BIOLOGICAL ASSESSMENT

LOGISTICENTER AT ENTERPRISE PROJECT

HAYWARD, ALAMEDA COUNTY, CALIFORNIA

LSA

February 2022

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HAYWARD, ALAMEDA COUNTY, CALIFORNIA

Submitted to:

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Project No. DYP2101

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February 2022

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EXECUTIVE SUMMARY

S.1 PURPOSE OF THIS BIOLOGICAL ASSESSMENT

The purpose of this Biological Assessment (BA) is to review the Hayward Dermody Project (Project) in sufficient detail to determine if the Project may affect federally-listed threatened or endangered species, or those proposed for such listing, and their designated Critical Habitats. This BA has been prepared in accordance with legal requirements set forth under Section 7 of the federal Endangered Species Act (ESA) (Title 16, U.S. Code [USC], Section 1536[c]). The Project will require a federal permit from the U.S. Army Corps of Engineers (Corps), who will act as the federal lead agency for the Project under Section 7 of the ESA.

The BA considers the following federally listed species and designated Critical Habitats:

Species under U.S. Fish and Wildlife Service (USFWS) Jurisdiction:

- California seablite (*Suaeda californica*) - Endangered
- Contra Costa goldfields (*Lasthenia conjugens*) - Endangered
- Salt marsh harvest mouse (*Reithrodontomys raviventris*) - Endangered
- California Ridgway's (=clapper) rail (*Rallus obsoletus obsoletus*) - Endangered
- California least tern (*Sterna antillarum browni*) - Endangered
- Western snowy plover (*Charadrius nivosus nivosus*) - Threatened
- Yellow-billed cuckoo (*Coccyzus americanus*) - Threatened
- Alameda whipsnake (=striped racer) (*Masticophis lateralis euryxanthus*) - Threatened
- California red-legged frog (*Rana draytonii*) - Threatened
- California tiger salamander (*Ambystoma californiense*) - Threatened
- Delta smelt (*Hypomesus transpacificus*) - Threatened
- Tidewater goby (*Eucyclogobius newberryi*) - Endangered
- Vernal pool fairy shrimp (*Branchinecta* lynchi) - Threatened

Species under National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) Jurisdiction:

- Steelhead (*Oncorhynchus mykiss irideus*), Central California Coast Distinct Population Segment (DPS) - Threatened
- Green sturgeon (southern DPS) (*Acipenser medirostris*) - Threatened, Critical Habitat
- Species with Essential Fish Habitat under NMFS Jurisdiction:
- Essential Fish Habitat for: Coho salmon (*Oncorhynchus kisutch*)
- Essential Fish Habitat for: Chinook Salmon (*Oncorhynchus tshawytscha*)
- Essential Fish Habitat for: Groundfish
- Essential Fish Habitat for: Coastal Pelagics
- Species that are covered under the Endangered Species Act and Marine Mammal Protection Act:
- Marine Mammal Protection Act Pinnipeds

S.2 PROJECT OVERVIEW

The LogistiCenter at Enterprise Project (Project) involves the construction of a 219,656-square foot industrial building and associated grading, parking spaces and trailer stalls, truck access and loading docks, landscaping, and utilities on an approximately 10.87-acre site in Hayward, Alameda County, California. The building will have four radio towers located on the roof that currently occur on the property. Project construction will involve grading, installation of drainage and utilities, and storm water prevention measures, including approximately 19,451 square feet (0.45 acre) of detention basins. The project will be constructed in one phase and will require placement of permanent fill in 0.094 acre of seasonal wetlands. Figures 1 and 2 show the location of the proposed Project. Figure 3 depicts the Action Area, which includes adjacent areas that could be indirectly affected by the Project. Figure 4 shows the land cover types within the Action Area.

Project construction is anticipated to occur between August 2022 and March 2023. At project completion, the building will be leased by one or two tenants.

S.3 EFFECTS OF THE PROPOSED PROJECT

Permanent Impacts. The Project development area will require placement of permanent fill in approximately 0.13 acre of seasonal wetlands (Figure 4). Grading will also remove approximately 10.7 acres of grassland/upland habitat at the Project site. The Project will not temporarily affect any seasonal wetlands or upland habitat. All permanent impacts are summarized in Table S.A.

Table S.A: Permanent Impacts to Land Cover Types

Land Cover Type	Permanent
Seasonal Wetlands	0.129 acre
Ruderal/Grasslands	10.401 acres
Ornamental/Landscaping	0.179 acre
Totals	10.709 acres

Indirect Impacts. The Project will include a Storm Water Pollution and Prevention Plan (SWPPP) to avoid and minimize construction-related water quality effects. Under the SWPPP, BMPs will be implemented during construction work, so that Project excavation, grading, and filling work will avoid adverse water quality impacts (e.g., sedimentation, turbidity, other runoff constituents) in the adjacent wetlands and other waters. Moreover, the Project will include a Post-construction Storm Water Management Plan (SWMP), subject to Regional Water Quality Control Board (RWQCB) approval, that will provide on-site uptake and retention of runoff pollutants prior to discharge into the municipal storm drain system. This system ultimately discharges to the bay approximately 1.3 miles from the Project site, so the SWMP will prevent surface runoff from the Project site from degrading water quality in the Bay.

Impacts to Federally-Listed Species. A total of 15 federally listed plant and wildlife species that have suitable habitats in the Project vicinity were analyzed under this BA. Four of these species (salt marsh harvest mouse, California Ridgway's rail, California least tern, and western snowy plover)

were found to have some potential to occur in the Action Area based on the presence of suitable habitat and/or Critical Habitat. Table S.B below summarizes key findings.

S.4 MITIGATION

The Project will provide mitigation for the impacted seasonal wetlands by purchasing mitigation credits at the San Francisco Bay Wetland Mitigation Bank.

S.5 SUMMARY OF FINDINGS

Table S.B summarizes the proposed Project's effects on federally listed species and Critical Habitat with respect to ESA Section 7 determinations.

Table S.B: Effects Determination for Federally Listed Species and Designated Critical Habitat

Species	Federal Status	Determination
Species under USFWS Administration:		
Plants		
California seablite (*Suaeda californica*)	Endangered	No effect.
Contra Costa goldfields (*Lasthenia conjugens*)	Endangered	No effect.
Mammals		
Salt marsh harvest mouse (*Reithrodontomys raviventris*)	Endangered	May affect, not likely to adversely affect.
Birds		
California Ridgway's rail (*Rallus longirostris obsoletus*)	Endangered	May affect, not likely to adversely affect.
California least tern (*Sterna antillarum browni*)	Endangered	May affect, not likely to adversely affect.
Western snowy plover (*Charadrius nivosus nivosus*)	Threatened	May affect, not likely to adversely affect.
Yellow-billed cuckoo (*Coccyzus americanus*)	Threatened	No effect.
Reptiles		
Alameda whipsnake (*Masticophis lateralis euryxanthus*)	Threatened	No effect.
Amphibians		
California red-legged frog (*Rana draytonii*)	Threatened	No effect.
California tiger salamander (*Ambystoma californiense*)	Threatened	No effect.
Fish		
Delta smelt (*Hypomesus transpacificus*)	Threatened	No effect.
Tidewater goby (*Eucyclogobius newberryi*)	Endangered	No effect.
Invertebrates		
Vernal pool fairy shrimp (*Branchinecta lynchi*)	Threatened	No effect.
Species under NMFS Administration:		

Table S.B: Effects Determination for Federally Listed Species and Designated Critical Habitat

Species	Federal Status	Determination
Fish		
Steelhead (Central California Coast Distinct Population Segment [DPS]) (*Oncorhynchus mykiss irideus*)	Threatened	No effect.
Green sturgeon (Southern Distinct Population Segment) (*Acipenser medirostris*)	Threatened	No effect.

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FIGURES AND TABLES

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LIST OF ABBREVIATIONS AND ACRONYMS

BA	Biological Assessment
BMPs	Best Management Practices
CDFW	California Department of Fish and Wildlife
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
Corps	U.S. Army Corps of Engineers
Dermody	Dermody Properties
DPS	Distinct Population Segment
EFH	Essential Fish Habitat
ESA	Endangered Species Act
ESU	Evolutionary Significant Unit
IPaC	Information for Planning and Consulting
MHW	mean high water
MMP	Mitigation and Monitoring Plan
NMFS	National Marine Fisheries Service
Project	LogistiCenter at Enterprise Project
RWQCB	Regional Water Quality Control Board
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution and Prevention Plan
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service

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1.0 INTRODUCTION

The purpose of this Biological Assessment (BA) is to review the LogistiCenter at Enterprise Project (Project) in sufficient detail to determine if the Project may affect federally listed threatened or endangered species, or those proposed for such listing, and their designated Critical Habitats. This BA has been prepared in accordance with legal requirements set forth under Section 7 of the federal Endangered Species Act (ESA) (Title 16, U.S. Code [USC], Section 1536[c]). The Project will require a federal permit from the U.S. Army Corps of Engineers (Corps), who will act as federal lead agency for the Project under Section 7 of the ESA.

1.1 RESPONSIBLE PARTIES

1.1.1 Federal Lead Agency

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1.1.2 Biological Assessment Preparation

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1.1.3 Applicant

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1.2 CONSULTATION HISTORY

Neither the applicant nor the consultant has coordinated with the USFWS or NMFS to date regarding the current proposed Project.

1.3 DESCRIPTION OF THE PROPOSED PROJECT

1.3.1 Location

The approximately 10.87-acre Project site is located along the southern side of Enterprise Avenue, west of its intersection with Whitesell Street, and approximately 0.6-mile northwest of the Eden Landing Road/Clawiter Road exit from State Highway 92, east of the San Mateo Bridge toll station (Figures 1 and 2). The study site is accessed by driving north on Clawiter Road and turning west onto Enterprise Avenue.

The Project site comprises Alameda County Assessor's Parcels 439-99-35 and 439-99-36-2. The site is situated within Township 3 South, Range 3 West in the NE ¼ of Section 36 and Range 2 West in the NW ¼ of Section 31 on the San Leandro, California 7.5-minute USGS quadrangle, and is centered at 37.6322° North Latitude and 122.1313° West Longitude.

The site has elevations between 7 and 13 feet above mean sea level, with most of the site relatively flat and below the elevation of 11 feet. The Project site largely consists of an annually mowed grassland occupied by a small building and four radio broadcast towers. The site is surrounded by a chain link fence, except for its western edge. Land uses surrounding the Project site are filled vacant land to the east; a municipal wastewater treatment plant to the north; warehouse/trucking buildings to the west; and a railroad track, a drainage ditch, and a leveed former brackish marsh to the south.

The following sections provide descriptions of the proposed actions by the applicant within Corps jurisdiction and outside of Corps jurisdiction.

1.3.2 Proposed Action within the Corps Jurisdiction

The Project will consist of construction of an industrial building and associated parking spaces, trailer stalls, truck access and loading docks, landscaping, detention basins, and utilities. The actions within the Corps jurisdictional areas consist of grading and filling for the new industrial building and associated parking lot. The fill is necessary to construct the Project in order to provide a suitable substrate for the building foundation and parking lot at required flood elevations. As summarized in the Executive Summary in Table S.A, the Project would directly and permanently affect a potential jurisdictional area of 5,615 square feet (0.129 acre) of seasonal wetlands. The proposed mitigation will include the purchase of wetland mitigation credits at the San Francisco Bay Wetland Mitigation Bank.

1.3.3 Proposed Activities outside the Corps Jurisdiction

Construction of the Project will take place primarily outside of Corps jurisdiction in upland grassland areas. The Project will affect approximately 10.58 acres of non-developed uplands outside Corps jurisdiction.

1.3.4 Operation and Maintenance

Operation and maintenance of the proposed Project would entail daily activities associated with the warehouse and offices, including the movement of vehicles and people through the vehicular/ pedestrian circulation areas, loading and unloading of trucks, and landscape/ infrastructure maintenance work. These operational and maintenance activities would not cause any appreciable increase in the level of human activity or noise disturbance than currently occurs since the surround areas already have the same or higher levels of daily human activities.

Outdoor artificial lighting for the Project will be designed to avoid disturbance to the marshlands that lie to the south of the site that have the potential to support federally listed nocturnal species, such as salt marsh harvest mouse and Ridgway's rail. Lighting will be directed away for the marshlands. It will consist of wall-mounted lights that are mounted at 33.5-feet above the ground, and pole-lights that are mounted at 25 feet above the ground. The light fixtures would be shielded to direct light toward the parking areas and the vehicular/pedestrian circulation areas for safety. For these reasons, operation of the Project is not expected to result in a significant disturbance of wildlife usage patterns in the adjacent marshlands.

1.4 SPECIES AND CRITICAL HABITATS ADDRESSED

1.4.1 Methods

In order to identify federally protected (proposed, threatened, or endangered) species that could be affected by the Project, LSA biologists obtained an official species list from the USFWS on November 3, 2021, and a NMFS species list on November 3, 2021 (USFWS 2021, NMFS 2021; Appendix A). LSA also searched the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB; CDFW 2021) for occurrences of special-status plants and wildlife within 5 miles of the Project site. LSA also reviewed the Alameda County Breeding Bird Atlas (Richmond et al. 2011). Based on the field surveys, USFWS official species list, and results of the CNDDB search, LSA compiled a list of special-status species and habitats known to occur within the vicinity of the site.

LSA biologists conducted three field surveys at the Project site. These consisted of a reconnaissance-level habitat survey and jurisdictional delineation of the Project site on March 11, 2021, and botanical surveys on April 21 and August 23, 2021 (Appendix B).

1.4.2 Results

1.4.2.1 Plants

No federally listed plants were detected during LSA's botanical surveys of the site (Appendix B). The USFWS official species list (Appendix A) included two flowering plant species that are briefly summarized below. An analysis of the potential for this listed plant species to occur is provided in Table A and in more detail in Section 3.0.

Contra Costa Goldfields. Contra Costa goldfields (*Lasthenia conjugens*) is the only federally listed plant species that had the potential to occur at the site. This species is known to occur in a variety of habitats including seasonal wetlands and low depressions in grassland environments, which are present on the site. However, the species was not observed during the springtime botanical survey

when it would be in flower. The only CNDDB record within 5 miles of the site is a 1959 occurrence from an unknown location along the shore of the San Francisco Bay, estimated at approximately 0.5-mile from the site (CDFW 2021).

California Seablite. The other federally listed plant identified in the USFWS species list is the California seablite (*Suaeda californica*), which occurs in salt marsh habitat. The closest CNDDB record for this species is a transplanted population at Roberts Landing in San Lorenzo, approximately 3 miles from the site. No suitable salt marsh habitat is present on the project site for this species and this species was not observed during focused plant surveys conducted at the site.

Table A: Federally Listed Species Evaluated

Species	Common Name	Status	General Habitat Description	Potential to Occur
Plants				
Suaeda californica	California seablite	Endangered	Margins of coastal salt marshes.	**Does not occur.** No suitable habitat present. Not observed during focused plant surveys conducted in 2021. Closest CNDDB occurrence is approximately 3 miles from the site.
Lasthenia conjugens	Contra Costa goldfields	Endangered	Vernal pools, swales, low depressions, in open grassy areas in mesic, cismontane woodland, valley and foothill grassland.	**Does not occur.** Potential suitable habitat present in the seasonal wetland, but species not observed during focused plant surveys conducted in 2021. Closest CNDDB occurrence is 1959 record from an unknown location, estimated at approximately 0.5 mile from the site.
Mammals				
Reithrodontomys raviventris	Salt marsh harvest mouse	Endangered	Tidal salt marshes of San Francisco Bay and its tributaries. Requires tall, dense pickleweed for cover. Can use adjacent high marsh zones and vegetated uplands as refuge during high winter tidal periods.	**Low potential to occur.** This species is known to occur within the Action Area in the Hayward Regional Shoreline, approximately 400 feet (0.07 mile) south of the Project site (CDFW 2021; Figure 5). Therefore, it has the potential to use grasslands within the Action Area south of the Project site for upland refuge habitat during high tides. However, the potential for occurrence within the grasslands in proximity to the Project site is low because of the migration distance involved and the fact that extensive upland refuge habitat exists much closer to the habitat where the mouse has been documented to occur. The Project site is also regularly mowed and therefore, provides poor cover for this species. Moreover, the mouse would also need to cross several intervening levees to reach the grasslands near to the Project site.
Birds				

Table A: Federally Listed Species Evaluated

Species	Common Name	Status	General Habitat Description	Potential to Occur
Rallus obsoletus (=*Rallus longirostris obsoletus*)	California Ridgway's rail (=California clapper rail)	Endangered	Salt marshes and tidal sloughs. Requires tidal mudflats and tidal slough and channels for foraging habitat. Prefers cordgrass (*Spartina* sp.) for cover and nesting but can be occasionally found in bulrush and cattails.	**Low potential to occur.** No suitable nesting habitat is present in the Project site nor in the Action Area within 700 feet of the Project site. The Project site also does not provide suitable upland refugia habitat because it consists of regularly mowed grasslands that do not provide adequate cover for this species. Potentially suitable refugia habitat (grasslands and wetlands) occurs in the Action Area south of the Project site. However, the potential for occurrence within these grasslands and wetlands is low because they are a significant distance (in excess of 800 feet) from potentially suitable breeding habitat.
Sterna antillarum browni	California least tern	Endangered	Nests on the ground on sandy beaches, alkali flats, and hard-pan surfaces (salt ponds).	**Low potential to occur.** The Project site and Action Area do not contain suitable nesting habitat (i.e., sparsely vegetated flat areas), nor is there suitable foraging habitat present for this species. This species could nest in constructed islands within a restored tidal marsh as close as 0.3 mile (1,550 feet) to the southwest of the Project site. It could also forage in open water habitat approximately 2,500 feet southwest of the Project site. Closest CNDDB occurrence is at a dredged, constructed island within a restored tidal salt marsh, approximately 0.7 mile from the Project site.

