Appendix C:

# Biological Resources Supporting Information

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# C.1 - CNDDB Summary Report

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# Selected Elements by Scientific Name

## California Department of Fish and Wildlife

## California Natural Diversity Database

**Query Criteria:** Quad IS (San Francisco North (3712274) OR San Francisco South (3712264) OR Oakland West (3712273) OR Hunters Point (3712263) OR Point Bonita (3712275) OR San Mateo (3712253) OR Montara Mountain (3712254))

| Species | Element Code | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|---|---|---|---|---|---|---|
| ***Acanthomintha duttonii*** San Mateo thorn-mint | PDLAM01040 | Endangered | Endangered | G1 | S1 | 1B.1 |
| ***Accipiter cooperii*** Cooper's hawk | ABNKC12040 | None | None | G5 | S4 | WL |
| ***Acipenser medirostris pop. 1*** green sturgeon - southern DPS | AFCAA01031 | Threatened | None | G2T1 | S1 | |
| ***Adela oplerella*** Opler's longhorn moth | IILEE0G040 | None | None | G2 | S2 | |
| ***Agrostis blasdalei*** Blasdale's bent grass | PMPOA04060 | None | None | G2G3 | S2 | 1B.2 |
| ***Allium peninsulare var. franciscanum*** Franciscan onion | PMLIL021R1 | None | None | G4G5T2 | S2 | 1B.2 |
| ***Ambystoma californiense pop. 1*** California tiger salamander - central California DPS | AAAAA01181 | Threatened | Threatened | G2G3T3 | S3 | WL |
| ***Amsinckia lunaris*** bent-flowered fiddleneck | PDBOR01070 | None | None | G3 | S3 | 1B.2 |
| ***Antrozous pallidus*** pallid bat | AMACC10010 | None | None | G4 | S3 | SSC |
| ***Arctostaphylos franciscana*** Franciscan manzanita | PDERI040J3 | Endangered | None | GHC | S1 | 1B.1 |
| ***Arctostaphylos imbricata*** San Bruno Mountain manzanita | PDERI040L0 | None | Endangered | G1 | S1 | 1B.1 |
| ***Arctostaphylos montana ssp. ravenii*** Presidio manzanita | PDERI040J2 | Endangered | Endangered | G3T1 | S1 | 1B.1 |
| ***Arctostaphylos montaraensis*** Montara manzanita | PDERI042W0 | None | None | G1 | S1 | 1B.2 |
| ***Arctostaphylos pacifica*** Pacific manzanita | PDERI040Z0 | None | Endangered | G1 | S1 | 1B.1 |
| ***Arctostaphylos regismontana*** Kings Mountain manzanita | PDERI041C0 | None | None | G2 | S2 | 1B.2 |
| ***Arenaria paludicola*** marsh sandwort | PDCAR040L0 | Endangered | Endangered | G1 | S1 | 1B.1 |
| ***Astragalus pycnostachyus var. pycnostachyus*** coastal marsh milk-vetch | PDFAB0F7B2 | None | None | G2T2 | S2 | 1B.2 |
| ***Astragalus tener var. tener*** alkali milk-vetch | PDFAB0F8R1 | None | None | G2T1 | S1 | 1B.2 |
| ***Athene cunicularia*** burrowing owl | ABNSB10010 | None | None | G4 | S2 | SSC |

| Species | Element Code | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|---|---|---|---|---|---|---|
| ***Banksula incredula*** incredible harvestman | ILARA14100 | None | None | G1 | S1 | |
| ***Bombus caliginosus*** obscure bumble bee | IIHYM24380 | None | None | G2G3 | S1S2 | |
| ***Bombus crotchii*** Crotch bumble bee | IIHYM24480 | None | Candidate Endangered | G2 | S2 | |
| ***Bombus occidentalis*** western bumble bee | IIHYM24252 | None | Candidate Endangered | G3 | S1 | |
| ***Brachyramphus marmoratus*** marbled murrelet | ABNNN06010 | Threatened | Endangered | G3 | S2 | |
| ***Caecidotea tomalensis*** Tomales isopod | ICMAL01220 | None | None | G2 | S2S3 | |
| ***Calicina minor*** Edgewood blind harvestman | ILARA13020 | None | None | G1 | S1 | |
| ***Callophrys mossii bayensis*** San Bruno elfin butterfly | IILEPE2202 | Endangered | None | G4T2 | S2 | |
| ***Calystegia purpurata ssp. saxicola*** coastal bluff morning-glory | PDCON040D2 | None | None | G4T2T3 | S2S3 | 1B.2 |
| ***Carex comosa*** bristly sedge | PMCYP032Y0 | None | None | G5 | S2 | 2B.1 |
| ***Carex praticola*** northern meadow sedge | PMCYP03B20 | None | None | G5 | S2 | 2B.2 |
| ***Centromadia parryi ssp. parryi*** pappose tarplant | PDAST4R0P2 | None | None | G3T2 | S2 | 1B.2 |
| ***Charadrius nivosus nivosus*** western snowy plover | ABNNB03031 | Threatened | None | G3T3 | S3 | SSC |
| ***Chloropyron maritimum ssp. palustre*** Point Reyes salty bird's-beak | PDSCR0J0C3 | None | None | G4?T2 | S2 | 1B.2 |
| ***Chorizanthe cuspidata var. cuspidata*** San Francisco Bay spineflower | PDPGN04081 | None | None | G2T1 | S1 | 1B.2 |
| ***Chorizanthe robusta var. robusta*** robust spineflower | PDPGN040Q2 | Endangered | None | G2T1 | S1 | 1B.1 |
| ***Cicindela hirticollis gravida*** sandy beach tiger beetle | IICOL02101 | None | None | G5T2 | S2 | |
| ***Circus hudsonius*** northern harrier | ABNKC11011 | None | None | G5 | S3 | SSC |
| ***Cirsium andrewsii*** Franciscan thistle | PDAST2E050 | None | None | G3 | S3 | 1B.2 |
| ***Cirsium fontinale var. fontinale*** fountain thistle | PDAST2E161 | Endangered | Endangered | G2T1 | S1 | 1B.1 |
| ***Cirsium hydrophilum var. vaseyi*** Mt. Tamalpais thistle | PDAST2E1G2 | None | None | G2T1 | S1 | 1B.2 |

| Species | Element Code | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|---|---|---|---|---|---|---|
| ***Cirsium occidentale var. compactum*** compact cobwebby thistle | PDAST2E1Z1 | None | None | G3G4T2 | S2 | 1B.2 |
| ***Clarkia franciscana*** Presidio clarkia | PDONA050H0 | Endangered | Endangered | G1 | S1 | 1B.1 |
| ***Collinsia corymbosa*** round-headed collinsia | PDSCR0H060 | None | None | G1 | S1 | 1B.2 |
| ***Collinsia multicolor*** San Francisco collinsia | PDSCR0H0B0 | None | None | G2 | S2 | 1B.2 |
| ***Corynorhinus townsendii*** Townsend's big-eared bat | AMACC08010 | None | None | G4 | S2 | SSC |
| ***Coturnicops noveboracensis*** yellow rail | ABNME01010 | None | None | G4 | S2 | SSC |
| ***Danaus plexippus plexippus pop. 1*** monarch - California overwintering population | IILEPP2012 | Candidate | None | G4T1T2Q | S2 | |
| ***Dicamptodon ensatus*** California giant salamander | AAAAH01020 | None | None | G2G3 | S2S3 | SSC |
| ***Dipodomys venustus venustus*** Santa Cruz kangaroo rat | AMAFD03042 | None | None | G4T1 | S1 | |
| ***Dirca occidentalis*** western leatherwood | PDTHY03010 | None | None | G2 | S2 | 1B.2 |
| ***Dufourea stagei*** Stage's dufourine bee | IIHYM22010 | None | None | G1G2 | S1 | |
| ***Elanus leucurus*** white-tailed kite | ABNKC06010 | None | None | G5 | S3S4 | FP |
| ***Emys marmorata*** western pond turtle | ARAAD02030 | None | None | G3G4 | S3 | SSC |
| ***Enhydra lutris nereis*** southern sea otter | AMAJF09012 | Threatened | None | G4T2 | S3 | FP |
| ***Erethizon dorsatum*** North American porcupine | AMAFJ01010 | None | None | G5 | S3 | |
| ***Eriophyllum latilobum*** San Mateo woolly sunflower | PDAST3N060 | Endangered | Endangered | G1 | S1 | 1B.1 |
| ***Eucyclogobius newberryi*** tidewater goby | AFCQN04010 | Endangered | None | G3 | S3 | |
| ***Eumetopias jubatus*** Steller sea lion | AMAJC03010 | Delisted | None | G3 | S2 | |
| ***Euphydryas editha bayensis*** Bay checkerspot butterfly | IILEPK4055 | Threatened | None | G5T1 | S3 | |
| ***Extriplex joaquinana*** San Joaquin spearscale | PDCHE041F3 | None | None | G2 | S2 | 1B.2 |
| ***Falco columbarius*** merlin | ABNKD06030 | None | None | G5 | S3S4 | WL |

| Species | Element Code | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|---|---|---|---|---|---|---|
| ***Falco peregrinus anatum*** American peregrine falcon | ABNKD06071 | Delisted | Delisted | G4T4 | S3S4 | |
| ***Fritillaria biflora var. ineziana*** Hillsborough chocolate lily | PMLIL0V0M1 | None | None | G3G4T1 | S1 | 1B.1 |
| ***Fritillaria lanceolata var. tristulis*** Marin checker lily | PMLIL0V0P1 | None | None | G5T2 | S2 | 1B.1 |
| ***Fritillaria liliacea*** fragrant fritillary | PMLIL0V0C0 | None | None | G2 | S2 | 1B.2 |
| ***Geothlypis trichas sinuosa*** saltmarsh common yellowthroat | ABPBX1201A | None | None | G5T3 | S3 | SSC |
| ***Gilia capitata ssp. chamissonis*** blue coast gilia | PDPLM040B3 | None | None | G5T2 | S2 | 1B.1 |
| ***Gilia millefoliata*** dark-eyed gilia | PDPLM04130 | None | None | G2 | S2 | 1B.2 |
| ***Gonidea angulata*** western ridged mussel | IMBIV19010 | None | None | G3 | S2 | |
| ***Grindelia hirsutula var. maritima*** San Francisco gumplant | PDAST470D3 | None | None | G5T1Q | S1 | 3.2 |
| ***Helianthella castanea*** Diablo helianthella | PDAST4M020 | None | None | G2 | S2 | 1B.2 |
| ***Hemizonia congesta ssp. congesta*** congested-headed hayfield tarplant | PDAST4R0W1 | None | None | G5T2 | S2 | 1B.2 |
| ***Hesperevax sparsiflora var. brevifolia*** short-leaved evax | PDASTE5011 | None | None | G4T3 | S3 | 1B.2 |
| ***Hesperolinon congestum*** Marin western flax | PDLIN01060 | Threatened | Threatened | G1 | S1 | 1B.1 |
| ***Heteranthera dubia*** water star-grass | PMPON03010 | None | None | G5 | S2 | 2B.2 |
| ***Holocarpha macradenia*** Santa Cruz tarplant | PDAST4X020 | Threatened | Endangered | G1 | S1 | 1B.1 |
| ***Horkelia cuneata var. sericea*** Kellogg's horkelia | PDROS0W043 | None | None | G4T1? | S1? | 1B.1 |
| ***Horkelia marinensis*** Point Reyes horkelia | PDROS0W0B0 | None | None | G2 | S2 | 1B.2 |
| ***Hydrochara rickseckeri*** Ricksecker's water scavenger beetle | IICOL5V010 | None | None | G2? | S2? | |
| ***Hydroporus leechi*** Leech's skyline diving beetle | IICOL55040 | None | None | G1? | S2S3 | |
| ***Hypogymnia schizidiata*** island tube lichen | NLT0032640 | None | None | G2G3 | S2 | 1B.3 |
| ***Icaricia icarioides missionensis*** Mission blue butterfly | IILEPG801A | Endangered | None | G5T2 | S2 | |

| Species | Element Code | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|---|---|---|---|---|---|---|
| ***Icaricia icarioides pheres*** Pheres blue butterfly | IILEPG8019 | None | None | G5TX | SX | |
| ***Ischnura gemina*** San Francisco forktail damselfly | IIODO72010 | None | None | G2 | S2 | |
| ***Lasiurus cinereus*** hoary bat | AMACC05032 | None | None | G3G4 | S4 | |
| ***Lasiurus frantzii*** western red bat | AMACC05080 | None | None | G4 | S3 | SSC |
| ***Lasthenia californica ssp. macrantha*** perennial goldfields | PDAST5L0C5 | None | None | G3T2 | S2 | 1B.2 |
| ***Laterallus jamaicensis coturniculus*** California black rail | ABNME03041 | None | Threatened | G3T1 | S2 | FP |
| ***Layia carnosa*** beach layia | PDAST5N010 | Threatened | Endangered | G2 | S2 | 1B.1 |
| ***Leptosiphon croceus*** coast yellow leptosiphon | PDPLM09170 | None | Endangered | G1 | S1 | 1B.1 |
| ***Leptosiphon rosaceus*** rose leptosiphon | PDPLM09180 | None | None | G1 | S1 | 1B.1 |
| ***Lessingia arachnoidea*** Crystal Springs lessingia | PDAST5S0C0 | None | None | G2 | S2 | 1B.2 |
| ***Lessingia germanorum*** San Francisco lessingia | PDAST5S010 | Endangered | Endangered | G1 | S1 | 1B.1 |
| ***Lichnanthe ursina*** bumblebee scarab beetle | IICOL67020 | None | None | G2 | S2 | |
| ***Limnanthes douglasii ssp. ornduffii*** Ornduff's meadowfoam | PDLIM02039 | None | None | G4T1 | S1 | 1B.1 |
| ***Malacothamnus arcuatus*** arcuate bush-mallow | PDMAL0Q0E0 | None | None | G2Q | S2 | 1B.2 |
| ***Melospiza melodia pusillula*** Alameda song sparrow | ABPBXA301S | None | None | G5T2T3 | S2 | SSC |
| ***Melospiza melodia samuelis*** San Pablo song sparrow | ABPBXA301W | None | None | G5T2 | S2 | SSC |
| ***Microseris paludosa*** marsh microseris | PDAST6E0D0 | None | None | G2 | S2 | 1B.2 |
| ***Monardella sinuata ssp. nigrescens*** northern curly-leaved monardella | PDLAM18162 | None | None | G3T2 | S2 | 1B.2 |
| ***Monolopia gracilens*** woodland woollythreads | PDAST6G010 | None | None | G3 | S3 | 1B.2 |
| ***Mylopharodon conocephalus*** hardhead | AFCJB25010 | None | None | G3 | S3 | SSC |
| ***Myotis thysanodes*** fringed myotis | AMACC01090 | None | None | G4 | S3 | |

