

APPENDIX E

SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE PROJECT AREA

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**TABLE E-1
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN
THE SACRAMENTO METROPOLITAN REGION OF THE PROJECT AREA**

SACRAMENTO COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
SPECIES LISTED OR PROPOSED FOR LISTING		
<i>Invertebrates</i>		
Conservancy fairy shrimp <i>Branchinecta conservatio</i>	FE/--	Inhabits vernal pools and swales in the Central Valley
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	FT/--	Grassland vernal pools
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i> Critical Habitat designated	FT/--	Occurs only in the California Central Valley in association with blue elderberry (<i>Sambucus mexicana</i>); eggs laid in 1" plus diameter elderberry trees with a preference shown for "stressed" plants
Vernal pool tadpole shrimp <i>Lepidurus packardii</i>	FE/--	Inhabits vernal pools and swales in the Central Valley containing clear or highly turbid water
<i>Fish</i>		
Delta smelt <i>Hypomesus transpacificus</i> Critical Habitat designated	FT/CT	Restricted to the Sacramento-San Joaquin Delta, including Suisun and San Pablo Bays and the Carquinez Strait.
Steelhead-Central Valley ESU <i>Oncorhynchus mykiss</i>	FT/--	Spawn in the Sacramento and San Joaquin Rivers and their tributaries, migrate through San Francisco and Suisun Bays, as well as the Delta region
Chinook salmon—spring-run <i>Oncorhynchus tshawytscha</i> Critical Habitat designated	FT/CT	Spawning and rearing restricted to Sacramento River basin, migrate through San Francisco Bay and Sacramento-San Joaquin Delta
Chinook salmon—fall/late fall-run <i>Oncorhynchus tshawytscha</i> Critical Habitat proposed	FC/CSC	Spawning and rearing restricted to Sacramento River basin, migrate through San Francisco Bay and Sacramento-SanJoaquin Delta, require clean, cold water and gravel beds for spawning
Chinook salmon—winter run <i>Oncorhynchus tshawytscha</i> Critical Habitat proposed	FE/CE	Spawning restricted to the Sacramento River. Requires clean, cold water with gravel beds.
Sacramento splittail <i>Pogonichthys macrolepidotus</i>	FT/CSC	Slow moving river sections and dead-end sloughs with flooded vegetation for spawning and foraging for young.
<i>Amphibians</i>		
California tiger salamander <i>Ambystoma californiense</i>	FC/CSC	Seasonal freshwater ponds with little or no emergent vegetation. Utilizes mammal burrows in upland habitat for aestivation during the dry season.

TABLE E-1 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN
THE SACRAMENTO METROPOLITAN REGION OF THE PROJECT AREA

SACRAMENTO COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
California red-legged frog <i>Rana aurora draytonii</i> Critical Habitat designated	FT/CSC	Breed in stock ponds, pools, and slow-moving streams with emergent vegetation for escape cover and egg attachment. Where water is seasonal often utilizes mammal burrows in upland habitat for aestivation
Reptiles		
Giant garter snake <i>Thamnophis gigas</i>	FT/--	Freshwater marsh and slow streams
Birds		
Swainson's hawk <i>Buteo swainsoni</i>	--/CT	Breeds in stands with few trees in juniper-sage flats, riparian areas and in oak savannah. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.
Mountain plover <i>Charadrius montanus</i>	FPT/CSC	Winters in areas with short-grassed or plowed fields with bare ground and flat topography. Prefer grazed areas and those with burrowing rodents.
Western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	--/CE	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow cottonwoods, w/lower story of blackberry, nettles, or wild grape.
Greater sandhill crane <i>Grus canadensis tabida</i>	--/CT	Winters in the Central Valley. Prefers grain fields within 4 miles of a shallow body of water.
Bald eagle <i>Haliaeetus leucocephalus</i>	FT/CE	Nests and forages on inland lakes, reservoirs, and rivers; winter foraging at lakes and along major rivers
Bank swallow <i>Riparia riparia</i>	--/CT	Nests primarily in riparian and other lowland habitat. Requires vertical banks or cliffs with fine textured or sandy soils near water.
Mammals		
Fresno kangaroo rat <i>Dipodomys nitratoides exilis</i>	FE/CE	Burrows are usually found in relatively light, sandy soils in raised areas. Habitat needs are grassland and alkali desert scrub communities on the San Joaquin Valley floor in Merced, Kings, Fresno, and Madera counties.
Riparian woodrat <i>Neotoma fuscipes riparia</i>	FE/CSC	Generally found in riparian areas supporting a mixture of trees and brush. Require suitable nesting sites such as cavities in trees, snags, or logs; spaces in talus; or lodges built of downed woody material, which are usually a conspicuous feature of areas inhabited by the species.