Table A: Federally Listed Species Evaluated

Species	Common Name	Status	General Habitat Description	Potential to Occur
Charadrius nivosus nivosus	Western snowy plover	Threatened Critical Habitat	Nesting habitat includes upper areas of sandy beaches (above normal high tide line), barren dikes of salt ponds, and edges of alkali or brackish lakes in inland areas; forages along the water's edge and on exposed mud flats.	**Low potential to occur.** Suitable habitat is not present within or immediately adjacent to the Project site, but this species could forage and/or nest in salt pond habitat within the Action Area, approximately 350 feet southwest of the Project site. Closest CNDDB occurrence is at the Eden Landing Ecological Reserve, approximately 0.6 mile from the site. Closest designated Critical Habitat is approximately 0.6 mile from the Project site.
Coccyzus americanus	Yellow-billed cuckoo	Threatened	Nests in riparian systems along the broad lower flood-bottoms of larger river systems; requires dense riparian vegetation.	**No potential to occur.** The Action Area lacks suitable riparian habitat. No CNDDB occurrences occur within 5 miles of the site.
Reptiles				
Masticophis lateralis euryxanthus	Alameda striped racer (=Alameda whipsnake)	Threatened	Chaparral and sage scrub with patches of grassland and rock outcrops.	**No potential to occur.** The Action Area lacks suitable scrub habitat and is isolated from known occupied habitat by highly urbanized lands. Closest CNDDB occurrence is approximately 4 miles from the site.
Amphibians				
Rana draytonii	California red-legged frog	Threatened	Associated with quiet perennial to intermittent ponds, stream pools, and wetlands. Prefers shorelines with extensive vegetation. Disperses through uplands during and after rains.	**No potential to occur.** The Action Area lacks suitable stream or freshwater pond habitat and is isolated from any potential suitable breeding habitat by extensive urbanized lands. The distance to suitable breeding habitat is more than the maximum dispersal distance for this species. No CNDDB occurrences occur within 5 miles of the site.

Table A: Federally Listed Species Evaluated

Species	Common Name	Status	General Habitat Description	Potential to Occur
Ambystoma californiense	California tiger salamander	Threatened	Seasonal ponds or vernal pools are required for breeding. Spends most of its life underground in small mammal burrow complexes in upland grasslands adjacent to aquatic breeding habitat.	**No potential to occur.** Suitable breeding ponds are not present in the Action Area. The Action Area is fully isolated from any potential suitable breeding habitat by extensive urbanized lands. No CNDDB occurrences occur within 5 miles of the site.
Fish				
Hypomesus transpacificus	Delta smelt	Threatened	Large, main channels and open areas of San Pablo Bay. Able to tolerate a wide range of water salinities. Occurs from tidal freshwater reaches of the Delta west to eastern San Pablo Bay. Spawns in tidally influenced backwater sloughs.	**No potential to occur.** Suitable aquatic habitat is not present within or adjacent to the Action Area. No CNDDB occurrences occur within 5 miles of the site.
Eucyclogobius newberryi	Tidewater goby	Threatened	Brackish shallow lagoons and lower stream reaches where water is fairly still but not stagnant.	**No potential to occur.** Suitable aquatic habitat is not present within or adjacent to the Action Area. Species considered extinct in the San Francisco Bay (Moyle 2002). No CNDDB occurrences occur within 5 miles of the site.
Oncorhynchus mykiss irideus	Steelhead, Central California Coast DPS	Threatened	Coastal streams from Russian River south to Aptos Creek (Santa Cruz Co.), including streams tributary to San Francisco and San Pablo Bays.	**No potential to occur.** Suitable aquatic habitat is not present within or adjacent to the Action Area. Drainage at the Project site enters a storm drain and does not flow directly into the wetlands or other waters. No CNDDB occurrences occur within 5 miles of the site. Closest designated Critical Habitat is approximately 1 mile from the Project site.

Table A: Federally Listed Species Evaluated

Species	Common Name	Status	General Habitat Description	Potential to Occur
Acipenser medirostris	Green sturgeon (southern Distinct Population Segment)	Threatened Critical Habitat	Oceanic waters, bays, and estuaries; spawns in deep pools in large, turbulent freshwater river mainstems; known to forage in estuaries and bays from San Francisco Bay to British Columbia.	**No potential to occur.** Suitable aquatic habitat is not present within or adjacent to the Action Area. Drainage at the project site enters a storm drain and does not flow directly into the wetlands or other waters. No CNDDB occurrences occur within 5 miles of the site. Closest designated Critical Habitat is approximately 0.52 mile from the Project site.
Invertebrates				
Branchinecta lynchi	Vernal pool fairy shrimp	Threatened	Endemic to the grasslands of the Central Valley, and central and south coast mountains in small, clear water sandstone-depression and grassed swale, earth slump, or basalt-flow depression rain-filled pools.	**No potential to occur.** The Action Area is outside the known range of the species, and no suitable habitat is present (vernal pools). No CNDDB occurrences occur within 5 miles of the site.

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1.4.2.2 Wildlife under USFWS Jurisdiction

The USFWS official species list (Appendix A) includes 11 wildlife species that were evaluated for this BA. An analysis of the potential for each of the listed wildlife species to occur is provided in Table A. No federally listed wildlife species were detected during any of the surveys conducted in the Action Area.

The proposed Project was determined to have no effect on following seven wildlife species because the Action Area lacks suitable habitat or is situated outside the range for the species: yellow-billed cuckoo, Alameda striped racer, California red-legged frog, California tiger salamander, delta smelt, tidewater goby, and vernal pool fairy shrimp.

The remaining four wildlife species on the USFWS list are discussed below and in more detail in Section 3.0.

California Ridgway's Rail. The California Ridgway's rail is federally listed as an endangered species and also State-listed as endangered. It occurs primarily in tidal salt and brackish marshes with dense stands of pickleweed (*Salicornia pacifica*) and cordgrass (*Spartina* spp.). In the North Bay and Suisun Bay, California Ridgway's rail is also associated with bulrush stands. Ridgeway rails have not been recorded in or in the vicinity of the Action Area. Vegetation adjacent to channels and sloughs subject to tidal circulation is typical nesting site habitat for Ridgway's rail (Albertson and Evens 2000). Such habitat is not present in the Action Area. However, the species is known to occur in the tidal marshes approximately 0.5 mile of the Project site (Figure 5). Other occurrences within 5 miles of the Project site are in marshes around 1.6, 2.0, and 2.8 miles from the site.

Recommended Finding: *May Affect, Not Likely to Adversely Affect*

Salt Marsh Harvest Mouse. The salt marsh harvest mouse, a federally listed endangered species endemic to the San Francisco Bay estuary, inhabits mid to upper elevations of tidal and diked salt marshes dominated by dense pickleweed. Vegetated levees and other grassy upland habitats adjacent to pickleweed marshes are also critical as they provide shelter from predators during high tides and flooding. Records of salt marsh harvest mice exist for salt/brackish marshlands approximately 400 feet from the Action Area, at the Salt Marsh Harvest Mouse Preserve in the Hayward Marsh Regional Shoreline (CDFW 2021; Figure 5). The Project site contains only a few patches of pickleweed in the southwest corner; regular mowing of the site and the resulting lack of cover significantly reduces the likelihood for salt marsh harvest mice to occur in the site's grasslands. Suitable salt marsh and grassland habitat is present within the Action Area approximately 250 feet south and southwest of the site. The species could potentially use grasslands within the Action Area south of the Project site for upland refuge habitat during high tides. However, the potential for occurrence within the grasslands in proximity to the Project site is low because of the migration distance involved and the fact that extensive upland refuge habitat exists much closer to the habitat where the mouse has been documented to occur. Moreover, the mouse would also need to cross several intervening levees to reach the grasslands near to the Project site.

Based on all the foregoing, salt marsh harvest mouse is assumed to be present adjacent to the Action Area and possibly within the southern portion of the Action Area, approximately 600 feet

from the Project site. With implementation of the avoidance measures in Section 5.0 during construction work, the Project would not likely adversely affect salt marsh harvest mouse.

Recommended Finding: *May Affect, Not Likely to Adversely Affect*

Western Snowy Plover. The western snowy plover is federally listed as threatened. This species occurs on sandy beaches, salt pond levees and shores of large alkali lakes. They nest in sandy, gravelly, or friable soils. The Project site does not provide suitable nesting habitat for snowy plovers. The Project site consists primarily of grassland habitat, while snowy plovers occur in sandy beaches above normal high tide line and barren dikes of salt ponds. Snowy plovers have been observed nesting approximately 0.6 mile from the Project site in the Eden Landing Ecological Preserve and Hayward Shoreline Regional Park (CDFW 2021; Figure 5). Suitable nesting habitat may be present within the Action Area in the salt ponds and levees within 350 feet of the Project site. Future construction activities within the Project site could result in indirect impacts to nesting or foraging snowy plovers. With implementation of the avoidance measures in Section 5.0 during construction work, the Project would not likely adversely affect Western snowy plover.

Recommended Finding: *May affect, not likely to adversely affect*

California Least Tern is federally listed as endangered. This bird species is a seasonal migrant to San Francisco Bay, usually arriving in mid-spring and departing in the late summer. Suitable nesting habitat consists of sandy beaches, alkali flats, hardpan surfaces, and other bare or sparsely vegetated substrates along the coast. The primary food sources for this species consist of small fish species, shrimp, and other invertebrates. The Action Area does not provide suitable nesting habitat for least terns. The adjacent wetlands and open water detention ponds south of the Action Area provide suitable foraging habitat. This bird species is not likely to nest in the wetlands south of the site but has been recorded nesting on a dredged, constructed island within a restored tidal salt marsh approximately 0.7 mile southwest of the Project site (CDFW 2021). Similar islands that may provide suitable nesting habitat are situated within a within a restored tidal salt marsh approximately 0.3 mile (1,500 feet southwest of the Project site). With implementation of the avoidance measures in Section 5.0 during construction work, the Project would not likely adversely affect California least tern.

Recommended Finding: *May affect, not likely to adversely affect*

1.4.2.3 Wildlife under NMFS Jurisdiction

The NMFS species list for the Project vicinity (Appendix A) includes two fish species: Central California Coast DPS (federally threatened) and Southern DPS of green sturgeon (federally threatened). The Action Area does not provide suitable aquatic habitat for these two fish species. The only potential for effects to federally-listed fish species would be through indirect impacts to water quality in the San Francisco Bay from surface runoff from the Project site. Drainage from the Project site will not flow into the Action Area nor directly into the bay; rather it will flow into a municipal storm drain following on-site retention and treatment under the Project's SWMP. The municipal storm drain system ultimately discharges into the bay approximately 1.3 miles from the Project site. The Project's SWMP will avoid adverse water quality impacts from surface runoff prior to entry into the storm drain system, and therefore will not affect any of the federally-listed fish species.

1.4.2.4 Critical Habitat

The Project will not affect Critical Habitat for any species. The nearest Critical Habitat from the Project site is approximately 0.6 mile (0.6 mile from the Action Area) for western snowy plover, 1 mile (1 mile from the Action Area) for steelhead, and 0.52 mile (0.4 mile from the Action Area) for green sturgeon (Figure 6).

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2.0 ACTION AREA

The Action Area is defined in 50 Code of Federal Regulations (CFR) §402.02 as, "all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action." This area includes beneficial, insignificant, and discountable effects. The Action Area includes the entirety of the approximately 10.87-acre Project site, plus adjacent habitat around the site. As such, the Action Area includes approximately 31.76 acres. The Action Area is shown in Figures 2 and 3.

2.1 DESCRIPTION

2.1.1 General Setting

The approximately 10.87-acre Project site is located along the southern side of Enterprise Avenue, west of its intersection with Whitesell Street, and approximately 0.6 miles northwest of the Eden Landing Road/Clawiter Road exit from State Highway 92. The Project site is accessed by driving north on Clawiter Road and turning west onto Enterprise Avenue.

The Project site comprises Alameda County Assessor's Parcels 439-99-35 and 439-99-36-2. The site is situated within Township 3 South, Range 3 West in the NE ¼ of Section 36 and Range 2 West in the NW ¼ of Section 31 on the San Leandro, California 7.5-minute USGS quadrangle, and is centered at 37.6322° North Latitude and 122.1313° West Longitude. Figures 1 and 2 depict the regional location and study site location, respectively.

2.1.2 Surroundings and Land Use

The Project site consists largely of an annually mowed grassland that is occupied by a small building and four radio broadcast towers. The site is surrounded by a chain link fence, except for its western edge. Land uses surrounding the study site are filled vacant land to the east, a municipal wastewater treatment plant to the north, warehouse/trucking buildings to the west, and a railroad track, a drainage ditch, and a leveed former brackish marsh to the south.

2.1.3 Soils

Soils on the entire study site are mapped as Reyes clay, 0 to 2 percent slopes (USDA WebSoil Survey, accessed March 6, 2021). The site has been tilled in the past for agricultural purposes and portions of the site appear to contain imported fill. There are indistinct low berms and apparent shallow fill areas in the western portion of the site

2.1.4 Elevation

The Project site has elevations between 7 and 13 feet above mean sea level, with most of the site relatively flat and below the elevation of 11 feet.

2.1.5 Land Cover – Project Site

The Action Area includes developed lands with buildings, as well as seasonal wetlands and ruderal/upland areas. The extant plant communities and other cover types in the Project area are addressed below. Table C provides the acreages of the plant communities and other cover types on the Project site.

Table B: Acreage of Plant Community/Cover Types in the Project Site

Cover Types	Acres
Grasslands	10.401
Seasonal Wetlands	0.129
Ornamental/Landscaping	0.179
Developed	0.124
Total	10.833

Grasslands. Vegetation on the Project site is predominantly grasslands, except for ornamental plantings along the elevated western site boundary planted to screen the adjacent warehouse building (Figure 4). Dominant plant species in the grasslands are ripgut brome (*Bromus diandrus*), hare barley (*Hordeum murinum*), wild oats (*Avena* sp.), creeping wild rye (*Elymus triticoides*), salt grass (*Distichlis spicata*), and Italian rye (*Festuca perennis*). Other common plant species observed include mostly non-native forbs, such as cutleaf geranium (*Geranium dissectum*), bristly ox-tongue (*Helminthotheca echioides*), fennel (*Foeniculum vulgaris*), and wild radish (*Raphanus sativa*).

The lower-lying areas of the grasslands contain alkaline plant species, such as wild spear oracle (*Atriplex patula*), alkali heath (*Frankenia salina*), and salt grass.

Seasonal Wetlands. The Project site contains a single seasonal wetland area that occurs in a depression in the site's northeast corner. This wetland is characterized by hydrophytic species associated with alkaline soil conditions, primarily saltgrass, pickleweed, alkali heath, and brass buttons (*Cotula coronopifolia*).

Ornamental Plantings. A row of Italian buckthorn (*Rhamnus alaternus*) is planted along the elevated western site boundary, screening the adjacent warehouse building.