| Species | Element Code | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|---|---|---|---|---|---|---|
| ***Nannopterum auritum*** double-crested cormorant | ABNFD01020 | None | None | G5 | S4 | WL |
| ***Neotoma fuscipes annectens*** San Francisco dusky-footed woodrat | AMAFF08082 | None | None | G5T2T3 | S2S3 | SSC |
| ***Northern Coastal Salt Marsh*** Northern Coastal Salt Marsh | CTT52110CA | None | None | G3 | S3.2 | |
| ***Northern Maritime Chaparral*** Northern Maritime Chaparral | CTT37C10CA | None | None | G1 | S1.2 | |
| ***Nyctinomops macrotis*** big free-tailed bat | AMACD04020 | None | None | G5 | S3 | SSC |
| ***Oncorhynchus kisutch pop. 4*** coho salmon - central California coast ESU | AFCHA02034 | Endangered | Endangered | G5T2Q | S2 | |
| ***Oncorhynchus mykiss irideus pop. 8*** steelhead - central California coast DPS | AFCHA0209G | Threatened | None | G5T3Q | S3 | |
| ***Pentachaeta bellidiflora*** white-rayed pentachaeta | PDAST6X030 | Endangered | Endangered | G1 | S1 | 1B.1 |
| ***Plagiobothrys chorisianus var. chorisianus*** Choris' popcornflower | PDBOR0V061 | None | None | G3T1Q | S1 | 1B.2 |
| ***Plagiobothrys diffusus*** San Francisco popcornflower | PDBOR0V080 | None | Endangered | G1Q | S1 | 1B.1 |
| ***Plagiobothrys glaber*** hairless popcornflower | PDBOR0V0B0 | None | None | GX | SX | 1A |
| ***Polemonium carneum*** Oregon polemonium | PDPLM0E050 | None | None | G3G4 | S2 | 2B.2 |
| ***Polygonum marinense*** Marin knotweed | PDPGN0L1C0 | None | None | G2Q | S2 | 3.1 |
| ***Pomatiopsis californica*** Pacific walker | IMGASJ9020 | None | None | G1 | S1 | |
| ***Potentilla hickmanii*** Hickman's cinquefoil | PDROS1B370 | Endangered | Endangered | G1 | S1 | 1B.1 |
| ***Rallus obsoletus obsoletus*** California Ridgway's rail | ABNME05011 | Endangered | Endangered | G3T1 | S2 | FP |
| ***Rana boylii pop. 1*** foothill yellow-legged frog - north coast DPS | AAABH01051 | None | None | G3T4 | S4 | SSC |
| ***Rana boylii pop. 4*** foothill yellow-legged frog - central coast DPS | AAABH01054 | Threatened | Endangered | G3T2 | S2 | |
| ***Rana draytonii*** California red-legged frog | AAABH01022 | Threatened | None | G2G3 | S2S3 | SSC |
| ***Reithrodontomys raviventris*** salt-marsh harvest mouse | AMAFF02040 | Endangered | Endangered | G1G2 | S3 | FP |
| ***Riparia riparia*** bank swallow | ABPAU08010 | None | Threatened | G5 | S3 | |

| Species | Element Code | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|---|---|---|---|---|---|---|
| ***Sanicula maritima*** adobe sanicle | PDAPI1Z0D0 | None | Rare | G2 | S2 | 1B.1 |
| ***Scapanus latimanus insularis*** Angel Island mole | AMABB02032 | None | None | G5T1 | S2? | |
| ***Scapanus latimanus parvus*** Alameda Island mole | AMABB02031 | None | None | G5T1Q | SH | SSC |
| ***Senecio aphanactis*** chaparral ragwort | PDAST8H060 | None | None | G3 | S2 | 2B.2 |
| ***Serpentine Bunchgrass*** Serpentine Bunchgrass | CTT42130CA | None | None | G2 | S2.2 | |
| ***Silene scouleri ssp. scouleri*** Scouler's catchfly | PDCAR0U1MC | None | None | G5T4T5 | S2S3 | 2B.2 |
| ***Silene verecunda ssp. verecunda*** San Francisco campion | PDCAR0U213 | None | None | G5T1 | S1 | 1B.2 |
| ***Speyeria callippe callippe*** callippe silverspot butterfly | IILEPJ6091 | Endangered | None | G5T1 | S1 | |
| ***Speyeria zerene myrtleae*** Myrtle's silverspot butterfly | IILEPJ608C | Endangered | None | G5T1 | S1 | |
| ***Spirinchus thaleichthys*** longfin smelt | AFCHB03010 | Candidate | Threatened | G5 | S1 | |
| ***Stebbinsoseris decipiens*** Santa Cruz microseris | PDAST6E050 | None | None | G2 | S2 | 1B.2 |
| ***Sternula antillarum browni*** California least tern | ABNNM08103 | Endangered | Endangered | G4T2T3Q | S2 | FP |
| ***Suaeda californica*** California seablite | PDCHE0P020 | Endangered | None | G1 | S1 | 1B.1 |
| ***Taxidea taxus*** American badger | AMAJF04010 | None | None | G5 | S3 | SSC |
| ***Thamnophis sirtalis tetrataenia*** San Francisco gartersnake | ARADB3613B | Endangered | Endangered | G5T2Q | S2 | FP |
| ***Trachusa gummifera*** San Francisco Bay Area leaf-cutter bee | IIHYM80010 | None | None | G1 | S1 | |
| ***Trifolium amoenum*** two-fork clover | PDFAB40040 | Endangered | None | G1 | S1 | 1B.1 |
| ***Trifolium hydrophilum*** saline clover | PDFAB400R5 | None | None | G2 | S2 | 1B.2 |
| ***Triphysaria floribunda*** San Francisco owl's-clover | PDSCR2T010 | None | None | G2? | S2? | 1B.2 |
| ***Triquetrella californica*** coastal triquetrella | NBMUS7S010 | None | None | G2 | S2 | 1B.2 |
| ***Tryonia imitator*** mimic tryonia (=California brackishwater snail) | IMGASJ7040 | None | None | G2 | S2 | |

| Species | Element Code | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|---|---|---|---|---|---|---|
| ***Valley Needlegrass Grassland*** | CTT42110CA | None | None | G3 | S3.1 | |
| Valley Needlegrass Grassland | | | | | | |
| ***Vespericola marinensis*** | IMGASA4140 | None | None | G2 | S2 | |
| Marin hesperian | | | | | | |
| ***Viburnum ellipticum*** | PDCPR07080 | None | None | G4G5 | S3? | 2B.3 |
| oval-leaved viburnum | | | | | | |
| ***Zapus trinotatus orarius*** | AMAFH01031 | None | None | G5T2 | S2 | SSC |
| Point Reyes jumping mouse | | | | | | |

**Record Count: 149**

## C.2 - CNPS Rare Plant Inventory—Search Results

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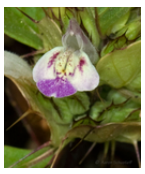
CNPS Rare Plant Inventory

## Search Results

**95** matches found. Click on scientific name for details

Search Criteria: 9-Quad include [**3712273:3712263:3712264:3712274:3712275:3712253:3712254**]

| ▲ SCIENTIFIC NAME | COMMON NAME | FAMILY | LIFEFORM | BLOOMING PERIOD | FED LIST | STATE LIST | GLOBAL RANK | STATE RANK | CA RARE PLANT RANK | CA ENDEMIC | DATE ADDED | PHOTO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Acanthomintha duttonii* | San Mateo thorn-mint | Lamiaceae | annual herb | Apr-Jun | FE | CE | G1 | S1 | 1B.1 | Yes | 1974-01-01 |  © 2011 Aaron Schusteff |
| *Agrostis blasdalei* | Blasdale's bent grass | Poaceae | perennial rhizomatous herb | May-Jul | None | None | G2G3 | S2 | 1B.2 | Yes | 1974-01-01 |  © 2001 Doreen L. Smith |
| *Allium peninsulare* var. *franciscanum* | Franciscan onion | Alliaceae | perennial bulbiferous herb | (Apr)May-Jun | None | None | G4G5T2 | S2 | 1B.2 | Yes | 2001-01-01 |  © 2019 Aaron Arthur |
| *Amsinckia lunaris* | bent-flowered fiddleneck | Boraginaceae | annual herb | Mar-Jun | None | None | G3 | S3 | 1B.2 | Yes | 1974-01-01 |  © 2011 Neal Kramer |
| *Aphyllon robbinsii* | Robbins' broomrape | Orobanchaceae | annual herb (achlorophyllous) | Apr-Jul | None | None | G1 | S1 | 1B.1 | | 2023-03-28 |  © 2017 Dylan Neubauer |
| *Arabis blepharophylla* | coast rockcress | Brassicaceae | perennial herb | Feb-May | None | None | G4 | S4 | 4.3 | Yes | 1974-01-01 |  © 2011 Neal Kramer |
| *Arctostaphylos franciscana* | Franciscan manzanita | Ericaceae | perennial evergreen shrub | Feb-Apr | FE | None | GHC | S1 | 1B.1 | Yes | 1974-01-01 |  © 2015 Neal Kramer |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Arctostaphylos imbricata* | San Bruno Mountain manzanita | Ericaceae | perennial evergreen shrub | Feb-May | None | CE | G1 | S1 | 1B.1 | Yes | 1974-01-01 |  © 2013 Robert Sikora |
| *Arctostaphylos montana* ssp. *ravenii* | Presidio manzanita | Ericaceae | perennial evergreen shrub | Feb-Mar | FE | CE | G3T1 | S1 | 1B.1 | Yes | 1980-01-01 |  © 2019 Susan McDougall |
| *Arctostaphylos montaraensis* | Montara manzanita | Ericaceae | perennial evergreen shrub | Jan-Mar | None | None | G1 | S1 | 1B.2 | Yes | 1974-01-01 |  © 2016 Neal Kramer |
| *Arctostaphylos pacifica* | Pacific manzanita | Ericaceae | evergreen shrub | Feb-Apr | None | CE | G1 | S1 | 1B.1 | Yes | 1974-01-01 | No Photo Available |
| *Arctostaphylos regismontana* | Kings Mountain manzanita | Ericaceae | perennial evergreen shrub | Dec-Apr | None | None | G2 | S2 | 1B.2 | Yes | 1994-01-01 | No Photo Available |
| *Arenaria paludicola* | marsh sandwort | Caryophyllaceae | perennial stoloniferous herb | May-Aug | FE | CE | G1 | S1 | 1B.1 | | 1984-01-01 | No Photo Available |
| *Aspidotis carlotta-halliae* | Carlotta Hall's lace fern | Pteridaceae | perennial rhizomatous herb | Jan-Dec | None | None | G3 | S3 | 4.2 | Yes | 1994-01-01 | No Photo Available |
| *Astragalus nuttallii* var. *nuttallii* | ocean bluff milk-vetch | Fabaceae | perennial herb | Jan-Nov | None | None | G4T4 | S4 | 4.2 | Yes | 2001-01-01 | No Photo Available |
| *Astragalus pycnostachyus* var. *pycnostachyus* | coastal marsh milk-vetch | Fabaceae | perennial herb | (Apr)Jun-Oct | None | None | G2T2 | S2 | 1B.2 | Yes | 2001-01-01 |  ©2009 Neal Kramer |
| *Astragalus tener* var. *tener* | alkali milk-vetch | Fabaceae | annual herb | Mar-Jun | None | None | G2T1 | S1 | 1B.2 | Yes | 1994-01-01 | No Photo Available |
| *Calochortus umbellatus* | Oakland star-tulip | Liliaceae | perennial bulbiferous herb | Mar-May | None | None | G3? | S3? | 4.2 | Yes | 1980-01-01 | No Photo Available |
| *Calochortus uniflorus* | pink star-tulip | Liliaceae | perennial bulbiferous herb | Apr-Jun | None | None | G4 | S4 | 4.2 | | 2010-03-04 |  © 2021 Scot Loring |

