

**Appendix F**  
**Sensitive Species Table**

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**Appendix F**

**Special Status Species Potentially Occurring in the Project Area**

(page 1 of 4)

Common Name	Legal or Conservation Status	Typical Habitat and Regional Distribution
<b>Mammals</b>		
Salt marsh harvest mouse ( <i>Reithrodontomys raviventris</i> )	FE/SE	Salt marsh and brackish marsh (both non-tidal and tidal) with perennial pickleweed and associated salt-tolerant low-growing subshrubs and herbs; most frequent in dense, continuous vegetation cover with infrequent and brief flooding, and ample flood escape habitat. Does not occur in cordgrass. San Francisco Bay (southern subspecies), San Pablo Bay, Suisun Bay (northern subspecies)
Salt marsh wandering shrew ( <i>Sorex vagrans halicoetes</i> )	FSC/CSC	Tidal salt marsh plains above cordgrass zone, moist, lower pickleweed-dominated marsh, with abundant invertebrates, tidal debris, and flood escape habitat. South San Francisco Bay.
Southern sea otter ( <i>Enhydra lutris nereis</i> )	FE/SE	Near-shore marine and estuarine waters; historic inhabitants of San Francisco Bay, now vagrants.
Suisun ornate shrew ( <i>Sorex ornatus sinuosus</i> )	FSC/CSC	Tidal brackish marsh plains with dense cover, moist substrate, abundant invertebrates, tidal debris, and ample flood escape habitat. Suisun Marsh and marshes along the north shore of San Pablo Bay.
Harbor seal ( <i>Phoca vitulina richardi</i> )	MMPA	Sloughs, open bay, and haul-outs on tidal marshes, islands, or beaches, San Francisco Bay and San Pablo Bay, occasional to Napa River
<b>Birds</b>		
Alameda song sparrow ( <i>Melospiza melodia pusilla</i> )	FSC/CSC	Tidal salt and brackish marshes, San Francisco Bay.
California black rail <i>Laterallus jamaicensis coturniculus</i>	FSC/SE	Coastal salt, brackish, and freshwater marshes, usually brackish marshes with tall grass-like emergent marsh vegetation along channels and pickleweed associations on the marsh plain. Suisun Bay and San Pablo Bay, formerly San Francisco Bay (presumed extirpated).
California clapper rail ( <i>Rallus longirostris obsoletus</i> )	FE/SE	Tidal salt and brackish marshes; most abundant in cordgrass-pickleweed salt marsh with abundant small channels, dense vegetation, and ample flood escape cover. San Francisco Bay, San Pablo Bay, and western Suisun Marsh.
California least tern ( <i>Sterna antillarum browni</i> )	FE/SE	In San Francisco Bay, forages over open shallow water of bays, salt ponds; roosts and nests on barren levees, and dry salt ponds, and derelict paved areas. Naturally roosts and nests on undisturbed beaches.
California brown pelican ( <i>Pelecanus occidentalis californicus</i> )	FE/SE	Open bays and ocean; occasional in San Francisco Bay.
Salt marsh common yellowthroat ( <i>Geothlypis trichas sinuosa</i> )	FSC/CSC	Tidal brackish and salt marsh, non-tidal freshwater riparian woodland, freshwater marsh, throughout San Francisco Estuary
San Pablo song sparrow ( <i>Melospiza melodia samuelis</i> )	FSC/CSC	Tidal brackish or salt marshes, San Pablo Bay.
Suisun song sparrow ( <i>Melospiza melodia maxillaris</i> )	FSC/CSC	Tidal brackish marshes, Suisun Bay
Western snowy plover ( <i>Charadrius alexandrinus nivosus</i> )	FT/CSC	In the San Francisco Estuary, salt pond levees and exposed, emergent salt pond beds (playa-like habitat), San Francisco Bay; rare in San Pablo Bay. Typical coastal habitat is on wide, sandy beaches with scattered debris.

**Appendix F**

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(page 2 of 4)

