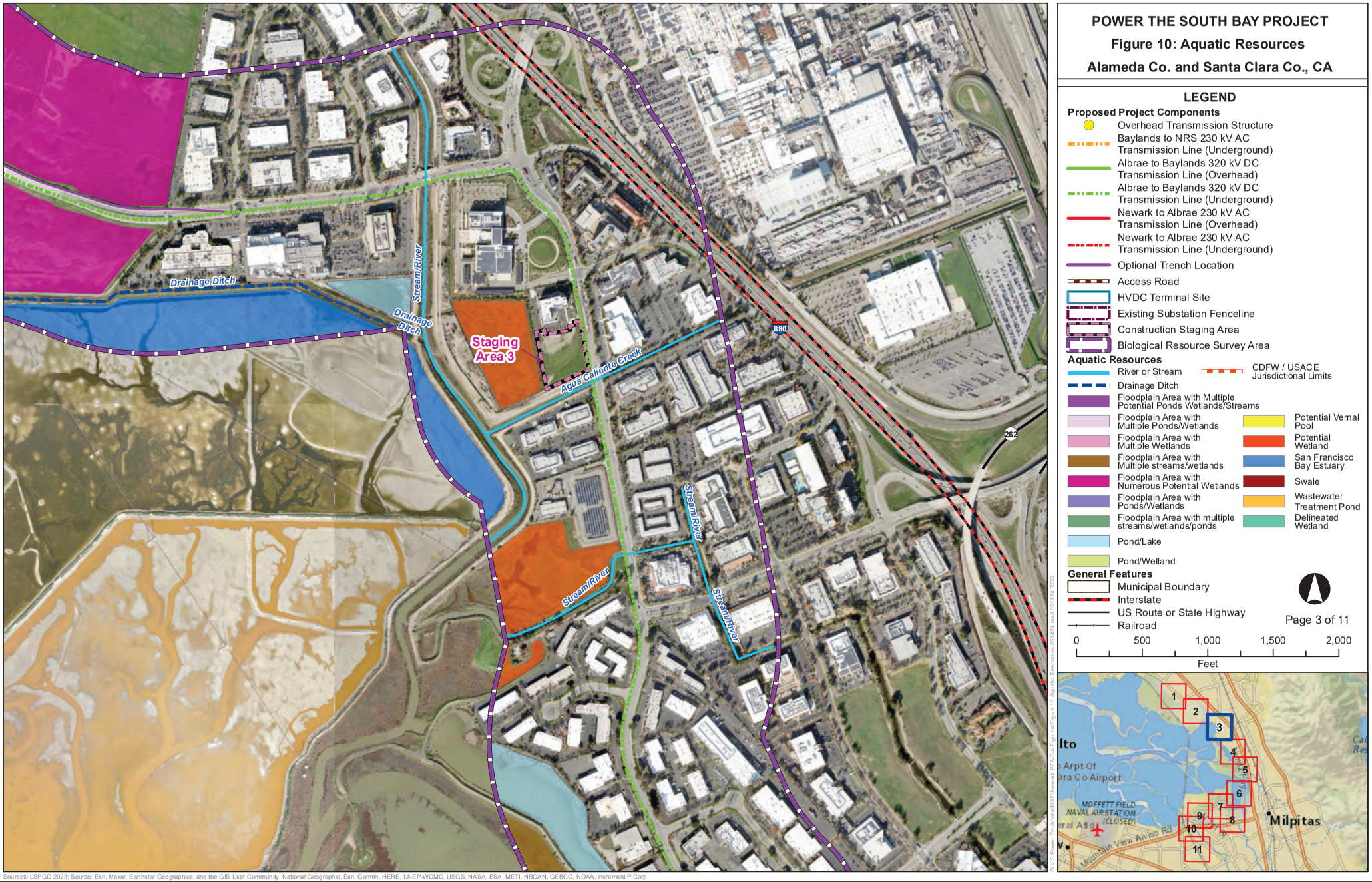


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## Figure 10: Aquatic Resources

## Alameda Co. and Santa Clara Co., CA

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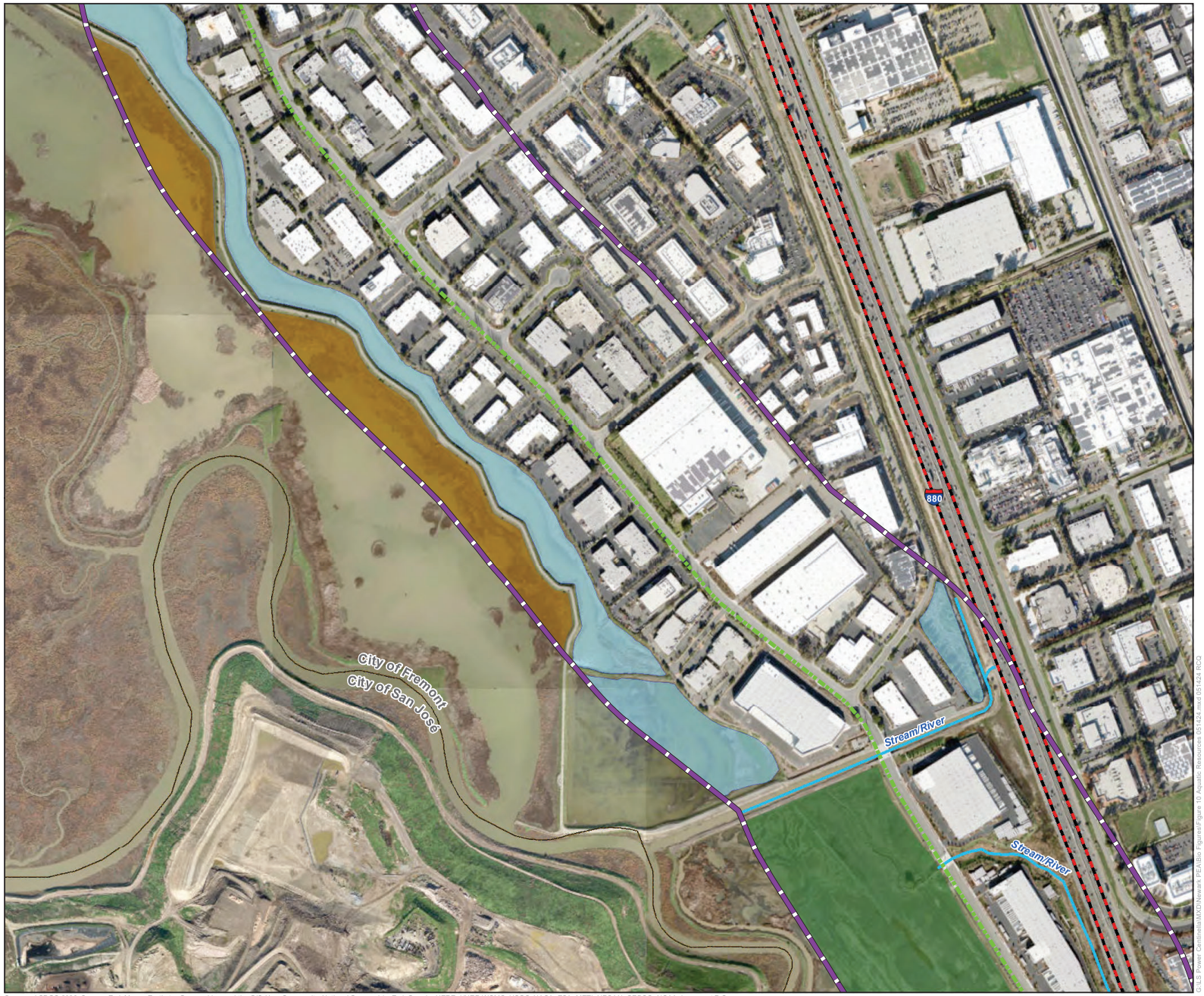
0 500 1,000 1,500 2,000

Feet




Sources: LSPGC 2023; Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.




# POWER THE SOUTH BAY PROJECT

## Figure 10: Aquatic Resources

## Alameda Co. and Santa Clara Co., CA

### LEGEND

**Proposed Project Components**

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**Aquatic Resources**

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- Delineated Wetland

**General Features**

- Municipal Boundary
- Interstate
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- Railroad



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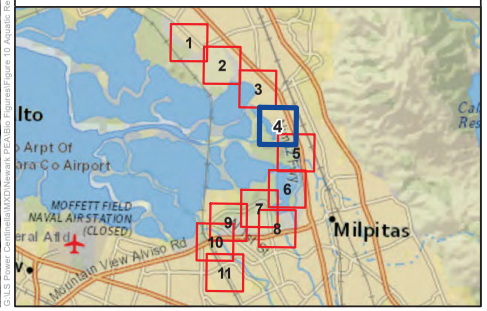


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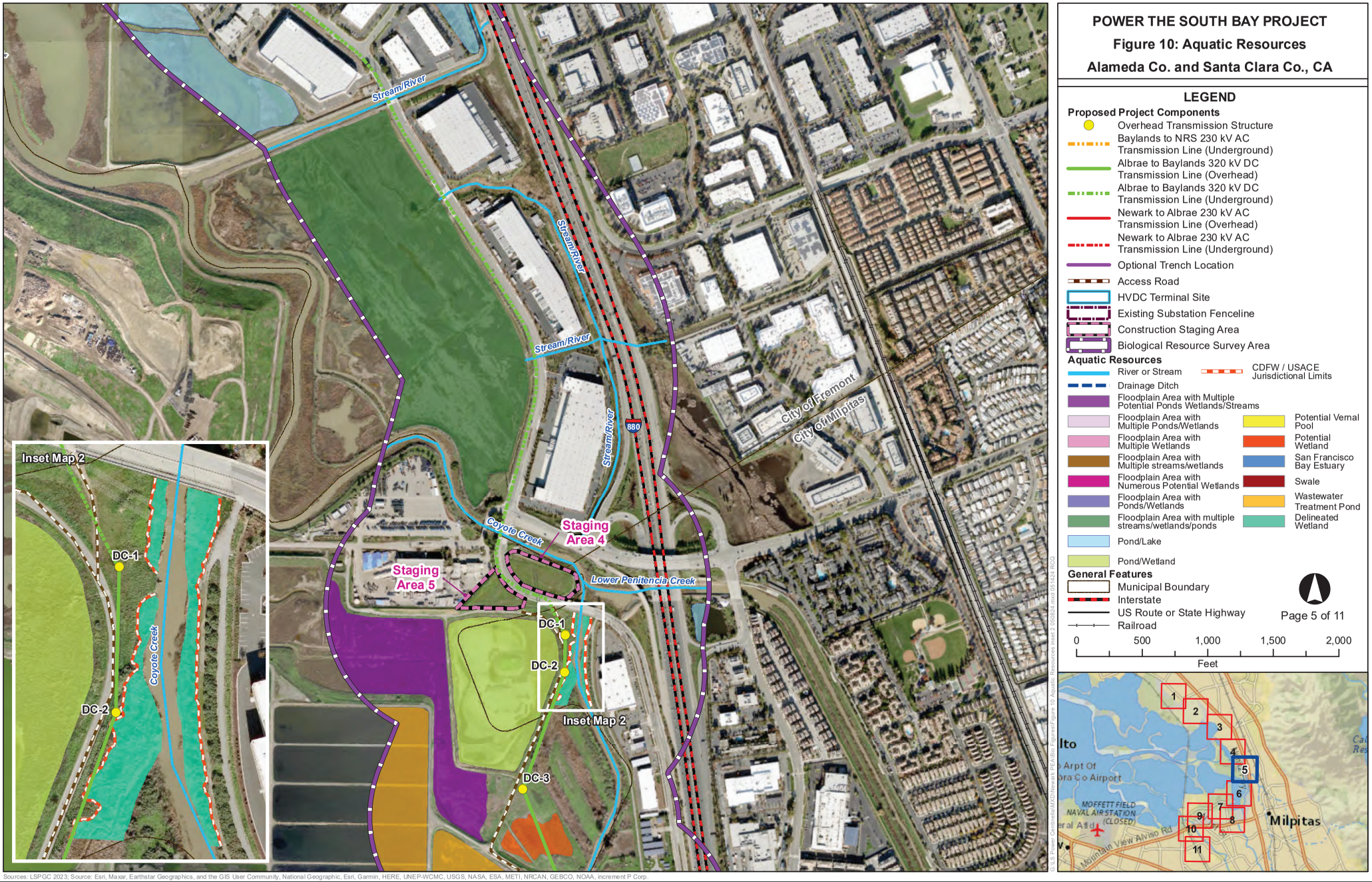
Sources: LSPGC 2023; Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

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# POWER THE SOUTH BAY PROJECT

## Figure 10: Aquatic Resources

## Alameda Co. and Santa Clara Co., CA

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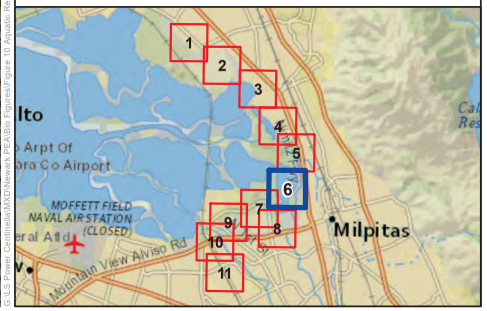


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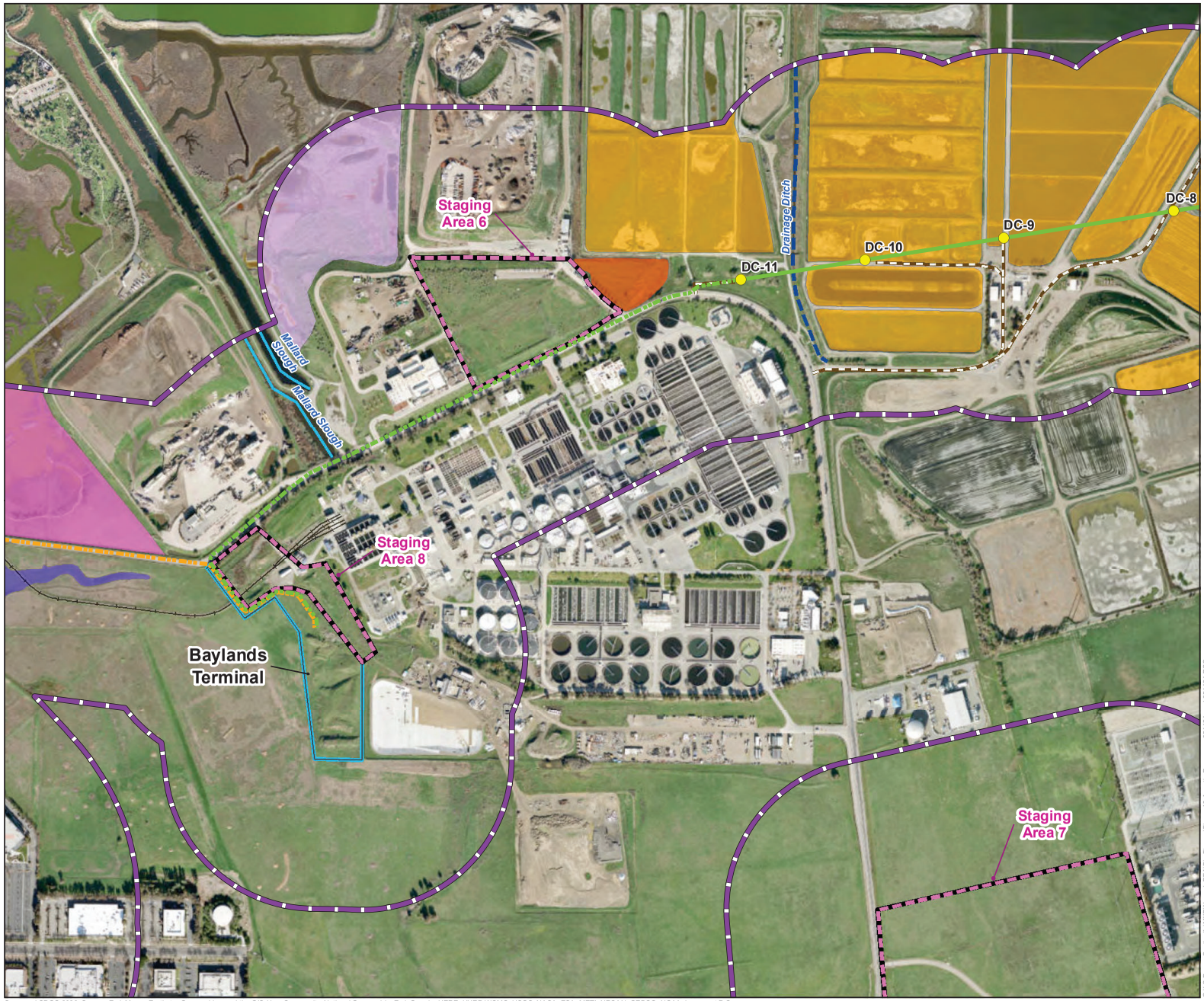


# POWER THE SOUTH BAY PROJECT

## Figure 10: Aquatic Resources

## Alameda Co. and Santa Clara Co., CA

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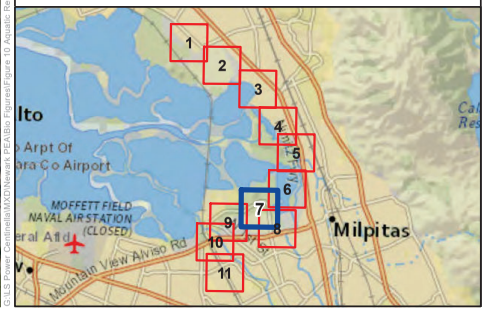


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# POWER THE SOUTH BAY PROJECT

## Figure 10: Aquatic Resources

## Alameda Co. and Santa Clara Co., CA

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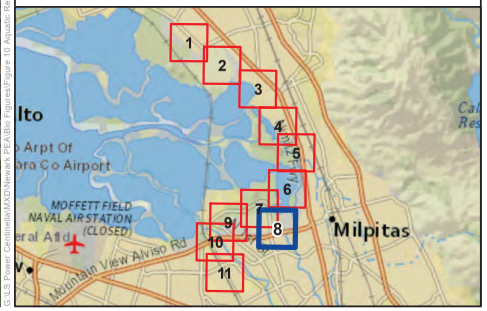


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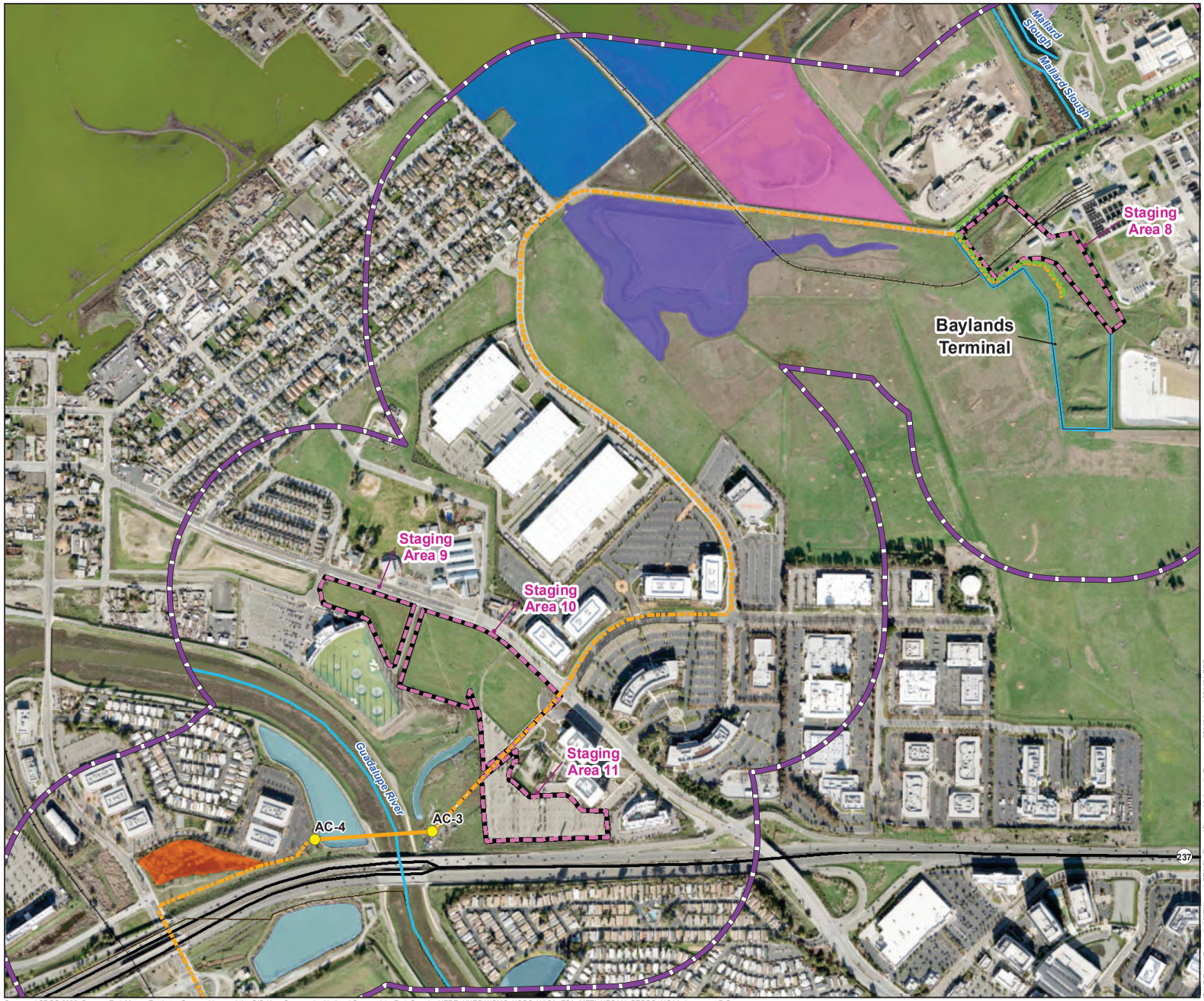


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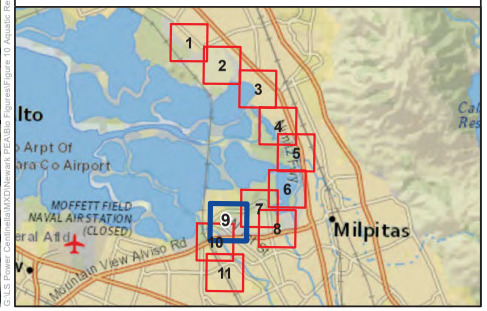


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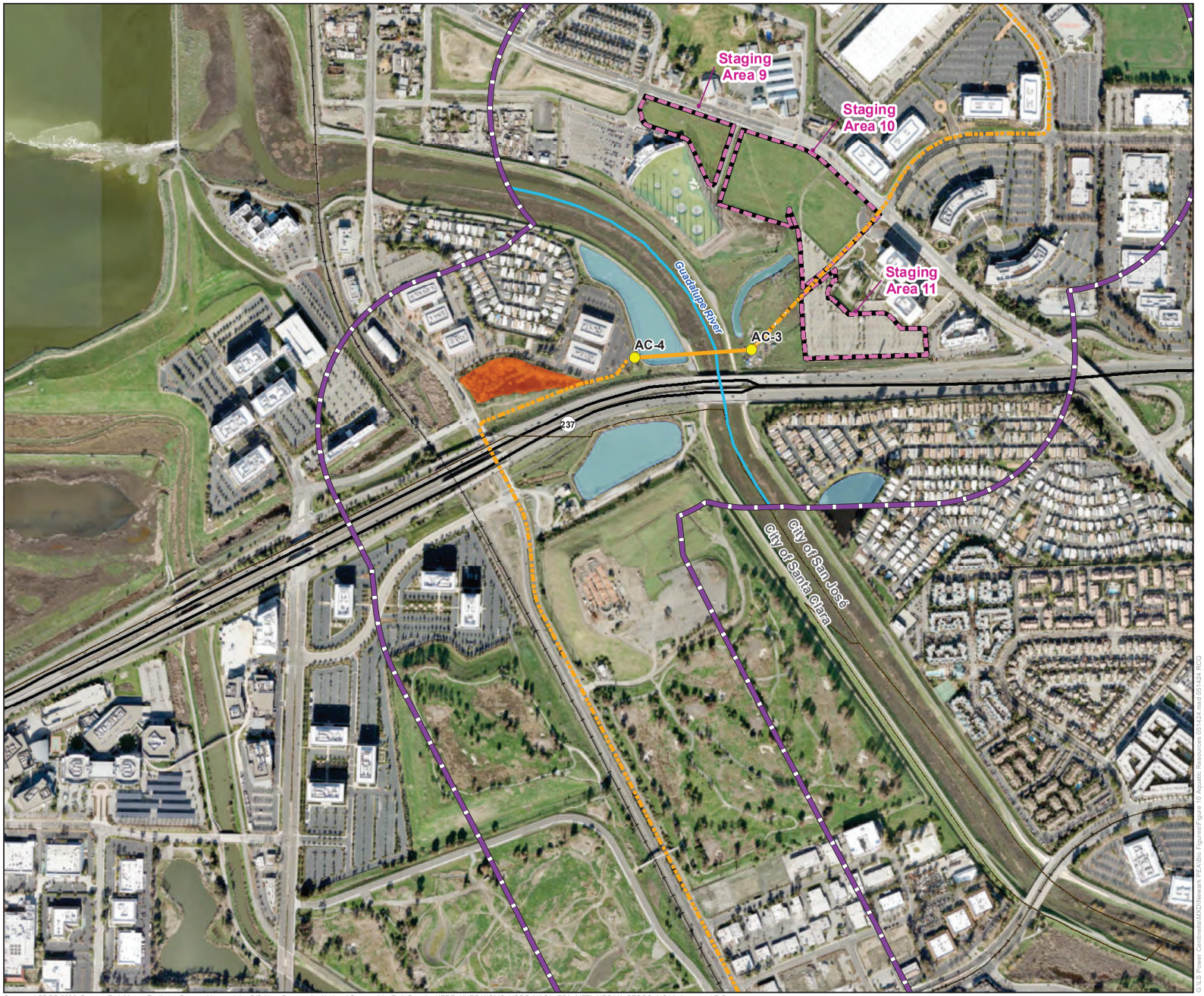


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## Alameda Co. and Santa Clara Co., CA

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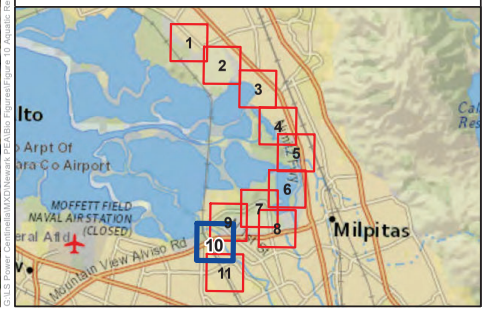


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# POWER THE SOUTH BAY PROJECT

## Figure 10: Aquatic Resources

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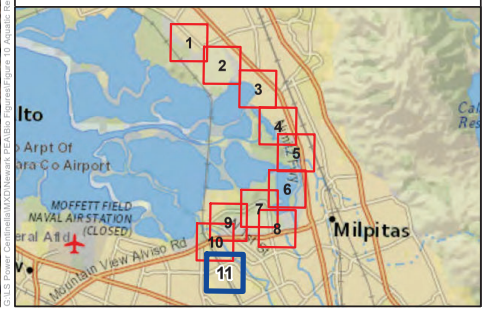


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## 4.4. Special-Status Plants

All special-status plant species found in the Information for Planning and Consulting (IPaC) (USFWS, 2023), CNPS (CNPS, 2024b), and CNDDB (CDFW, 2024b) occurrence records within the Survey Area and a five-mile buffer were evaluated for their potential to occur based on the presence of suitable habitat, elevation, and soils. The IPaC report is provided in **Appendix B**. All plants that have CNPS records within the United States Geological Survey (USGS) 7.5-minute quadrangles that the Survey Area lies within are included in **Table 2**, *CNPS Plant Species*. Additionally, CNDDB records are shown on **Figure 11a**, *CNDDB Map (Flora).*

Based on the literature review (CNDDB data), 21 special-status plant species and one sensitive vegetation community were evaluated for their potential to occur within the Survey Area; of the 21 special-status plant species and one sensitive vegetation community, eight have a low potential to occur or are not expected to occur, and 14 plant species have moderate or high potential to occur in the Survey Area (as shown in **Table 2**). Full analysis of the potential to occur within the Survey Area is provided in **Table 3**, *Special-Status Species4*. Several of these plants could occur within impact areas in the vicinity of the Don Edwards San Francisco Bay NWR.

**Table 2: CNPS Plant Species**

| Common Name | Scientific Name | Status | Potential to Occur |
|---|---|---|---|
| Alkali milkvetch | *Astragalus tener* var. *tener* | 1B.2 | Moderate |
| Brittle scale | *Atriplex depressa* | 1B.2 | Moderate |
| Lesser saltscale | *Atriplex minuscula* | 1B.1 | Moderate |
| Congdon's tarplant | *Centromadia parryi* ssp. *congdonii* | 1B.1 | High |
| Point Reyes salty birds beak | *Chloropyron maritimum* ssp. *palustre* | 1B.2 | Moderate |
| Robust spineflower | *Chorizanthe robusta* var. *robusta* | 1B.1, FE | Low |
| Santa Clara red ribbons | *Clarkia concinna* ssp. *automixa* | 4.3 | Low |
| Small spikerush | *Eleocharis parvula* | 4.3 | Low |
| Bay buckwheat | *Eriogonum umbellatum* var. *bahiiforme* | 4.2 | Low |
| Hoover's button celery | *Eryngium aristulatum* var. *hooveri* | 1B.1 | Moderate |
| San Joaquin spearscale | *Extriplex joaquinana* | 1B.2 | Moderate |
| Contra Costa goldfields | *Lasthenia conjugens* | 1B.1, FE | High |
| Hall's bush mallow | *Malacothamnus hallii* | 1B.2 | Low |
| Prostrate vernal pool navarettia | *Navarretia prostrata* | 1B.2 | Moderate |
| California alkali grass | *Puccinellia simplex* | 1B.2 | Moderate |
| Chaparral harebell | *Ravenella exigua* | 1B.2 | Low |
| Long-styled sand-spurrey | *Spergularia macrotheca* var. *longistyla* | 1B.2 | Moderate |
| Most beautiful jewelflower | *Streptanthus albidus* ssp. *peramoenus* | 1B.2 | Low |
| Northern slender pondweed | *Stuckenia filiformis* ssp. *alpina* | 2B.2 | Low |
| California seablite | *Suaeda californica* | 1B.1, FE | Moderate |

| | | | |
|---|---|---|---|
| Saline clover | *Trifolium hydrophilum* | 1B.2 | Moderate |
| Northern coastal salt marsh | N/A | Sensitive Vegetative Community | Moderate |

**CNPS:**

- **1B** = Plants rare, threatened, or endangered in California or elsewhere
- **2B** = Plants rare, threatened, or endangered in California but more common elsewhere
- **3** = Review List: Plants about which more information is needed
- **4** = Watch List: Plants of limited distribution
- **0.1** = Plants seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat)
- **0.2** = Plants moderately threatened in California (20-80% occurrences threatened/moderate degree and immediacy of threat)
- **0.3** = Plants not very threatened in California (less than 20% of occurrences threatened/low degree and immediacy of threat or no current threats known)

# POWER THE SOUTH BAY PROJECT

## Figure 11a: CNDDB Map (Flora)

## Alameda Co. and Santa Clara Co., CA




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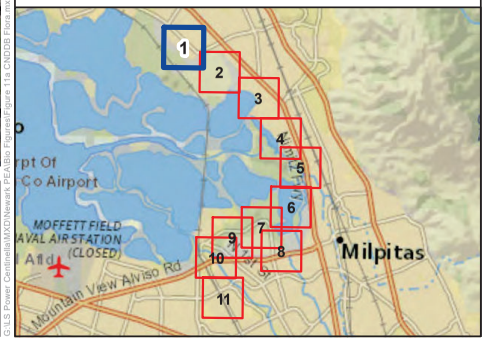


- California Seablite
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- Contra Costa Goldfields
- Hoover's Button-Celery
- Northern Coastal Salt Marsh
- Point Reyes Salty Bird's-Beak

Sources: CDFW, 2023; LSPGC 2023; Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.




**POWER THE SOUTH BAY PROJECT**

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**Alameda Co. and Santa Clara Co., CA**

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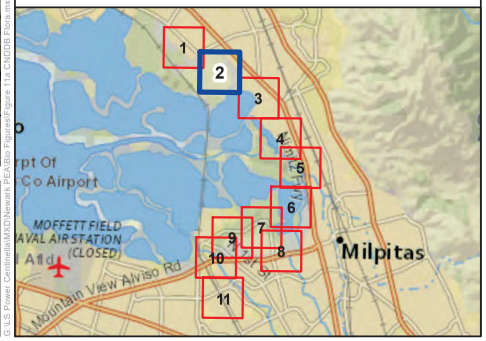


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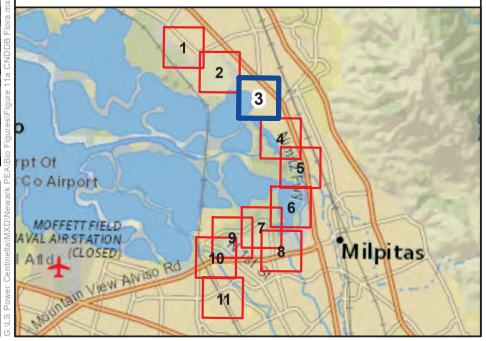


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- Existing Substation Boundary
- Construction Staging Area
- Biological Resource Survey Area

**General Features**

- Interstate
- US Route or State Highway
- Railroad



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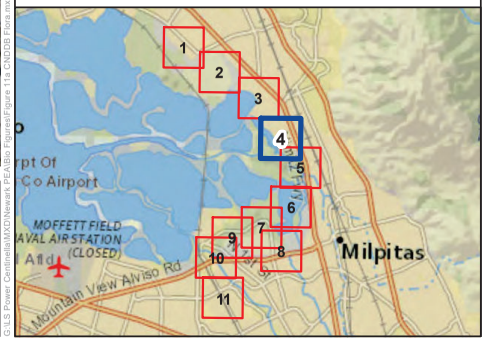


- California Seablite
- Congdon's Tarplant
- Contra Costa Goldfields
- Hoover's Button-Celery
- Northern Coastal Salt Marsh
- Point Reyes Salty Bird's-Beak

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Sources: CDFW, 2023; LSPGC 2023; Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.




# POWER THE SOUTH BAY PROJECT

## Figure 11a: CNDDB Map (Flora)

## Alameda Co. and Santa Clara Co., CA

### LEGEND

**Proposed Project Components**

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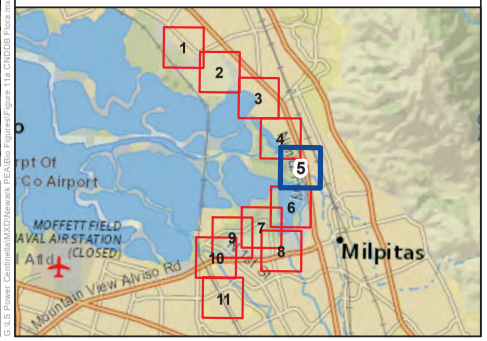


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**POWER THE SOUTH BAY PROJECT**

**Figure 11a: CNDDB Map (Flora)**

**Alameda Co. and Santa Clara Co., CA**

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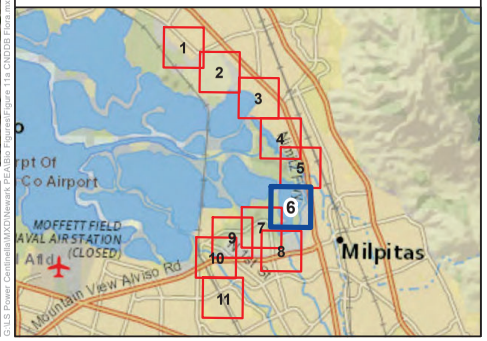


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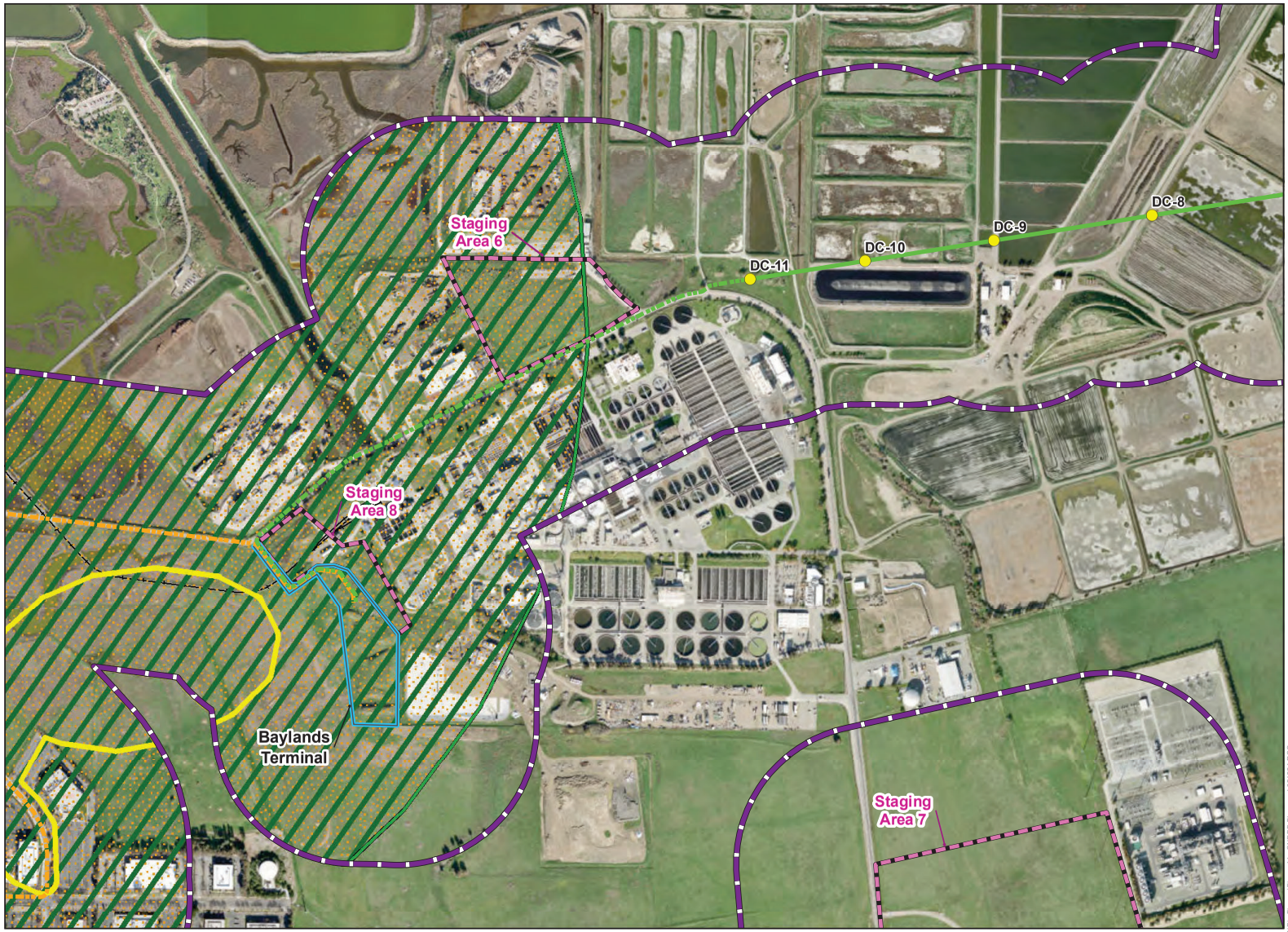


# POWER THE SOUTH BAY PROJECT

## Figure 11a: CNDDB Map (Flora)

## Alameda Co. and Santa Clara Co., CA

### LEGEND

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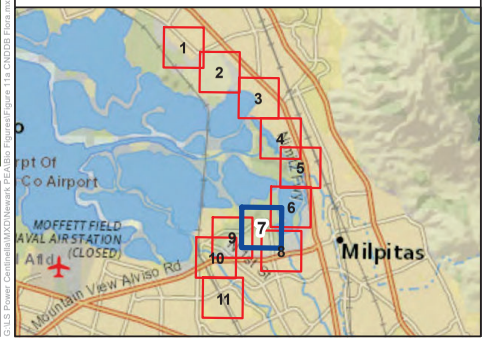


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**POWER THE SOUTH BAY PROJECT**

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**Alameda Co. and Santa Clara Co., CA**

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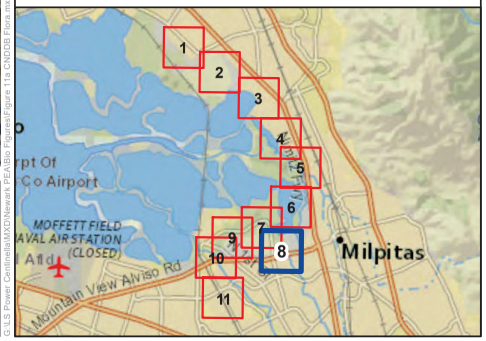


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**POWER THE SOUTH BAY PROJECT**

**Figure 11a: CNDDB Map (Flora)**

**Alameda Co. and Santa Clara Co., CA**

**LEGEND**

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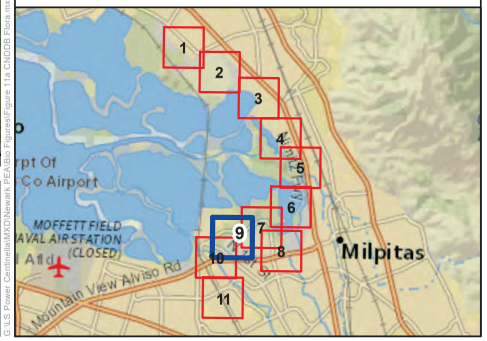


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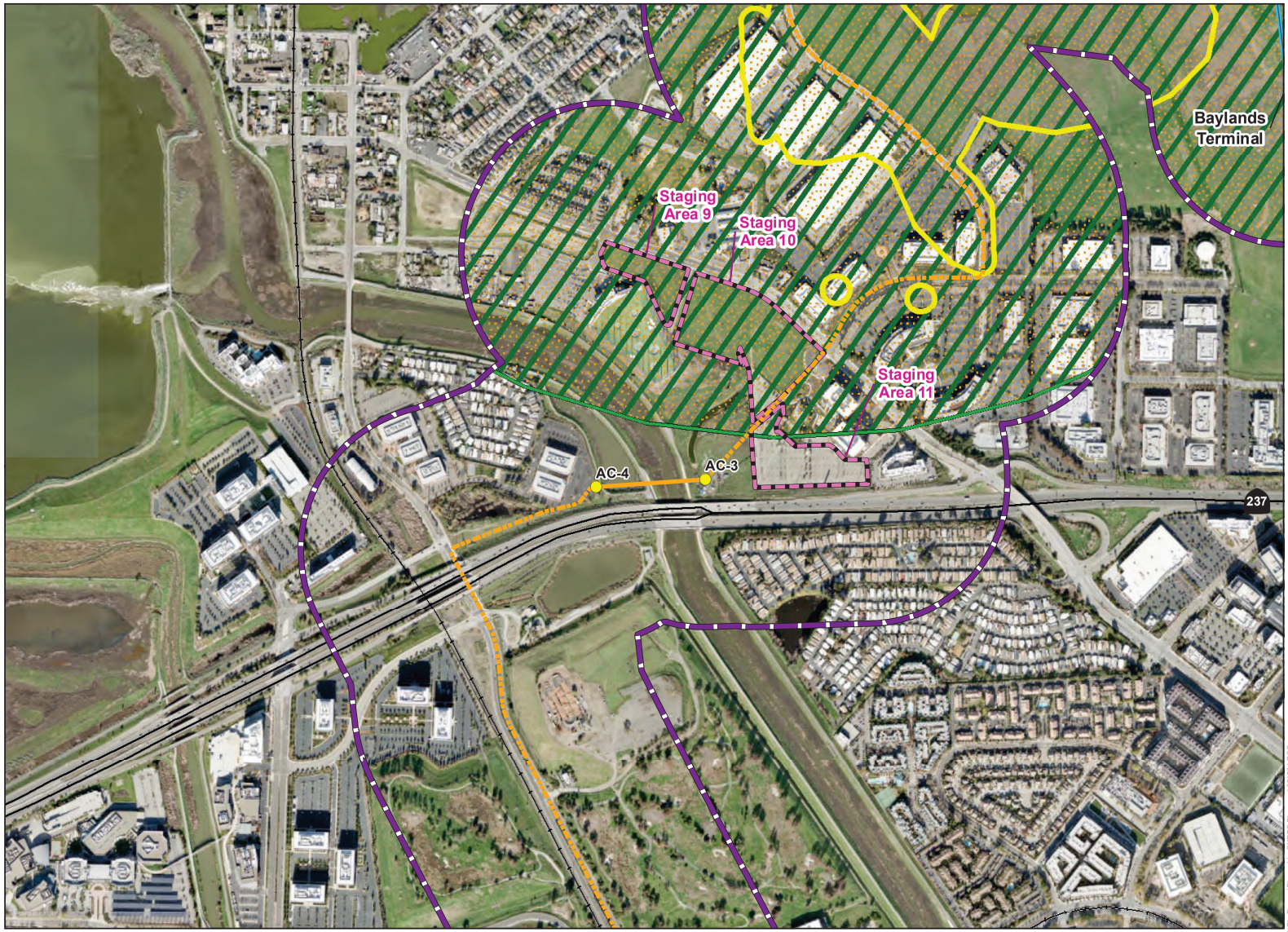


# POWER THE SOUTH BAY PROJECT

## Figure 11a: CNDDB Map (Flora)

## Alameda Co. and Santa Clara Co., CA

### LEGEND

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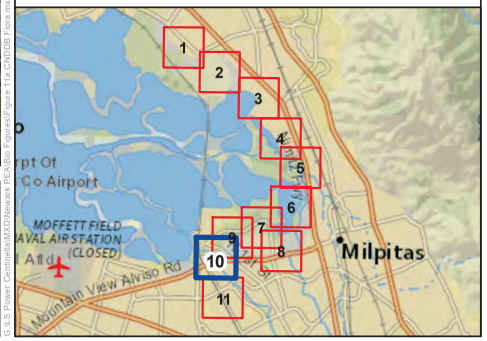


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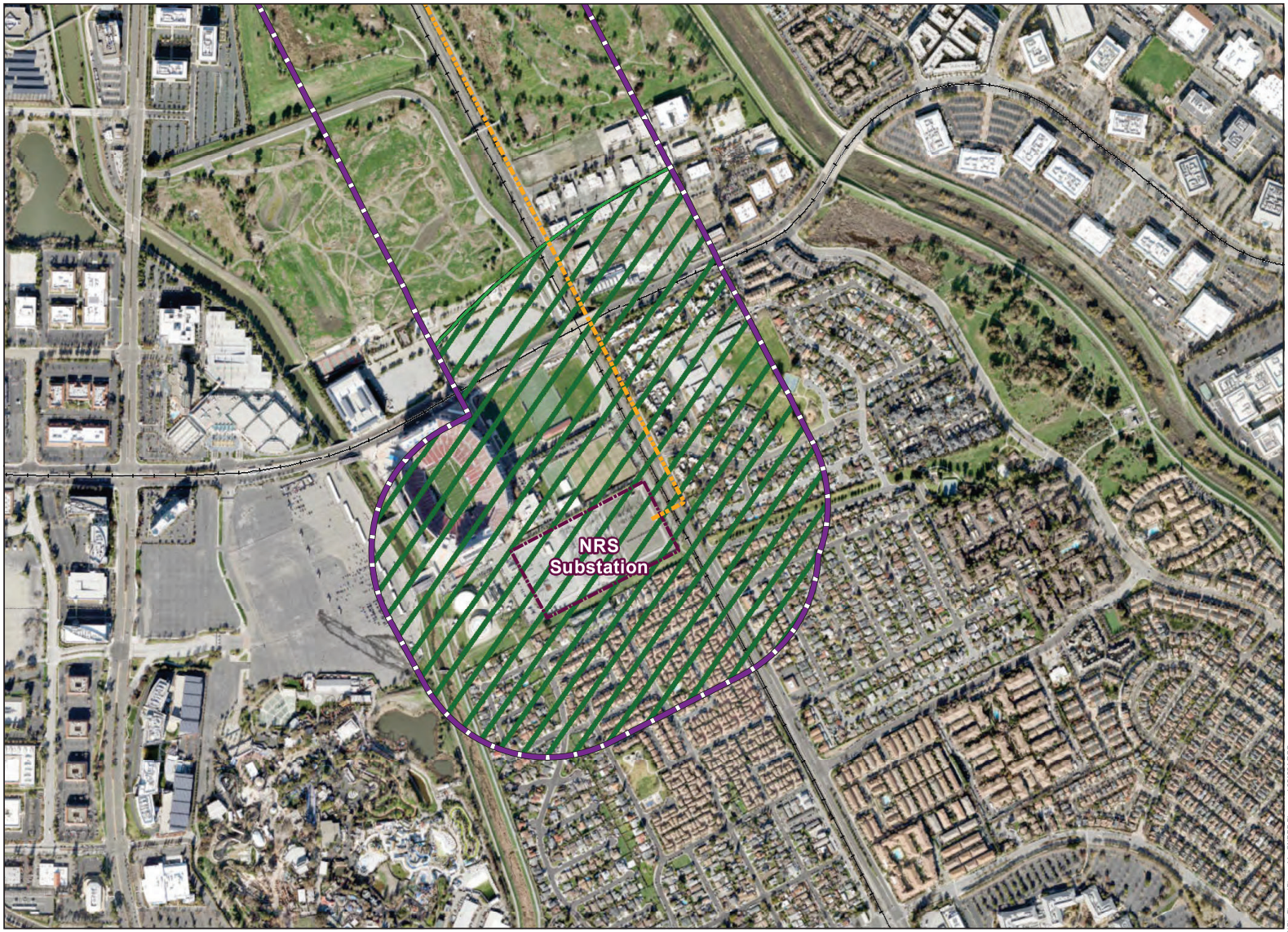


**POWER THE SOUTH BAY PROJECT**

**Figure 11a: CNDDB Map (Flora)**

**Alameda Co. and Santa Clara Co., CA**

**LEGEND**

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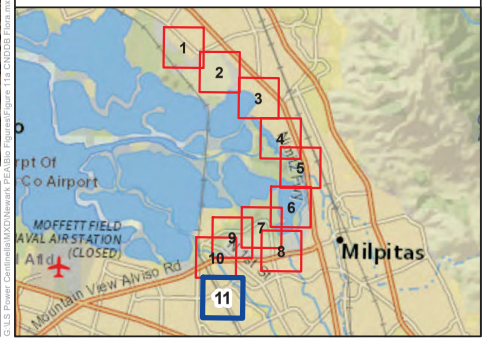


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## 4.5. Special Status Wildlife

All special status wildlife species listed in the IPaC (USFWS, 2023), CNDDB (CDFW, 2024b) occurrence records, and Western Bat Working Group (WBWG) (WBWG, 2023a) priority bats, which were determined to have an overlapping range with the Proposed Project five-mile buffer (WBWG, 2024b), were evaluated for their potential to occur within the Survey Area based on the presence of suitable habitat (**Table 4**, *Special-Status Species, Habitat, and Potential for Occurrence within the Survey Area*). The IPaC report is provided in **Appendix B**, and CNDDB records are shown on **Figures 11b***, CNDDB Map (Fauna)*. Based on the literature review, 14 mammals, 42 avian species, six invertebrate species, three amphibian species, three fish species, and three reptile species were evaluated for their potential to occur within the Survey Area (**Table 3**).

Of the 71 species that were evaluated for their potential to occur, 39 species were identified as having a moderate or high potential to occur within the Survey Area or were observed during field surveys: three fish species, six invertebrate species, one mammal species, 26 avian species, one reptile species, and two amphibian species (as shown in **Table 3**). Raptors (protected by the Migratory Bird Treatment Act [MBTA] and the California Fish and Game Code [CFGC]) were also observed during field surveys and were identified as having a high potential to occur within the Survey Area. The rest of the species that were analyzed for occurrence in the Survey Area are not expected to occur or are considered to have a low potential to occur. No special-status bat species were identified as having a moderate or high potential to occur. The species that have a moderate or high potential to occur within the Survey Area, and have the potential to occur within impact areas, are those for which additional surveys would likely be required. The following species are those that were determined to have a moderate or high potential to occur or were observed within the Survey Area (**Table 3**).