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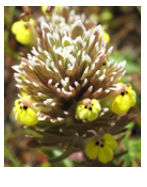
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Calystegia purpurata* ssp. *saxicola* | coastal bluff morning-glory | Convolvulaceae | perennial herb | (Mar)Apr-Sep | None | None | G4T2T3 | S2S3 | 1B.2 | Yes | 2001-01-01 | No Photo Available |
| *Carex comosa* | bristly sedge | Cyperaceae | perennial rhizomatous herb | May-Sep | None | None | G5 | S2 | 2B.1 | | 1994-01-01 |  Dean Wm. Taylor 1997 |
| *Carex praticola* | northern meadow sedge | Cyperaceae | perennial herb | May-Jul | None | None | G5 | S2 | 2B.2 | | 1984-01-01 |  ©2013 Scot Loring |
| *Castilleja ambigua* var. *ambigua* | johnny-nip | Orobanchaceae | annual herb (hemiparasitic) | Mar-Aug | None | None | G4T4 | S3S4 | 4.2 | | 2009-02-04 |  ©2011 Dylan Neubauer |
| *Centromadia parryi* ssp. *parryi* | pappose tarplant | Asteraceae | annual herb | May-Nov | None | None | G3T2 | S2 | 1B.2 | Yes | 2004-01-01 |  © 2016 John Doyen |
| *Chloropyron maritimum* ssp. *palustre* | Point Reyes salty bird's-beak | Orobanchaceae | annual herb (hemiparasitic) | Jun-Oct | None | None | G4?T2 | S2 | 1B.2 | | 1974-01-01 |  ©2017 John Doyen |
| *Chorizanthe cuspidata* var. *cuspidata* | San Francisco Bay spineflower | Polygonaceae | annual herb | Apr-Jul(Aug) | None | None | G2T1 | S1 | 1B.2 | Yes | 1994-01-01 | No Photo Available |
| *Chorizanthe robusta* var. *robusta* | robust spineflower | Polygonaceae | annual herb | Apr-Sep | FE | None | G2T1 | S1 | 1B.1 | Yes | 1980-01-01 | No Photo Available |
| *Cirsium andrewsii* | Franciscan thistle | Asteraceae | perennial herb | Mar-Jul | None | None | G3 | S3 | 1B.2 | Yes | 1974-01-01 | No Photo Available |
| *Cirsium fontinale* var. *fontinale* | fountain thistle | Asteraceae | perennial herb | (Apr)May-Oct | FE | CE | G2T1 | S1 | 1B.1 | Yes | 1974-01-01 | No Photo Available |
| *Cirsium hydrophilum* var. *vaseyi* | Mt. Tamalpais thistle | Asteraceae | perennial herb | May-Aug | None | None | G2T1 | S1 | 1B.2 | Yes | 1974-01-01 | No Photo Available |
| *Cirsium occidentale* var. *compactum* | compact cobwebby thistle | Asteraceae | perennial herb | Apr-Jun | None | None | G3G4T2 | S2 | 1B.2 | Yes | 1974-01-01 | No Photo Available |
| *Clarkia franciscana* | Presidio clarkia | Onagraceae | annual herb | May-Jul | FE | CE | G1 | S1 | 1B.1 | Yes | 1974-01-01 | No Photo Available |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Collinsia corymbosa* | round-headed collinsia | Plantaginaceae | annual herb | Apr-Jun | None | None | G1 | S1 | 1B.2 | Yes | 1994-01-01 |  ©2007 Steve Matson |
| *Collinsia multicolor* | San Francisco collinsia | Plantaginaceae | annual herb | (Feb)Mar-May | None | None | G2 | S2 | 1B.2 | Yes | 1974-01-01 | No Photo Available |
| *Cypripedium fasciculatum* | clustered lady's-slipper | Orchidaceae | perennial rhizomatous herb | Mar-Aug | None | None | G4 | S4 | 4.2 | | 1980-01-01 |  © 2013 Scot Loring |
| *Dirca occidentalis* | western leatherwood | Thymelaeaceae | perennial deciduous shrub | Jan-Mar(Apr) | None | None | G2 | S2 | 1B.2 | Yes | 1974-01-01 |  © 2017 Steve Matson |
| *Elymus californicus* | California bottle-brush grass | Poaceae | perennial herb | May-Aug(Nov) | None | None | G4 | S4 | 4.3 | Yes | 1974-01-01 | No Photo Available |
| *Equisetum palustre* | marsh horsetail | Equisetaceae | perennial rhizomatous herb | Unk | None | None | G5 | S1S3 | 3 | | 1994-01-01 | No Photo Available |
| *Eriophyllum latilobum* | San Mateo woolly sunflower | Asteraceae | perennial herb | May-Jun | FE | CE | G1 | S1 | 1B.1 | Yes | 1974-01-01 | No Photo Available |
| *Erysimum franciscanum* | San Francisco wallflower | Brassicaceae | perennial herb | Mar-Jun | None | None | G3 | S3 | 4.2 | Yes | 1974-01-01 | No Photo Available |
| *Erythranthe laciniata* | cut-leaved monkeyflower | Phrymaceae | annual herb | Apr-Jul | None | None | G4 | S4 | 4.3 | Yes | 1974-01-01 |  © 2017 Steven Perry |
| *Extriplex joaquinana* | San Joaquin spearscale | Chenopodiaceae | annual herb | Apr-Oct | None | None | G2 | S2 | 1B.2 | Yes | 1988-01-01 | No Photo Available |
| *Fritillaria biflora* var. *ineziana* | Hillsborough chocolate lily | Liliaceae | perennial bulbiferous herb | Mar-Apr | None | None | G3G4T1 | S1 | 1B.1 | Yes | 1994-01-01 |  © 2012 Toni Corelli |
| *Fritillaria lanceolata* var. *tristulis* | Marin checker lily | Liliaceae | perennial bulbiferous herb | Feb-May | None | None | G5T2 | S2 | 1B.1 | Yes | 1994-01-01 |  © 2020 Barry Rice |
| *Fritillaria liliacea* | fragrant fritillary | Liliaceae | perennial bulbiferous herb | Feb-Apr | None | None | G2 | S2 | 1B.2 | Yes | 1974-01-01 |  © 2004 Carol W. Witham |

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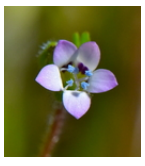
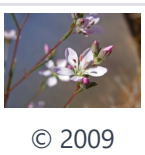
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Gilia capitata* ssp. *chamissonis* | blue coast gilia | Polemoniaceae | annual herb | Apr-Jul | None | None | G5T2 | S2 | 1B.1 | Yes | 2001-01-01 |  © 2017 John Doyen |
| *Gilia millefoliata* | dark-eyed gilia | Polemoniaceae | annual herb | Apr-Jul | None | None | G2 | S2 | 1B.2 | | 2001-01-01 |  © 2017 John Doyen |
| *Grindelia hirsutula* var. *maritima* | San Francisco gumplant | Asteraceae | perennial herb | Jun-Sep | None | None | G5T1Q | S1 | 3.2 | Yes | 1974-01-01 |  Robert Potts © 2001 California Academy of Sciences |
| *Helianthella castanea* | Diablo helianthella | Asteraceae | perennial herb | Mar-Jun | None | None | G2 | S2 | 1B.2 | Yes | 1974-01-01 |  © 2013 Christopher Bronny |
| *Hemizonia congesta* ssp. *congesta* | congested-headed hayfield tarplant | Asteraceae | annual herb | Apr-Nov | None | None | G5T2 | S2 | 1B.2 | Yes | 1988-01-01 |  © 2015 Vernon Smith |
| *Hesperevax sparsiflora* var. *brevifolia* | short-leaved evax | Asteraceae | annual herb | Mar-Jun | None | None | G4T3 | S3 | 1B.2 | | 1994-01-01 |  © 2006 Doreen L. Smith |
| *Hesperolinon congestum* | Marin western flax | Linaceae | annual herb | Apr-Jul | FT | CT | G1 | S1 | 1B.1 | Yes | 1974-01-01 |  © 2009 Neal Kramer |
| *Heteranthera dubia* | water star-grass | Pontederiaceae | perennial herb (aquatic) | Jul-Oct | None | None | G5 | S2 | 2B.2 | | 2013-10-10 |  ©2010 Louis-M. Landry |
| *Holocarpha macradenia* | Santa Cruz tarplant | Asteraceae | annual herb | Jun-Oct | FT | CE | G1 | S1 | 1B.1 | Yes | 1974-01-01 |  © 2011 Dylan Neubauer |

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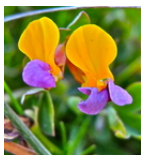
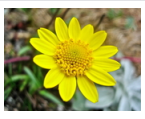
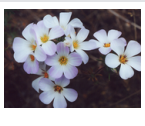
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Horkelia cuneata* var. *sericea* | Kellogg's horkelia | Rosaceae | perennial herb | Apr-Sep | None | None | G4T1? | S1? | 1B.1 | Yes | 1988-01-01 |  © 2018 Neal Kramer |
| *Horkelia marinensis* | Point Reyes horkelia | Rosaceae | perennial herb | May-Sep | None | None | G2 | S2 | 1B.2 | Yes | 1974-01-01 |  © 2017 John Doyen |
| *Hosackia gracilis* | harlequin lotus | Fabaceae | perennial rhizomatous herb | Mar-Jul | None | None | G3G4 | S3 | 4.2 | | 2004-01-01 |  © 2015 John Doyen |
| *Hypogymnia schizidiata* | island tube lichen | Parmeliaceae | foliose lichen | | None | None | G2G3 | S2 | 1B.3 | | 2014-03-01 | No Photo Available |
| *Iris longipetala* | coast iris | Iridaceae | perennial rhizomatous herb | Mar-May(Jun) | None | None | G3 | S3 | 4.2 | Yes | 2006-10-12 |  © 2014 Aaron Schusteff |
| *Lasthenia californica* ssp. *macrantha* | perennial goldfields | Asteraceae | perennial herb | Jan-Nov | None | None | G3T2 | S2 | 1B.2 | Yes | 2001-01-01 |  © 2013 John Doyen |
| *Layia carnosa* | beach layia | Asteraceae | annual herb | Mar-Jul | FT | CE | G2 | S2 | 1B.1 | | 1988-01-01 |  © 2007 Aaron Schusteff |
| *Leptosiphon ambiguus* | serpentine leptosiphon | Polemoniaceae | annual herb | Mar-Jun | None | None | G4 | S4 | 4.2 | Yes | 1994-01-01 |  © 2010 Aaron Schusteff |
| *Leptosiphon croceus* | coast yellow leptosiphon | Polemoniaceae | annual herb | Apr-Jun | None | CE | G1 | S1 | 1B.1 | Yes | 2001-01-01 |  © 2018 Neal Kramer |
| *Leptosiphon grandiflorus* | large-flowered leptosiphon | Polemoniaceae | annual herb | Apr-Aug | None | None | G3G4 | S3S4 | 4.2 | Yes | 1994-01-01 |  © 2003 Doreen L. Smith |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Leptosiphon latisectus* | broad-lobed leptosiphon | Polemoniaceae | annual herb | Apr-Jun | None | None | G4 | S4 | 4.3 | Yes | 2001-01-01 |  © 2015 Steve Matson |
| *Leptosiphon rosaceus* | rose leptosiphon | Polemoniaceae | annual herb | Apr-Jul | None | None | G1 | S1 | 1B.1 | Yes | 2001-01-01 |  © 2013 Aaron Schusteff |
| *Lessingia arachnoidea* | Crystal Springs lessingia | Asteraceae | annual herb | Jul-Oct | None | None | G2 | S2 | 1B.2 | Yes | 1994-01-01 |  © 2008 Neal Kramer |
| *Lessingia germanorum* | San Francisco lessingia | Asteraceae | annual herb | (Jun)Jul-Nov | FE | CE | G1 | S1 | 1B.1 | Yes | 1980-01-01 |  © 2019 Aaron Schusteff |
| *Lessingia hololeuca* | woolly-headed lessingia | Asteraceae | annual herb | Jun-Oct | None | None | G2G3 | S2S3 | 3 | Yes | 1994-01-01 |  © 2015 Aaron Schusteff |
| *Limnanthes douglasii* ssp. *ornduffii* | Ornduff's meadowfoam | Limnanthaceae | annual herb | Nov-May | None | None | G4T1 | S1 | 1B.1 | Yes | 2014-03-18 |  © 2021 Eva Buxton |
| *Lupinus arboreus* var. *eximius* | San Mateo tree lupine | Fabaceae | perennial evergreen shrub | Apr-Jul | None | None | G2Q | S2 | 3.2 | Yes | 1980-01-01 | No Photo Available |
| *Malacothamnus arcuatus* | arcuate bush-mallow | Malvaceae | perennial deciduous shrub | Apr-Sep | None | None | G2Q | S2 | 1B.2 | Yes | 1974-01-01 |  © 2017 Keir Morse |
| *Micropus amphibolus* | Mt. Diablo cottonweed | Asteraceae | annual herb | Mar-May | None | None | G3G4 | S3S4 | 3.2 | Yes | 1974-01-01 |  © 2008 Aaron Arthur |
| *Microseris paludosa* | marsh microseris | Asteraceae | perennial herb | Apr-Jun(Jul) | None | None | G2 | S2 | 1B.2 | Yes | 2001-01-01 | No Photo Available |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Monardella sinuata* ssp. *nigrescens* | northern curly-leaved monardella | Lamiaceae | annual herb | (Apr)May-Jul(Aug-Sep) | None | None | G3T2 | S2 | 1B.2 | Yes | 2013-12-31 |  © 2014 John Doyen |
| *Monolopia gracilens* | woodland woollythreads | Asteraceae | annual herb | (Feb)Mar-Jul | None | None | G3 | S3 | 1B.2 | Yes | 2010-04-06 |  © 2016 Richard Spellenberg |
| *Pentachaeta bellidiflora* | white-rayed pentachaeta | Asteraceae | annual herb | Mar-May | FE | CE | G1 | S1 | 1B.1 | Yes | 1974-01-01 | No Photo Available |
| *Plagiobothrys chorisianus* var. *chorisianus* | Choris' popcornflower | Boraginaceae | annual herb | Mar-Jun | None | None | G3T1Q | S1 | 1B.2 | Yes | 1984-01-01 | No Photo Available |
| *Plagiobothrys diffusus* | San Francisco popcornflower | Boraginaceae | annual herb | Mar-Jun | None | CE | G1Q | S1 | 1B.1 | Yes | 1974-01-01 | No Photo Available |
| *Plagiobothrys glaber* | hairless popcornflower | Boraginaceae | annual herb | Mar-May | None | None | GX | SX | 1A | Yes | 1974-01-01 | No Photo Available |
| *Polemonium carneum* | Oregon polemonium | Polemoniaceae | perennial herb | Apr-Sep | None | None | G3G4 | S2 | 2B.2 | | 2008-11-03 |  ©2018 John Doyen |
| *Polygonum marinense* | Marin knotweed | Polygonaceae | annual herb | (Apr)May-Aug(Oct) | None | None | G2Q | S2 | 3.1 | Yes | 1974-01-01 | No Photo Available |
| *Potentilla hickmanii* | Hickman's cinquefoil | Rosaceae | perennial herb | Apr-Aug | FE | CE | G1 | S1 | 1B.1 | Yes | 1974-01-01 | No Photo Available |
| *Ranunculus lobbii* | Lobb's aquatic buttercup | Ranunculaceae | annual herb (aquatic) | Feb-May | None | None | G4 | S3 | 4.2 | | 1974-01-01 | No Photo Available |
| *Sanicula maritima* | adobe sanicle | Apiaceae | perennial herb | Feb-May | None | CR | G2 | S2 | 1B.1 | Yes | 1974-01-01 | No Photo Available |
| *Senecio aphanactis* | chaparral ragwort | Asteraceae | annual herb | Jan-Apr(May) | None | None | G3 | S2 | 2B.2 | | 1994-01-01 | No Photo Available |
| *Silene scouleri* ssp. *scouleri* | Scouler's catchfly | Caryophyllaceae | perennial herb | (Mar-May)Jun-Aug(Sep) | None | None | G5T4T5 | S2S3 | 2B.2 | | 2017-12-13 |  ©2015 Vernon Smith |

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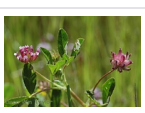
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Silene verecunda* ssp. *verecunda* | San Francisco campion | Caryophyllaceae | perennial herb | (Feb)Mar-Jul(Aug) | None | None | G5T1 | S1 | 1B.2 | Yes | 1980-01-01 | No Photo Available |
| *Stebbinsoseris decipiens* | Santa Cruz microseris | Asteraceae | annual herb | Apr-May | None | None | G2 | S2 | 1B.2 | Yes | 1974-01-01 | No Photo Available |
| *Suaeda californica* | California seablite | Chenopodiaceae | perennial evergreen shrub | Jul-Oct | FE | None | G1 | S1 | 1B.1 | Yes | 1988-01-01 | No Photo Available |
| *Trifolium amoenum* | two-fork clover | Fabaceae | annual herb | Apr-Jun | FE | None | G1 | S1 | 1B.1 | Yes | 1974-01-01 | No Photo Available |
| *Trifolium hydrophilum* | saline clover | Fabaceae | annual herb | Apr-Jun | None | None | G2 | S2 | 1B.2 | Yes | 2001-01-01 |  © 2005 Dean Wm Taylor |
| *Triphysaria floribunda* | San Francisco owl's-clover | Orobanchaceae | annual herb | Apr-Jun | None | None | G2? | S2? | 1B.2 | Yes | 1974-01-01 | No Photo Available |
| *Triquetrella californica* | coastal triquetrella | Pottiaceae | moss | | None | None | G2 | S2 | 1B.2 | | 2001-01-01 | No Photo Available |
| *Viburnum ellipticum* | oval-leaved viburnum | Viburnaceae | perennial deciduous shrub | May-Jun | None | None | G4G5 | S3? | 2B.3 | | 1974-01-01 |  © 2006 Tom Engstrom |

Showing 1 to 95 of 95 entries

**Suggested Citation:**

California Native Plant Society, Rare Plant Program. 2023. Rare Plant Inventory (online edition, v9.5). Website https://www.rareplants.cnps.org [accessed 19 October 2023].