2.1.6 Land Cover – Action Area outside the Project Site

The land cover/habitat types in the Action Area outside of the Project site include a ruderal/gravel field to the east, grasslands and brackish marshlands to the south and southwest, a salt pond to the southwest, and a tidal canal and associated levees to the south (Figure 4). The ruderal/gravel field to the east consists of mostly bare ground with a sparse ruderal vegetation and is bordered to the north, east, and south by urban development. The grasslands, brackish marshlands, and salt pond to the south and southwest are part of a mosaic of wetland features that have been created by a system of levees.

2.1.7 Wildlife

The quality of wildlife habitat on the Project site is limited by the urban setting, periodic mowing, and subsequent lack of cover in the grasslands. However, the Project site retains habitat value for some wildlife typical of ruderal grasslands. Wildlife observed on the site include Botta's pocket gopher (*Thomomys bottae*), black-tailed jackrabbit (*Lepus californicus*), and various species of birds. Birds observed in the ruderal grasslands included various birds typical of open habitats with low ruderal vegetation, such as Canada goose (*Branta canadensis*), killdeer (*Charadrius vociferus*), American crow (*Corvus brachyrhynchos*), and European starling (*Sturnus vulgaris*). Table B.1 in Appendix C provides a list of wildlife species observed during the survey. Although not accessed during the survey, several salt marsh wetland bird species were observed in the wetlands and treatment pond approximately 300-600 feet southwest of the Project site. Birds observed at the adjacent wetlands or salt pond include common wading bird, waterfowl, and gulls, such as mallard (*Anas platyrhynchos*), black-necked stilt (*Himantopus mexicanus*), and ring-billed gull (*Larus delawarensis*). In addition, a number of other wildlife species that inhabit ruderal areas and wetland in Alameda County are expected to occasionally occur on or near the Project site.

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3.0 SPECIES ACCOUNTS AND POTENTIAL EFFECTS

This BA has been prepared to address the potential effects of the proposed Project on the species that have the potential to occur in the Action Area and therefore could potentially be affected by the proposed Project. As shown in Table A, four animal species have a low potential to occur in the Action Area (salt marsh harvest mouse, California Ridgway's rail, California least tern, and western snowy plover. These species are discussed below. No other federally listed species or habitats are likely to be affected by the Project.

3.1 WILDLIFE UNDER THE JURISDICTION OF THE USFWS

3.1.1 Salt Marsh Harvest Mouse

Status. The salt marsh harvest mouse was listed as state-endangered on June 27, 1971 (CCR Title 14, Section 670.5) and federally endangered on October 13, 1970 (35 FR 1604). It is also a California fully protected species. Salt marsh harvest mice are divided into two subspecies. *R. r. raviventris* is found in Corte Madera, Richmond, and the southern portion of San Francisco Bay, while *R. r. halicoetes* is found in the San Pablo and Suisun bays.

Habitat and Behavior. The salt marsh harvest mouse is endemic to the San Francisco Bay estuary. This species inhabits mid to upper elevations of tidal and diked salt marshes dominated by dense pickleweed. The mice are seldom found in cordgrass, alkali bulrush, or pure stands of saltgrass (Shellhammer et al. 1982). Vegetated levees and other grassy upland habitats adjacent to pickleweed marshes are also critical as they provide shelter from predators during high tides and flooding.

Salt marsh harvest mice are dependent on dense cover of native halophytes (salt-tolerant plants) and prefer pickleweed-dominated saline emergent wetlands as their habitat (Shellhammer 1977). The most suitable habitat is deep (23-29 inches tall) and dense pickleweed, intermixed with fat hen and alkali heath (Shellhammer 1982). The species requires non-submerged, salt tolerant vegetation to escape the high tide (Shellhammer et al. 1982). During these periods of high tides, populations of salt marsh harvest mice tend to concentrate in high marsh level areas of the high marsh zone (Fisler 1965). The salt marsh harvest mouse has also been found in the top zone and transitional zones of tidal marshes which rarely flood. The mice are rarely found in cordgrass, alkali bulrush, or pure stands of saltgrass (Shellhammer et al. 1982). The species will also move into adjoining grasslands during the highest winter tides. Grasslands are utilized as habitat only when new grass growth affords suitable cover in spring and summer months (Fisler 1965, Shellhammer 1982).

The diet of salt marsh harvest mice consists of seeds, grasses, leaves, plant stems, forbs, and insects. Salt marsh harvest mice tend to eat fresh green grasses in the winter and pickleweed and saltgrass during the rest of the year (Fisler 1965). The mice can tolerate high salinities in both their food and drink intake. The northern subspecies can drink both sea and fresh water (Fisler 1965).

Salt marsh harvest mice are primarily nocturnal, but under laboratory conditions Fisler (1965) recorded 15-20 percent of daily activity during the day, most of which occurred in the afternoon.

Salt marsh harvest mice are strong swimmers and climbers and hence are able to survive tidal or seasonal flooding (Fisler 1965).

Breeding. Breeding occurs from spring through autumn. Reproductive activity for females ranges from March to November. Males are reproductively active from April to September. The breeding season for the northern subspecies starts in May (Fisler 1965), which would be the season applicable to this Project. Salt marsh harvest mice build nests on the ground amongst the marsh vegetation or use old nests from ground-nesting birds. Nests are usually small and built of grass and sedge.

Occurrence in the Project Vicinity. Records of salt marsh harvest mice exist for salt/brackish marshlands in the vicinity of the Action Area, including the Salt Marsh Harvest Mouse Preserve in the Hayward Marsh Regional Shoreline (Figure 5) (CDFW 2021). The CNDDB (CDFW 2021) maps the following occurrences of salt marsh harvest mouse within the vicinity of the Action Area: 0.07 mile (400 feet) from the Project site at the Salt Marsh Harvest Mouse Preserve in the Hayward Marsh Regional Shoreline, 0.9 mile from the Project site at Mt. Eden Creek, 1.2 miles from the Project site at a marsh just south of the San Mateo Bridge eastern toll plaza, 1.8 miles from the Project site at the Alameda Creek marsh, 1.8 miles from the Project site just north of Sulphur Creek and west of Hayward Municipal Airport, 1.8 miles from the Project site at the Meadow Gun Club, and 2 miles from the Project site near the intersection of North Creek and Mt. Eden Creek (Figure 5).

Occurrence in the Action Area. Field surveys for salt marsh harvest mouse have not been conducted directly on the Project site or elsewhere in the Action Area. Nevertheless, the Project site is not likely to support salt marsh harvest mouse because habitat conditions are only marginally suitable for this species. The site contains mowed, ruderal upland habitat that provides poor cover for this species. Although the site contains few, small patches of pickleweed there are no appreciable stands of the plant. Given the poor on-site habitat conditions, the potential for harvest mice to use the site as upland refuge habitat during high tides is very low.

The nearest known occurrence is in the Action Area approximately 400 feet south of the Project site. Although the Action Area is well within the potential migratory distance of this species, the potential for occurrence within close proximity to the Project site is low because of the migration distance involved and the extensive upland refuge habitat that exists south of the Project site, much closer to the habitat where the mouse has been documented to occur. Moreover, the mouse would also need to cross several intervening levees to reach the Action Area grasslands near to the Project site.

On the basis of this habitat assessment and the proximity of known records, there is a potential for salt marsh harvest mouse to occur within the Action Area. However, the potential for occurrence is low, and with implementation of the standard avoidance and minimization measures during construction work (see Section 5.0), the Project is unlikely to adversely affect this species.

Recommended Finding: *May Affect, Not Likely to Adversely Affect*

3.1.2 California Ridgway's Rail

Status. California Ridgway's rail was listed as state-endangered on June 27, 1971 (CCR Title 14, Section 670.5) and federally endangered on October 13, 1970 (35 FR 1604). It is also a California fully protected species. Despite state and federal listing and protection, the California Ridgway's rail populations continue to decline (Wood et al. 2011).

Habitat. California Ridgway's rails occur primarily in tidal salt and brackish marshes with dense stands of pickleweed and cordgrass (*Spartina* spp.). The birds prefer marsh areas that have abundant vegetation in adjacent uplands to serve as a refuge during the highest tides and have a network of tidal sloughs to provide foraging habitat.

They feed on a variety of invertebrates, including crabs, clams, worms, and insects (Albertson and Evens 2000). California Ridgway's rails forage in higher marsh vegetation, along the vegetation and mudflat interface, and along tidal sloughs and creeks. They feed by gleaning, pecking, probing, and scavenging from the surface (Harvey 1990). Clapper rails also eat mice during high tides and may scavenge dead fish (Zembal and Massey 1983).

Breeding. According to the Draft Recovery Plan for Tidal Marsh Ecosystems of Northern and Central California (USFWS 2010), the breeding season of the California Ridgway's rail is protracted. Pair bonding and nest building are generally initiated by mid-February. Nesting may begin as early as late February to early May and may extend through August. There appears to be a break in nesting between mid-May and late June in the North Bay, a period that corresponds to the highest summer tides.

Vegetation adjacent to channels and sloughs subject to tidal circulation is typical nesting site habitat for Ridgway's rail (Albertson and Evens 2000). In saline emergent wetlands, clapper rails nest mostly in lower zones near tidal sloughs and where cordgrass is abundant (Harvey 1980, Zembal and Massey 1983). Clapper rails build a platform concealed by a canopy of woven cordgrass stems or pickleweed and gumweed (Harvey 1990). Nests are constructed only as high as necessary to prevent inundation while preserving a natural cover of vegetation. Clapper rail nests are woven to the surrounding vegetation that allows for flotation during extreme tidal events. Clapper rails also use dead drift vegetation as a platform (Harvey 1990). In fresh or brackish water, clapper rails construct nests in dense cattail or bulrush (Harvey 1990).

Dispersal. California Ridgway's rails are not migratory, but post-breeding dispersal has been recorded in late fall and early winter (Wilber and Tomlinson 1976). In general, clapper rails appear to move very little between seasons and between nesting or core-use territories (Albertson 1995). Based on banded birds, Albertson (1995) found most birds do not move from the marsh in which they were banded. Clapper rails tend to be more dispersed within the marsh following the nesting season, although the preferred habitat continues to be marsh dominated by cordgrass.

Occurrence in the Project Vicinity. Ridgway rails have been recorded in the vicinity of the Action Area; the species is known to occur approximately 0.5 mile from the Project site in tidal marshes west of the Hayward Shoreline Interpretive Center in the Hayward Area Recreation District Marsh in Hayward and in marshes between Hayward Landing and Johnson Landing in the Hayward shoreline

(Figure 5). Other occurrences within 5 miles of the Project site are in marshes 1.6 miles away at the mouth of Alameda Creek, 2 miles away north of Sulphur Creek in the northwest Hayward shoreline, and 2.8 miles away along the San Lorenzo shoreline (CDFW 2021; Figure 5).

Occurrence in the Action Area. Vegetation (primarily cordgrass) adjacent to channels and sloughs subject to tidal circulation is typical nesting site habitat for the Ridgway's rail (Albertson and Evens 2000). Such habitat is not present in or adjacent to the Action Area. For the Biological Opinion for the proposed South Bay Salt Pond Restoration Project (USFWS 2008), the USFWS used 700 feet from a nest site as a suitable buffer distance for most construction noise activities during the rail breeding season. The Action Area for the proposed Project extends 700 feet from the edge of the Project site, therefore, the potential for occurrence is low.

Based on an assessment of the quality and character of the habitat present in the Action Area and the very poor habitat that occurs there, Ridgway's rails are unlikely to be present. Nevertheless, construction activities could indirectly disturb nesting rails, in the unlikely event that nesting were to occur in the vicinity. However, the ambient level of disturbance in the Project site independent of the proposed Project is already high from the surrounding industrial development, the roadways, and other human activities. As a consequence, with implementation of the avoidance measures in Section 5.0, the Project would not likely contribute to disruption of nesting activity. We conclude that the proposed Project may affect but is not likely to adversely affect the California Ridgway's rail.

Recommended Finding: *May Affect, Not Likely to Adversely Affect*

3.1.3 California Least Tern

Status. The California least tern was federally listed as endangered on June 2, 1970 (35 FR 8491).

Habitat and Behavior. The California least tern occurs in coastal waters, sandy beaches, alkali flats, and hard-pan surfaces, such as salt ponds.

Occurrence in the Project Vicinity. The California least tern has been recorded nesting approximately 0.7 mile to the west on constructed island within a restored tidal salt marsh within the Hayward Regional Shoreline (CDFW 2021; Figure 5). The substrate at these islands is composed of light-colored sand, crushed shells, and large oyster shells (CDFW 2021). Other CNDDB occurrence within 5 miles of the site include: approximately 1.3 miles away at a post-breeding staging area at the Baumberg salt ponds; approximately 3.3 miles away at nesting habitat on a narrow dike surrounded by the Alvarado salt evaporator ponds between the old Alameda Creek channel and the new Alameda County flood control channel; and approximately 4.4 miles away at the Leslie salt ponds just south of Coyote Hills Slough.

Occurrence in the Action Area. No suitable foraging or nesting habitat is present on the Project site. The Action Area may provide suitable foraging habitat, but no suitable nesting habitat is present the Action Area. California least terns could nest in the constructed islands within restored tidal salt marsh outside of the Action Area, approximately 0.3 mile (1,500 feet) southwest of the Project site and forage in the open water habitat southwest of the Project site.

Recommended Finding: *May Affect, Not Likely to Adversely Affect*

3.1.4 Western Snowy Plover

Status. The western snowy plover was federally listed as threatened on March 5, 1993 (58 FR 12864). Western snowy plovers were historically widely distributed along the California coast but have undergone significant declines in recent decades (USFWS 2007). Critical Habitat for the western snowy plover was designated by USFWS on June 19, 2012 (77 FR 36728.).

Habitat and Behavior. The western snowy plover is typically found in open, sparsely vegetated habitats, most commonly on beaches. During the winter they may be found on beaches they do not nest on, as well as manmade salt ponds, and estuarine sand and mud flats (USFWS 2007). In the winter, western snowy plovers are gregarious, sometimes congregating in large flocks on beaches and other open areas. During the breeding season, western snowy plovers nest primarily on coastal beaches above the high-tide line, including sand spits, dune-backed beaches, and other coastal features where vegetation is sparse (USFWS 2007). Nests are placed in shallow depressions created by males. Nesting areas typically have some vegetation or washed-up debris, such as kelp or driftwood, which provide shelter from winds and predators and/or provide foraging habitat.

Occurrence in the Project Vicinity. Western snowy plovers have been observed nesting approximately 0.6 mile south of the Project site (approximately 0.5 mile [2,640 feet] from the Action Area) at restored salt ponds, marsh, and tidal habitat managed for snowy plovers in the Eden Landing Ecological Preserve. They are also known to nest approximately 0.6 mile west (approximately 0.5 mile [2,500 feet] from the Action Area) of the Project site on a dredged, constructed island within a restored tidal salt marsh at the Hayward Shoreline Regional Park (CDFW 2021; Figure 5).

Occurrence in the Action Area. No suitable foraging or nesting habitat is present on the Project site, but western snowy plover could nest and/or forage within the Action Area in the salt ponds approximately 350 feet to southwest.

Recommended Finding: *May Affect, Not Likely to Adversely Affect*

3.2 CRITICAL HABITAT

The Project will not affect Critical Habitat for any species. The nearest Critical Habitat is approximately 0.6 mile from the Action Area for western snowy plover, 1 mile for steelhead, and 0.4 mile for green sturgeon (Figure 6).

Recommended Finding: Will not appreciably diminish the value of the Critical Habitat as a whole for the conservation of western snowy plover, steelhead, or green sturgeon.

3.3 ESSENTIAL FISH HABITAT

Essential Fish Habitat (EFH) are those waters and substrate necessary to fish for spawning, breeding, foraging, or growth to maturity. EFH is described by Fishery Management Councils in amendments to Fishery Management Plans and is approved by the Secretary of Commerce acting through the NMFS (50 CFR 600.10) (NMFS 2004). The importance of EFH is not necessarily the presence of fisheries species, but rather what the habitat contributes to the surrounding fisheries environment.

Avoidance and minimization measures as proposed will serve to mitigate for effects to downstream EFH.

No EFH is present in the Project site. The Action Area consists of grasslands and brackish marshlands and a salt pond that is separated from San Francisco Bay by a series of levees. A tidal canal is situated within the Action Area and flows approximately 1 mile west into the San Francisco Bay. The proposed project will not affect this tidal slough or its potential EFH for fish species.