**Table 3: Special-Status Wildlife**

| Common Name | Scientific Name | Status | Potential to Occur |
|---|---|---|---|
| **Fish Species** | | | |
| Steelhead | *Oncorhynchus mykiss irideus* | FT, ST | High |
| Longfin smelt | *Spirinchus thaleichthys* | FC, ST | Moderate |
| Green sturgeon (Southern distinct population segment [DPS]) | *Acipenser medirostris* | FT | Moderate |
| **Invertebrate Species** | | | |
| Vernal pool tadpole shrimp | *Lepidurus packardi* | FE | Moderate |
| Vernal pool fairy shrimp | *Branchinecta lynchi* | FT | Moderate |
| Western bumblebee | *Bombus occidentalis* | SC | Moderate |
| Crotch's bumblebee | *Bombus crotchii* | SC | Moderate |
| Monarch butterfly | *Danaus plexippus* | FC | Moderate |
| Large marble butterfly | *Euchloe ausonides ausonides* | N/A | Moderate |
| **Mammal Species** | | | |
| Salt marsh harvest mouse | *Reithrodontomys raviventris* | FE, SE | High |
| **Avian Species** | | | |
| Burrowing owl | *Athene cunicularia* | BCC, CSSC | Nesting: High |

| Table 3: Special-Status Wildlife | | | |
|---|---|---|---|
| **Common Name** | **Scientific Name** | **Status** | **Potential to Occur** |
| | | | Foraging: High |
| Western snowy plover | *Charadrius nivosus nivosus* | FT, CSSC | Nesting: High Foraging: High |
| Tricolored blackbird | *Agelaius tricolor* | BCC, ST | Nesting: High Foraging: High |
| Saltmarsh common yellowthroat | *Geothlypis trichas sinuosa* | BCC, CSSC | Nesting: Moderate Foraging: Moderate |
| Alameda song sparrow | *Melospiza melodia pusillula* | BCC, CSSC | Nesting: Moderate Foraging: Moderate |
| California black rail | *Laterallus jamaicensis coturniculus* | ST, BCC, CFP | Nesting: Moderate Foraging: Moderate |
| Yellow rail | *Coturnicops noveboracensis* | BCC, CSSC | Nesting: Moderate Foraging: Moderate |
| White-tailed kite | *Elanus leucurus* | CFP, BCC | Nesting: High Foraging: High |
| Golden eagle | *Aquila chrysaetos* | BGEPA, BCC, CFP | Present Nesting: High Foraging: High |
| California clapper rail | *Rallus longirostris obsoletus* | FE, SE, CFP | Nesting: Moderate Foraging: Moderate |
| Northern harrier | *Circus hudsonius* | CSSC, BCC | Nesting: Moderate Foraging: Moderate |
| American peregrine falcon | *Falco peregrinus anatum* | BCC | Nesting: High Foraging: High |
| Great blue heron | *Ardea herodias* | BCC | Present Nesting: High Foraging: High |
| Allen's hummingbird | *Selasphorus sasin* | BCC | Nesting: Moderate Foraging: Moderate |
| Bald eagle | *Haliaeetus leucocephalus* | BGEPA, BCC, SE, CFP | Present Nesting: Low Foraging: Low |
| Black tern | *Chlidonias niger* | BCC | Nesting: Moderate Foraging: Moderate |

| Table 3: Special-Status Wildlife | | | |
|---|---|---|---|
| **Common Name** | **Scientific Name** | **Status** | **Potential to Occur** |
| Bullock's oriole | *Icterus bullockii* | BCC | Nesting: Moderate Foraging: Moderate |
| California gull | *Larus californicus* | BCC, SWL | Present Nesting: High Foraging: High |
| Clark's grebe | *Aechmophorus clarkii* | BCC | Nesting: Moderate Foraging: Moderate |
| Common yellowthroat | *Geothlypis thrichas sinuosa* | BCC, CSSC | Nesting: Moderate Foraging: Moderate |
| Marbled godwit | *Limosa fedoa* | BCC | Nesting: Moderate Foraging: Moderate |
| Nuttall's woodpecker | *Picoides [Dryobates] nuttallii* | BCC | Nesting: Moderate Foraging: Moderate |
| Short-billed dowitcher | *Limnodromus griseus* | BCC | Nesting: Low Foraging: Moderate |
| Western grebe | *Aechmophorus occidentalis* | BCC | Nesting: Moderate Foraging: Moderate |
| Willet | *Tringa semipalmata* | BCC | Present Nesting: High Foraging: High |
| Wrentit | *Chamaea fasciata* | BCC | Foraging: Moderate |
| **Reptile Species** | | | |
| Western pond turtle | *Emys marmorata* | FC, CSSC | High |
| **Amphibian Species** | | | |
| California tiger salamander | *Hydromantes shastae* | FT, ST | Moderate |
| California red-legged frog | *Rana draytonii* | FT, ST | Moderate |

**State Status:**
- CFP = California Fully Protected Species
- CSSC = California Species of Special Concern
- SC = State Candidate Species
- SE = State Endangered
- ST = State Threatened
- SWL = State Watchlist Species

**Federal Status:**
- BGEPA = Bald and Golden Eagle Protection Act Protected Species
- BCC = USFWS Bird of Conservation Concern
- FC = Federal Candidate Species

| Table 3: Special-Status Wildlife | | | |
|---|---|---|---|
| **Common Name** | **Scientific Name** | **Status** | **Potential to Occur** |
| • FE = Federally Endangered<br>• FT = Federally Threatened<br>• | | | |




# POWER THE SOUTH BAY PROJECT

## Figure 11b: CNDDB Map (Fauna)

## Alameda Co. and Santa Clara Co., CA

### LEGEND

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- Overhead Transmission Structure
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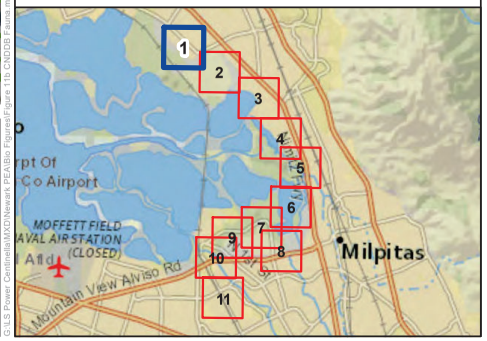


- Alameda Song Sparrow
- California Black Rail
- California Tiger Salamander
- Burrowing Owl
- Golden Eagle
- Salt-Marsh Harvest Mouse
- Salt-Marsh Wandering Shrew
- Salt-Marsh Common Yellowthroat
- Steelhead - Central California Coast DPS
- Tricolored Blackbird
- Vernal Pool Tadpole Shrimp
- Western Pond Turtle
- Western Ridged Mussel
- Western Snowy Plover
- White-Tailed Kite

Sources: CDFW, 2023; LSPGC 2023; Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

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# POWER THE SOUTH BAY PROJECT

## Figure 11b: CNDDB Map (Fauna)

## Alameda Co. and Santa Clara Co., CA

### LEGEND

**Proposed Project Components**

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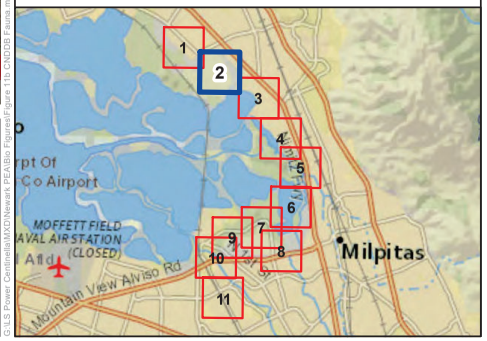


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# POWER THE SOUTH BAY PROJECT

## Figure 11b: CNDDB Map (Fauna)

## Alameda Co. and Santa Clara Co., CA

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- Newark to Albrae 230 kV AC Transmission Line (Overhead)
- Newark to Albrae 230 kV AC Transmission Line (Underground)
- Optional Trench Location
- HVDC Terminal Site
- Existing Substation Boundary
- Construction Staging Area
- Biological Resource Survey Area

**General Features**

- Interstate
- US Route or State Highway
- Railroad



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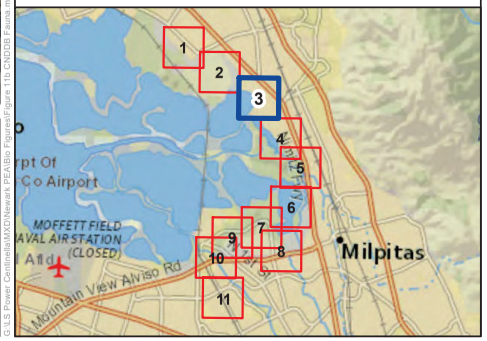


- Alameda Song Sparrow
- California Black Rail
- California Tiger Salamander
- Burrowing Owl
- Golden Eagle
- Salt-Marsh Harvest Mouse
- Salt-Marsh Wandering Shrew
- Salt-Marsh Common Yellowthroat
- Steelhead - Central California Coast DPS
- Tricolored Blackbird
- Vernal Pool Tadpole Shrimp
- Western Pond Turtle
- Western Ridged Mussel
- Western Snowy Plover
- White-Tailed Kite

Sources: CDFW, 2023; LSPGC 2023; Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

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# POWER THE SOUTH BAY PROJECT

## Figure 11b: CNDDB Map (Fauna)

## Alameda Co. and Santa Clara Co., CA

### LEGEND

**Proposed Project Components**

- Overhead Transmission Structure
- Baylands to NRS 230 kV AC Transmission Line (Overhead)
- Baylands to NRS 230 kV AC Transmission Line (Underground)
- Albrae to Baylands 320 kV DC Transmission Line (Overhead)
- Albrae to Baylands 320 kV DC Transmission Line (Underground)
- Newark to Albrae 230 kV AC Transmission Line (Overhead)
- Newark to Albrae 230 kV AC Transmission Line (Underground)
- Optional Trench Location
- HVDC Terminal Site
- Existing Substation Boundary
- Construction Staging Area
- Biological Resource Survey Area

**General Features**

- Interstate
- US Route or State Highway
- Railroad



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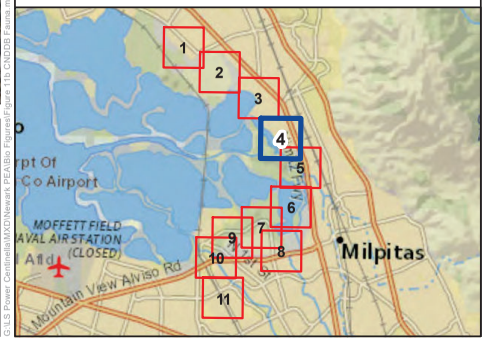
Feet

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Sources: CDFW, 2023; LSPGC 2023; Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

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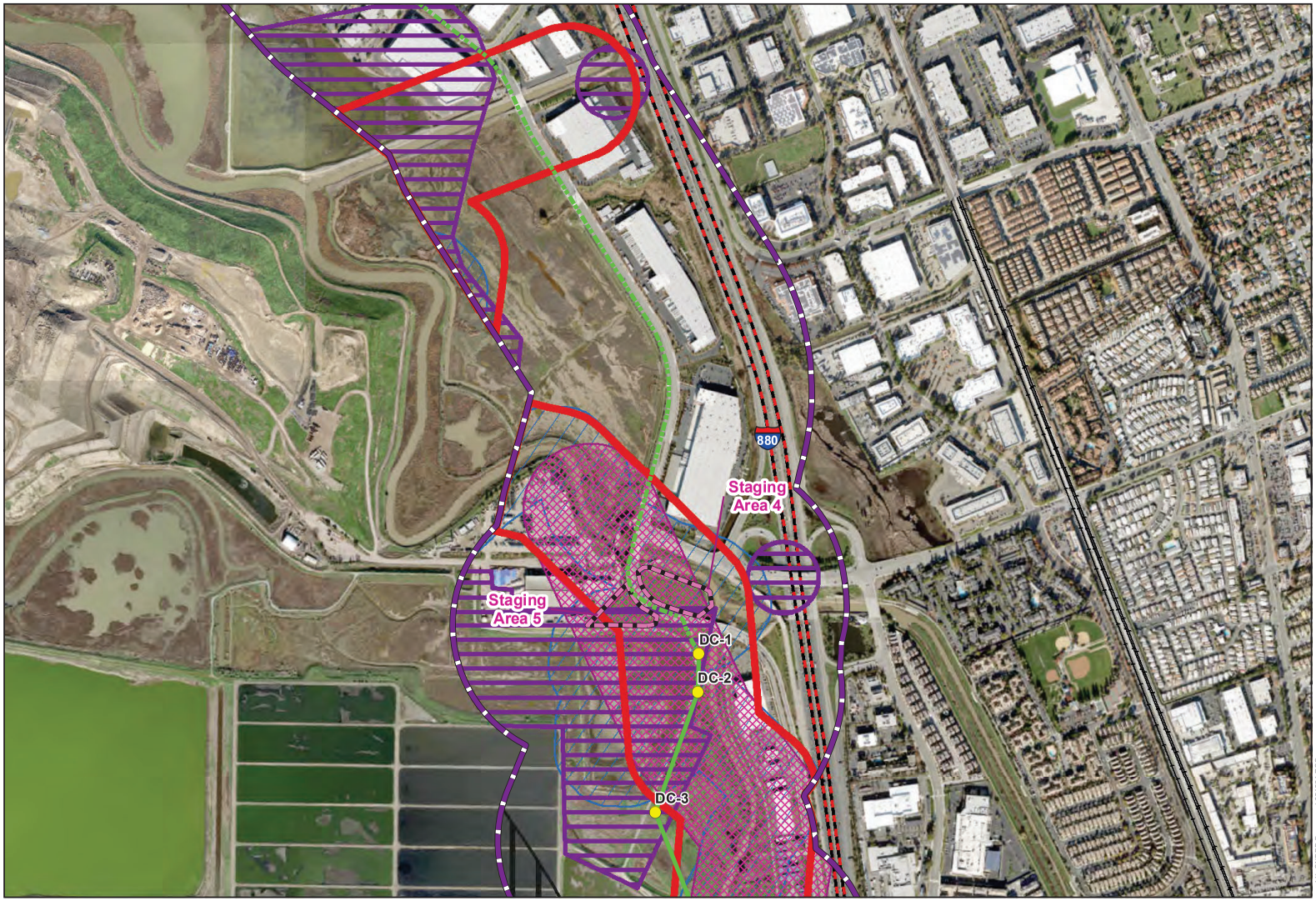


# POWER THE SOUTH BAY PROJECT

## Figure 11b: CNDDB Map (Fauna)

## Alameda Co. and Santa Clara Co., CA

### LEGEND

**Proposed Project Components**

- Overhead Transmission Structure
- Baylands to NRS 230 kV AC Transmission Line (Overhead)
- Baylands to NRS 230 kV AC Transmission Line (Underground)
- Albrae to Baylands 320 kV DC Transmission Line (Overhead)
- Albrae to Baylands 320 kV DC Transmission Line (Underground)
- Newark to Albrae 230 kV AC Transmission Line (Overhead)
- Newark to Albrae 230 kV AC Transmission Line (Underground)
- Optional Trench Location
- HVDC Terminal Site
- Existing Substation Boundary
- Construction Staging Area
- Biological Resource Survey Area

**General Features**

- Interstate
- US Route or State Highway
- Railroad



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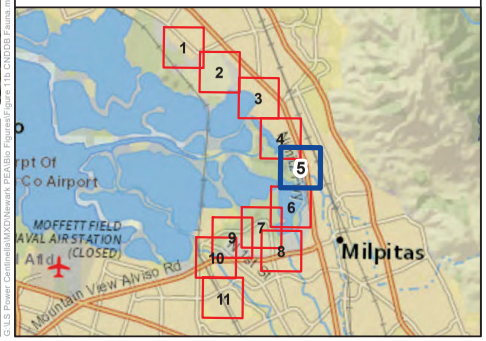


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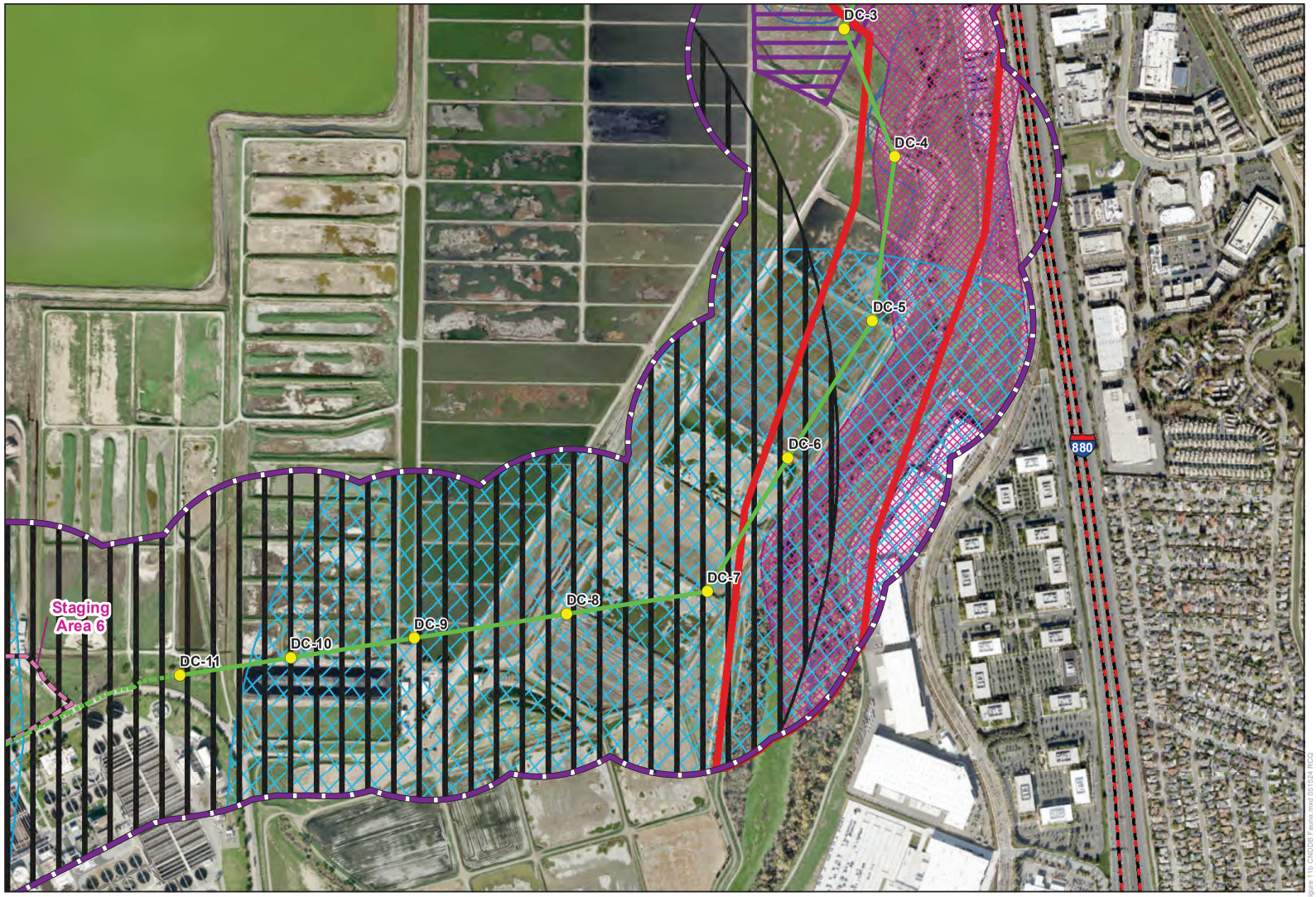


# POWER THE SOUTH BAY PROJECT

## Figure 11b: CNDDB Map (Fauna)

## Alameda Co. and Santa Clara Co., CA

### LEGEND

**Proposed Project Components**

- Overhead Transmission Structure
- Baylands to NRS 230 kV AC Transmission Line (Overhead)
- Baylands to NRS 230 kV AC Transmission Line (Underground)
- Albrae to Baylands 320 kV DC Transmission Line (Overhead)
- Albrae to Baylands 320 kV DC Transmission Line (Underground)
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- Newark to Albrae 230 kV AC Transmission Line (Underground)
- Optional Trench Location
- HVDC Terminal Site
- Existing Substation Boundary
- Construction Staging Area
- Biological Resource Survey Area

**General Features**

- Interstate
- US Route or State Highway
- Railroad



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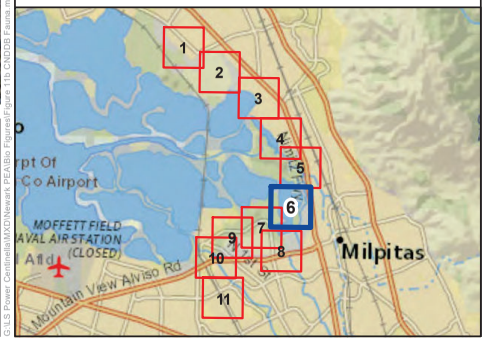


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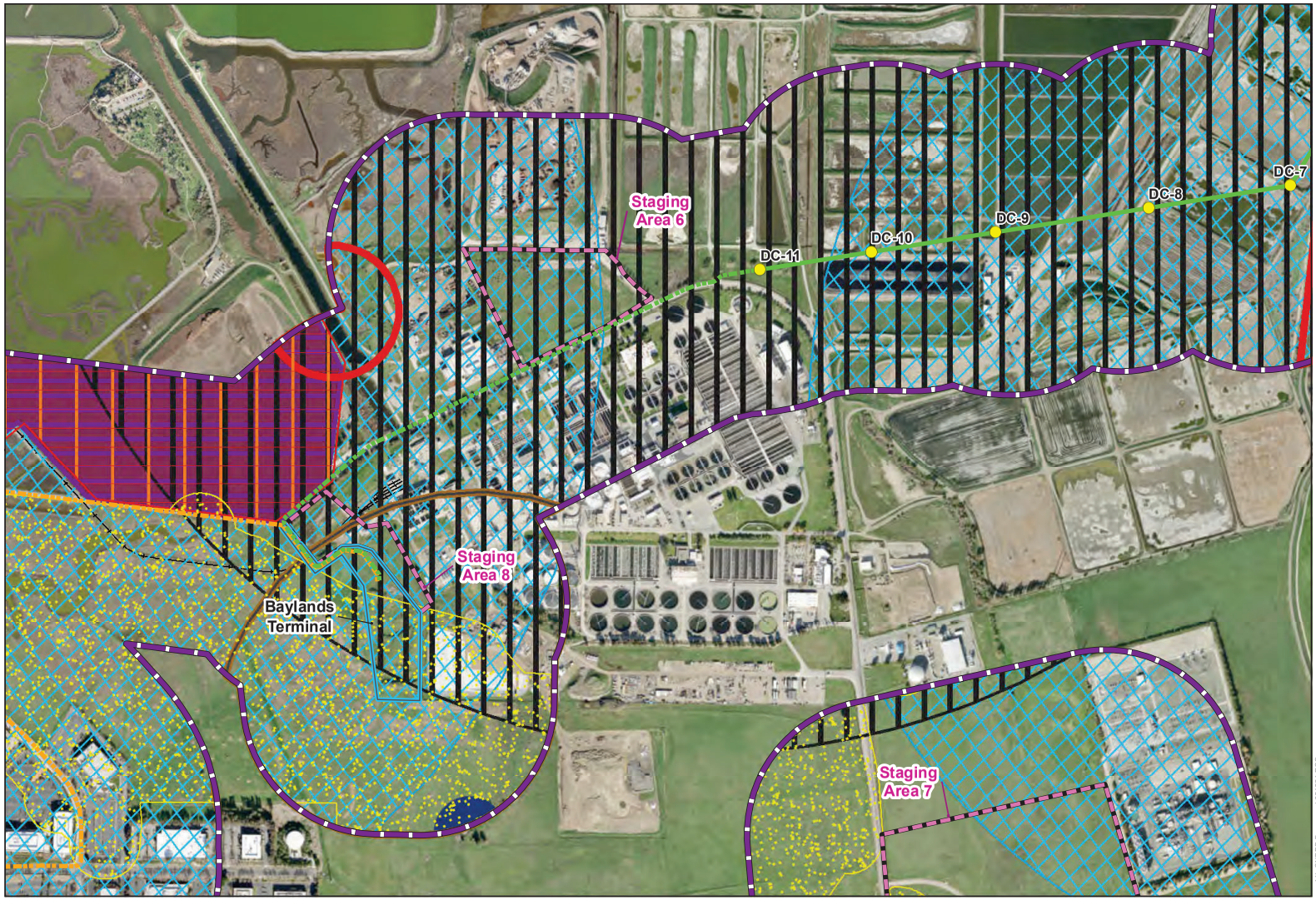


**POWER THE SOUTH BAY PROJECT**

**Figure 11b: CNDDB Map (Fauna)**

**Alameda Co. and Santa Clara Co., CA**

**LEGEND**

**Proposed Project Components**

- Overhead Transmission Structure
- Baylands to NRS 230 kV AC Transmission Line (Overhead)
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- Existing Substation Boundary
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- Biological Resource Survey Area

**General Features**

- Interstate
- US Route or State Highway
- Railroad



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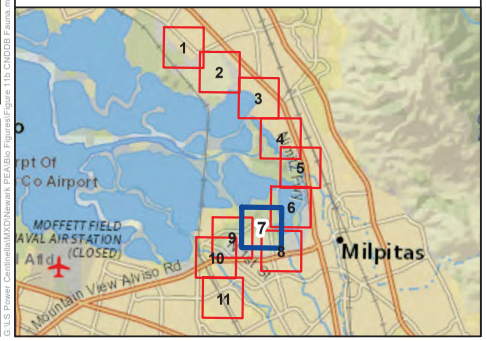


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Sources: CDFW, 2023; LSPGC 2023; Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.




**POWER THE SOUTH BAY PROJECT**

**Figure 11b: CNDDB Map (Fauna)**

**Alameda Co. and Santa Clara Co., CA**

**LEGEND**

**Proposed Project Components**

- Overhead Transmission Structure
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**General Features**

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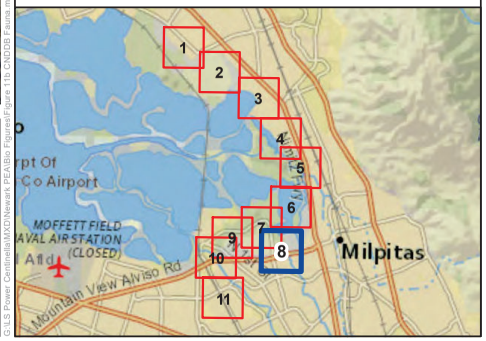


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**POWER THE SOUTH BAY PROJECT**

**Figure 11b: CNDDB Map (Fauna)**

**Alameda Co. and Santa Clara Co., CA**

**LEGEND**

**Proposed Project Components**

- Overhead Transmission Structure
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**General Features**

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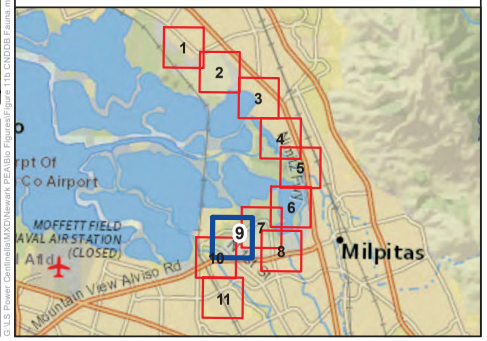


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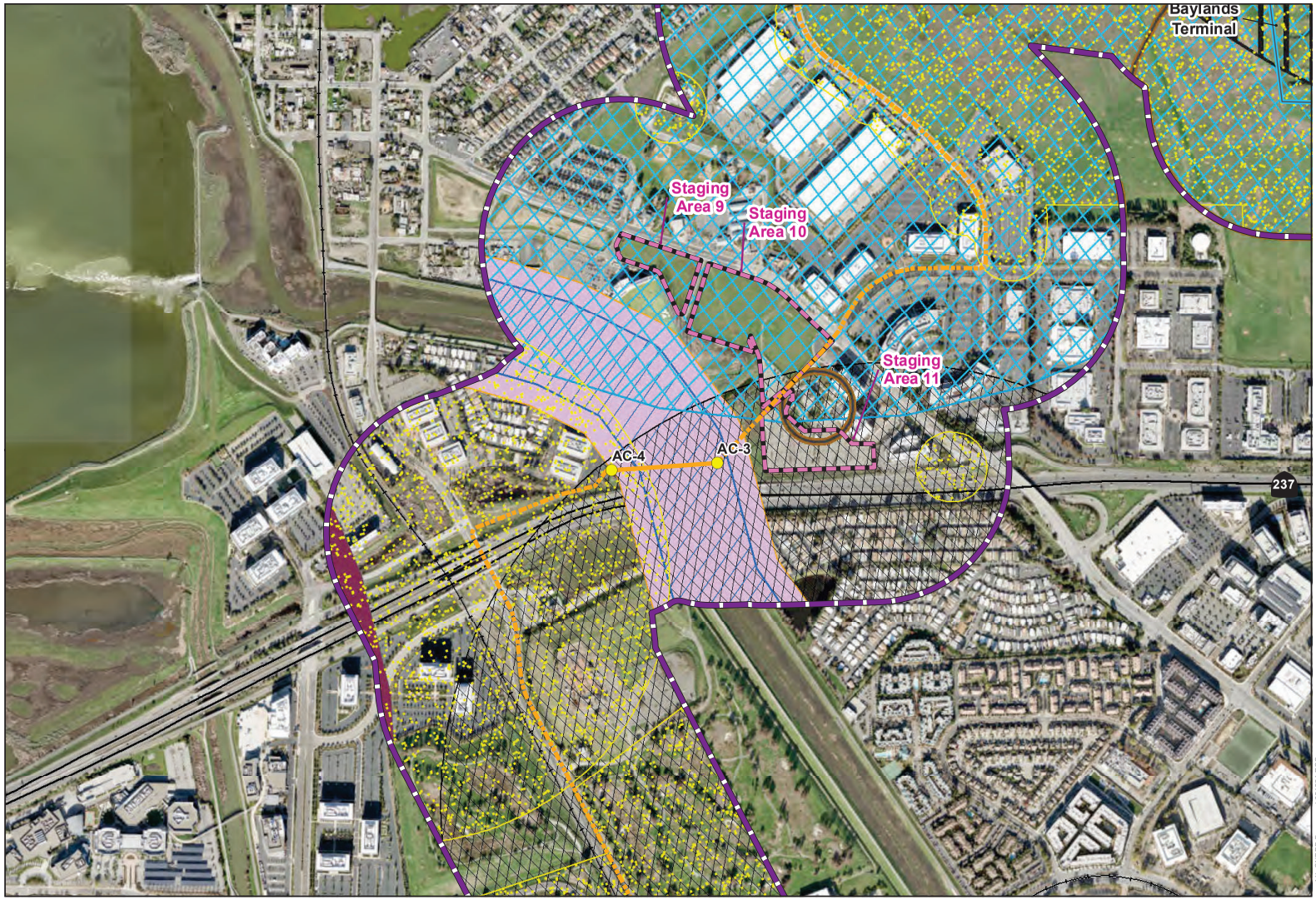


# POWER THE SOUTH BAY PROJECT

## Figure 11b: CNDDB Map (Fauna)

## Alameda Co. and Santa Clara Co., CA

### LEGEND

**Proposed Project Components**

- Overhead Transmission Structure
- Baylands to NRS 230 kV AC Transmission Line (Overhead)
- Baylands to NRS 230 kV AC Transmission Line (Underground)
- Albrae to Baylands 320 kV DC Transmission Line (Overhead)
- Albrae to Baylands 320 kV DC Transmission Line (Underground)
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- Newark to Albrae 230 kV AC Transmission Line (Underground)
- Optional Trench Location
- HVDC Terminal Site
- Existing Substation Boundary
- Construction Staging Area
- Biological Resource Survey Area

**General Features**

- Interstate
- US Route or State Highway
- Railroad



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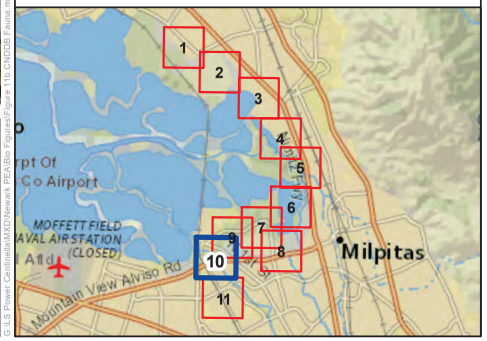


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**POWER THE SOUTH BAY PROJECT**

**Figure 11b: CNDDB Map (Fauna)**

**Alameda Co. and Santa Clara Co., CA**

**LEGEND**

**Proposed Project Components**

- Overhead Transmission Structure
- Baylands to NRS 230 kV AC Transmission Line (Overhead)
- Baylands to NRS 230 kV AC Transmission Line (Underground)
- Albrae to Baylands 320 kV DC Transmission Line (Overhead)
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**General Features**

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- US Route or State Highway
- Railroad



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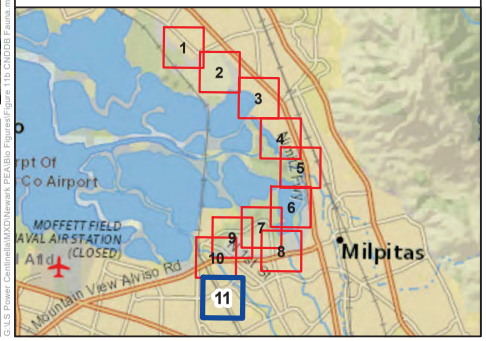
Feet

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**Special-Status Species Descriptions**

The following special-status descriptions are used in **Table 4**.

- **FE** = Federally Endangered
- **FT** = Federally Threatened
- **SE** = State Endangered
- **ST** = State Threatened
- **SC** = State Candidate Species
- **SWL** = State Watch List Species
- **SPM** = Specialty Protected Mammal
- **CSSC** = California Species of Special Concern
- **CFP** = California Fully Protected Species
- **CFGC** = California Fish and Game Code Protected Species
- **CWL** = California Watch List Species
- **BCC** = USFWS Bird of Conservation Concern
- **BGEPA** = Bald and Golden Eagle Protection Act Protected Species
- **MBTA** = Migratory Bird Treaty Act Protected Species
- **Western Bat Working Group-H (WBWG-H)** = The High (H) designation represents those species considered the highest priority for funding, planning, and conservation actions. Information about status and threats to most species could result in effective conservation actions being implemented should a commitment to management exist. These species are imperiled or are at high risk of imperilment.
- **WBWG-M** = The Medium (M) designation indicates a level of concern that should warrant closer evaluation, more research, and conservation actions of both the species and possible threats. A lack of meaningful information is a major obstacle in adequately assessing these species' status and should be considered a threat.
- **CNPS:**
- **1B** = Plants rare, threatened, or endangered in California or elsewhere
- **2B** = Plants rare, threatened, or endangered in California but more common elsewhere
- **3** = Review List: Plants about which more information is needed
- **4** = Watch List: Plants of limited distribution
- **0.1** = Plants seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat)
- **0.2** = Plants moderately threatened in California (20-80% occurrences threatened/moderate degree and immediacy of threat)
- **0.3** = Plants not very threatened in California (less than 20% of occurrences threatened/low degree and immediacy of threat or no current threats known)

Sources: CDFW 2023a, WBWG 2023a, and CNPS 2023a

| Table 4: Special-Status Species, Habitat, and Potential for Occurrence within the Survey Area | | | | |
|---|---|---|---|---|
| **Common Name** | **Scientific Name** | **Status** | **Habitat** | **Potential for Occurrence within the Survey Area** |
| **Plant Species** | | | | |
| Alkali milkvetch | *Astragalus tener* var. *tener* | 1B.2 | This annual herb is typically found in moist places in playas, alkali flats, valley and foothill grasslands, and vernal pools in both coastal and inland areas such as the Central Valley. This species flowers from March to June and is found at elevations from 5-195 feet (CNPS, 2024b; Jepson, 2024). | Moderate; suitable vernal pool and grassland habitat are present within the Survey Area primarily in the vicinity of the Newark substation, Don Edwards San Francisco Bay NWR, and the area west of the Baylands Terminal area. CNDDB occurrences are mapped in the vicinity of Disk Drive and the Alviso Marina County Park west of the San José-Santa Clara RWF, but these occurrences are from 1905 and may be extirpated due to development of the area (CDFW, 2024b). |
| Brittle scale | *Atriplex depressa* | 1B.2 | This annual herb occurs in alkaline vernal pool and wetland habitats within grassland areas. Blooms from June to October and occurs at elevations up to 1,400 feet (CNPS, 2024d; Jepson, 2024) | Moderate; suitable vernal pool/wetland habitats within grassland habitat are present within the Survey Area primarily in the vicinity of the Newark Substation, Don Edwards San Francisco Bay NWR, and the area west of the Baylands Terminal area. CNDDB occurrences are not mapped within the Survey Area, but some are mapped just outside the survey area within the Don Edwards San Francisco Bay NWR in the vicinity of Cushing Parkway (CDFW, 2024b). |

| Table 4: Special-Status Species, Habitat, and Potential for Occurrence within the Survey Area | | | | |
|---|---|---|---|---|
| **Common Name** | **Scientific Name** | **Status** | **Habitat** | **Potential for Occurrence within the Survey Area** |
| Lesser saltscale | *Atriplex minuscula* | 1B.1 | This annual herb occurs in sandy, alkaline soils often in association with river floodplains. Only occurs in microhabitats that are not flooded year-round. Blooms from April to October and occurs at elevations less than 300 feet (Jepson, 2024; ESRP, 2024). | Moderate; suitable floodplain habitats are present within the Survey Area in the vicinity of Don Edwards San Francisco Bay NWR along Cushing Parkway, the area west of the Baylands Terminal, and in the vicinity of Coyote Creek. CNDDB occurrences are not mapped within the Survey Area, but some are mapped just outside the survey area within the Don Edwards San Francisco Bay NWR in the vicinity of Cushing Parkway (CDFW, 2024b). |
| Congdon's tarplant | *Centromadia parryi* ssp. *congdonii* | 1B.1 | An annual herb that occurs in valley and foothill grassland habitat with alkaline soils. This species blooms from May to October and occurs at elevations from 0-755 feet. It is also known to occur in terraces, swales, floodplains, and disturbed sites (CNPS, 2024b; Jepson, 2024). | High; suitable grassland habitat, as well as floodplain and disturbed areas are present within the Survey Area primarily within Don Edwards San Francisco Bay NWR along Cushing Parkway and in the area near the Baylands Terminal site. CNDDB occurrences are mapped in the vicinity of Disk Drive southwest of the San José-Santa Clara RWF (822 plants were observed in 2016) and in the vicinity of the Fremont Boulevard and Cushing Parkway intersection (40-50 plants were observed in 2019 but these may be extirpated due to development of the area) (CDFW, 2024b). |

| Table 4: Special-Status Species, Habitat, and Potential for Occurrence within the Survey Area | | | | |
|---|---|---|---|---|
| **Common Name** | **Scientific Name** | **Status** | **Habitat** | **Potential for Occurrence within the Survey Area** |
| Point Reyes salty birds beak | *Chloropyron maritimum* ssp. *palustre* | 1B.2 | An annual herb that occurs in coastal salt marshes at elevation from 0-35 feet. It has a blooming period from June through October (CNPS, 2024b; Jepson, 2024). | Moderate; suitable coastal salt marsh habitat occurs in the vicinity of Don Edwards San Francisco Bay NWR and Alviso west of the Baylands Terminal area. CNDDB occurrences are mapped in the vicinity of Disk Drive and the Alviso Marina County Park west of the San José-Santa Clara RWF, but these occurrences are from 1905 and are likely extirpated due to development of the area (CDFW, 2024b). |
| Robust spineflower | *Chorizanthe robusta* var. *robusta* | 1B.1, FE | An annual herb that occurs in maritime chaparral, coastal dunes, coastal scrub, and clearings in cismontane woodlands. Occurs at elevations from 10-985 feet and has a blooming period from April to September. This species is typically found in sandy or gravelly soil (CNPS, 2024b; Jepson, 2024). | Low; no coastal dunes or coastal scrub habitats are present in the Survey Area. No CNDDB occurrences are mapped within the Survey Area, but there are occurrences mapped south of the Survey Area within the City of San José from 1882, but this area is now highly developed, and these occurrences are now likely extirpated (CDFW, 2024b). |

| Table 4: Special-Status Species, Habitat, and Potential for Occurrence within the Survey Area | | | | |
|---|---|---|---|---|
| **Common Name** | **Scientific Name** | **Status** | **Habitat** | **Potential for Occurrence within the Survey Area** |
| Hoover's button celery | *Eryngium aristulatum* var. *hooveri* | 1B.1 | An annual or perennial herb that occurs in vernal pools and seasonal wetlands at elevations from 10-150 feet and typically flowers in July (CNPS, 2024b; Jepson, 2024). | Moderate; suitable vernal pool and wetland/riparian habitat are present within the Survey Area in the vicinity of Don Edwards San Francisco Bay NWR, Coyote Creek, and Alviso west of the Baylands terminal area. CNDDB occurrences are mapped in the Don Edwards San Francisco Bay NWR in the vicinity of Cushing Parkway, in the vicinity of the NRS substation, though these occurrences are from 1902 and are likely extirpated due to development in the area, and in the vicinity of Disk Drive and Alviso west of the Baylands Terminal, though these are mapped from 1902 and may be extirpated by development (CDFW, 2024b). |
| San Joaquin spearscale | *Extriplex joaquinana* | 1B.2 | This annual herb typically occurs in alkali meadows or alkali grassland or on the margins of alkali scrub. This species blooms from April to October and is found at elevations up to 1,000 feet (Jones and Stokes, 2006). | Moderate; suitable alkali meadows are present within the Survey Area in the vicinity of Don Edwards San Francisco Bay NWR along Cushing Parkway. CNDDB occurrences are not mapped within the Survey Area, but some are mapped just outside the survey area within the Don Edwards San Francisco Bay NWR in the vicinity of Cushing Parkway (CDFW, 2024b). |

| Table 4: Special-Status Species, Habitat, and Potential for Occurrence within the Survey Area | | | | |
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| **Common Name** | **Scientific Name** | **Status** | **Habitat** | **Potential for Occurrence within the Survey Area** |
| Contra Costa goldfields | *Lasthenia conjugens* | 1B.1, FE | An annual herb that occurs in vernal pools and wet meadows within alkaline playas, valley and foothill grasslands, and cismontane woodland habitats. This species typically flowers from March to June and is found at elevations from 0-1,540 feet (CNPS, 2024b; Jepson, 2024). | High; suitable vernal pool and grassland habitat are present within the Survey Area in the vicinity of Don Edwards San Francisco Bay NWR along Cushing Parkway, in the vicinity of Coyote Creek, and the area west of and within the Baylands terminal site. USFWS-mapped critical habitat for the Contra Costa goldfields is located along Cushing Parkway within Don Edwards San Francisco Bay NWR (**Figure 11a**). CNDDB occurrences are also mapped in the Don Edwards San Francisco Bay NWR in the vicinity of Cushing Parkway (CDFW, 2024b). |
| Hall's bush mallow | *Malacothamnus hallii* | 1B.2 | This perennial shrub occurs in chapparal and coastal scrub habitat types. This species blooms from May through October and is found at elevations from 30-2,500 feet (CNPS, 2024b; Jepson, 2024). | Low; suitable chaparral and coastal scrub habitats do not exist within the Survey Area. CNDDB occurrences are not mapped within the Survey Area, but there is one occurrence along the Guadalupe River northwest of the Survey Area from 1955 (CDFW, 2024b). |
| Prostrate vernal pool navarettia | *Navarretia prostrata* | 1B.2 | This annual herb is typically associated with seasonal wetlands, alkaline floodplains, and vernal pools. This species blooms from April through July and is found at elevations below 2,000 feet (CNPS, 2024d; Jepson, 2024). | Moderate; suitable vernal pool and wetland habitats are present within the Survey Area in the vicinity of Don Edwards San Francisco Bay NWR along Cushing Parkway, the area west of the Baylands terminal, and in the vicinity of Coyote Creek. CNDDB occurrences are not mapped within the Survey Area, but some are mapped just outside the Survey Area within the Don Edwards San Francisco Bay NWR in the vicinity of Cushing Parkway (CDFW, 2024b). |

| Table 4: Special-Status Species, Habitat, and Potential for Occurrence within the Survey Area | | | | |
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| **Common Name** | **Scientific Name** | **Status** | **Habitat** | **Potential for Occurrence within the Survey Area** |
| California alkali grass | *Puccinellia simplex* | 1B.2 | This annual grass-like herb typically occurs in moist habitats such as wetlands, sinks, lake margins, vernal pools, and mineral springs with saline soils. Occurs at elevations up to 3,000 feet and blooms from March to May (CNPS, 2024d; Jepson, 2024). | Moderate; suitable moist habitats are present within the Survey Area in the vicinity of Don Edwards San Francisco Bay NWR along Cushing Parkway, the area west of the Baylands Terminal, and in the vicinity of Coyote Creek. CNDDB occurrences are not mapped within the Survey Area, but some are mapped just outside the Survey Area within the Don Edwards San Francisco Bay NWR in the vicinity of Cushing Parkway (CDFW, 2024b). |
| Chaparral harebell | *Ravenella exigua* | 1B.2 | This annual herb is known to grow in rocky and gravelly soils in chaparral habitat types, primarily in the Mount Diablo State Park. This species occurs at elevations from 250-4,200 feet and blooms from May to June (CNPS, 2024d; Jepson, 2024). | Low; suitable chaparral habitats do not exist within the Survey Area. CNDDB occurrences were not mapped within the 5-mile buffer (CDFW, 2024b). |
| Long-styled sand-spurrey | *Spergularia macrotheca* var. *longistyla* | 1B.2 | This perennial herb occurs in marshes, swamps, ponds, seeps, mudflats, and wet meadows. This species occurs at elevations below 700 feet and blooms from February through May (CNPS, 2024d; Jepson, 2024). | Moderate; suitable moist habitats are present within the Survey Area in the vicinity of Don Edwards San Francisco Bay NWR along Cushing Parkway, the area west of the Baylands Terminal, and in the vicinity of Coyote Creek. CNDDB occurrences are not mapped within the Survey Area, but some are mapped 2 miles north of the Survey Area from the late 1800s and 1930s; these are presumed to no longer be extant due to human development in the area (CDFW, 2024b). |

| Table 4: Special-Status Species, Habitat, and Potential for Occurrence within the Survey Area | | | | |
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| **Common Name** | **Scientific Name** | **Status** | **Habitat** | **Potential for Occurrence within the Survey Area** |
| Most beautiful jewelflower | *Streptanthus albidus* ssp. *peramoenus* | 1B.2 | This annual herb occurs on serpentine soils in grassland or chaparral habitats within the Coast Range. This species occurs from 10-8,200 feet and blooms from March through May (CNPS, 2024d; Jepson, 2024). | Low; suitable grassland habitats occur within Don Edwards San Francisco Bay NWR along Cushing Parkway and to the east of the Baylands Terminal site, but this species is only known to occur within the Coast Ranges. There are no CNDDB occurrences within the Survey Area, but there are occurrences 3-4 miles to the north and northeast in the foothills of the Coast Range (CDFW, 2024b). |
| Northern slender pondweed | *Stuckenia filiformis* ssp. *alpina* | 2B.2 | This perennial herb occurs in shallow areas in freshwater wetlands, ponds, lakes, and drainages. This species occurs from 1,000-7,000 feet and blooms from May through July (CNPS, 2024d; Jepson, 2024). | Low; the Survey Area occurs outside of the normal elevations for this species. There are no CNDDB occurrences within the Survey Area, but there is one occurrence 3 miles to the north near Alameda Creek (CDFW, 2024b). |
| California seablite | *Suaeda californica* | 1B.1, FE | A perennial, evergreen shrub that occurs in coastal salt marshes and is typically found along the margins of such habitat. This species has a blooming period from July to October and is found at elevations from 0-50 feet (CNPS, 2024b; Jepson, 2024). | Moderate; suitable coastal salt marsh habitat occurs in the vicinity of Don Edwards San Francisco Bay NWR and Alviso west of the Baylands Terminal area. CNDDB occurrences are mapped in the Don Edwards San Francisco Bay NWR in the vicinity of Cushing Parkway, but this occurrence is from 1951 and may have been extirpated due to development (CDFW, 2024b). |

| Table 4: Special-Status Species, Habitat, and Potential for Occurrence within the Survey Area | | | | |
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| **Common Name** | **Scientific Name** | **Status** | **Habitat** | **Potential for Occurrence within the Survey Area** |
| Saline clover | *Trifolium hydrophilum* | 1B.2 | An annual herb that occurs in coastal salt marshes, vernal pools, open areas in alkaline and mesic soils within valley and foothill grasslands. It has a blooming period from April through June and is found at elevations from 0-985 feet (CNPS, 2024b; Jepson, 2024). | Moderate; suitable vernal pool and grassland habitat are present within the Survey Area in the vicinity of Don Edwards San Francisco Bay NWR along Cushing Parkway, in the vicinity of Coyote Creek, and the area west of the Baylands terminal. CNDDB occurrences are mapped in the vicinity of Cushing Parkway in the Don Edwards San Francisco Bay NWR and in Alviso near Disk Drive, but these occurrences are from 1892 and are mapped as a best guess; it is unknown if the population is still extant (CDFW, 2024b). |
| Northern coastal salt marsh | N/A | Sensitive Veg Community | Northern coastal salt marsh is a highly productive plant community dominated by herbaceous, suffrutescent (sub-shrubby), salt-tolerant hydrophytes (water plants), typically forming a dense mat of vegetation up to three feet high. The most characteristic plant of this community is pickleweed (*Salicornia virginica*), and it provides habitat to numerous endangered, threatened, and rare species, such as Point Reyes bird's-beak and California seablite (CNPS - Yerba Buena Chapter, 2024). | Moderate; suitable coastal salt marsh habitat occurs in the vicinity of Don Edwards San Francisco Bay NWR and in the vicinity of Coyote Creek. CNDDB occurrences are mapped in the Don Edwards San Francisco Bay NWR and along Coyote Creek within and surrounding the historic salt ponds that are being restored to tidal wetland habitats (CDFW, 2024b). |

| Table 4: Special-Status Species, Habitat, and Potential for Occurrence within the Survey Area | | | | |
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| **Common Name** | **Scientific Name** | **Status** | **Habitat** | **Potential for Occurrence within the Survey Area** |
| **Fish Species** | | | | |
| Steelhead (Central California Coast DPS) | *Oncorhynchus mykiss irideus* | FT, ST | This anadromous fish is found in Pacific Ocean drainages from Southern California to Alaska. The Central Coast population segment includes all populations below natural and manmade barriers from the Russian River (Sonoma Co.) south to Aptos Creek (Santa Cruz Co.). Adults from this population enter the rivers and streams in this area between December and February when flows are highest and move upstream for spawning purposes. Steelhead spawn within coarse gravel in pools or riffles within small streams and tributaries where cool, well oxygenated water is available year-round. Steelhead are known to use the Guadalupe River and portions of Coyote Creek for spawning and migration purposes (National Marine Fisheries Service [NMFS], 2016). | High; steelhead may use Coyote Creek and the Guadalupe River within the Survey Area for migration and spawning purposes. Designated critical habitat occurs within Coyote Creek and the Guadalupe River within the Survey Area (**Figure 11b**). There are also CNDDB occurrences along the Guadalupe River (CDFW, 2024b). |
| Longfin smelt | *Spirinchus thaleichthys* | FC, ST | The pelagic forage fish is facultatively anadromous because migration to the sea is not required to complete their life cycle. They are adapted to the cool waters of the San Francisco estuary. The adults breed in low salinity to freshwater habitats from winter to spring, while the spawn move seaward, some all the way to the Pacific Ocean, as temperatures warm from spring to summer (USFWS, 2022). | Moderate; known to occur within the San Francisco Bay and have been observed using Coyote Creek (Lewis et al., 2019). Also may use the Guadalupe River for breeding purposes. There are known CNDDB occurrences within the San Francisco Bay (CDFW, 2024b). |

| Table 4: Special-Status Species, Habitat, and Potential for Occurrence within the Survey Area | | | | |
|---|---|---|---|---|
| **Common Name** | **Scientific Name** | **Status** | **Habitat** | **Potential for Occurrence within the Survey Area** |
| Green sturgeon (Southern DPS) | *Acipenser medirostris* | FT | One of the largest and longest living species found in freshwater, this anadromous fish lives in temperate waters along the west coast of North America. They have a relatively complex life history that includes spawning and juvenile rearing in rivers followed by migrating to saltwater to feed, grow, and mature before returning to freshwater to spawn. The populations within the San Francisco Bay estuaries spawn in the Sacramento - San Joaquin River system (CDFW, 2024e; NOAA, 2024). | Moderate; known to occur in San Francisco Bay but is unlikely to use the creeks and streams in the Survey Area for spawning purposes. They could be found in the vicinity of the Survey Area in these streams and in the San Francisco Bay estuaries for foraging purposes. Designated critical habitat occurs within Coyote Creek, San Tomas Aquino Creek, the Guadalupe River, near Coyote Creek Lagoon in a drainage that passes under Fremont Boulevard, and along a tributary to Coyote Creek that passes under Cushing Parkway just east of the Fremont Boulevard – Cushing Parkway intersection within the Survey Area (**Figure 11b**). No CNDDB occurrences within the Survey Area or 5-mile buffer (CDFW, 2024b). |