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## C.3 - Special-status Species Evaluation Tables

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## Table 1: Special-status Plant Species Habitat Value Evaluation

| *Scientific Name* Common Name | Status | | | Habitat Description[4] | Estimated Habitat Value and Rationale |
|---|---|---|---|---|---|
| | ESA[1] | CESA[2] | CRPR[3] | | |
| *Acanthomintha duttonii* San Mateo thorn-mint | FE | CE | 1B.1 | Annual herb found in valley and foothill grassland, chaparral, and serpentinite soils. Elevation: 50-300 m. Blooming Period: April-June | **None:** The project site does not contain suitable grassland, chaparral habitat, or serpentinite soils to support this species. No occurrences of these species are recorded within 5 miles of the project site. The last recorded occurrence was in 1994. |
| *Agrostis blasdalei* Blasdale's bent grass | — | — | 1B.2 | Perennial rhizomatous herb found in coastal bluff scrub, coastal dunes, coastal prairie. Elevation: 0-150 m. Blooming Period: May-July | **None:** The project site does not contain suitable coastal bluff scrub, coastal dunes, or coastal prairie habitat to support this species. No occurrences of these species are recorded within 5 miles of the project site. The last recorded occurrence was in 2003. |
| *Allium peninsulare var. franciscanum* Franciscan onion | — | — | 1B.2 | Perennial bulbiferous herb found in valley and foothill grassland, cismontane woodland. Occurs in clay, serpentinite (often), and volcanic soils. Elevation: 52-305 m. Blooming Period: (April)May-June | **None:** The project site does not contain suitable grassland, woodland, or soils to support this species. One occurrence has been recorded within 5 miles of the project site. The last recorded occurrence was in 1950. |
| *Amsinckia lunaris* bent-flowered fiddleneck | — | — | 1B.2 | Annual herb found in cismontane woodland, valley and foothill grassland, coastal bluff scrub. Elevation: 3-500 m. Blooming Period: March-June | **None:** The project site does not contain suitable coastal bluff scrub, cismontane, or grassland habitat to support this species. One occurrence has been recorded within 5 miles of the project site. The last recorded occurrence was in 1963. |
| *Aphyllon robbinsii* Robbins' broomrape | — | — | 1B.1 | Annual herb (achlorophyllous) found in coastal bluff scrub, coastal dune habitat, or rocky/sandy soils. Elevation: 0-100 m. Blooming Period: April-July | **None:** The project site does not contain suitable scrub, dune habitat or soils to support this species. No occurrences of these species are recorded within 5 miles of the project site. |
| *Arctostaphylos franciscana* Franciscan manzanita | FE | — | 1B.1 | Perennial evergreen shrub found in serpentinite coastal scrub. Elevation: 60-300 m. Blooming Period: February-April | **None:** The project site does not contain suitable serpentinite coastal scrub habitat to support this species. One occurrence has been recorded within 5 miles of the project site. The last recorded occurrence was in 1918. |
| *Arctostaphylos imbricata* San Bruno Mountain manzanita | — | — | 1B.1 | Perennial evergreen shrub found in chaparral, and coastal scrub. Occurs in rocky soils. Elevation: 275-370 m. Blooming Period: February-May | **None:** The project site does not contain suitable coniferous forests, chaparral habitat, or sandy slopes to support this species. Two occurrences have been recorded within 5 miles of the project site. However, surrounding development would preclude this species from occurring on site. |
| *Arctostaphylos montana ssp. ravenii* Presidio manzanita | FE | CE | 1B.1 | Perennial evergreen shrub found in chaparral, coastal prairie, coastal scrub, and serpentinite outcrops. Elevation: 45-215 m. Blooming Period: February-March | **None:** The project site does not contain suitable chaparral, coastal prairie habitat, or serpentinite outcrops to support this species. No occurrences of these species are recorded within 5 miles of the project site. Surrounding development would preclude this species from occurring on site. |

| *Scientific Name* Common Name | Status | | | Habitat Description[4] | Estimated Habitat Value and Rationale |
|---|---|---|---|---|---|
| | ESA[1] | CESA[2] | CRPR[3] | | |
| *Arctostaphylos montaraensis* Montara manzanita | — | — | 1B.2 | Perennial evergreen shrub found in maritime chaparral and coastal scrub. Elevation: 80-500 m. Blooming Period: January-March | **None:** The project site does not contain suitable chaparral or coastal scrub habitat to support this species. One occurrence has been recorded within 5 miles of the project site. The last recorded occurrence was on San Bruno Mountain in 2010. |
| *Arctostaphylos pacifica* Pacific manzanita | — | CE | 1B.1 | Evergreen shrub found in chaparral and coastal scrub. Elevation: 330-330 m. Blooming Period: February-April | **None:** The project site does not contain suitable chaparral or coastal scrub habitat to support this species. One occurrence has been recorded within 5 miles of the project site. The last recorded occurrence was on San Bruno Mountain in 2007. |
| *Arctostaphylos regismontana* Kings Mountain manzanita | — | — | 1B.2 | Perennial evergreen shrub found in broadleafed upland forest, chaparral, North Coast coniferous forest habitat, and granitic/sandstone soils. Elevation: 305-730 m. Blooming Period: December-April | **None:** The project site does not contain suitable chaparral, forest habitat, or granitic/sandstone soils to support this species. No occurrences of these species are recorded within 5 miles of the project site. The last recorded occurrence was in 1993. |
| *Arenaria paludicola* marsh sandwort | FE | CE | 1B.1 | Perennial stoloniferous herb found in brackish freshwater marshes and swamps. Occurs in openings and sandy soils. Elevation: 3-170 m. Blooming Period: May-August | **None:** The project site does not contain suitable marsh or swamp habitat, or sandy soils to support this species. No occurrences of these species are recorded within 5 miles of the project site. |
| *Astragalus pycnostachyus var. pycnostachyus* coastal marsh milk-vetch | — | — | 1B.2 | Perennial herb found in mesic coastal dunes, coastal scrub, streamsides, and coastal marshes and swamps. Elevation: 0-55 m. Blooming Period: (April)June-October | **None:** The project site does not contain suitable dune, scrub, stream, marsh, or swamp habitat to support this species. No occurrences of these species are recorded within 5 miles of the project site. |
| *Astragalus tener var. tener* alkali milk-vetch | — | — | 1B.2 | Annual herb found in alkaline playas, valley and foothill grassland, or vernal pools. Occurs on low ground, alkali flats, and flooded lands, in annual grassland or in playas or vernal pools. Elevation: 0-60 m. Blooming Period: March-June | **None:** The project site does not contain suitable alkali playa, valley or foothill grassland, or vernal pool habitat to support this species. No occurrences of these species are recorded within 5 miles of the project site. The last recorded occurrence was in 1868. |
| *Atriplex depressa* brittlescale | — | — | 1B.2 | Annual herb found in chenopod scrub, meadows and seeps, playas, valley and foothill grassland, and vernal pools. Occurs in alkaline and clay soils. Elevation: 1-320 m. Blooming period: April-October | **None:** The project site does not contain suitable chenopod scrub, meadows, or seeps, playas, valley or foothill grasslands to support this species. No occurrences of these species are recorded within 5 miles of the project site. |
| *Atriplex minuscula* lesser saltscale | — | — | 1B.1 | Annual herb found in chenopod scrub, playas, valley and foothill grassland. Occurs in alkaline and sandy soils. Elevation: 15-200 m. Blooming period: May-October | **None:** The project site does not contain suitable chenopod scrub, meadows, or seeps, playas, valley or foothill grasslands to support this species. No occurrences of these species are recorded within 5 miles of the project site. |

| *Scientific Name* Common Name | Status | | | Habitat Description[4] | Estimated Habitat Value and Rationale |
|---|---|---|---|---|---|
| | ESA[1] | CESA[2] | CRPR[3] | | |
| *Calystegia purpurata ssp. Saxicola* coastal bluff morning-glory | — | — | 1B.2 | Perennial herb found in coastal bluff scrub, coastal dune, coastal scrub, and North Coast coniferous forest. Elevation: 0-105 m. Bloom period: (March)April-September | **None:** The project site does not contain suitable coastal bluff scrub, coastal dune, coastal scrub, or forest habitat to support this species. No occurrences of these species are recorded within 5 miles of the project site. The last recorded occurrence was in 2013. |
| *Carex comosa* bristly sedge | — | — | 2B.1 | Perennial rhizomatous herb found in coastal prairie, lake margins, valley and foothill grassland, marshes, and swamps. Elevation: 0-625 m. Blooming Period: May-September | **None:** The project site does not contain suitable coastal prairie, lake margins, valley and foothill grassland, marsh, or swamp habitat to support this species. No occurrences of these species are recorded within 5 miles of the project site. The last recorded occurrence was in 1866. |
| *Carex praticola* northern meadow sedge | — | — | 2B.2 | Perennial herb found in mesic meadows and seeps. Elevation: 0-3200 m. Blooming Period: May-July | **None:** The project site does not contain suitable mesic meadows or seep habitat to support this species. No occurrences of these species are recorded within 5 miles of the project site. The last recorded occurrence was in 1967. |
| *Centromadia parryi ssp. parryi* pappose tarplant | — | — | 1B.2 | Annual herb found in chaparral, coastal prairie, meadows and seeps, coastal salt marshes and seeps, and vernally mesic valley and foothill grassland. Often occurs in alkaline soils. Elevation: 0-420 m. Blooming Period: May-November | **None:** The project site does not contain suitable chaparral, coastal prairie, meadows and seeps, coastal salt marshes and seeps, and vernally mesic valley and foothill grassland habitat to support this species. The last recorded occurrence was in 2006. |
| *Chloropyron maritimum ssp. palustre* Point Reyes salty bird's-beak | — | — | 1B.2 | Annual herb (hemiparasitic) found in coastal salt marshes and swamps. Usually occurs in coastal salt marsh with *Salicornia, Distichlis, Jaumea, Spartina,* etc. Elevation: 0-10 m. Blooming Period: June-October | **None:** The project site does not contain suitable coastal or marsh habitat to support this species. Two occurrences have been recorded within 5 miles of the project site. The last recorded occurrence was on San Bruno Mountain in 2006. |
| *Chorizanthe pungens var. hartwegiana* San Francisco Bay spineflower | — | — | 1B.2 | Annual herb found in coastal bluff scrub, coastal dunes, coastal prairie, and coastal scrub. Occurs in sandy soils. Elevation: 3-215 m. Blooming Period: April-July(August) | **None:** The project site does not contain suitable coastal bluff scrub, coastal dune, coastal prairie, and coastal scrub habitat to support this species. Eleven occurrences of these species have been recorded within 5 miles of the project site. The closest recorded occurrence was on San Bruno Mountain in 2009. Surrounding development would preclude this species from occurring on site. |
| *Chorizanthe robusta var. robusta* robust spineflower | FE | — | 1B.1 | Annual herb found in cismontane woodland openings, coastal dunes, coastal scrub, and maritime chaparral. Occurs in gravelly and sandy soils. Elevation: 3-300 m. Blooming period: April-September | **None:** The project site does not contain suitable cismontane woodland, coastal dunes, coastal scrub, or chaparral habitat to support this species. No occurrences of these species are recorded within 5 miles of the project site. The last recorded occurrence was in 1889 and is considered extirpated. |

| *Scientific Name* Common Name | Status | | | Habitat Description[4] | Estimated Habitat Value and Rationale |
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| | ESA[1] | CESA[2] | CRPR[3] | | |
| *Cirsium andrewsii* Franciscan thistle | — | — | 1B.2 | Perennial herb found in broadleafed upland forests, coastal bluff scrub, coastal prairie, and coastal scrub. Often grows in seeps on serpentine soils. Elevation: 0-150 m. Blooming period: March-July | **None:** The project site does not contain suitable broadleafed upland forests, coastal bluff scrub, coastal prairie, or coastal scrub habitat to support this species. No occurrences of these species are recorded within 5 miles of the project site. |
| *Cirsium fontinale var. fontinales* fountain thistle | FE | CE | 1B.1 | Perennial herb found in chaparral openings, cismontane woodland, meadows and seeps, and valley and foothill grassland. Often grows in seeps on serpentinite soils. Elevation: 45-175 m. Blooming Period: (April)May-October | **None:** The project site does not contain suitable chaparral openings, cismontane woodland, meadows and seeps, or valley and foothill grassland habitat to support this species. No occurrences of these species are recorded within 5 miles of the project site. The last recorded occurrence was in 2014. Surrounding development would preclude this species from occurring on site. |
| *Cirsium hydrophilum var. vaseyi* Mt. Tamalpais thistle | — | — | 1B.2 | Perennial herb found in broadleafed upland forests, meadows and seeps, and chaparral. Often grows in seeps on serpentinite soils. Elevation: 240-620 m. Blooming Period: May-August | **None:** The project site does not contain suitable broadleafed upland forests, meadows and seeps, or chaparral habitat to support this species. No occurrences of these species are recorded within 5 miles of the project site. The last recorded occurrence was in 1890 and is considered extirpated. |
| *Cirsium occidentale var. compactum* compact cobwebby thistle | — | — | 1B.2 | Perennial herb found in chaparral, coastal dunes, coastal prairie, and coastal scrub. Elevation: 5-150 m. Blooming Period: April-June | **None:** The project site does not contain suitable chaparral, coastal dunes, coastal prairie, or coastal scrub habitat to support this species. One occurrence has been recorded within 5 miles of the project site. The last recorded occurrence was in 1957. |
| *Clarkia franciscana* Presidio clarkia | FE | CE | 1B.1 | Annual herb found in coastal scrub, and serpentinite valley and foothill grassland. Elevation: 25-335 m. Blooming Period: May-July | **None:** The project site does not contain suitable in coastal scrub, or serpentinite valley and foothill grassland habitat to support this species. No occurrences of these species are recorded within 5 miles of the project site. |
| *Collinsia corymbose* round-headed collinsia | — | — | 1B.2 | Annual herb found in coastal dunes. Elevation: 0-20 m. Blooming Period: April-June | **None:** The project site does not contain suitable coastal dune habitat to support this species. One occurrence has been recorded within 5 miles of the project site. The last recorded occurrence was in 1919. |
| *Collinsia multicolor* San Francisco collinsia | — | — | 1B.2 | Annual herb found in closed-cone coniferous forest and coastal scrub. On decomposed shale (mudstone) mixed with humus; sometimes on serpentine. Elevation: 30-275 m. Blooming Period: (February)March-May | **None:** The project site does not contain suitable coniferous forest, coastal scrub habitat, or serpentinite soils to support this species. No occurrences of these species are recorded within 5 miles of the project site. The last recorded occurrence was in 1919. |