3.4 MARINE MAMMAL PROTECTION ACT

The NMFS California Tool also lists pinnipeds protected by the Marine Mammal Protection Act as occurring within the San Leandro USGS quadrangle. Pinniped species that could occur near the Action Area include the harbor seal (*Phoca vitulina*) and California sea lion (*Zalophus californianus*). The Action Area does not occur within or adjacent to open water habitat within San Francisco Bay. No suitable harbor seal haul-out sites were observed during the survey and seals are unlikely haul-out in the Action Area due to the lack of suitable habitat. These marine mammals are not likely to occur in the Action Area, and therefore, the Project will not result in any impacts to marine mammals.

4.0 EFFECTS ANALYSIS

4.1 PROJECT AREA CONSTRUCTION

Project construction work will result in approximately 0.129 acre of unavoidable direct impacts to a seasonal wetland and 10.87 acres of uplands at the Projects site. All work will work will be conducted in accordance with the avoidance and minimization measures described in Section 5.0. Permanent impacts to the seasonal wetland will be compensated under the Project's MMP through the purchase of wetland mitigation credits at the San Francisco Bay Wetland Mitigation Bank at a 1:1 compensation ratio

4.2 SALT MARSH HARVEST MOUSE

Salt marsh harvest mouse has not been observed in the Action Area and the potential for occurrence is low based on the factors described above in Section 3.2.3. Nevertheless, presence is assumed possible on the site.

4.2.1 Effects and Response Inside Corps Jurisdiction

The Project site does not contain suitable salt marsh habitat for salt marsh harvest mouse. The seasonal wetland on the Project site does not provide suitable salt marsh habitat for this species. This species is known to occur in the Action Area approximately 400 south of the Project site, but the potential for "take" of this species is minimal due to the low probability of this species to occur. The minimal cover of vegetation within the mowed lawn with the Project site and the intervening levees, tidal canal, and uplands and marshlands between the known occupied habitat and the Project site makes this species unlikely to occur within the Project site or be affected by the project. With implementation of the measures in Section 5.0, the remote potential for take will be further minimized.

4.2.2 Effects and Response Outside Corps Jurisdiction

The Project will result in the loss of 10.58 acre of non-jurisdictional uplands that may provide marginally suitable high-tide refuge habitat for salt marsh harvest mouse.

4.2.3 Effects on Critical Habitat

The Project will have no effect on Critical Habitat because Critical Habitat has not been designated for the species.

4.3 CALIFORNIA RIDGWAY'S RAIL

California Ridgway's rail has not been observed in the Action Area and the potential for occurrence is low based on the factors described above in Section 3.2.2. Nevertheless, presence is assumed possible near the Project site.

4.3.1 Effects and Response Inside Corps Jurisdiction

Suitable nesting habitat for the California Ridgway's rail is not present in the Action Area and only marginally suitable foraging habitat is present in the wetlands south of the site. Moreover, ambient levels of disturbance in the Action Area independent of the proposed Project are already high from the roadways and existing human activities at and near the Project site. Even under the remote possibility of nesting, implementation of the measures in Section 5.0 would avoid the potential for such disturbance. Therefore, Project construction activities will not disturb nesting rails within the Action Area's jurisdictional habitats. The Project will not result in suitable Corps jurisdictional brackish marsh wetlands that could provide suitable foraging habitat for this species.

4.3.2 Effects and Response Outside Corps Jurisdiction

The Project's effects on non-jurisdictional upland habitat upon California Ridgway's rail will be limited to the same potential for construction-related noise disturbance described above. The same measures to avoid disturbance will be implemented.

4.3.3 Effects on Critical Habitat

The Project will have no effect on Critical Habitat because Critical Habitat has not been designated for the species.

4.4 WESTERN SNOWY PLOVER

4.4.1 Central Effects and Response Inside Corps Jurisdiction

Suitable nesting habitat for the western snowy plover is not present in the Action Area. Suitable nesting habitat may be present in the salt ponds approximately 350 feet from the site. These wetlands are likely situated far enough away that nesting would not be impacted by the Project. Moreover, ambient levels of disturbance in the Action Area independent of the proposed Project are already high from the roadways and existing human activities at and near the Project site. If nesting occurs at these wetlands, implementation of the measures in Section 5.0 would avoid the potential for such disturbance. Therefore, Project construction activities will not disturb nesting snowy plovers within the Action Area's jurisdictional habitats. The Project will not result in suitable Corps jurisdictional brackish marsh wetlands that could provide suitable foraging habitat for this species.

4.4.2 Effects and Response Outside Corps Jurisdiction

The Project's effects on non-jurisdictional upland habitat upon western snowy plover will be limited to the same potential for construction-related noise disturbance described above. The same measures to avoid disturbance will be implemented.

4.4.3 Effects on Critical Habitat

The Project will have no effect on Critical Habitat for western snowy plover because no part of the Action Area occurs within designated Critical Habitat. The nearest Critical Habitat for western snowy plover is along the San Francisco Bay, 0.6 mile south and 0.8 mile west of the Action Area (Figure 6).

4.5 CALIFORNIA LEAST TERN

4.5.1 Effects and Response within Corps Jurisdiction

Suitable nesting habitat for the western snowy plover is not present in the Action Area. Suitable nesting habitat may be present in the constructed islands approximately 0.6 mile from the Project site. These islands are likely situated far enough away that nesting would not be impacted by the Project. Moreover, ambient levels of disturbance in the Action Area independent of the proposed Project are already high from the roadways and existing human activities at and near the Project site. If nesting occurs at these islands, implementation of the measures in Section 5.0 would avoid the potential for such disturbance. Therefore, Project construction activities will not disturb nesting snowy plovers within the Action Area's jurisdictional habitats. The Project will not result in suitable Corps jurisdictional brackish marsh wetlands that could provide suitable foraging habitat for this species.

4.5.2 Effects and Response Outside Corps Jurisdiction

The Project's effects on non-jurisdictional upland habitat upon California least tern will be limited to the same potential for construction-related noise disturbance described above. The same measures to avoid disturbance will be implemented.

4.5.3 Effects on Critical Habitat

The Project will have no effect on Critical Habitat because Critical Habitat has not been designated for the species.

4.6 INTERRELATED AND INTERDEPENDENT ACTIONS

No known interrelated or interdependent actions are associated with the Project. If an interrelated or interdependent Project occurs at some future time, the applicant will conduct necessary studies to determine if any impacts will occur and will consult with the USFWS as needed.

4.7 CUMULATIVE EFFECTS ANALYSIS

The Endangered Species Handbook (USFWS and NMFS 1998) states that cumulative effects under the ESA include all future, non-federal (e.g., State, Tribal, local or private) actions "reasonably certain to occur" in the Project area. Future federal actions are not considered in the cumulative effects analysis because these actions would be analyzed in future Section 7 consultations. Due to the potential presence of federally listed species adjacent to the proposed Project, any private sector Project applicants would be required to consult with the USFWS under Section 7 or Section 10 of the ESA prior to implementation.

LSA is not aware of any other non-federal actions that are reasonably certain to occur in the Project area. Therefore, both within and outside of the Corps jurisdiction, the proposed Project would not contribute to a cumulative significant effect to any federally listed species.

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5.0 AVOIDANCE, MINIMIZATION, AND MITIGATION MEASURES

The following measures will be implemented to avoid, reduce, and mitigate for potential impacts to federally listed species and their habitats.

Measure 1: Project Biologist. A qualified Project Biologist, approved by the USFWS, will monitor all initial ground disturbance/grading work on the Project site. The Project Biologist shall have full authority to stop work if any of the following occurs:

- Non-compliance with the conditions of the USFWS Biological Opinion;
- Any observed presence of a federally listed species within the work area; and
- Non-compliance with the Project's SWPPP or other water quality protection measures required by the Regional Water Quality Control Board.

Work may not resume until the Project Biologist has verified that the non-compliance issue has been resolved and/or the federally listed species is no longer present within the work area.

Measure 2: SWPPP. Prior to the commencement of work at the Project site, the construction contractor shall prepare a SWPPP in compliance with RWQCB requirements. The SWPPP will identify specific best management practices (BMPs) for each construction activity to eliminate or minimize the potential for the discharge of polluted storm water or unauthorized non-storm water from the work area. Specific BMPs will be implemented during Project construction so as not to cause or contribute to an exceedance of any water quality standard and RWQCB-defined beneficial uses of waters. In addition, changes to the BMPs such as alternative mechanisms, if necessary, during Project design and/or construction will be implemented in order to achieve the stated goals and performance standards.

Measure 3. Salt Marsh Harvest Mouse and Ridgway's Rail Protection. Although salt marsh harvest mouse and Ridgway's rail are unlikely to occur on the Project site due to the paucity of suitable habitat, the possibility of occurrence cannot be totally discounted. Therefore, the following measures shall be used for any work that occurs within and adjacent to suitable habitat for salt marsh harvest mouse and Ridgway's rail (i.e., salt marsh and ruderal upland habitat):

- Exclusion fencing for salt marsh harvest mice will be installed along the Project site's southern boundary where the site abuts adjacent grasslands and marshlands. The fence will be a minimum of 2 feet in height. If Visqueen is used, the fencing will be supported by wooden or steel rebar stakes. The fence will be constructed with 8-millimeter plastic (Visqueen) sheeting that is too smooth to be climbed by salt marsh harvest mice. The toe of the fence will be buried approximately 4 inches in the ground to prevent salt marsh harvest mice from crawling or burrowing underneath it. To provide strength, durability and wind resistance, the plastic sheeting will be sandwiched between two stakes at each stake location, with the stakes screwed or wired together firmly.

- The Project Biologist will be present during vegetation clearing and during installation of salt marsh harvest mouse exclusion fencing. Once the exclusion fencing has been installed and all work activity is confined to the cleared work site, the Project Biologist will train a Biological Monitor to conduct daily monitoring duties, including exclusion fence inspection.

- Hand tools will be used to clear vegetation. Weed whackers will be allowed if the Project Biologist walks in front of the operator of the weed whacker, clearing the area of salt marsh harvest mice.

- Vegetation clearance will be conducted in a complete manner so that the Project Biologist can determine with certainty that salt marsh harvest mice are absent.

- If a salt marsh harvest mouse or Ridgway's rail is observed within the areas being removed of vegetation or elsewhere within the work site, the Project Biologist will stop work in the immediate area until the animal leaves the work area on its own volition. If the animal does not leave the work area, work in the immediate area will not be reinitiated until the USFWS is consulted regarding appropriate avoidance measures, and permission is granted by the USFWS to commence work.

- No salt marsh harvest mice or Ridgway's rail may be handled or captured at any time during site preparation or other Project activities.

- Maintenance of the fencing will be conducted as needed throughout the work period. Any necessary repairs to the fencing will be completed within 24 hours of the initial observance of damage. Work will not continue within 100 feet of the damaged fencing until the fence is repaired and the site is surveyed by the Project Biologist to ensure that salt marsh harvest mice have not entered the work area.

- The Project Biologist will be available on an on-call basis to come out the site in the event that the trained representative finds a salt marsh harvest mouse or Ridgway's rail in the work area after the vegetation has been cleared and the fence has been installed.

Measure 4: Worker Environmental Awareness Program. An employee education program for all construction personnel will be developed and implemented by the Project Biologist prior to the initiation of construction activities. At a minimum, the program will include the following topics: (1) biology, conservation, and legal status of the federally-listed species with the potential to occur in the Project vicinity; (2) responsibilities of the Project Biologist and Biological Monitor; (3) review of key restrictions and requirements under the Biological Opinion and other environmental permits; (4) limitations on all movement of those employed on-site, including ingress and egress of equipment and personnel, to designated construction zones; (5) salt marsh harvest mouse/Ridgway's rail exclusion fencing restrictions and maintenance; (6) on-site pet prohibitions; (7) use of trash containers for disposal and removal of trash.

Measure 5: Compensatory Mitigation. The applicant will purchase wetland mitigation credits at a minimum 1:1 ratio from the San Francisco Bay Wetland Mitigation Bank to compensate for the loss of seasonal wetlands on the Project site

Measure 7: ESA Fencing. Environmentally Sensitive Area (ESA) fencing shall be placed along the southern boundary of the Project site, adjacent to the salt marsh harvest mouse exclusion fencing. The fencing can be installed after initial clearing of vegetation but shall be installed prior to any further work on the Project site. Vehicles and equipment shall not be operated or parked beyond the fencing within any adjacent habitat. Materials shall not be stored or staged beyond the fencing. No vegetation removal or ground-disturbing activities shall be permitted beyond the fencing. BMPs as prescribed by the Project's SWPPP shall be installed in conjunction with the ESA fencing to prevent pollution of the avoided wetlands.

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6.0 CONCLUSION AND DETERMINATION OF EFFECTS

6.1 SALT MARSH HARVEST MOUSE

Determination: The construction and operation of the Project **may affect, but is not likely to adversely affect** the salt marsh harvest mouse because:

- Although the species is known to occur in the Project site vicinity, its potential for actual occurrence in or adjacent to the work areas is very low due to the paucity of suitable pickleweed habitat and the distance from suitable, occupied habitat.
- The avoidance measures contained herein will prevent direct or indirect impacts to this species in the unlikely event of occurrence of this species in or near the work area.

The Project will **not affect** Critical Habitat for the salt marsh harvest mouse because:

- No Critical Habitat has been designated for this species.

The Project **will not jeopardize** the continued existence of the species because:

- The Project would not cause any effects that would preclude the ability to recover the species.

Rationale: The species is unlikely to be present at the Project site due to the limited suitable marsh habitat present at or near the site, the distance from occupied habitat, and the lack of vegetative cover at the Project site due to periodic mowing.

6.2 CALIFORNIA RIDGWAY'S RAIL

Determination: The construction and operation of the Project **may affect, but is not likely to adversely affect** the California Ridgway's rail because:

- Although the species is known to occur in the tidal marshes within 0.5 mile of the Project site, the potential for occurrence in or adjacent to the work area is very low. Suitable nesting habitat does not occur near the Project site, and only marginally suitable upland refugia habitat occurs.
- The avoidance measures contained herein will prevent direct or indirect impacts to this species in the unlikely event of occurrence of this species in or near the work area.

The Project will **not affect** Critical Habitat for the California Ridgway's rail because:

- No critical habitat has been designated for this species.

The Project will not jeopardize the continued existence of the species because:

- The Project would not cause any effects that would preclude the ability to recover the species.

Rationale: The species is unlikely to be present at the Project site due to an absence of suitable nesting habitat and the marginal nature of the suitable upland refugia habitat.

6.3 WESTERN SNOWY PLOVER

Determination: The construction and operation of the Project **may affect, but is not likely to adversely affect** the western snowy plover because:

- Suitable habitat may be present within the Action Area in the salt flats ponds or and levees within 350 feet of the Project site. However, the construction work will not directly affect these areas and the potential for indirect affects will be avoided through implementation of the Project's avoidance measures during construction work.

The Project will **not affect** Critical Habitat for the western snowy plover because:

- The Project site is not located within or near to designated Critical Habitat for this species.

The Project **will not jeopardize** the continued existence of the species because:

- The Project would not cause any effects that would preclude the ability to recover the species.

Rationale: Although the western snowy plover has the potential to nest and forage in the salt ponds southwest of the Project site, no suitable nesting habitat is present within 350 feet of the Project site, the construction work will not directly affect the off-site salt ponds, and the suitable habitat is far away enough that the potential for indirect affects during construction work will be avoided.

6.4 CALIFORNIA LEAST TERN

Determination: The construction and operation of the Project may affect, but is not likely to adversely affect the California least tern because:

The Project **may affect, not likely to adversely affect** the California least tern because:

- Suitable habitat may be present in the constructed islands approximately 0.3 mile (1,500 feet) southwest of the Action Area. However, the construction work will not directly affect the islands and the potential for indirect affects will be avoided through implementation of the Project's avoidance measures during construction work.

The Project will **not affect** Critical Habitat for the California least tern because:

- No critical habitat has been designated for this species.

The Project **will not jeopardize** the continued existence of the species because:

- The Project would not cause any effects that would preclude the ability to recover the species.

Rationale: Although California least tern has the potential to occur in the wetlands and ponds south and southwest to the Project site, the construction work will not directly affect these wetlands/ponds and the potential for indirect affects during construction work will be avoided.

6.5 CONCLUSION

We request concurrence that the Project may affect but is unlikely to adversely affect salt marsh harvest mouse, California Ridgway's rail, western snowy plover, and California least tern, and we request initiation of formal consultation.