| Table 4: Special-Status Species, Habitat, and Potential for Occurrence within the Survey Area | | | | |
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| **Common Name** | **Scientific Name** | **Status** | **Habitat** | **Potential for Occurrence within the Survey Area** |
| **Invertebrate Species** | | | | |
| Vernal pool tadpole shrimp | *Lepidurus packardi* | FE | A small, freshwater crustacean found in vernal pools in California. A hard shell that appears like a shield over its back gives the tadpole shrimp its' tadpole-like appearance and distinguishes it from the fairy shrimp. They are found only in ephemeral freshwater habitats including alkaline pools, clay flats, vernal lakes, vernal pools, vernal swales, and other seasonal wetlands in California (USFWS, 2024b). | Moderate; suitable vernal pool and grassland habitat is present within the Survey Area in the vicinity of the Newark Substation and Don Edwards San Francisco Bay NWR. CNDDB occurrences are mapped in the Don Edwards San Francisco Bay NWR in the vicinity of Cushing Parkway and immediately north of the Newark substation in a vernal pool where tadpole shrimp and exoskeletons were observed in 2016 (CDFW, 2024b). The area within Don Edwards San Francisco Bay NWR along Cushing Parkway is included as CDFW-mapped Critical Habitat for the vernal pool tadpole shrimp (**Figure 11b**). |
| Conservancy fairy shrimp | *Branchinecta conservatio* | FE | A small, freshwater crustacean found in vernal pools in California's Central Valley from Tehama County in the north to Merced County in the south. They primarily live in large, turbid freshwater vernal pools called playa pools and are extremely rare, with only 6 known populations (ESRP, 2024). None of these known populations are within Santa Clara or Alameda Counties. The vernal pools in which this species is found can occur in grassland, rural/agricultural, and wetland habitats (USFWS, 2024b). | Low; suitable vernal pools occur in the Survey Area, but the Proposed Project is outside of the known range of the species. There are no CNDDB occurrences within 5 miles of the Survey Area (CDFW, 2024b). |

| Table 4: Special-Status Species, Habitat, and Potential for Occurrence within the Survey Area | | | | |
|---|---|---|---|---|
| **Common Name** | **Scientific Name** | **Status** | **Habitat** | **Potential for Occurrence within the Survey Area** |
| Vernal pool fairy shrimp | *Branchinecta lynchi* | FT | A small, freshwater crustacean found in vernal pools in California, currently found in 32 counties across California's Central Valley, central coast, and southern California (as well as Jackson County in southern Oregon). Does not have a hard outer shell, unlike other species of shrimp. This species can be found in a variety of vernal pool habitat types and occur in grassland, rural/agricultural, and wetland habitat (USFWS, 2024b). | Moderate; suitable vernal pool and grassland habitat is present within the Survey Area in the vicinity of the Newark Substation and Don Edwards San Francisco Bay NWR. There are no CNDDB occurrences within 5 miles of the Survey Area (CDFW, 2024b). |
| Western bumblebee | *Bombus occidentalis* | SC | This species occurs along the Pacific coast and western interior of North America, from Arizona, New Mexico, and California north through the Pacific Northwest and into Alaska. Inhabits open grassland and scrub habitats within many ecoregions including adjacent foothills (WDFW, 2024). | Moderate; suitable open grassland habitat with nectar-producing plant species is present within the Survey Area in open space areas and the Don Edwards San Francisco Bay NWR. There are no CNDDB occurrences within the Survey Area, but there are occurrences approximately 2 miles northwest and 3.5 miles north of the Newark Substation and approximately 1 mile southeast of the NRS substation (CDFW, 2024b). |

| Table 4: Special-Status Species, Habitat, and Potential for Occurrence within the Survey Area | | | | |
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| **Common Name** | **Scientific Name** | **Status** | **Habitat** | **Potential for Occurrence within the Survey Area** |
| Crotch's bumblebee | *Bombus crotchii* | SC | Distributed from coastal California east towards the Sierra-Cascade crest. Inhabits open grassland and scrub habitats within many ecoregions including adjacent foothills. Generally occupies warmer and more arid regions than other bumble bees and does not usually occupy mountainous regions. Most current observations (2002-2017) occur in southern California (Xerces et al., 2018; Williams et al., 2014). | Moderate; suitable open grassland habitat with nectar-producing plant species is present within the Survey Area in open space areas and the Don Edwards San Francisco Bay NWR. There are no CNDDB occurrences within the Survey Area, but there are occurrences approximately 1 mile southeast of the NRS Substation (CDFW, 2024b). |
| Monarch butterfly | *Danaus plexippus* | FC | Occurs in North, Central, and South America; Australia; New Zealand; islands of the Pacific and Caribbean, and elsewhere. Monarchs lay their eggs on their obligate milkweed host plant (primarily *Asclepias* spp.) (USFWS, 2020a). North America has several dozen native milkweed species with which monarchs coevolved and upon which they rely to complete their life cycle. Monarchs from Nevada generally migrate to California to overwinter. In the southwestern states, migrating monarchs tend to occur more frequently near water sources (Morris et al. 2015). During breeding and migration, monarchs require a diversity of blooming nectar resources and milkweed. | Moderate; flowering plants occur within the Survey Area, and milkweed species could occur. There are no CNDDB occurrences within the Survey Area, but there are occurrences approximately 1.75 miles and 5 miles northwest of the Newark Substation (CDFW, 2024b). |

| Table 4: Special-Status Species, Habitat, and Potential for Occurrence within the Survey Area | | | | |
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| **Common Name** | **Scientific Name** | **Status** | **Habitat** | **Potential for Occurrence within the Survey Area** |
| Large marble butterfly | *Euchloe ausonides ausonides* | Federally Petitioned | Large marble caterpillars feed on various plants in the mustard family, and preferred habitats for the butterfly include grasslands and open meadows along with streamsides, berms, desert washes, beaches, canyons, sagebrush steppe, montane slopes, open tundra, and weedy flats. | Moderate; suitable grassland and open meadows occur along Coyote Creek and the Guadalupe River. There are no CNDDB occurrences within the vicinity of the Survey Area (CDFW, 2024b). |

| Table 4: Special-Status Species, Habitat, and Potential for Occurrence within the Survey Area | | | | |
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| **Common Name** | **Scientific Name** | **Status** | **Habitat** | **Potential for Occurrence within the Survey Area** |
| **Mammal Species** | | | | |
| Salt marsh harvest mouse | *Reithrodontomys raviventris* | FE, SE | Primarily restricted to inhabiting saline or subsaline marsh habitats around the San Francisco Bay Estuary, except for occurrences documented in mixed saline or brackish areas of the Suisun Bay area. Occurrence is often closely correlated with ample pickleweed (*Sarcocornia)* in tidal and diked marshes (USFWS, 2024b). | High; suitable saline or subsaline marsh habitats occur within the Survey Area west of the proposed alignment in the vicinity of Coyote Creek Lagoon, north of the San José-Santa Clara RWF wastewater disposal ponds, northwest of the Baylands terminal, and west of the Survey Area in the Don Edwards San Francisco Bay NWR. There are numerous CNDDB occurrences within and in the vicinity of the Survey Area, including near Coyote Creek lagoon and its associated wetlands, to the north and west of the San José-Santa Clara RWF, and to the north of Los Esteros Road and the Baylands terminal site within the Don Edwards San Francisco Bay NWR (CDFW, 2024b) |
| Salt marsh wandering shrew | *Sorex vagrans haliocoetes* | CSSC | Inhabits salt marshes, with driftwood and vegetation that grows to a height of 5 to 10 centimeters, giving shrews and their prey ample cover during warm, dry weather (Johnston and Rudd, 1957). | Low; suitable habitat in the vicinity of the Survey Area has become increasingly brackish or degraded by development. There is one CNDDB occurrence in the vicinity of the Survey Area near Alviso and the Baylands Park west of the Baylands terminal site, but this area no longer supports suitable habitat (CDFW, 2024b). |

| Table 4: Special-Status Species, Habitat, and Potential for Occurrence within the Survey Area | | | | |
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| **Common Name** | **Scientific Name** | **Status** | **Habitat** | **Potential for Occurrence within the Survey Area** |
| San Joaquin kit fox | *Vulpes macrotis mutica* | FE, ST | Inhabits grasslands and scrublands that can have a moderate level of human disturbance, such as active oil fields, wind turbines, and agricultural matrices of row crops, irrigated pasture, orchards, vineyards, and grazed annual grassland. In agricultural areas, San Joaquin kit foxes inhabit grazed, non-irrigated grasslands, but also live next to and forage in tilled or fallow fields, irrigated row crops, orchards, and vineyards. Prefers loose-textured soils for digging but can be found on virtually every soil type (USFWS, 1998). | Low; grassland and scrubland habitat in the vicinity of the Survey Area has either become developed or extremely fragmented and isolated from the more suitable and contiguous habitat east of the highly developed areas from Newark to San José. No CNDDB occurrences within the Survey Area or 5-mile buffer (CDFW, 2024b). |
| Townsend's big-eared bat | *Corynorhinus townsendii* | CSSC, WBWG-H | Occurs in a wide variety of habitats including coniferous forests, mixed forests, deserts, native prairies, riparian communities, active agricultural areas, and coastal habitat types. Forages near edge habitats along streams and adjacent to and within a variety of wooded habitats. Requires caves or mines for roosting habitat (WBWG, 2024b). | Low; caves and mines that provide roosting, maternity, and hibernating habitat are not present in the vicinity of the Survey Area. There are no CNDDB occurrences within the Survey Area, but there are several occurrences in the foothills to the east of the Survey Area (CDFW, 2024b). |

| Table 4: Special-Status Species, Habitat, and Potential for Occurrence within the Survey Area | | | | |
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| **Common Name** | **Scientific Name** | **Status** | **Habitat** | **Potential for Occurrence within the Survey Area** |
| Spotted bat | *Euderma maculatum* | CSSC, WBWG-H | Occurs in a wide variety of habitats from arid, low desert habitats to high elevation coniferous forests. Prominent rock features are a necessary feature for roosting. Forages in close proximity to roost sites (WBWG, 2024b). | Low; suitable roosting habitat is not present in the vicinity of the Survey Area. No CNDDB occurrences within the Survey Area or 5-mile buffer (CDFW, 2024b). |
| Silver-haired bat | *Lasionycteris noctivagans* | WBWG-M | Occurs in coastal and montane coniferous forests, valley foothill woodland, pinyon-juniper woodlands, and valley foothill and montane riparian habitats. Prefers old growth forests but can be found in a variety of wooded habitats. Roosts individually or in small groups in hollow trees, snags, buildings, rock crevices, caves, and under bark (CDFW, 2024a; WBWG, 2024b). | Low; suitable woodland habitat is very limited within the Survey Area and is surrounded by highly developed areas. No CNDDB occurrences within the Survey Area or 5-mile buffer (CDFW, 2024b). |
| Western red bat | *Lasiurus blossevillii* | CSSC, WBWG-H | Prefers riparian woodlands but is also found in a variety of other forests. Primarily roosts in trees along forest edges adjacent to streams or open fields but will sometimes use orchards and buildings for day roosts. Forages over open areas near the roosting sites (WBWG, 2024b). | Low; some suitable habitat exists along Coyote Creek and within woodland and riparian areas, but these habitats are limited and surrounded by large areas of development. No CNDDB occurrences within the Survey Area or 5-mile buffer (CDFW, 2024b). |

| Table 4: Special-Status Species, Habitat, and Potential for Occurrence within the Survey Area | | | | |
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| **Common Name** | **Scientific Name** | **Status** | **Habitat** | **Potential for Occurrence within the Survey Area** |
| Hoary bat | *Lasiurus cinereus* | WBWG-M | The most widespread bat in the United States. Prefers coniferous and broadleaf trees at the edges of clearings but will also use dense forested areas. Usually roosts in dense foliage of trees but will occasionally use buildings and ledges. Forages in open areas near roosting areas (WBWG, 2024b). | Low; some suitable habitat exists along Coyote Creek and within woodland and riparian areas, but these habitats are limited and surrounded by large areas of development. There are no CNDDB occurrences within the Survey Area, but there is one occurrence south of the Survey Area within the city of San Jose, but this occurrence is from 1893 and the area is now heavily developed (CDFW, 2024b). |
| Long-eared myotis | *Myotis evotis* | WBWG-M | Occurs in semiarid shrublands, sage, chaparral, and agricultural areas, but prefers coniferous woodlands and forests. Roosts under tree bark, in hollow trees, caves, mines, cliff crevices, sinkholes, rocky outcrops, buildings, and under bridges. Forages amongst and along the edges of forested areas (WBWG, 2024b). | Low; some suitable habitat exists along Coyote Creek and within woodland and riparian areas, but these habitats are limited and surrounded by large areas of development. No CNDDB occurrences within the Survey Area or 5-mile buffer (CDFW, 2024b). |

| Table 4: Special-Status Species, Habitat, and Potential for Occurrence within the Survey Area | | | | |
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| **Common Name** | **Scientific Name** | **Status** | **Habitat** | **Potential for Occurrence within the Survey Area** |
| Little brown myotis | *Myotis lucifugus* | WBWG-M | Widespread and common in mesic, forested areas of temperate North America. Will exploit a wide variety of natural and man-made roost sites in woodland/forested areas where water sources are nearby. Maternity roost sites include tree cavities, caves, and buildings. Most common in mid- to high-elevation forests. Feeds over water and other open areas such as agricultural fields and grasslands (WBWG, 2024b). | Low; suitable forested habitats are very limited within the Survey Area. No CNDDB occurrences within the Survey Area or 5-mile buffer (CDFW, 2024b). |
| Fringed myotis | *Myotis thysanodes* | WBWG-H | Mostly occupies dry habitats where open areas (e.g., grasslands and deserts) are interspersed with mature forests (usually ponderosa pine, pinyon-juniper, or oak), creating complex mosaics with ample edges and abundant snags. In dry environments, exists in close proximity to water sources. Tends to forage along forest edges. Uses caves, mines, large trees and snags, and buildings as roost areas (Keinath, 2004; CDFW, 2024a; WBWG, 2024b). | Low; suitable dry open areas are present, but large areas of mature forests are not present within the Survey Area. No CNDDB occurrences within the Survey Area or 5-mile buffer (CDFW, 2024b). |

| Table 4: Special-Status Species, Habitat, and Potential for Occurrence within the Survey Area | | | | |
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| **Common Name** | **Scientific Name** | **Status** | **Habitat** | **Potential for Occurrence within the Survey Area** |
| Long-legged myotis | *Myotis volans* | WBWG-H | Primarily occupies coniferous woodlands and forests above 4,000 feet in elevation, but will also use chaparral, coastal scrub, riparian, and desert habitats. Roosts in rock crevices, buildings, under tree bark, in snags, mines, and caves. Forages in openings, near trees and cliffs, and over water sources (WBWG, 2024b; CDFW, 2024a). | Low; suitable habitats are not present within the Survey Area. No CNDDB occurrences within the Survey Area or 5-mile buffer (CDFW, 2024b). |
| Western mastiff bat | *Eumops perotis* | CSSC, WBWG-H | Primarily occupies broad, open areas in dry desert washes, floodplains, chaparral, oak woodland, open ponderosa pine forest, grassland, and agricultural areas. Primarily a cliff-roosting species but will sometimes use tall buildings and crevices in large boulders (WBWG, 2024b; CDFW, 2024a). | Low; suitable open foraging habitats are limited within the Survey Area and are surrounded by large, developed areas. No CNDDB occurrences within the Survey Area or 5-mile buffer (CDFW, 2024b). |
| Pallid bat | *Antrozous pallidus* | CSSC, WBWG-H | Occurs in wide range of environments, from meadows to higher altitude coniferous woods, stony, dry deserts, and open grasslands. Feeds over large open areas. Most prevalent in the xeric ecosystems below 6,000 feet, but have been documented up to 10,000 feet in Sierra Nevada (WBWG, 2024b). | Low; suitable xeric habitats and open foraging areas are limited within the Survey Area. There are no CNDDB occurrences within the Survey Area, but there is an occurrence in the foothills to the east of the Survey Area and an occurrence in downtown San José from 1943 which is likely no longer extant due to heavy development (CDFW, 2024b). |

| Table 4: Special-Status Species, Habitat, and Potential for Occurrence within the Survey Area | | | | |
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| **Common Name** | **Scientific Name** | **Status** | **Habitat** | **Potential for Occurrence within the Survey Area** |
| **Avian Species** | | | | |
| Burrowing owl | *Athene cunicularia* | BCC, CSSC | Open habitats with low or sparse vegetation such as prairie pastures, desert or desert scrub, agricultural, and disturbed areas. Especially alongside canals and berms associated with agriculture. Forages over low vegetation and typically will not forage within trees or tall shrubs (Poulin et al. 2020). | High; suitable native and non-native grassland habitat occurs within the Survey Area in the area surrounding the Newark Substation, Don Edwards San Francisco Bay NWR along Cushing Parkway, the Santa Clara Police Activities League (SCPAL) Bicycle Motor-Cross (BMX) Track and areas that used to be the Santa Clara golf and tennis club, and the Baylands Terminal. The grassland areas immediately adjacent to the proposed Baylands Terminal have been used for burrowing owl relocation and several release structures were observed during field surveys. There are CNDDB occurrences within the Survey Area in the vicinity of the Baylands Terminal site where there are known burrowing owl populations, breeding pens, and artificial burrows; in the vicinity of the Newark substation; in the Don Edwards San Francisco Bay NWR along Cushing Parkway; within Staging Area 7 along Zanker Road; along Lafayette Street within the Santa Clara PAL BMX Track and areas that used to be the Santa Clara golf and tennis club; and in the area where Levi's Stadium was built, which are now likely extirpated (CDFW, 2024b). There have been eBird sightings from the vicinity of the Baylands terminal site near Disk Drive and in the Don Edwards San Francisco Bay NWR near Cushing Parkway (eBird, 2024). |

| Table 4: Special-Status Species, Habitat, and Potential for Occurrence within the Survey Area | | | | |
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| **Common Name** | **Scientific Name** | **Status** | **Habitat** | **Potential for Occurrence within the Survey Area** |
| California condor | *Gymnogyps californianus* | FE, SE, CFP | Typically observed in flight over foothills and ridges in open savannah-like habitat. Roosts on cliffs or large trees (Sibley, 2014). | Low; nearest suitable foraging or roosting habitat occurs in the foothills approximately 2.5 miles east of the Survey Area. Recent observations (2021-2023) of condors from Pinnacles National Monument flying near Mt. Diablo in Contra Costa County (Negle, 2023) suggest that those individuals traveled along the mountain ridges east of the Survey Area. No CNDDB occurrences within the Survey Area or 5-mile buffer (CDFW, 2024b). |
| Western snowy plover | *Charadrius nivosus nivosus* | FT, CSSC | Occurs locally on sandy beaches and at some shallow inland lakes, favoring drier areas of sand or dried mud far from water. Typically solitary while foraging, but may roost in small numbers (Sibley, 2014). | High; suitable habitat associated with diked salt evaporation ponds occurs in the areas within Don Edwards San Francisco Bay NWR south of Cushing Parkway and north and west of the Baylands terminal site. There are CNDDB occurrences within the Survey Area within Don Edwards San Francisco Bay NWR near Alviso along Disk Drive and Los Esteros Road and near Baylands south of Cushing Parkway (where there is also designated critical habitat) (CDFW, 2024b). There have been eBird sightings in the vicinity of the Don Edwards San Francisco Bay NWR near Cushing Parkway from as recently as December 2023 (eBird, 2024). |

| Table 4: Special-Status Species, Habitat, and Potential for Occurrence within the Survey Area | | | | |
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| **Common Name** | **Scientific Name** | **Status** | **Habitat** | **Potential for Occurrence within the Survey Area** |
| Tricolored blackbird | *Agelaius tricolor* | BCC, ST | Typically nests in large and dense marshes but in recent decades use of certain agricultural crops and upland shrubs and thistles has increased. Annual grasslands with invasive shrubs and weeds are also used. Forages over water, certain agricultural fields, alkali scrub, coast live oak, and other land cover types that support insect prey. Orchards, vineyards, and cultivated row crops provide little to no breeding season foraging opportunities (Beedy et al., 2023). | High; suitable habitat in the form of saline and subsaline marshland, annual grasslands, salt and sewage ponds, and the riparian areas of Coyote Creek and the Guadalupe River occur within the Survey Area immediately adjacent to and up to a mile from the Baylands Terminal site. There are CNDDB occurrences within the Survey Area in the vicinity of Coyote Creek near the San José-Santa Clara RWF and near Alviso within the Don Edwards San Francisco Bay NWR. The Coyote Creek occurrence included capture of individuals as recently as 2021 and the Don Edwards San Francisco Bay NWR occurrence recorded individuals in 2019. There is another CNDDB occurrence near Fremont Boulevard and Warren Avenue, but this occurrence was from 1985, and surveys from 2014 and 2015 discovered no individuals as the area is now heavily developed and disturbed (CDFW, 2024b). There have been eBird sightings in the vicinity of Coyote Creek and the San José-Santa Clara RWF from as recently as December 2023 (eBird, 2024). |

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| **Common Name** | **Scientific Name** | **Status** | **Habitat** | **Potential for Occurrence within the Survey Area** |
| Saltmarsh common yellowthroat | *Geothlypis trichas sinuosa* | BCC, CSSC | Occurrence found to be linked to suitable freshwater and salt marshes with nearby willow thickets. Nests in marshy areas that are usually higher off the ground, where they are safer from flooding (USFWS, 2024b). | Moderate; suitable habitat in the form of saline and subsaline marshland and salt and sewage ponds around Artesian and Mud Sloughs and the riparian areas of Coyote Creek occurs within and adjacent to the Survey Area. There are CNDDB occurrences within the Survey Area in the vicinity of Coyote Creek, Mud Slough, Mallard Slough, and Artesian Slough as well as salt ponds near Alviso in the Don Edwards San Francisco Bay NWR; all of these occurrences are from the 1980s and 1990s and some of the habitat has been degraded, but large areas of saltmarsh and freshwater still exist in these areas (CDFW, 2024b). |
| Alameda song sparrow | *Melospiza melodia pusillula* | BCC, CSSC | Historically occurs where tidal marsh habitat is available within its described range (southern Alaska across central and southern Canada south through the U.S. into northern Mexico and Baja California) (Shuford and Gardali, 2008) | Moderate; suitable habitat within the Survey Area occurs north of the Baylands terminal site in the area around Artesian Slough and to the northeast around Coyote Creek and Lagoon. There are CNDDB occurrences within the Survey Area along the Guadalupe River and near the Survey Area in Don Edwards San Francisco Bay NWR north of Alviso. The Guadalupe River occurrence is from 1947, and the area is now more heavily developed. The Don Edwards San Francisco Bay NWR occurrence is from 2004, and the area consists of restored coastal salt marsh (CDFW, 2024b). |

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| **Common Name** | **Scientific Name** | **Status** | **Habitat** | **Potential for Occurrence within the Survey Area** |
| California black rail | *Laterallus jamaicensis coturniculus* | ST, BCC, CFP | Occurs sparsely in grassy, fresh and brackish marshes. Rarely seen out in the open, instead preferring to shelter in tall grasses (Sibley, 2014). | Moderate; suitable marsh habitat within the Survey Area occurs north of the Baylands terminal site in the area around Artesian Slough and to the northeast around Coyote Creek and Lagoon. There are CNDDB occurrences within the Survey Area in the vicinity of the San José-Santa Clara RWF, but these occurrences are from the 1890s. There are other CNDDB occurrences within 5 miles of the Survey Area in Don Edwards San Francisco Bay NWR to the north and west of the Survey Area. These occurrences are from 2015 and 2016 (CDFW, 2024b). |
| Western yellow-billed cuckoo | *Coccyzus americanus occidentalis* | FT, SE | Uncommon in woods, often occurring in wet areas such as riparian willow groves or in mid-eves of trees at field edges with dense tangle of undergrowth. Solitary, foraging on prey from leaves and twigs (Sibley, 2014). | Low; suitable heavily wooded habitat is absent from the Survey Area. There are no CNDDB occurrences within the Survey Area, and the only CNDDB occurrence in the vicinity is from Milpitas in 1899 in an area that has been fully developed, eliminating all potential habitat (CDFW, 2024b). |
| Yellow rail | *Coturnicops noveboracensis* | BCC, CSSC | Secretive and rarely observed. Occurs in damp grassy meadows or sedge marshes, often habitat that is also occupied by Sedge wren and LeConte's sparrow. Prefers dark, well covered environments (Sibley, 2014). | Moderate; suitable marsh habitat within the Survey Area occurs north of the Baylands Terminal site in the area around Artesian Slough and to the northeast around Coyote Creek and Lagoon. There are CNDDB occurrences within the Survey Area within Don Edwards San Francisco Bay NWR near Alviso. Several of these occurrences are from the 1890s, but one individual was observed in the Don Edwards San Francisco Bay NWR parking lot in 2013 (CDFW, 2024b). |

| Table 4: Special-Status Species, Habitat, and Potential for Occurrence within the Survey Area | | | | |
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| **Common Name** | **Scientific Name** | **Status** | **Habitat** | **Potential for Occurrence within the Survey Area** |
| White-tailed kite | *Elanus leucurus* | CFP, BCC | Occurs in open grassy areas with scattered shrubs. Hunts from the air, often hovering gracefully before dropping straight down. Perches on prominent posts or treetops (Sibley, 2014). | High; suitable foraging habitat occurs within the Survey Area in the grasslands surrounding the Baylands Terminal site and in Don Edwards San Francisco Bay NWR near Cushing Parkway. Native and non-native trees suitable for nesting also occur within the Survey Area. There has been one CNDDB occurrence within the Survey Area near the Baylands terminal site. This occurrence included a nest in a eucalyptus tree but was from 1993 (CDFW, 2024b). There have been eBird sightings in the vicinity of Coyote Creek and the San José-Santa Clara RWF from 2019 - 2023 (eBird, 2024). |
| Golden eagle | *Aquila chrysaetos* | BGEPA, BCC, CFP | Nest in high densities in open and semi-open habitat but also may nest at lower densities in coniferous habitat when open space is available (e. g. fire breaks, clear-cuts, burned areas, pastureland, etc.). Golden eagles can be found from the tundra, through grasslands, woodland-brushlands, and forested habitat, south to arid deserts. Usually associated with areas of high topographic relief such as rolling hills and mountains. Uses cliffs, rock outcroppings, and tall, prominent trees for nesting. Will occasionally nest on tall transmission towers (Pagel et al., 2010; Katzner et al., 2020). | High; suitable foraging habitat occurs within the Survey Area in the grasslands surrounding the Baylands Terminal site. Native and non-native trees suitable for nesting also occur within the Survey Area. There is one CNDDB occurrence within the Survey Area south of the Baylands terminal site. This occurrence is a nest within a palm tree with sightings as recently as 2021 (CDFW, 2024b). There have been eBird sightings of golden eagle made in this area in 2023 as well as sightings near the San José-Santa Clara RWF in January 2024 and the Don Edwards San Francisco Bay NWR near Cushing Parkway in April 2023 (eBird, 2024). |

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| **Common Name** | **Scientific Name** | **Status** | **Habitat** | **Potential for Occurrence within the Survey Area** |
| California clapper rail (Ridgway's rail) | *Rallus longirostris obsoletus* | FE, SE, CFP | Occurs almost exclusively in tidal and brackish marshes with unrestricted daily tidal flows, adequate invertebrate prey food supply, well-developed tidal channel networks, and suitable nesting and escape cover to provide habitat during extreme high tides. Their current distribution is restricted to the San Francisco Bay Estuary (USFWS, 2013). | Moderate; suitable marsh habitat within the Survey Area occurs north of the Baylands terminal site in the area around Artesian Slough and to the northeast around Coyote Creek and Lagoon. There are no CNDDB occurrences within the Survey Area, but there are several within salt marsh vegetation in the Don Edwards San Francisco Bay NWR to the north and west of the Survey Area (CDFW, 2024b). There has been one eBird sighting during January 2024 in the vicinity of the Coyote Creek Pond north of the San José-Santa Clara RWF and south of Staging Area 5 (eBird, 2024). |
| Northern harrier | *Circus hudsonius* | CSSC, BCC | Typically found flying just above vegetation over open fields, grasslands, or marshes. Perches on the ground or on fence posts, lower than most hawks. Nests on the ground in open, vegetated habitat. Generally solitary (Sibley, 2014). | Moderate; suitable habitat occurs within and adjacent to the Survey Area in the marsh areas of Artesian and Coyote Creek Sloughs and in the grasslands around the Baylands Terminal site and Don Edwards San Francisco Bay NWR near Cushing Parkway. There are no CNDDB occurrences within the Survey Area, but there are several within salt marsh vegetation in the Don Edwards San Francisco Bay NWR to the north and west of the Survey Area (CDFW, 2024b). There have been eBird sightings recorded from the area surrounding the San José-Santa Clara RWF as well as Don Edwards San Francisco Bay NWR near Cushing Parkway from 2022 and 2023 (eBird, 2024). |

| Table 4: Special-Status Species, Habitat, and Potential for Occurrence within the Survey Area | | | | |
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| **Common Name** | **Scientific Name** | **Status** | **Habitat** | **Potential for Occurrence within the Survey Area** |
| California least tern | *Sterna antillarum browni* | FE, SE, CFP | This subspecies of the least tern (*Sterna antillarum*) traditionally nested on sandy beaches close to estuaries and coastal embayments relatively free from human disturbance. Foraging habitat includes nearshore waters, estuarine channels, narrow bays, and other shallow water marine habitat (USFWS, 2020b). | Low; suitable sandy beach habitat is absent from the Survey Area. There are no CNDDB occurrences within the Survey Area, but there is one occurrence in the Don Edwards San Francisco Bay NWR to the west of the Survey Area (CDFW, 2024b). |
| American peregrine falcon | *Falco peregrinus anatum* | BCC | Uncommon in open areas, especially near water. Nests on cliff ledges or on buildings or bridges in cities. Solitary. Hunts from perch or from high in the air, stooping on prey at very high speed; sometimes stoops repeatedly at same prey in series of U-shaped dives, feeding mainly on small or medium-sized birds (Sibley, 2014). | High; suitable breeding habitat does occur within the Survey Area given recent observations of this species utilizing existing stick nests on towers and ground nesting on the salt evaporation pond dikes (Latta, 2024). Additionally, an adult peregrine was observed perched and vocalizing on a tower near the Newark substation during 2023 field surveys. There are no CNDDB occurrences within the Survey Area, but there are occurrences east of the Survey Area in the foothills near San Antonio reservoir and an occurrence of a nesting pair that were using a nest box on a high-rise office building in San José south of the Survey Area (CDFW, 2024b). There have been eBird sightings from the vicinity of the San José-Santa Clara RWF and Coyote Creek from 2021 and 2023, the vicinity of Los Esteros Road and Disk Drive from 2022, and from the Don Edwards San Francsico Bay NWR near Cushing Parkway from 2022 (eBird, 2024). |

| Table 4: Special-Status Species, Habitat, and Potential for Occurrence within the Survey Area | | | | |
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| **Common Name** | **Scientific Name** | **Status** | **Habitat** | **Potential for Occurrence within the Survey Area** |
| Prairie falcon | *Falco mexicanus* | SWL, BCC | Uncommon in open deserts, grasslands, and agricultural land. Nests on cliff ledges. Solitary. Hunts from perch, from low contouring flight or from high in the air. Feeds mainly on small mammals such as ground squirrels, but also small birds and some insects (Sibley, 2014). | Low; some foraging habitat is present in the grasslands around the Baylands Terminal site and Don Edwards San Francisco Bay NWR near Cushing Parkway, but breeding habitat is absent from the Survey Area. There are no CNDDB occurrences within the Survey Area, but there are occurrences east of the Survey Area in the foothills near San Antonio reservoir (CDFW, 2024b). |
| Great blue heron | *Ardea herodias* | BCC | Common occurrences. Nests in colonies in trees standing in water. Forages in any open grassy to shallow water habitat. Typically solitary, but roosts and migrates in groups. Often more active at night (Sibley, 2014). | Present; foraging habitat exists along the entire length of the Survey Area. Nesting habitat exists within the Survey Area along Coyote Creek. There are no CNDDB occurrences within the Survey Area, but there are several occurrences south of the Survey Area along Coyote Creek and north of the Survey Area in the Alameda Creek quarries (CDFW, 2024b). There have been eBird sightings in the vicinity of Coyote Creek and the San José-Santa Clara RWF and from Disk Drive west of San José-Santa Clara RWF from 2023 (eBird, 2024). Additionally, great blue herons were observed along several creeks and within Don Edwards San Francisco Bay NWR in wetland areas during field surveys in January 2024. |

| Table 4: Special-Status Species, Habitat, and Potential for Occurrence within the Survey Area | | | | |
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| **Common Name** | **Scientific Name** | **Status** | **Habitat** | **Potential for Occurrence within the Survey Area** |
| Swainson's hawk | *Buteo swainsoni* | ST, BCC | Overwinters in South America. Habitat in the breeding range consists of open stands of grass dominated vegetation, sparse shrublands, open woodlands, and agricultural lands – primarily those dominated by row, grain, and hay crops. Nests in scattered trees within these landscapes, such as in riparian trees near grasslands or agricultural areas (Bechard et al., 2020). | Low; there is a small amount of suitable habitat within the Survey Area, but it is likely too isolated and not extensive enough to support a breeding pair. There are no CNDDB occurrences within the Survey Area, but there was one occurrence near San José airport from 1889; this area is now fully developed, and no habitat remains (CDFW, 2024b). |
| Allen’s hummingbird | *Selasphorus sasin* | BCC | Breeds along the Pacific coast and winters in central Mexico, migrating through California and northern Mexico. Breeds only in the moist, narrow coastal belt affected by summer fogs. Habitat in breeding range includes coastal scrub and riparian shrubland (Clark and Mitchell, 2020). | Moderate; suitable habitat occurs within the Survey Area in the riparian scrubland along Coyote Creek and the Guadalupe River. |

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| **Common Name** | **Scientific Name** | **Status** | **Habitat** | **Potential for Occurrence within the Survey Area** |
| Bald eagle | *Haliaeetus leucocephalus* | BGEPA, BCC, SE, CFP | Typically breeds in forested areas adjacent to large open bodies of water or rivers. Breeding habitat is typically mature forest patches with open areas and edges where they will nest in large trees on the edges of the forest. Typically nests away from areas of human development (Buehler, 2022). | Present; suitable breeding and foraging habitat is largely absent from the Survey Area but is located within the vicinity in San Francisco Bay. Suitable nesting habitat is sparse within the Survey Area and may include tall trees. There are no CNDDB occurrences within 5 miles of the Survey Area (CDFW, 2024b), but there are known eBird occurrences in the Survey Area in the vicinity of Coyote Creek and the San José-Santa Clara RWF and the Don Edwards San Francisco Bay NWR near Cushing Parkway (eBird, 2024). Additionally, one individual was sighted during field surveys in January 2024 flying over the San José-Santa Clara RWF towards San Francisco Bay. |
| Belding's savannah sparrow | *Passerculus sandwichensis beldingi* | BCC, SE | This rare subspecies of the savannah sparrow (*Passerculus sandwichensis*) occupies coastal salt marshes along the California coast. Nests in pickleweed (*Salicornia virginica*) saltmarsh vegetation (Sibley, 2009). | Low; suitable habitat exists within the Survey Area in the salt marshes near Artesian and Coyote Sloughs, however, the species is quite rare. There are no CNDDB occurrences within 5 miles of the Survey Area (CDFW, 2024b). |
| Black oystercatcher | *Haematopus bachmani* | BCC | Sparsely but widely distributed along the coast. Singles or small groups on rocks at ocean's edge, only loosely associated with other shore birds. Nests on rocks and pebbles just above high-tide line (Sibley, 2014). | Low; suitable oceanside rocky habitat is absent from the Survey Area. |

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| **Common Name** | **Scientific Name** | **Status** | **Habitat** | **Potential for Occurrence within the Survey Area** |
| Black skimmer | *Rynchops niger* | BCC, CSSC | Occupies mainland coast or barrier islands on sandy beaches, sandbars, shell banks, dredge islands and mudflats, tidal pools, inlets and creeks, saltmarsh wrack and creeks, ponds, lagoons, and estuaries. Almost exclusively coastal, except on large inland lakes. Suspected to breed in San Francisco Bay but are very uncommon on the west coast outside of southern California (Gochfeld et al., 2020). | Low; small amounts of suitable habitat exist within the Survey Area near Artesian and Coyote Sloughs, but this species is rare in northern California. There are no CNDDB occurrences within 5 miles of the Survey Area (CDFW, 2024b). |
| Black swift | *Cypseloides niger* | BCC | Observed mainly around nest sites on damp coastal cliffs or cliff ledges behind waterfalls. Foraging birds fly at high altitude over wide range of habitat, traveling long distances and rarely seen. Typically in small groups (Sibley, 2014). | Low; suitable cliff habitat is absent from the Survey Area. There are no CNDDB occurrences within 5 miles of the Survey Area (CDFW, 2024b). |
| Black tern | *Chlidonias niger* | BCC | Nests on marshy ponds with emergent vegetation; migrants can be seen over any water from marshes to open ocean and often roost with other terns on sandbars. Feeds on small fish, insects and other aquatic prey captured in flight, rarely plunge-dives (Sibley, 2014). | Moderate; suitable habitat exists within the Survey Area near Artesian and Coyote Sloughs. There are no CNDDB occurrences within 5 miles of the Survey Area (CDFW, 2024b). |

| Table 4: Special-Status Species, Habitat, and Potential for Occurrence within the Survey Area | | | | |
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| **Common Name** | **Scientific Name** | **Status** | **Habitat** | **Potential for Occurrence within the Survey Area** |
| Black turnstone | *Arenaria melanocephala* | BCC | Commonly found wintering along rocky ocean shores. Often seen with *A. interpres*, however *melanocephala* is almost never seen away from salt water. Nests in marshy coastal tundra (Sibley, 2014). | Low; suitable rocky ocean shore habitat is absent from the Survey Area. |
| Bullock's oriole | *Icterus bullockii* | BCC | Breeds in the U.S. and overwinters in Mexico and Central America. Breeds in riparian and oak woodlands, especially where trees are large and well-spaced or in isolated clumps. Sycamores (*Platanus*), cottonwoods (*Populus*), willows (*Salix*), and deciduous oaks seem to be especially favored for nesting, but live oaks (*Q. agrifolia*), orchard trees, and occasionally conifers are used (Flood et al., 2020). | Moderate; suitable habitat occurs within the Survey Area in the riparian area along Coyote Creek. There have been eBird sightings from the vicinity of the San José-Santa Clara RWF from 2019 (eBird, 2024). |
| California gull | *Larus californicus* | BCC, SWL | Primarily breeds in inland areas in the U.S. and Canada and overwinters along the Pacific coast. Nearly every habitat within the Pacific coast region is used, including beaches and rocky coasts, mudflats, coastal estuaries, and deltas of rivers and streams (Winkler, 2020). | Present; suitable foraging habitat exists within the Survey Area near Artesian and Coyote Sloughs. There are no CNDDB occurrences within 5 miles of the Survey Area (CDFW, 2024b), but there are known eBird sightings from the Don Edwards San Francisco Bay NWR and San José-Santa Clara RWF (eBird, 2024) and numerous individuals were observed during field surveys throughout the Survey Area, primarily in the vicinity of Don Edwards San Francisco Bay NWR and the San José-Santa Clara RWF. |

| Table 4: Special-Status Species, Habitat, and Potential for Occurrence within the Survey Area | | | | |
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| **Common Name** | **Scientific Name** | **Status** | **Habitat** | **Potential for Occurrence within the Survey Area** |
| California thrasher | *Toxostoma redivivum* | BCC | Occurs from sea level to upper elevations of montane chaparral and lower elevation limits of coniferous and pine-oak woodlands (approximately 5,000 feet). Relies on dense cover and shrub habitats for breeding (Cody, 2020). | Low; suitable woodland and shrubland habitat is absent from the Survey Area. |
| Clark's grebe | *Aechmophorus clarkii* | BCC | Breeds on large lakes and marshes with extensive areas of open water bordered by emergent vegetation throughout western North America. Overwinters primarily in salt or brackish bays, estuaries, or sheltered coasts, less frequently on freshwater lakes, and occasionally on rivers (LaPorte et al., 2020a). | Moderate; suitable habitat is present within the Survey Area along the creeks and rivers as well as within ponds and in the vicinity of Don Edwards San Francisco Bay NWR. |
| Common yellowthroat | *Geothlypis thrichas sinuosa* | BCC, CSSC | Occupies thick vegetation in a wide range, from wetlands to prairie to pine forests. More prevalent in wet areas with thick vegetation (Guzy and Ritchison, 2020). | Moderate; suitable habitat occurs along Coyote Creek and in wetland areas. There have been eBird sightings from Coyote Creek and the SJRWF from 2019 and 2023 (eBird, 2024). |
| Lawrence's goldfinch | *Carduelis (Spinus) lawrencei* | BCC | Typically occupies arid and open woodlands within chaparral or other brushy areas with tall annual fields and a water source nearby. Oaks are the predominant tree in which this species nests (Watt et al., 2020). | Low; a minimal amount of isolated suitable habitat occurs near Coyote Creek west of McCarthy Boulevard between Coyote Creek Lagoon and SR-237. There are no CNDDB occurrences within 5 miles of the Survey Area (CDFW, 2024b). |

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| **Common Name** | **Scientific Name** | **Status** | **Habitat** | **Potential for Occurrence within the Survey Area** |
| Long-eared owl | *Asio otus* | BCC | Typically observed at winter roost sites, where one to several birds routinely spend the day hidden in dense foliage, especially willow thickets or evergreen trees. Nests in dense conifer groves adjacent to open fields and wetlands. Forages at night, flying slowly along hedgerows, brushy fields, and forest edges (Sibley, 2014). | Low; suitable heavily wooded habitat is absent from the Survey Area. There are no CNDDB occurrences within 5 miles of the Survey Area (CDFW, 2024b). |
| Marbled godwit | *Limosa fedoa* | BCC | Breeds on short grass prairies and wetlands of the northern U.S. and Canada. Overwinters along the coast in coastal mudflats adjoining savannahs or meadows, estuaries, sandy beaches, and sandflats (Gratto-Trevor, 2020). | Moderate; suitable foraging habitat exists within the Survey Area near Artesian and Coyote Sloughs. There have been eBird sightings from the Don Edwards San Francisco Bay NWR in the vicinity of Cushing Parkway from 2023 (eBird, 2024). |
| Nuttall's woodpecker | *Picoides (Dryobates) nuttallii* | BCC | Occurs mostly in oak and riparian deciduous woodland. Nest cavities are built in soft wood often in dead trunks or limbs of willow, cottonwood, oak, and sycamore (Lowther et al., 2020a). | Moderate; suitable habitat within the Survey Area exists along Coyote Creek in hardwood woodland areas. There have been eBird sightings in the vicinity of Coyote Creek and the San José-Santa Clara RWF and in the vicinity of Disk Drive west of the Baylands terminal site from 2023 (eBird, 2024). |
| Oak titmouse | *Baeolophus inornatus* | BCC | Occurs primarily in warm, dry oak or oak-pine woodlands. Composition of the oak woodlands varies, but woodland is generally open. Nests primarily in natural cavities and woodpecker-excavated cavities in oak trees (Cicero et al., 2020). | Low; sufficient open woodland habitat does not occur within the Survey Area. |

| Table 4: Special-Status Species, Habitat, and Potential for Occurrence within the Survey Area | | | | |
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| **Common Name** | **Scientific Name** | **Status** | **Habitat** | **Potential for Occurrence within the Survey Area** |
| Olive-sided flycatcher | *Contopus cooperi* | BCC, CSSC | Breeds primarily in montane and northern coniferous forests. Can occur at any elevation from sea level to timberline, but typically occupies mid- to high-elevation forest. Primarily associated with openings and edge habitats (Altman and Sallabanks, 2020). | Low; suitable coniferous forest habitat is absent from the Survey Area. There are no CNDDB occurrences within 5 miles of the Survey Area (CDFW, 2024b). |
| Short-billed dowitcher | *Limnodromus griseus* | BCC | Breeds in bogs and woodlands in Canada. Overwinters along the coasts in coastal mudflats and brackish lagoons (Jehl et al., 2020). | Moderate; suitable overwinter foraging habitat exists within the Survey Area near Artesian and Coyote SIloughs and in Don Edwards San Francisco Bay NWR. |
| Western grebe | *Aechmophorus occidentalis* | BCC | Breeds on freshwater lakes and marshes with extensive open water bordered by emergent vegetation. Overwinters along the coast primarily in salt or brackish bays, estuaries, or sheltered coasts, less frequently on freshwater lakes and occasionally on rivers (LaPorte et al., 2020b). | Moderate; suitable habitat is present within the Survey Area along the creeks and rivers as well as within ponds and in the vicinity of Don Edwards San Francisco Bay NWR. |
| Willet | *Tringa semipalmata* | BCC | Breeds on prairies and wetlands in northern U.S. and Canada. Overwinters on coastal California mudflats, marshes, sandy beaches, and rocky coasts (Lowther et al., 2020b). | Present; suitable foraging habitat exists within the Survey Area near Artesian and Coyote Sloughs, Coyote Creek, and in the vicinity of other wetland habitat. There have been eBird sightings from Coyote Creek and the San José-Santa Clara RWF and Disk Drive west of the Baylands terminal site from 2023 (eBird, 2024). There were several observations within the San José-Santa Clara RWF and Don Edwards San Francisco Bay NWR in the Survey Area during field surveys in 2024. |

| Table 4: Special-Status Species, Habitat, and Potential for Occurrence within the Survey Area | | | | |
|---|---|---|---|---|
| **Common Name** | **Scientific Name** | **Status** | **Habitat** | **Potential for Occurrence within the Survey Area** |
| Wrentit | *Chamaea fasciata* | BCC | Occupies cismontane scrub from sea level to 7,000 feet in elevation. Occurs in coastal sage scrub, northern coastal scrub, coastal hard and montane chaparral. Breeds in dense shrub understory, including mature riparian valley oak, Douglas fir and redwood forests, early successional forests, riparian (willow) scrub, coyote bush (*Baccharis* sp.) thickets, and suburban parks and gardens (Geupel and Ballard, 2023). | Moderate; suitable habitat occurs within the Survey Area in the scrub along the fringes of the grassland habitat between Coyote Creek and the Guadalupe River. |
| Yellow-billed magpie | *Pica nuttalli* | BCC | Primarily restricted to oak savanna habitat containing large trees scattered across broad expanses of open ground. Some urban populations nest in native and non-native trees mainly close to rivers and streams and forage in lawns and parks (Koenig et al., 2022). | Low; suitable oak savanna habitat is absent from the Survey Area. |
| Raptors | | MBTA, CFGC | Various. | Present; high: Suitable foraging and breeding habitat for species such as red-tailed hawk, great horned owl, barn owl, and American kestrel occurs in the undeveloped areas of the Survey Area. An often-occupied barn owl nest box is mounted on a transmission tower adjacent to the Newark Substation. Numerous raptors have been observed within the Survey Area during field surveys, including bald eagle, red-tailed hawk, American kestrel, and turkey vulturem. |

| Table 4: Special-Status Species, Habitat, and Potential for Occurrence within the Survey Area | | | | |
|---|---|---|---|---|
| **Common Name** | **Scientific Name** | **Status** | **Habitat** | **Potential for Occurrence within the Survey Area** |
| **Reptile Species** | | | | |
| Western pond turtle | *Emys marmorata* | CSSC | Found in ponds, lakes, streams, creeks, marshes, and irrigation ditches with abundant vegetation and either rocky or muddy bottoms. Found in woodland, forest, and grassland habitats along permanent or nearly permanent water sources. In streams, it prefers pools to shallower areas. Logs, rocks, and exposed banks are required for basking. Nests are typically located along stream or pond margins in areas with full sunlight, but sometimes nests can be as far as 300 feet from the water source. Sometimes terrestrial burrow habitats are used for wintering (Holland, 1994). | High; suitable open water habitats exist along Coyote Creek, Agua Caliente Creek, Guadalupe River, and numerous ponds and lakes in the Survey Area. Additionally, brackish estuarine areas exist in the vicinity of Don Edwards San Francisco Bay NWR and the San Francisco Bay. There are several CNDDB occurrences along Coyote Creek, San Tomas Aquino Creek, the Guadalupe River, and various ponds and estuary areas within and in the vicinity of the Survey Area (CDFW, 2024b). |

| Table 4: Special-Status Species, Habitat, and Potential for Occurrence within the Survey Area | | | | |
|---|---|---|---|---|
| **Common Name** | **Scientific Name** | **Status** | **Habitat** | **Potential for Occurrence within the Survey Area** |
| Alameda whipsnake | *Masticophis lateralis euryxanthus* | FT, ST | This species occurs in five populations throughout Contra Costa, most of Alameda, and small portions of northern Santa Clara and western San Joaquin counties. Inhabits mixed chaparral, annual grassland, and oak woodland habitats and are strongly associated with rock piles within these habitats, as they provide cover for the snake and are home to prey items (primarily lizards). The Alameda whipsnake is only known to occur in the Coast Range of mountains (USFWS, 2002a; USFWS, 2024b). | Low; this species is only known to occur in the Coast Range of mountains located east of the Survey Area. There is one CNDDB occurrence mapped approximately 3.5 miles east of the Survey Area near Mission Peak (CDFW, 2024b). |
| Northern California legless lizard | *Anniella pulchra* | CSSC | Occurs in sparsely vegetated areas of beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces. This species frequents areas that have loose, fine soil, sand, or litter through which it burrows. It also requires surface cover such as rocks or bushes and spends much of its time below the surface. Moisture is essential for this species (Stebbins and McGinnis, 2012). | Low; some areas of suitable habitat may occur in association with riparian corridors, but the areas lack loose, fine sands and soils. There is one historic CNDDB occurrence from the 1940s south of the Survey Area in the City of San José that is assumed to be extirpated due to high levels of development (CDFW, 2024b). |

| Table 4: Special-Status Species, Habitat, and Potential for Occurrence within the Survey Area | | | | |
|---|---|---|---|---|
| **Common Name** | **Scientific Name** | **Status** | **Habitat** | **Potential for Occurrence within the Survey Area** |
| **Amphibian Species** | | | | |
| California tiger salamander | *Hydromantes shastae* | FT, ST | Primarily inhabits annual grasslands and open woodlands. This salamander requires upland habitat that is occupied by small burrowing mammals, such as California ground squirrel (*Otospermophilus beecheyi*) and Botta's pocket gopher (*Thommomys bottae*) that create underground systems utilized by the salamanders throughout the year. Breeds in vernal pools and ponds and will sometimes use other livestock and decorative ponds (USFWS, 2017). | Moderate; potentially suitable ponds and vernal pools occur within the Don Edwards San Francisco Bay NWR and near Coyote Creek and upland dispersal habitats exist in the vicinity. There are several CNDDB occurrences within the Survey Area within the Don Edwards San Francisco Bay NWR in the vicinity of Cushing Parkway (CDFW, 2024b). |

| Table 4: Special-Status Species, Habitat, and Potential for Occurrence within the Survey Area | | | | |
|---|---|---|---|---|
| **Common Name** | **Scientific Name** | **Status** | **Habitat** | **Potential for Occurrence within the Survey Area** |
| California red-legged frog | *Rana draytonii* | FT, ST | Requires a variety of habitat elements with aquatic breeding areas embedded within a matrix of riparian and upland dispersal habitats. Breeding sites are in permanent water habitats, including pools and backwaters within streams and creeks, ponds, marshes, springs, sag ponds, dune ponds, lagoons, and stock ponds. Typically, breeding adults are associated with deep, slow-moving water with dense shrubby riparian and emergent vegetation. Upland habitats include downed woody vegetation, leaf litter, and small mammal burrows; habitats that provide protection from predators and prevent desiccation (USFWS, 2002b). | Moderate; suitable breeding habitats and upland dispersal habitats exist within the Survey Area in the vicinity of Coyote Creek and associated lakes and ponds, though these areas are in the vicinity of areas of high development. There are no CNDDB occurrences within the Survey Area, but there are several occurrences in the foothills to the east of the Survey Area (CDFW, 2024b). |

| Table 4: Special-Status Species, Habitat, and Potential for Occurrence within the Survey Area | | | | |
|---|---|---|---|---|
| **Common Name** | **Scientific Name** | **Status** | **Habitat** | **Potential for Occurrence within the Survey Area** |
| Foothill yellow-legged frog – Central coast DPS | *Rana boylii* | FT, SE | Frequents rocky streams and rivers with rocky substrate and open, sunny banks. Usually occurs in forests, chaparral, and woodland habitats. Can be found in isolated pools, vegetated backwaters, and deep, shaded, spring-fed pools (Hayes et al., 2016). Tadpoles require at least 3-4 months of water to complete metamorphosis, so this frog occupies primarily perennial or permanent streams. In intermittent streams large groups of adults can be found in persistent pools (CDFW, 2024a). Tends to occur within foothills and mountain streams with rocky or cobbly bottoms. | Low; suitable perennial stream habitats exist within the Survey Area along Coyote Creek, but this portion of the creek is not very rocky and is in an area of frequent disturbance. There are no known occurrences within the Survey Area and the only known occurrence within 5 miles was located within a highly developed area and is presumed to be extirpated (CDFW, 2024b). |

## 4.6. Species Accounts

The species below are those that have a moderate or high potential to occur within the Proposed Project impact areas and those species for whom additional surveys would likely be required.

**Plants**

***Alkali Milkvetch***

Alkali milk vetch (*Austragalus tener* var. *tener*) is an annual herb typically found in moist places in playas, alkali flats, valley and foothill grasslands, and vernal pools in both coastal and inland areas such as the Central Valley. This species flowers from March to June and is found at elevations from 5-195 feet (CNPS, 2024b; Jepson, 2024).

Suitable vernal pool and grassland habitat is present within the Survey Area primarily in the vicinity of the existing Newark substation, Don Edwards San Francisco Bay NWR, and the area west of the proposed Baylands terminal area. CNDDB occurrences are mapped in the vicinity of Disk Drive and the Alviso Marina County Park west of the San José-Santa Clara RWF, but these occurrences are from 1905 and may be extirpated due to development of the area (CDFW, 2024b).