TABLE E-1 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN
THE SACRAMENTO METROPOLITAN REGION OF THE PROJECT AREA

SACRAMENTO COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Riparian brush rabbit <i>Sylvilagus bachmani riparius</i>	FE/CE	Found in San Joaquin Valley native riparian areas with large clumps of dense shrubs, low growing vines, some tall shrubs and scrubby trees.
Plants		
Pine Hill ceanothus <i>Ceanothus roderickii</i>	FE/CR/List 1B	Chaparral, cismontane woodland/serpentinite or gabbroic. Found Shingle Springs, Clarksville, and Pilot Hill.
Pine Hill flannelbush <i>Fremontodendron decumbens</i>	FE/CR/List 1B	Chaparral, cismontane woodland. Endemic to gabbrioc chaparral community in El Dorado and Nevada counties.
El Dorado bedstraw <i>Galium californicum</i> ssp. <i>sierrae</i>	FE/CR/List 1B	Chaparral, cismontane woodland, lower montane coniferous forest/gabbroic substrates.
Boggs Lake hedge-hyssop <i>Gratiola heterosepala</i>	--/CE/List 1B	Marshes and swamps (lake margins), vernal pools/clay.
Slender orcutt grass <i>Orcuttia tenuis</i>	FT/CE/List 1B	Vernal pools
Hairy orcutt grass <i>Orcuttia viscida</i>	FE/CE/List 1B	Vernal pools
Layne's ragwort <i>Senecio layneae</i>	FT/CR/List 1B	Chaparral, cismontane woodland/serpentinite or gabbroic, rocky.
FEDERAL OR STATE SPECIES OF SPECIAL CONCERN		
Invertebrates		
Sacramento anthicid beetle <i>Anthicus sacramento</i>	FSC/--	Well-developed riparian habitat
Midvalley fairy shrimp <i>Branchinecta mesovallensis</i>	FSC/--	Vernal pools, seasonal wetlands that fill with water during fall and winter rains. Distribution: Central Valley, including Sacramento, Solano, Merced, Madera, San Joaquin, Fresno, and Contra Costa counties.
California linderiella <i>Linderiella occidentalis</i>	FSC/--	Seasonal pools in intact grasslands where alluvial soils are underlaid by hardpan or in sandstone depressions
Molestan blister beetle <i>Lytta molesta</i>	FSC/--	Central Valley vernal pool vegetation; historically collected from Lake Yosemite site
South Forks ground beetle <i>Nebria darlingtoni</i>	FSC/--	El Dorado County under rocks along the margins of cool streams.
Fish		
Green sturgeon <i>Acipenser medirostris</i>	FSC/--	Spawn in the Sacramento River and its tributaries, the San Francisco Bay system provides rearing habitat for juveniles