We request concurrence from the NMFS that the Project will not adversely affect EFH pursuant to the Magnuson-Stevens Act.

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7.0 PREPARERS

George Molnar, Principal/Senior Wetland Biologist
Dan Sidle, Associate/Senior Biologist
Chip Bouril, Senior Soil Scientist/Wetland Delineator
Tim Milliken, Senior Botanist
Greg Gallaugher, Associate/Senior GIS Specialist

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8.0 REFERENCES

Albertson, J.D. 1995. Ecology of the California clapper rail in South San Francisco Bay. M.S. Thesis, San Francisco State University, San Francisco, California. 200 pp.

Albertson, J.D. and J. Evens. 2000. California Clapper Rail. In P.R. Olofson, editor. Goals Project: Baylands Ecosystems Species and Community Profiles. San Francisco Bay Area Wetlands Ecosystems Goals Project. San Francisco Bay Regional Water Quality Control Board, Oakland, California. pp. 332-340.

Burgner, R. L., J.T. Light, L. Margolis, T. Okazaki, A. Tautz, and S. Ito. 1992. Distribution and origins of steelhead trout (*Oncorhynchus mykiss*) in offshore waters of the north Pacific Ocean. International North Pacific Fisheries Commission. Bulletin no. 51.

California Native Plant Society (CNPS). 2021. Electronic Inventory of Rare and Endangered Plants of California. [computer program]. Version 1.5.2. California Native Plant Society. Sacramento, California.

California Department of Fish and Wildlife (CDFW). 2021. California Natural Diversity Database (CNDDB), California Department of Fish and Wildlife, Biogeographic Data Branch, Sacramento, California. November.

Fisler, G.F. 1965. Adaptations and speciation in harvest mice of the marshes of San Francisco Bay. University of California Publications in Zoology, Vol. 77. University of California Press, Berkeley, California.

Grewell, B. J., M. A. DaPrato, P. R. Hyde, and E. Rejmankova. 2003. Reintroduction of endangered soft bird's-beak (*Cordylanthus mollis* ssp. *mollis*) to restored habitat in Suisun Marsh. Final report to CalFed Ecosystem Restoration Program, Contract 99-N05. April 10, 2003. 142 pp.

_____. 1990. California's wildlife, birds, clapper rail. California Wildlife Habitat Relationships System, California Interagency Wildlife Task Group, California Department of Fish and Wildlife, Sacramento, California. Available online at: http://www.dfg.ca.gov/whdab/B144.html (accessed July 2021).

Leidy, Robert A., G.S. Becker, and B.N. Harvey. 2005. Historical distribution and current status of steelhead/rainbow trout (*Oncorhynchus mykiss*) in streams of the San Francisco Estuary, California. Center for Ecosystem Management and Restoration, Oakland, California.

Leidy, R.A. 2007. Ecology, Assemblage Structure, Distribution, and Status of Fishes in Streams Tributary to the San Francisco Estuary, California. San Francisco Estuary Institute. Contribution No. 530. April.

McEwan, D., and T.A. Jackson. 1996. Steelhead Restoration and Management Plan for California. California Department of Fish and Game. Sacramento, California.

Moore Biological Consultants (Moore). 2020. 3600 Enterprise Avenue, Hayward, Alameda County, California: Preliminary Wetlands and Special-Status Species Review. Prepared for Dermody Properties. December 23.

Moyle, P.B. 2002. Inland fishes of California: revised and expanded. University of California Press, Berkeley.

NOAA Fisheries. 1993. Designated Critical Habitat; Sacramento River Winter-run Chinook Salmon. Federal Register: 59: 33212-33219.

_____. 2005. Endangered and Threatened Species; Designation of Critical Habitat for seven Evolutionarily Significant Units of Pacific Salmon and Steelhead in California. FR V 70 #170: 52488-52627.

National Marine Fisheries Service (NMFS). 2021. National Marine Fisheries Service Species list for the San Leandro, California USGS 7.5-minute Quadrangle.

Pacific Fishery Management Council (PFMC). 2014. Pacific Coast Groundfish Fishery Management Plan for the California, Oregon, and Washington Groundfish Fishery. Portland, Oregon. May.

Peinado, M., F. Alcaraz, J. Delgadillo, M. De La Cruz, J. Alvarez, and J. L. Aguirre. 1994. The coastal salt marshes of California and Baja California: phytosociological typology and zonation. Vegetation 110:55-66.

Radtke, L.D. 1966. Distribution of Smelt, Juvenile Sturgeon and Starry Flounder in the Sacramento-San Joaquin Delta. Pages 115–119 in S.L. Turner and D.W. Kelley, editors. Ecological studies of the Sacramento-San Joaquin Delta, Part II. California Department of Fish and Game Fish Bulletin 136.

Richmond B., Green H., and Rice, D.C. 2011. Alameda County Breeding Bird Atlas. Golden Gate Audubon Society, Berkeley, CA and Ohlone Audubon Society, Hayward, CA.

Shellhammer, H.S. 1977. Of Mice and Marshes. San Jose Studies, San Jose State University 3:23-35.

_____. 1982. Reithrodontomys raviventris. Mammal. Species No. 169. 3 pp.

Shellhammer, H., R. Jackson, W. Davilla, A. M. Gilroy, H. T. Harvey, and L. Simons. 1982. Habitat preferences of salt marsh harvest mice (*Reithrodontomys raviventris*). Wasmann Journal of Biology 40:102–114.

U.S. Department of Agriculture (USDA). 2021. Query of Web Soil Survey. Website: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx (accessed April 29).

U.S. Fish and Wildlife Service (USFWS). 1994. Endangered and Threatened Wildlife and Plants; Critical Habitat Determination for the Delta Smelt; Final Rule. Federal Register, Vol. 59, No. 242, p. 65256-65279.

_____. 2005. Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon. Portland, Oregon. xxvi + 606 pages.

_____. 2007. Western Snowy Plover (*Charadrius alexandrinus nivosus*) Pacific Coast Population Recovery Plan. Volume 1: Recovery Plan. Sacramento, California.

_____. 2008. Formal Endangered Species Consultation on the Proposed South Bay Salt Pond Restoration Project Long-term Plan and the Project-level Phase 1 Actions, Alameda, Santa Clara, and San Mateo Counties, California. Sacramento Fish and Wildlife Service Office, Sacramento, California. August 12.

_____. 2009. Draft Recovery Plan for Tidal Marsh Ecosystems of Northern and Central California. Sacramento, California. xviii + 636 pp.

_____. 2010. Draft Recovery Plan for Tidal Marsh Ecosystems of Northern and Central California. Sacramento, California. xvii + 636 pp.

_____. 2021. Information for Planning and Consulting (IPaC), List of Threatened and Endangered Species that May Occur in Your Proposed Project Location or May Be Affected by Your Proposed Project.

USFWS and NMFS. 1998. Consultation Handbook. Procedures for Conducting Consultation and Conference Activities Under Section 7 of the Endangered Species Act.

Wilber, S.R., and R.E. Tomlinson. 1976. The literature of western clapper rails. Wildl. Res. Rpt. No. 194, U.S. Fish Wildlife Service, Washington, D.C.

Wood, J., L. Liu, and N. Nur. 2011. Clapper Rail. In Pitkin, M. and J. Wood (editors). The State of the Birds San Francisco Bay 2011. PRBO Conservation Science (Point Blue) and the San Francisco Bay Joint Venture. Available online at: http://data.prbo.org/sfstateofthebirds/index.php?page=clapper-rail (accessed July 2021).

WRA, Inc. (WRA). 2020. Biological Resources Assessment, 3636 Enterprise Ave., Hayward California. Prepared for Salem Broadcasting Company. June.

Zembal, R.L., and B.W. Massey. 1983. The Light-Footed Clapper Rail: Distribution, Nesting Strategies, and Management. Cal-Nevada Wildlife. Trans. 1983:97-103.

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FIGURES

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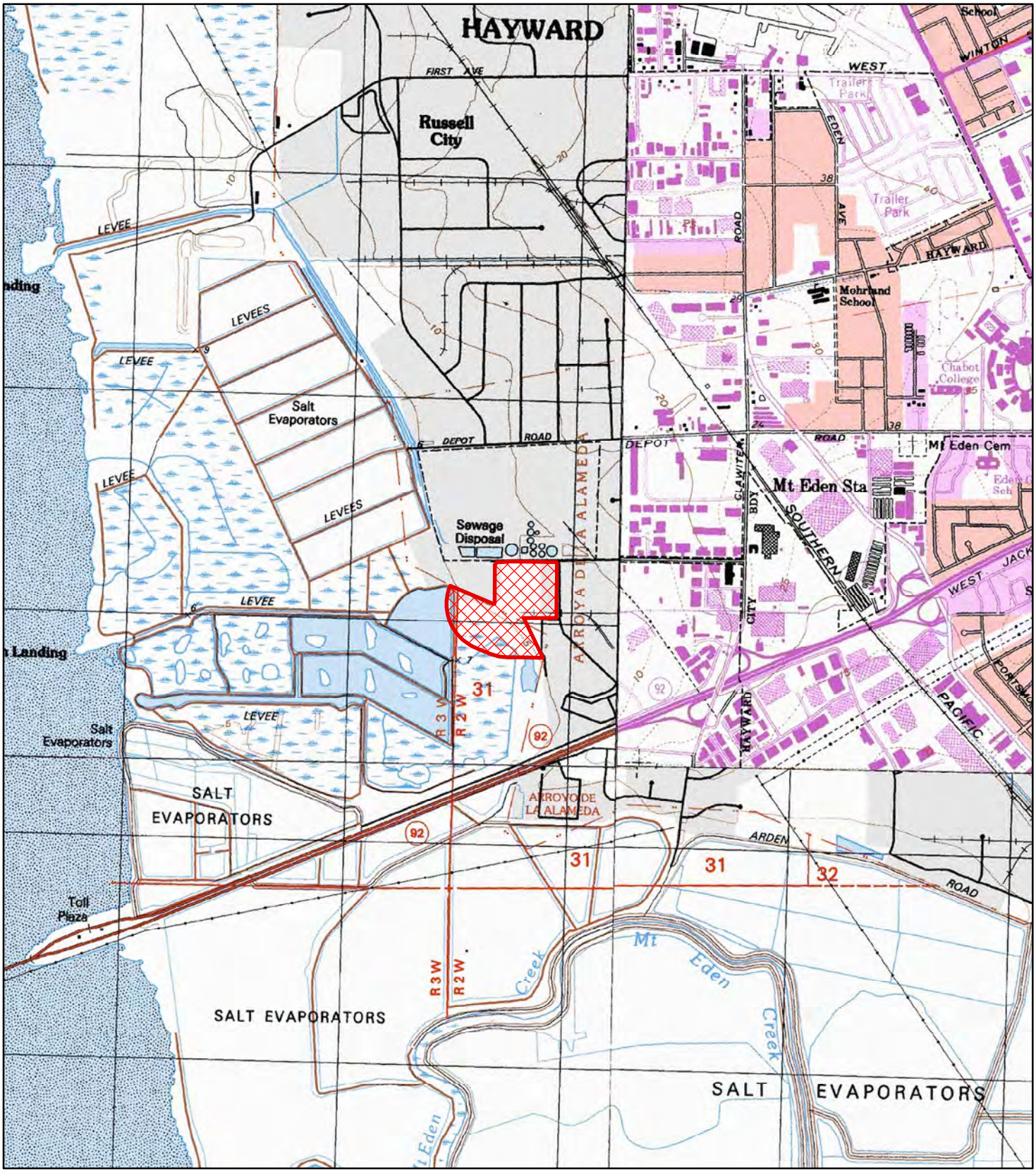
LSA

FIGURE 1

LogistiCenter at Enterprise Project
Hayward, Alameda County, California
Regional Location

SOURCE: Esri World Street Map (2021).

I:\DYP2101\GIS\Maps\BA\Figure 1_Regional Location.mxd (1/13/2022)



LSA

LEGEND

Action Area

FIGURE 2

N

0 1000 2000

FEET

LogistiCenter at Enterprise Project
Hayward, Alameda County, California

Action Area Location

SOURCE: USGS 7.5-minute Topo Quads - *San Leandro, Calif.* (1993), *Hayward, Calif.* (1980), *Redwood Point, Calif.*, and *Neward, Calif.* (1993).

I:\DYP2101\GIS\Maps\BA\Figure 2_Action Area Location.mxd (1/13/2022)

LSA

LEGEND

Project Site (10.83 acres)

Action Area (36.38 acres)

N

0 150 300

FEET

SOURCE: Aerial Imagery from Google Maps.

I:\DYP2101\GIS\Maps\BA\Figure 3_Action Area and Proposed Project.mxd (1/13/2022)

FIGURE 3

LogistiCenter at Enterprise Project
Hayward, Alameda County, California

Action Area and Proposed Project

LSA

LEGEND

Action Area (36.38 acres)

Land Cover Types within Project Site

- Grassland (10.401 acres)
- Developed (0.124 acres)
- Ornamental/ Landscaping (0.179 acres)
- Seasonal Wetland (0.129 acres)

N

0 150 300

FEET

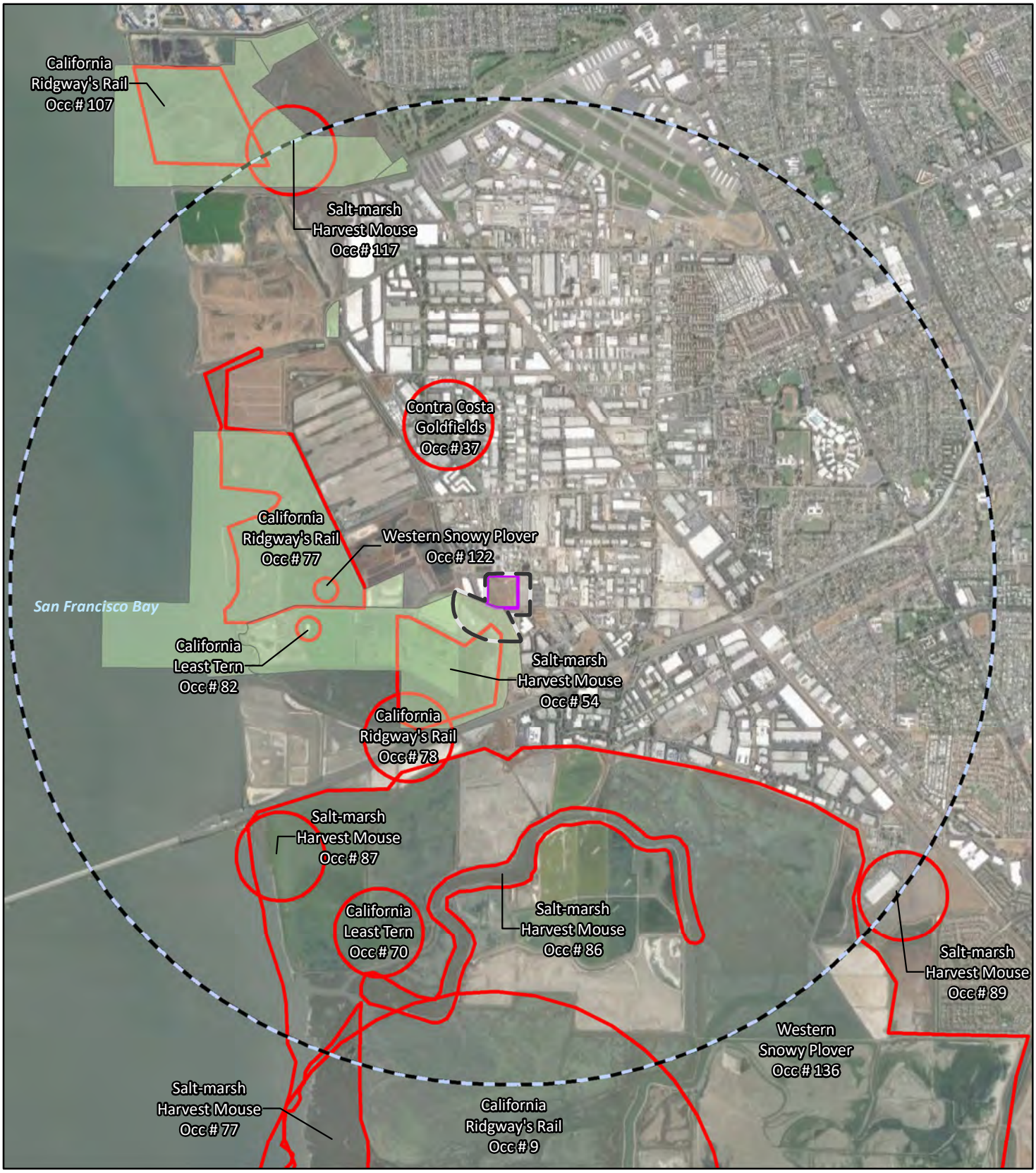
SOURCE: Aerial Imagery from Google Maps.