***Brittle Scale***

Brittle scale (*Atriplex depressa*) is an annual herb that occurs in alkaline vernal pool and wetland habitats within grassland areas. Blooms from June to October and occurs at elevations up to 1,400 feet (CNPS, 2024d; Jepson, 2024).

Suitable vernal pool/wetland habitats within grassland habitat is present within the Survey Area primarily in the vicinity of the existing Newark substation, Don Edwards San Francisco Bay NWR, and the area west of the proposed Baylands terminal area. CNDDB occurrences are not mapped within the Survey Area, but some are mapped just outside the survey area within the Don Edwards San Francisco Bay NWR in the vicinity of Cushing Parkway (CDFW, 2024b).

***Lesser Saltscale***

Lesser saltscale (Atriplex minuscula) is an annual herb that occurs in sandy, alkaline soils often in association with river floodplains. Only occurs in microhabitats that are not flooded year-round. Blooms from April to October and occurs at elevations less than 300 feet (Jepson, 2024; ESRP, 2024).

Suitable floodplain habitats are present within the Survey Area in the vicinity of Don Edwards San Francisco Bay NWR along Cushing Parkway, the area west of the proposed Baylands terminal, and in the vicinity of Coyote Creek. CNDDB occurrences are not mapped within the Survey Area, but some are mapped just outside the survey area within the Don Edwards San Francisco Bay NWR in the vicinity of Cushing Parkway (CDFW, 2024b).

***Congdon's Tarplant***

Congdon's tarplant (*Centromadia parryi* ssp. *congdonii*) is an annual herb that occurs in valley and foothill grassland habitat with alkaline soils. This species blooms from May to October and occurs

at elevations from 0-755 feet. It is also known to occur in terraces, swales, floodplains, and disturbed sites (CNPS, 2024b; Jepson, 2024).

Suitable grassland habitat, as well as floodplain and disturbed areas are present within the Survey Area primarily within Don Edwards San Francisco Bay NWR along Cushing Parkway and in the area near the Baylands terminal site. CNDDB occurrences are mapped in the vicinity of Disk Drive southwest of the San José-Santa Clara RWF (822 plants were observed in 2016) and in the vicinity of the Fremont Boulevard and Cushing Parkway intersection (40-50 plants were observed in 2019 but these may be extirpated due to development of the area) (CDFW, 2024b).

***Point Reyes Salty Birds Beak***

Point Reyes salty birds beak (*Chloropyron maritimum* ssp. *palustre*) is an annual herb that occurs in coastal salt marshes at elevation from 0-35 feet. It has a blooming period from June through October (CNPS, 2024b; Jepson, 2024).

Suitable coastal salt marsh habitat occurs in the vicinity of Don Edwards San Francisco Bay NWR and Alviso west of the Baylands terminal area. CNDDB occurrences are mapped in the vicinity of Disk Drive and the Alviso Marina County Park west of the San José-Santa Clara RWF, but these occurrences are from 1905 and are likely extirpated due to development of the area (CDFW, 2024b).

***Hoover's Button Celery***

Hoover's button celery (*Eryngium aristulatum* var. *hooveri*) is an annual or perennial herb that occurs in vernal pools and seasonal wetlands at elevations from 10-150 feet and typically flowers in July (CNPS, 2024b; Jepson, 2024).

Suitable vernal pool and wetland/riparian habitat are present within the Survey Area in the vicinity of Don Edwards San Francisco Bay NWR, Coyote Creek, and Alviso west of the Baylands terminal area. CNDDB occurrences are mapped in the Don Edwards San Francisco Bay NWR in the vicinity of Cushing Parkway, in the vicinity of the existing NRS substation, though these occurrences are from 1902 and are likely extirpated due to development in the area, and in the vicinity of Disk Drive and Alviso west of the Baylands terminal, though these are mapped from 1902 and may be extirpated by development (CDFW, 2024b).

***San Joaquin Spearscale***

San Joaquin spearscale (*Extriplex joaquinana*) is an annual herb that typically occurs in alkali meadows or alkali grassland or on the margins of alkali scrub. This species blooms from April to October and is found at elevations up to 1,000 feet (Jones and Stokes, 2006).

Suitable alkali meadows are present within the Survey Area in the vicinity of Don Edwards San Francisco Bay NWR along Cushing Parkway. CNDDB occurrences are not mapped within the Survey Area, but some are mapped just outside the survey area within the Don Edwards San Francisco Bay NWR in the vicinity of Cushing Parkway (CDFW, 2024b).

***Contra Costa Goldfields***

Contra Costa goldfields (*Lasthenia conjugens*) is a federally endangered annual herb species that is found in vernal pools and wet meadows within alkaline playas, valley and foothill grasslands, and

cismontane woodland habitats. This species typically flowers from March to June and is found at elevations below 1540 feet (CNPS, 2024b; Jepson, 2024).

Within the Proposed Project impact areas, suitable vernal pool and grassland habitat are present within the Survey Area in the vicinity of Don Edwards San Francisco Bay NWR along Cushing Parkway, in the vicinity of Coyote Creek, and the area west of and within the proposed Baylands terminal site. USFWS-mapped critical habitat for the Contra Costa goldfields is located along Cushing Parkway within Don Edwards San Francisco Bay NWR (**Figure 11b**). Occurrences are also mapped in the Don Edwards San Francisco Bay NWR in the vicinity of Cushing Parkway (CDFW, 2024b). No protocol-level rare plant surveys have been conducted for Contra Costa goldfields.

***Prostrate Vernal Pool Navarrettia***

Prostrate vernal pool navarettia (*Navarretia prostrata*) is an annual herb that is typically associated with seasonal wetlands, alkaline floodplains, and vernal pools. This species blooms from April through July and is found at elevations below 2,000 feet (CNPS, 2024d; Jepson, 2024).

Suitable vernal pool and wetland habitats are present within the Survey Area in the vicinity of Don Edwards San Francisco Bay NWR along Cushing Parkway, the area west of the Baylands terminal, and in the vicinity of Coyote Creek. CNDDB occurrences are not mapped within the Survey Area, but some are mapped just outside the Survey Area within the Don Edwards San Francisco Bay NWR in the vicinity of Cushing Parkway (CDFW, 2024b).

***California Alkali Grass***

California alkali grass (*Puccinellia simplex*) is an annual grass-like herb that typically occurs in moist habitats such as wetlands, sinks, lake margins, vernal pools, and mineral springs with saline soils. Occurs at elevations up to 3,000 feet and blooms from March to May (CNPS, 2024d; Jepson, 2024).

Suitable moist habitats are present within the Survey Area in the vicinity of Don Edwards San Francisco Bay NWR along Cushing Parkway, the area west of the proposed Baylands terminal, and in the vicinity of Coyote Creek. CNDDB occurrences are not mapped within the Survey Area, but some are mapped just outside the Survey Area within the Don Edwards San Francisco Bay NWR in the vicinity of Cushing Parkway (CDFW, 2024b).

***Long-styled Sand-spurrey***

Long-styled sand-spurrey (*Spergularia macrotheca* var. *longistyla*) is a perennial herb that occurs in marshes, swamps, ponds, seeps, mudflats, and wet meadows. This species occurs at elevations below 700 feet and blooms from February through May (CNPS, 2024d; Jepson, 2024).

Suitable moist habitats are present within the Survey Area in the vicinity of Don Edwards San Francisco Bay NWR along Cushing Parkway, the area west of the proposed Baylands terminal, and in the vicinity of Coyote Creek. CNDDB occurrences are not mapped within the Survey Area, but some are mapped 2 miles north of the Survey Area from the late 1800s and 1930s; these are presumed to no longer be extant due to human development in the area (CDFW, 2024b).

### *California Seablite*

California seablite (*Suaeda californica*) is a federally endangered perennial, evergreen shrub that occurs in coastal salt marshes and is typically found along the margins of such habitat. This species has a blooming period from July to October and is found at elevations from 0-50 feet (CNPS, 2024b; Jepson, 2024). These shrubs are known to occur within the Don Edwards San Fransico Bay NWR and Alviso west of the proposed Baylands terminal.

Within the Proposed Project impact areas, there is suitable coastal salt marsh habitat. Protocol-level rare plant surveys have not been conducted for California seablite. There is mapped CNDDB occurrence in the vicinity of the Cushing Parkway; however, this occurrence is from 1951 and may have been extirpated due to development (CDFW, 2024b).

### *Saline Clover*

Saline clover (*Trifolium hydrophilum*) is an annual herb that occurs in coastal salt marshes, vernal pools, open areas in alkaline and mesic soils within valley and foothill grasslands. It has a blooming period from April through June and is found at elevations from 0-985 feet (CNPS, 2024b; Jepson, 2024).

Suitable vernal pool and grassland habitat are present within the Survey Area in the vicinity of Don Edwards San Francisco Bay NWR along Cushing Parkway, in the vicinity of Coyote Creek, and the area west of the Baylands terminal. CNDDB occurrences are mapped in the vicinity of Cushing Parkway in the Don Edwards San Francisco Bay NWR and in Alviso near Disk Drive, but these occurrences are from 1892 and are mapped as a best guess; it is unknown if the population is still extant (CDFW, 2024b).

### *Northern Coastal Salt Marsh*

Northern coastal salt marsh is a highly productive plant community dominated by herbaceous, suffrutescent (sub-shrubby), salt-tolerant hydrophytes (water plants), typically forming a dense mat of vegetation up to three feet high. The most characteristic plant of this community is pickleweed (*Salicornia virginica*), and it provides habitat to numerous endangered, threatened, and rare species, such as Point Reyes bird's-beak and California seablite (CNPS - Yerba Buena Chapter, 2024).

Suitable coastal salt marsh habitat occurs in the vicinity of Don Edwards San Francisco Bay NWR and in the vicinity of Coyote Creek. CNDDB occurrences are mapped in the Don Edwards San Francisco Bay NWR and along Coyote Creek within and surrounding the historic salt ponds that are being restored to tidal wetland habitats (CDFW, 2024b).

## Wildlife

### *Steelhead*

The Central California Coast steelhead DPS (*Oncorhynchus mykiss irideus*) is a Federal- and State-threatened anadromous coastal rainbow trout fish species. The Central California Coast population includes all populations below natural and manmade barriers from the Russian River (Sonoma County) south to Aptos Creek (Santa Cruz County). These fish are born in freshwater streams and generally migrate to the ocean where most of their growth occurs, then they return to freshwater to spawn. They may return to their spawning grounds several times over the course of their lives. Some

steelhead will stay in creeks and streams for longer periods of their life. Steelhead in the Central California Coast region run up streams and rivers in the region between December and February, when flows are generally the highest. They will spawn in these streams between February and April (Caltrout, 2023; Calfish, 2023; NMFS, 2016). Steelhead are known to occur along Coyote Creek and the Guadalupe River (Santa Clara Valley Water District ["Valley Water"], 2022). NMFS designated critical habitat for the Central California Coast steelhead DPS occurs along Coyote Creek and the Guadalupe River within the Survey Area (**Figure 11b**).

Within the Proposed Project impact areas, there is potential habitat for Steelhead in Coyote Creek and the Guadalupe River for migration and spawning. Designated Critical Habitat occurs within Coyote Creek and the Guadalupe River within the survey area (**Figure 11b**). There are also CNDDB occurrences along the Guadalupe River (CDFW, 2024b)

***Longfin Smelt***

Longfin smelt (*Spirinchus thaleichthys*) pelagic forage fish is facultatively anadromous because migration to the sea is not required to complete their life cycle. They are adapted to the cool waters of the San Francisco estuary. The adults breed in low salinity to freshwater habitats from winter to spring, while the spawn move seaward, some all the way to the Pacific Ocean, as temperatures warm from Spring to summer. (USFWS, 2022)

Longfin Smelt are known to occur within the San Francisco Bay and have been observed using Coyote Creek (Lewis et al., 2019). They may also use the Guadalupe River for breeding purposes. There are known CNDDB occurrences within the San Francisco Bay (CDFW, 2024b).

***Green Sturgeon***

Green sturgeon (*Acipenser medirostris*) is one of the largest and longest living species found in freshwater, this anadromous fish lives in temperate waters along the west coast of North America. They have a relatively complex life history that includes spawning and juvenile rearing in rivers followed by migrating to saltwater to feed, grow and mature before returning to freshwater to spawn. The populations within the San Francisco Bay estuaries spawn in the Sacramento – San Joaquin River System (CDFW, 2024e; NOAA, 2024).

The Green Sturgeon is known to occur in the San Francisco Bay but is unlikely to use the creeks and streams in the Survey Area for spawning purposes. They could be found in the vicinity of the Survey Area in these streams and in the San Francisco Bay estuaries for foraging purposes. Designated critical habitat occurs within Coyote Creek, San Tomas Aquino Creek, the Guadalupe River, near Coyote Creek Lagoon in a drainage that passes under Fremont Boulevard, and along a tributary to Coyote Creek that passes under Cushing Parkway just east of the Fremont Boulevard – Cushing Parkway intersection within the Survey Area (**Figure 11b**). No CNDDB occurrences within the Survey Area or 5-mile buffer (CDFW, 2024b).

***Vernal Pool Tadpole Shrimp***

Vernal pool tadpole shrimp (*Lepidurus packardi*) is a small, freshwater crustacean found in vernal pools in California. A hard shell that appears like a shield over its back gives the tadpole shrimp its tadpole-like appearance and distinguishes it from the fairy shrimp. They are found only in ephemeral freshwater habitats including alkaline pools, clay flats, vernal lakes, vernal pools, vernal swales, and other seasonal wetlands in California (USFWS, 2024b).

Suitable vernal pool and grassland habitat is present within the Survey Area in the vicinity of the existing Newark substation and Don Edwards San Francisco Bay NWR. CNDDB occurrences are mapped in the Don Edwards San Francisco Bay NWR in the vicinity of Cushing Parkway and immediately north of the existing Newark substation in a vernal pool where tadpole shrimp and exoskeletons were observed in 2016 (CDFW, 2024b). The area within Don Edwards San Francisco Bay NWR along Cushing Parkway is included as CDFW-mapped Critical Habitat for the vernal pool tadpole shrimp (**Figure 11b**).

***Vernal Pool Fairy Shrimp***

Vernal pool fairy shrimp (*Branchinecta lynchi*) is a small, freshwater crustacean found in vernal pools in California, currently found in 32 counties across California's Central Valley, central coast, and southern California (as well as Jackson County in southern Oregon). It does not have a hard outer shell, unlike other species of shrimp. This species can be found in a variety of vernal pool habitat types and occur in grassland, rural/agricultural, and wetland habitat (USFWS, 2024b).

Suitable vernal pool and grassland habitat is present within the Survey Area in the vicinity of the existing Newark substation and Don Edwards San Francisco Bay NWR. There are no CNDDB occurrences within 5 miles of the Survey Area (CDFW, 2024b).

***Western Bumblebee***

Western bumblebee (*Bombus occidentalis*) occurs along the Pacific coast and western interior of North America, from Arizona, New Mexico, and California north through the Pacific Northwest and into Alaska. Inhabits open grassland and scrub habitats within many ecoregions including adjacent foothills (WDFW, 2024).

Suitable open grassland habitat with nectar-producing plant species is present within the Survey Area in open space areas and the Don Edwards San Francisco Bay NWR. There are no CNDDB occurrences within the Survey Area, but there are occurrences approximately 2 miles northwest and 3.5 miles north of the existing Newark substation and approximately 1 mile southeast of the NRS substation (CDFW, 2024b).

***Crotch's Bumblebee***

The Crotch's bumblebee is distributed from coastal California east towards the Sierra-Cascade crest. It inhabits open grassland and scrub habitats within many ecoregions including adjacent foothills. Generally, it occupies warmer and more arid regions than other bumble bees and does not usually occupy mountainous regions. Most current observations (2002-2017) occur in southern California (Xerces et al., 2018; Williams et al., 2014).

Suitable open grassland habitat with nectar-producing plant species is present within the Survey Area in open space areas and the Don Edwards San Francisco Bay NWR. There are no CNDDB occurrences within the Survey Area, but there are occurrences approximately 1 mile southeast of the NRS substation (CDFW, 2024b).

### *Monarch Butterfly*

The Monarch butterfly occurs in North, Central, and South America; Australia; New Zealand; islands of the Pacific and Caribbean, and elsewhere. Monarchs lay their eggs on their obligate milkweed host plant (primarily *Asclepias* spp.) (USFWS, 2020a). North America has several dozen native milkweed species with which monarchs coevolved and upon which they rely to complete their life cycle. Monarchs from Nevada generally migrate to California to overwinter. In the southwestern states, migrating monarchs tend to occur more frequently near water sources (Morris et al., 2015). During breeding and migration, monarchs require a diversity of blooming nectar resources and milkweed.

Flowering plants occur within the Survey Area, and milkweed species could occur. There are no CNDDB occurrences within the Survey Area, but there are occurrences approximately 1.75 miles and 5 miles northwest of the Newark substation (CDFW, 2024b).

### *Salt Marsh Harvest Mouse*

The salt marsh harvest mouse is primarily restricted to inhabiting saline or subsaline marsh habitats around the San Francisco Bay Estuary, except for occurrences documented in mixed saline or brackish areas of the Suisun Bay area. Occurrence is often closely correlated with ample pickleweed (*Sarcocornia)* in tidal and diked marshes (USFWS, 2024b).

Suitable saline or subsaline marsh habitats occur within the Survey Area west of the proposed alignment in the vicinity of Coyote Creek Lagoon, north of the San José-Santa Clara RWF wastewater disposal ponds, northwest of the Baylands terminal, and west of the Survey Area in the Don Edwards San Francisco Bay NWR. There are numerous CNDDB occurrences within and in the vicinity of the Survey Area, including near Coyote Creek lagoon and its associated wetlands, to the north and west of the San José-Santa Clara RWF, and to the north of Los Esteros Road and the Baylands terminal site within the Don Edwards San Francisco Bay NWR (CDFW, 2024b).

### *Burrowing Owl*

The burrowing owl occurs in open habitats with low or sparse vegetation such as prairie pastures, desert or desert scrub, agricultural, and disturbed areas. Especially alongside canals and berms associated with agriculture. It forages over low vegetation and typically will not forage within trees or tall shrubs (Poulin et al., 2020).

Suitable native and non-native grassland habitat occurs within the Survey Area in the area surrounding the existing Newark substation, Don Edwards San Francisco Bay NWR along Cushing Parkway, the Santa Clara PAL BMX Track and areas that used to be the Santa Clara golf and tennis club, and the Baylands terminal. The grassland areas immediately adjacent to the proposed Baylands terminal have been used for burrowing owl relocation and several release structures were observed during field surveys. There are CNDDB occurrences within the Survey Area in the vicinity of the proposed Baylands terminal site where there are known burrowing owl populations, breeding pens, and artificial burrows; in the vicinity of the existing Newark substation; in the Don Edwards San Francisco Bay NWR along Cushing Parkway; within Staging Area 7 along Zanker Road; along Lafayette Street within the Santa Clara PAL BMX Track and areas that used to be the Santa Clara golf and tennis club; and in the area where Levi's Stadium was built, which are now likely extirpated (CDFW, 2024b). There have been eBird sightings from the vicinity of the proposed Baylands terminal site near Disk Drive and in the Don Edwards San Francisco Bay NWR near Cushing Parkway (eBird, 2024).

### *Western Snowy Plover*

The Western snowy plover occurs locally on sandy beaches and at some shallow inland lakes, favoring drier areas of sand or dried mud far from water. It is typically solitary while foraging, but may roost in small numbers (Sibley, 2014).

Suitable habitat associated with diked salt evaporation ponds occurs in the areas within Don Edwards San Francisco Bay NWR south of Cushing Parkway and north and west of the Baylands terminal site. There are CNDDB occurrences within the Survey Area within Don Edwards San Francisco Bay NWR near Alviso along Disk Drive and Los Esteros Road and near Baylands south of Cushing Parkway (where there is also designated critical habitat) (CDFW, 2024b). There have been eBird sightings in the vicinity of the Don Edwards San Francisco Bay NWR near Cushing Parkway from as recently as December 2023 (eBird, 2024).

### *Tricolored Blackbird*

The tricolored blackbird typically nests in large and dense marshes, but in recent decades use of certain agricultural crops and upland shrubs and thistles has increased. Annual grasslands with invasive shrubs and weeds are also used. Forages over water, certain agricultural fields, alkali scrub, coast live oak, and other land cover types that support insect prey. Orchards, vineyards, and cultivated row crops provide little to no breeding season foraging opportunities (Beedy et al., 2023).

Suitable habitat in the form of saline and subsaline marshland, annual grasslands, salt and sewage ponds, and the riparian areas of Coyote Creek and the Guadalupe River occur within the Survey Area immediately adjacent to and up to a mile from the proposed Baylands terminal site. There are CNDDB occurrences within the Survey Area in the vicinity of Coyote Creek near the San José-Santa Clara RWF and near Alviso within the Don Edwards San Francisco Bay NWR. The Coyote Creek occurrence included capture of individuals as recently as 2021 and the Don Edwards San Francisco Bay NWR occurrence recorded individuals in 2019. There is another CNDDB occurrence near Fremont Boulevard and Warren Avenue, but this occurrence was from 1985, and surveys from 2014 and 2015 discovered no individuals as the area is now heavily developed and disturbed (CDFW, 2024b). There have been eBird sightings in the vicinity of Coyote Creek and the San José-Santa Clara RWF from as recently as December 2023 (eBird, 2024).

### *Saltmarsh Common Yellowthroat*

Occurrence of the saltmarsh common yellowthroat is found to be linked to suitable freshwater and salt marshes with nearby willow thickets. Nests in marshy areas that are usually higher off the ground, where they are safer from flooding (USFWS, 2024b).

Suitable habitat in the form of saline and subsaline marshland and salt and sewage ponds around Artesian and Mud Sloughs and the riparian areas of Coyote Creek occurs within and adjacent to the Survey Area. There are CNDDB occurrences within the Survey Area in the vicinity of Coyote Creek, Mud Slough, Mallard Slough, and Artesian Slough as well as salt ponds near Alviso in the Don Edwards San Francisco Bay NWR; all of these occurrences are from the 1980s and 1990s and some of the habitat has been degraded, but large areas of saltmarsh and freshwater still exist in these areas (CDFW, 2024b).

### *Alameda Song Sparrow*

The Alameda song sparrow historically occurs where tidal marsh habitat is available within its described range (southern Alaska across central and southern Canada south through the U.S. into northern Mexico and Baja California) (Shuford and Gardali, 2008).

Suitable habitat within the Survey Area occurs north of the proposed Baylands terminal site in the area around Artesian Slough and to the northeast around Coyote Creek and Lagoon. There are CNDDB occurrences within the Survey Area along the Guadalupe River and near the Survey Area in Don Edwards San Francisco Bay NWR north of Alviso. The Guadalupe River occurrence is from 1947, and the area is now more heavily developed. The Don Edwards San Francisco Bay NWR occurrence is from 2004, and the area consists of restored coastal salt marsh (CDFW, 2024b).

### *California Black Rail*

The California black rail occurs sparsely in grassy, fresh and brackish marshes. Rarely seen out in the open, instead preferring to shelter in tall grasses (Sibley, 2014).

Suitable marsh habitat within the Survey Area occurs north of the proposed Baylands terminal site in the area around Artesian Slough and to the northeast around Coyote Creek and Lagoon. There are CNDDB occurrences within the Survey Area in the vicinity of the San José-Santa Clara RWF, but these occurrences are from the 1890s. There are other CNDDB occurrences within 5 miles of the Survey Area in Don Edwards San Francisco Bay NWR to the north and west of the Survey Area. These occurrences are from 2015 and 2016 (CDFW, 2024b).

### *Yellow Rail*

The yellow rail is secretive and rarely observed. It occurs in damp grassy meadows or sedge marshes, often habitat that is also occupied by Sedge wren and LeConte's sparrow. It prefers dark, well covered environments (Sibley, 2014).

Suitable marsh habitat within the Survey Area occurs north of the Baylands terminal site in the area around Artesian Slough and to the northeast around Coyote Creek and Lagoon. There are CNDDB occurrences within the Survey Area within Don Edwards San Francisco Bay NWR near Alviso. Several of these occurrences are from the 1890s, but one individual was observed in the Don Edwards San Francisco Bay NWR parking lot in 2013 (CDFW, 2024b).

### *White Tailed Kite*

The white tailed kite occurs in open grassy areas with scattered shrubs. It hunts from the air, often hovering gracefully before dropping straight down. Perches on prominent posts or treetops (Sibley, 2014).

Suitable foraging habitat occurs within the Survey Area in the grasslands surrounding the proposed Baylands terminal site and in Don Edwards San Francisco Bay NWR near Cushing Parkway. Native and non-native trees suitable for nesting also occur within the Survey Area. There has been one CNDDB occurrence within the Survey Area near the proposed Baylands terminal site. This occurrence included a nest in a eucalyptus tree but was from 1993 (CDFW, 2024b). There have been eBird sightings in the vicinity of Coyote Creek and the San José-Santa Clara RWF from 2019 - 2023 (eBird, 2024).

### *Golden Eagle*

Golden eagles nest in high densities in open and semi-open habitat but also may nest at lower densities in coniferous habitat when open space is available (e. g. fire breaks, clear-cuts, burned areas, pastureland, etc.). They can be found from the tundra, through grasslands, woodland-brushlands, and forested habitat, south to arid deserts. Golden Eagles are usually associated with areas of high topographic relief such as rolling hills and mountains. The use cliffs, rock outcroppings, and tall, prominent trees for nesting and will occasionally nest on tall transmission towers (Pagel et al., 2010; Katzner et al., 2020).

Suitable foraging habitat occurs within the Survey Area in the grasslands surrounding the proposed Baylands terminal site. Native and non-native trees suitable for nesting also occur within the Survey Area. There is one CNDDB occurrence (nest) within the Survey Area south of the proposed Baylands terminal site. This occurrence is a nest within a palm tree with sightings as recently as 2021 (CDFW, 2024b). There have been eBird sightings of golden eagle made in this area in 2023 as well as sightings near the San José-Santa Clara RWF in January 2024 and the Don Edwards San Francisco Bay NWR near Cushing Parkway in April 2023 (eBird, 2024).

### *California Clapper Rail (Ridgway's Rail)*

The California clapper rail, or Ridgway's rail, occurs almost exclusively in tidal and brackish marshes with unrestricted daily tidal flows, adequate invertebrate prey food supply, well-developed tidal channel networks, and suitable nesting and escape cover to provide habitat during extreme high tides. Their current distribution is restricted to the San Francisco Bay Estuary (USFWS, 2013).

Suitable marsh habitat within the Survey Area occurs north of the proposed Baylands terminal site in the area around Artesian Slough and to the northeast around Coyote Creek and Lagoon. There are no CNDDB occurrences within the Survey Area, but there are several within salt marsh vegetation in the Don Edwards San Francisco Bay NWR to the north and west of the Survey Area (CDFW, 2024b). There has been one eBird sighting during January 2024 in the vicinity of the Coyote Creek Pond north of the San José-Santa Clara RWF and south of Staging Area 5 (eBird, 2024).

### *Bald eagle*

Bald eagles (*Haliaeetus leucocephalus*) typically breed in forested areas adjacent to large open bodies of water or rivers. Breeding habitat is typically mature forest patches with open areas and edges where they will nest in large trees on the edges of the forest. Typically, they nests away from areas of human development (Buehler, 2022).

Suitable breeding and foraging habitat is largely absent from the Survey Area but is located within the vicinity in San Francisco Bay. Suitable nesting habitat is sparse within the Survey Area and may include tall trees. There are no CNDDB occurrences within 5 miles of the Survey Area (CDFW, 2024b), but there are known eBird occurrences in the Survey Area in the vicinity of Coyote Creek and the San José-Santa Clara RWF and the Don Edwards San Francisco Bay NWR near Cushing Parkway (eBird, 2024). Additionally, one individual was sighted during field surveys in January 2024 flying over the San José-Santa Clara RWF towards San Francisco Bay.

### *Raptors*

Per California Fish and Game Code 3503.5, all raptors are protected under state law. Several Federal- or State-threatened, USFWS BCC, CDFW Fully Protected, or Species of Special Concern raptor species have a high potential to occur within the Survey Area at different times throughout the year (CDFW, 2023c, USFWS, 2023b). Examples include Cooper's hawk (*Accipiter cooperii*), merlin (*Falco columbarius*), Swainson's hawk, and sharp-shinned hawk (*Accipiter striatus*). Examples of non-listed raptor species that are known to occur or have a high potential to occur within the Survey Area include: red-shouldered hawk (*Buteo lineatus*), red-tailed hawk (*Buteo jamaicensis*), barn owl (*Tyto alba*), great-horned owl (*Bubo virginianus*), turkey vulture (*Cathartes aura*), and American kestrel (*Falco sparverius*). These raptor species with the highest potential to occur in the Survey Area use and inhabit hardwood and riparian woodland habitats and use urban and suburban habitats as well. Habitat use varies based on raptor species and time of year but foraging and nesting individuals have the potential to occur within the Survey Area. Raptor nest surveys have not been conducted for the Proposed Project.

### *Northern Harrier*

The Northern harrier is typically found flying just above vegetation over open fields, grasslands, or marshes. It perches on the ground or on fence posts, lower than most hawks, and nests on the ground in open, vegetated habitat. It is generally solitary (Sibley, 2014).

Suitable habitat occurs within and adjacent to the Survey Area in the marsh areas of Artesian and Coyote Creek Sloughs and in the grasslands around the Baylands terminal site and Don Edwards San Francisco Bay NWR near Cushing Parkway. There are no CNDDB occurrences within the Survey Area, but there are several within salt marsh vegetation in the Don Edwards San Francisco Bay NWR to the north and west of the Survey Area (CDFW, 2024b). There have been eBird sightings recorded from the area surrounding the San José-Santa Clara RWF as well as Don Edwards San Francisco Bay NWR near Cushing Parkway from 2022 and 2023 (eBird, 2024).

### *American Peregrine Falcon*

The American peregrine falcon is uncommon in open areas, especially near water. It nests on cliff ledges or on buildings or bridges in cities. It is solitary and hunts from perch or from high in the air, stooping on prey at very high speed. It sometimes stoops repeatedly at same prey in series of U-shaped dives, feeding mainly on small or medium-sized birds (Sibley, 2014).

Suitable breeding habitat does occur within the Survey Area given recent observations of this species utilizing existing stick nests on towers and ground nesting on the salt evaporation pond dikes (Latta, 2024). Additionally, an adult peregrine was observed perched and vocalizing on a tower near the existing Newark substation during 2023 field surveys. There are no CNDDB occurrences within the Survey Area, but there are occurrences east of the Survey Area in the foothills near San Antonio reservoir and an occurrence of a nesting pair that were using a nest box on a high-rise office building in San José south of the Survey Area (CDFW, 2024b). There have been eBird sightings from the vicinity of the San José-Santa Clara RWF and Coyote Creek from 2021 and 2023, the vicinity of Los Esteros Road and Disk Drive from 2022, and from the Don Edwards San Francsico Bay NWR near Cushing Parkway from 2022 (eBird, 2024).

***Allen's Hummingbird***

The Allen's hummingbird breeds along the Pacific coast and winters in central Mexico, migrating through California and northern Mexico. It breeds only in the moist, narrow coastal belt affected by summer fogs. It's habitat in breeding range includes coastal scrub and riparian shrubland (Clark and Mitchell, 2020).

Suitable habitat occurs within the Survey Area in the riparian scrubland along Coyote Creek and the Guadalupe River.

***Black Tern***

The black tern nests on marshy ponds with emergent vegetation. Migrants can be seen over any water from marshes to open ocean and often roost with other terns on sandbars. It feeds on small fish, insects and other aquatic prey captured in flight, and rarely plunge-dives (Sibley, 2014).

Suitable habitat exists within the Survey Area near Artesian and Coyote Sloughs. There are no CNDDB occurrences within 5 miles of the Survey Area (CDFW, 2024b).

***Bullock's Oriole***

The Bullock's oriole breeds in the U.S. and overwinters in Mexico and Central America. It breeds in riparian and oak woodlands, especially where trees are large and well-spaced or in isolated clumps. Sycamores (*Platanus*), cottonwoods (*Populus*), willows (*Salix*), and deciduous oaks seem to be especially favored for nesting, but live oaks (*Q. agrifolia*), orchard trees, and occasionally conifers are used (Flood et al., 2020).

Suitable habitat occurs within the Survey Area in the riparian area along Coyote Creek. There have been eBird sightings from the vicinity of the San José-Santa Clara RWF from 2019 (eBird, 2024).

***Clark's Grebe***

The Clark's grebe breeds on large lakes and marshes with extensive areas of open water bordered by emergent vegetation throughout western North America. It overwinters primarily in salt or brackish bays, estuaries, or sheltered coasts, less frequently on freshwater lakes, and occasionally on rivers (LaPorte et al., 2020a).

Suitable habitat is present within the Survey Area along the creeks and rivers as well as within ponds and in the vicinity of Don Edwards San Francisco Bay NWR.

***Common Yellowthroat***

The common yellowthroat occupies thick vegetation in a wide range, from wetlands to prairie to pine forests. It is more prevalent in wet areas with thick vegetation (Guzy and Ritchison, 2020).

Suitable habitat occurs along Coyote Creek and in wetland areas. There have been eBird sightings from Coyote Creek and the SJRWF from 2019 and 2023 (eBird, 2024).

***Marbled Godwit***

The marbled godwit breeds on short grass prairies and wetlands of the northern U.S. and Canada. It overwinters along the coast in coastal mudflats adjoining savannahs or meadows, estuaries, sandy beaches, and sandflats (Gratto-Trevor, 2020).

Suitable foraging habitat exists within the Survey Area near Artesian and Coyote Sloughs. There have been eBird sightings from the Don Edwards San Francisco Bay NWR in the vicinity of Cushing Parkway from 2023 (eBird, 2024).

***Nuttall's Woodpecker***

The Nuttall's woodpecker occurs mostly in oak and riparian deciduous woodland. Its nest cavities are built in soft wood often in dead trunks or limbs of willow, cottonwood, oak, and sycamore (Lowther et al., 2020a).

Suitable habitat within the Survey Area exists along Coyote Creek in hardwood woodland areas. There have been eBird sightings in the vicinity of Coyote Creek and the San José-Santa Clara RWF and in the vicinity of Disk Drive west of the Baylands terminal site from 2023 (eBird, 2024).

***Short-Billed Dowitcher***

The short billed dowitcher breeds in bogs and woodlands in Canada. It overwinters along the coasts in coastal mudflats and brackish lagoons (Jehl et al., 2020).

Suitable overwinter foraging habitat exists within the Survey Area near Artesian and Coyote Sloughs and in Don Edwards San Francisco Bay NWR.

***Western Grebe***

The western grebe breeds on freshwater lakes and marshes with extensive open water bordered by emergent vegetation. It overwinters along the coast primarily in salt or brackish bays, estuaries, or sheltered coasts, less frequently on freshwater lakes and occasionally on rivers (LaPorte et al., 2020b).

Suitable habitat is present within the Survey Area along the creeks and rivers as well as within ponds and in the vicinity of Don Edwards San Francisco Bay NWR.

***Wrentit***

The wrentit occupies cismontane scrub from sea level to 7,000 feet in elevation. It occurs in coastal sage scrub, northern coastal scrub, coastal hard and montane chaparral. It breeds in dense shrub understory, including mature riparian valley oak, Douglas fir and redwood forests, early successional forests, riparian (willow) scrub, coyote bush (*Baccharis* sp.) thickets, and suburban parks and gardens (Geupel and Ballard, 2023).

Suitable habitat occurs within the Survey Area in the scrub along the fringes of the grassland habitat between Coyote Creek and the Guadalupe River.

***Western Pond Turtle***

The western pond turtle is found in ponds, lakes, streams, creeks, marshes, irrigation ditches, and brackish estuarine areas with abundant vegetation and either rocky or muddy bottoms. It is also found in woodland, forest, and grassland habitats along permanent or nearly permanent water sources. In streams, it prefers pools to shallower areas. Logs, rocks, and exposed banks are required for basking. Nests are typically located along stream or pond margins in areas with full sunlight, but sometimes nests can be as far as 300 feet from the water source. Sometimes it uses terrestrial burrow habitats for wintering. (Holland, 1994).

Suitable open water habitats exist along Coyote Creek, Agua Caliente Creek, Guadalupe River, and numerous ponds and lakes in the Survey Area. Additionally, brackish estuarine areas exist in the vicinity of Don Edwards San Francisco Bay NWR and the San Francisco Bay. There are several CNDDB occurrences along Coyote Creek, San Tomas Aquino Creek, the Guadalupe River, and various ponds and estuary areas within and in the vicinity of the Survey Area (CDFW, 2024b).

***California Tiger Salamander***

The California tiger salamander primarily inhabits annual grasslands and open woodlands. This salamander requires upland habitat that is occupied by small burrowing mammals, such as California ground squirrel (*Otospermophilus beecheyi*) and Botta's pocket gopher (*Thommomys bottae*) that create underground systems utilized by the salamanders throughout the year. It breeds in vernal pools and ponds and will sometimes use other livestock and decorative ponds (USFWS, 2017).

Potentially suitable ponds and vernal pools occur within the Don Edwards San Francisco Bay NWR and near Coyote Creek and upland dispersal habitats exist in the vicinity. There are several CNDDB occurrences within the Survey Area within the Don Edwards San Francisco Bay NWR in the vicinity of Cushing Parkway (CDFW, 2024b).

***California Red Legged Frog***

The California Red Legged Frog requires a variety of habitat elements with aquatic breeding areas embedded within a matrix of riparian and upland dispersal habitats. Breeding sites are in permanent water habitats, including pools and backwaters within streams and creeks, ponds, marshes, springs, sag ponds, dune ponds, lagoons, and stock ponds. Typically, breeding adults are associated with deep, slow-moving water with dense shrubby riparian and emergent vegetation. Upland habitats include downed woody vegetation, leaf litter, and small mammal burrows; habitats that provide protection from predators and prevent desiccation (USFWS, 2002b).

Suitable breeding habitats and upland dispersal habitats exist within the Survey Area in the vicinity of Coyote Creek and associated lakes and ponds, though these areas are in the vicinity of areas of high development. There are no CNDDB occurrences within the Survey Area, but there are several occurrences in the foothills to the east of the Survey Area (CDFW, 2024b).

## 4.7. Aquatic Resources and Jurisdictional Waters

Preliminary aquatic resources delineation surveys were conducted on September 22, 2023, and January 24 and 25, 2024, for a large portion of the Survey Area with potential wetlands. These surveys were conducted to map where potential aquatic resources occur within the Survey Area. A

formal jurisdictional survey was conducted along Coyote Creek in the vicinity of McCarthy Boulevard and the San José-Santa Clara RWF on December 12, 2023 (from the southern end of the McCarthy Boulevard bridge to the proposed overhead structure DC-3). On March 15, 2024, a formal delineation was performed along the north and south sides of Cushing Parkway as it crosses a marsh on a low bridge. National Wetlands Inventory (NWI) maps were reviewed for the areas (United States Fish and Wildlife Service [USFWS], 2024a), and there are several NWI drainages and wetlands that are mapped within the 1,000-foot buffer Survey Area (**Figure 9**). Most of these features were verified in the field within the Survey Area. Several wetlands were mapped using field observations (**Figure 10**).

**McCarthy Blvd.**

Coyote Creek is a perennial stream that flows north through the Survey Area (**Figure 10**). The channel has been modified on both banks, having been graded and in some places hardened, to protect adjacent infrastructure, a paved access road on the west and a trail to the east. The creek appeared to be flowing higher than normal during the delineation and riparian vegetation was partially submerged.

The east side of the creek has been modified more than the west side, creating a more abrupt transition from the channel to the floodplain, and then to the uplands. This allowed for the delineation of the ordinary high water mark (OHWM) on the east bank, and the CDFW jurisdictional extent based on the limit of riparian vegetation. A cattail- and bull rush-dominated wetland (Typha angustifolia and Schoenoplectus spp.) lines the bank.

The west bank of the creek has been modified as well, but the transition from the creek to the uplands is more gradual and the fringe wetlands are more extensive. The western extent of wetlands and the CDFW-jurisdictional extent was delineated. The area below the CDFW line encompasses both aquatic resource types (emergent wetland and open-water channel).

**Cushing Parkway**

Cushing Parkway crosses a wide marsh with a 3,400-foot bridge (**Figure 10**). The marsh supports numerous shallow open-water ponds surrounded by marshlands and no main channel (i.e., river or creek) is present. Flow is generally to the southeast, eventually reaching the salt flats north of Coyote Creek. Adjacent to both sides of the bridge, ground level has been raised several feet and levelled, effectively creating a 30-foot shoulder. A barbed wire fence separates the shoulders from the adjacent marsh.

Extending 800 feet from both ends of the bridge, the shoulders are steeper roadsides with some shrubs. The central section is nearly all short brome on flat ground built a few feet above the adjacent surface waters. Soils are moist, but not hydric, and no wetland hydrology was observed.

One wetland was located on the south side of the bridge about 900 feet from the western end (**Figure 10**). The wetland is 2,265 square feet (0.05 acre) within the Survey Boundary (the fence); the wetland extends beyond the fence, connecting to a larger pond.

It should be noted the bridge is supported on numerous piles, and the ground directly beneath the bridge is exposed mud. The underside of the deck is low, less than 10 feet mostly, and no vegetation is present due to the shading.

The features described above may the criteria to be considered jurisdictional under both current State and Federal Clean Water Act (CWA) laws and under CDFW's Lake and Streambed Alteration Program. As required for state and federal wetland permitting, a detailed wetland delineation will be prepared for any areas that may be impacted by the Proposed Project, and verification of this delineation with all applicable agencies would be obtained prior to any earth moving activities in potential "waters of the United States" or "waters of the State."

## 4.8. Native Wildlife Corridors and Nursery Sites

Native wildlife corridors are migration areas that connect suitable wildlife habitats in a region that would otherwise be fragmented by rugged terrain, changes in vegetation, or human disturbance. Natural features (e.g., canyon drainages, ridgelines, or areas with vegetation cover) provide corridors for wildlife travel. Impacts to wildlife corridors, such as human disturbance and development, can cause harm to migrating species, cause species to exceed population thresholds in fragmented patches, or prevent healthy gene flow between populations.

The California Essential Habitat Connectivity (CEHC) Project maintains a statewide Essential Habitat Connectivity Map, which broadly depicts large, relatively natural habitat blocks that support native biodiversity (Natural Landscape Blocks) and areas essential for ecological connectivity between them (Essential Connectivity Areas) (Spencer et al., 2010). There are no Essential Connectivity Areas within the Survey Area (Spencer et al., 2010; CDFW, 2024f). The riparian corridor associated with Coyote Creek is mapped as a potential riparian connection (Spencer et al., 2010; CDFW, 2024f). This area could act as a local migration corridor for various terrestrial species as well as a watercourse for aquatic species.

The Proposed Project lies within the Pacific Flyway—an important north-south migration corridor that runs along the Pacific coast of the Americas from Alaska to Patagonia, including all of North America lying west of the Rocky Mountains. The Pacific Flyway links breeding grounds to the north with wintering areas to the south and is used by many different species of birds during migration. Many birds (especially waterfowl) use locations in California's Sacramento Valley as a stopover point or wintering area. A majority of the Survey Area is located in the vicinity of fresh and saltwater resources that could be used by waterfowl and contain potential foraging areas during migration for a variety of avian species.

The portions of the Proposed Project area and Survey Area in the vicinity of the Don Edwards San Francisco Bay NWR and along Coyote Creek may provide potential wildlife nursery sites within hardwood woodland, annual grassland, wetland, estuary, and vernal pool habitat types.

The South Bay salt ponds are frequented by migrating and resident avian species and provide habitat for countless other plants and animals. The multi-agency South Bay Salt Pond Restoration Project aims to restore 15,100 acres of salt ponds in the vicinity of the Proposed Project to a rich mosaic of tidal wetlands and other habitats, more accurately mimicking the way these habitats used to be prior to the development of the salt ponds (Santa Clara Valley Open Space Authority, 2014). The Don Edwards San Francisco Bay NWR includes approximately 30,000 acres of open bay, salt pond, salt marsh, mudflat, upland, and vernal pool habitats in the southern portion of San Francisco Bay. These areas are used as nursery, migratory stop-over points, and as habitat of all types for a wide variety of plant and animal species, including special-status species.

## 4.9. Designated Critical Habitat Areas

The USFWS and National Marine Fisheries Service (NMFS) designate critical habitat for endangered and threatened species under the Endangered Species Act (ESA). Critical habitat is designated for the survival and recovery of Federally listed endangered or threatened species. Protected habitat includes areas for foraging, breeding, roosting, shelter, and movement or migration. There is USFWS-designated critical habitat for the Contra Costa goldfields, western snowy plover, and vernal pool tadpole shrimp located within the Don Edwards San Francisco Bay NWR in the northern portion of the Survey Area and extending into the Proposed Project impact

area along Cushing Parkway (USFWS, 2023; **Figure 12**, *Critical Habitat Map*). There is also NMFS-designated critical habitat for the Central California Coast DPS of steelhead and for the southern DPS of green sturgeon. The critical habitat for steelhead occurs along Coyote Creek and the Guadalupe River within the Proposed Project area. The critical habitat for the green sturgeon, occurs within the Proposed Project area along Coyote Creek, San Tomas Aquino Creek, Guadalupe River, near Coyote Creek Lagoon in a drainage that passes under Fremont Boulevard, and along a tributary to Coyote Creek that passes under Cushing Parkway just east of the Fremont Boulevard and Cushing Parkway intersection. Additionally, some critical habitat for green sturgeon occurs within estuary areas associated with the San Francisco Bay (NMFS, 2024; **Figure 12**).

## 4.10. Biological Resource Management Areas

The Don Edwards San Francisco Bay NWR is a 30,000-acre area managed by the USFWS as part of the San Francisco Bay NWR Complex. The Don Edwards San Francisco Bay NWR aims to protect and restore a resilient bayland ecosystem. This area is located generally to the west of the Proposed Project within the San Francisco Bay. It also has several areas that extend into or adjacent to the Proposed Project, including along both sides of Cushing Parkway and to the north of Los Esteros Road, west of the San José-Santa Clara RWF. A Comprehensive Conservation Plan (CCP) was developed by the USFWS to guide refuge management and address legal mandates, policies, goals, and National Environmental Policy Act (NEPA) compliance. Goals, objectives, and strategies outlined in the Don Edwards San Francisco Bay NWR CCP aim to protect and restore the refuge's tidal marsh, mudflat, open bay, vernal pool, grassland, and upland habitats and provide habitat for protected and sensitive species (USFWS, 2012). The San Francisco Bay is divided into three units: North Bay, Central Bay, and South Bay. The Proposed Project is located within the South Bay sub-region.




**POWER THE SOUTH BAY PROJECT**

**Figure 12: Critical Habitat Map**

**Alameda Co. and Santa Clara Co., CA**

**Proposed Project Components**

- Overhead Transmission Structure
- Baylands to NRS 230 kV AC Transmission Line (Overhead)
- Baylands to NRS 230 kV AC Transmission Line (Underground)
- Albrae to Baylands 320 kV DC Transmission Line (Overhead)
- Albrae to Baylands 320 kV DC Transmission Line (Underground)
- Newark to Albrae 230 kV AC Transmission Line (Overhead)
- Newark to Albrae 230 kV AC Transmission Line (Underground)
- Optional Trench Location
- HVDC Terminal Site
- Existing Substation Boundary
- Construction Staging Area
- Biological Resource Survey Area

**USFWS and NMFS Critical Habitat**

- Steelhead Trout
- Green Sturgeon
- Green Sturgeon
- Western Snowy Plover
- Vernal Pool Tadpole Shrimp
- Contra Costa Goldfields

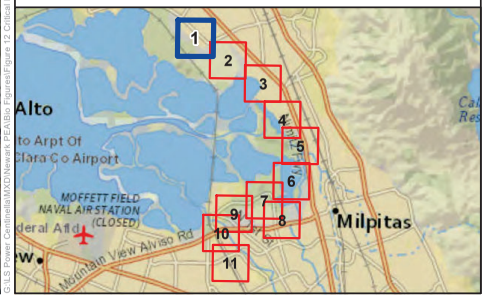
**General Features**

- Interstate
- US Route or State Highway
- Railroad

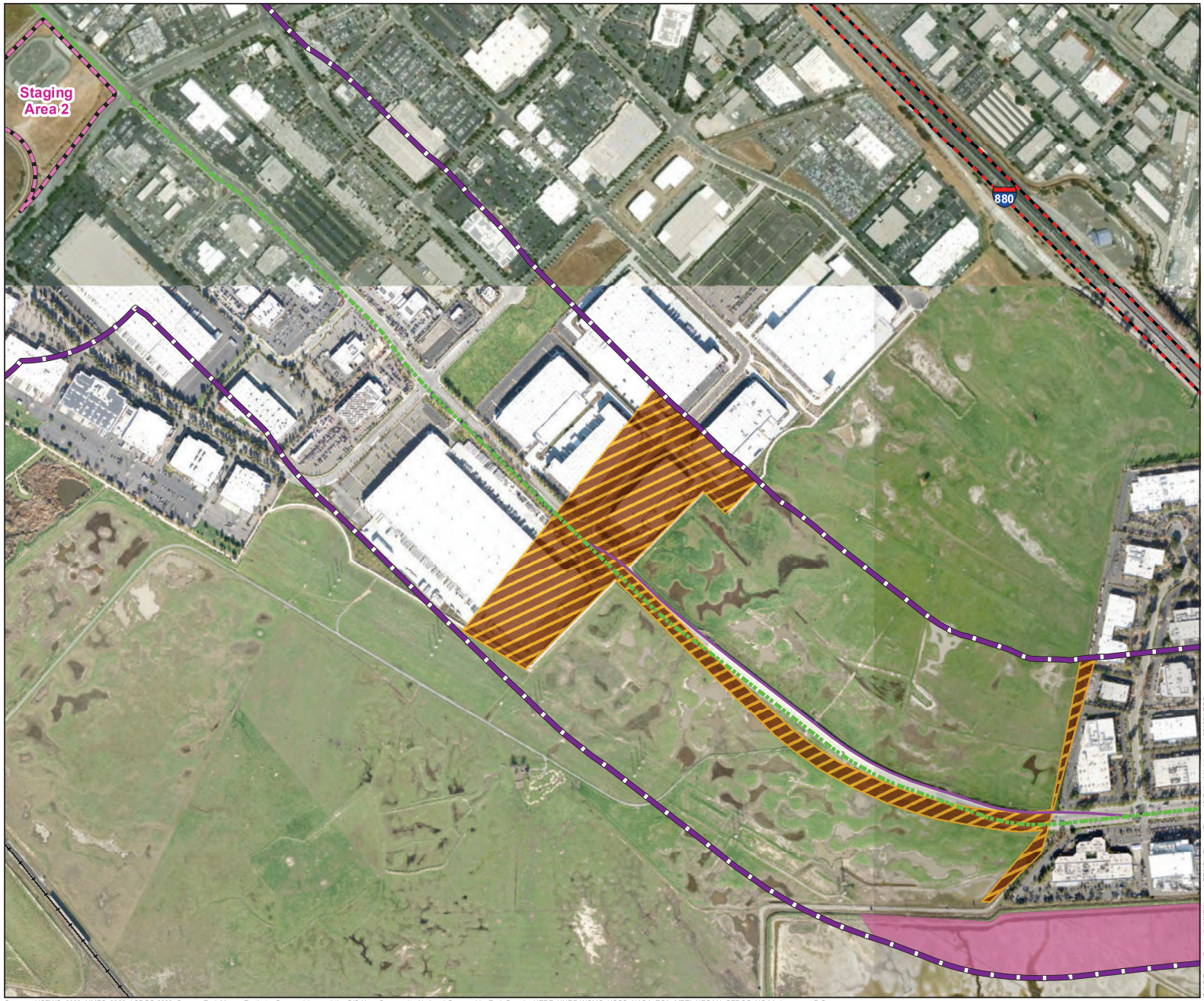


0 500 1,000 1,500 2,000

Feet




Sources: USFWS, 2023; NMFS, 2023; LSPGC 2023; Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.