TABLE E-1 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN
THE SACRAMENTO METROPOLITAN REGION OF THE PROJECT AREA

SACRAMENTO COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Sacramento perch <i>Archoplites interruptus</i>	FSC/CSC	Slow moving sloughs, streams, rivers, and lakes
River lamprey <i>Lampetra ayresi</i>	FSC/--	Larger coastal streams in the San Francisco Bay drainage system
Kern brook lamprey <i>Lampetra hubbsi</i>	FSC/--	San Joaquin River system and Kern River, require gravel bottomed areas for spawning and muddy bottomed areas for young
Pacific lamprey <i>Lampetra tridentata</i>	FSC/--	Pacific Ocean and estuaries; spawning in coastal streams from Alaska to Baja California
Hardhead <i>Mylopharodon conocephalus</i>	--/CSC	Pools and side pools of rivers and creeks; Freshwater habitats w/gravel, sand, and decomposed granite and rocky areas for substrate. Distribution: Napa River near Tountville, Sacramento River near Red Bluff, and upper San Joaquin River both above and below Kerckhoff Dam.
Longfin smelt <i>Spirinchus thaleichthys</i>	FSC/--	Sacramento-San Joaquin estuary in the salt or brackish water portions of the estuary, require fresh water, sandy-gravel substrates, rocks, and aquatic vegetation for spawning
Amphibians		
Western spadefoot toad <i>Spea hammondi</i>	FSC/CSC	Floodplains and grassland pools
Reptiles		
Western pond turtle <i>Clemmys marmorata marmorata</i>	FSC/CSC	Freshwater ponds and slow streams, marshes, rivers, and irrigation ditches with upland sandy soils for laying eggs
Southwestern pond turtle <i>Clemmys marmorata pallida</i>	FSC/--	Permanent or nearly permanent bodies of water in a variety of habitat types. Require basking sites such as partially submerged logs or open mud banks.
California horned lizard <i>Phrysonomoa coronatum frontale</i>	FSC/--	Patchy open areas with sandy soils
Birds		
Cooper's hawk <i>Accipiter cooperi</i>	--/CSC	Nests in riparian growths of deciduous trees and live oak woodlands
Tricolored blackbird <i>Agelaius tricolor</i>	FSC/CSC	Riparian thickets and emergent vegetation near open water
Grasshopper sparrow <i>Ammodramus savannarum</i>	FSC/	Riparian thickets and emergent vegetation near open water

TABLE E-1 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN
THE SACRAMENTO METROPOLITAN REGION OF THE PROJECT AREA

SACRAMENTO COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Great egret <i>Ardea alba</i>	--/*	Colonial nester in large tress. Rookery sites located near marshes, tide-flats, irrigated pastures, and margins of rivers and streams and lakes.
Great blue heron <i>Ardea herodias</i>	--/*	Nests in trees along lakes and estuaries
Short-eared owl <i>Asio flammeus</i>	--/CSC	Fresh water and salt marshes and swamps, lowland meadows, irrigated fields
Western burrowing owl <i>Athene cunicularia hypugaea</i>	FSC/CSC	Nests in mammal burrows in open, sloping grasslands
Oak titmouse <i>Baeolophus inornatus</i>	FSLC/--	Deciduous or oak woodland
Aleutian Canada goose <i>Branta canadensis leucopareia</i>	Delisted	Winters on lakes, reservoirs, and ponds and inland prairies with natural pasture or grain fields nearby
Ferruginous hawk <i>Buteo regalis</i>	FSC/CSC	Dry open country with a variety of habitats
Lawrence's goldfinch <i>Carduelis lawrencei</i>	FSC/--	Dry grassy slopes and chaparral
Vaux's swift <i>Chaetura vauxi</i>	FSC/--	Riparian woodlands and woodlands near lakes
Snowy egret <i>Egretta thula</i>	--/*	Marshes, tidal flats, lakes, streams
White-tailed kite <i>Elanus leucurus</i>	--/3511	Nests near wet meadows and open grasslands dense oak, willow or other large tree stands.
Little willow flycatcher <i>Empidonax traillii brewsteri</i>	FSC/CSC	Willow riparian habitat, dry, brushy upland pastures, orchards
Loggerhead shrike <i>Lanius ludovicianus</i>	FSC/CSC	Nests in shrublands and forages in open grasslands
Lewis's woodpecker <i>Melanerpes lewis</i>	FSC/--	Open woodlands in interior foothills and valleys
Long-billed curlew <i>Numenius americanus</i>	FSC/--	Lake beaches, nests in both dry and wet uplands
Black-crowned night heron <i>Nycticorax nycticorax</i>	--/*	Lake margins, mud bordered bays, marshy areas
Double-crested cormorant <i>Phalacrocorax auritus</i>	--/CSC	Nests along coast on isolated islands or in trees along lake margins.
Nuttall's woodpecker <i>Picoides nuttallii</i>	FSLC/--	Riparian habitat oak woodlands of northern California. In other more arid areas, these woodpeckers inhabit deciduous trees alongside streams as well as oak scrublands and chaparral.

