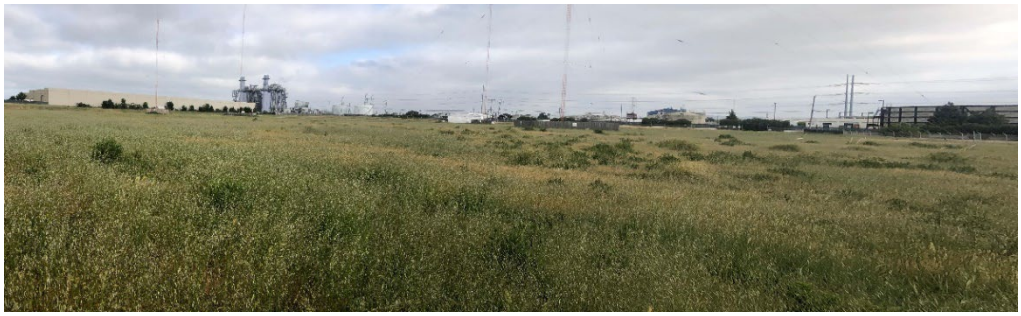
BOTANICAL SURVEY REPORT

LOGISTICENTER AT ENTERPRISE PROJECT

HAYWARD, CALIFORNIA



LSA

February 2022

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LOGISTICENTER AT ENTERPRISE PROJECT

HAYWARD, CALIFORNIA

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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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APPENDIX A

SOIL SURVEY

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United States Department of Agriculture