# POWER THE SOUTH BAY PROJECT

## Figure 12: Critical Habitat Map

## Alameda Co. and Santa Clara Co., CA

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**USFWS and NMFS Critical Habitat**

- Steelhead Trout
- Green Sturgeon
- Green Sturgeon
- Western Snowy Plover
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- Contra Costa Goldfields

**General Features**

- Interstate
- US Route or State Highway
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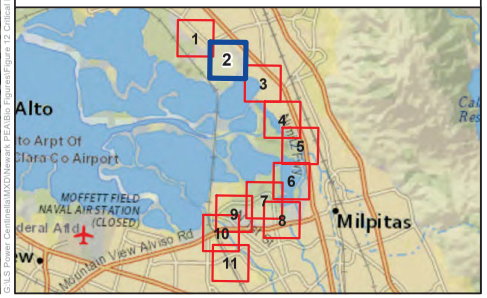
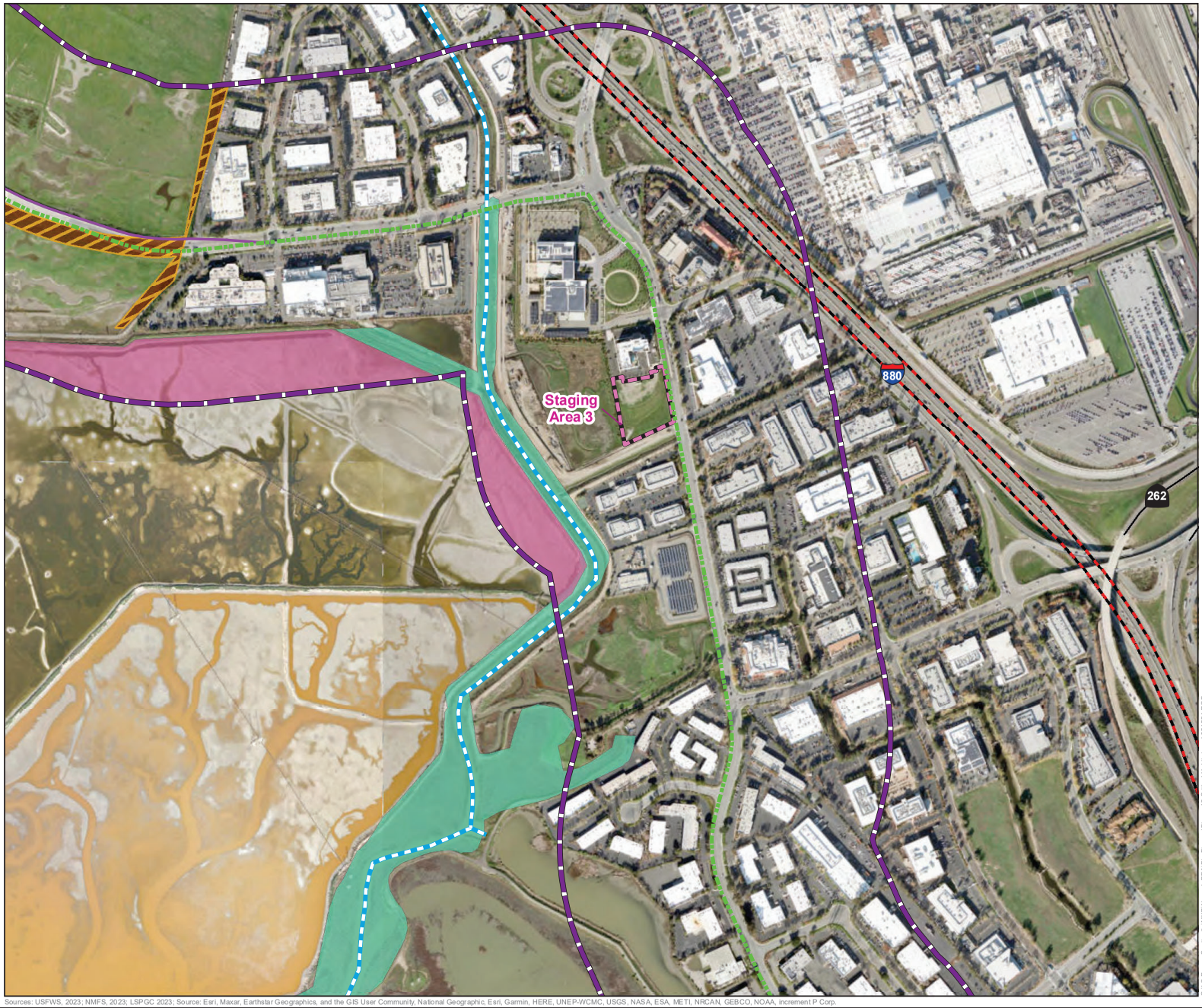
Feet




Sources: USFWS, 2023; NMFS, 2023; LSPGC 2023; Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.




# POWER THE SOUTH BAY PROJECT

## Figure 12: Critical Habitat Map

## Alameda Co. and Santa Clara Co., CA

**Proposed Project Components**

- Overhead Transmission Structure
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**USFWS and NMFS Critical Habitat**

- Steelhead Trout
- Green Sturgeon
- Green Sturgeon
- Western Snowy Plover
- Vernal Pool Tadpole Shrimp
- Contra Costa Goldfields

**General Features**

- Interstate
- US Route or State Highway
- Railroad



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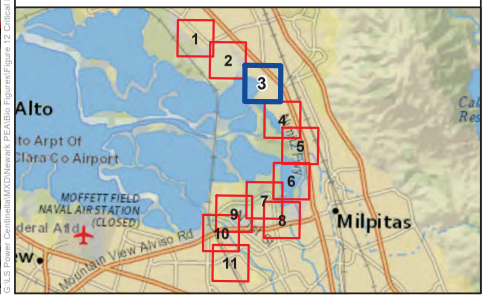
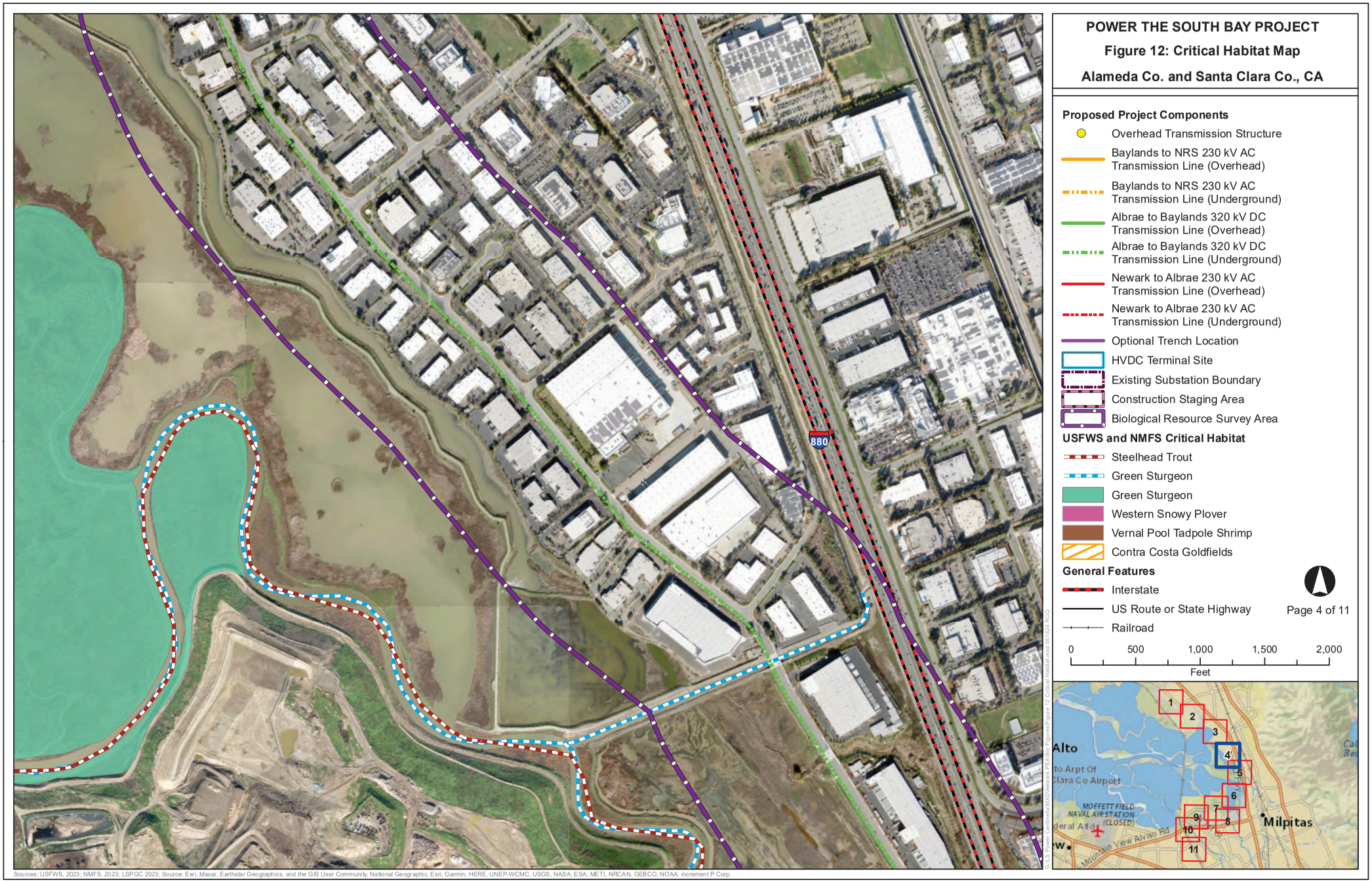



Sources: USFWS, 2023; NMFS, 2023; LSPGC 2023; Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

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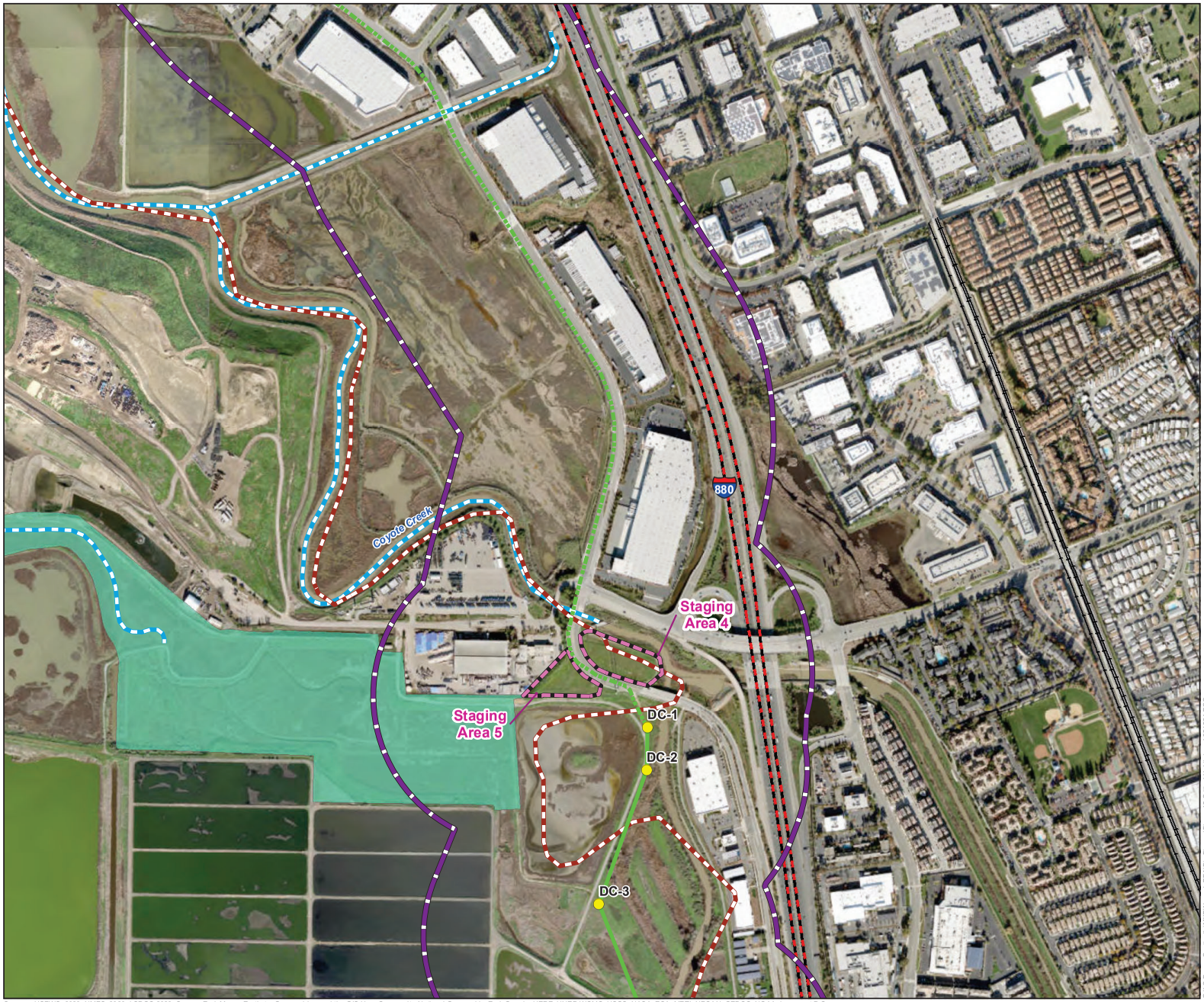


**POWER THE SOUTH BAY PROJECT**

**Figure 12: Critical Habitat Map**

**Alameda Co. and Santa Clara Co., CA**

**Proposed Project Components**

- Overhead Transmission Structure
- Baylands to NRS 230 kV AC Transmission Line (Overhead)
- Baylands to NRS 230 kV AC Transmission Line (Underground)
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- HVDC Terminal Site
- Existing Substation Boundary
- Construction Staging Area
- Biological Resource Survey Area

**USFWS and NMFS Critical Habitat**

- Steelhead Trout
- Green Sturgeon
- Green Sturgeon
- Western Snowy Plover
- Vernal Pool Tadpole Shrimp
- Contra Costa Goldfields

**General Features**

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- US Route or State Highway
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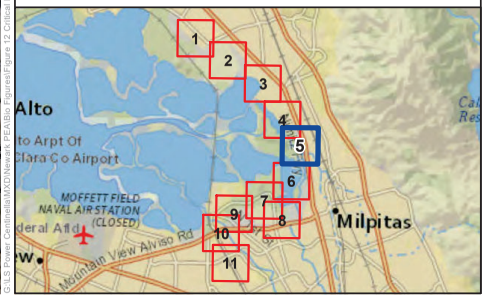


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# POWER THE SOUTH BAY PROJECT

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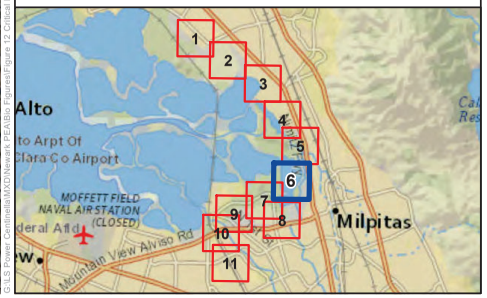


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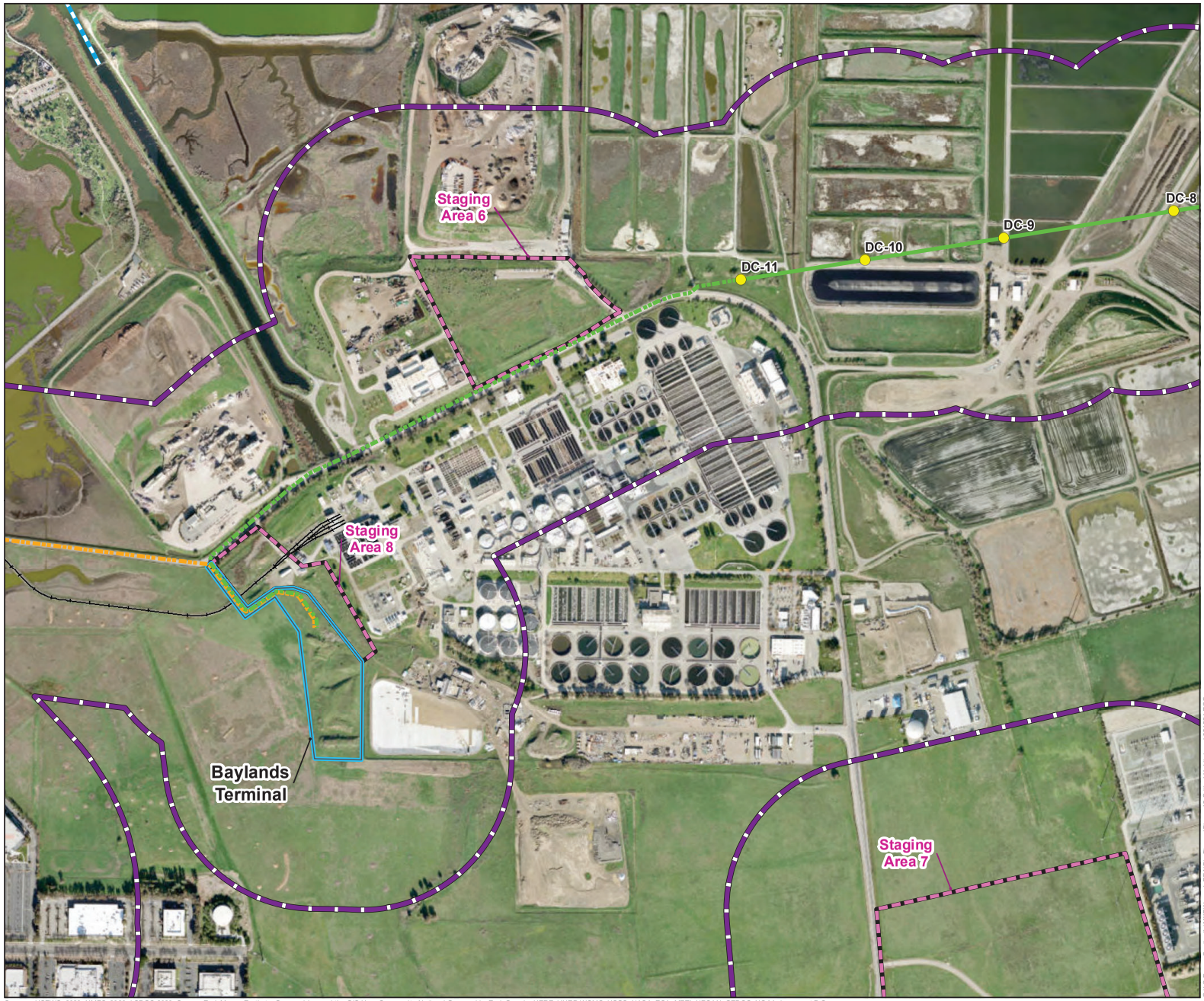


# POWER THE SOUTH BAY PROJECT

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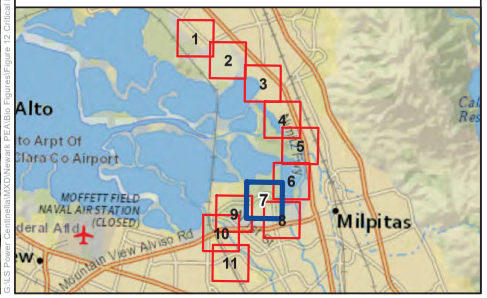


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**POWER THE SOUTH BAY PROJECT**

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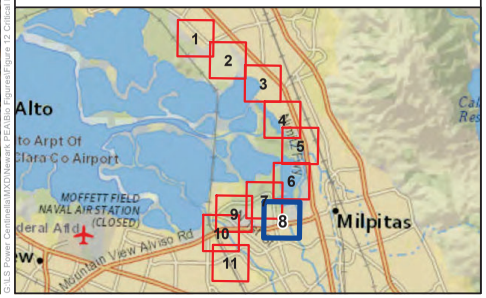


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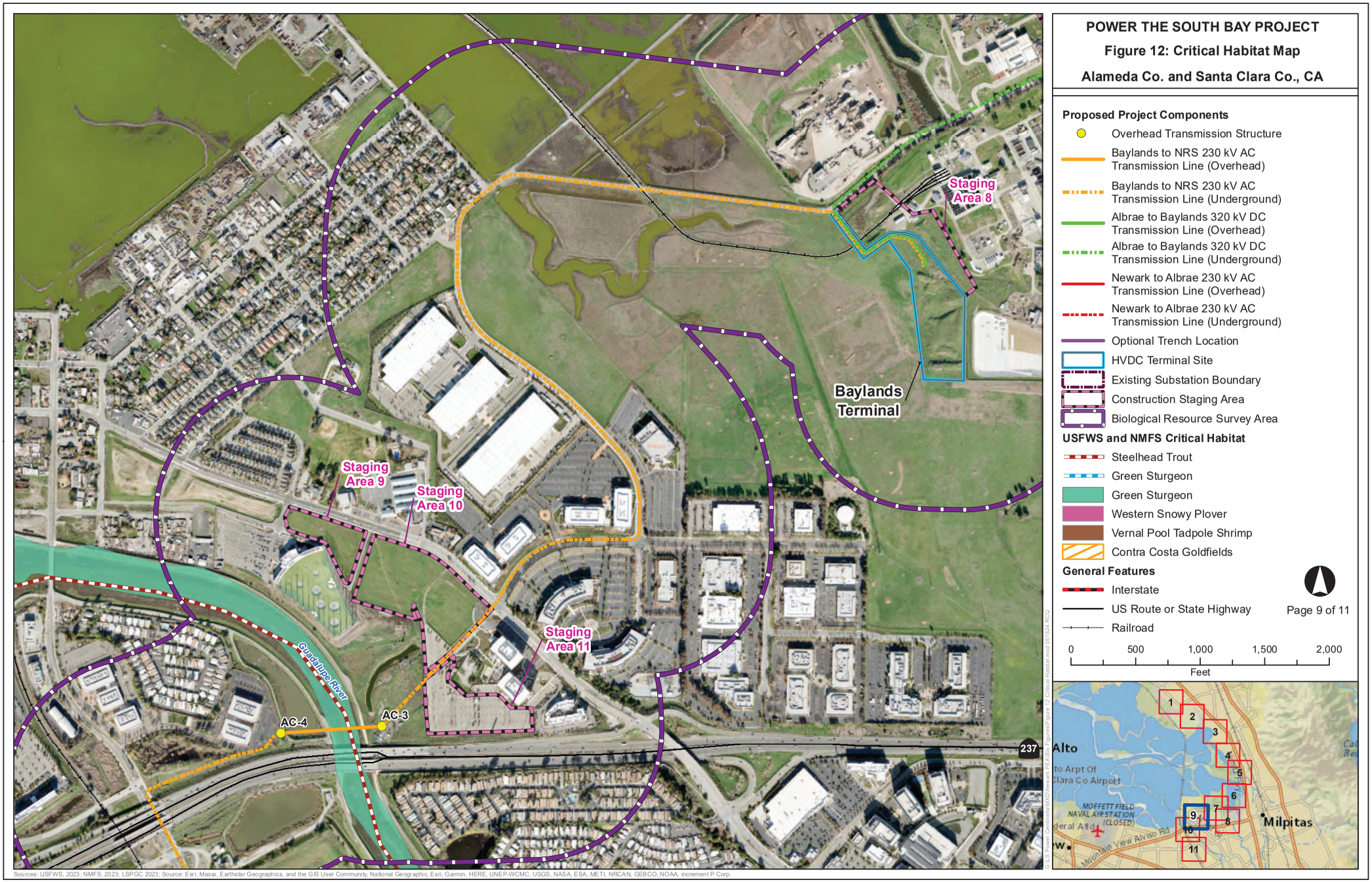
Sources: USFWS, 2023; NMFS, 2023; LSPGC 2023; Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.


POWER THE SOUTH BAY PROJECT
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General Features
Interstate
US Route or State Highway
Railroad
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Staging Area 8
Baylands Terminal
Staging Area 9
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Guadalupe River
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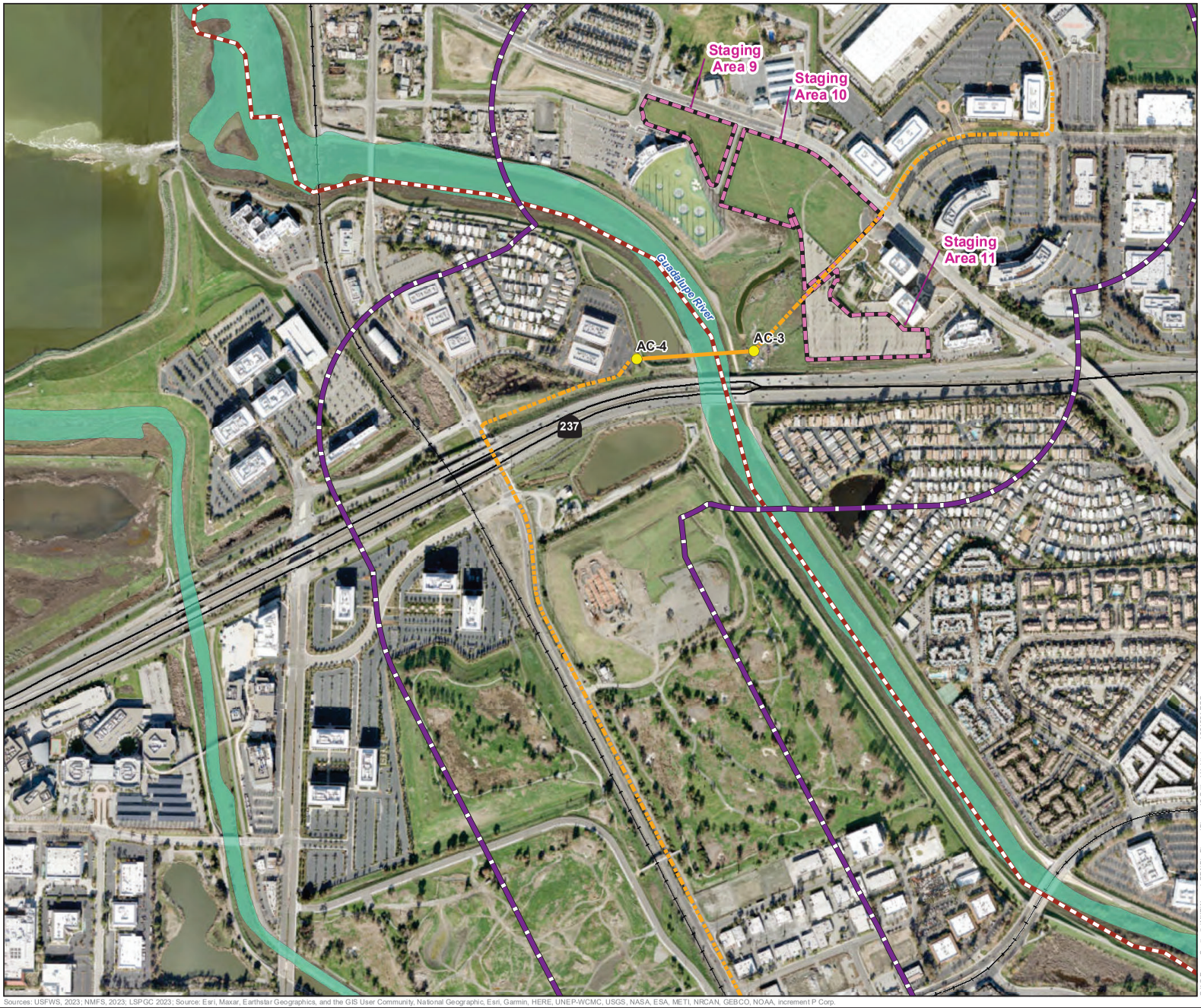
Sources: USFWS, 2023; NMFS, 2023; LSPGC 2023; Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.




# POWER THE SOUTH BAY PROJECT

## Figure 12: Critical Habitat Map

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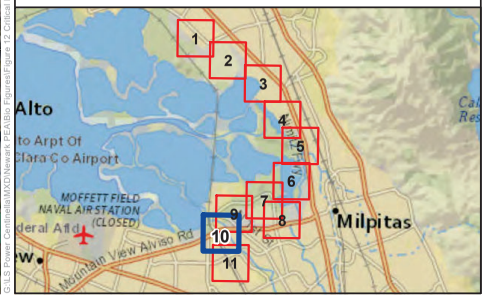


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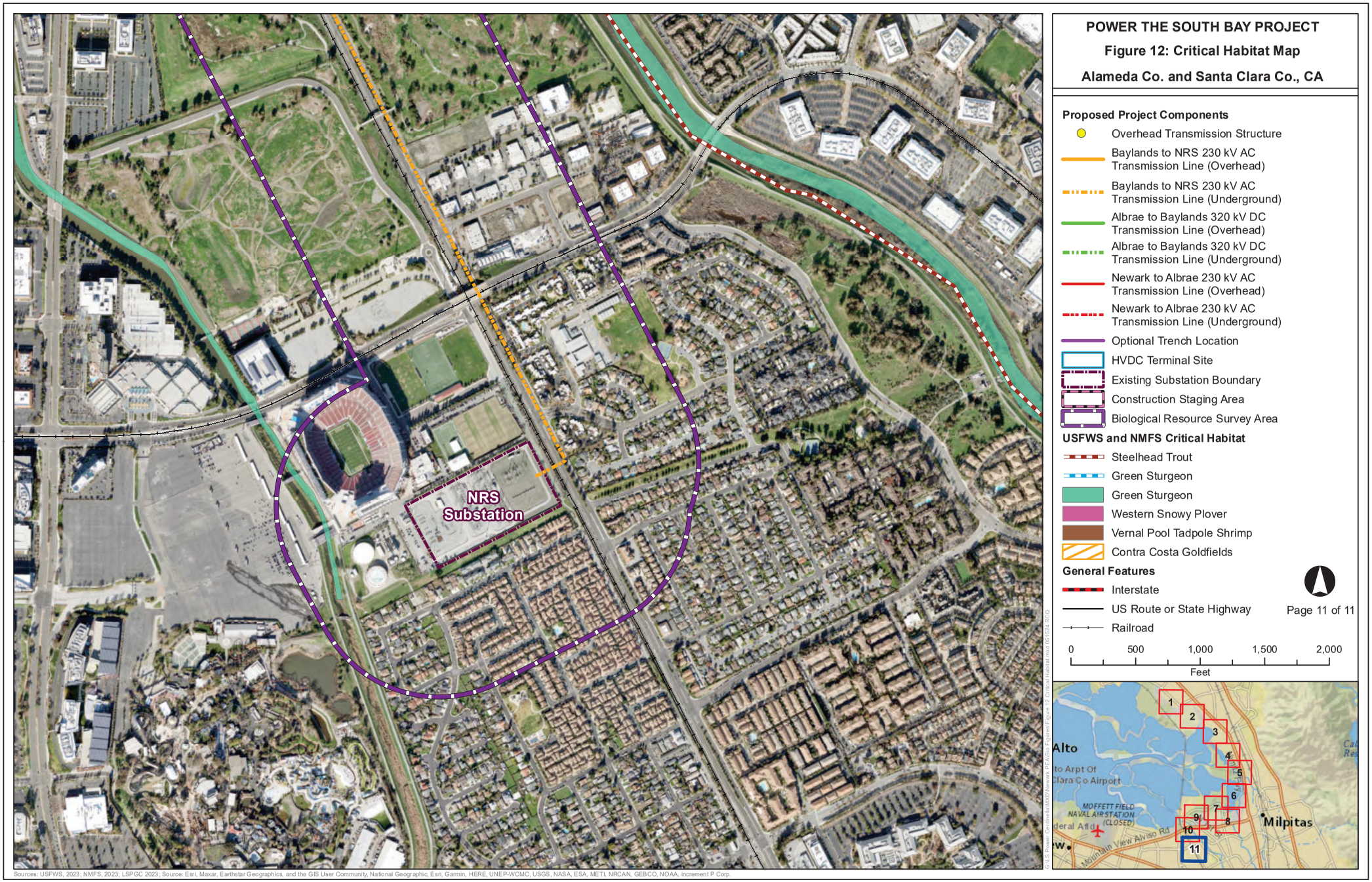
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Mountain View Alviso Rd
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Sources: USFWS, 2023; NMFS, 2023; LSPGC 2023; Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

# 5. Applicant Proposed Measures and Potential Impacts

## 5.1. Significance Criteria

According to Section 15002(g) of the CEQA Guidelines, “a significant effect on the environment is defined as a substantial adverse change in the physical conditions which exist in the area affected by a proposed project.” As stated in Section 15064(b) of the guidelines, the significance of an activity may vary with the setting. The potential significance of impacts caused by the Proposed Project on biological resources were evaluated using the applicable criteria from the CEQA Guidelines (CPUC, 2019), as discussed in the following sections.

## 5.2. Impact Definitions

The following discussion describes the Proposed Project’s potential to affect special-status biological resources during construction and ongoing maintenance and operation activities. Direct and indirect impacts may be either permanent or temporary. These impact categories are defined below.

**Direct:** Direct impacts are caused by a project and occur at the same time and place as the project. Any alteration, disturbance, or destruction of biological resources caused by project activities is considered a direct impact. Direct impacts include loss of native habitats, potential jurisdictional waters, wetlands, and special-status species; diverted flows from natural surface waters are also included. Direct impacts could include injury, death, or harassment of listed or special-status species. Direct impacts could also include the destruction of habitats necessary for species breeding, feeding, or sheltering. Direct impacts on plants can include crushing of adult plants, bulbs, or seeds.

**Indirect:** As a result of project activities, biological resources may also be affected in a manner that is not direct. Indirect impacts may occur later in time or at a place that is farther removed in distance from the project than direct impacts, but indirect impacts are still reasonably foreseeable and attributable to project activities. Examples include habitat fragmentation; elevated noise, dust, and lighting levels; changes in hydrology, runoff, and sedimentation; decreased water quality; soil compaction; increased human activity; and the introduction of invasive wildlife (domestic cats and dogs) and plants.

**Permanent:** All impacts that result in the irreversible removal of biological resources are considered permanent. For the purposes of the Proposed Project, impacts are irreversible if filling activities result in an elevation (gradient) change or an impervious surface. Examples include constructing a building or permanent road on an area that contains biological resources.

**Temporary:** Any impacts considered to have reversible effects on biological resources can be viewed as temporary. Examples include the generation of fugitive dust during construction or removal of vegetation for pipeline trenching activities, then allowing the natural vegetation to recolonize the impact area.

## 5.3. Recommended Applicant-Proposed Measures

The following recommended applicant-proposed measures (APMs) will meet existing regulations

and requirements or are standard practices to avoid, minimize, or mitigate potential impacts on biological resources that would be less than significant (**Table 5**, *Recommended Applicant Proposed Measures*).

| Table 5: Recommended Applicant Proposed Measures | |
|---|---|
| **APM Number** | **Description** |
| APM BIO-1 | Once construction is completed in a given area, natural vegetation areas (annual grassland, annual grassland/wetland, riparian, wetland, and vernal pools) that are temporarily disturbed by Proposed Project activities shall be restored to approximate preconstruction conditions. Areas that are temporarily disturbed by grading, augering, or equipment movement shall be restored to their original contours and drainage patterns. Work areas shall be decompacted, and salvaged topsoil materials shall be respread following recontouring to aid in restoration of temporarily disturbed areas. Revegetation activities shall be conducted in accordance with the Proposed Project SWPPP and APMs. Restoration could include recontouring, reseeding, and planting replacement of natural vegetation, as appropriate. Temporarily disturbed natural vegetation areas shall be revegetated with appropriate weed-free native seed mixes or species that are characteristic of the plant community that was disturbed. |
| APM BIO-2 | Protocol surveys following standard guidelines shall be conducted within suitable habitat areas for special-status plants that may occur within the Proposed Project impact areas during the appropriate blooming period to determine the location and extent of populations of rare plants, if present. In the event of the discovery of a rare plant, the area shall be marked as a sensitive area and shall be avoided to the extent practicable. If avoidance is not possible, LS Power shall consult with the USFWS for individual take permits, as required. There are no CDFW-listed species that were analyzed, but CNPS species would require surveys and potential mitigation if they cannot be avoided. Construction activities that may impact rare plants, including movement of construction equipment and other activities outside of the fenced/paved areas within suitable habitat, shall be monitored by a qualified biologist. Upon the discovery of sensitive plants, the qualified biologist shall have the authority to stop work activities and, following the identification and implementation of steps required to avoid or minimize impacts to sensitive plants, direct construction work to commence once more. |

| Table 5: Recommended Applicant Proposed Measures | |
|---|---|
| **APM Number** | **Description** |
| APM BIO-3 | Prior to initial vegetation clearance and ground-disturbing activities, a qualified biologist shall conduct preconstruction survey sweeps of the Proposed Project work area for special-status wildlife and plants in potentially suitable habitats. In the event of the discovery of a special-status plant, the area shall be marked as a sensitive area and shall be avoided to the extent practicable. If avoidance is not possible, LS Power shall seek coverage from the Santa Clara Valley HCP, or shall consult with the USFWS and/or CDFW for take ITP or other authorization as well as any additional mitigation. Any other construction activities that may impact sensitive biological resources, including movement of construction equipment and other activities outside of the fenced/paved areas within wildlife habitat, shall be monitored by a qualified biologist. The qualified biologist shall have the authority to stop work activities upon the discovery of sensitive biological resources and allow construction to proceed after the identification and implementation of steps required to avoid or minimize impacts to sensitive resources. These surveys shall be conducted within 30 days of the start of construction activities and after protocol surveys for individual species have been conducted. These surveys serve to double-check populations, nesting/breeding areas, and sensitive habitats that would be identified during protocol surveys and to ensure that these areas will be avoided by construction activities. |
| APM BIO-4 | All sensitive biological areas (including creeks, rivers, wetlands, vernal pools, riparian areas, and special-status species habitats) within the Proposed Project work area shall be clearly marked prior to construction commencement to restrict construction activities and equipment from entering these areas, except as necessary for construction activities. These markings shall be inspected regularly to ensure that they remain in place. |
| APM BIO-5 | Vehicles and equipment shall be cleaned prior to use in native habitat on the Proposed Project areas to avoid the spread of noxious weeds and nonnative invasive plant species. |
| APM BIO-6 | Speed of vehicles driving along proposed access roads and on the Proposed Project site during construction and operation shall be limited to 15 miles per hour, except in the case of legal roadgoing vehicles traveling on portions of the Proposed Project site that are public roadways which shall be limited to posted speed limits. In addition, construction and maintenance employees shall be required to stay on established and clearly marked and existing roads, except where not feasible due to physical or safety constraints and shall be advised that care should be exercised when commuting to and from the Proposed Project area. |

| Table 5: Recommended Applicant Proposed Measures | |
|---|---|
| **APM Number** | **Description** |
| | |
| APM BIO-7 | Protocol surveys following standard guidelines shall be conducted within all proposed impact areas and suitable buffers within suitable habitat areas for SMHM by an approved biologist. In the event of the discovery of SMHM individuals, the area and a suitable buffer shall be marked as a sensitive area and shall be avoided to the extent practicable. If avoidance is not possible, USFWS and/or CDFW shall be consulted prior to construction activity. Any other construction activities that may impact SMHM including movement of construction equipment and other activities outside of the fenced/paved areas within suitable habitat, shall be monitored by a qualified biologist. The qualified biologist shall have the authority to stop work activities upon the discovery of live individuals and allow construction to proceed after the identification and implementation of steps required to avoid or minimize impacts to SMHM, such as allowing individuals to leave on their own or temporarily halting construction in areas where SMHM is present. All adjacent known SMHM preserve areas shall be clearly marked as well and avoided. This APM would be applied along the transmission line west of the proposed alignment in the vicinity of Coyote Creek Lagoon,. |
| APM BIO-8 | Excavated holes/trenches that are not within areas that have wildlife exclusion fencing or that are not filled at the end of a workday shall be covered, or a wildlife escape ramp shall be installed to prevent the inadvertent entrapment of wildlife species. |
| APM BIO-9 | A WEAP shall be developed and implemented to educate all on-site construction workers on site-specific biological and non-biological resources and proper work practices to avoid harming wildlife during construction activities. This WEAP shall include measures to reduce trash buildup during construction. |

| Table 5: Recommended Applicant Proposed Measures | |
|---|---|
| **APM Number** | **Description** |
| APM BIO-10 | The use of outdoor lighting during construction and O&M shall be minimized whenever practicable. Photocell and motion detection-controlled lighting shall be provided at a level sufficient to provide safe entry and exit to the Proposed Project terminals and control enclosures and for security purposes. All lighting shall be selectively placed, shielded, and directed downward to the extent practicable. All lighting near sensitive species habitat shall be directed away from these areas to the extent practicable. Night work shall be avoided as practicable; however, given the large amount of construction proposed within existing roads, local municipalities may dictate that transmission line construction occurs at nighttime within certain areas of the Proposed Project. The most likely areas for nighttime construction are within commercial and industrial areas and not residential or potentially sensitive biological areas. Night work is not anticipated during O&M except during emergencies. |
| APM BIO-11 | Protocol surveys following standard guidelines shall be conducted for California black rail, tricolored blackbird, California clapper rail, burrowing owl, golden eagle, and bald eagle, and focused surveys shall be conducted for western snowy plover, white-tailed kite, and other raptors. In the event of the discovery of suitable habitats, nests, or live individuals, the area and a suitable buffer shall be marked as a sensitive area and shall be avoided to the extent practicable. If avoidance is not possible, USFWS and/or CDFW shall be consulted. Tricolored blackbird and burrowing owl are covered species under the Santa Clara Valley HCP; if impacts are identified during species-specific protocol surveys, the take for this species shall be covered either under the HCP or covered under a State ITP in consultation with CDFW. If impacts are identified during species-specific protocol surveys for the other State-listed avian species that are not covered under the Santa Clara Valley HCP (California black rail, California clapper rail, Western snowy plover, bald eagle, and any other avian species that are identified), the take shall be covered under a State ITP in consultation with CDFW. Any other construction activities that may impact special-status birds, including movement of construction equipment and other activities outside of the fenced/paved areas within suitable habitat, shall be monitored by a qualified biologist. Additionally, qualified biologists shall monitor all active nests to ensure that construction activities are not disturbing the nest. The monitor/inspector shall have the authority to stop work activities upon the discovery of nests or live individuals and allow construction to proceed after the identification and implementation of steps required to avoid or minimize impacts to sensitive birds. Additional burrowing owl protections may be required in the vicinity of the proposed Baylands terminal site depending on proximity of |

| Table 5: Recommended Applicant Proposed Measures | |
|---|---|
| **APM Number** | **Description** |
| | construction to active burrows. These measures may include constructing berms or placing haybales between the known burrowing owl burrows and active construction areas and having additional monitors to make sure the owls are not being stressed by construction activities. |
| APM BIO-12 | If feasible, LS Power shall avoid certain construction activities such as vegetation trimming/removal during the migratory bird nesting or breeding season. When it is not feasible to avoid construction during the nesting or breeding season (generally February 15 through August 31) **APM BIO-15** shall be used. Any construction activities that may impact nesting birds, including movement of construction equipment and other activities outside of the fenced/paved areas within suitable habitat, shall be monitored by a qualified biologist. Additionally, biologists shall monitor all active nests to ensure that construction activities are not disturbing the nest. The monitor/inspector shall have the authority to stop work activities upon the discovery of nests or live individuals and allow construction to proceed after the identification and implementation of steps required to avoid or minimize impacts to nesting birds |
| APM BIO-13 | If a raptor nest is observed within 500 feet of the Proposed Project during protocol or preconstruction surveys, a qualified biologist shall determine if it is active. If the nest is determined to be active, the qualified biologist shall establish an appropriately sized no construction buffer around the nest and shall monitor the nest to ensure that nesting or breeding activities are not substantially adversely affected. If the biological monitor determines that activities associated with the Proposed Project are disturbing or disrupting nesting or breeding activities, the monitor shall make recommendations to reduce noise or disturbance in the vicinity of the nest. If the nest is determined to be inactive, the nest shall be removed under direct supervision of the qualified biologist. |
| APM BIO-14 | The USFWS recommends a one mile no disturbance buffer around active nests during the active nesting season (USFWS, 2024). LS Power shall conduct an eagle nest survey within suitable nesting habitat prior to construction. If pre-construction surveys determine that there is an active golden eagle nest within the Survey Area, LS Power shall consult with the agencies to identify an appropriate disturbance buffer based on existing conditions, including existing visual barriers, existing noise levels, existing high levels of human activity and vehicle traffic, and other factors. In lieu of placing an avoidance buffer, LS Power could construct a barrier wall, outside of the nesting season, to obstruct construction activities from line of site from the nest. The barrier would also dampen noise from construction activities. A full time biological monitor shall monitor the bird(s) for signs of distress. If signs of distress are identified, the |

| Table 5: Recommended Applicant Proposed Measures | |
|---|---|
| **APM Number** | **Description** |
| | biological monitor shall require construction to cease until the birds exhibits normal behavior. |
| APM BIO-15 | Preconstruction nest surveys shall be conducted during the nesting or breeding season (generally February 15 through August 31) within all proposed impact areas and suitable buffers within suitable habitat areas for MBTA-protected birds. This survey shall be performed to determine the presence or absence of nesting birds and roosting bats. If roosting bats or active nests (i.e., containing eggs or young) are identified, a suitable construction avoidance buffer shall be implemented to ensure that the nesting or breeding activities are not affected. If the nesting or breeding activities by a Federal- or State-listed species are observed, LS Power shall consult with the USFWS and CDFW as necessary. Monitoring of the nest shall continue until the birds have fledged or construction is no longer occurring on the site. |
| APM BIO-16 | Protocol surveys following standard guidelines and during appropriate seasons shall be conducted within all proposed impact areas and suitable buffers within potentially suitable habitat areas for vernal pool tadpole shrimp, vernal pool fairy shrimp, monarch butterfly, Western bumblebee, and Crotch's bumblebee. In the event of the discovery of suitable habitat, host plants, or individuals of these special-status invertebrates, the area shall be marked as a sensitive area and shall be avoided to the extent practicable. If impacts are identified during species-specific surveys for vernal pool tadpole shrimp, vernal pool fairy shrimp, monarch butterfly, Western bumblebee, or Crotch's bumblebee, which are not covered under the Santa Clara Valley HCP, the take shall be covered under a Federal ITP (vernal pool tadpole shrimp, Federally Endangered; vernal pool fairy shrimp, Federally Threatened; monarch butterfly, Federal candidate species) or State ITP (Western bumblebee and Crotch's bumblebee, State candidate species) in consultation with CDFW or USFWS. Any other construction activities that may impact special-status invertebrates or their habitats, including movement of construction equipment and other activities outside of the fenced/paved areas within suitable habitat, shall be monitored by a qualified biologist. The qualified biologist shall have the authority to stop work activities upon the discovery of individuals or host plants and allow construction to proceed after the identification and implementation of steps required to avoid or minimize impacts to sensitive invertebrates. |

| Table 5: Recommended Applicant Proposed Measures | |
|---|---|
| **APM Number** | **Description** |
| APM BIO-17 | Construction in the vicinity of waterways, wetlands, and vernal pools, such as along the Cushing Parkway bridge that borders the Don Edwards San Francisco Bay NWR, near vernal pools north of the existing Newark substation, and in the vicinity of Coyote Creek and the Guadalupe River, shall be restricted to occur during the dry season (generally from May 1 through October 15) to the maximum extent practicable. This would minimize the chance of encountering and impacting sensitive species such as vernal pool tadpole shrimp and CTS that can be found in annual grassland/wetland, wetland, and vernal pool habitat present in these areas as well as fish species such as steelhead, longfin smelt, and green sturgeon that could be using waterways. If construction cannot be conducted during the dry season in the vicinity of waterways, wetlands, and vernal pools, they shall be clearly marked and avoided to the maximum extent practicable and biological monitors shall be present to ensure that no impacts occur. . |
| APM BIO-18 | Protocol surveys shall be conducted for CTS and CRLF, and preconstruction surveys shall be conducted within all proposed impact areas and suitable buffers within potentially suitable habitat areas for CTS and CRLF. In the event of the discovery of suitable habitats or live individuals, the area and a suitable buffer shall be marked as a sensitive area and shall be avoided to the extent practicable. If avoidance is not possible, USFWS and/or CDFW shall be consulted. CTS and CRLF are covered species under the Santa Clara Valley HCP; if impacts are identified during species-specific surveys, the take for this species shall be covered either under the HCP or covered under a State ITP in consultation with CDFW. Any other construction activities that may impact special-status amphibians, including movement of construction equipment and other activities outside of the fenced/paved areas within suitable habitat, shall be monitored by a qualified biologist. The qualified biologist shall have the authority to stop work activities upon the discovery of live individuals and allow construction to proceed after the identification and implementation of steps required to avoid or minimize impacts to sensitive amphibians. |
| APM BIO-19 | Pursuant to property owner approval, a wetland and aquatic resources delineation shall be conducted for the portion of the proposed Baylands to NRS 230 kV transmission line within the California Department of Transportation (Caltrans) right-of-way containing potential State or Federal jurisdictional waters. Accurate acreages of vernal pools and RWQCB, CDFW, and USACE jurisdictional waters shall be defined from these delineations. Vernal pools and jurisdictional waters shall be marked as a sensitive area and shall be avoided to the extent |

| Table 5: Recommended Applicant Proposed Measures | |
|---|---|
| **APM Number** | **Description** |
| | practicable. If these areas cannot be avoided, applicable permits shall be obtained. |

## 5.4 PG&E Field Protocols and Best Management Practices

The following biological resources FPs and BMPs would be implemented by PG&E for the activities to be completed by PG&E and/or their contractors. The FPs are derived directly from PG&E's Bay Area HCP, and the FPs and BMPs are consistent with the Bay Area O&M HCP.

**FP-01**: Hold annual training on habitat conservation plan requirements for employees and contractors performing covered activities in the Plan Area that are applicable to their job duties and work.

**FP-02:** Park vehicles and equipment on pavement, existing roads, or other disturbed or designated areas (barren, gravel, compacted dirt).

**FP-03:** Use existing access and ROW roads. Minimize the development of new access and ROW roads, including clearing and blading for temporary vehicle access in areas of natural vegetation.

**FP-04:** Locate off-road access routes and work sites to minimize impacts on plants, shrubs, and trees, small mammal burrows, and unique natural features (e.g., rock outcrops).

**FP-05**: Notify conservation land owner at least 2 business days prior to conducting covered activities on protected lands (state and federally owned wildlife areas, ecological reserves, or conservation areas); more notice will be provided if possible or if required by other permits. If the work is an emergency, as defined in PG&E's Utility Procedure ENV-8003P-01, PG&E will notify the conservation land owner within 48 hours after initiating emergency work. While this notification is intended only to inform conservation land owner, PG&E will attempt to work with the conservation land owner to address landowner concerns.

**FP-06:** Minimize potential for covered species to seek refuge or shelter in pipes and culverts. Inspect pipes and culverts, of diameter wide enough to be entered by a covered species that could inhabit the area where pipes are stored, for wildlife species prior to moving pipes and culverts. Immediately contact a biologist if a covered species is suspected or discovered.

**FP-07:** Vehicle speeds on unpaved roads will not exceed 15 miles per hour.

**FP-08:** Prohibit trash dumping, firearms, open fires (such as barbecues), hunting, and pets (except for safety in remote locations) at work sites.

**FP-09:** During fire season in designated State Responsibility Areas, equip all motorized equipment with federally approved or state-approved spark arrestors. Use a backpack pump filled with water and a shovel and fire-resistant mats and/or windscreens when welding. During fire "red flag" conditions as determined by Cal Fire, curtail welding. Each fuel truck will carry a large fire extinguisher with a minimum rating of 40 B:C. Clear parking and storage areas of all flammable materials.

**FP-10:** Minimize the activity footprint and minimize the amount of time spent at a work location to reduce the potential for take of species.

**FP-11:** Utilize standard erosion and sediment control BMPs (pursuant to the most current version of PG&E's Stormwater Field Manual for Construction Best Management Practices) to prevent construction site runoff into waterways.

**FP-12:** Stockpile soil within established work area boundaries and locate stockpiles so as not to enter water bodies, stormwater inlets, other standing bodies of water. Cover stockpiled soil prior to precipitation events.

**FP-13:** Fit open trenches or steep-walled holes with escape ramps of plywood boards or sloped earthen ramps at each end if left open overnight. Field crews will search open trenches or steep-walled holes every morning prior to initiating daily activities to ensure wildlife are not trapped. If any wildlife are found, a biologist will be notified and will relocate the species to adjacent habitat or the species will be allowed to naturally disperse, as determined by a biologist.

**FP-14:** If the covered activity disturbs 0.1 acre or more of habitat for a covered species in grasslands, the field crew will revegetate the area with a commercial "weed free" seed mix.

**FP-15:** Prohibit vehicular and equipment refueling 250 feet from the edge of vernal pools, and 100 feet from the edge of other wetlands, streams, or waterways. If refueling must be conducted closer to wetlands, construct a secondary containment area subject to review by an environmental field specialist and/or biologist. Maintain spill prevention and cleanup equipment in refueling areas.

**FP-16:** Maintain a buffer of 250 feet from the edge of vernal pools and 50 feet from the edge of wetlands, ponds, or riparian areas. If maintaining the buffer is not possible because the areas are either in or adjacent to facilities, the field crew will implement other measures as prescribed by the land planner, biologist, or HCP administrator to minimize impacts by flagging access, requiring foot access, restricting work until dry season, or requiring a biological monitor during the activity.

**FP-17:** Directionally fell trees away from an exclusion zone, if an exclusion zone has been defined. If this is not possible, remove the tree in sections. Avoid damage to adjacent trees to the extent possible. Avoid removal of snags and conifers with basal hollows, crown deformities, and/or limbs over 6 inches in diameter.

**FP-18:** Nests with eggs and/or chicks will be avoided: contact a biologist, land planner or

the Avian Protection Program manager for further guidance.

**BMP BIO-1: Burrowing Owl.** A survey for evidence of burrowing owl (sign or presence) should be conducted prior to initial ground-disturbance. The survey can occur within the best detection timeframe and within two weeks of construction. If burrowing owl are detected, consult with the California Department of Fish and Wildlife.