I:\DYP2101\GIS\Maps\BA\Figure 4_Land Cover.mxd (2/3/2022)

FIGURE 4

LogistiCenter at Enterprise Project
Hayward, Alameda County, California

Land Cover



LSA

LEGEND

- Project Site
- Action Area
- 2-Mile Buffer of Project Site
- Hayward Regional Shoreline
- CNDDB Occurrences

N

0 1500 3000

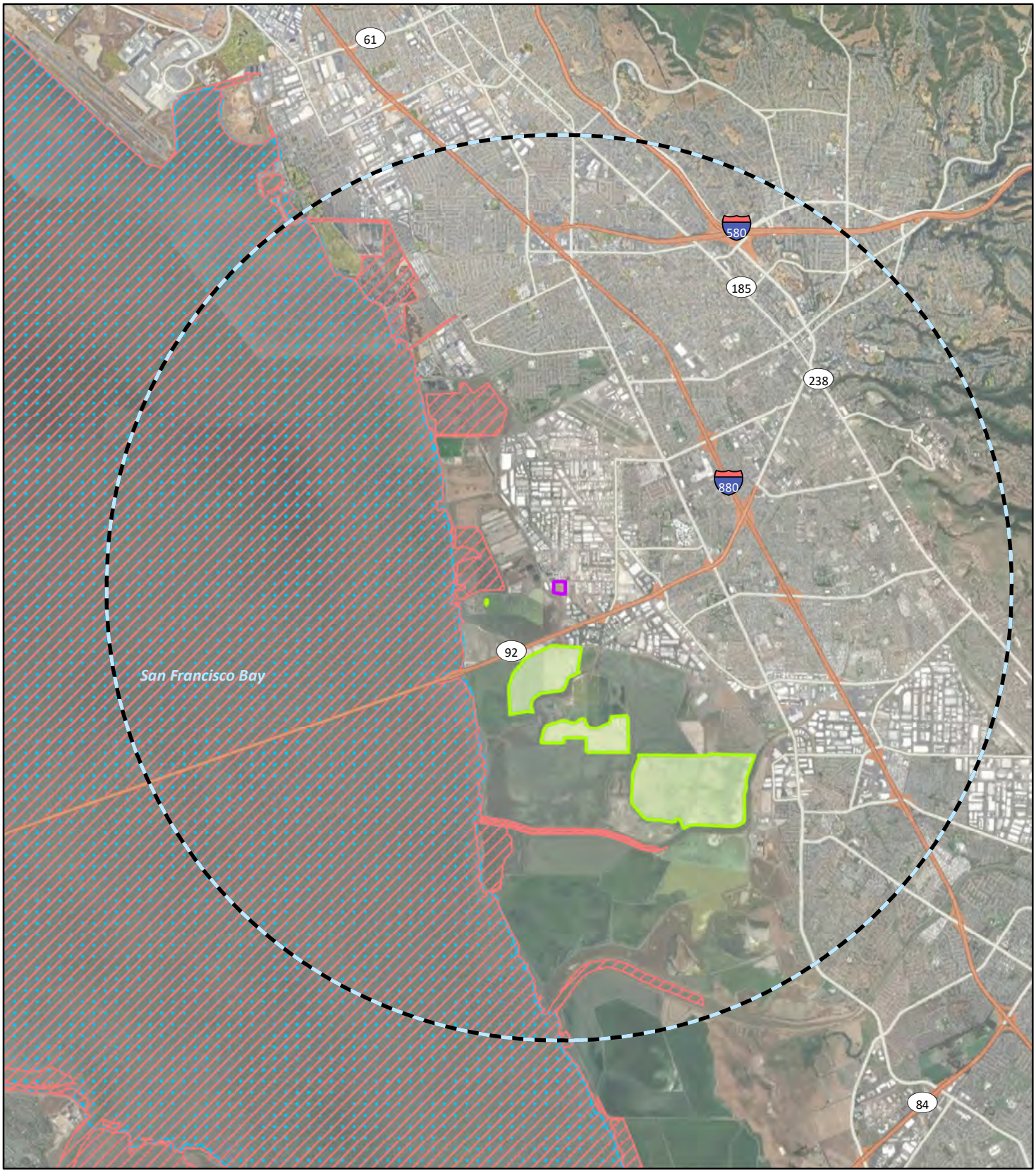
FEET

FIGURE 5

LogistiCenter at Enterprise Project
Hayward, Alameda County, California
Federally Listed CNDDB Occurrences within Two Miles of the Project Site

SOURCE: Google Maps Sat (2021); CDFW CNDDB (11/2021).

I:\DYP2101\GIS\Maps\BA\Figure 5_Federally Listed CNDDB Occurrences within 2 Miles.mxd (2/8/2022)



LSA

LEGEND

- Project Site
- 5-Mile Buffer of Project Site
- Western Snowy Plover Critical Habitat
- Central California Coast Steelhead Critical Habitat
- Green Sturgeon Critical Habitat

N

0 0.75 1.5
Miles

FIGURE 6

LogistiCenter at Enterprise Project
Hayward, Alameda County, California
Critical Habitats within
Five Miles of the Project Site

SOURCE: Google Maps Sat (2021); USFWS (06/2012); NMFS (06/2005, 10/2009).

I:\DYP2101\GIS\Maps\BA\Figure 6_Critical Habitats within 5 Miles.mxd (2/3/2022)

APPENDIX A

U.S. FISH AND WILDLIFE SERVICE OFFICIAL SPECIES LIST AND NATIONAL MARINE FISHERIES SERVICE SPECIES LIST

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To: November 03, 2021
Consultation Code: 08ESMF00-2022-SLI-0292
Event Code: 08ESMF00-2022-E-00885
Project Name: Hayward Dermody

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to

utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

Project Summary

Consultation Code: 08ESMF00-2022-SLI-0292
Event Code: Some(08ESMF00-2022-E-00885)
Project Name: Hayward Dermody
Project Type: DEVELOPMENT
Project Description: Construction of industrial building and associated parking
Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@37.632234999999994,-122.13124799838475,14z

Counties: Alameda County, California

Endangered Species Act Species

There is a total of 14 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. 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.

Mammals

NAME	STATUS
Salt Marsh Harvest Mouse *Reithrodontomys raviventris* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/613	Endangered

Birds

NAME	STATUS
California Clapper Rail *Rallus longirostris obsoletus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4240	Endangered
California Least Tern *Sterna antillarum browni* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8104	Endangered
Western Snowy Plover *Charadrius nivosus nivosus* Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast) There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/8035	Threatened
Yellow-billed Cuckoo *Coccyzus americanus* Population: Western U.S. DPS There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

Reptiles

NAME	STATUS
Alameda Whipsnake (=striped Racer) *Masticophis lateralis euryxanthus* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5524	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog *Rana draytonii* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander *Ambystoma californiense* Population: U.S.A. (Central CA DPS) There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2076	Threatened

Fishes

NAME	STATUS
Delta Smelt *Hypomesus transpacificus* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/321	Threatened
Tidewater Goby *Eucyclogobius newberryi* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/57	Endangered

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp *Branchinecta lynchi* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened

Flowering Plants

NAME	STATUS
California Seablite *Suaeda californica*	Endangered
Population:	
No critical habitat has been designated for this species.	
Species profile: https://ecos.fws.gov/ecp/species/6310	
Contra Costa Goldfields *Lasthenia conjugens*	Endangered
There is **final** critical habitat for this species. The location of the critical habitat is not available.	
Species profile: https://ecos.fws.gov/ecp/species/7058	

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

NATIONAL MARINE FISHERIES SERVICE SAN LEANDRO QUAD SPECIES LIST

Quad Name **San Leandro**
Quad Number **37122-F2**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) - **X**
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) -
Eulachon (T) -
sDPS Green Sturgeon (T) - **X**

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat - **X**
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat - **X**

ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -	**X**
Chinook Salmon EFH -	**X**
Groundfish EFH -	**X**
Coastal Pelagics EFH -	**X**

Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds
See list at left and consult the NMFS Long Beach office 562-980-4000

MMPA Cetaceans -

MMPA Pinnipeds - **X**

APPENDIX B

WILDLIFE SPECIES LISTS

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Table B.1: Wildlife Species Observed during the LSA Survey

Common Name	Scientific Name	Status
Birds		
Canada goose	*Branta canadensis*	R
Mallard	*Anas platyrhynchos*	R
red-tailed hawk	*Buteo jamaicensis*	R
killdeer	*Charadrius vociferus*	R
American crow	*Corvus brachyrhynchos*	R
rock pigeon	*Columba livia*	R, I
black phoebe	*Sayornis nigricans*	R
Say's phoebe	*Sayornis saya*	W
American pipit	*Anthus rubescens*	W
European starling	*Sturnus vulgaris*	R, I
Brewer's blackbird	*Euphagus cyanocephalus*	R
California towhee	*Melozone crissalis*	R
savanna sparrow	*Passerculus sandwichensis*	R, W
yellow-rumped warbler	*Setophaga coronata*	W
Mammals		
Botta's pocket gopher	*Thomomys bottae*	R
Black-tailed jackrabbit	*Lepus californicus*	R
Wildlife Observed in Grasslands and Brackish Marshlands South of Site		
Birds		
Canada goose	*Branta canadensis*	R
mallard	*Anas platyrhynchos*	R
black-necked stilt	*Himantopus mexicanus*	R
greater yellowlegs	*Tringa melanoleuca*	R
turkey vulture	*Cathartes aura*	R
ring-billed gull	*Larus delawarensis*	W
western gull	*Larus occidentalis*	R
Forster's tern	*Sterna forsteri*	S
American pipit	*Anthus rubescens*	W
western meadowlark	*Sturnella neglecta*	R
red-winged blackbird	*Agelaius phoeniceus*	R

R = Year-round resident; expected to nest/breed on the project site or vicinity.
S = Spring/summer resident; may nest on the project site or vicinity.
W = Winter resident; winters on or near site but migrates out of Bay Area to nest.
I = Introduced

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APPENDIX C

BOTANY REPORT

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BOTANICAL SURVEY REPORT

LOGISTICENTER AT ENTERPRISE PROJECT

HAYWARD, CALIFORNIA

LSA

February 2022

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BOTANICAL SURVEY REPORT

LOGISTICENTER AT ENTERPRISE PROJECT

HAYWARD, CALIFORNIA

Submitted to:

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Project No. DYP2101

LSA

February 2022

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LIST OF ABBREVIATIONS AND ACRONYMS

CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
ESA	Endangered Species Act
NCSS	National Cooperative Soil Survey Web Soil Survey
project	LogistiCenter at Enterprise Project
USDA	U.S. Department of Agriculture

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INTRODUCTION

This Botanical Survey Report presents the results of LSA's special-status plant surveys and a sensitive natural community survey for the LogistiCenter at Enterprise Project (project) in Hayward, Alameda County, California.

SITE DESCRIPTION

The approximately 10.87-acre project site is located along the southern side of Enterprise Avenue, west of its intersection with Whitesell Street, and approximately 0.6-miles northwest of the Eden Landing Road/Clawiter Road exit from State Highway 92, east of the San Mateo Bridge toll station. The project site is accessed by driving north on Clawiter Road and turning west onto Enterprise Avenue.

The project site comprises Alameda County Assessor's Parcel Numbers 439-99-35 and 439-99-36-2. The site is situated within Township 3 South, Range 3 West in the NE ¼ of Section 36 and Range 2 West in the NW ¼ of Section 31 on the San Leandro, California 7.5-minute U.S. Geological Survey quadrangle, and is centered at 37.6322° North Latitude and 122.1313° West Longitude.

The site has elevations between 7 and 13 feet above mean sea level, with most of the site relatively flat and below the elevation of 11 feet. The project site is annually mowed grassland and occupied by a small building and four radio broadcast towers. The site is surrounded by a chain-link fence, except for its western edge. Land uses surrounding the project site are filled vacant land to the east, a municipal wastewater treatment plant to the north, warehouse/trucking buildings to the west, and a railroad track, a drainage ditch, and a leveed former brackish marsh to the south.

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METHODS

LSA senior botanist Tim Milliken conducted rare plant surveys at the project site on April 21 and August 23, 2021. The surveys were performed according to the *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW, 2018).

BACKGROUND RESEARCH

LSA prepared this report based on current information gathered during field surveys conducted in 2021 and prior surveys (Moore, 2020 and WRA, 2020). To identify special-status plant and sensitive natural communities known to occur or potentially occurring in the project site vicinity, LSA queried the California Natural Diversity Database (CNDDB; CDFW, 2021a) for records, and locations of potential reference sites, within a 5-mile radius of the project site. LSA also queried the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants of California (CNPS, 2021) for records of special-status plant species in the San Leandro 7.5-minute U.S. Geological Survey quadrangle. LSA compiled the resulting list and analyzed the potential for special-status plant species and sensitive natural communities to occur within the context of the site (Table A and Table B). The analysis also aided in verifying conditions in which the targeted plant species grow and windows of time when their phenological development is optimal for identification in the field.

Special-status plant and sensitive natural communities are often associated with specific soil types (i.e., soils derived from serpentine or volcanic rock parent material). LSA gathered information on the general soil conditions potentially present on the project site using the National Cooperative Soil Survey (USDA Web Soil Survey 2021; Appendix A).

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Table A: Special-Status Plant Species Potentially Occurring on the Project Site

Species	Status (Federal/State/ CRPR/EB-CNPS)	Ecology/Habitats/Elevation/Blooming Period	Habitat Present/ Absent	Occurrence or Potential, Rationale for Exclusion, and/or Other Details
Astragalus tener var. *tener* Alkali milk-vetch	--/--/1B.2/A2	**Ecology:** Alkaline flats, vernally moist meadows. **General Habitats:** Playas, valley and foothill grassland (adobe clay), vernal pools. **Microhabitat:** Alkaline. Low ground, alkali flats, and flooded lands; in annual grassland or in playas or vernal pools. **Elevation:** 1-60 meters **Blooms:** March-June	Present	This species occurs in valley and foothill grassland, one of the general habitats present on the site. This species was not observed during protocol-level botanical surveys.
Centromadia parryi subsp. *congdonii* Congdon's tarplant	--/--/1B.1/A2	**Ecology:** Terraces, swales, floodplains, grassland, disturbed sites. **General Habitats:** Valley and foothill grassland (alkaline). **Microhabitat:** Alkaline soils, sometimes described as heavy white clay. **Elevation:** 0-300 meters **Blooms:** May-October (November)	Present	Grasslands on the site provide potentially suitable habitat. This species was not observed during protocol-level botanical surveys.
Chloropyron maritimum subsp. *palustre* Point Reyes salty bird's-beak	--/--/1B.2/A1x	**Ecology:** Coastal salt marsh. **General Habitats:** Marshes and swamps (coastal salt). **Microhabitat:** Usually in coastal salt marsh with Salicornia, Distichlis, Jaumea, Spartina, etc. **Elevation:** 0-10 meters **Blooms:** (May) June-October	Absent	Suitable habitat conditions are not present on the project site. This species was not considered as a target species. This species was not observed during the protocol-level botanical surveys.
Chorizanthe robusta var. *robusta* Robust spineflower	FE/--/1B.1/A1x	**Ecology:** Sand or gravel. **General Habitats:** Chaparral (maritime), cismontane woodland (openings), coastal dunes, coastal scrub. **Microhabitat:** Sandy terraces and bluffs or in loose sand or gravel. **Elevation:** 10-300 meters **Blooms:** (April) May-September	Absent	Suitable habitat conditions are not present on the project site. This species was not considered as a target species. This species was not observed during the protocol-level botanical surveys.