TABLE E-1 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN
THE SACRAMENTO METROPOLITAN REGION OF THE PROJECT AREA

SACRAMENTO COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
White-faced ibis <i>Pelgadis chihi</i>	FSC/--	Nests and feeds in freshwater marshes.
Rufous hummingbird <i>Selasphorus rufus</i>	FSC/--	Forests, woodland edges, thickets
Brewer's sparrow <i>Spizella breweri</i>	FSC/--	Neotropical migrant. Breeds in successional-scrub; nests on ground or low in shrubs .
California thrasher <i>Toxostoma redivivum</i>	FSC/--	Chaparral covered foothills and brushy parklands where there is open ground under a dense shrub layer
Mammals		
Townsend's western big-eared bat <i>Corynorhinus townsendi townsendii</i>	FSC/CSC	Humid coastal regions, will only roost in the open, extremely sensitive to disturbance
Spotted bat <i>Euderma maculatum</i>	FSC/--	Found in western North America, from British Columbia down into Mexico. Habitat: Lives in desert scrub and open forest areas. Roosts in cliff faces and rock crevices.
Greater western mastiff bat <i>Eumops perotis californicus</i>	FSC/CSC	Open arid to semi-arid habitats, including woodlands, coastal scrub, chaparral, and grasslands. Roosts in trees and cliffs dwellings.
Small-footed myotis <i>Myotis ciliolabrum</i>	FSC/--	A variety of habitats, excluding coastal redwoods. Nursery colonies in caves, crevices, clay banks. Roosts in caves, dwellings, crevices.
Long-eared myotis <i>Myotis evotis</i>	FSC/--	Brush, woodland, and forest habitats, prefers coniferous habitat types. Nursery colonies in buildings, crevices, spaces under tree bark, and snags.
Fringed myotis <i>Myotis thysanodes</i>	FSC/--	A wide variety of habitats. Optimal habitats are valley-foothill hardwood and hardwood-conifer types. Uses caves, buildings, or crevices for roosting and nursery colonies.
Long-legged myotis <i>Myotis volans</i>	FSC/--	Most common in woodland and forest habitats above 4000 feet. Use trees and caves for roosting, hollow trees or spaces under tree bark for nursery colonies.
Yuma myotis <i>Myotis yumanensis</i>	FSC/--	Optimal habitat is open forests or woodlands with sources of water and flying insects. Nursery colonies in caves, buildings, or crevices
San Joaquin pocket mouse <i>Perognathus inornatus inornatus</i>	FSC/--	Grasslands and blue oak savanna with friable soils
Plants		