| *Scientific Name* Common Name | Status | | | Habitat Description[4] | Estimated Habitat Value and Rationale |
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| | ESA[1] | CESA[2] | CRPR[3] | | |
| *Dirca occidentalis* western leatherwood | — | — | 1B.2 | Perennial deciduous shrub found in broadleafed upland forest, chaparral, closed-cone coniferous forest, cismontane woodland, north coast coniferous forest, riparian forest, riparian woodland. On brushy slopes, mesic sites; mostly in mixed evergreen & foothill woodland communities.<br>Elevation: 25-425 m.<br>Blooming Period: January-March(April) | **None:** The project site does not contain suitable broadleafed upland forest, chaparral, closed-cone coniferous forest, cismontane woodland, or north coast coniferous forest to support this species. Five occurrences have been recorded within 5 miles of the project site, on Montara Mountain. The last recorded occurrence was in 2021. Surrounding development would preclude this species from occurring on site. |
| *Eriophyllum latilobum* San Mateo woolly sunflower | FE | CE | 1B.1 | Perennial herb found in serpentinite woodland, coastal scrub, and lower montane coniferous forest.<br>Elevation: 45-330 m.<br>Blooming Period: May-June | **None:** The project site does not contain suitable serpentinite woodland, coastal scrub, or lower montane coniferous forest habitat to support this species. No occurrences of these species are recorded within 5 miles of the project site. |
| *Extriplex joaquinana* San Joaquin spearscale | — | — | 1B.2 | Annual herb fond in chenopod scrub, meadows and seeps, playas, valley and foothill grassland. Occurs in seasonal alkali wetlands or alkali sink scrub with *Distichlis spicata, Frankenia*, etc.<br>Elevation: 1-835 m.<br>Blooming Period: April-October | **None**: The project site does not contain suitable chenopod scrub, meadows, playas, foothill grassland habitat, or alkaline soils to support this species. No occurrences of these species are recorded within 5 miles of the project site. |
| *Fritillaria biflora var. ineziana* Hillsborough chocolate lily | — | — | 1B.1 | Perennial bulbiferous herb found in cismontane woodland, and valley and foothill grassland. Often grows in serpentinite soils.<br>Elevation: 150-150 m.<br>Blooming Period: March-April | **None:** The project site does not contain suitable cismontane woodland, valley and foothill grassland habitat, or serpentinite soils to support this species. No occurrences of these species are recorded within 5 miles of the project site. |
| *Fritillaria lanceolata var. tristulis* Marin checker lily | — | — | 1B.1 | Perennial bulbiferous herb found coastal bluff scrub, coastal prairie, and coastal scrub.<br>Elevation: 15-150 m.<br>Blooming Period: February-May | **None:** The project site does not contain suitable coastal bluff scrub, coastal prairie, or coastal scrub to support this species. No occurrences of these species are recorded within 5 miles of the project site. |
| *Fritillaria liliacea* fragrant fritillary | — | — | 1B.2 | Perennial bulbiferous herb found in cismontane woodland, coastal prairie, coastal scrub, and valley and foothill grassland. In seasonal alkali wetlands or alkali sink scrub with *Distichlis spicata, Frankenia, etc*.<br>Elevation: 3-410 m.<br>Blooming Period: February-April | **None:** The project site does not contain suitable cismontane woodland, coastal prairie, coastal scrub, valley and foothill grassland, or serpentinite soils to support this species. No occurrences of these species are recorded within 5 miles of the project site. |
| *Gilia capitata ssp. chamissonis* blue coast gilia | — | — | 1B.1 | Annual herb found in coastal dunes and coastal scrub.<br>Elevation: 2-200 m.<br>Blooming Period: April-July | **None:** The project site does not contain suitable coastal dunes and coastal scrub to support this species. No occurrences of these species are recorded within 5 miles of the project site. |

| *Scientific Name* Common Name | Status | | | Habitat Description[4] | Estimated Habitat Value and Rationale |
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| | ESA[1] | CESA[2] | CRPR[3] | | |
| *Gilia millefoliata* dark-eyed gilia | — | — | 1B.2 | Annual herb found in coastal dunes. Elevation: 2-30 m. Blooming Period: April-July | **None:** The project site does not contain suitable coastal dune habitat to support this species. One occurrence has been recorded within 5 miles of the project site. The last recorded occurrence was in 1930. |
| *Grindelia hirsutula var. maritima* San Francisco gumplant | — | — | 3.2 | Perennial herb found in coastal bluff scrub, coastal scrub, and valley and foothill grassland. Sometimes occurs in sandy and serpentinite soils. Elevation: 15-400 m. Blooming Period: June-September | **None:** The project site does not contain suitable coastal bluff scrub, coastal scrub, or valley and foothill grassland habitat to support this species. Two occurrences have been recorded within 5 miles of the project site. The last recorded occurrence was in 1988. |
| *Helianthella castanea* Diablo helianthella | — | — | 1B.2 | Perennial herb found in broadleafed upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, and valley and foothill grassland. Grows in rocky, Azonal soils in partial shade. Elevation: 60-1300 m. Blooming Period: March-June | **None:** The project site does not contain suitable broadleafed upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, or valley and foothill grassland habitat to support this species. Five occurrences have been recorded within 5 miles of the project site. The last recorded occurrence was on San Bruno Mountain in 2012. However, surrounding development would preclude this species from occurring on site. |
| *Hemizonia congesta ssp. congesta* congested-headed hayfield tarplant | — | — | 1B.2 | Annual herb found in valley and foothill grasslands. Sometimes occurs in roadsides. Elevation: 20-560 m. Blooming Period: April-November | **None:** The project site does not contain suitable valley and foothill grassland habitat to support this species. One occurrence has been recorded within 5 miles of the project site. The last recorded occurrence was in 1909 and is considered extirpated. |
| *Hesperevax sparsiflora var. brevifolia* short-leaved evax | — | — | 1B.2 | Annual herb found in sandy coastal bluff scrub, coastal dunes, and coastal prairie. Elevation: 0-215 m. Blooming Period: March-June | **None:** The project site does not contain suitable sandy coastal bluff scrub, coastal dunes, and coastal prairie habitat to support this species. One occurrence has been recorded within 5 miles of the project site. The last recorded occurrence was in 1956 and is considered extirpated. |
| *Hesperolinon congestum* Marin western flax | FT | ST | 1B.1 | Annual herb found in chaparral, and valley and foothill grasslands. Elevation: 5-370 m. Blooming Period: April-July | **None:** The project site does not contain suitable chaparral, or valley and foothill grassland habitat to support this species. No occurrences of these species are recorded within 5 miles of the project site. |
| *Heteranthera dubia* water star-grass | — | — | 2B.2 | Perennial aquatic herb found in marshes and swamps (alkaline, still, slow-moving water). Requires a pH of 7 or higher, usually in slightly eutrophic waters. Elevation: 30-1495 m. Blooming Period: July-October | **None:** The project site does not contain suitable marsh or swamp habitat to support this species. No occurrences of these species are recorded within 5 miles of the project site. |
| *Holocarpha macradenia* Santa Cruz tarplant | FT | SE | 1B.1 | Annual herb found in coastal prairies, coastal scrub, and valley and foothill grassland. Often found in clay and sandy soils. Elevation: 10-220 m. Blooming Period: June-October | **None:** The project site does not contain suitable coastal prairies, coastal scrub, or valley and foothill grassland habitat to support this species. No occurrences of these species are recorded within 5 miles of the project site. |

| *Scientific Name* Common Name | Status | | | Habitat Description[4] | Estimated Habitat Value and Rationale |
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| | ESA[1] | CESA[2] | CRPR[3] | | |
| *Horkelia cuneata var. sericea* Kellogg's horkelia | — | — | 1B.1 | Perennial herb found in openings of closed-cone coniferous forest, maritime chaparral, coastal dunes, and coastal scrub. Sometimes grows in gravelly and sandy soils. Elevation: 10-200 m. Blooming Period: April-September | **None:** The project site does not contain suitable closed-cone coniferous forest, maritime chaparral, coastal dunes, or coastal scrub habitat to support this species. Two occurrences have been recorded within 5 miles of the project site. The last recorded occurrence was in 1989. |
| *Horkelia marinensis* Point Reyes horkelia | — | — | 1B.2 | Perennial herb found in coastal dunes, coastal prairie, and coastal scrub. Grows in sandy soils. Elevation: 5-755 m. Blooming Period: May-September | **None:** The project site does not contain suitable coastal prairie, or coastal scrub habitat to support this species. Two occurrences have been recorded within 5 miles of the project site. The last recorded occurrence was in 1909. |
| *Hypogymnia schizidiata* island tube lichen | — | — | 1B.3 | Foliose lichen found on bark and wood of hardwoods and conifers in chaparral and closed-cone coniferous forests. Elevation: 360-405 m. Blooming Period: N/A | **None:** The project site does not contain suitable chaparral and closed-cone coniferous forests. No occurrences of these species are recorded within 5 miles of the project site. |
| *Lasthenia californica ssp. macrantha* perennial goldfields | — | — | 1B.2 | Annual herb found in coastal bluff scrub, coastal dunes, and coastal scrub. Elevation: 5-520 m. Blooming Period: January-November | **None**: The project site does not contain suitable coastal bluff scrub, coastal dunes, or coastal scrub habitat to support this species. No occurrences of these species are recorded within 5 miles of the project site. |
| *Layia carnosa* beach layia | FT | SE | 1B.1 | Annual herb found in coastal dunes and sandy coastal scrub. Elevation: 0-60 m. Blooming Period: March-July | **None:** The project site does not contain suitable coastal dune or coastal scrub habitat to support this species. No occurrences of these species are recorded within 5 miles of the project site. |
| *Leptosiphon croceus* coast yellow leptosiphon | — | SE | 1B.1 | Annual herb found in coastal bluff scrub and coastal prairie. Elevation: 10-150 m. Blooming Period: April-June | **None:** The project site does not contain suitable coastal bluff or coastal prairie habitat to support this species. No occurrences of these species are recorded within 5 miles of the project site. |
| *Leptosiphon rosaceus* rose leptosiphon | — | — | 1B.1 | Annual herb found in coastal bluff scrub. Elevation: 0-100 m. Blooming Period: April-July | **None:** The project site does not contain suitable coastal bluff scrub habitat to support this species. Two occurrences have been recorded within 5 miles of the project site. The last recorded occurrence was in 2009. However, surrounding development would preclude this species from occurring on site. |
| *Lessingia arachnoidea* Crystal Springs lessingia | — | — | 1B.2 | Annual herb found in coastal scrub, cismontane woodland, valley and foothill grassland. Often found growing on serpentine soils and on roadsides. Elevated: 60-200 m. Blooming period: July-October | **None**: The project site does not contain suitable coastal scrub, cismontane woodland, valley and foothill grassland habitat, or serpentinite soils to support this species. No occurrences of these species are recorded within 5 miles of the project site. |

| *Scientific Name* Common Name | Status | | | Habitat Description[4] | Estimated Habitat Value and Rationale |
|---|---|---|---|---|---|
| | ESA[1] | CESA[2] | CRPR[3] | | |
| *Lessingia germanorum* San Francisco lessingia | FE | SE | 1B.1 | Annual herb found in remnant dunes of coastal scrub. Elevation: 25-110 m. Blooming Period: (June)July-November | **None:** The project site does not contain suitable coastal scrub habitat to support this species. Two occurrences have been recorded within 5 miles of the project site. The last recorded occurrence was in 1999. |
| *Lessingia hololeuca* woolly-headed mesangia | — | — | 3 | Annual herb found in broadleafed upland forest, coastal scrub, lower montane coniferous forest, valley and foothill grassland. Grows in clay and serpentinite soils. Elevation: 15-305 m. Blooming Period: June-October | **None:** The project site does not contain suitable broadleafed upland forest, coastal scrub, lower montane coniferous forest, or valley and foothill grassland habitat to support this species. |
| *Limnanthes douglasii ssp. ornduffii* Ornduff's meadowfoam | — | — | 1B.1 | Annual herb found in meadows and seeps. Often grows in agricultural fields. Elevation: 10-20 m. Blooming Period: November-May | **None:** The project site does not contain suitable meadow or seep habitat to support this species. No occurrences of these species are recorded within 5 miles of the project site. |
| *Lupinus arboreus var. eximius* San Mateo tree lupine | — | — | 3.2 | Perennial evergreen shrub found in chaparral and coastal scrub. Elevation: 90-550 m. Blooming Period: April-July | **None:** The project site does not contain suitable chaparral or coastal scrub habitat to support this species. |
| *Malacothamnus arcuatus* arcuate bush-mallow | — | — | 1B.2 | Perennial deciduous shrub found in chaparral, cismontane woodland. Often found growing on gravelly alluvium substrates. Elevation: 15–355 m. Blooming period: April–September | **None.** The project site does not contain suitable chaparral or cismontane woodland habitat to support this species. Four occurrences have been recorded within 5 miles of the project site. However, lack of suitable habitat and high level of development surrounding the project site preclude presence. |
| *Microseris paludosa* marsh microseris | — | — | 1B.2 | Perennial herb found in closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland. Elevation: 5-355 m. Blooming Period: April-June(July) | **None:** The project site does not contain suitable closed-cone coniferous forest, cismontane woodland, coastal scrub, or valley and foothill grassland habitat to support this species. No occurrences of these species are recorded within 5 miles of the project site. The last recorded occurrence was in 1956. |
| *Monardella sinuata ssp. nigrescens* northern curly-leaved monardella | — | — | 1B.2 | Annual herb found in chaparral, coastal dunes, coastal scrub, lower montane coniferous forest, and ponderosa pine sandhills. Elevation: 0-300 m. Blooming Period: (April)May-July(August-September) | **None:** The project site does not contain suitable chaparral, coastal dunes, coastal scrub, lower montane coniferous forest, or ponderosa pine sandhill habitat to support this species. No occurrences of these species are recorded within 5 miles of the project site. The last recorded occurrence was in 1933. |