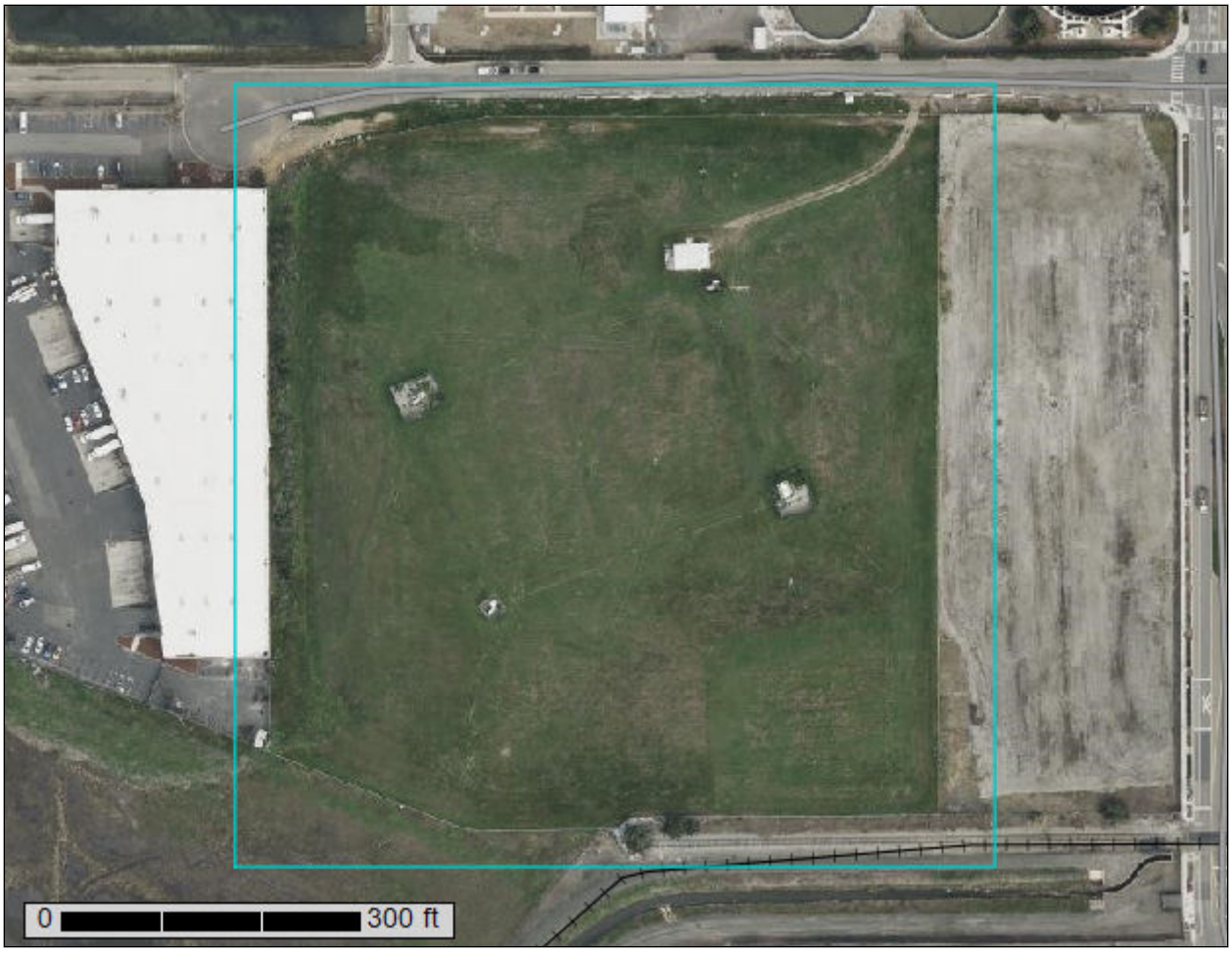
NRCS

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.

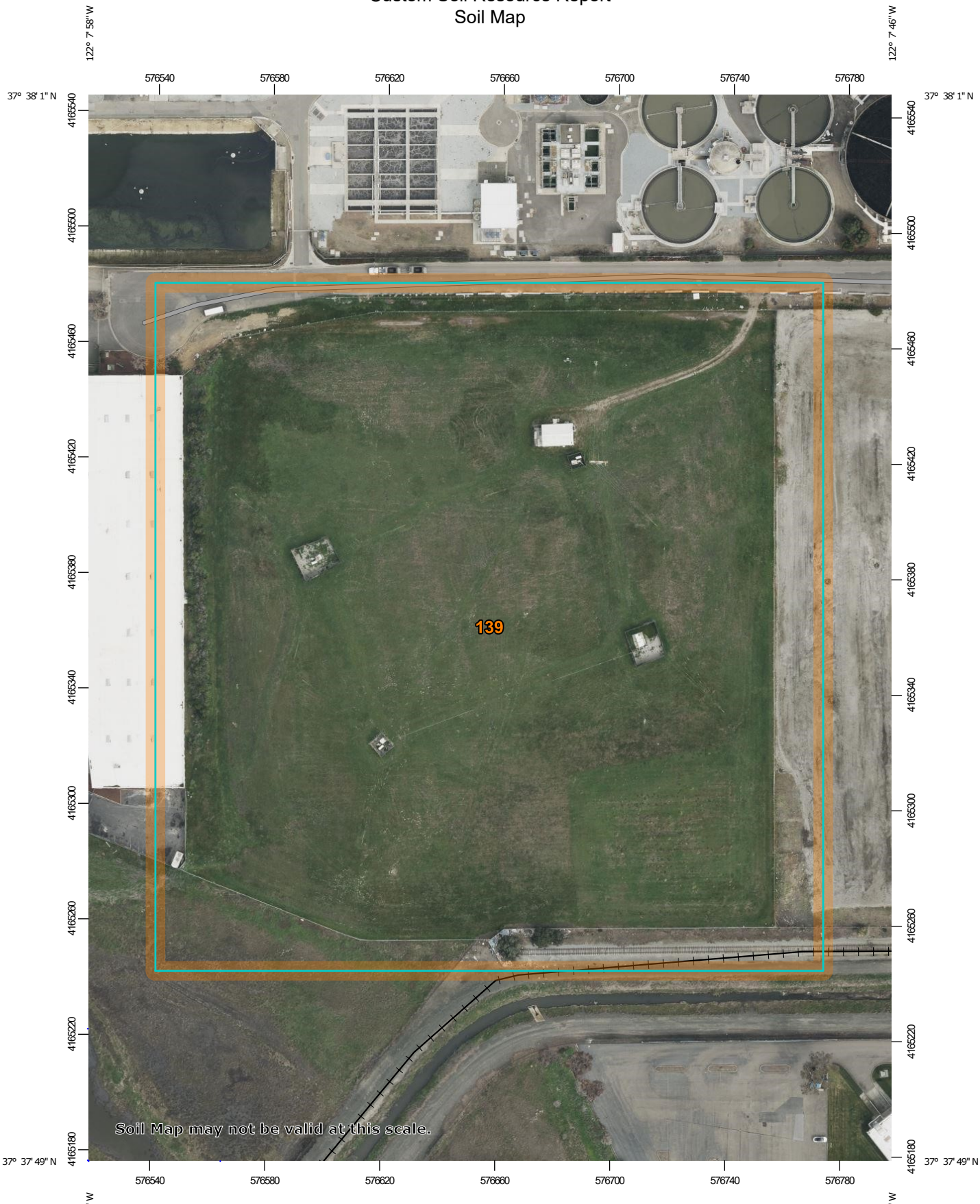
The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political 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

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

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.



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

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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

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

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

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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