TABLE E-1 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN
THE SACRAMENTO METROPOLITAN REGION OF THE PROJECT AREA

SACRAMENTO COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
San Joaquin spearscale <i>Atriplex joaquiniana</i>	FSC/--List 1B	Alkaline soils in chenopod scrub, meadows, playas, valley and foothill grassland
Big-scale balsamroot <i>Balsamorhiza macrolepis</i> var. <i>macrolepis</i>	--/--List 1B	Cismontane woodland, grassland
Red Hills soaproot <i>Chlorogalum grandiflorum</i>	FSC/--List 1B	Chaparral, cismontane woodland, lower montane coniferous forest/serpentinite or gabbroic
Brandegee's clarkia <i>Clarkia biloba</i> ssp. <i>brandegeae</i>	--/--List 1B	Foothill woodland
Hispid bird's beak <i>Cordylanthus mollis</i> ssp. <i>hispidus</i>	--/--List 1B	Saline marshes and flats
Dwarf downingia <i>Downingia pusilla</i>	--/--List 1B	Mesic sites in valley and foothill grassland, vernal pools
Tuolumne coyote-thistle (=button-celery) <i>Eryngium pinnatisectum</i>	FSC/--List 1B	Vernal pools and wet depressions
Bogg's Lake hedge hyssop <i>Gratiola heterosepala</i>	FSC/--List 1B	Shallow water, margins of vernal pools.
Bisbee Peak rush-rose <i>Helianthemum suffrutescens</i>	--/--List 1B	Chaparral
Rose-mallow <i>Hibiscus lasiocarpus</i>	--/--List 2	Freshwater marshes and swamps, sloughs
Northern California black walnut <i>Juglans hindsii</i>	FSC/--List 1B	Riparian forest and woodland
Ahart's dwarf rush <i>Juncus leiospermus</i> var. <i>ahartii</i>	FSC/--List 1B	Vernal pool margins
Legenere <i>Legenere limosa</i>	FSC/--List 1B	Vernal pools
Pincushion navarretia <i>Navarretia myersii</i> ssp. <i>myersii</i>	--/--List 1B	Vernal pools
Sanford's arrowhead <i>Sagittaria sanfordii</i>	FSC/--List 1B	Marshes and swamps (assorted shallow freshwater)
El Dorado County mule ears <i>Wyethia reticulata</i>	FSC/--List 1B	Chaparral, cismontane woodland, lower montane coniferous forest/clay or gabbroic substrate

SACRAMENTO COUNTY

SENSITIVE PLANT COMMUNITIES

Name	Global Rank	State Rank
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TABLE E-1 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN
THE SACRAMENTO METROPOLITAN REGION OF THE PROJECT AREA

Alkali meadow	G3	S2.1
Alkali seep	G3	S2.1
Elderberry savannah	G2	S2.1
Great Valley cottonwood riparian forest	G2	S2.1
Great Valley valley oak riparian forest	G1	S1.1
Northern claypan vernal pool	G1	S1.1
Northern hardpan vernal pool	G3	S3.1
Northern volcanic mud flow vernal pool	G1	S1.1
Valley needlegrass grassland	G1	S3.1

**TABLE E-2
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA**

MARIN COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
<i>Invertebrates</i>		
Bay checkerspot butterfly <i>Euphydryas editha bayensis</i>	FT/--	Serpentine bunchgrass grassland, require healthy populations of <i>Plantago erecta</i> as a host plant for larvae.
Mission blue butterfly <i>Icaricia icarioides missionensis</i>	FE/--	Grassland with <i>Lupinus albifrons</i> , <i>L. formosa</i> , and <i>L. varicolor</i>
Callippe silverspot butterfly <i>Speyeria callippe callippe</i>	FE/--	Found in native grasslands with <i>Viola pedunculata</i> as larval food plant
Myrtle's silverspot butterfly <i>Speyeria zereue myrtleae</i>	FE/	Restricted to the foggy coastal dunes/hills of Pt. Reyes Peninsula; Extirpated from coastal San Mateo County.
California freshwater shrimp <i>Syncaris pacifica</i>	FE/CE	Found in low elevation, low gradient streams where riparian cover is moderate to heavy. Shallow pools away from main streamflow.
<i>Fish</i>		
Tidewater goby <i>Eucyclogobius newberryi</i>	FT/CSC	Shallow waters of bays and estuaries
Delta smelt <i>Hypomesus transpacificus</i> Critical habitat designated	FT/CT	Restricted to the Sacramento-San Joaquin Delta, including Suisun and San Pablo Bays and the Carquinez Strait.
Coho salmon-Central California coast ESU <i>Oncorhynchus kisutch</i> Critical Habitat designated	FT/CE	Accessible Bay Area and coastal rivers and streams with cover, cool water and sufficient dissolved oxygen. Require beds of loose, silt-free gravel for spawning.
Steelhead – Central California Coast ESU <i>Oncorhynchus mykiss irideus</i> Critical Habitat designated	FT/CSC	Unblocked Bay Area and coastal rivers and streams
Steelhead-Central Valley ESU <i>Oncorhynchus mykiss irideus</i> Critical Habitat designated	FT/CSC	Spawn in the Sacramento and San Joaquin Rivers and their tributaries, migrate through San Francisco and Suisun Bays, as well as the Delta region
Chinook salmon-Central Valley ESU-spring run <i>Oncorhynchus tshawytscha</i> Critical Habitat designated	FT/CT	Spawning and rearing restricted to Sacramento River basin, migrate through San Francisco Bay and Sacramento-SanJoaquin Delta, require clean, cold water and gravel beds for spawning