**BMP BIO-2: Nesting Birds.** If work is anticipated to occur within the nesting bird season (February–August), nesting birds, including raptors and other species protected under the Migratory Bird Treaty Act, may be impacted. If active nests are discovered, exclusionary measures and/or designated avoidance buffers may be required and implemented according to the guidance in the PG&E Nesting Bird Management Plan. The project biologist determines if the construction action will impact the nest, and if so, identifies whether alternative actions or monitoring can be implemented to avoid impacts. If active nests are observed during construction, crews must immediately alert the PG&E project biologist.

## 5.4. Potential Impacts

Potential impacts on biological resources were evaluated against the CEQA significance criteria (CPUC, 2019) and are discussed in further detail in the following paragraphs.

The impact analysis includes both temporary and permanent impacts and direct and indirect impacts associated with construction of the Proposed Project. Permanent impacts would include the following components:

- Albrae terminal (6.1 acres)
- Baylands terminal (9.2 acres)
- Albrae to Baylands 320 kV DC transmission line (approximately 1.9 miles overhead, and 6.7 miles underground)
- Newark to Albrae 230 kV transmission line (0.2 mile overhead and 0.2 mile underground)
- Baylands to NRS 230 kV Transmission line (approximately 3.3 miles underground, 0.2 mile overhead)

Temporary and short-term impacts associated with Project construction would include the following components:

- Temporary construction staging yards (11 total yards – approximately 117.1 acres)

See **Figure 13,** *Biological Impact Areas* for the locations of Project impacts.




# POWER THE SOUTH BAY PROJECT
## Figure 13: Biological Impact Area Map
## Alameda Co. and Santa Clara Co., CA

### LEGEND

**Proposed Project Components**

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**Biological Impact Area**

- Temporary Impacts
- Permanent Impacts

**General Features**

- Municipal Boundary
- Interstate
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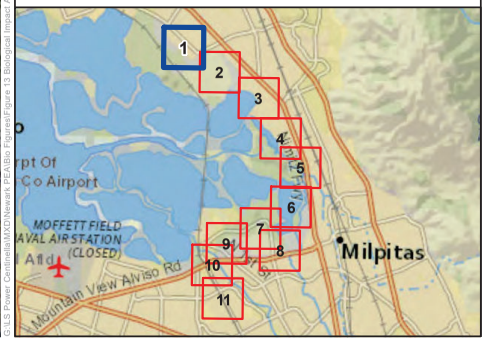
Feet



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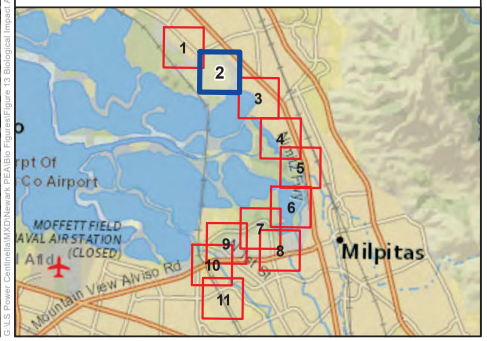


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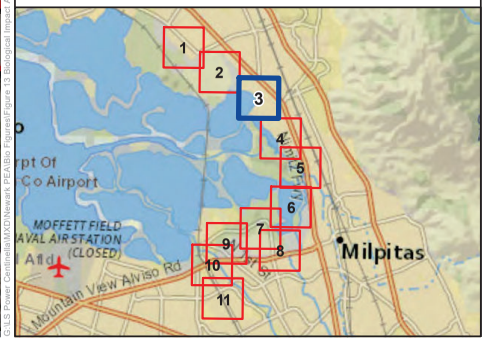


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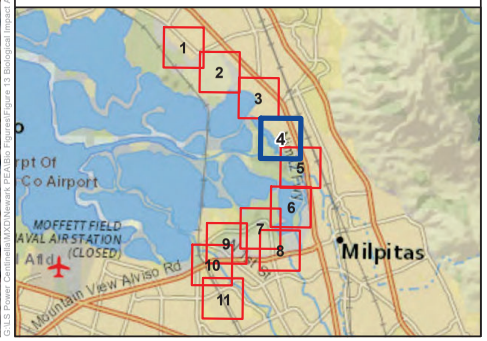


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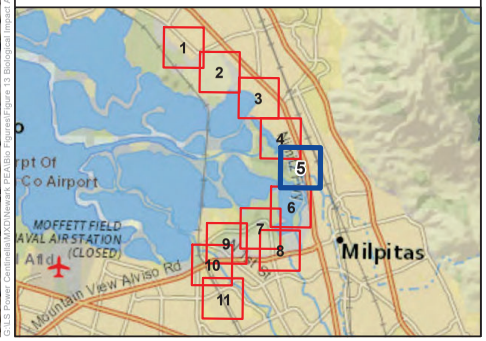


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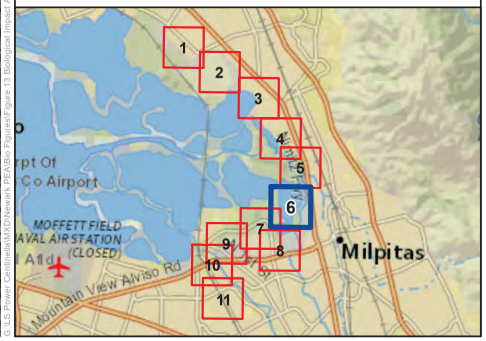


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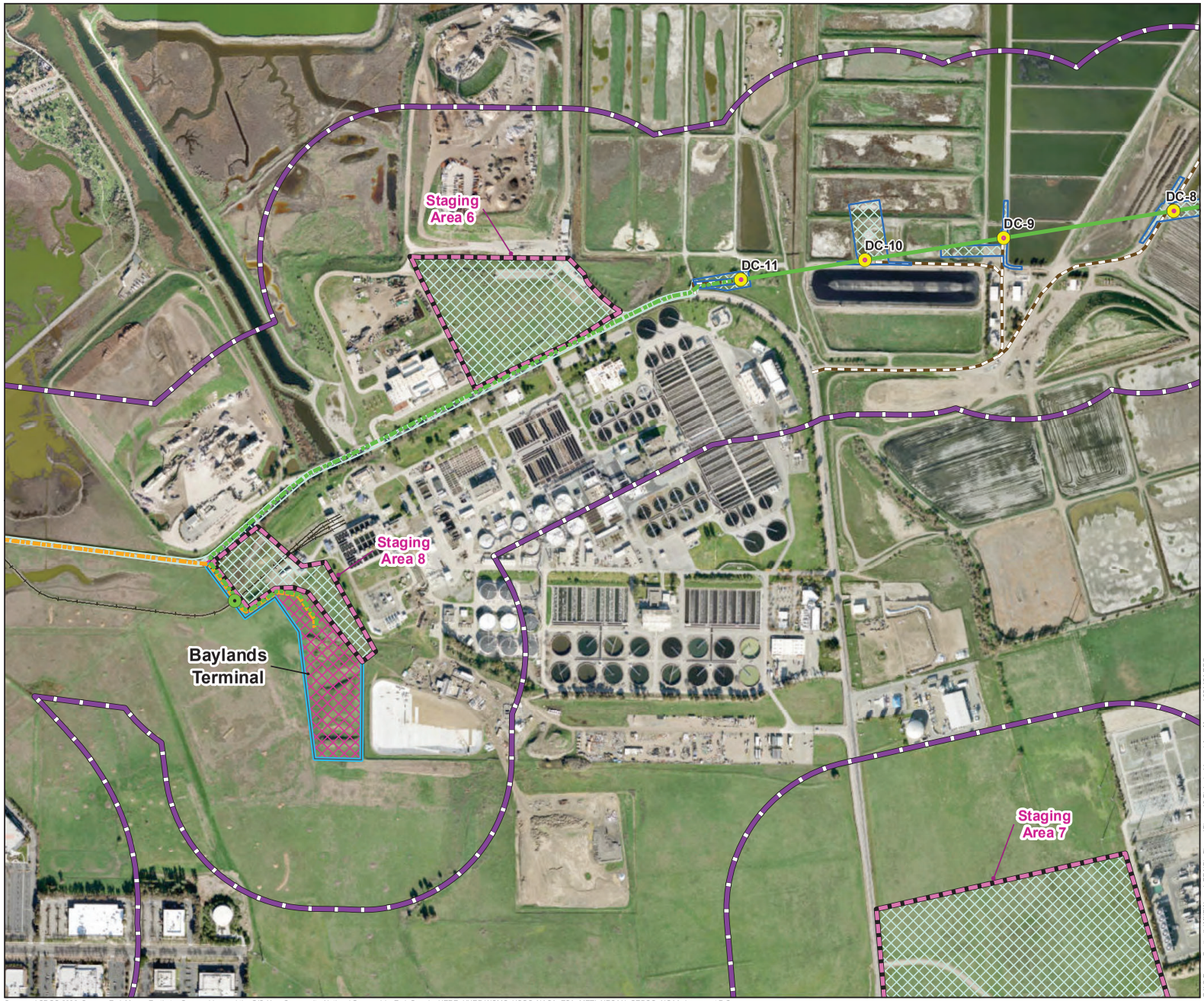


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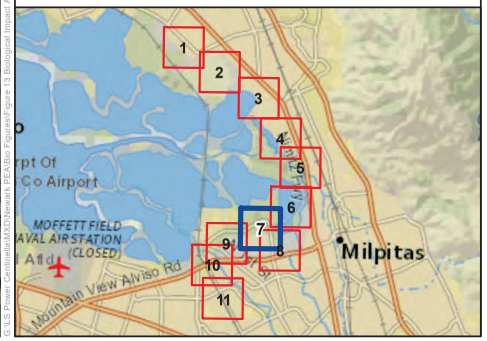


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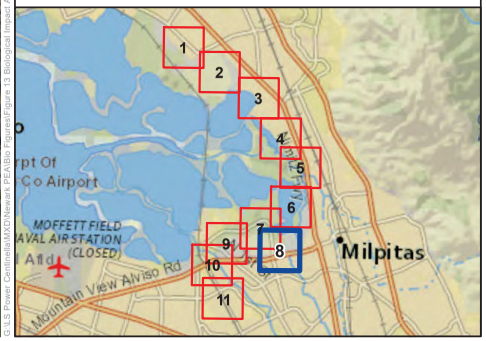


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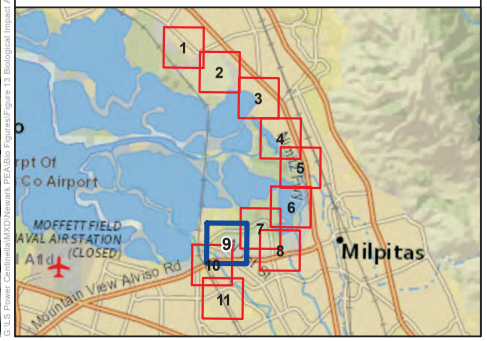


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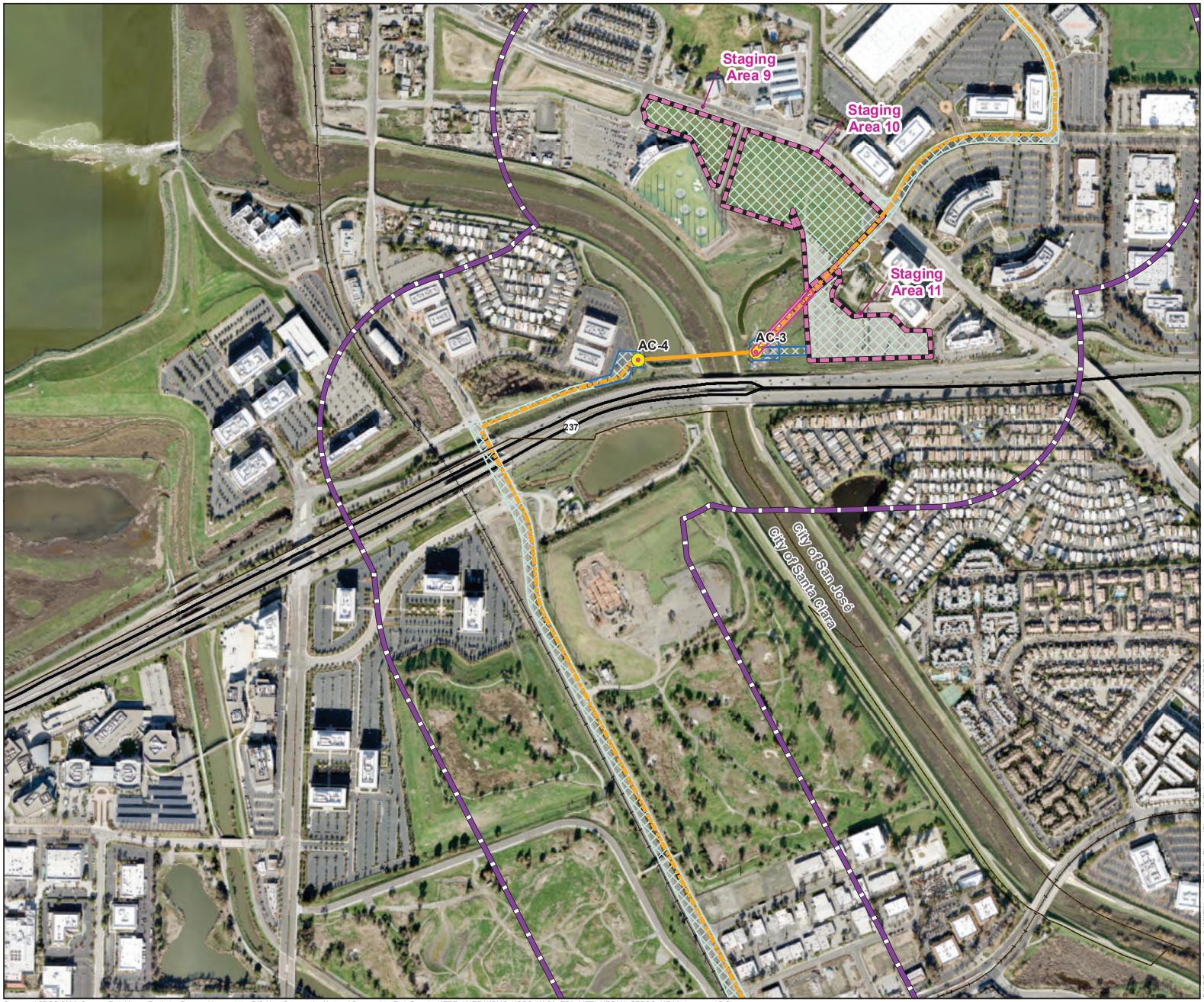


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- Biological Resource Survey Area

**Biological Impact Area**

- Temporary Impacts
- Permanent Impacts

**General Features**

- Municipal Boundary
- Interstate
- US Route or State Highway
- Railroad

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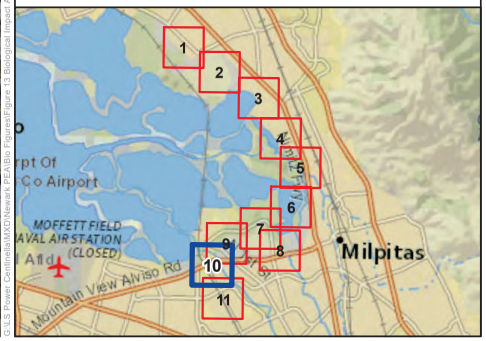


G:\LS Power Centralia\MXD\Newark PEA\Bio Figures\Figure 13 Biological Impact Area Map.mxd 05/14/24 RGD

Sources: LSPGC 2023; Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.




**POWER THE SOUTH BAY PROJECT**
**Figure 13: Biological Impact Area Map**
**Alameda Co. and Santa Clara Co., CA**

**LEGEND**

**Proposed Project Components**
- Overhead Transmission Structure
- Jack and Bore Location
- HDD Location
- Baylands to NRS 230 kV AC Transmission Line (Overhead)
- Baylands to NRS 230 kV AC Transmission Line (Underground)
- Albrae to Baylands 320 kV DC Transmission Line (Overhead)
- Albrae to Baylands 320 kV DC Transmission Line (Underground)
- Newark to Albrae 230 kV AC Transmission Line (Overhead)
- Newark to Albrae 230 kV AC Transmission Line (Underground)
- Optional Trench Location
- Access Road
- HVDC Terminal Site
- Existing Substation Fenceline
- Construction Staging Area
- Existing Substation Modification Area
- Stringing, Pulling, and Structure Work Areas
- Biological Resource Survey Area

**Biological Impact Area**
- Temporary Impacts
- Permanent Impacts

**General Features**
- Municipal Boundary
- Interstate
- US Route or State Highway
- Railroad

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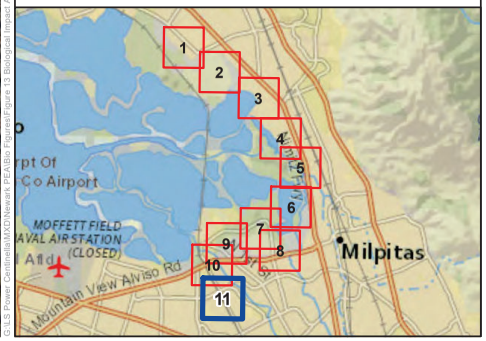
Feet

Page 11 of 11




Sources: LSPGC 2023; Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

### 5.4.1. Impacts to Special-Status Species

#### 5.4.1.1. Special-Status Plant Species and Sensitive Vegetation Communities

Direct impacts to special-status plant species and sensitive vegetation communities could include destruction of individual plants, and indirect impacts could include loss of areas that contain suitable microhabitat conditions for special-status plants and introduction of nonnative weed species that may out-compete these plants. **Table 6,** *Impacts to Vegetation Communities by Location (for non-PG&E/SVP-owned Property)* and shown in **Figure 13** details the total area of temporary and permanent impact by vegetation community associated with implementation of the Proposed Project.

The Proposed Project would result in approximately 15.65 acres of permanent disturbance and approximately 238.65 acres of temporary disturbance for the project components outside of PG&E and SVP property. Impacts to vegetation communities within PG&E and SVP property are discussed further below. Impacts associated with the proposed terminal sites, transmission line alignments, and staging areas are broken down by habitat type in **Table 6** and shown in **Figure 13**.

**Table 6: Impacts to Vegetation Communities by Location (for non-PG&E/SVP-owned Property)**

| Location of Temporary Impacts | Temporary Impact (Acreage) | Location of Permanent Impacts | Permanent Impact (Acreage) |
|---|---|---|---|
| **Annual Grassland** | | | |
| Overhead Work Areas | 2.7 | Baylands Terminal | 8.60 |
| Underground Work Areas | 1.25 | Overhead Structures | 0.03 |
| Staging Areas | 77.59 | N/A | 0.00 |
| ***Temporary Subtotal*** | ***81.53*** | ***Permanent Subtotal*** | ***8.63*** |
| **Riparian** | | | |
| Overhead Work Areas | 0.07 | N/A | <0.01 |
| Underground Work Areas | 0.01 | N/A | 0.00 |
| Staging Areas | 0.04 | N/A | 0.00 |
| ***Temporary Subtotal*** | ***0.12*** | ***Permanent Subtotal*** | ***<0.01*** |
| **Disturbed/Urban** | | | |
| Overhead Work Areas | 5.21 | Overhead Structures | 0.05 |
| Underground Work Areas | 85.98 | Albrae Terminal | 6.11 |
| Staging Areas | 39.52 | Baylands Terminal | 0.60 |
| Albrae Terminal | 19.29 | AC-3 Access Road | 0.24 |
| ***Temporary Subtotal*** | ***150.00*** | ***Permanent Subtotal*** | ***7.0*** |
| **Wastewater Treatment Pond** | | | |
| Overhead Work Areas | 6.69 | Overhead Structures | 0.02 |
| **Wetland** | | | |
| Overhead Work Areas | 0.21 | N/A | 0.00 |
| Underground Work Areas | 0.10 | N/A | 0.00 |

| Table 6: Impacts to Vegetation Communities by Location (for non-PG&E/SVP-owned Property) | | | |
|---|---|---|---|
| **Location of Temporary Impacts** | **Temporary Impact (Acreage)** | **Location of Permanent Impacts** | **Permanent Impact (Acreage)** |
| ***Temporary Subtotal*** | ***0.31*** | ***Permanent Subtotal*** | ***0.00*** |
| **Temporary Total** | **238.65** | **Permanent Total** | **15.65** |
| [1]The total acreage of the Survey Area in this table does not include the area for water within the Survey Area (as open water is not a vegetation community). Therefore, the total acreage of the Survey Area in this table does not match other tables in this PEA that include open water.<br>Note: Totals in this table may not sum accurately due to rounding. | | | |

As described in **Applicant Proposed Measure (APM) BIO-1**, *Restoration of Disturbed Areas*, LS Power would restore all sensitive areas that are temporarily disturbed by Proposed Project activities to approximate preconstruction conditions. Restoration could include recontouring, reseeding, and planting replacement vegetation, as appropriate. Temporarily disturbed areas would be revegetated with appropriate weed-free native seed mixes or species that are characteristic of the plant community that was disturbed. All areas would be carefully assessed to be sure all residual construction debris and waste is removed and transported off-site to an approved disposal facility. LS Power would conduct a final inspection to ensure that cleanup activities are successfully completed as required. Areas that are disturbed by grading, auguring, or equipment movement would be restored to their original contours and drainage patterns. Work areas would be recompacted, and salvaged topsoil materials would be respread following recontouring to aid in restoration of temporarily disturbed areas. Additionally, the Proposed Project would be required to develop and implement a Stormwater Pollution Prevention Plan (SWPPP) that would outline an approach for the use of erosion control measures, such as stormwater Best Management Practices (BMPs) and groundwater BMPs.

Direct impacts to special-status plant species and sensitive vegetation communities could include destruction of individual plants, and indirect impacts could include loss of areas that contain suitable microhabitat conditions for special-status plants and introduction of nonnative weed species that may out-compete these plants.

Thirteen special-status plant species have the potential to occur within the Survey Area, but none are expected to occur within temporary or permanent impact areas. Most of these plants are likely to occur within wetland, riparian, vernal pool, or estuary habitats; all are considered sensitive vegetation communities. Congdon's tarplant, lesser saltscale, San Joaquin spearscale, Contra Costa goldfields, and saline clover can occur in grassland habitats, which are not considered sensitive. Small portions of Coyote Creek and its associated riparian habitat are expected to be impacted by construction. A small portion of the Guadalupe River and its associated riparian habitat north of the SR-237 overpass may also be impacted. This would likely impact an area of riparian and wetland habitat associated with Coyote Creek and the Guadalupe River, depending on construction methods (a total of approximately 0.12 acres of riparian habitat and 0.31 acres of wetlands are anticipated to be temporarily impacted). Additionally, disturbed annual grassland/wetland habitat in the Don Edwards San Francisco Bay NWR alongside Cushing Parkway would be impacted by construction and mowed/maintained during operations. The level of impacts at the Cushing Parkway bridge crossing would depend on whether the proposed transmission line is attached to the underside of the bridge or trenched underground adjacent to the bridge within a 10-foot utility easement (and 30-foot operational and maintenance utility easement). Either way, the Proposed Project would result in temporary impacts to this area within the easement. It is less likely

that sensitive plant species would be located in this area due to its current disturbed condition, but focused rare plant surveys would still be conducted during appropriate blooming periods (February 1 through June 15) (**APM BIO-2**, *Rare Plant Surveys*). If sensitive plant species within the Don Edwards San Francisco Bay NWR along Cushing Parkway would be impacted by the Proposed Project, LS Power would coordinate with the USFWS to determine if applicable permits would be required (**APM BIO-3**, *Preconstruction Sweeps)*. There are no CDFW-listed species with the potential to occur; however, CNPS species would require surveys (**APM BIO-2**) and potentially mitigation if they cannot be avoided.

The Proposed Project would result in the loss of sensitive vegetation communities and could result in the loss of suitable habitat conditions for special-status plants. Focused surveys for rare plants would be conducted (February 1 through June 15) (**APM BIO-2**), and any populations that are found would be avoided to the extent practicable (**APMs BIO-2, BIO-3**, and **BIO-4**, *Sensitive Area Demarcation*). Any riparian habitat, wetlands, vernal pools, and estuary areas and other water features would be avoided to the extent practicable by construction activities (**APM BIO-4**); preconstruction sweeps would occur within disturbance areas (**APM BIO-3**); and vehicles would be cleaned prior to arriving on-site in sensitive natural areas (**APM BIO-5**, *Vehicle Cleaning Prior to Entering Natural Areas*), limiting the potential spread of noxious weeds within the Proposed Project area. Therefore, with the implementation of APMs, direct and indirect impacts on special-status plant species and sensitive vegetation communities would be less than significant.

Riparian habitat and other sensitive habitat areas are present within the Survey Area and within impact areas (riparian, wetland, annual grassland/wetland, and vernal pool). These areas would be impacted by construction of the Proposed Project: 0.12 acre of temporary impacts are proposed to riparian habitats; and 0.31 acre of temporary impacts are proposed to wetlands. All wetlands and other aquatic resources including vernal pools would be delineated prior to construction (**APM BIO-19**), and impacts would be avoided to the extent practicable (**APM BIO-4**). All temporary impacts would be restored per **APM BIO-1**, minimizing the impact to these sensitive vegetation communities.

No other riparian or sensitive habitat areas would be impacted by the Proposed Project. Therefore, with the implementation of APMs, direct and indirect impacts on riparian habitat or other sensitive vegetation communities would be less than significant.

**PG&E Substation Modifications**

The PG&E Newark substation modifications would occur within and adjacent to the existing substation facility (located entirely within PG&E fee-owned property). The existing PG&E substation facility does not currently support riparian habitat or other sensitive vegetation communities. The area north of the substation fence within PG&E property, where overhead Structures AC-1 is proposed, would be impacted by construction of the Proposed Project, including 0.09 acre of temporary impacts to vernal pools (see **Table 6** for exact impact numbers). Implementation of **FP-01** through **FP-04, FP-10, FP-11, FP-12, FP-14** through **FP-16** would minimize these impacts. The vernal pools would be avoided to the maximum extent practicable be implementing a buffer from construction (**FP-16**) and implementing spill prevention BMPs (**FP-15**). Training (**FP-01**) would educate workers on the vernal pools as sensitive areas and measures to minimize impacts. Temporary impacts to this area would also be restored (**FP-14**). No other sensitive vegetation communities or critical habitats occur within PG&E areas. Therefore, impacts would be less than significant.

**SVP Substation Modifications**

The SVP NRS substation modifications would occur within the existing substation facility. The existing NRS substation facility does not currently support riparian habitat or other sensitive vegetation communities. The proposed NRS substation modification work would occur in paved, disturbed, and developed areas only. Therefore, no impacts would result.

#### 5.4.1.2. Special-Status Wildlife Species

Several special-status wildlife species were observed during habitat assessment and jurisdictional waters surveys: Bald eagle (BGEPA-protected, State-endangered), peregrine falcon, red-tailed hawk, turkey vulture, (raptors; MBTA and CFGC protected), California gull, willet, and great blue heron (Birds of Conservation Concern [BCC] and MBTA protected).

The current level of disturbance and human activity associated with the Cities of Fremont, Milpitas, San José, and Santa Clara is very high within a majority of the Proposed Project impact areas. Even in areas that contain native habitats, such as along Coyote Creek near the San José-Santa Clara RWF, along Fremont Boulevard, the Don Edwards San Francisco Bay NWR alongside Cushing Parkway and Los Esteros Road, in the vicinity of the proposed Baylands terminal site, and the Guadalupe River and associated riparian habitat north of SR-237, disturbance and human activity in the immediate vicinity is presently high. Because of this, direct impacts to special-status species are less likely to occur. Direct impacts include the potential for direct mortality, destruction of nesting or breeding habitat, and loss of foraging habitat may occur during construction of the Proposed Project in suitable habitats. The short-term construction of the Proposed Project would only be slightly above the current levels of disturbance and human activity, which could indirectly impact wildlife species. The level of disturbance associated with long-term operation would be low because the majority of the proposed transmission lines would be undergrounded, and the current level of disturbance in the area associated with overhead segments, including existing overhead transmission lines. Additionally, because a majority of the Proposed Project is expected to be constructed within existing roadways, and temporary work areas are expected to be primarily within previously disturbed habitats, the new disturbance is expected to be minimal. There is a large amount of similar habitat in the vicinity of Coyote Creek and the Don Edwards San Francisco Bay NWR; therefore, temporary impacts to approximately 88.65 acres and permanent loss of approximately 8.66 acres of potentially suitable habitat (annual grassland, wastewater treatment ponds, riparian, and wetlands habitat types; see **Table 6**) would be less than significant. Additionally, a majority of the temporary impacts are associated with the 11 staging areas, most of which are not expected to be used by construction.

##### 5.4.1.2.1. Salt Marsh Harvest Mouse

Potential salt marsh harvest mouse (SMHM) habitat is shown on **Figure 14,** *Impacted Species Habitats* and is located west of the proposed alignment in the vicinity of Coyote Creek Lagoon, north of the San José-Santa Clara RWF wastewater disposal ponds, northwest of the proposed Baylands terminal, and west of the Survey Area in the Don Edwards San Francisco Bay NWR. Direct impacts to SMHM could result from potential vehicle strikes during Proposed Project construction and operation if individuals disperse from their typical habitat, destruction of vegetation during clearing activities, and entrapment in excavations. The coastal salt marsh habitat in which this species occurs would not be directly impacted, but construction would take place in some areas that are adjacent to potential coastal salt marsh habitat. These potential direct impacts would be less than significant and avoided or further minimized by the implementation of **APMs BIO-6**, *Vehicle Speed Limits*; **BIO-7**, *SMHM Surveys*; **BIO-8**, *Excavation Wildlife Safety BMPs*; **BIO-9**, *Workers Environmental Awareness Program (WEAP) Training*; **BIO-3**, *Preconstruction Sweeps*; **BIO-4**, *Sensitive Area Demarcation*; and **BIO-1,** *Restoration of Disturbed Areas*, as further discussed below.




# POWER THE SOUTH BAY PROJECT

## Figure 14: Potentially Impacted Species Habitats

## Alameda Co. and Santa Clara Co., CA

### LEGEND

**Proposed Project Components**

- Overhead Transmission Structure
- Baylands to NRS 230 kV AC Transmission Line (Overhead)
- Baylands to NRS 230 kV AC Transmission Line (Underground)
- Albrae to Baylands 320 kV DC Transmission Line (Overhead)
- Albrae to Baylands 320 kV DC Transmission Line (Underground)
- Newark to Albrae 230 kV AC Transmission Line (Overhead)
- Newark to Albrae 230 kV AC Transmission Line (Underground)
- Optional Trench Location
- Access Road
- HVDC Terminal Site
- Existing Substation Fenceline
- Construction Staging Area
- Biological Resource Survey Area

**Potentially Impacted Species Habitats**

- Burrowing owl, golden eagle and other raptors
- CA Tiger Salamander/CA red legged frog
- California Ridgeway's rail, CA black rail
- Salt marsh harvest mouse
- Tri-colored blackbird
- Vernal pool tadpole shrimp/Vernal pool fairy shrimp
- Western bumblebee/Crotch's bumblebee/ Monarch butterfly
- Western pond turtle
- Western snowy plover

**Vegetation**

- Annual Grassland
- Annual Grassland/Wetland
- Disturbed Annual Grassland/Wetland
- Hardwood Woodland
- Riparian
- Urban/Disturbed
- Vernal Pool
- Wastewater Treatment Pond
- Water
- Wetland

**General Features**

- Don Edwards San Francisco Bay NWR
- Municipal Boundary
- Interstate
- US Route or State Highway
- Railroad
- River or Stream
- Drainage Ditch

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Feet



G:\LS Power Centinela\MXD\Newark PEA\Bio Figures\Figure 14 Potentially Impacted Species Habitats.mxd 5/14/2024 RCQ

Sources: LSPGC 2023; Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.




# POWER THE SOUTH BAY PROJECT

## Figure 14: Potentially Impacted Species Habitats

## Alameda Co. and Santa Clara Co., CA

### LEGEND

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Feet



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# POWER THE SOUTH BAY PROJECT

## Figure 14: Potentially Impacted Species Habitats

## Alameda Co. and Santa Clara Co., CA

### LEGEND

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- Overhead Transmission Structure
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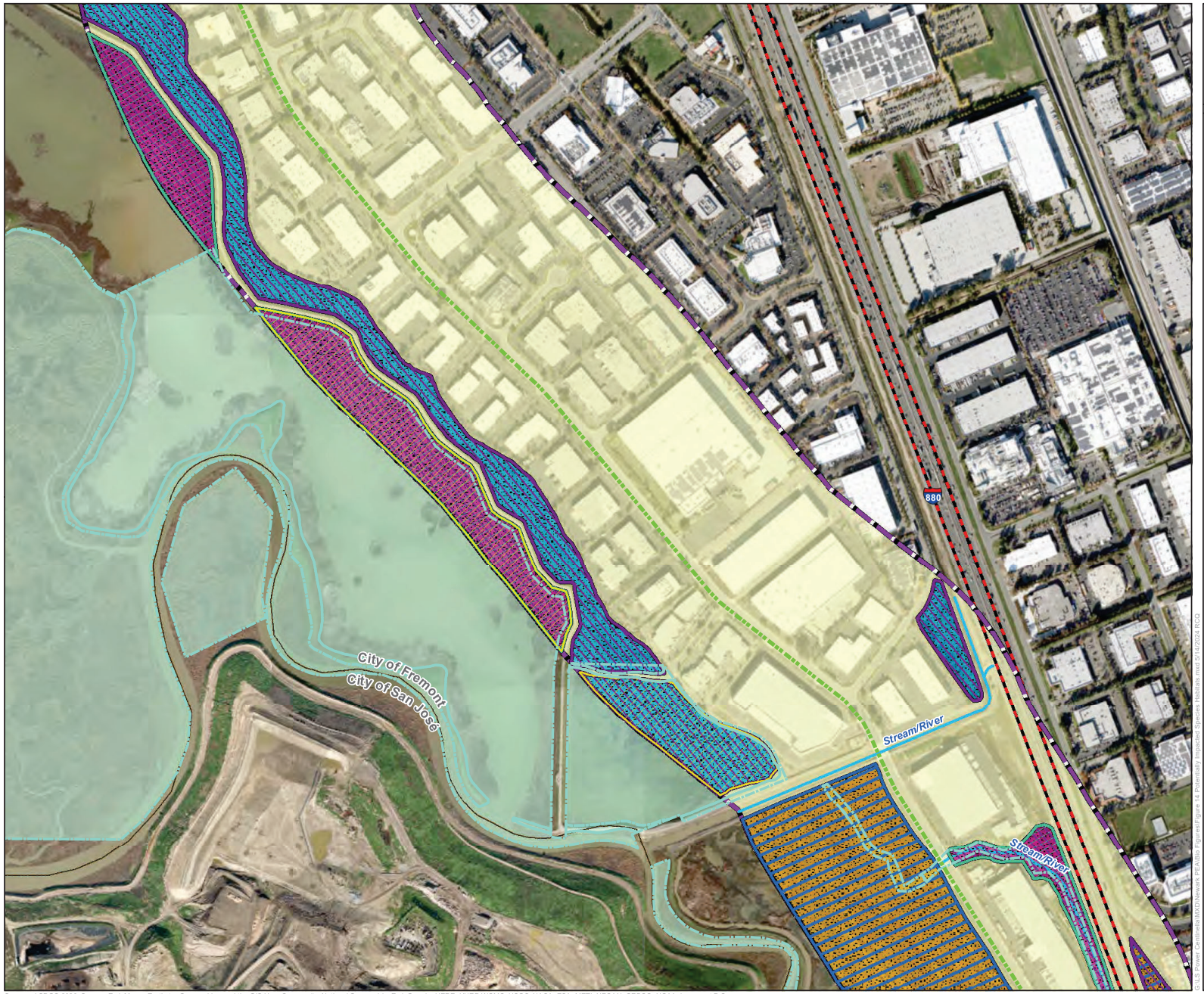


# POWER THE SOUTH BAY PROJECT

## Figure 14: Potentially Impacted Species Habitats

### Alameda Co. and Santa Clara Co., CA

**LEGEND**

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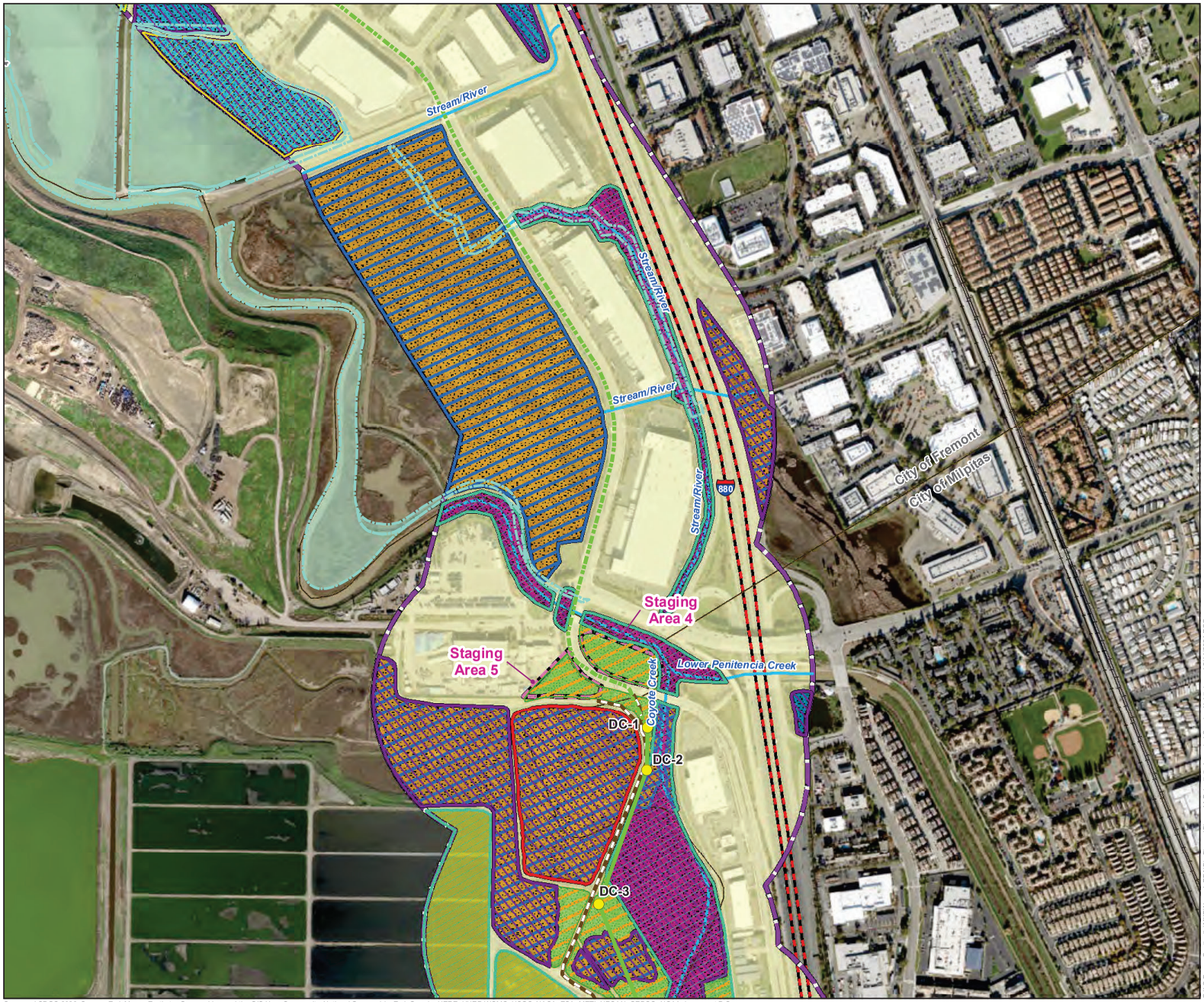


# POWER THE SOUTH BAY PROJECT

## Figure 14: Potentially Impacted Species Habitats

## Alameda Co. and Santa Clara Co., CA

### LEGEND

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# POWER THE SOUTH BAY PROJECT

## Figure 14: Potentially Impacted Species Habitats

## Alameda Co. and Santa Clara Co., CA

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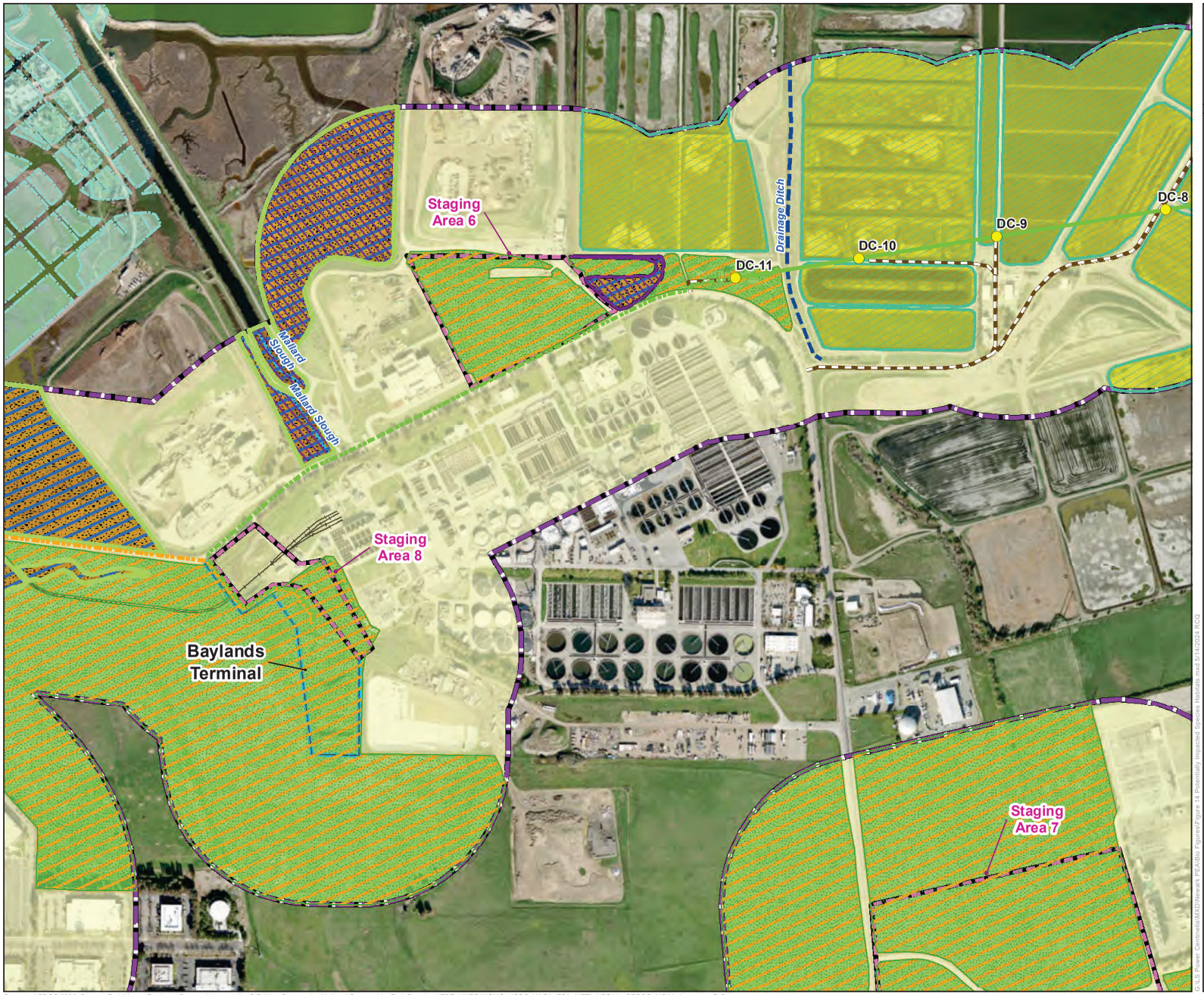


# POWER THE SOUTH BAY PROJECT

## Figure 14: Potentially Impacted Species Habitats

## Alameda Co. and Santa Clara Co., CA

### LEGEND

**Proposed Project Components**

- Overhead Transmission Structure
- Baylands to NRS 230 kV AC Transmission Line (Overhead)
- Baylands to NRS 230 kV AC Transmission Line (Underground)
- Albrae to Baylands 320 kV DC Transmission Line (Overhead)
- Albrae to Baylands 320 kV DC Transmission Line (Underground)
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- Newark to Albrae 230 kV AC Transmission Line (Underground)
- Optional Trench Location
- Access Road
- HVDC Terminal Site
- Existing Substation Fenceline
- Construction Staging Area
- Biological Resource Survey Area

**Potentially Impacted Species Habitats**

- Burrowing owl, golden eagle and other raptors
- CA Tiger Salamander/CA red legged frog
- California Ridgeway's rail, CA black rail
- Salt marsh harvest mouse
- Tri-colored blackbird
- Vernal pool tadpole shrimp/Vernal pool fairy shrimp
- Western bumblebee/Crotch's bumblebee/ Monarch butterfly
- Western pond turtle
- Western snowy plover

**Vegetation**

- Annual Grassland
- Annual Grassland/Wetland
- Disturbed Annual Grassland/Wetland
- Hardwood Woodland
- Riparian
- Urban/Disturbed
- Vernal Pool
- Wastewater Treatment Pond
- Water
- Wetland

**General Features**

- Don Edwards San Francisco Bay NWR
- Municipal Boundary
- Interstate
- US Route or State Highway
- Railroad
- River or Stream
- Drainage Ditch

0 500 1,000 1,500 2,000
Feet



Sources: LSPGC 2023; Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.




# POWER THE SOUTH BAY PROJECT

## Figure 14: Potentially Impacted Species Habitats

## Alameda Co. and Santa Clara Co., CA

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## Figure 14: Potentially Impacted Species Habitats

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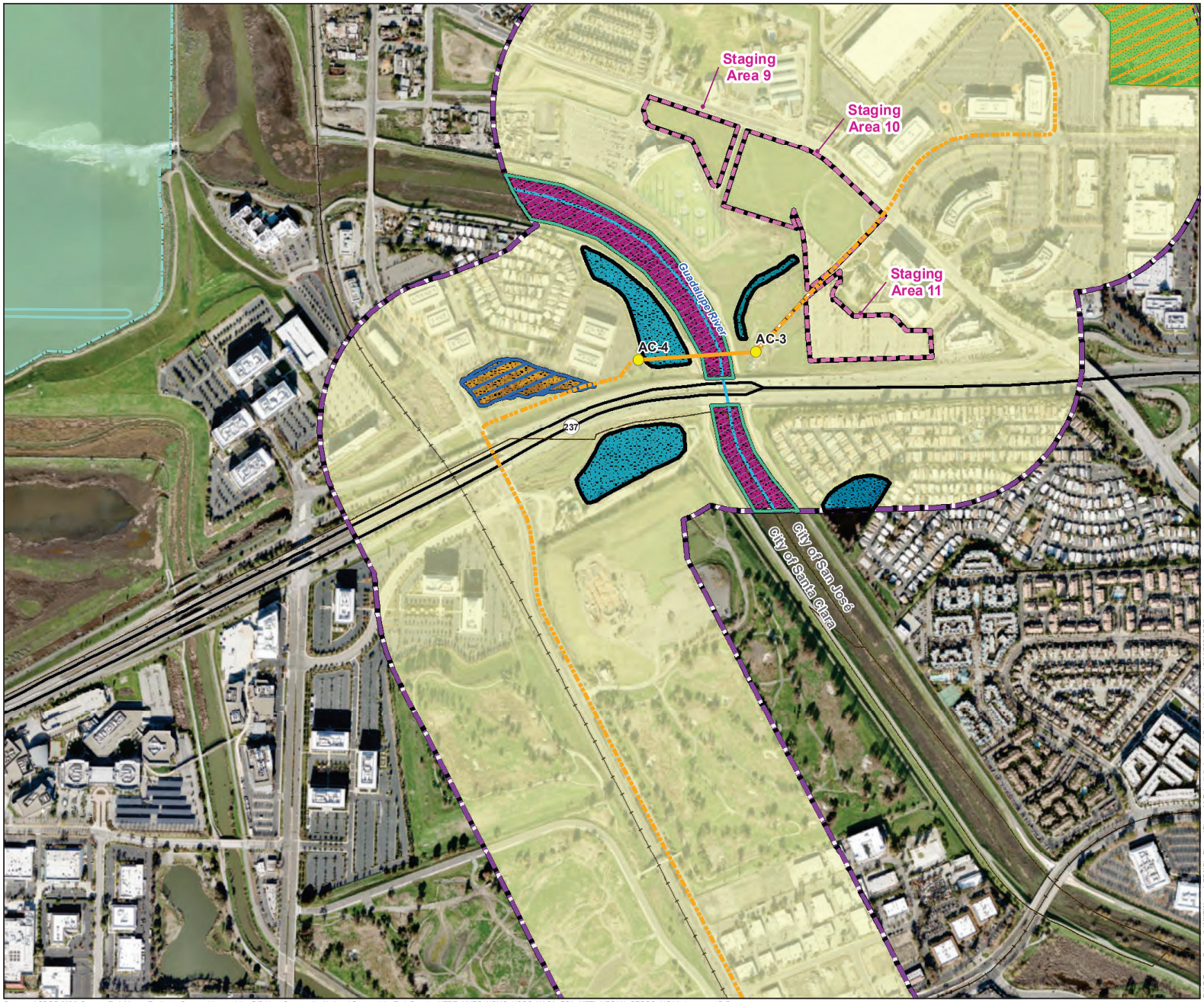


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## Figure 14: Potentially Impacted Species Habitats

## Alameda Co. and Santa Clara Co., CA

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# POWER THE SOUTH BAY PROJECT

## Figure 14: Potentially Impacted Species Habitats

## Alameda Co. and Santa Clara Co., CA

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A majority of the impacts would be limited to previously disturbed roadways and grassland habitat, and any temporary impacts would be restored (**APM BIO-1**). Protocol surveys and preconstruction sweeps (**APMs BIO-3** and **BIO-7**) would identify any suitable habitat in which SMHM could occur that are close to proposed Project construction areas. Because protocol surveys using standard guidelines are not limited to a particular survey window, surveys can be conducted year-round by a USFWS-approved biologist.

If sensitive coastal salt marsh habitat is identified within wetland habitat types, it would be clearly marked and avoided by Proposed Project construction activities to the extent practicable (**APMs BIO-4** and **BIO-7**). Coastal salt marsh habitat occurs in close vicinity to the Survey Area within wetland habitat types, but no impacts to coastal salt marsh are expected to occur. A qualified biological monitor would be present during construction activities that would occur within 500 feet of SMHM habitat, including the area west of Coyote Creek and south of Staging Area 5 and any other areas within 500 feet of identified habitat (**APM BIO-7**). The number of vehicles during construction of the Proposed Project would be substantially higher than during operation, but the number of vehicles associated with construction would not substantially increase the total number of public vehicles that move through these areas during any given time period. Throughout construction and operation, vehicles would stay on established roadways, and the speed limit would be 15 miles per hour (mph) (**APM BIO-6**), minimizing the risk of vehicle strikes. SMHM would likely avoid the construction area during construction activities due to the increased noise and activity. All trenches and holes that could create an entrapment hazard for SMHM would be covered or have wildlife escape ramps installed (**APM BIO-8**) to minimize the potential for mortality due to entrapment. If SMHM habitat cannot be avoided by construction activities, CDFW and USFWS would be consulted, and any additional necessary permit(s) or authorizations would be obtained prior to disturbance.

Indirect impacts to SMHM during construction could include decreased suitability of habitat in the vicinity of the Proposed Project caused by factors such as increased noise from construction activities, vehicles, and O&M activities, as well as increased human activity. Impacts from lighting are not anticipated as nighttime construction is not proposed near SMHM habitat. Indirect impacts would be less than significant and would be avoided or further minimized by the implementation of **BIO-9** and **BIO-1**. Noise from construction activities can affect wildlife in multiple ways, such as depressing breeding success by acoustical masking and interfering with hunting activities. Construction activities could disrupt breeding and foraging activities. Noise during construction activities in the vicinity of potentially suitable areas is expected to be short-term in nature and minimal and would be even lower during operation. Additionally, the area is already heavily populated and has a high background noise level to begin with. A WEAP training would be administered to all workers that would educate them on the potential for indirect impacts to this mammal and ways to reduce these impacts (**APM BIO-9**). Additionally, all temporary impacts would be restored per **APM BIO-1**, minimizing the impact of decreased suitability of habitat.

The SMHM is not a covered species under the Santa Clara Valley HCP. If impacts are identified during species-specific surveys, the take for this species would be covered under a Federal and/or State Incidental Take Permit (ITP) in consultation with CDFW and USFWS. The above measures would reduce impacts to any other sensitive mammal species that have a low chance to occur within the Survey Area.

#### 5.4.1.2.2. Avian Species

**California Ridgway's Rail and California Black Rail**

Direct impacts to California Ridgway's rail and California black rail could occur in marsh habitat north of the proposed Baylands terminal site in the area around Artesian Slough and to the northeast around Coyote Creek and Lagoon (**Figure 14**). Direct impacts could include potential vehicle strikes during Proposed Project construction and operation, removal of nesting habitat from construction and vegetation clearing activities, potential impacts to foraging or breeding behavior from increase noise and human presence (including potential nest abandonment/failure), and collision and electrocution risk from Proposed Project structures during operation. There would be up to approximately 0.31 acres of temporary impacts and no permanent impacts to suitable nesting or foraging habitat).