| *Scientific Name* Common Name | Status | | | Habitat Description[4] | Estimated Habitat Value and Rationale |
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| | ESA[1] | CESA[2] | CRPR[3] | | |
| *Monolopia gracilens* woodland woollythreads | — | — | 1B.2 | Annual herb found in chaparral openings, valley and foothill grassland, cismontane woodland, broadleafed upland forest openings, North Coast coniferous forest openings. Occurs in serpentinite soils after burns but may have only weak affinity to serpentine. Elevation: 100-1200 m. Blooming Period: (February)March-July | **None:** The project site does not contain suitable chaparral openings, woodland, forest openings, grassland habitat, or serpentinite soils to support this species. No occurrences of these species are recorded within 5 miles of the project site. The last recorded occurrence was in 1973. |
| *Pentachaeta bellidiflora* white-rayed pentachaeta | FE | SE | 1B.1 | Annual herb found in valley and foothill grassland, cismontane woodland. Open dry rocky slopes and grassy areas, often on soils derived from serpentine bedrock. Elevation: 35-620 m. Blooming Period: March-May | **None:** The project site does not contain suitable woodland or valley/foothill grassland habitat to support this species. Two occurrences have been recorded within 5 miles of the project site. However, lack of suitable habitat and high level of development surrounding the project site precludes presence. |
| *Plagiobothrys chorisianus var. chorisianus* Choris' popcornflower | — | — | 1B.2 | Annual herb found in chaparral, coastal prairie, and coastal scrub. Grows in mesic soils. Elevation: 3-160 m. Blooming Period: March-June | **None:** The project site does not contain suitable chaparral, coastal prairie, or coastal scrub habitat to support this species. Three occurrences have been recorded within 5 miles of the project site. However, lack of suitable habitat and high level of development surrounding the project site precludes presence. |
| *Plagiobothrys diffuses* San Francisco popcornflower | — | SE | 1B.1 | Annual herb found in coastal prairie, valley and foothill grasslands. Elevation: 60-360 m. Blooming Period: March-June | **None:** The project site does not contain suitable coastal prairie or valley and foothill grassland habitat to support this species. No occurrences have been recorded within 5 miles of the project site. The last recorded occurrence was in 1987 and is considered extirpated. |
| *Plagiobothrys glaber* hairless popcornflower | — | — | 1A | Annual herb found in meadows and seeps in alkaline soils and coastal salt marshes and swamps. Elevation: 15-180 m. Blooming Period: March-May | **None:** The project site does not contain suitable meadows, seeps, valleys or foothill grasslands to support this species. No occurrences have been recorded within 5 miles of the project site. The last recorded occurrence was in 1924 and is considered extirpated. |
| *Polemonium carneum* Oregon polemonium | — | — | 2B.2 | Perennial herb found in coastal prairie, coastal scrub, and lower montane coniferous forest. Elevation: 0-1830 m. Blooming Period: April-September | **None:** The project site does not contain suitable coastal prairie, coastal scrub, or lower montane coniferous forest habitat to support this species. No occurrences have been recorded within 5 miles of the project site. |
| *Polygonum marinense* Marin knotweed | — | — | 3.1 | Annual herb found in brackish, coastal salt marshes and swamps. Elevation: 0-10 m. Blooming Period: (April)May-August(October) | **None:** The project site does not contain suitable brackish, coastal salt marsh and swamp habitat to support this species. No occurrences have been recorded within 5 miles of the project site. |

| *Scientific Name* Common Name | Status | | | Habitat Description[4] | Estimated Habitat Value and Rationale |
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| | ESA[1] | CESA[2] | CRPR[3] | | |
| *Potentilla hickmanii* Hickman's cinquefoil | FE | SE | 1B.1 | Perennial herb found in coastal bluff scrub, closed-cone coniferous forest, vernally mesic meadows and seeps, and freshwater marshes and swamps. Elevation: 10-149 m. Blooming Period: April-August | **None:** The project site does not contain suitable coastal bluff scrub, closed-cone coniferous forest, vernal mesic meadows and seeps, or freshwater marsh and swamp habitat to support this species. One occurrence has been recorded within 5 miles of the project site. The last recorded occurrence was in 2019. However, lack of suitable habitat and high level of development surrounding the project site precludes presence. |
| *Sanicula maritima* adobe sanicle | — | SR | 1B.1 | Perennial herb found in —. Grows in clay and serpentinite soils. Elevation: 30-240 m. Blooming Period: February-May | **None:** The project site does not contain suitable chaparral, coastal prairie, meadow and seep, valley and foothill grassland habitat or soils to support this species. No occurrences have been recorded within 5 miles of the project site. The last recorded occurrence was in 1895 and is considered extirpated. |
| *Senecio aphanactis* chaparral ragwort | — | — | 2B.2 | Annual herb found in chaparral, cismontane woodland, and coastal scrub. Sometimes grows in alkaline soils. Elevation: 15-800 m. Blooming Period: January-April(May) | **None:** The project site does not contain suitable chaparral, cismontane woodland, coastal scrub habitat, or soils to support this species. No occurrences have been recorded within 5 miles of the project site. |
| *Silene scouleri ssp. scouleri* Scouler's catchfly | — | — | 2B.2 | Perennial herb found in coastal bluff scrub, coastal prairie, valley and foothill grassland. Elevation: 0-600 m. Blooming Period: (March-May)June-August(September) | **None:** The project site does not contain suitable coastal bluff scrub, coastal prairie, or valley and foothill grassland habitat to support this species. Eight occurrences have been recorded within 5 miles of the project site. The last recorded occurrence was in 2018. However, lack of suitable habitat and high level of development at site preclude presence. |
| *Silene verecunda ssp. verecunda* San Francisco campion | — | — | 1B.2 | Perennial herb found in coastal bluff scrub, chaparral, coastal prairie, coastal scrub, valley and foothill grassland. Grows in sandy soils. Elevation: 30-645 m. Blooming Period: (February)March-July(August) | **None:** The project site does not contain suitable coastal bluff scrub, chaparral, coastal prairie, coastal scrub, valley and foothill grassland habitat, or soils to support this species. Six occurrences have been recorded within 5 miles of the project site. The last recorded occurrence was in 2018. However, lack of suitable habitat and high level of development at site preclude presence. |
| *Stebbinsoseris decipiens* Santa Cruz microseris | — | — | 1B.2 | Annual herb found in openings of broadleafed upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, valley and foothill grassland. Sometimes grows in serpentinite soils. Elevation: 10-500 m. Blooming Period: April-May | **None:** The project site does not contain suitable broadleafed upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, valley and foothill grassland habitat, or soils to support this species. No occurrences have been recorded within 5 miles of the project site. |
| *Suaeda californica* California seablite | FE | — | 1B.1 | Perennial evergreen shrub found in margins of coastal salt marshes and swamps. Elevation: 0-15 m. Blooming Period: July-October. | **None:** The project site does not contain suitable marsh habitat to support this species. No occurrences of these species are recorded within 5 miles of the project site. |

| *Scientific Name* Common Name | Status | | | Habitat Description[4] | Estimated Habitat Value and Rationale |
|---|---|---|---|---|---|
| | ESA[1] | CESA[2] | CRPR[3] | | |
| *Trifolium amoenum* two-fork clover | FE | — | 1B.1 | Annual herb found in coastal bluff scrub, valley and foothill grassland. Sometimes grows in serpentine soils. Elevation: 5-415 m. Blooming Period: April-June | **None:** The project site does not contain suitable coastal bluff scrub, valley and foothill grassland habitat, or soils to support this species. Two occurrences have been recorded within 5 miles of the project site. The last recorded occurrence was in 1907 and is presumed extant. |
| *Trifolium hydrophilum* saline clover | — | — | 1B.2 | Annual herb found in marshes and swamps, valley and foothill grassland in mesic or alkaline soils, and vernal pools. Elevation: 0-300 m. Blooming Period: April-June | **None**: The project site does not contain marshes and swamps, valley and foothill grassland, vernal pool habitat, or mesic, alkaline soils, to support this species. No occurrences of these species are recorded within 5 miles of the project site. |
| *Triphysaria floribunda* San Francisco owl's-clover | — | — | 1B.2 | Annual herb found in coastal prairie, coastal scrub, valley and foothill grassland. Usually grows in serpentinite soils. Elevation: 10-160 m. Blooming Period: April-June | **Low:** The project site does not contain suitable coastal prairie, coastal scrub, valley and foothill grassland habitat, or soils to support this species. Seven occurrences have been recorded within 5 miles of the project site. However, lack of suitable habitat and high level of development at site preclude presence. |
| *Triquetrella californica* coastal triquetrella | — | — | 1B.2 | Moss found in coastal bluff scrub and coastal scrub. Elevation: 10-100 m. Blooming Period: N/A | **None:** The project site does not contain suitable coastal bluff scrub or coastal scrub habitat to support this species. No occurrences of these species are recorded within 5 miles of the project site. |
| *Viburnum ellipticum* oval-leaved viburnum | — | — | 2B.3 | Perennial deciduous shrub found in chaparral, cismontane woodland, and lower montane coniferous forest. Elevation: 215-1400 m. Blooming Period: May-June | **None:** The project site does not contain suitable chaparral, cismontane woodland, and lower montane coniferous forest habitat to support this species. No occurrences of these species are recorded within 5 miles of the project site. |

**Code Designations**

[1] **Federal Status: 2023 ESA Listing** [2] **State Status: 2023 CESA Listing** [3] **CRPR: 2023 CRPR Listing**

| *Scientific Name* Common Name | Status | | | Habitat Description[4] | Estimated Habitat Value and Rationale |
|---|---|---|---|---|---|
| | ESA[1] | CESA[2] | CRPR[3] | | |

**ESU** = Evolutionary Significant Unit is a distinctive population.
**FE** = Listed as endangered under the FESA.
**FT** = Listed as threatened under the FESA.
**FC** = Candidate for listing (threatened or endangered) under FESA.
**FD** = Delisted in accordance with the FESA.
**FPD** = Federally Proposed to be Delisted.
**MBTA** = protected by the Migratory Bird Treaty Act
**—** = Not federally listed

**SE** = Listed as endangered under the CESA.
**ST** = Listed as threatened under the CESA.
**SSC** = Species of Special Concern as identified by the CDFW.
**FP** = Listed as fully protected under FGC.
**CFG** = FGC =protected by FGC 3503.5
**CR** = Rare in California.
**—** = Not state listed

**Rank 1A** = Plants species that presumed extinct in California.
**Rank 1B** = Plant species that are rare, threatened, or endangered in California and elsewhere.
**Rank 2** = Plant species that are rare, threatened, or endangered in California, but more common elsewhere.
**Rank 3** = Plants about which we need more information—A Review List
**Rank 4** = Plants of limited distribution—A Watch List
**Blooming period:** Months in parentheses are uncommon.

[4] **Habitat Description**: Habitat description adapted from CNDDB[1] and CNPS online inventory[2] or other specified source*.
[5] **Potential to Occur and Rationale**: Location of recorded species occurrences determined by geospatial information from BIOS 6[3] or other specified source*.

**Sources:**

California Department of Fish and Wildlife (CDFW). 2023. CNDDB RareFind 5 California Natural Diversity Database Query for Special-Status Species. Website: https://map.dfg.ca.gov/rarefind/view/RareFind.aspx. Accessed October 25, 2023.
California Native Plant Society (CNPS). 2023. California Native Plant Society Rare and Endangered Plant Inventory. Website: http://www.rareplants.cnps.org/. Accessed October 25, 2023.
California Department of Fish and Wildlife (CDFW). 2023. Biogeographic Information and Observation System (BIOS 6). Website: https://map.dfg.ca.gov/bios/. Accessed October 25, 2023.

# Table 2: Special-status Wildlife Species Habitat Value Evaluation

| Scientific Name<br>Common Name | Status | | Habitat Description[3] | Habitat Value and Rationale |
|---|---|---|---|---|
| | ESA[1] | CESA/FGC[2] | | |
| **Amphibians** | | | | |
| *Ambystoma californiense pop. 1*<br>California tiger salamander | FT | ST | Need underground refuges, especially ground squirrel burrows, and vernal pools, ponds, or other standing water bodies for breeding. | **None**: There are no historical records within 5 miles of the project site. The last recorded occurrence was in 1886. Preferred breeding habitats such as stock ponds and vernal pools are not present in the project site. High levels of development surrounding the site precludes presence. CTS can disperse as far as 1.3 mi from their breeding ground, making the project site isolated from any active breeding populations. |
| *Dicamptodon ensatus*<br>California giant salamander | — | SSC | Known from wet coastal forests near streams and seeps from Mendocino County south to Monterey County, and east to Napa County. Aquatic larvae found in cold, clear streams, occasionally in lakes and ponds. Adults known from wet forests under rocks and logs near streams and lakes. | **None:** The project site does not contain suitable temperate forests, rivers, freshwater lakes or freshwater marshes to support this species. No occurrences have been recorded within 5 miles of the project site. Lack of suitable habitat and high level of development at site preclude presence. |
| *Rana boylii pop.1*<br>foothill yellow-legged frog - north coast DPS | — | SSC | Partly shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis. | **None:** The project site does not contain suitable streams or rocky substrate to support this species. No occurrences have been recorded within 5 miles of the project site. |
| *Rana boylii pop. 4*<br>foothill yellow-legged frog - central coast DPS | — | SE<br>FP | Partly shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis. | **None:** The project site does not contain suitable streams or rocky substrate to support this species. One occurrence of this species was located within 5 miles of the project site and has since been extirpated. |
| *Rana draytonii*<br>California red-legged frog | FT | SSC | Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development | **None:** The site does not contain suitable lowlands, foothills, deep water, or riparian vegetation to support this species. Twenty-five occurrences were recorded within 5 miles of the project site. The closest occurrence was recorded 1.73-mile southwest of the project site. However, lack of suitable habitat on-site and dense urban development surrounding the site preclude presence. |
| **Birds** | | | | |
| *Accipiter cooperii*<br>Cooper's hawk | —<br>MBTA | WL | Prefers woodland habitat, chiefly of open, interrupted or marginal type, including cismontane woodlands, riparian forests/woodlands and upper montane coniferous forest. May also occur near parks and residential areas. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks. | **Low:** The project site itself does not contain suitable nesting habitat, however suitable habitat can be found in the vicinity of the project site. No occurrences have been recorded within 5 miles of the project site. The last recorded occurrence was in 2003. Lack of suitable habitat and high level of development lower the potential of presence. |