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

MARIN COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Chinook salmon- Central Valley ESU-fall/late fall run <i>Oncorhynchus tshawytscha</i> Critical Habitat designated	FC/CSC	Spawning and rearing restricted to Sacramento River basin, migrate through San Francisco Bay and Sacramento-SanJoaquin Delta, require clean, cold water and gravel beds for spawning
Chinook salmon—winter run <i>Oncorhynchus tshawytscha</i> Critical Habitat designated	FE/CE	Spawning restricted to the Sacramento River. Requires clean, cold water with gravel beds.
Sacramento splittail <i>Pogonichthys macrolepidotus</i>	FT/CSC	Slow moving river sections and dead-end sloughs with flooded vegetation for spawning and foraging for young.
Amphibians		
California red-legged frog <i>Rana aurora draytonii</i>	FT/CSC	Breed in stock ponds, pools, and slow-moving streams with emergent vegetation for cover and egg attachment.
Birds		
Marbled murrelet <i>Brachyramphus marmoratus</i> Critical Habitat designated	FT/CE	Nests in burrows or crevices. Common resident of northwestern coastal forests (temperate rainforest)
Western snowy plover <i>Charadrius alexandrinus nivosus</i>	FT/CSC	Nests and forages on sandy beaches on marine and estuarine shores - requires sandy, gravelly, or friable soils for nesting
Western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	FC/	Riverine woodlands, thickets, farms.
Bald eagle ¹ <i>Haliaeetus leucocephalus</i>	FT/CE	Nests and forages on inland lakes, reservoirs, and rivers; winter foraging at lakes and along major rivers
California black rail <i>Laterallus jamaicensis coturniculus</i>	FSC/CT/3511	Nests and forages in tidal emergent wetland with pickleweed and cordgrass
California brown pelican <i>Pelecanus occidentalis californicus</i>	FE/3511	Nests on coastal islands of small to moderate size that afford protection from predators.
California clapper rail <i>Rallus longirostris obsoletus</i>	FE/CE	Nests and forages in emergent wetlands with pickleweed, cordgrass, and bulrush
Bank swallow <i>Riparia riparia</i>	--/CT	Nests primarily in riparian and other lowland habitat. Requires vertical banks or cliffs with fine textured or sandy soils near water.

¹ The bald eagle was proposed for delisting by the U.S. Fish and Wildlife Service on July 6, 1999.