The existing urban development within the Proposed Project vicinity already creates collision risks for avian species, and the number of tall towers and other potential obstacles in the area would only be increased slightly by the construction of the Proposed Project (in association with the two new high-voltage direct current [HVDC] terminals and limited sections of overhead transmission line).The risks of collision and electrocution associated with this increase would be minimized by using appropriate Avian Power Line Interaction Committee (APLIC) methods included in the Proposed Project design.

Potential direct impacts would be less than significant and avoided or further minimized by the implementation of **APMs BIO-6**; **BIO-11**, *Special-Status Bird Surveys*; **BIO-12**, *Nesting Bird Protection Measures*; **BIO-9**; **BIO-3**; **BIO-4**; and **BIO-1**, as further discussed below. California Ridgeway's rail and California black rail protocol surveys using standard guidelines should be conducted between January 15 and April 15 (surveys for other marsh-dwelling special-status birds may be able to be conducted simultaneously).

**Western Snowy Plover and California Least Tern**

Direct impacts to western snowy plover and least tern within suitable habitat associated with diked salt evaporation ponds in the areas within Don Edwards San Francisco Bay NWR south of Cushing Parkway and north and west of the proposed Baylands terminal site (**Figure 14**) are not expected to occur. While there is potential nesting habitat within the Survey Area, there is no nesting habitat near any construction work areas and none would be disturbed; there is no potential to impact active nests. Furthermore, due to the distance from construction activities to potentially suitable habitat indirect impacts would not be expected.

Potential direct and indirect impacts would be less than significant and avoided or further minimized by the implementation of **APMs BIO-6**; **BIO-11**, *Special-Status Bird Surveys*; **BIO-12**, *Nesting Bird Protection Measures*; **BIO-9**; **BIO-3**; **BIO-4**; and **BIO-1**, as further discussed below.

**Burrowing Owl**

Direct impacts to burrowing owl within suitable native and non-native grassland habitat in the area surrounding the existing Newark substation, Don Edwards San Francisco Bay NWR along Cushing Parkway, the SC PAL BMX Track and areas that used to be the Santa Clara golf and tennis club,

and the proposed Baylands terminal (**Figure 14**). Burrowing owls are known to nest in the vicinity of the proposed Baylands terminal site at a nearby burrowing owl conservation area.

Direct impacts could include potential vehicle strikes during Proposed Project construction and operation, removal of nesting habitat from construction and vegetation clearing activities, and collision and electrocution risk from Proposed Project structures during construction and operation. However, risks of collision and electrocution associated with this increase would be minimized by using appropriate APLIC methods included in the Proposed Project design. Potential indirect impacts to foraging or breeding behavior from increased noise and human presence (including potential nest abandonment/failure) could result from the Proposed Project. The Proposed Project would result in up to approximately 82.51 acres of temporary impacts to potentially suitable nesting and foraging habitat and permanent loss of approximately 8.65 acres of potentially suitable nesting and foraging habitat (native and non-native grassland habitat).

Potential direct impacts would be less than significant and avoided or further minimized by the implementation of **APMs BIO-6**; **BIO-11**, *Special-Status Bird Surveys*; **BIO-12**, *Nesting Bird Protection Measures*; **BIO-9**; **BIO-3**; **BIO-4**; and **BIO-1**, as further discussed below. Additional burrowing owl protections may be required in the vicinity of the proposed Baylands terminal site such as constructing berms or placing haybales to block construction activities from the known burrowing owl breeding and foraging areas (**APM BIO-11**). Impacts from night lighting at the proposed HVDC terminal facilities are not anticipated because burrowing owls are diurnal, meaning they are active during the day. They are typically in their burrows at night and lighting would not impact them. Burrowing owl protocol surveys using standard guidelines should be conducted between April 15 and July 15.

Indirect impacts are expected to be minimal given the amount of existing infrastructure and high levels of human activity in the immediate vicinity of suitable habitat throughout the Study Area, although construction of the fence could deter burrowing owls from nesting in grassland habitat near the existing Newark substation and proposed Baylands terminal.

**Golden Eagle**

Impacts to golden eagles could occur south of the proposed Baylands terminal (**Figure 14**). There is a known nest approximately 1,000 feet south of the proposed Baylands terminal site. Indirect impacts from noise and increased human activity are expected to be low given the current high levels of industrial facilities and human activity east, north, and southwest of the proposed Baylands terminal.

Direct impacts could include potential vehicle strikes during Proposed Project construction and operation, nest abandonment from construction activities, and collision and electrocution risk from Proposed Project structures during operation. Direct impacts from potential vehicle strikes would be low due to the reduced speeds of construction equipment vehicles on the local roads. The risks of collision and electrocution would be minimized by using appropriate APLIC methods that have been included in the project design. The Proposed Project would result in up to approximately 82.51 acres of temporary impacts to foraging habitat and permanent loss of approximately 8.65 acres of foraging habitat (native and non-native grassland habitat).

Potential direct impacts would be less than significant and avoided or further minimized by the implementation of **APMs BIO-6**; **BIO-11**, *Special-Status Bird Surveys*; **BIO-12**, *Nesting Bird Protection Measures*; **BIO-13**, *Raptor Surveys;* **BIO-14,** *Golden Eagle Measure***; BIO-9**; **BIO-3**; **BIO-4**; and **BIO-1**, as further discussed below. Protocol surveys using standard guidelines for bald and

golden eagles require aerial surveys within two miles of impact areas between February 1 and May 15 (ground-based surveys may be considered in lieu of aerial surveys).

**Other Raptors**

Direct impacts to other raptors could occur south in the survey area near trees that could be used for nesting in hardwood woodland habitat. Raptors could nest within urban and disturbed areas as well. Direct impacts could include potential vehicle strikes during Proposed Project operation, potential impacts to foraging or breeding behavior from increased noise and human presence (including potential nest abandonment/failure), and collision and electrocution risk from Proposed Project structures during operation. The Proposed Project would result in up to approximately 82.51 acres of temporary impacts to potentially suitable nesting and foraging habitat and permanent loss of approximately 8.65 acres of potentially suitable nesting and foraging habitat (hardwood woodland habitat).

Potential direct impacts would be less than significant and avoided or further minimized by the implementation of **APMs BIO-6**; **BIO-11**, *Special-Status Bird Surveys*; **BIO-12**, *Nesting Bird Protection Measures*; **BIO-13**, *Raptor Surveys;* **BIO-9**; **BIO-3**; **BIO-4**; and **BIO-1**, as further discussed below.

Raptor surveys would be conducted concurrently with bald and golden eagle surveys.

**Tri-colored Blackbird**

Direct impacts to tri-colored blackbird could occur in saline and subsaline marshland, annual grasslands, salt and sewage ponds, and the riparian areas of Coyote Creek and the Guadalupe River immediately adjacent to and up to a mile from the proposed Baylands terminal site and Coyote Creek near the San José-Santa Clara RWF and near Alviso within the Don Edwards San Francisco Bay NWR (**Figure 14**). Direct impacts could include potential vehicle strikes during Proposed Project construction and operation, removal of nesting habitat from construction and vegetation clearing activities, potential impacts to foraging or breeding behavior from increased noise and human presence (including potential nest abandonment/failure), and collision and electrocution risk from Proposed Project structures during operation. The Proposed Project would result in up to approximately 7.01 acres of temporary impacts to potentially suitable nesting and foraging habitat and permanent loss of approximately 0.02 acre of potentially suitable nesting and foraging habitat.

Potential direct impacts would be less than significant and avoided or further minimized by the implementation of **APMs BIO-6**; **BIO-11**, *Special-Status Bird Surveys*; **BIO-12**, *Nesting Bird Protection Measures*; **BIO-9**; **BIO-3**; **BIO-4**; and **BIO-1**, as further discussed below. Tricolored blackbird protocol nesting surveys using standard guidelines should be conducted between February 1 and June 15 (surveys for other marsh-dwelling special-status birds may be able to be conducted simultaneously).

The permanent loss of approximately 0.02 acres of potentially suitable foraging and potential nesting habitat (including annual grassland, wastewater treatment ponds, riparian, and wetland habitat types) for special-status avian species is unavoidable, but temporary impact areas would be restored (**APM BIO-1**). The high quantity of similar habitat (annual grassland, wetland and marsh, and riparian) in the region would minimize the potential for impacts to special-status avian species caused by the loss of these habitats. Additional similar nesting sites exist within these habitats. Focused surveys and preconstruction sweeps (**APMs BIO-3**, **BIO-11**, **BIO-13**, and **BIO-15**, *Nesting Bird Surveys*) would identify any trees or other vegetation that may be housing nests, and nests

would be clearly marked with appropriate buffers and avoided by construction activities (**APMs BIO-4**, **BIO-12**, **BIO-13**, and **BIO-15**). A qualified biological monitor would be present during all construction activities that could potentially impact special-status birds (**APMs BIO-11**, **BIO-13**, and **BIO-15**). During the migratory bird nesting or breeding season (generally February 15 through August 31), vegetation removal would be avoided, if feasible. If it is not feasible to avoid those activities during the breeding season, then a nesting bird survey would be conducted in advance of those activities (**APMs BIO-12** and **BIO-15**). Additionally, the majority of the Proposed Project is expected to be constructed within existing disturbed roadways and temporary work areas are also expected to be within previously disturbed habitats; therefore, disturbance to previously undisturbed areas is expected to be minimal.

The number of vehicles associated with the Proposed Project during construction would be substantially higher than during operation, but the existing background level of vehicles within the work area is already very high; therefore, the Proposed Project would not contribute substantially to this level. Throughout construction and operation, vehicles would stay on established roadways and the speed limit would be 15 mph (**APM BIO-6**), minimizing the risk of vehicle strikes or crushing of ground-nesting bird nests. Avian species would likely temporarily avoid the work area during construction activities due to the increased noise and activity. The existing urban development within the Proposed Project vicinity already create collision risks for avian species, and the number of tall towers and other potential obstacles in the area would only be increased slightly by the construction of the Proposed Project (in association with the two new HVDC terminals and limited sections of overhead transmission line). The risks of collision and electrocution associated with this increase would be minimized by using appropriate APLIC methods included in the project design. A WEAP would be administered to all workers and would include information to educate them on special-status avian species, nests, and appropriate buffers (**APM BIO-9**).

Indirect impacts to special-status avian species during construction and operation could include decreased suitability of habitat in the vicinity of the Proposed Project caused by factors such as increased noise from construction activities and vehicles, as well as increased human activity. Indirect impacts would be less than significant and would be avoided or further minimized by the implementation of **APMs BIO-1**, **BIO-10**, and **BIO-9**. Noise from construction activities could affect avian species in multiple ways, such as depressing breeding success by acoustical masking, interfering with intra-specific communication, and interfering with the detection of predators. Indirect impacts from lighting are not expected because nighttime construction is not proposed near suitable habitat. Construction activities could disrupt breeding and foraging activities, prevent birds from tending to nests, or cause birds to flush from their nests, endangering eggs and chicks. Construction of the fence could deter burrowing owls from nesting in grassland habitat near the existing Newark substation and proposed Baylands terminal. Noise during construction activities is expected to be short-term in nature and minimal and would not substantially differ from the high levels of noise disturbance already associated with the Proposed Project area. Night lighting would be motion detecting, which would reduce potential light-related impacts to birds that may be active at night (**APM BIO-10**). A WEAP training would be administered to all workers that would educate them on the potential for indirect impacts to special-status birds and ways to reduce these impacts (**APM BIO-9**). Additionally, all temporary impacts would be restored per **APM BIO-1**, minimizing the impact of decreased suitability of habitat.

The above measures would also reduce potential risk to other special-status avian species that have a potential to occur within the Survey Area as well as any bat species that may have the potential to occur within the Survey Area to less than significant.

Tricolored blackbird and burrowing owl are a covered species under the Santa Clara Valley HCP; if impacts are identified during species-specific surveys, the take for these species would be covered either under the HCP or covered under a State ITP in consultation with CDFW. If impacts are identified during species-specific surveys for the other State-listed avian species that are not covered under the Santa Clara Valley HCP (western snowy plover, California black rail, California clapper rail, burrowing owl, bald eagle, and any other avian species that are identified), the take would likely be covered under a Federal or State ITP in consultation with USFWS and CDFW.

#### 5.4.1.2.3. Invertebrate Species

USFWS-designated critical habitat for Contra Costa goldfields and vernal pool tadpole shrimp could be directly impacted by the Proposed Project in the vicinity of the Don Edwards San Francisco Bay NWR along Cushing Parkway; where a mapped section of designated critical habitat extends along Cushing Parkway. This area would be directly impacted alongside the Cushing Parkway bridge, but the impacts would be less than significant in this area since all impacts would be within a designated 10-foot utility easement next to the bridge (and 30-foot operational and maintenance utility easement). Focused surveys and preconstruction sweeps would be conducted for these species, and qualified biological monitors would be present during all construction activities (**APMs BIO-2**, **BIO-3**, and **BIO-16**). All wetlands and other aquatic resources including vernal pools would be delineated (**APM BIO-19**), and construction activities in the vicinity of wetlands and waterways would be restricted to the dry season to the maximum extent practicable, reducing the potential for impacts to vernal pools that are occupied by vernal pool tadpole shrimp (**APM BIO-17**). Furthermore, LS Power would coordinate with the USFWS and other applicable agencies, to determine if permits would be required (**APM BIO-16***).*

Direct impacts to the special-status invertebrate species (Monarch butterfly, large marble butterfly, Crotch's bumblebee, Western bumblebee [grassland and disturbed grassland habitat], vernal pool tadpole shrimp, and vernal pool fairy shrimp) could include potential vehicle strikes or crushing during construction and operation, removal of suitable flowering vegetation for butterflies and bees during construction and vegetation clearing activities, and permanent loss of approximately 8.63 acres of potentially suitable habitat (annual grassland) (**Figure 14**). Suitable habitats for each of the invertebrate species would be more refined after protocol surveys and wetland delineations have been conducted (**APMs BIO-4**; **BIO-16**, *Invertebrate Species Surveys*; and **BIO-19,** *Wetland and Aquatic Resources Delineations*). Potential for direct impacts would be low and avoided or further minimized by the implementation of **APMs BIO-6**, **BIO-9**, **BIO-3**, **BIO-4**, **BIO-16**, and **BIO-1**, as further discussed below. Additionally, **APM BIO-17**, *Wetland, Vernal Pool, and Waterway Construction Timing Restrictions* would be implemented to minimize the chance of encountering vernal pool tadpole and fairy shrimp. Vernal pool tadpole shrimp have mapped CNDDB occurrences in the Don Edwards San Francisco Bay NWR in the vicinity of Cushing Parkway.

The permanent loss of approximately 8.63 acres of potentially suitable grassland is unavoidable, but temporary impact areas (88.53 acres of annual grassland, riparian, and wetland habitat types would be restored [**APM BIO-1**]. The high quantity of similar habitat (annual grassland, wetland, and riparian) in the region would minimize the potential for impacts to special-status butterfly and bee species caused by the loss of these habitats, but vernal pool tadpole and fairy shrimp are not as mobile, and temporary impacts may be as harmful as permanent impacts. These areas would be avoided to the maximum extent practicable by construction activities per **APM BIO-4**. Protocol surveys using standard guidelines during the appropriate time periods for fairy shrimp, tadpole shrimp, and bumblebees and butterflies (all grasslands identified in **Table 6**) and preconstruction sweeps (**APMs BIO-3** and **BIO-16**) would identify any vernal pools, host plants, butterfly roosting

sites, and bumblebee nests, which would then be clearly marked for avoidance during construction activities, as necessary (**APMs BIO-4** and **BIO-16**). If these areas cannot be avoided, USFWS and/or CDFW would be consulted. A qualified biological monitor would be present during all construction activities that could potentially impact special-status invertebrates (**APM BIO-16**). Additionally, the majority of the Proposed Project is expected to be constructed within existing disturbed roadways, and temporary work areas are also expected to be within previously disturbed habitats; therefore, the disturbance to previously undisturbed areas is expected to be minimal. Throughout construction and operation, vehicles would stay on established roadways and the speed limit would be 15 mph (**APM BIO-6**), minimizing the risk of vehicle strikes or crushing of suitable flowering plant species. A WEAP would be administered to all workers and would include information to educate them on special-status invertebrate species, their habitats, and their preferred flowering plants (**APM BIO-9**).

Indirect impacts to special-status invertebrate species during construction and operation could include decreased suitability of grassland and disturbed grassland habitat in the vicinity of the Proposed Project caused by factors such as runoff, sedimentation, invasive species proliferation, increased noise from construction activities and vehicles, as well as increased human activity. A WEAP training would be administered to all workers that would educate them on the potential for indirect impacts to special-status invertebrates and ways to reduce these impacts (**APM BIO-9**). Additionally, all temporary impacts would be restored per **APM BIO-1**, minimizing the impact of decreased suitability of habitat. A SWPPP would be implemented for the Proposed Project, which would reduce impacts from runoff and sedimentation. Additionally, all vehicles would be washed prior to entering natural areas on the Proposed Project (**APM BIO-5**), reducing the potential for introduction of invasive weeds that could spread. Indirect impacts would be less than significant and would be avoided or further minimized by the implementation of these APMs.

If impacts are identified during species-specific surveys for vernal pool tadpole shrimp, vernal pool fairy shrimp, Monarch butterflies, Western bumblebee, or Crotch's bumblebee which are not covered under the Santa Clara Valley HCP, the take would be covered under a Federal ITP (vernal pool tadpole shrimp, Federally endangered species; vernal pool fairy shrimp, Federally threatened species; monarch butterfly, Federal candidate species) or State ITP (Western bumblebee, State candidate species; Crotch's bumblebee, State candidate species) in consultation with CDFW or USFWS.

**Fish Species**

There is NMFS-designated critical habitat for the Central California Coast DPS of steelhead along Coyote Creek and the Guadalupe River, and designated critical habitat for the Southern DPS of green sturgeon occurs within Coyote Creek, San Tomas Aquino Creek, the Guadalupe River near Coyote Creek Lagoon in a drainage that passes under Fremont Boulevard, along a tributary to Coyote Creek that passes under Cushing Parkway just east of the Fremont Boulevard and Cushing Parkway intersection, and within estuary areas associated with San Francisco Bay. Longfin smelt are also known to use Coyote Creek and may use the Guadalupe River for breeding purposes. The proposed transmission line would be bored underneath several of these critical habitat areas using horizontal directional drilling (HDD), which would not impact any of the waterways that are critical habitats. Additionally, construction activities would take place in close proximity to NMFS-designated critical habitat for steelhead and green sturgeon along the main branch of Coyote Creek.

Direct impacts to the special-status fish species (steelhead, longfin smelt, green sturgeon) are not anticipated due to the fact that all Proposed Project construction impact areas are outside of waterways. Some construction activities would either cross or be in the vicinity of Coyote Creek,

Guadalupe River, Lower Penitencia Creek, Agua Caliente Creek, Mallard Slough, and several other unnamed streams or drainage ditches that could be used by these fish species. It is anticipated that all creeks, rivers, and streams would be spanned by overhead lines (Guadalupe River) or drilled under using HDD or jack-and-bore trenchless techniques under these waterways if conventional trenching is not feasible (all stream crossings that go under the roads where the line would be undergrounded). Potential direct impacts would be avoided or further minimized by the implementation of **APMs BIO-9**, **BIO-4**, and **BIO-1**, as further discussed below.

A WEAP would be administered to all workers and would include information to educate them on steelhead, longfin smelt, green sturgeon, and their potential for occurrence within waterways (**APM BIO-9**). Any sensitive areas for steelhead, longfin smelt, and green sturgeon (including Coyote Creek and the Guadalupe River in areas where construction activities are not planned) would be clearly marked and avoided to the extent practicable by construction activities (**APM BIO-4**). Once construction activities are completed, all temporary impact areas would be restored, to reduce impacts to habitats in the vicinity of the waterways (**APM BIO-1**). Impacts to streams that are also NMFS-designated critical habitat are not planned, but the Proposed Project would aerially cross or go underneath several of these critical habitat areas, such as the Guadalupe River, Coyote Creek, and several unnamed streams in the vicinity of Coyote Creek. If any impacts to these streams are identified during any preconstruction surveys or during the planning process, permits and consultations with CDFW and NMFS may be required to address potential impacts to steelhead, longfin smelt, and green sturgeon and steelhead and green sturgeon-designated critical habitat.

Indirect impacts to steelhead, longfin smelt, and green sturgeon during construction and operation could include decreased water quality and suitability of habitat in the vicinity of the Proposed Project caused by factors such as spills/leaks into waterways, increased noise from construction activities, as well as increased human activity. A WEAP training would be administered to all workers (**APM BIO-9**) to educate them on the potential for indirect impacts and to ensure that no spills, leaks, or trash dumping occurs within waterways, reducing the potential for water quality issues. Temporary impact areas within the vicinity of Coyote Creek and other waterways would be restored following construction, further reducing the potential impacts to habitat suitability (**APM BIO-1**). With the implementation of **APM BIO-17**, construction activities would be performed during the dry season to the maximum extent practicable when there is a very low chance for any of the special-status fish species to be using Coyote Creek or the Guadalupe River, further reducing the potential for indirect impacts related to increased noise and human activity. Indirect impacts would be less than significant and would be avoided or further minimized by the implementation of these APMs.

#### 5.4.1.2.4. Amphibian and Reptile Species

Direct impacts to the special-status amphibian and reptile species California red-legged frog (CRLF) (vicinity of Coyote Creek and associated lakes and ponds) (**Figure 14**), western pond turtle (WPT) (open water habitats exist along Coyote Creek, Agua Caliente Creek, Guadalupe River, and numerous ponds and lakes; brackish estuarine areas exist in the vicinity of Don Edwards San Francisco Bay NWR and the San Francisco Bay) (**Figure 14**), and CTS could include potential direct mortality due to vehicle strikes during Proposed Project construction and operation, removal of vegetation that could be used for breeding and cover during construction and vegetation clearing activities, and temporary loss of approximately 88.65 acres and permanent loss of approximately 8.66 acres of potentially suitable breeding and upland dispersal habitat (annual grassland, wastewater treatment ponds, riparian, and wetland habitat types; see **Table 6** for impacts to each habitat type). The areas with the potential for occurrence of these species are in Proposed Project work areas near Coyote Creek and associated lakes and ponds, as well as among vernal pools and

annual grassland/wetland of the Don Edwards San Francisco Bay NWR near Cushing Parkway, though these areas are in the vicinity of highly developed areas. Potential direct impacts would be less than significant and avoided or further minimized by the implementation of **APMs BIO-6**; **BIO-18**, *Special Status Amphibian Surveys*; **BIO-10**; **BIO-9**; **BIO-3**; **BIO-4**; **BIO-1**; and **BIO-17**, as further discussed below. Protocol surveys following standard CDFW guidelines for CRLF and CTS would be conducted in March, April, and May, as required. They would be conducted in potential breeding habitats within 0.6 mile of potential impact areas.

The permanent loss of approximately 8.66 acres of potentially suitable upland dispersal habitat is unavoidable, but temporary impact areas (approximately 88.65 acres of annual grassland, wastewater treatment ponds, riparian, and wetland habitat types; see **Table 6** for impacts to each habitat type) would be restored (**APM BIO-1**). The high quantity of similar habitat (riparian areas, annual grassland, and wetlands) in the region would minimize the potential for impacts to special-status amphibian and reptile species caused by the loss of these habitats. Protocol or focused surveys following standard guidelines (**APM BIO-18**) and preconstruction sweeps (**APM BIO-3**) would identify areas where these species may occur, and any sensitive areas for these species (such as wetlands and waterways) that are identified would be clearly marked and avoided to the extent practicable by construction activities (**APM BIO-4**). If these areas are determined to contain the species and cannot be avoided, USFWS and/or CDFW would be consulted. A qualified biological monitor would be present during all construction activities that could potentially impact special-status amphibians and reptiles (**APM BIO-18**). Additionally, the majority of the Proposed Project is expected to be constructed within existing disturbed roadways, and temporary work areas are also expected to be within previously disturbed habitats; therefore, the disturbance in previously undisturbed areas is expected to be minimal.

The number of vehicles during construction would be higher than during operation, but the existing background level of vehicles within the work area is already very high; therefore, the Proposed Project would not substantially contribute to this level. Throughout construction and operation, vehicles would stay on established roadways and the speed limit would be 15 mph (**APM BIO-6**), minimizing the risk of vehicle strikes or crushing individuals and breeding sites. A WEAP would be administered to all workers and would include information to educate them on special-status amphibian and reptile species and refuge locations (**APM BIO-9**). Additionally, night work would be avoided to the extent practicable during construction and is not expected during operations except during emergencies (**APM BIO-10**), which is when the amphibian species can be more active. The construction in the vicinity of waterways, wetlands, and vernal pools, such as along Cushing Parkway in the vicinity of the Don Edwards San Francisco Bay NWR, would be timed for the dry season to the extent practicable (**APM BIO-17**), when these amphibians and reptiles are less likely to be using these areas for movement and/or breeding purposes.

Indirect impacts to reptiles and amphibians during construction and operation could include decreased water quality and suitability of habitat and movement corridors in the vicinity of the Proposed Project caused by factors such as spills/leaks into waterways, runoff, sedimentation, invasive species proliferation, increased noise from construction activities and increased human activity, and modification of the waterway. A WEAP training would be administered to all workers (**APM BIO-9**) to educate them on the potential for direct impacts and to ensure that no spills, leaks, or trash dumping occurs within waterways, wetlands, or vernal pools, reducing the potential for water quality issues. A SWPPP would be implemented for the Proposed Project, which would reduce impacts from runoff, spills/leaks, and sedimentation. Additionally, all vehicles would be washed prior to entering natural areas on the Proposed Project site (**APM BIO-5**), reducing the potential for invasive weeds to spread. Temporary impact areas within wetland, vernal pool, and riparian habitats would be restored following construction, further reducing the potential impacts to habitat suitability

(**APM BIO-1**). Indirect impacts would be less than significant and would be avoided or further minimized by the implementation of these APMs.

CRLF, WPT, and CTS are all covered species under the Santa Clara Valley HCP; if these species are confirmed to be present during species-specific surveys, the take for these species would be covered either under the HCP or under a Federal and/or State ITP in consultation with USFWS and CDFW.PG&E Substation Modifications

**PG&E Substation Modifications**

In order to integrate the proposed HVDC terminals and new Albrae to Baylands 320 kilovolt (kV) direct current (DC) transmission line into the existing transmission system, PG&E would be required to perform modifications at their existing Newark substation. The Newark substation modifications would occur within and adjacent to the existing substation (located entirely within PG&E fee-owned property). The existing Newark substation facility does not currently support candidate, sensitive, or special status species or habitats; however, the area within PG&E property north of the substation fence, where overhead structure AC-1 is proposed, consists of annual grasslands and vernal pools that house potential habitat for special-status species such as CTS, vernal pool fairy shrimp, and vernal pool tadpole shrimp (there have been mapped CNDDB occurrences of vernal pool tadpole shrimp in the vicinity of existing Newark substation), as well as foraging habitat for raptors and potential breeding and foraging habitat for burrowing owl. Construction of the overhead structure adjacent to the substation fence would result in approximately 1.07 acres of temporary impacts and 0.50 acre of permanent impacts (see **Table 7**, *Impacts by Vegetation Community for PG&E-owned Property* for impact numbers by habitat type).

**Table 7: Impacts by Vegetation Community for PG&E-owned Property**

| Habitat Type | Proposed Project Component | Temporary Impact Acreage | Permanent Impact Acreage |
|---|---|---|---|
| **Annual Grassland** | Newark Substation Modification | 0 | <0.01 |
| | Overhead Structures (AC-1 and AC-2) | 0 | <0.01 |
| | Overhead Work Area | 0.92 | 0 |
| | Distribution Span to be transferred Underground | 0.06 | 0 |
| **Disturbed/ Urban** | Newark Substation Modification | 0 | 0.50 |
| | Overhead Work Area | <0.01 | 0 |
| **Vernal Pool** | Overhead Work Area | 0.09 | 0 |
| **Totals** | N/A | **1.07** | **0.5** |
| Note: Totals in this table may not sum accurately due to rounding. | | | |

PG&E would implement **Field Protocols (FPs) FP-1** through **FP-18** that are derived from the PG&E Bay Area O&M HCP as well as construction BMPs. The PG&E FPs include standard measures aimed at avoiding or minimizing potential adverse effects on biological resources, especially indirect effects as could occur during their scope of work. The FPs address potential biological resources impacts including nesting birds, wetlands and vernal pool impacts, revegetation of disturbed areas, indirect and nuisance impacts, and water quality. The full FPs are listed in **Section 5.4.7**, *PG&E Field Protocols and Best Management Practices*. In addition, PG&E would implement **BMPs BIO-1** Burrowing Owl; and **BIO-2**, *Nesting Birds*. Therefore, impacts would be less than significant.

**SVP Substation Modifications**

In order to integrate the proposed HVDC terminals and new Albrae to Baylands 320 kV DC transmission line into the existing transmission system, Silicon Valley Power (SVP) would be required to perform modifications at their existing NRS substation (refer to **Section 3.3.5**). The NRS substation modifications would occur within the existing substation facility within paved, disturbed, and developed areas. The existing NRS substation facility is entirely developed, consisting of 13.52 acres of urban/disturbed areas, and does not currently support candidate, sensitive, or special-status species or habitats. Therefore, no impacts would result.

### 5.4.2. Impacts to Aquatic and Jurisdictional Resources

There are multiple mapped streams, creeks, rivers, and drainage ditches that cross the path of the Proposed Project alignment (**Figures 9 and 10**). All of the mapped streams would be avoided by using HDD trenchless techniques under these waterways or by constructing overhead lines that would span the waterways. Several other areas have the potential to be impacted, such as riparian areas, wetlands, and vernal pools that would likely be CDFW, RWQCB, and/or USACE jurisdictional areas. Wetland reconnaissance surveys were conducted throughout the Study Area. Detailed wetland delineations were conducted in areas where impacts to wetlands could occur. A full formal wetland delineation and mapping was conducted for the jurisdictional water features with the potential to be impacted by the Proposed Project at two locations where access was granted: the area along Coyote Creek in the vicinity of McCarthy Boulevard and the San José-Santa Clara RWF (i.e., from the southern side of McCarthy Boulevard bridge to the proposed overhead structure DC-3), and both north and south sides of Cushing Parkway bridge. The impacts to CDFW and RWQCB/USACE for this area are shown in **Table 8**, *Impact Areas to Jurisdictional Waters* below. These temporary impacts are associated with the clearing of vegetation to construct the poles and for stringing conductor at proposed overhead structures DC-1 through DC-2 (**Figure 13**). A third location with potential jurisdictional water features, located west of proposed overhead structure AC-4 and north of SR-237, that could potentially be impacted by the Proposed Project was not included in the formal wetland as access was not obtained. A wetland and aquatic resources delineation would be conducted within this area prior to construction to determine exact impact acreages and determine if permits would be needed (**APM BIO-19**), and impacts would be avoided to the extent practicable (**APM BIO-4**). All temporary impacts would be restored per **APM BIO-1**, minimizing the impact to these sensitive vegetation communities.

**Table 8: Impact Areas to Jurisdictional Waters**

| | Approximate CDFW Impact Area (Sq. Ft./Acres) | Approximate RWQCB/USACE Impact Area (Sq. Ft./Acres) |
|---|---|---|
| Permanent Impacts | 0 | 0 |
| Temporary Impacts | 9,051/0.2 | 9,051/0.2 |
| Total Impacts | 9,051/0.2 | 9,051/0.2 |

State and federal aquatic permits would be required for any change to existing channel, bed, or bank; removal or deposit of material; or diverting or obstructing the natural flow of a jurisdictional water feature. Currently, anticipated construction activities associated with structures being placed in the vicinity of Coyote Creek may result in one or more of these permit triggers. Therefore, the following permits may be required: Section 1602 LSAA from CDFW; CWA Section 401 Water Quality Certification from the RWQCB; and CWA Section 404 Permit from USACE (Nationwide or individual, depending on the impact acreage).

The proposed HVDC terminal locations do not have any known aquatic or jurisdictional waters on-site, and they would be built to drain stormwater to an on-site detention system. Stormwater would react as it normally does along a majority of the transmission line alignments and would be drained into roadside drains. Stormwater runoff during construction and O&M activities would be managed according to a stormwater management plan and BMPs established in the associated SWPPP.

**PG&E Substation Modifications**

The PG&E Newark substation modifications would occur within and adjacent to the existing substation facility (located entirely within PG&E fee-owned property). The existing Newark substation facility does not contain aquatics or jurisdictional waters. However, construction of the proposed overhead structure AC-1 would occur within undeveloped areas north of the existing substation. The construction of proposed overhead structure AC-1 in this undeveloped area would result primarily in impacts to areas that are not jurisdictional, but there are proposed temporary impacts (0.09 acre) to vernal pools that would likely be CDFW jurisdictional features. Implementation of **FP-01** through **FP-04, FP-10, FP-11, FP-12, FP-14** through **FP-16** would minimize these impacts. The vernal pools would be avoided to the maximum extent practicable by implementing a buffer from construction (**FP-16**) and implementing spill prevention BMPs (**FP-15**). Training (**FP-01**) would educate workers on the vernal pools as sensitive areas and measures to minimize impacts. Temporary impacts to this area would also be restored (**FP-14**). Therefore, impacts to waters or wetland would be less than significant.

**SVP Substation Modifications**

The SVP NRS substation modifications would occur within the existing substation facility. The existing NRS substation facility does not currently support aquatics or jurisdictional waters. The proposed NRS substation modification work would occur in paved, disturbed, and developed areas only. Therefore, no impacts to waters or wetlands would result.

### 5.4.3. Impacts to Designated Critical Habitat Areas

When potentially impacting designated critical habitat, Federal agencies must ensure that any action they carry out is not likely to destroy or adversely modify critical habitat. Destroy or adversely modify means a direct or indirect alteration that appreciably diminishes the value of critical habitat as a whole for the conservation of a listed species.

USFWS designated critical habitat for bay checkerspot butterfly could be directly impacted by the Proposed Project in the vicinity of Tulare Hill Ecological Preserve along Monterey Road where a mapped section of designated critical habitat extends into Monterey Road that would be impacted by the Proposed Project. This may be a mapping error since this area is not suitable habitat for bay checkerspot butterfly. This area would be directly impacted, but the impacts will be less than significant since it is within a previously disturbed road.

NMFS-designated critical habitat for steelhead occurs along Coyote Creek. The Proposed Project would not destroy or adversely modify designated critical habitat. No other designated or proposed critical habitats would be impacted by the Proposed Project.

### 5.4.4. Impacts to Wildlife Movement Corridors and Wildlife Nursery Sites

Significant impacts on wildlife movement could occur if a wildlife movement corridor were to be interrupted by a feature that physically blocks wildlife movement (e.g., a roadway) or if suitable habitat that supports wildlife in the movement corridor were to be directly removed during construction or indirectly affected by construction noise or dust.

A large portion of the Proposed Project is located within the Cities of Fremont, Milpitas, San José, and Santa Clara where there are no large wildlife movement corridors, but there are numerous riparian corridors and waterways that could be used by wildlife for movement and nursery sites. These waterways and riparian corridors would be largely avoided, but direct impacts to wildlife movement, specifically creation of barriers to wildlife movement, could result from the Proposed Project.

The Proposed Project would mostly be constructed along and within existing public road ROWs and would not create any additional barriers to movement along the road. These areas would not result in barriers to movement and would only potentially impact wildlife movement for a short period during construction activities. The overhead portions of the line would be constructed outside of the public road ROWs, but they all exist in close vicinity to previously disturbed areas, such as the San José-Santa Clara RWF, existing public utilities infrastructure, SR-237, and the existing Newark substation.

The proposed Baylands terminal site would be located immediately west of the San José-Santa Clara RWF in an annual grassland that is currently fenced, and the fence acts as a barrier to movement of wildlife species. The construction of the proposed Baylands terminal would remove some potentially suitable habitat within the grassland; however, because existing fencing already restricts the movement of wildlife species through the site, wildlife movement conditions would remain unchanged. Additionally, the relatively small impact area would not have a large effect on overall wildlife movement through the area.

The construction along the Cushing Parkway bridge that runs through the Don Edwards San Francisco Bay NWR would impact wildlife movement in the short term by creating a potential barrier under and alongside the bridge when construction is occurring. An existing chain-link fence is located along the existing utility O&M easement; however, the chain-link fence does not fully restrict wildlife movement. Construction and maintenance activities associated with the Proposed Project would remain within the existing utility easement and the associated O&M utility easement. With implementation of **APM BIO-17**, construction in this area would occur during the dry season and would limit impacts to movement of sensitive species. Additionally, this area already sees regular traffic and maintenance activities, and animal species that use the area for movement are accustomed to disturbance.

Speed limits within construction areas would be kept to 15 mph, and workers would be advised to take care when commuting to and from the site, reducing the potential for vehicle strikes to moving wildlife (**APM BIO-6**). Vehicles would also be kept to disturbance areas only, and sensitive areas (such as the Coyote Creek riparian corridor) would be clearly marked and avoided, reducing potential impacts to suitable movement habitats for wildlife (**APMs BIO-4** and **BIO-6**). Night work and nighttime lighting would be reduced to the extent practicable (**APM BIO-10**), which would reduce potential impacts to wildlife movement which tends to be higher at night. Vegetation removal would be kept to a minimum and all temporary impact areas would be restored (**APM BIO-1**), keeping habitats intact for wildlife movement in the area.

**PG&E Substation Modifications**

The PG&E Newark substation modifications would occur within and adjacent to the existing substation facility (located entirely within PG&E fee-owned property). The existing Newark substation facility does not currently support candidate, sensitive, or special status species or habitats. The proposed Newark substation modification work would occur within PG&E's existing property, which is surrounded by a security fence and in close proximity to the substation; therefore, the proposed modifications would not result in new restrictions to wildlife movement. There is a potential for impacts to wildlife nursery sites in the vernal pools in this area that could be used as breeding areas for vernal pool tadpole shrimp and CTS. PG&E would implement erosion and sediment control BMPs (**FP-11 and FP-12**), spill prevention BMPs (**FP-15**), and provide markings/flagging and buffers from the edge of the vernal pools (**FP-16**). PG&E would minimize areas of disturbance to sensitive species by implementing **FP-01** through **FP-04, FP-06**, and **FP-10.** Implementation of PG&E **BMP BIO-2** would address potential impacts to nesting birds. The vernal pools would be avoided to the maximum extent practicable and marked as sensitive areas (**FP-15**), and construction would be timed for the dry season to the maximum extent practicable (**FP-16**) when pools are more likely to be dry and these amphibians and invertebrates are less likely to be using these areas for movement and/or breeding purposes. Training (**FP-01**) would educate workers on the potential for special-status birds, amphibians, and invertebrates to occur and measures to minimize impacts. Temporary impacts to this area would also be restored (**FP-14**). Therefore, impacts to wildlife movement corridors and nursery sites would be less than significant.

**SVP Substation Modifications**

The SVP NRS substation modifications would occur within the existing substation facility. The existing NRS substation facility does not currently support candidate, sensitive, or special status species or habitats. As perimeter walls and existing development is currently located around the existing substation facilities, the proposed modifications would not result in new restrictions to wildlife movement. Therefore, no impacts to wildlife movement corridors or nursery sites would result.

### 5.4.5. Conflicts with Local Policies or Ordinance

The CPUC has exclusive jurisdiction over the Proposed Project's siting, design, and construction, and the Proposed Project is not subject to local land use and zoning regulations or discretionary permits. However, local regulations relating to biological resources were reviewed to ensure that the Proposed Project would not be in conflict with local policies or ordinances protecting biological resources. The Cities of Fremont, Milpitas, San José, and Santa Clara General Plans were reviewed, and the Proposed Project is being designed to be consistent with these local policies. The Proposed Project would result in the removal of approximately 24 trees; the majority of which are landscaped trees in the vicinity of proposed overhead structures. Although not required, LS Power would coordinate with the Cities of Fremont, Milpitas, San José, and Santa Clara to obtain applicable tree removal permits for the removal of existing trees. Therefore, implementation of the Proposed Project would comply with local policies or ordinances relating to biological resources. Impacts would be less than significant.

**PG&E Substation Modifications**

The PG&E Newark substation modifications would occur within and adjacent to the existing substation facility (located entirely within PG&E fee-owned property). The proposed Newark substation modifications would not conflict with local policies or ordinances relating to biological resources. Therefore, no impacts would occur.

**SVP Substation Modifications**

The SVP NRS substation modifications would occur within the existing substation facility. The proposed NRS substation modifications would not conflict with local policies or ordinances relating to biological resources. Therefore, no impacts would occur.

### 5.4.6. Conflicts with an Approved Habitat Conservation Plan

The Proposed Project lies within PG&E's Bay Area O&M HCP (PG&E, 2017), Don Edwards San Francisco Bay NWR CCP, Alameda County VLP, and the Santa Clara Valley HCP (County of Santa Clara et al., 2012).

The PG&E Bay Area O&M HCP covers 18 wildlife and 13 plant species, and its purpose is to enable PG&E to continue to conduct current and future O&M activities within the nine counties of the San Francisco Bay Area while avoiding, minimizing, and mitigating for temporary and permanent impacts on threatened- and endangered-species habitat that could result from PG&E's ongoing O&M activities (PG&E, 2017). LS Power is not a stakeholder of PG&E's Bay Area O&M HCP, and the activities proposed are not covered activities under this HCP.

The Don Edwards San Francisco Bay NWR CCP is a refuge-specific program for conserving natural resources, stewarding wildlife habitat, and engaging the community in conservation. Portions of the Proposed Project would be located adjacent to the Don Edwards San Francisco Bay NWR; however, in these areas the proposed transmission line would be located entirely within existing public roadways or an existing utility easement adjacent to Cushing Parkway. Therefore, the Proposed Project would not be an incompatible use within the Don Edwards San Francisco Bay NWR. The Proposed Project would be consistent with policies pertaining to the conservation and protection of natural and cultural resources and the CCP's goals and objectives. Furthermore, LS Power is not a stakeholder of the Don Edwards San Francisco Bay NWR CCP, and it does not cover the type of activities that are associated with the Proposed Project.

The Alameda County VLP provides take authorization, under CESA, to participating farmers and ranchers while following the management practices for two species listed as threatened in California: the CTS and the Alameda whipsnake. The VLP covers the entire County but primarily serves residents conducting routine and on-going agricultural activities in the eastern, rural portion of the County of Alameda and within properties adjoining or encompassing creeks in rural-urban interface areas. The VLP also excludes projects in salt marsh and estuary habitats in the County's bayfront area, including land and waterways under BCDC jurisdiction. As mapped by the VLP Land Use figure, the Proposed Project would be located within Urban and Buildup Land and Other (rural development, mined land, etc.) in the County of Alameda. Furthermore, the VLP does not cover the type of activities that are associated with the Proposed Project, and LS Power is not a stakeholder of the VLP.

The Santa Clara Valley HCP provides a framework for promoting the protection and recovery of natural resources, including endangered species, while streamlining the permitting process for planned development, infrastructure, and maintenance activities (County of Santa Clara et al., 2012). The Santa Clara Valley HCP covers public and private utility activities within the planning limits of urban growth (as defined by the HCP) such as those that are associated with the Proposed Project. A majority of the Proposed Project occurs within the planning limits of urban growth and may be covered activities. The Santa Clara Valley HCP covers many of the same species that were analyzed within this BRTR: CRLF, WPT, CTS, burrowing owl, and tricolored blackbird. If impacts are identified to these species, LS Power would coordinate with the stakeholders of the Santa Clara Valley HCP to obtain coverage for the Proposed Project, as required. In the event that LS Power is unable to opt into coverage from the Santa Clara Valley HCP, LS Power would consult with the wildlife agencies to obtain project-specific permits. The Proposed Project's APMs generally align with the measures that are proposed to reduce impacts to these species in the HCPs so no conflicts with approved HCPs would occur. Impacts would be less than significant.

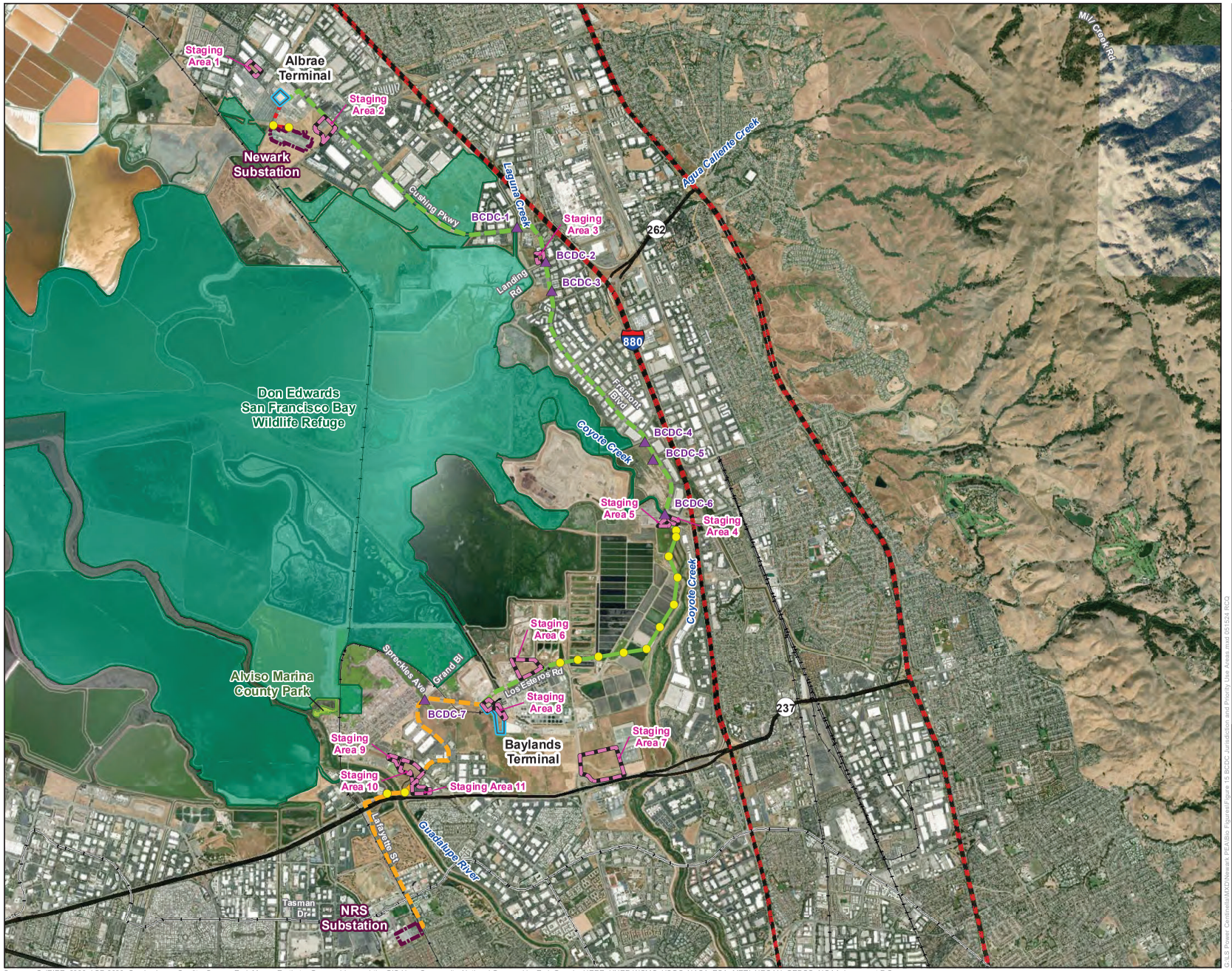
The Proposed Project would cross the jurisdiction of the BCDC (refer to **Figure 15**, *BCDC Jurisdiction and Priority Use Areas*) and is adjacent to the Don Edwards San Francisco Bay NWR, which is designated by the BCDC as a Priority Use Area for Wildlife. LS Power has initiated coordination with BCDC, and it was confirmed that, at a minimum, an administrative permit would be required for any transmission line crossings under BCDC jurisdiction. LS Power would continue to coordinate with BCDC for their continued review of the Proposed Project to confirm and obtain the necessary permits prior to construction to ensure compliance with the policies of both the McAteer-Petris Act and the San Francisco Bay Plan.

**PG&E Substation Modifications**

The PG&E Newark substation modifications would occur within and adjacent to the existing substation facilities (located entirely within PG&E fee-owned property). The existing substation facility consists of disturbed, paved, or currently developed areas. There are no sensitive resources within the existing substation where modifications would occur, and utilization of their Bay Area O&M HCP is not anticipated to be required. The area adjacent to the existing substation within PG&E property consists of disturbed undeveloped land. Construction of proposed overhead structure AC-1 in this undeveloped area would result in approximately 1.07 acres of temporary impacts and approximately 0.02 acre of permanent impacts to sensitive vegetation and communities (0.09 acre of temporary impacts to vernal pools; and 0.98 acres of temporary impacts and 0.02 acre of permanent impacts to annual grasslands). PG&E could utilize their Bay Area O&M HCP to address potential impacts to species covered under their HCP. However, PG&E would implement **FP-01** through **FP-07**, **FP-10** through **16**, and **FP-18** as well as construction **BMP BIO-2**. The PG&E FPs are derived directly from the Bay Area O&M HCP, and the BMP is consistent with the PG&E HCP documents. Therefore, no impacts related to conflicts with approved HCPs would result.

**SVP Substation Modifications**

The SVP NRS substation modifications would occur within the existing substation facilities, in areas that are disturbed, paved, or currently developed. There are no sensitive resources within these existing facilities where modifications would occur. Therefore, no impacts would result.




# POWER THE SOUTH BAY PROJECT

## Figure 15: BCDC Jurisdiction and Priority Use Areas

## Alameda Co. and Santa Clara Co., CA

### LEGEND

**Proposed Project Components**

- Overhead Transmission Structure
- Baylands to NRS 230 kV AC Transmission Line (Overhead)
- Baylands to NRS 230 kV AC Transmission Line (Underground)
- Albrae to Baylands 320 kV DC Transmission Line (Overhead)
- Albrae to Baylands 320 kV DC Transmission Line (Underground)
- Newark to Albrae 230 kV AC Transmission Line (Overhead)
- Newark to Albrae 230 kV AC Transmission Line (Underground)
- HVDC Terminal Site
- Construction Staging Area
- Existing Substation Boundary

**BCDC Priority Use Areas (Updated 2023)**

- BCDC Jurisdiction Crossings
- Wildlife
- Waterfront Park, Beach

**General Features**

- Interstate
- US Route or State Highway
- Railroad

0 0.5 1 1.5 2

Miles




Sources: CalFIRE, 2023; LSP 2023; Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

G:\LS Power Centennial\MXD\Newark PEA\Bio Figures\Figure 15 BCDC Jurisdiction and Priority Use Areas.mxd 051524 RCO

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# Appendix A – Photo Log

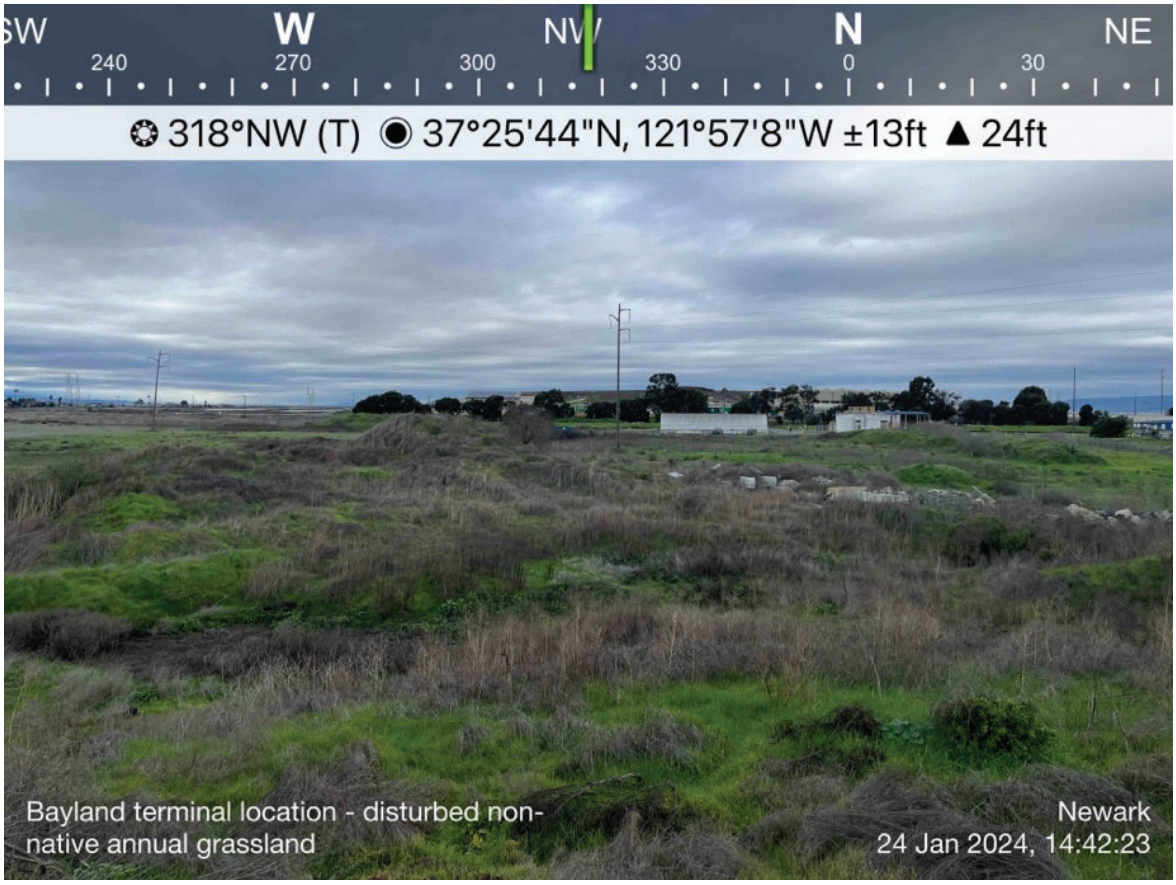



Photo 1 – Facing NW - Bayland Terminal Location. Non-native annual grassland habitat.