Table A: Special-Status Plant Species Potentially Occurring on the Project Site

Species	Status (Federal/State/ CRPR/EB-CNPS)	Ecology/Habitats/Elevation/Blooming Period	Habitat Present/ Absent	Occurrence or Potential, Rationale for Exclusion, and/or Other Details
Gilia millefoliata Dark-eyed gilia	--/--/1B.2/--	**Ecology:** Stabilized coastal dunes. **General Habitats:** Coastal dunes. **Microhabitat:** Same as CNPS Habitats. **Elevation:** 2-30 (<10) meters **Blooms:** (April) March-July	Absent	Suitable habitat conditions are not present on the project site. This species was not considered as a target species. This species was not observed during the protocol-level survey.
Hoita strobilina Loma Prieta hoita	--/--/1B.1/*A1x	**Ecology:** Chaparral, oak woodland. **General Habitats:** Chaparral, cismontane woodland, riparian woodland. **Microhabitats:** Serpentine soils in chaparral and woodland. Presumed extirpated in Alameda and Contra Costa Counties. **Elevation:** 30-860 meters **Blooms:** May-October	Absent	This species occurs in valley and foothill grassland, one of the general habitats present on the site. However, it has an affinity for serpentine soils, which are not present. This species was not considered as a target species. This species was not observed during protocol-level botanical surveys.
Horkelia cuneata var. *sericea* Kellogg's horkelia	--/--/1B.1/A1x	**Ecology:** Old dunes, coastal sandhills. **General Habitats:** Closed-cone coniferous forest, chaparral (maritime), coastal dunes, coastal scrub. **Microhabitat:** Old dunes, coastal sandhills; openings. Sandy or gravelly soils. **Elevation:** 10-200 meters **Blooms:** April-August (September)	Absent	Suitable habitat conditions are not present on the project site. This species was not considered as a target species. This species was not observed during the protocol-level botanical surveys.
Lasthenia conjugens Contra Costa goldfields	FE/--/1B.1/*A1	**Ecology:** Vernal pools, wet meadows. **General Habitats:** Cismontane woodland, playas (alkaline), valley and foothill grassland, vernal pools. **Microhabitat:** Vernal pools, swales, low depressions, in open grassy areas. Mesic. **Elevation:** 0-470 meters **Blooms:** March-June	Present	This species occurs in valley and foothill grassland, one of the general habitats present on the site. This species was not observed during protocol-level botanical surveys.

Table A: Special-Status Plant Species Potentially Occurring on the Project Site

Species	Status (Federal/State/ CRPR/EB-CNPS)	Ecology/Habitats/Elevation/Blooming Period	Habitat Present/ Absent	Occurrence or Potential, Rationale for Exclusion, and/or Other Details
Monolopia gracilens Woodland woolythreads	--/--/1B.2/*A1	**Ecology:** Serpentine grassland, open chaparral, oak woodland. **General Habitats:** Broadleafed upland forest (openings), chaparral (openings), cismontane woodland, North Coast coniferous forest (openings), valley and foothill grassland. **Microhabitat:** Grassy sites, in openings; sandy to rocky soils. Often seen on serpentine after burns but may have only weak affinity to serpentine. **Elevation:** 100-1,200 meters **Blooms:** (February) March-July	Absent	Suitable habitat conditions are not present on the project site. This species was not considered as a target species. This species was not observed during the protocol-level botanical surveys.
Polygonum marinense Marin knotweed	--/--/3.1/--	**Ecology:** Coastal salt, brackish marshes, swamps. **General Habitats:** Salt marsh. **Microhabitat:** Coastal salt marsh. **Elevation:** 0-10 meters **Blooms:** May-August	Absent	Suitable habitat conditions are not present on the project site. This species was not considered as a target species. This species was not observed during the protocol-level botanical surveys.
Sanicula maritima Adobe sanicle	--/CR/1B.1/A1x	**Ecology:** Coastal, grassy, open wet meadows, ravines. **General Habitats:** Chaparral, coastal prairie, meadows and seeps, valley and foothill grassland. **Microhabitat:** Moist clay or ultramafic soils, clay, serpentinite. **Elevation:** 30-240 meters **Blooms:** February-May	Absent	Suitable habitat conditions are not present on the project site. This species was not considered as a target species. This species was not observed during the protocol-level botanical surveys.

Table A: Special-Status Plant Species Potentially Occurring on the Project Site

Species	Status (Federal/State/ CRPR/EB-CNPS)	Ecology/Habitats/Elevation/Blooming Period	Habitat Present/ Absent	Occurrence or Potential, Rationale for Exclusion, and/or Other Details
Spergularia macrotheca var. *longistyla* Long-styled sand-spurrey	--/--/1B.1/*A2	**Ecology:** Alkaline marshes, mud flats, meadows, hot springs. **General Habitats:** Alkali areas, miscellaneous wetlands, vernal pools**,** marshes and swamps. **Microhabitat:** Alkaline habitats, wetland-riparian. **Elevation:** 0-255 meters **Blooms:** February-May	Absent	Suitable habitat conditions are not present on the project site. This species was not considered as a target species. This species was not observed during the protocol-level botanical surveys.
Streptanthus glandulosus subsp. *glandulosus* Most beautiful jewelflower	--/--/1B.2/*A2	**Ecology:** Serpentine or metamorphic soils (Franciscan formation), rocky, generally barren slopes, chaparral openings, steep woodland. **General Habitats:** Chaparral, cismontane woodland, valley and foothill grassland. **Microhabitat:** Serpentine outcrops, on ridges and slopes. **Elevation:** 95-1,000 meters **Blooms:** (March) April-September (October)	Absent	Suitable habitat conditions are not present on the project site. This species was not considered as a target species. This species was not observed during the protocol-level botanical surveys.
Suaeda californica California seablite	FE/--/1B.1/A1x	**Ecology:** Margins of coastal salt marshes. **General Habitats:** Marshes and swamps (coastal salt). **Microhabitat:** Margins of coastal salt marshes. **Elevation:** < 5 meters **Blooms:** July-October	Absent	Suitable habitat conditions are not present on the project site. This species was not considered as a target species. This species was not observed during the protocol-level botanical surveys.

Table A: Special-Status Plant Species Potentially Occurring on the Project Site

Species	Status (Federal/State/ CRPR/EB-CNPS)	Ecology/Habitats/Elevation/Blooming Period	Habitat Present/ Absent	Occurrence or Potential, Rationale for Exclusion, and/or Other Details
Trifolium hydrophilum Saline clover	--/--/1B.2/A1	**Ecology:** Salt marshes, open areas in alkaline soils. **General Habitats:** Marshes and swamps, valley and foothill grassland (mesic, alkaline), vernal pools. **Microhabitat:** Mesic, alkaline sites. **Elevation:** 0-300 meters **Blooms:** April-June	Present	This species occurs in valley and foothill grassland, one of the general habitats present on the site, and it has an affinity for mesic, alkaline habitats, which are present. This species was not observed during protocol-level botanical surveys.

Source: California Natural Diversity Database (CDFW 2021a); Inventory of Rare and Endangered Plants (CNPS 2021).
CDFW = California Department of Fish and Wildlife; CNPS = California Native Plant Society; CRPR = California Rare Plant Rank; EB = East Bay

Status:
Federal/State
FE = federally listed as endangered
FT = federally listed as threatened
CE = State listed as endangered
CR = State listed as rare
CT = State listed as threatened

Rare Plant Rank
CRPR 1B.1 = Plant species rare, threatened, or endangered in California and elsewhere, seriously threatened in California.
CRPR 1B.2 = Plant species rare, threatened, or endangered in California and elsewhere, moderately threatened in California.
CRPR 2B = Plants presumed extirpated in California, but common elsewhere.
CRPR 2B.2 = Plant species rare, threatened, or endangered in California, but more common elsewhere, moderately threatened in California.
CRPR 3 = Plants about which more information is needed – a review list.
CRPR 4 = A watch list, plants of limited distribution.

Local
*A = Species in Alameda and Contra Costa Counties listed as rare, threatened, or endangered statewide by federal or state agencies or by the CNPS (includes *A1, *A1x, and *A2 species).
A1 = Species known from 2 or less botanical regions in Alameda or Contra Costa Counties, either currently or historically (includes *A1 and A1 species).
A2 = Locally rare species currently known from 3 to 5 regions in Alameda or Contra Costa Counties, or, if more, meeting other important criteria such as small populations, stressed or declining populations, small geographical range, limited or threatened habitat, etc. (includes *A2 and A2 species).
A1x = Species previously known from Alameda or Contra Costa Counties, but now believed to have been extirpated, and are no longer occurring here (includes *A1x and A1x species).
B = High priority watch list: a locally rare species currently known from 6 to 9 regions in Alameda or Contra Costa Counties, or, if more, meeting other important criteria as described above in A2. Not protected by the California Environmental Quality Act.

Table B: Sensitive Natural Communities Potentially Occurring on the Project Site

Sensitive Natural Communities/Habitats	Status*	Presence Within Project Site	Discussion
Northern Coastal Salt Marsh	G3/S3.2	None within project site.	Habitat within search parameters, but not present on project site.

Source: California Sensitive Natural Community Vegetation Classification and Mapping Program (CDFW 2021b).

* Sensitive Natural Communities

G1/S1.2 = Throughout its range, this natural community is critically imperiled and at a very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors. Within California, this critically imperiled vegetation alliance is threatened and at very high risk of extirpation due to very restricted range, very few population occurrences, very steep declines, severe threats, or other factors.

G3/S3.2 = Throughout its range, this natural community is vulnerable and at a moderate rate of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors. Within California, this vulnerable vegetation alliance is threatened and at a moderate risk of extirpation due to a fairly restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors and is critically imperiled because of extreme rarity (often 5 or fewer populations) or because factor(s) such as very steep declines make it especially vulnerable to extirpation from the State.

FIELD SURVEYS

The project area is delineated by the property line of the parcel. The botanical survey area encompassed the entire parcel.

The surveys were conducted by walking throughout the survey area and visually searching for blooming or otherwise identifiable plants. All plants observed during the survey were identified to the extent necessary to determine their rarity status. While searching the survey area for targeted special-status plant species and sensitive natural communities, Mr. Milliken recorded all plant species observed and made preliminary categories for the existing plant communities. A list of plants occurring on the project site is provided in Table C. Plant names follow the conventions presented in the latest edition and errata of The Jepson Manual and updates provided on the Jepson Flora Project website (Baldwin et al., 2012) (Jepson Flora Project, 2021).

Table C: Plant Species Observed at the Project Site, April 21 and August 23, 2021

GROUP/FAMILY NAME/*Species Name*	Common Name	California Native or Alien Non-Native
EUDICOTS		
APIACEAE	CARROT FAMILY	
Foeniculum vulgare	Fennel	Alien MODERATELY INVASIVE
ASTERACEAE	SUNFLOWER FAMILY	
Baccharis pilularis	Coyote brush	Native
Carduus pycnocephalus	Italian thistle	Alien MODERATELY INVASIVE
Centaurea solstitialis	Yellow-star thistle	Alien HIGHLY INVASIVE
Helminthotheca echioides	Bristly ox-tongue	Alien
Lactuca saligna	Prickly lettuce	Alien
Senecio vulgaris	Common groundsel	Alien
Sonchus asper subsp. *Asper.*	Prickly sow thistle	Alien
BRASSICACEAE	MUSTARD FAMILY	
Brassica nigra	Black mustard	Alien MODERATELY INVASIVE
Raphanus sativus	Wild radish	Alien
FRANKENIACEA	FRANKENIA FAMILY	
Frankenia salina	Alkali heath	Native
FABACEAE	LEGUME FAMILY	
Lotus corniculatus	Bird's-foot trefoil	Alien
Medicago polymorpha	Bur-clover	Alien
GERANIACEAE	GERANIUM FAMILY	
Geranium dissectum	Cutleaf geranium	Alien
Erodium cicutarium	Fillaree	Alien LIMITED INVASIVE
MALVACEAE	MALLOW FAMILY	
Malva neglecta	Buttonweed	Alien
ONAGRACEAE	EVENING PRIMROSE FAMILY	
Epilobium brachycarpum	Panicled willowherb	Native

Table C: Plant Species Observed at the Project Site, April 21 and August 23, 2021

GROUP/FAMILY NAME/*Species Name*	Common Name	California Native or Alien Non-Native
PAPAVERACEAE	POPPY FAMILY	
Eschscholzia californica	California poppy	Native
PLANTAGINACEAE	PLANTAIN FAMILY	
Plantago coronopus	Cutleaf plantain	Alien
Plantago lanceolata	English plantain	Alien
POLYGONACAE	BUCKWHEAT FAMILY	
Rumex crispus	Curly dock	Alien
RHAMNACEAE	BUCKTHORN FAMILY	
Rhamnus alaternus	Italian buckthorn	Alien
MONOCOTS		
POACEAE	GRASS FAMILY	
Avena barbata	Slender wild oat	Alien Moderately Invasive
Bromus diandrus	Ripgut brome	Alien Moderately Invasive
Bromus hordeaceus	Soft chess	Alien
Cortaderia selloana	Pampas grass	Alien Highly Invasive
Distichlis spicata	Salt grass	Native
Elymus triticoides	Creeping wild rye	Native
Festuca myuros	Rattail fescue	Alien
Festuca perennis	Italian ryegrass	Alien Moderately Invasive
Hordeum brachyantherum	Meadow barley	Native
Hordeum marinum subsp. *gussoneanum*	Mediterranean barley	Alien
Hordeum murinum subsp. *leporinum*	Hare barley	Alien Moderately Invasive

Source: Compiled by LSA (2021).

SPECIAL-STATUS PLANT SPECIES

Descriptions of special-status plants, if found on the site, are recorded and their locations are mapped on the project's botanical survey area map. Although no special-status plant species were found on the project site, a Native Species Form indicating the absence of Congdon's tarplant was completed (Appendix B).

Special-status plant species are defined as follows:

- Plant species with a California Rare Plant Rank (CRPR) status of 1A, 1B, 2, and 3 as included in the CNPS Inventory of Rare and Endangered Vascular Plants of California and updated rankings in the Electronic Inventory of Rare and Endangered Plants of California (CNPS, 2021).

- Species that are listed, formally proposed, or designated as candidates for listing as threatened or endangered under the federal Endangered Species Act (ESA).

- Species that are listed, or designated as candidates for listing, as rare, threatened, or endangered under the California Endangered Species Act (CESA).

- Species that meet the definition of rare, threatened, or endangered under Section 15380 of the California Environmental Quality Act (CEQA) guidelines.

- Species that are considered a taxon of special concern by local agencies.

California Rare Plant Ranks. Special-status plants in California are assigned to one of six "California Rare Plant Ranks" by a collaborative group of over 300 botanists in government, academia, non-governmental organizations, and the private sector. This effort is jointly managed by the California Department of Fish and Wildlife (CDFW) and the CNPS. The CNDDB currently includes the following California Rare Plant Ranks (CRPR):CRPR 1A – Plants presumed extirpated in California and are either rare or extinct elsewhere;

- CRPR 1B – Plants rare, threatened, or endangered in California and elsewhere;
- CRPR 2A – Plants presumed extirpated in California, but common elsewhere;
- CRPR 2B – Plants rare, threatened, or endangered in California, but more common elsewhere;
- CRPR 3 – Plants about which more information is needed – a review list; and
- CRPR 4 – Plants of limited distribution – a watch list.

Impacts to CRPR 1A, 1B, 2A, 2B, and 3 plant species or their habitat are analyzed during preparation of environmental documents as they meet the definition of Rare or Endangered under CEQA Guidelines §15125 (c) and/or §15380. Substantial impacts to these species are typically considered significant.

East Bay Chapter of CNPS – Locally Rare Plant Species. The East Bay Chapter of the California Native Plant Society (EB-CNPS) has compiled plant observations from many sources as well as field surveys (Lake, 2010). These observations informed an evaluation process to determine which plant species are rare or threatened at the local level, but possibly more common elsewhere. Locally rare or unusual plant species are protected by CEQA in Sections 15380 or 15125(a) which address species of local concern and place special emphasis on environmental resources that are rare or unique to a region. Thus, they may be considered in local land planning and management issues. The locally rare or unusual plant ranks under consideration are:

- EB-CNPS A – Species in Alameda and Contra Costa Counties listed as rare, threatened, or endangered statewide by federal or state agencies, or by the state CNPS. Protected by CEQA.

- EB-CNPS A1 – Species known from 2 or less botanical regions in Alameda and Contra Costa Counties, either currently or historically. Protected by CEQA.

- EB-CNPS A1X – Species that once occurred in Alameda and Contra Costa Counties but are now presumed to be extirpated in those counties. Protected by CEQA.

- EB-CNPS A2 – Species currently known from 3 to 5 regions in Alameda and Contra Costa Counties, or, if more, meeting other important criteria such as small populations, stressed or

declining populations, small geographical range, limited or threatened habitat, etc. Protected by CEQA.