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

MARIN COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
California least tern <i>Sterna antillarum browni</i>	FE/CE	Colonial breeder on bare or sparsely vegetated flat substrates including sand beaches, alkali flats, land fills, or paved areas
Northern spotted owl <i>Strix occidentalis caurina</i>	FT/--	Nests in old growth forests
Mammals		
Salt marsh harvest mouse <i>Reithrodontomys raviventris</i>	FE/CE	Saline emergent marsh with dense pickleweed
Plants		
Presidio Manzanita <i>Arctostaphylos hookeri ssp. ravenii</i>	FE/CE/List 1B	Chaparral, coastal prairie, coastal scrub. Endemic to San Francisco area.
Marsh sandwort <i>Arenaria paludicola</i>	FE/CE/List 1B	Marshes and swamps; Grows up through dense mats of Typha, Juncus, Scirpus, etc. in freshwater marsh.
Tiburon mariposa lily <i>Calochortus tiburonensis</i>	FT/CT/List 1B	Serpentine grassland
Tiburon indian paintbrush <i>Castilleja affinis ssp. neglecta</i>	FE/CT/List 1B	Open serpentine slopes
Sonoma spineflower <i>Chorizanthe valida</i>	FE/CE/List 1B	Sandy soils in coastal grassland
Presidio clarkia <i>Clarkia franciscana</i>	FE/CE/List 1B	Coastal scrub, grassland on serpentine and other ultramafic soils
Soft bird's-beak <i>Cordylanthus mollis ssp. mollis</i>	FE/CR/List 1B	Coastal salt marshes, extirpated in Marin County.
Baker's larkspur <i>Delphinium bakeri</i>	FE/CR/List 1B	Coastal scrub
Yellow larkspur <i>Delphinium luteum</i>	FE/CR/List 1B	Moist sites, cliffs, coastal grassland, chaparral.
Marin dwarf flax <i>Hesperolinon congestum</i>	FT/CT/List 1B	Grasslands and openings in chaparral, often on serpentinite
Santa Cruz tarplant <i>Holocarpha macradenia</i>	FT/CE/List 1B	Coastal scrub, coastal sand dunes, openings in oak woodlands with sandy or gravelly soil, extirpated in Marin County.
Beach layia <i>Layia carnosa</i>	FE/CE/List 1B	Sparsely vegetated semi-stabilized coastal sand dunes, usually behind foredunes and in coastal scrub on sandy substrate.

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

MARIN COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
San Francisco lessingia <i>Lessingia germanorum</i>	FE/CE/List 1B	Coastal scrub on remnant dunes. Occurs in sandy soils where cover is open and competition from other species is low.
White-rayed pentachaeta <i>Pentachaeta bellidiflora</i>	FE/CE/List 1B	Open dry rocky slopes and grassland, often on soils derived from serpentinite. Extirpated in Marin County.
San Francisco popcorn flower <i>Plagiobothrys diffusus</i>	--/CE/List 1B	Coastal prairie, valley and foothill grassland.
North coast semaphore grass <i>Pleuropogon hooverianus</i>	FSC/CR/List 1B	Mesic soils in vernal pools, meadows, and forests
Adobe sanicle <i>Sanicula maritima</i>	--/CR/List 1B	Moist clay or ultramfic soils in meadows and seeps, grasslands
Tiburon jewelflower <i>Streptanthus niger</i>	FE/CE/List 1B	Serpentine outcrops in grasslands
Showy indian clover <i>Trifolium amoenum</i>	FE/--/List 1B	Moist, heavy soils, disturbed areas.
FEDERAL OR STATE SPECIES OF SPECIAL CONCERN		
<i>Invertebrates</i>		
Opler's longhorn moth <i>Adela oplerella</i>	FSC/--	Serpentine grasslands, larvae feed on <i>Platystemon californicus</i>
Marin blind harvestman <i>Calicina diminua</i>	FSC/	Known only from Burdell Mountain, Marin County. Lives under rocks in serpentine grassland
Sonoma arctic skipper <i>Carterocephalus palaemon</i>	FSC/	Inhabits openings in heavily forested woods, moist meadows, and streambanks; larval host plants include purple reedgrass (<i>Calamagrostis purpurascens</i>) in California, and bromes (<i>Bromus</i>)
Sandy beach tiger beetle <i>Cicindela hirticollis gravida</i>	FSC/	Sandy areas around water; larva live in burrows in sand along sea beaches, creeks, seepages, and lake shores.
Globose dune beetle <i>Coelus globosus</i>	FSC/	Coastal dunes; primarily subterranean, this species tunnels through sand underneath dune vegetation.
Monarch butterfly <i>Danaus plexippus</i>	--/*	Winters in California. Roosts in wind protected eucalyptus, Monterey pine, and cypress groves, with water and nectar sources nearby.
Ricksecker's water scavenger beetle <i>Hydrochara rickseckeri</i>	FSC/--	Found in freshwater ponds, shallow water of streams marshes and lakes