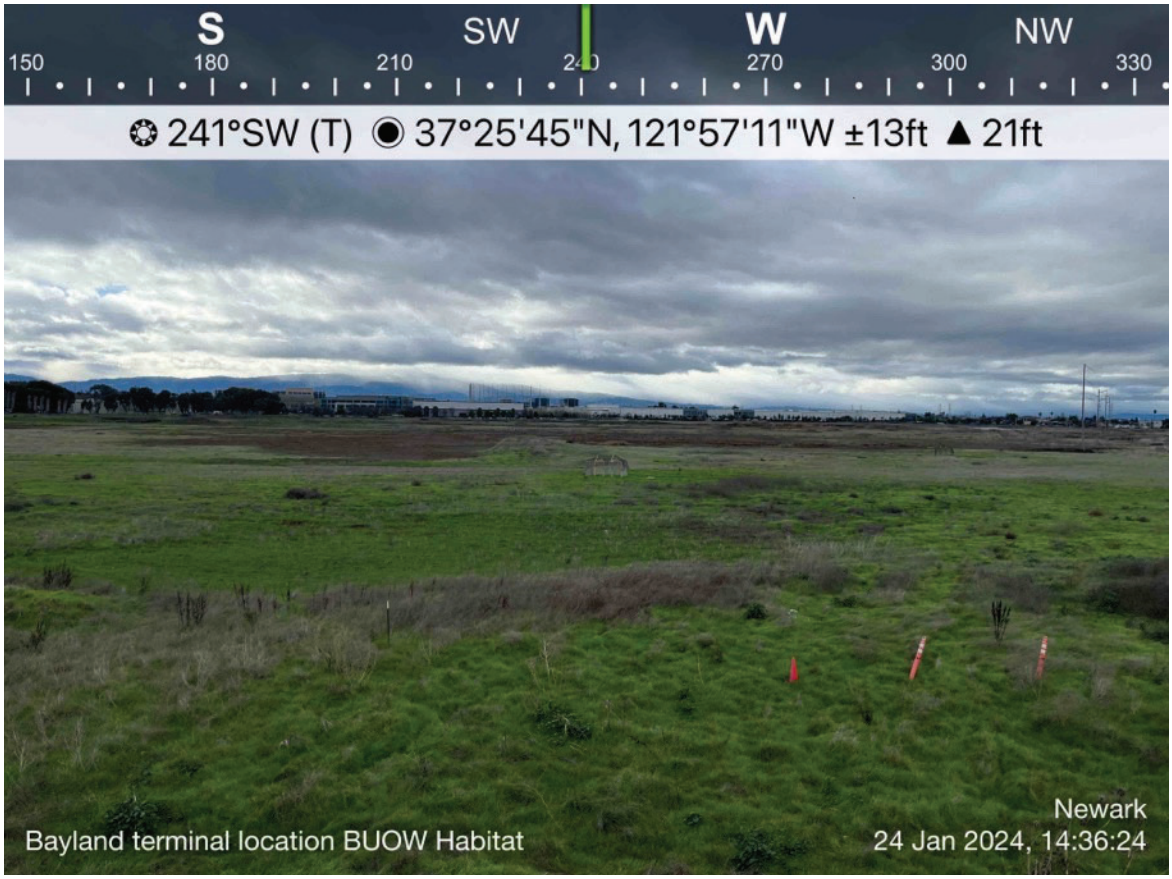



Photo 2 – Facing WSW – Bayland Terminal Location. Annual grassland and burrowing owl habitat to the west.

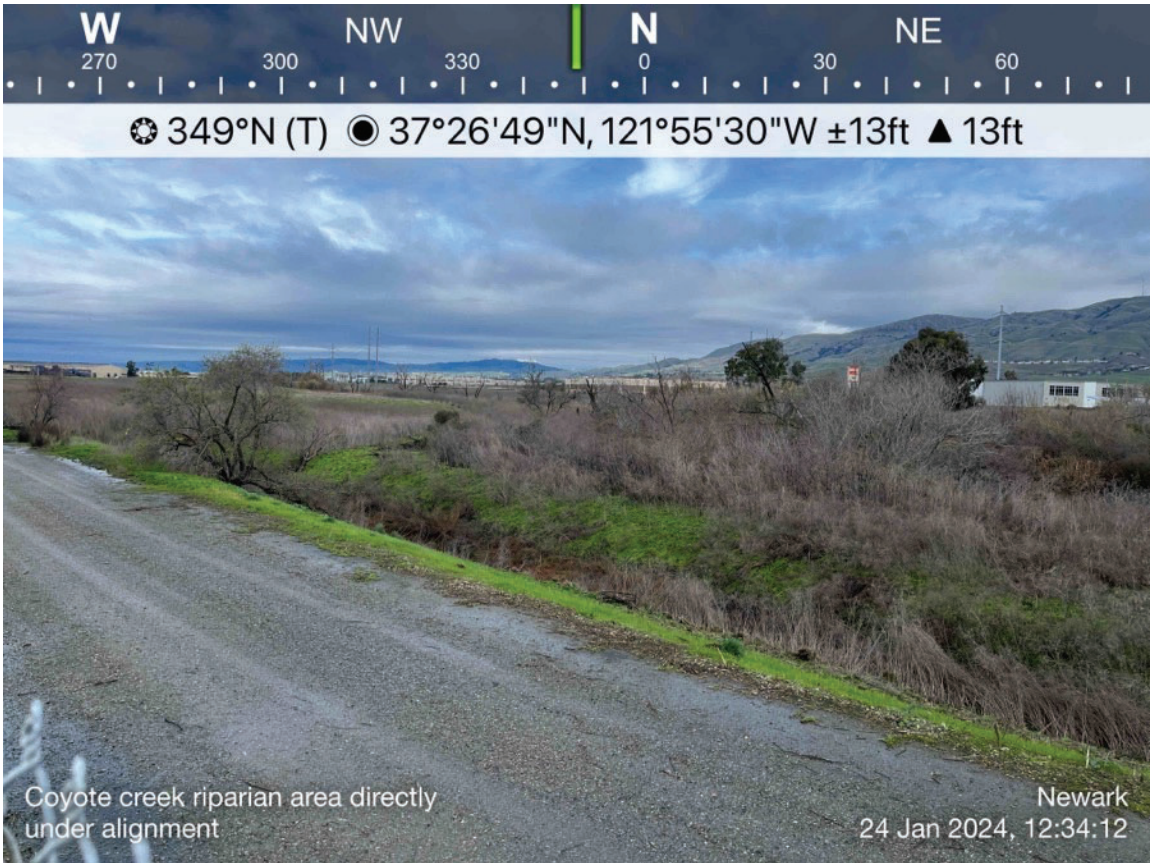



Photo 3 – Facing N - Coyote Creek riparian area east of the San Jose RWF.




Photo 4 – Facing W – Cushing Parkway bridge over the Don Edwards NWR floodplain area. Shows some potential wetlands outside of the easement area.

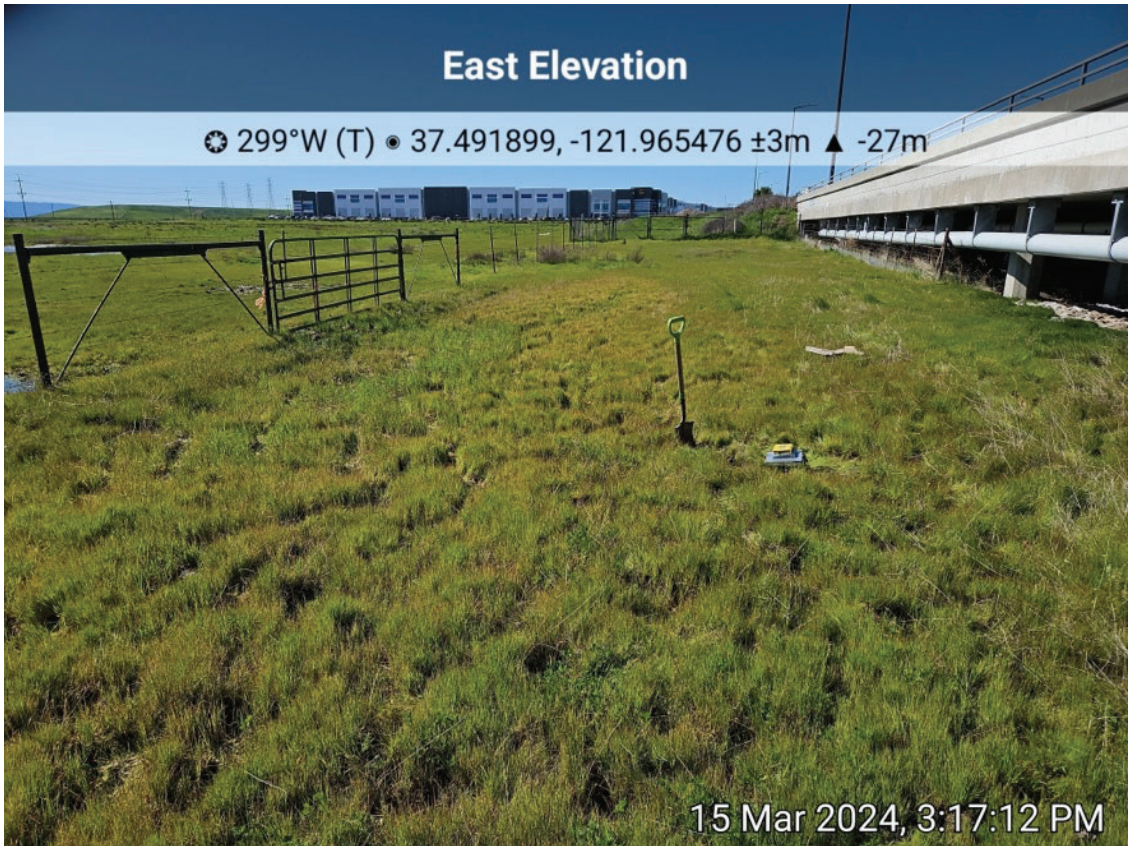



Photo 5 – Facing W – Wetland area along the south side of Cushing Parkway within the easement area.




Photo 6 – Facing ESE - Cushing Parkway bridge over the Don Edwards NWR floodplain area. Shows potential wetlands outside of the easement area.




Photo 7 – Facing NW –Location near the previous photo during the September survey when the area was much drier and lacked pooled water.




Photo 8 – Facing N – Alignment along Cushing Parkway – disturbed urban.




Photo 9 – Facing NNW – Alignment along Disk Drive with mowed open space on the right and disturbed urban on the left.




Photo 10 – Facing WSW – Alignment along Fremont Boulevard – disturbed urban with ornamental trees.




Photo 11 – Facing ENE – Guadalupe River where the alignment crosses – wetland habitat.




Photo 12 – Facing E – Alignment along Los Esteros Road with wetland habitats associated with the Don Edwards NWR on both sides of the road.




Photo 13 – Facing SW – Parking lot immediately to the northeast of the Northern Receiving Station.




Photo 14 – Facing SSE – San Jose RWF ponds.

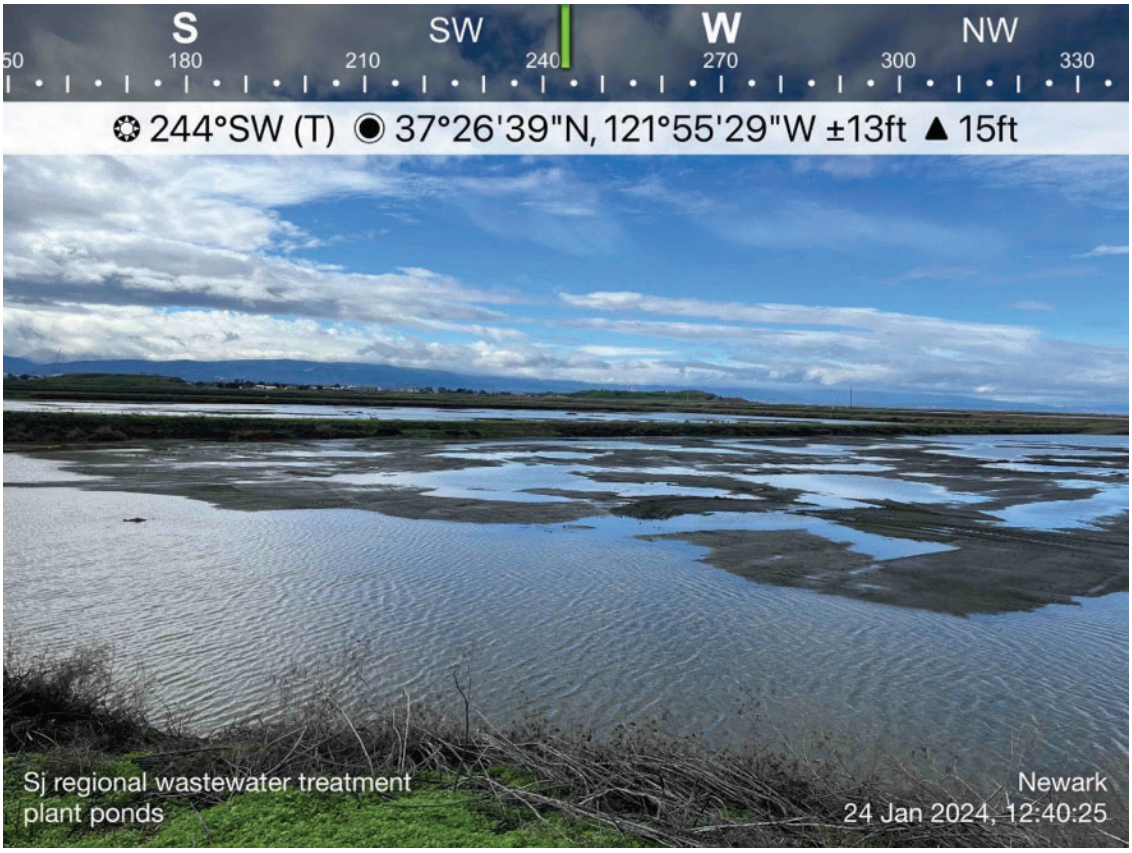


Photo 15 – Facing WSW – San Jose RWF ponds.



Photo 16 – Facing WNW – San Jose RWF ponds and access road.



Photo 17 – Facing SE – Staging Area 1. Disturbed grassland with a few trees.

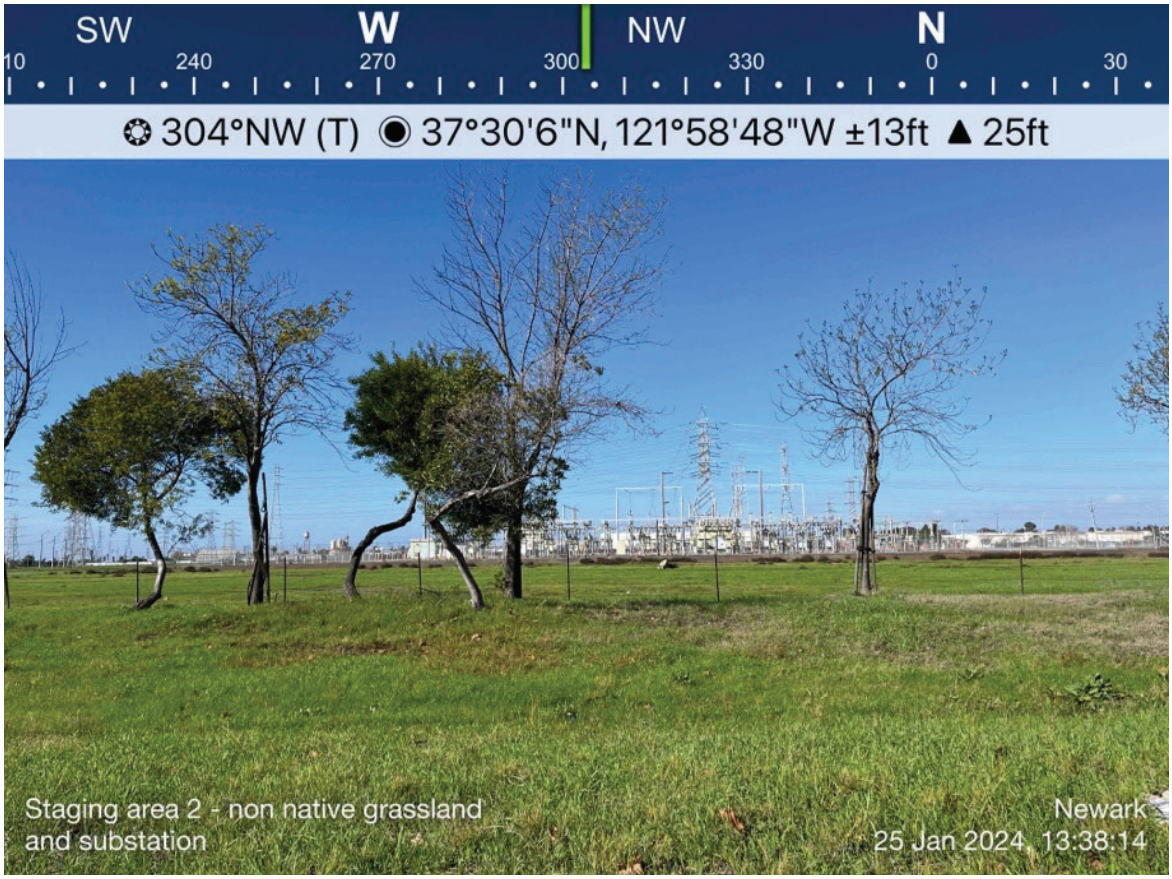



Photo 18 – Facing WNW – Staging Area 2 – Annual grassland with some trees.




Photo 19 – Facing SSW – Staging Area 3 – Annual grassland.




Photo 20 – Facing N – Staging Area 4 – Annual grassland.



Photo 21 – Facing W – Staging Area 5 – Annual grassland.


Photo 22 – Facing SW – Staging Area 6 – Annual grassland.

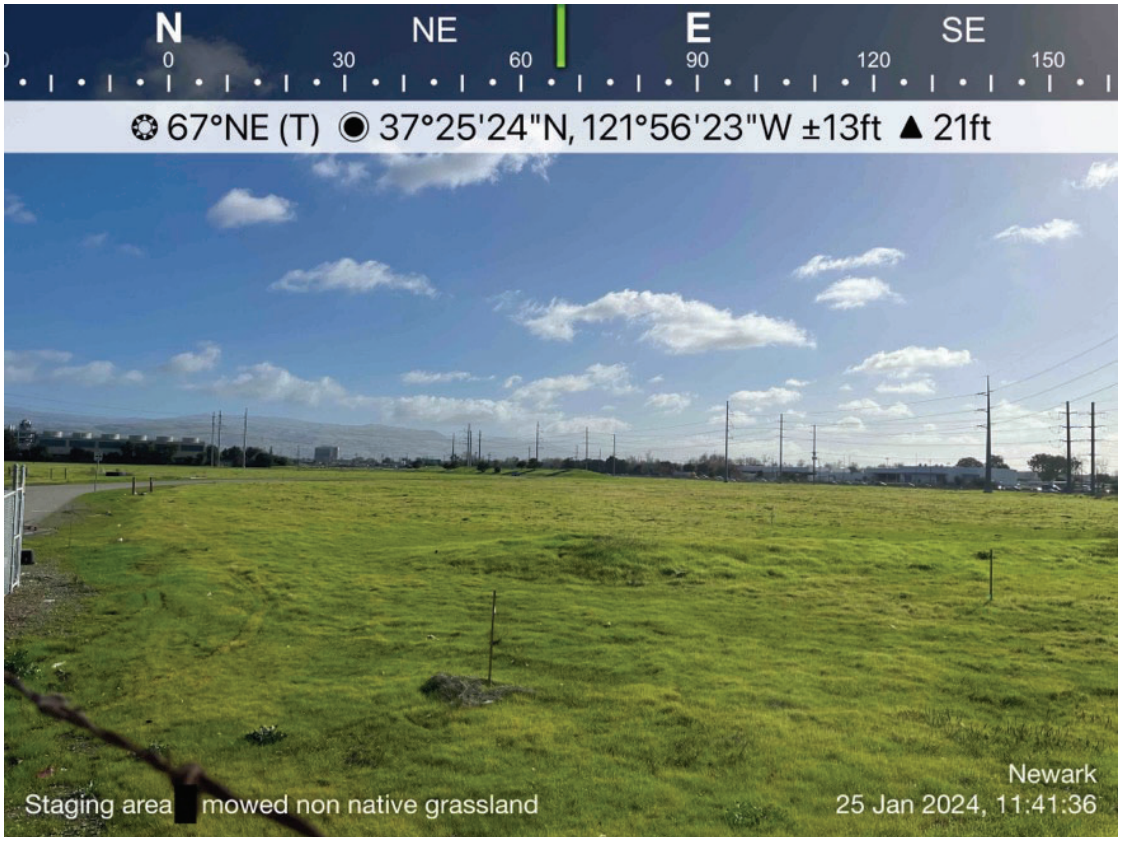


Photo 23 – Facing ENE – Staging Area 7 – Annual grassland and an existing roadway.



Photo 24 – Facing N – Staging Area 8 – Annual grassland and disturbed areas adjacent to a railway.



Photo 25 – Facing W – Staging Area 9 – Disturbed field covered in weeds.



Photo 26 – Facing SE – Staging Area 10 – Disturbed and mowed field.

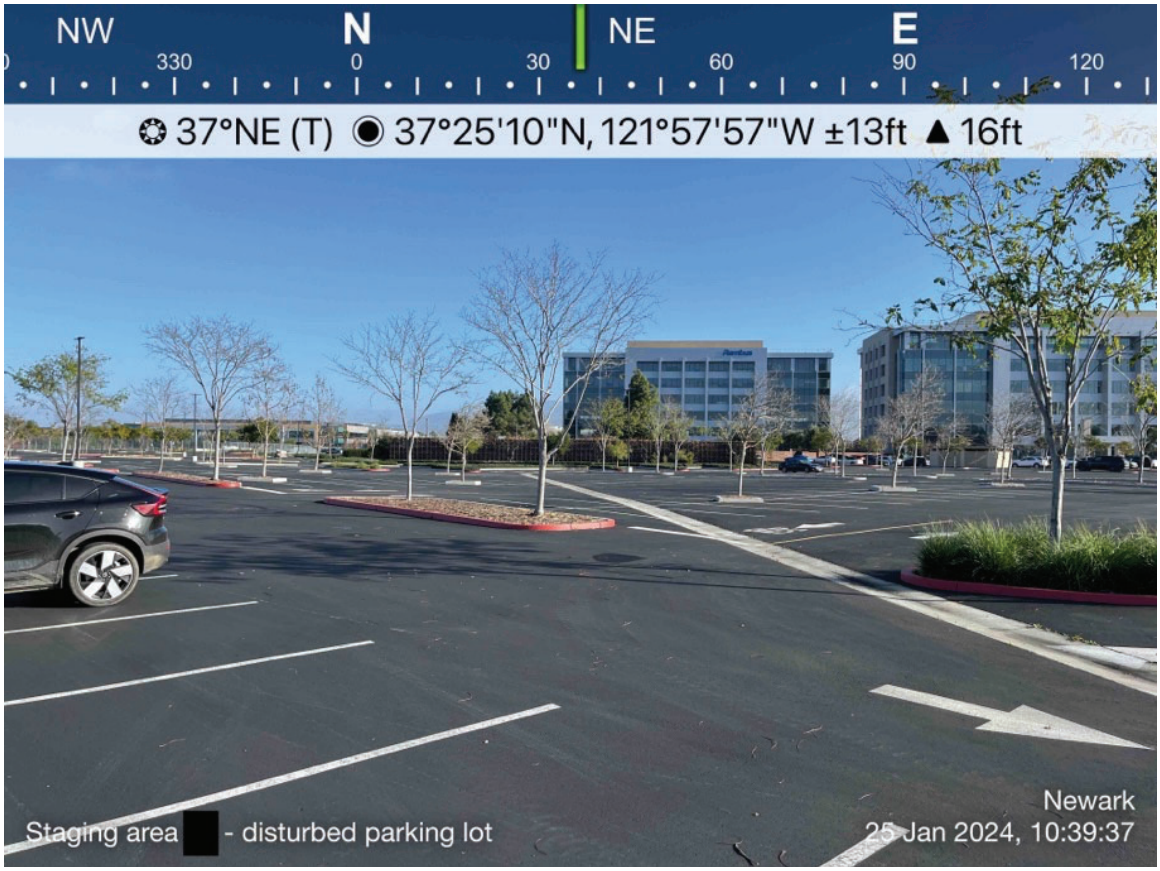



Photo 27 – Facing NE – Staging Area 11 – Disturbed parking lot.

# Appendix B – IPaC Search Results

**IPaC** Information for Planning and Consultation **U.S. Fish & Wildlife Service**

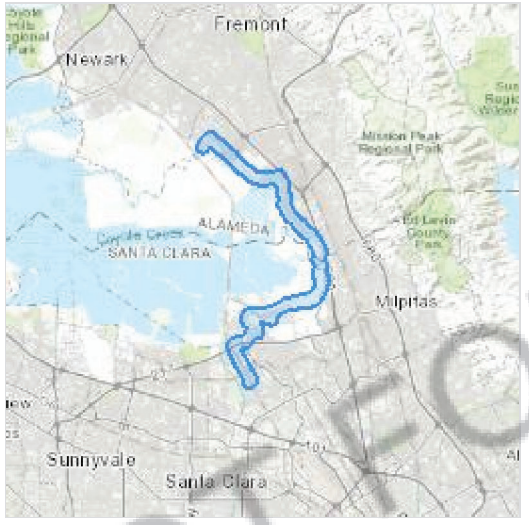
# IPaC resource list

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

Alameda and Santa Clara counties, California




NOT FOR CONSULTATION

# Local offices

San Francisco Bay-Delta Fish And Wildlife

(916) 930-5603
(916) 930-5654

650 Capitol Mall
Suite 8-300
Sacramento, CA 95814

Sacramento Fish And Wildlife Office

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

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

NOT FOR CONSULTATION

# 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.

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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*<br>Wherever found<br>No critical habitat has been designated for this species.<br>https://ecos.fws.gov/ecp/species/613 | Endangered |
| **San Joaquin Kit Fox** *Vulpes macrotis mutica*<br>Wherever found<br>No critical habitat has been designated for this species.<br>https://ecos.fws.gov/ecp/species/2873 | Endangered |

# Birds

| NAME | STATUS |
|---|---|
| **California Clapper Rail** *Rallus longirostris obsoletus*<br>Wherever found<br>No critical habitat has been designated for this species.<br>https://ecos.fws.gov/ecp/species/4240 | Endangered |

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California Condor Gymnogyps californianus — Endangered

There is **final** critical habitat for this species.Your location does not overlap the critical habitat.

https://ecos.fws.gov/ecp/species/8193

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

Western Snowy Plover Charadrius nivosus nivosus — Threatened

There is **final** critical habitat for this species.Your location overlaps the critical habitat.

https://ecos.fws.gov/ecp/species/8035

Yellow-billed Cuckoo Coccyzus americanus — Threatened

There is **final** critical habitat for this species.Your location does not overlap the critical habitat.

https://ecos.fws.gov/ecp/species/3911

# Reptiles

| NAME | STATUS |
|---|---|

Alameda Whipsnake (=striped Racer) Masticophis lateralis euryxanthus — Threatened

Wherever found

There is **final** critical habitat for this species.Your location does not overlap the critical habitat.

https://ecos.fws.gov/ecp/species/5524

Northwestern Pond Turtle Actinemys marmorata — Proposed Threatened

Wherever found

No critical habitat has been designated for this species.

https://ecos.fws.gov/ecp/species/1111

NOT FOR CONSULTATION

# Amphibians

| NAME | STATUS |
|---|---|
| **California Red-legged Frog** Rana draytonii<br>Wherever found<br>There is **final** critical habitat for this species.Your location does not overlap the critical habitat.<br>https://ecos.fws.gov/ecp/species/2891 | Threatened |
| **California Tiger Salamander** Ambystoma californiense<br>There is **final** critical habitat for this species.Your location does not overlap the critical habitat.<br>https://ecos.fws.gov/ecp/species/2076 | Threatened |
| **Foothill Yellow-legged Frog** Rana boylii<br>No critical habitat has been designated for this species.<br>https://ecos.fws.gov/ecp/species/5133 | Threatened |

# Insects

| NAME | STATUS |
|---|---|
| **Monarch Butterfly** Danaus plexippus<br>Wherever found<br>No critical habitat has been designated for this species.<br>https://ecos.fws.gov/ecp/species/9743 | Candidate |

# Crustaceans

| NAME | STATUS |
|---|---|

NOT FOR CONSULTATION

| NAME | STATUS |
|---|---|
| Conservancy Fairy Shrimp Branchinecta conservatio<br>Wherever found<br>There is **final** critical habitat for this species.Your location does not overlap the critical habitat.<br>https://ecos.fws.gov/ecp/species/8246 | Endangered |
| Vernal Pool Fairy Shrimp Branchinecta lynchi<br>Wherever found<br>There is **final** critical habitat for this species.Your location does not overlap the critical habitat.<br>https://ecos.fws.gov/ecp/species/498 | Threatened |
| Vernal Pool Tadpole Shrimp Lepidurus packardi<br>Wherever found<br>There is **final** critical habitat for this species.Your location overlaps the critical habitat.<br>https://ecos.fws.gov/ecp/species/2246 | Endangered |

# Flowering Plants

| NAME | STATUS |
|---|---|
| California Seablite Suaeda californica<br>No critical habitat has been designated for this species.<br>https://ecos.fws.gov/ecp/species/6310 | Endangered |
| Contra Costa Goldfields Lasthenia conjugens<br>Wherever found<br>There is **final** critical habitat for this species.Your location overlaps the critical habitat.<br>https://ecos.fws.gov/ecp/species/7058 | Endangered |

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| | |
|---|---|
| Robust Spineflower Chorizanthe robusta var. robusta<br>Wherever found<br>There is **final** critical habitat for this species.Your location does not overlap the critical habitat.<br>https://ecos.fws.gov/ecp/species/9287 | Endangered |

# Critical habitats

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

This location overlaps the critical habitat for the following species:

| NAME | TYPE |
|---|---|
| Contra Costa Goldfields Lasthenia conjugens<br>https://ecos.fws.gov/ecp/species/7058#crithab | Final |
| Vernal Pool Tadpole Shrimp Lepidurus packardi<br>https://ecos.fws.gov/ecp/species/2246#crithab | Final |
| Western Snowy Plover Charadrius nivosus nivosus<br>https://ecos.fws.gov/ecp/species/8035#crithab | Final |

# Bald & Golden Eagles

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

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats[3], should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles"

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Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

**There are bald and/or golden eagles in your project area.**

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

| NAME | BREEDING SEASON |
|---|---|
| Bald Eagle *Haliaeetus leucocephalus*<br>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. | Breeds Jan 1 to Aug 31 |
| Golden Eagle *Aquila chrysaetos*<br>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.<br>https://ecos.fws.gov/ecp/species/1680 | Breeds Jan 1 to Aug 31 |

# 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 "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

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**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.

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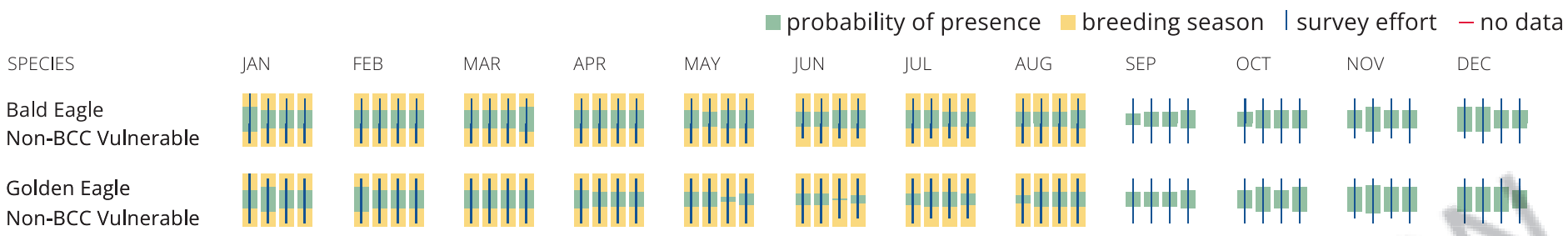
## Survey Timeframe

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.




### What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence 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). To see a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

### What does IPaC use to generate the probability of presence graphs of bald and golden eagles 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 Rapid Avian Information Locator (RAIL) Tool.

### What if I have eagles on my list?

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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. Please contact your local Fish and Wildlife Service Field Office if you have questions.

# 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[3] should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles"

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:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/ documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

**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

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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, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

| NAME | BREEDING SEASON |
|---|---|
| **Allen's Hummingbird** *Selasphorus sasin*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9637 | Breeds Feb 1 to Jul 15 |
| **Bald Eagle** *Haliaeetus leucocephalus*<br>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. | Breeds Jan 1 to Aug 31 |
| **Belding's Savannah Sparrow** *Passerculus sandwichensis beldingi*<br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA<br>https://ecos.fws.gov/ecp/species/8 | Breeds Apr 1 to Aug 15 |
| **Black Oystercatcher** *Haematopus bachmani*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9591 | Breeds Apr 15 to Oct 31 |
| **Black Skimmer** *Rynchops niger*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/5234 | Breeds May 20 to Sep 15 |

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| | |
|---|---|
| **Black Swift** *Cypseloides niger*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/8878 | Breeds Jun 15 to Sep 10 |
| **Black Tern** *Chlidonias niger*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/3093 | Breeds May 15 to Aug 20 |
| **Black Turnstone** *Arenaria melanocephala*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds elsewhere |
| **Bullock's Oriole** *Icterus bullockii*<br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA | Breeds Mar 21 to Jul 25 |
| **California Gull** *Larus californicus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds Mar 1 to Jul 31 |
| **California Thrasher** *Toxostoma redivivum*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds Jan 1 to Jul 31 |
| **Clark's Grebe** *Aechmophorus clarkii*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds Jun 1 to Aug 31 |

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Common Yellowthroat Geothlypis trichas sinuosa — Breeds May 20 to Jul 31

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/2084

Golden Eagle Aquila chrysaetos — Breeds Jan 1 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/1680

Lawrence's Goldfinch Carduelis lawrencei — Breeds Mar 20 to Sep 20

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

Long-eared Owl asio otus — Breeds Mar 1 to Jul 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3631

Marbled Godwit Limosa fedoa — Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9481

Nuttall's Woodpecker Picoides nuttallii — Breeds Apr 1 to Jul 20

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9410

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Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Olive-sided Flycatcher Contopus cooperi — Breeds May 20 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3914

Short-billed Dowitcher Limnodromus griseus — Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9480

Tricolored Blackbird Agelaius tricolor — Breeds Mar 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3910

Western Grebe aechmophorus occidentalis — Breeds Jun 1 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/6743

Willet Tringa semipalmata — Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Wrentit Chamaea fasciata — Breeds Mar 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

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Yellow-billed Magpie Pica nuttalli — Breeds Apr 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9726

# 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 "Supplemental Information on Migratory Birds and Eagles" specifically the FAQ section titled "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.

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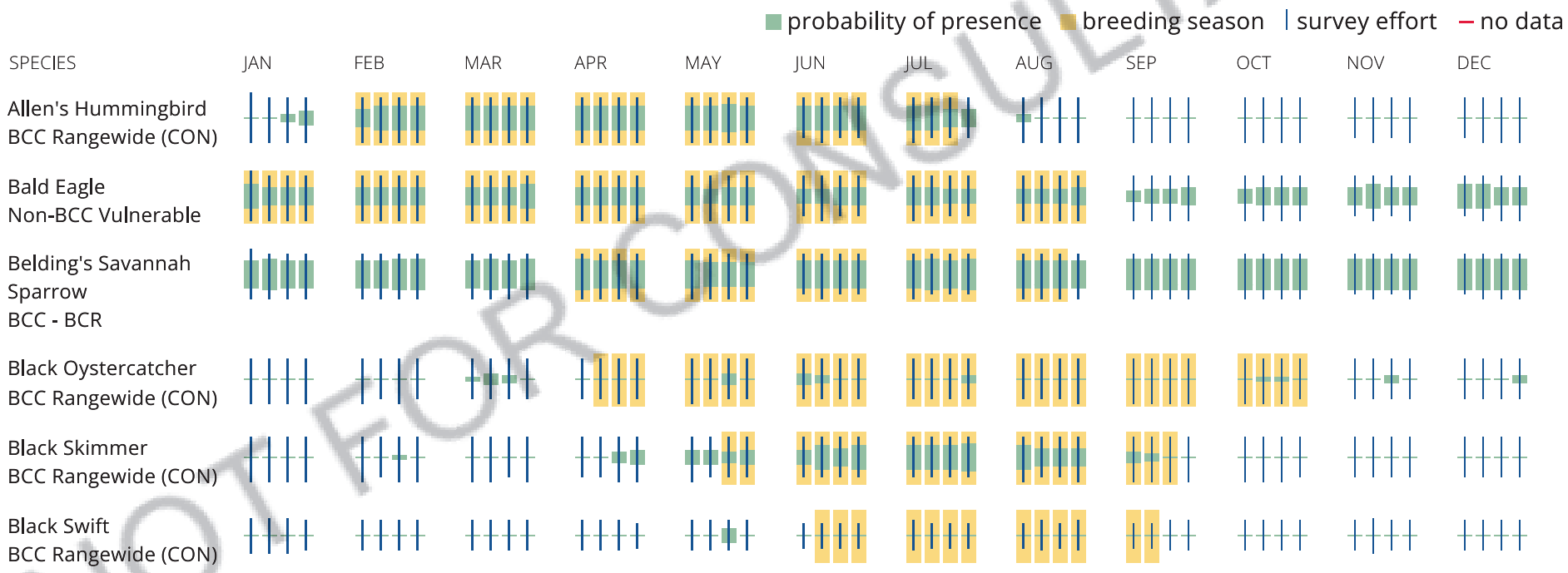
**Breeding Season** ( )
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

**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.

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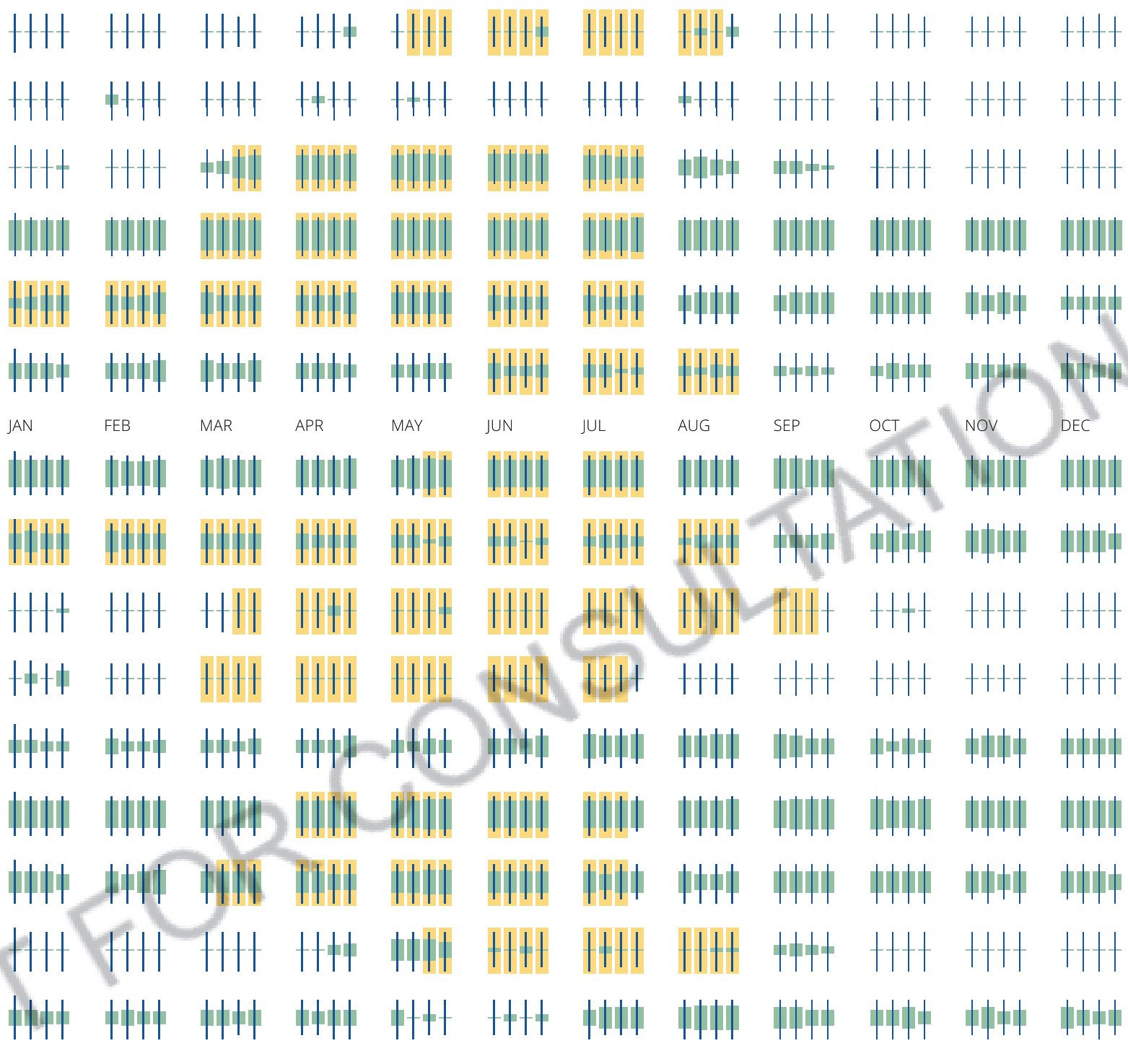


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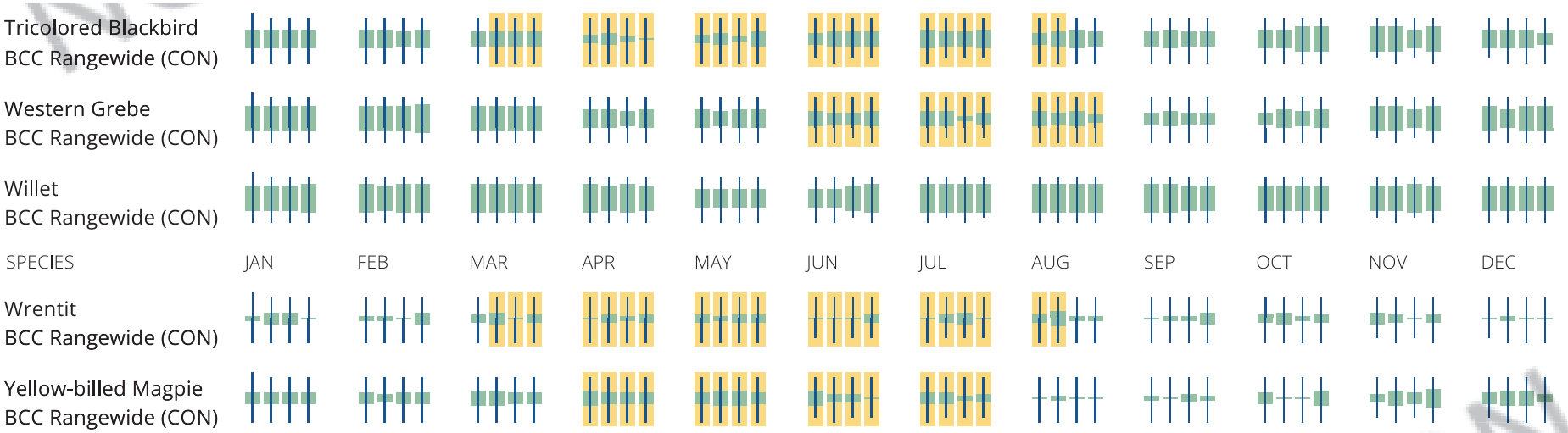


**Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.**

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 list of migratory birds that potentially occur 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 Rapid Avian Information Locator (RAIL) Tool.

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**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 or migrating in my 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 query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. 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.

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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

## National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

This location overlaps the following National Wildlife Refuge lands:

| LAND | ACRES |
|---|---|

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DON EDWARDS SAN FRANCISCO BAY NATIONAL WILDLIFE REFUGE 26,963.14 acres

# Fish hatcheries

There are no fish hatcheries at this location.

# Wetlands in the National Wetlands Inventory (NWI)

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

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

ESTUARINE AND MARINE DEEPWATER

- E1UBL

ESTUARINE AND MARINE WETLAND

- E2EM1N
- E2USNh
- E2USMh
- E2EM1Nh
- E2SBN
- E2USN
- E2SBNx

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E2SBNh
E2USM

FRESHWATER EMERGENT WETLAND
PEM1Ch
PEM1Ci
PEM1Ah

FRESHWATER FORESTED/SHRUB WETLAND
PFO1Ch

FRESHWATER POND
PUBKx
PUBHh
PUBHx
PUSCh

LAKE
L2USK
L2USCh
L2UBHh

RIVERINE
R4SBAx
R2UBHx
R4SBA
R1UBVx
R4SBC
R4SBCx

A full description for each wetland code can be found at the National Wetlands Inventory website

**NOTE:** This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

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### 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 – Observed Species

| Common Name | *Scientific Name* | Notes/Area of Observation |
|---|---|---|
| | **Mammals** | |
| Cattle | *Bos taurus* | Near Newark Sub and Don Edwards NWR near Cushing Parkway |
| California ground squirrel | *Otospermophilus beecheyi* | |
| Cottontail rabbit | *Sylvilagus audobonii* | |
| Black-tailed jackrabbit | *Lepus californicus* | Fresh carcass on ground next to Newark Sub |
| | **Birds** | |
| Gadwall | *Mareca strepera* | |
| Mallard | *Anas platyrhynchos* | |
| California gull | *Larus califonicus* | BCC, SWL. Observed throughout survey area, primarily near SJRWF |
| Northern shoveler | *Spatula clypeata* | |
| Willet | *Tringa semipalmata* | BCC. Observed within SJRWF and near Disk Drive/Los Esteros Blvd. |
| Least sandpiper | *Calidris minutilla* | |
| Western meadowlark | *Sturnella neglecta* | |
| Black phoebe | *Sayornis nigricans* | |
| Red-winged blackbird | *Agelaius phoeniceus* | |
| Yellow-rumped warbler | *Setophaga coronata* | |
| Say's phoebe | *Sayornis saya* | |
| American coot | *Fulica americana* | |
| Red-tailed hawk | *Buteo jamaicensis* | Nesting along Coyote Creek east of SJRWF and south side of staging area 4 |
| Bald Eagle | *Haliaeetus leucocephalus* | BGEPA, SE, BCC. Flying over SJRWF towards SF Bay |
| House finch | *Haemorhous mexicanus* | |
| Common raven | *Corvus corax* | |
| White-throated swift | *Aeronautes saxatalis* | |
| American crow | *Corvus brachyrhynchos* | |
| Anna's hummingbird | *Calypte anna* | |
| Black-necked stilt | *Himantopus maxicanus* | |
| American avocet | *Recurvirostra americana* | In Don Edwards NWR near Disk Drive/Los Esteros Blvd. |
| Mourning dove | *Zeneida macroura* | |
| House sparrow | *Passer domesticus* | |
| Great-blue heron | *Ardea herodias* | BCC. Observed along several creeks and within Don Edwards NWR in wetland areas |
| Greater egret | *Ardea alba* | |
| European starling | *Sturnus vulgaris* | |
| White-crowned sparrow | *Zonotrichia leucophrys* | |
| Long-billed curlew | *Numenius americanus* | |
| Peregrine falcon | *Falco peregrinus anatum* | BCC. Perched/vocalizing on transmission tower adjacent to Newark Substation. |
| | **Plants** | |
| Stinkwort | *Dittrichia graveolens* | In Disturbed Habitat in Laydown Option 1 between N. First Ave and Topgolf Dr. |
| Horseweed | *Erigeron canadensis* | In Disturbed Habitat in Laydown Option 1 between N. First Ave and Topgolf Dr. |
| Wild oat | *Avena fatua* | In Disturbed Habitat in Laydown Option 1 between N. First Ave and Topgolf Dr. |
| Kentucky bluegrass | *Poa pratensis* | |
| Tumbleweed | *Kali tragus ssp. tragus* | In Disturbed Habitat in Laydown Option 1 between N. First Ave and Topgolf Dr. |
| Shortpod mustard | *Hirschfeldia incana* | In Disturbed Habitat in Laydown Option 1 between N. First Ave and Topgolf Dr. |
| Cheeseweed mallow | *Malva parviflora* | In Disturbed Habitat in Laydown Option 1 between N. First Ave and Topgolf Dr. |
| Rose clover | *Trifolium hirtum* | In Disturbed Habitat in Laydown Option 1 between N. First Ave and Topgolf Dr. |
| Star-thistle | *Centaurea sp.* | In Disturbed Habitat in Laydown Option 1 between N. First Ave and Topgolf Dr. |
| Smilo grass | *Stipa miliacea* | In Disturbed Habitat in Laydown Option 1 between N. First Ave and Topgolf Dr., Northeast shoulder of Cushing Pkwy. |
| Panicled Willowherb | *Epilobium brachycarpum* | In Disturbed Habitat in Laydown Option 1 between N. First Ave and Topgolf Dr. |
| Fremont's goldfields | *Lasthenia fremontii* | |
| Blue gum | *Eucalyptus globulus* | |
| Narrowleaf Willow | *Salix exigua* | |

| | | |
|---|---|---|
| Coyote Brush | *Baccharis pilularis* | In Disturbed Habitat in Laydown Option 1 between N. First Ave and Topgolf Dr., Northeast shoulder of Cushing Pkwy. |
| Elderberry | *Sambucus nigra* | |
| Western Sycamore | *Platanus racemosa* | |
| Northern California Black Walnut | *Juglans hindsii* | |
| Fremont Cottonwood | *Populus fremontii* | |
| Red Willow | *Salix laevigata* | |
| Coast Live Oak | *Quercus agrifolia* | |
| Valley Oak | *Quercus lobata* | |
| California Fan Palm | *Washingtonia filifera* | |
| Pacific Poison Oak | *Toxicodendron diversilobum* | |
| Black Locust | *Robinia pseudoacacia* | |
| California Buckeye | *Aesculus californica* | |
| Giant Reed | *Arundo donax* | |
| Cider Gum | *Eucalyptus gunnii* | |
| Mulefat | *Baccharis salicifolia* | |
| Perennial Pepperweed | *Lepidium latifolium* | |
| Yellow Star-thistle | *Centaurea solstitialis* | |
| Curly Dock | *Rumex crispus* | |
| Broadleaf Cattail | *Typha latifolia* | |
| Rat's-Tail Fescue | *Vulpia myuros* | |
| Cheatgrass | *Bromus tectorum* | |
| Fennel | *Foeniculum vulgare* | |
| Dove Weed | *Croton setigerus* | |
| Common Mullein | *Verbascum thapsus* | |
| Softstem Bulrush | *Schoenoplectus tabernaemontani* | |
| Tall Flatsedge | *Cyperus eragrostis* | |
| Fragrant sage | *Salvia clevelandii* | |
| California sagebrush | *Artemisia californica* | Northeast side of Cushing Parkway between sidewalk and Don Edwards NWR, Warm Springs Unit |
| Chaparral whitethorn | *Caenothus leucodermis* | |
| Alkali seaheath | *Frankenia salina* | |
| Triangle orache | *Atriplex prostrata* | |
| Milk thistle | *Silybum marianum* | |
| Coast rock cress | *Arabis blepharophylla* | |
| Bulbous canarygrass | *Phalaris aquatica* | |
| Beet | *Beta vulgaris* | |
| Sage | *Salvia sp.* | Northeast side of Cushing Parkway between sidewalk and Don Edwards NWR, Warm Springs Unit |
| Ceanothus | *Ceanothus sp.* | Northeast side of Cushing Parkway between sidewalk and Don Edwards NWR, Warm Springs Unit |
| Buckthorn | *Rhamnus sp.* | Northeast side of Cushing Parkway between sidewalk and Don Edwards NWR, Warm Springs Unit |
| Mexican Bush Sage | *Salvia leucantha* | Northeast side of Cushing Parkway between sidewalk and Don Edwards NWR, Warm Springs Unit |
| Pickleweed | *Salicornia sp.* | Along drainage ditch and ponds on SCVWD property west of Coyote Creek and south of Dixon Landing Rd. and southwest of Newark Sub |
| Hemlock | *Conium maculatum* | In disturbed habitat with mustard on SCVWD property west of Coyote Creek and south of Dixon Landing Rd. |
| Peruvian Peppertree | *Schinus molle* | |
| Western ragweed | *Ambrosia psilostachya* | |