SPECIAL-STATUS NATURAL COMMUNITIES

The CDFW list of California Terrestrial Natural Communities indicates which natural communities are currently considered sensitive (CDFW, 2021b). The rarity ranks of special-status natural communities are calculated, reviewed, and published by VegCAMP and CNPS's Vegetation Program. The evaluation is done at both the Global (full natural range within and outside of California) and State (within California) levels resulting in a single G (Global) and S (State) rank ranging from 1 (very rare and threatened) to 5 (demonstrably secure).

Descriptions of sensitive natural communities, if found on the site, are recorded and their locations are mapped on the project's botanical survey area map. Descriptions of sensitive natural communities are based on the appropriate sections in *A Manual of California Vegetation* (Sawyer et. al., 2009).

Special-status natural communities are defined as follows:

1. Plant communities with ranks of S1 through S3 are considered special-status natural communities.

RESULTS

POTENTIAL SPECIAL-STATUS PLANTS AND SENSITIVE NATURAL COMMUNITIES

The database searches provided occurrence records for 15 species of special-status plants and 1 record of a sensitive natural community occurring in the region of the project site (Table A and Table B; CDFW, 2021a; CNPS, 2021). The project site has 2 predominant plant community types: grasslands and ornamental woodland. The plant communities present on the project site are described in the Plant Communities section below.

Grassland plant communities are known to support suitable habitat for four of the special-status plant species from the database query, including alkali milk-vetch (*Astragalus tener* var. *tener*), Congdon's tarplant (*Centromadia parryi* ssp. *congdonii*), Contra Costa goldfields (*Lasthenia conjugens*), and saline clover (*Trifolium hydrophilum*). The potential for all targeted species to occur on the site is discussed in Table A.

The microhabitat conditions required by 11 of the 15 special-status species is not present, for example, chaparral, coastal scrub, cismontane woodland, and salt marsh.

BIOLOGICAL SETTING

As mentioned in the Site Description section, the relatively flat site has been subjected to historical surface disturbances such as mowing. Although these disturbances favor invasion of non-native plant species, native plant communities persist on the site.

SOILS

The results from the National Cooperative Soil Survey Web Soil Survey (NCSS) query indicate that the map units (soil types) present on project site consist of Reyes clay, 0 to 2 percent slopes (USDA Web Soil Survey, 2021). Reyes clay is listed as completely hydric. The site has been tilled in the past for agricultural purposes, and portions of the site appear to contain imported fill. There are indistinct low berms and apparent shallow fill areas in the western portion of the site. Much of the soil observed had a darker moist color of 10YR2/1 and 2/2 compared to the 10YR3/3 and 4/3 colors described for Reyes clay. These darker colors may indicate accumulation of additional organic matter since the termination of this soil's formative brackish marsh hydrology and anaerobic soil conditions.

HYDROLOGY

The project site slopes very gently toward the southwest. A 2- to 3-foot-high fill slope at the adjacent warehouse prevents surface runoff from flowing westward. The elevated railroad bed prevents surface runoff from draining southward from that part of the site, and a low berm along the southern fence line somewhat restricts drainage to the south from that location. Four shallow topographic depressions are visible in the western portion of the site. Any surface drainage leaving the site would flow southwest to the adjacent leveed and ditched brackish marsh area. The areas southwest of the project site are leveed and appear cut off from full tidal action from the San

Francisco Bay located approximately 1 mile west of the site but may still have muted tidal influence. San Francisco Bay is a tidal Traditional Navigable Water of the United States.

PLANT COMMUNITIES

This section describes the plant communities (and their constituent plant species) observed within the area surveyed, including grasslands and ornamental woodland. The composition of the grassland varies due to slight differences in soils and micro-elevation. Soils within the slightly lower elevation areas tend to be sandy and alkaline and support a greater density of salt grass and alkali heath, both native species. Soils within the slightly higher elevation areas are expressed with a mix of non-native annual grasses and native creeping rye grass.

Non-Native Grasslands

The non-native grasslands are primarily dominated by Mediterranean barley. Other constituent plant species observed within the grassland include wild spear oracle, oat, coyote brush, black mustard, rip gut brome, soft chess, Italian thistle, yellow-star thistle, pampas grass, salt grass, creeping rye grass, willowherb, filaree, rattail fescue), Italian rye, fennel, alkali heath, cutleaf geranium, bristly ox-tongue, meadow barley, hare barley, prickly lettuce, bird's-foot trefoil, common mallow, burclover, cutleaf plantain, English plantain, prostrate knotweed, wild radish, curly dock, common groundsel, and prickly sow thistle.

Native Grasslands

This site contains stands of native grasslands dominated in some locations by alkali heath and creeping ryegrass and in other locations solely by creeping ryegrass. These grassland areas may be considered to be CNDDB sensitive vegetation types. Where alkali heath is co-dominant, the vegetation type may be classified as *Alkali Heath Marsh: Frankenia salina Herbaceous Alliance* which has a CNDDB rarity ranking of G4 S3 (apparently secure at the Global scale; statewide the community is rare, uncommon, or threatened, but not immediately imperiled, but assigned rank is uncertain; CDFW, 2021b). Where creeping ryegrass is dominant, the vegetation type may be classified as *Creeping Rye Grass Turfs: Elymus triticoides Herbaceous Alliance* which has a CNDDB rarity ranking of G3 S3 (globally and State rare, uncommon, or threatened, but not immediately imperiled, but assigned rank is uncertain; CDFW, 2021b).

Ornamental Woodland

A row of shrubs is planted along the elevated western site boundary, screening the adjacent warehouse building. The plantings consist entirely of Italian buckthorn (*Rhamnus alaternus*).

SPECIAL-STATUS PLANTS

Although no special-status plants were observed within the area surveyed, a discussion is provided for targeted plant species for which marginally suitable habitats exist on the project site.

Due to the historic California drought, botanical surveys may underrepresent the total abundance and distribution of special-status plants. The combination of higher-than-normal temperatures and below-average precipitation may have altered normal blooming periods, decreased the size of

populations, caused annual plant seeds to remain dormant, or caused failure of germinated seedlings. All these factors may lead to false negative results from botanical surveys for special-status plants. However, due to disturbed site characteristics, it is highly unlikely that special-status plant species would occur on the project site. The absence of special-status plant species was confirmed through the process of this botanical survey. Although marginally suitable habitats exist on the project site, no special-status plants were observed within the area surveyed.

Alkali Milk-Vetch

Alkali milk-vetch is most identifiable when it begins to bloom in early spring. This species' blooming range is March through June, and botanical surveys targeting alkali milk-vetch were conducted during the blooming period. The botanical survey occurred on April 21, 2021, a time when this plant would have been identifiable by flower. This is a plant of alkaline grassland habitats, like those of the project site. The grasslands were searched for occurrence of alkali milk-vetch. This species was not observed during the appropriately timed survey.

Congdon's Tarplant

Congdon's tarplant is most identifiable by the presence of 3 to 5 linear to awl-shaped scales (pappus). This species' blooming range is June through October, and timing of botanical surveys targeting Congdon's tarplant was conducted during that range. A record for Congdon's tarplant is located on the project site (CNDDB Occurrence #12). Although the botanical field surveys were conducted during the blooming period, this species was not observed during the botanical surveys. It is unlikely that climatic factors would cause a false/negative for this species at this site. It is more likely that this species was inadvertently extirpated from the site due to routine mowing.

Contra Costa Goldfields

Contra Costa goldfields is most identifiable by its spring bloom. This species' blooming range is March through June. The botanical survey occurred on April 21, 2021, a time when this plant would have been identifiable by flower. This is a plant that may occur in depressions within alkaline grassland habitats, like those of the project site. The grasslands were searched for occurrence of Contra Costa goldfields. This species was not observed during the appropriately timed survey.

Saline Clover

Saline clover is most identifiable when it begins to bloom in the spring. This species' blooming range is April through June. The botanical survey occurred on April 21, 2021, a time when this plant would have been identifiable by flower. This is a plant that may occur in depressions within alkaline grassland habitats, like those of the project site. The grasslands were searched for occurrence of saline clover. This species was not observed during the appropriately timed survey.

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CONCLUSIONS

ASSESSMENT OF POTENTIAL PROJECT IMPACTS

Although special-status plants are not present within the surveyed area, one record for Congdon's tarplant is located on the project site (CNDDB Occurrence #12). This occurrence was searched for during the appropriate time period and not located and assumed to be absent from the project site. A California Native Species Field Survey Form for Congdon's tarplant is attached.

The CNDDB provided one record of Northern Coastal Salt Marsh within 5 miles of the project site (CNDDB Occurrence #21). Although other undocumented instances of this community are likely nearby as well, these communities are isolated from the project site.

Although the CNDDB did not show occurrences of alkali heath marsh or creeping rye grass turfs within the 5-mile search parameter, stands of grasslands dominated by one or both species were observed in the site.

There are no areas on the project site that could be considered unoccupied potential habitat for special-status plant species. The site is already highly disturbed, and development of the project site will have no impact on unoccupied potential habitat for special-status plant species.

Because special-status plants are not present on the project site, LSA does not recommend measures to avoid, minimize, or mitigate potential impacts specific to these resources.

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REFERENCES

Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, editors. 2012. The Jepson Manual: Vascular Plants of California, Second Edition. University of California Press, Berkeley, California.

California Department of Fish and Wildlife (CDFW). 2018. *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities*. State of California, California Natural Resources Agency, Department of Fish and Wildlife. March 20.

California Department of Fish and Wildlife (CDFW). 2021a. California Natural Diversity Database (CNDDB), Commercial Version dated May 5. Biogeographic Data Branch, California Department of Fish and Wildlife, Sacramento, California.

California Department of Fish and Wildlife (CDFW). 2021b. California Sensitive Natural Communities. Biogeographic Data Branch, Vegetation Classification and Mapping Program. May 5. Website: www.wildlife.ca.gov/Data/VegCAMP/Natural-Communities (accessed September 14, 2021).

California Native Plant Society (CNPS), Rare Plant Program. 2021. Inventory of Rare and Endangered Plants (online edition, v8-03). California Native Plant Society, Sacramento, California. Website: www.cnps.org/rare-plants/cnps-inventory-of-rare-plants (accessed March 8, 2021).

Jepson Flora Project (eds.). 2021. Jepson eFlora. Website: ucjeps.berkeley.edu/eflora/ (accessed on June 28, 2021).

Lake, Dianne. 2010. *Rare, Unusual and Significant Plants of Alameda and Contra Costa Counties.* Published by the East Bay Chapter of the California Native Plant Society.

LSA, Inc. (LSA). 2021. Request for Verification of Jurisdictional Delineation, Hayward Dermody Project Study Site. Letter to Katerina Galacatos, South Branch Chief, U.S. Army Corps of Engineers April 16, 2021.

Moore Biological Consultants (Moore). 2020. 3600 Enterprise Avenue, Hayward, Alameda County, California: Preliminary Wetlands and Special-Status Species Review.

Sawyer, J.O., T. Keeler-Wolf, and J. Evens. 2009. *A Manual of California Vegetation*, Second Edition. California Native Plant Society, Sacramento, California.

WRA, Inc. (WRA). 2020. Biological Resources Assessment, 3636 Enterprise Ave., Hayward, California. Prepared for Salem Broadcasting Company.

U.S. Department of Agriculture (USDA). 2021. Natural Resources Conservation Service (NRCS), National Cooperative Soil Survey Web Soil Survey (NCSS). Website: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx (accessed March 6, 2021).

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APPENDIX A

SOIL SURVEY

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United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Alameda County, California, Western Part

LogistiCenter at Enterprise

January 6, 2022

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

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Contents

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

Map Scale: 1:1,800 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 25 50 100 150

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Alameda County, California, Western Part
Survey Area Data: Version 18, Sep 9, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 7, 2021—Mar 27, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
139	Reyes clay, 0 to 2 percent slopes	13.7	100.0%
Totals for Area of Interest		**13.7**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Alameda County, California, Western Part

139—Reyes clay, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2yrfr
Elevation: 0 to 10 feet
Mean annual precipitation: 15 to 20 inches
Mean annual air temperature: 59 to 60 degrees F
Frost-free period: 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Reyes and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Reyes

Setting

Landform: Tidal flats
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from sedimentary rock

Typical profile

A - 0 to 6 inches: clay
Cg1 - 6 to 42 inches: clay
Cg2 - 42 to 72 inches: clay

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: 6 to 20 inches to sulfuric
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately low (0.01 to 0.06 in/hr)
Depth to water table: About 24 to 48 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Maximum salinity: Strongly saline (16.0 mmhos/cm)
Sodium adsorption ratio, maximum: 25.0
Available water supply, 0 to 60 inches: Very low (about 0.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: D
Ecological site: R014XG901CA - Tidal Flat
Hydric soil rating: Yes

Minor Components

Unnamed, strongly saline, no polysulfides

Percent of map unit: 10 percent
Landform: Marshes

Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Pescadero, drained

Percent of map unit: 5 percent
Landform: Basin floors
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

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APPENDIX B

CALIFORNIA NATIVE SPECIES FIELD SURVEY FORMS

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Mail to:
California Natural Diversity Database
California Dept. of Fish & Wildlife
1807 13th Street, Suite 202
Sacramento, CA 95811
Fax: (916) 324-0475 email: CNDDB@wildlife.ca.gov

Date of Field Work (mm/dd/yyyy): 08/23/2021

For Office Use Only
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Centromadia parryi subsp. congdonii*

Common Name: Congdon's tarplant

Species Found? ☐ Yes ☑ No — potentially extirpated (If not, why?)

Total No. Individuals _____ Subsequent Visit? ☑ yes ☐ no

Is this an existing NDDB occurrence? 12 (Yes, Occ. #) ☐ no ☐ unk.

Collection? If yes: _____ (Number) _____ (Museum / Herbarium)

Reporter: Tim Milliken
Address: LSA Associates, Inc
157 Park Place; Richmond, CA 94801
E-mail Address: tim.milliken@lsa.net
Phone: (510) 236-6810

Plant Information

Phenology: 0 % vegetative 0 % flowering 0 % fruiting

Animal Information

_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown

☐ wintering ☐ breeding ☐ nesting ☐ rookery ☐ burrow site ☐ other

Location Description *(please attach map AND/OR fill out your choice of coordinates, below)*

Existing CNDDB Occurrence (#12) centered on site. A rosette of a tarplant was observed on April 21, 2021. Upon return visit in August 2021, the site had been mowed and the tarplant rosette was not relocated.

County: Alameda Landowner / Mgr.: Private

Quad Name: San Leandro Elevation: _____

T 3 R 3 Sec 36, NE ¼ of _____ ¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): _____

T 3 R 2 Sec 31, NW ¼ of _____ ¼, Meridian: H☐ M☐ S☐ GPS Make & Model _____

DATUM: **NAD27** ☐ **NAD83** ☐ **WGS84** ☐ Horizontal Accuracy _____ meters/feet

Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ ***OR*** Geographic (Latitude & Longitude) ☐

Coordinates: Lat / Long 37.6322° N., -122.1313° W.

Habitat Description (plants & animals) *plant communities, dominants, associates, substrates/soils, aspects/slope:*

Animal Behavior *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*

The site has elevations between 7 and 13 feet above mean sea level, with most of the site relatively flat and below the elevation of 11 feet. The project site is annually mowed grassland and occupied by a small building and four radio broadcast towers. The site is surrounded by a chain link fence, except for its western edge. Land uses surrounding the project site are filled vacant land to the east, a municipal wastewater treatment plant to the north, warehouse/trucking buildings to the west, and a railroad track, a drainage ditch, and a leveed former brackish marsh to the south.

Please fill out separate form for other rare taxa seen at this site.

Site Information

Overall site/occurrence quality/viability (site + population): ☐ Excellent ☐ Good ☑ Fair ☐ Poor

Immediate AND surrounding land use: Site mowed once or twice a year

Visible disturbances: Yes

Threats: land development, mowing for fire suppression.

Comments: Fieldwork conducted on 4/21 and 8/23/2021. A rosette of tarplant was observed on April 21. The plant was too immature to obtain positive species ID. On August 23 the habitat area had recently been mowed and tarplant was not observed. It appears that this occurrence has been extirpated

Determination: *(check one or more, and fill in blanks)*

☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☐ Other: _____

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☐
Habitat	☐	☐	☐
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? yes ☐ no ☐

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