<b>Reptiles and Amphibians</b>		
California red-legged frog ( <i>Rana aurora draytoni</i> )	FT/ CSC	In the San Francisco Bay region, freshwater to fresh-brackish marshes, ponds, lagoons, riparian woodland, streams; also estivates in terrestrial grassland or scrub. Does not occur in tidal salt or brackish marsh in San Francisco Bay, but may occur in tributaries; possible in fresher reaches of Napa or Petaluma River tidal marshes, but not documented.
San Francisco garter snake ( <i>Thamnophis sirtalis tetrataenia</i> )	FE/SE	Near or in freshwater marshes and ponds with ample prey (tree frogs, red-legged frogs); estivates in terrestrial grassland or scrub. Population nearest San Francisco Bay is west of the San Francisco International Airport.
Northwestern pond turtle ( <i>Clemmys marmorata marmorata</i> )	FSC/CSC	Fresh to fresh-brackish ponds, marshes, and riparian woodland with shallow, warm water, basking sites, ample invertebrate prey. In the San Francisco Estuary, tidal sloughs of Suisun Marsh, fresh-brackish reaches of Petaluma and Napa Rivers; doubtful in South San Francisco Bay tidal marshes.
<b>Fish</b>		
Coho salmon ( <i>Oncorhynchus kisutch</i> )	FT/	Historically known from San Pablo Bay tributaries; rare in San Francisco Estuary and tributaries.
Delta smelt ( <i>Hypomesus transpacificus</i> )	FT/ST	San Pablo and Suisun Bays, in tidal marsh creeks and shallow open water of sloughs and bays. Spawn in fresh-brackish to fresh tidal sloughs, and non-tidal rivers.
Green sturgeon ( <i>Acipenser medirostris</i> )	FPT/CSC	California coast; in San Francisco Estuary, spawn in Sacramento River/Delta, forage throughout range.
Longfin smelt ( <i>Spirinchus thaleichthys</i> )	FSC/ CSC	Sacramento-San Joaquin Rivers, Delta and northern San Francisco Estuary (San Pablo and Suisun Bay, tidal sloughs and open shallow water)
Pacific lamprey ( <i>Lampetra tridentata</i> )	FSC/	San Francisco Estuary, Sacramento-San Joaquin Rivers/Delta serve as a migration corridor
River lamprey ( <i>Lampetra ayresi</i> )	FSC/	San Francisco Estuary, Sacramento-San Joaquin Rivers/Delta serve as a migration corridor
Sacramento splittail ( <i>Pogonichthys macrolepidotus</i> )	FT/CSC	San Francisco Estuary, Sacramento-San Joaquin Rivers/Delta, northern San Francisco Estuary (San Pablo and Suisun Bay, tidal sloughs and open shallow water)
Steelhead trout (coastal central California and Central Valley populations) ( <i>Oncorhynchus mykiss</i> )	FT/	Central California coastal streams, including many tributaries of the San Francisco Estuary, Sacramento-San Joaquin Rivers, Delta
Tidewater goby ( <i>Eucyclogobius newberryi</i> )	FE/CSC	Coastal lagoons behind barrier beaches, shallow and low-energy estuarine subtidal habitats, Del Norte to San Diego counties; disperse in near-shore marine waters. Historic records in San Francisco Bay, no recent surveys or records.
Spring-run chinook salmon ( <i>Oncorhynchus tshawytscha</i> )	FT/ST	San Francisco Estuary, Sacramento-San Joaquin Delta, and tributaries serve as migratory corridors; spawning habitat in upstream reaches of Sacramento River tributaries.
Fall/late fall-run chinook salmon ( <i>Oncorhynchus tshawytscha</i> )	FSC/	San Francisco Estuary, Sacramento-San Joaquin Delta, and tributaries serve as migratory corridors; spawning habitat in upstream reaches of Sacramento River tributaries.
Winter-run chinook salmon ( <i>Oncorhynchus tshawytscha</i> )	FE/SE	San Francisco Estuary, Sacramento-San Joaquin Delta, and tributaries serve as migratory corridors; spawning habitat in upstream reaches of Sacramento River tributaries; Sacramento River to Golden Gate identified as critical habitat.

**Appendix F**

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(page 3 of 4)