| Scientific Name<br>Common Name | Status | | Habitat Description[3] | Habitat Value and Rationale |
|---|---|---|---|---|
| | ESA[1] | CESA/FGC[2] | | |
| *Athene cunicularia*<br>burrowing owl | —<br>MBTA | SSC | Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel. | **None:** The project site does not contain suitable habitat in the form of suitable grasslands, deserts, or scrublands. No suitable burrows for nesting were observed during the field survey. Additionally, there have been no recorded occurrences within 5 miles of the project site. Lack of suitable habitat and high level of development at site preclude presence. |
| *Brachyramphus marmoratus*<br>marbled murrelet | FT<br>MBTA | SE | Feeds near-shore; nests inland along coast from Eureka to Oregon border and from Half Moon Bay to Santa Cruz. Nests in old-growth redwood-dominated forests, up to six miles inland, often in Douglas-fir. | **None:** The project site is entirely developed and does not contain suitable nesting habitat to support this species. No occurrence of this species was located within 5 miles of the project site. |
| *Charadrius nivosus nivosus*<br>western snowy plover | FT | SSC | Breeds on sandy coasts and brackish inland lakes and is uncommon on fresh water. | **None**: The site lacks suitable habitat to support this species. Specifically, the site does not contain sandy coasts or brackish inland lakes. No occurrences have been recorded within 5 miles of the project site. |
| *Circus hudsonius*<br>northern harrier | — | SSC | Coastal salt and freshwater marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain cienagas. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas. | **None**: The site lacks meadows, wetlands, or marsh habitat to support this species. No occurrences have been recorded within 5 miles of the project site. |
| *Coturnicops noveboracensis*<br>yellow rail | — | SSC | Occurs in wet meadows, shallow marshes, and agricultural fields with grassy cover or heavy stubbles with fairly short vegetation. Often nest among sedges of the genus *Carex*. | **None:** The site does not contain suitable wetland habitat for this species. No occurrences have been recorded within 5 miles of the project site. |
| *Elanus leucurus*<br>white-tailed kite | — | FP | Grasslands and open coastal scrub in coastal and valley lowlands; rarely found away from agricultural areas. Inhabits herbaceous, open stages of most habitats mostly in cismontane California. | **Low:** No recent occurrence of this species was located within 5 miles of the project site. However, the site does not contain marginal foraging or breeding habitat to have value. Site is surrounded by dense human development. |
| *Falco peregrinus anatum*<br>American peregrine falcon | FD<br>MBTA | SD<br>FP | Found near wetlands, lakes, rivers, or other aquatic features. Nests on cliffs, coastal habitats or tall buildings. | **None:** There are two records of this species occurring within 5 miles of the project site, the most recent in 2014. However, the project site does not contain suitable aquatic or nesting habitat to support this species. |
| *Geothlypis trichas sinuosa*<br>saltmarsh common yellowthroat | —<br>MBTA | SSC | Resident of the San Francisco Bay region, in fresh and saltwater marshes. Requires thick, continuous cover down to water surface for foraging; tall grasses, tule patches, willows for nesting. | **None:** The project site does not contain suitable nesting habitat due to the lack of cliffs or tall buildings. There are historical records within 5 miles of the project site. However, high development around the project site lowers likelihood of presence. |
| *Laterallus jamaicensis coturniculus*<br>California black rail | —<br>MBTA | ST<br>FP | Occurs and nests in freshwater marshes, wet meadows, and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat. | **None:** The site does not contain suitable saltwater marsh habitat to support this species. No recent occurrence of this species was located within 5 miles of the project site. |

| Scientific Name<br>Common Name | Status<br>ESA[1] | Status<br>CESA/FGC[2] | Habitat Description[3] | Habitat Value and Rationale |
|---|---|---|---|---|
| *Melospiza melodia pusillula*<br>Alameda song sparrow | —<br>MBTA | SSC | Resident of salt marshes bordering south arm of San Francisco Bay. Inhabits Salicornia marshes; nests low in Grindelia bushes (high enough to escape high tides) and in Salicornia. | **None:** The project site does not contain suitable marsh habitat to support this species. One occurrence of this species was located within 5 miles of the project site. |
| *Melospiza melodia samuelis*<br>San Pablo song sparrow | — | SSC | Resident of salt marshes along the north side of San Francisco and San Pablo bays. Inhabits tidal sloughs in the *Salicornia* marshes; nests in *Grindelia* bordering slough channels. | **None:** The project site does not contain suitable salt marsh habitat or host plants to support this species. No recent occurrence of this species was located within 5 miles of the project site. |
| *Rallus obsoletus obsoletus*<br>California Ridgway's rail | FE | SE<br>FP | Salt water and brackish marshes traversed by tidal sloughs in the vicinity of San Francisco Bay. Associated with abundant growths of pickleweed, but feeds away from cover on invertebrates from mud-bottomed sloughs. | **None:** The project site does not contain suitable salt water/brackish marsh habitat with pickleweed to support this species. Three occurrences have been recorded within 5 miles of the project site. However, lack of suitable habitat and high level of development surrounding the project site preclude presence. |
| *Riparia riparia*<br>bank swallow | — | ST | Nests in riparian scrub and riparian woodland. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole. | **None:** The site does not contain suitable foraging or nesting habitat including vertical banks/cliffs with sandy soils to support this species. No recent occurrence of this species was located within 5 miles of the project site. |
| *Sternula antillarum browni*<br>California least tern | FE<br>MBTA | SE<br>FP | Nests along the coast from San Francisco Bay south to northern Baja California. Colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, landfills, or paved areas. | **None:** The site does not contain suitable habitat such as sand beaches, alkali flats, or landfills to support this species. No occurrence of this species was located within 5 miles of the project site. |
| **Fish** | | | | |
| *Acipenser medirostris pop. 1*<br>green sturgeon - southern DPS | FT | — | Spawning occurs primarily in cool (11-15 C) sections of mainstem rivers in deep pools (8-9 meters) with substrate containing small to medium sized sand, gravel, cobble, or boulder. | **None:** The project site does not contain aquatic habitat to support this species. One occurrence has been recorded within 5 miles of the project site. The last recorded occurrence was in 2021. However, lack of suitable habitat and high level of development at site preclude presence. |
| *Eucyclogobius newberryi*<br>tidewater goby | FE | — | Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels. | **None:** The project site does not contain suitable aquatic habitat to support this species. No occurrences have been recorded within 5 miles of the project site. |
| *Mylopharodon conocephalus*<br>hardhead | — | SSC | Found in small to large streams in a low to mid-elevation environment. Hardhead may also inhabit lakes or reservoirs. This species' range extends from the Kern River to the Pit River. | **None:** The project site does not contain aquatic habitat to support this species. One occurrence has been recorded within 5 miles of the project site. The last recorded occurrence was in 1989. However, lack of suitable habitat and high level of development at site preclude presence. |
| *Oncorhynchus kisutch pop. 4*<br>coho salmon - central California coast ESU | FE | SE | Found in freshwater during the first year and while spawning. Require beds of loose, silt-free, coarse gravel for spawning. Also need cover, cool water & sufficient dissolved oxygen. | **None:** The site does not contain suitable aquatic habitat to support this species. |

| Scientific Name<br>Common Name | Status | | Habitat Description[3] | Habitat Value and Rationale |
|---|---|---|---|---|
| | ESA[1] | CESA/FGC[2] | | |
| *Oncorhynchus mykiss irideus pop. 8*<br>steelhead - central California coast DPS | FT | — | DPS includes all naturally spawned populations of steelhead (and their progeny) in streams from the Russian River to Aptos Creek, Santa Cruz County, California (inclusive). Also includes the drainages of San Francisco and San Pablo Bays. | **None:** The site does not contain suitable aquatic habitat to support this species. |
| *Spirinchus thaleichthys*<br>longfin smelt | FC | ST | Euryhaline, nektonic and anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefer salinities of 15-30 ppt but can be found in completely freshwater to almost pure seawater. | **None:** The project site does not contain suitable aquatic habitat to support this species. No occurrences have been recorded within 5 miles of the project site. |
| **Invertebrates** | | | | |
| *Bombus crotchii*<br>Crotch bumble bee | — | SC | This species occurs primarily in California, including coastal habitats, western Mojave Desert, San Joaquin Valley, and adjacent foothills through most of southwestern California. It inhabits arid grasslands and shrublands, and its food sources including milkweeds, pincushions, lupines, clovers, phacelias, sages, clarkias, poppies, and buckwheats. | **None:** The project site does not contain suitable arid grasslands, shrublands, or food sources to support this species. No occurrences have been recorded within 5 miles of the project site. Additionally, lack of required floral resources and high level of development at site preclude presence. |
| *Bombus occidentalis*<br>western bumble bee | — | SC | Formerly found in large parts of California but has been reduced in abundance and is now mostly restricted to high meadows or coastal environments. Species require floral resources, and undisturbed nest and overwintering sites. | **None:** The project site does not contain suitable high meadows or coastal environments, floral resources and undisturbed nest sites to support this species. Three occurrences have been recorded within 5 miles of the project site, the most recent in 1996. However, lack of suitable habitat and high level of development at site preclude presence. |
| *Callophrys mossii bayensis*<br>San Bruno elfin butterfly | FE | — | Coastal, mountainous areas with grassy ground cover, mainly in the vicinity of San Bruno Mountain, San Mateo County. Colonies are located on steep, north-facing slopes within the fog belt. Larval host plant is *Sedum spathulifolium*. | **None:** The project site does not contain suitable coastal or mountainous habitat or its required host plant to support this species. |
| *Danaus plexippus*<br>monarch butterfly | FC | — | Occurs in temperate climates, such as eastern and western North America and undergoes long-distance migration. Lays eggs on obligate milkweed host plant (primarily *Asclepias spp.*) | **None:** The project site does not contain suitable overwintering habitat that would support occurrence of this species. No recent occurrences have been recorded within 5 miles of the project site. |
| *Dufourea stagei*<br>Stage's dufourine bee | — | FP | A solitary ground-nesting bee in coastal scrub habitat presumed to be endemic to the San Francisco and San Mateo counties. Range is from San Bruno Mountain, south to Santa Cruz Mountains area. | **None:** The project site does not contain suitable scrub habitat to support this species. One recent occurrence has been recorded within 5 miles of the project site. The most recent occurrence was recorded in 1962. Lack of suitable habitat and high level of development surrounding the project site preclude presence. |
| *Euphydryas editha bayensis*<br>Bay checkerspot butterfly | FT | — | Restricted to native grasslands on outcrops of serpentine soil in the vicinity of San Francisco Bay. *Plantago erecta* is the primary host plant; *Orthocarpus densiflorus* & *O. purpurscens* are the secondary host plants. | **None:** Lack of suitable habitat and high level of disturbance at site preclude presence. Lack of native grasslands, serpentine soil, or prime host plants onsite. Three recent occurrences have been recorded within 5 miles of the project site. The most recent occurrence was recorded in 2000. |

| Scientific Name<br>Common Name | Status | | Habitat Description[3] | Habitat Value and Rationale |
|---|---|---|---|---|
| | ESA[1] | CESA/FGC[2] | | |
| *Icaricia icarioides missionensis*<br>Mission blue butterfly | FE | — | Inhabits grasslands of the San Francisco peninsula. Three larval host plants: *Lupinus albifrons, L. variicolor, and L. formosus*, of which *L. albifrons* is favored. | **None:** The project site does not contain serpentine soils necessary to support this species' host plants. |
| *Speyeria callippe callippe*<br>callippe silverspot butterfly | FE | — | Restricted to the northern coastal scrub of the San Francisco Peninsula. Hostplant is *Viola pedunculata*. Most adults found on east facing slopes; males congregate on hilltops in search of females. | **None:** The project site does not contain northern coastal scrub habitat or it's host plant to support this species. Lack of suitable habitat and high level of development at site preclude presence. |
| *Speyeria zerene myrtleae*<br>Myrtle's silverspot butterfly | FE | — | Restricted to the foggy, coastal dunes/hills of the Point Reyes peninsula; extirpated from coastal San Mateo County. Larval foodplant thought to be *Viola adunca*. | **None:** The project site does not contain coastal dune habitat or the host plant to support this species. No recent occurrences were recorded within 5 miles of the project site. |
| **Mammals** | | | | |
| *Antrozous pallidus*<br>pallid bat | — | SSC | Found in deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures and include trees and buildings. Species is very sensitive to disturbance of roosting sites. | **None:** The existing trees and semi-occupied restaurant onsite may provide marginally suitable roosting habitat. Riparian corridors in the local vicinity of the project site may provide marginally suitable foraging habitat. One occurrence was recorded within 5 miles of the project site in 1952. However, high levels of development and human activity within and surrounding the project site preclude the likelihood of presence. |
| *Corynorhinus townsendii*<br>Townsend's big-eared bat | — | SSC | Throughout California in a wide variety of habitats. Most common in areas associated with mixed conifer forest, desert scrub, or pine forest habitat. Roosts in caves, mines, and buildings. Extremely sensitive to human disturbance. | **None:** The existing trees and semi-occupied restaurant onsite may provide marginally suitable roosting habitat. Riparian corridors in the local vicinity of the project site may provide marginally suitable foraging habitat. One occurrence was recorded within 5 miles of the project site in 2011. However, high levels of development and human activity within and surrounding the project site preclude the likelihood of presence. |
| *Enhydra lutris nereis*<br>southern sea otter | FT | FP | Nearshore marine environments from about Ano Nuevo, San Mateo Co. to Point Sal, Santa Barbara Co. Needs canopies of giant kelp & bull kelp for rafting & feeding. Prefers rocky substrates with abundant invertebrates. | **None:** The project site does not contain suitable marine habitat to support this species. |
| *Lasiurus blossevillii*<br>western red bat | — | SSC | Occurs in cismontane woodland, lower montane coniferous forest, riparian forest, riparian woodland. Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging. | **None:** The existing trees and semi-occupied restaurant onsite may provide marginally suitable roosting habitat. Riparian corridors in the local vicinity of the project site may provide marginally suitable foraging habitat. High levels of development and human activity within and surrounding the project site preclude the likelihood of presence. No occurrences have been recorded within 5 miles of the project site. |
| *Neotoma fuscipes annectens*<br>San Francisco dusky-footed woodrat | — | SSC | Forest habitats of moderate canopy & moderate to dense understory. May prefer chaparral & redwood habitats. Constructs nests of shredded grass, leaves & other material. May be limited by availability of nest-building materials. | **None**: The project site does not contain suitable forest, chaparral, or nesting habitat to support this species. No occurrences have been recorded within 5 miles of the project site. |