<b>Invertebrates</b>		
Tiger beetles ( <i>Cicendela senilis senilis</i> ) ( <i>C. oregona</i> ) ( <i>C. haemmoragica</i> )	FSC/--	Mostly maritime coastal distribution, beach and coastal flats and marshes; within San Francisco Estuary, typical habitats include bare upper channel banks, margins of salt pans, unvegetated artificial levees, estuarine beaches.
<b>Plants</b>		
Alkali milk-vetch ( <i>Astragalus tener</i> var. <i>tener</i> )	FSC/CSC/1B	Alluvial seasonally wet grasslands, alkali or sub-saline vernal pools marginal to the San Francisco Estuary; not known to occur within modern tidal marshes, but present in some diked baylands. Historic bay margin locality records from Berkeley, Oakland, Mt. Eden (Hayward), Alameda, Newark, Union City; modern records from Warm Springs (Fremont), Napa, and Montezuma Wetlands site.
Brittlescale ( <i>Atriplex depressa</i> )	FSC/CSC/1B	Diked baylands, northeastern San Francisco Estuary; potentially alluvial grasslands, alkali or sub-saline vernal pools marginal to the Estuary. Riparian salt marsh habitat.
California seablite ( <i>Suaeda californica</i> )	FE/SE/1B	Morro Bay (extant) and San Francisco Bay (extinct/reintroduced). Historic range in San Francisco Bay was Richmond to Palo Alto and Alameda. Estuarine beach edges, sandy high salt marsh edges.
Contra Costa goldfields ( <i>Lasthenia conjugens</i> )	FE/CSC/1B	Alluvial seasonally wet grasslands, alkali or sub-saline vernal pools marginal to the San Francisco Estuary, and edges of salt ponds and pans; not known to occur within modern tidal marshes, but present in some diked baylands. Historic Bay margin locality records from Mt. Eden (Hayward), Suisun Marsh, and Warm Springs (Fremont; extant).
Delta tule-pea ( <i>Lathyrus jepsonii</i> var. <i>jepsonii</i> )	FSC/CSC/1B	Freshwater and brackish marshes, northern San Pablo Bay, Suisun Bay, Sacramento-San Joaquin Delta.
Hispid bird's-beak ( <i>Cordylanthus mollis</i> ssp. <i>hispidus</i> )	FSC/CSC/1B	Alkali vernal pools and inland playa; locally in alluvial seasonal wetlands near tidal marsh edges at Denverton, Suisun Marsh, but not in tidal marsh.
Marin knotweed ( <i>Polygonum marinense</i> )	FSC/CSC/3	Taxonomy and distribution uncertain; primarily Drakes Bay salt and brackish tidal marshes; also Corte Madera, Greenbrae salt marshes; reported from Napa, Martinez tidal marshes.
Mason's lilaepsis ( <i>Lilaeopsis masonii</i> )	FSC/SR	Erosional creek banks, wave-scoured marsh peats at edges of channels and bays, Sacramento-San Joaquin Delta, northern San Pablo Bay (Tubbs Island and tidal reaches of Napa River, Mare Island Strait), Suisun Bay marshes.
Northern salt marsh (Point Reyes) bird's-beak ( <i>Cordylanthus maritimus</i> ssp. <i>palustris</i> )	FSC/CSC/1B	Extirpated in San Francisco Bay south of Sausalito, formerly abundant. Extant populations in the San Francisco Estuary occur rarely from the Petaluma Marsh to Richardson Bay (reintroduced to San Francisco). Now mostly maritime distribution, high sandy salt marshes, Coos Bay (Oregon) to Bolinas Lagoon.
Soft bird's beak ( <i>Cordylanthus mollis</i> ssp. <i>mollis</i> )	FE/CSC/1B	Tidal brackish or salt marsh, high marsh zone and edges of pans, alluvial fans, natural levees of creek banks; mostly Suisun Bay (Suisun Marsh, Contra Costa marshes); Fagan Marsh (Napa River), Point Pinole (Richmond); historic records from Petaluma Marsh and San Rafael.
Suisun Marsh aster ( <i>Aster lentus</i> )	FSC/CSC/1B	Brackish or freshwater marshes, high marsh zone, natural levees of creek banks; mostly in tidal brackish marshes of Suisun Marsh, northeastern San Pablo Bay; historic records in San Francisco Bay, especially the East Bay.

## Appendix F

### Special Status Species Potentially Occurring in the Project Area

(page 4 of 4)

Suisun thistle <i>(Cirsium hydrophilum</i> var. <i>hydrophilum)</i>	FE/CSC/1B	Brackish tidal marsh, high marsh zone; Suisun Marsh. Historic range limited to Suisun Marsh; modern range limited to northwestern Suisun Marsh (Peytonia Slough, Rush Ranch vicinity).
Valley spearscale, San Joaquin saltbush <i>(Atriplex joaquiniana)</i>	FSC/CSC/1B	Alkali or sub-saline seasonal wetlands, pans, playa. In San Francisco Estuary, diked non-tidal wetlands of northeastern Suisun Marsh, rarely to northeastern San Pablo Bay, but possible in brackish tidal marsh pan edges saline flat (Montezuma area).

Key:	FE: Federally-listed Endangered	FT: Federally-listed Threatened
	FD: De-listed under the Federal Endangered Species Act	FPE: Proposed for Federal listing as Endangered
	FPT: Proposed for Federal listing as Threatened	FSC: Federal Species of Concern
	SE: State-listed Endangered	ST: State-listed Threatened
	SR: State-listed Rare	CSC: California Species of Special Concern
		MMPA: Marine Mammal Protection Act (Federal)
CNDDDB:	California Natural Diversity Database	
CNPS:	1A: Plants Presumed Extinct in California	
	1B: Plants Rare, Threatened, or Endangered in California and Elsewhere	
	3: Plants About Which There is Not Enough Information	