| Scientific Name<br>Common Name | Status | | Habitat Description[3] | Habitat Value and Rationale |
|---|---|---|---|---|
| | ESA[1] | CESA/FGC[2] | | |
| *Nyctinomops macrotis*<br>big free-tailed bat | — | SSC | Migrant bats using elevations from 0-2600 meters. Roosts in rock crevices cliffs as well as in buildings, caves, and tree cavities. | **None:** The existing trees and semi-occupied restaurant onsite may provide marginally suitable roosting habitat. Riparian corridors in the local vicinity of the project site may provide marginally suitable foraging habitat. One occurrence of this species has been recorded within 5 miles of the project site in 1984. However, high levels of development and human activity within and surrounding the project site preclude the likelihood of presence. |
| *Reithrodontomys raviventris*<br>salt-marsh harvest mouse | FE | SE | Only in the saline emergent wetlands of San Francisco Bay and its tributaries. Pickleweed is primary habitat but may occur in other marsh vegetation types and in adjacent upland areas. Does not burrow; builds loosely organized nests. Requires higher areas for flood escape. | **None:** The project site does not contain saline emergent wetlands or tributaries to support this species. No occurrence of this species was recorded within 5 miles of the project site. |
| *Scapanus latimanus inssularis*<br>Angel Island mole | — | SSC | Only known from Angel Island. Found in a variety of habitats, especially annual and perennial grasslands. Prefers moist, friable soils. | **None:** The project site does not contain suitable perennial grasslands or soils to support this species. No occurrence of this species was recorded within 5 miles of the project site. |
| *Scapanus latimanus parvus*<br>Alameda Island mole | — | SSC | Only known from Alameda Island. Found in a variety of habitats, especially annual and perennial grasslands. Prefers moist, friable soils. | **None:** The project site does not contain suitable perennial grasslands or soils to support this species. No occurrence of this species was recorded within 5 miles of the project site. |
| *Taxidea taxus*<br>American badger | — | SSC | Found in drier open stages of most shrub, forest, and herbaceous habitats with friable soils. Requires sufficient food sources (rodents), friable soils, and open, uncultivated ground. Digs large burrows. | **None**: The project site does not contain shrub, forest habitat, or suitable soils to support this species. No occurrence of this species was recorded within 5 miles of the project site. Lack of suitable habitat large enough for species to disperse and roam. |
| *Zapus trinotatus orarius*<br>Point Reyes jumping mouse | — | SSC | Primarily in bunch grass marshes on the uplands of Point Reyes. Also present in coastal scrub, grassland, and meadows. Eats mainly grass seeds, insects, and fruit taken. Builds grassy nests on ground under vegetation, burrows in winter. | **None:** The project site does not contain suitable bunch grass marshes to support this species. No occurrence of this species was recorded within 5 miles of the project site. |
| **Reptiles** | | | | |
| *Emys marmorata*<br>western pond turtle | — | SSC | A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation. | **None:** The project site does not contain suitable aquatic habitat to support this species. One occurrence was recorded within 5 miles of the project site in 2005. However, high levels of development surrounding the project site preclude the likelihood of presence. |
| *Thamnophis sirtalis tetrataenia*<br>San Francisco gartersnake | FE | SE<br>FP | Vicinity of freshwater marshes, ponds and slow-moving streams in San Mateo County and extreme northern Santa Cruz County. Prefers dense cover and water depths of at least one foot. Upland areas near water are also very important. | **None:** No occurrence of this species was recorded within 5 miles of the project site. Lack of suitable habitat and high level of disturbance at site preclude presence. Lack of chaparral and scrub habitat onsite. |

| Scientific Name<br>Common Name | Status | | Habitat Description[3] | Habitat Value and Rationale |
|---|---|---|---|---|
| | ESA[1] | CESA/FGC[2] | | |
| *Phrynosoma blainvillii*<br>coast horned lizard | — | SSC | Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Requires open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects. | **None:** The project site does not contain suitable sandy wash or aquatic habitat to support this species. One occurrence was recorded within 5 miles of the project site. However, high levels of development surrounding the project site preclude the likelihood of presence. |

**Code Designations**

| [1] Federal Status: 2023 ESA Listing | | [2] State Status: 2023 CESA Listing | |
|---|---|---|---|
| **ESU** | = Evolutionary Significant Unit is a distinctive population. | **SE** | = Listed as endangered under the CESA. |
| **FE** | = Listed as endangered under the FESA. | **ST** | = Listed as threatened under the CESA. |
| **FT** | = Listed as threatened under the FESA. | **SSC** | = Species of Special Concern as identified by the CDFW. |
| **FC** | = Candidate for listing (threatened or endangered) under FESA. | **FP** | = Listed as fully protected under FGC. |
| **FD** | = Delisted in accordance with the FESA. | **CFG** | = FGC =protected by FGC 3503.5 |
| **FPD** | = Federally Proposed to be Delisted. | **CR** | = Rare in California. |
| **MBTA** | = protected by the Migratory Bird Treaty Act | **—** | = Not state listed |
| **—** | = Not federally listed | | |

**Notes:**
[3] **Habitat Description**: Habitat description adapted from CNDDB[4] or other specified source*.
[4] **Potential to Occur and Rationale**: Location of recorded species occurrences determined by geospatial information from BIOS 6[5] or other specified source*.
**Sources:**
California Department of Fish and Wildlife (CDFW). 2023. CNDDB RareFind 6 California Natural Diversity Database Query for Special-Status Species. Website: https://map.dfg.ca.gov/rarefind/view/RareFind.aspx. Accessed October 25, 2023.
California Department of Fish and Wildlife (CDFW). 2023. Biogeographic Information and Observation System (BIOS 6). Website: https://map.dfg.ca.gov/bios/. Accessed October 25, 2023.

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## C.4 - IPaC Report

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# IPaC resource list

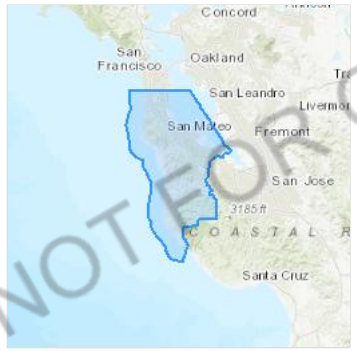
This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list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

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



## Location

San Mateo County, California




## Local offices

San Francisco Bay-Delta Fish And Wildlife

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

650 Capitol Mall
Suite 8-300
Sacramento, CA 95814

Ventura Fish And Wildlife Office

(805) 644-1766
(805) 644-3958
FW8VenturaSection7@FWS.Gov

2493 Portola Road, Suite B
Ventura, CA 93003-7726

Sacramento Fish And Wildlife Office

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

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

# Endangered species

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

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

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

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

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

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

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



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

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

## Mammals

| NAME | STATUS |
|---|---|
| Salt Marsh Harvest Mouse *Reithrodontomys raviventris*<br>Wherever found<br>No critical habitat has been designated for this species.<br>https://ecos.fws.gov/ecp/species/613 | Endangered |
| Southern Sea Otter *Enhydra lutris nereis*<br>Wherever found<br>No critical habitat has been designated for this species.<br>https://ecos.fws.gov/ecp/species/8560 | Threatened<br>Marine mammal |

## Birds

| NAME | STATUS |
|---|---|
| California Clapper Rail *Rallus longirostris obsoletus*<br>Wherever found<br>No critical habitat has been designated for this species.<br>https://ecos.fws.gov/ecp/species/4240 | Endangered |
| California Condor *Gymnogyps californianus*<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>https://ecos.fws.gov/ecp/species/8193 | Endangered |

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

Hawaiian Petrel Pterodroma sandwichensis — Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/6746

Least Bell's Vireo Vireo bellii pusillus — Endangered
Wherever found
There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
https://ecos.fws.gov/ecp/species/5945

Marbled Murrelet Brachyramphus marmoratus — Threatened
There is **final** critical habitat for this species. Your location overlaps the critical habitat.
https://ecos.fws.gov/ecp/species/4467

Short-tailed Albatross Phoebastria (=Diomedea) albatrus — Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/433

Southwestern Willow Flycatcher Empidonax traillii extimus — Endangered
Wherever found
There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
https://ecos.fws.gov/ecp/species/6749

Western Snowy Plover Charadrius nivosus nivosus — Threatened
There is **final** critical habitat for this species. Your location overlaps the critical habitat.
https://ecos.fws.gov/ecp/species/8035

Yellow-billed Cuckoo Coccyzus americanus — Threatened
There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
https://ecos.fws.gov/ecp/species/3911

## Reptiles

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

Alameda Whipsnake (=striped Racer) Masticophis lateralis euryxanthus — Threatened
Wherever found
There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
https://ecos.fws.gov/ecp/species/5524

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

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

## Amphibians

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

California Red-legged Frog Rana draytonii — Threatened
Wherever found
There is **final** critical habitat for this species. Your location overlaps the critical habitat.
https://ecos.fws.gov/ecp/species/2891

California Tiger Salamander Ambystoma californiense — Threatened
There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
https://ecos.fws.gov/ecp/species/2076

Foothill Yellow-legged Frog Rana boylii — Threatened
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/5133

## Fishes

| NAME | STATUS |
|---|---|
| Longfin Smelt Spirinchus thaleichthys<br>No critical habitat has been designated for this species. | Proposed Endangered |
| Tidewater Goby Eucyclogobius newberryi<br>Wherever found<br>There is **final** critical habitat for this species. Your location overlaps the critical habitat.<br>https://ecos.fws.gov/ecp/species/57 | Endangered |

## Insects

| NAME | STATUS |
|---|---|
| Bay Checkerspot Butterfly Euphydryas editha bayensis<br>Wherever found<br>There is **final** critical habitat for this species. Your location overlaps the critical habitat.<br>https://ecos.fws.gov/ecp/species/2320 | Threatened |
| Callippe Silverspot Butterfly Speyeria callippe callippe<br>Wherever found<br>There is **proposed** critical habitat for this species.<br>https://ecos.fws.gov/ecp/species/3779 | Endangered |
| Mission Blue Butterfly Icaricia icarioides missionensis<br>Wherever found<br>There is **proposed** critical habitat for this species.<br>https://ecos.fws.gov/ecp/species/6928 | Endangered |
| Monarch Butterfly Danaus plexippus<br>Wherever found<br>No critical habitat has been designated for this species.<br>https://ecos.fws.gov/ecp/species/9743 | Candidate |
| Mount Hermon June Beetle Polyphylla barbata<br>Wherever found<br>No critical habitat has been designated for this species.<br>https://ecos.fws.gov/ecp/species/3982 | Endangered |
| San Bruno Elfin Butterfly Callophrys mossii bayensis<br>Wherever found<br>There is **proposed** critical habitat for this species.<br>https://ecos.fws.gov/ecp/species/3394 | Endangered |
| Zayante Band-winged Grasshopper Trimerotropis infantilis<br>Wherever found<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>https://ecos.fws.gov/ecp/species/1036 | Endangered |

## Crustaceans

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

Vernal Pool Fairy Shrimp Branchinecta lynchi — Threatened
Wherever found
There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
https://ecos.fws.gov/ecp/species/498

Vernal Pool Tadpole Shrimp Lepidurus packardi — Endangered
Wherever found
There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
https://ecos.fws.gov/ecp/species/2246

## Flowering Plants

NAME | STATUS

Ben Lomond Spineflower Chorizanthe pungens var. hartwegiana — Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/7498

Ben Lomond Wallflower Erysimum teretifolium — Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/7429

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

Contra Costa Goldfields Lasthenia conjugens — Endangered
Wherever found
There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
https://ecos.fws.gov/ecp/species/7058

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

Franciscan Manzanita Arctostaphylos franciscana — Endangered
Wherever found
There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
https://ecos.fws.gov/ecp/species/5350

Hickman's Potentilla Potentilla hickmanii — Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/6343

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

Marsh Sandwort Arenaria paludicola — Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/2229

Monterey Clover Trifolium trichocalyx — Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/4282

Presidio Manzanita Arctostaphylos hookeri var. ravenii — Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/7216

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

San Francisco Lessingia Lessingia germanorum (=L.g. var. germanorum) — Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/8174

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

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

Showy Indian Clover Trifolium amoenum — Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/6459

Sonoma Sunshine Blennosperma bakeri — Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/1260

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



## Conifers and Cycads

| NAME | STATUS |
|---|---|
| Santa Cruz Cypress Cupressus abramsiana<br>Wherever found<br>No critical habitat has been designated for this species.<br>https://ecos.fws.gov/ecp/species/1678 | Threatened |

## Critical habitats

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

This location overlaps the critical habitat for the following species:

| NAME | TYPE |
|---|---|
| Bay Checkerspot Butterfly Euphydryas editha bayensis<br>https://ecos.fws.gov/ecp/species/2320#crithab | Final |
| California Red-legged Frog Rana draytonii<br>https://ecos.fws.gov/ecp/species/2891#crithab | Final |
| Marbled Murrelet Brachyramphus marmoratus<br>https://ecos.fws.gov/ecp/species/4467#crithab | Final |

| | |
|---|---|
| Tidewater Goby Eucyclogobius newberryi<br>https://ecos.fws.gov/ecp/species/57#crithab | Final |
| Western Snowy Plover Charadrius nivosus nivosus<br>https://ecos.fws.gov/ecp/species/8035#crithab | Final |

# Bald & Golden Eagles

There are no documented cases of eagles being present at this location. However, if you believe eagles may be using your site, please reach out to the local Fish and Wildlife Service office.

Additional information can be found using the following links:

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



## Bald and Golden Eagle information is not available at this time

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

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply). To see a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

**What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?**

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

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

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

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

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.

# Migratory birds

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

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

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

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds

- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/ documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

## Migratory bird information is not available at this time

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

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

**What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?**

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

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

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

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

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

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

**How do I know if a bird is breeding, wintering or migrating in my area?**

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

**What are the levels of concern for migratory birds?**

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

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

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

**Details about birds that are potentially affected by offshore projects**

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

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

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

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

**Proper Interpretation and Use of Your Migratory Bird Report**

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

# Marine mammals

Marine mammals are protected under the Marine Mammal Protection Act. Some are also protected under the Endangered Species Act[1] and the Convention on International Trade in Endangered Species of Wild Fauna and Flora[2].

The responsibilities for the protection, conservation, and management of marine mammals are shared by the U.S. Fish and Wildlife Service [responsible for otters, walruses, polar bears, manatees, and dugongs] and NOAA Fisheries[3] [responsible for seals, sea lions, whales, dolphins, and porpoises]. Marine mammals under the responsibility of NOAA Fisheries are **not** shown on this list; for additional information on those species please visit the Marine Mammals page of the NOAA Fisheries website.

The Marine Mammal Protection Act prohibits the take (to harass, hunt, capture, kill, or attempt to harass, hunt, capture or kill) of marine mammals and further coordination may be necessary for project evaluation. Please contact the U.S. Fish and Wildlife Service Field Office shown.

1. The Endangered Species Act (ESA) of 1973.
2. The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is a treaty to ensure that international trade in plants and animals does not threaten their survival in the wild.
3. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following marine mammals under the responsibility of the U.S. Fish and Wildlife Service are potentially affected by activities in this location:

| NAME |
| --- |
| Southern Sea Otter *Enhydra lutris nereis*<br>https://ecos.fws.gov/ecp/species/8560 |



# Facilities

## National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

This location overlaps the following National Wildlife Refuge lands:

| LAND | ACRES |
| --- | --- |
| DON EDWARDS SAN FRANCISCO BAY NATIONAL WILDLIFE REFUGE | 29,162.94 acres |

## Fish hatcheries

There are no fish hatcheries at this location.

# Wetlands in the National Wetlands Inventory (NWI)

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

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

### Wetland information is not available at this time

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the NWI map to view wetlands at this location.

**Data limitations**

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

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

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

**Data exclusions**

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

**Data precautions**

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

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