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

MARIN COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Marin elfin butterfly <i>Incisalia mossii marinensis</i>	FSC/--	Rocky outcrops, woody canyons, cliffs; host plant includes stonecrop (<i>Sedum</i> , <i>Sedella</i> , <i>Dudleya</i> , and <i>Parvisedum</i>) species
Bumblebee scarab beetle <i>Lichananthe ursina</i>	FSC/--	Inhabits coastal sand dunes.
Tiburon microblind harvestman <i>Microcina tiburona</i>	FSC/--	Dry grasslands with serpentine soils.
Fish		
Green sturgeon <i>Acipenser medirostris</i>	FSC/	Forages in San Francisco Bay and spawns in large fresh water rivers
River lamprey <i>Lampetra ayresi</i>	FSC/CSC	Pacific Ocean and estuaries; spawning in coastal streams from Alaska to San Francisco Bay
Pacific lamprey <i>Lampetra tridentata</i>	FSC/--	Pacific Ocean and estuaries; spawning in coastal streams from Alaska to Baja California
Tomales roach <i>Lavinia symmetricus</i> ssp. 2	--/CSC	Low-elevation foothill streams with warm permanent pools
Longfin smelt <i>Spirinchus thaleichthys</i>	FSC/--	Sacramento-San Joaquin estuary in the salt or brackish water portions of the estuary, requires fresh water, sandy-gravel substrates, rocks, and aquatic vegetation for spawning
Amphibians		
Northern red-legged frog <i>Rana aurora aurora</i>	FSC/--	Breed in stock ponds, pools, and slow-moving streams with emergent vegetation for cover and egg attachment.
Foothill yellow-legged frog <i>Rana boylei</i>	FSC/CSC	Streams with quiet pools absent of predatory fish
Reptiles		
Western pond turtle <i>Clemmys marmorata</i>	FSC/CSC	Freshwater ponds and slow streams edged with sandy soils for laying eggs
Northwestern pond turtle <i>Clemmys marmorata marmorata</i>	FSC/CSC	Freshwater ponds and slow streams, marshes, rivers, and irrigation ditches with upland sandy soils for laying eggs
California horned lizard <i>Phrynosoma coronatum frontale</i>	FSC/CSC	Patchy open areas with sandy soils
Birds		

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

MARIN COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Tricolored blackbird <i>Agelaius tricolor</i>	FSC/CSC	Riparian thickets and emergent vegetation
Grasshopper sparrow <i>Ammodramus savannarum</i>	FSC/	Riparian thickets and emergent vegetation near open water
Bell's sage sparrow <i>Amphispiza belli belli</i>	FSC/CSC	Prefer chaparral with fairly dense stands of chamise
Great egret <i>Ardea alba</i>	--/*	Forages for fishes, amphibians and invertebrates in freshwater and saline emergent wetlands, nests in large trees
Great blue heron <i>Ardea herodias</i>	--/*	Nests in trees along lakes and estuaries
Short-eared owl <i>Asio flammeus</i>	--/CSC	Fresh water and salt marshes and swamps, lowland meadows, irrigated fields
Western burrowing owl	FSC/CSC	Nests in mammal burrows in open, sloping grasslands
Ferruginous hawk <i>Buteo regalis</i>	FSC/CSC	Dry open country with a variety of habitats
Vaux's swift <i>Chaetura vauxi</i>	FSC/--	Riparian woodlands and woodlands near lakes
Northern harrier <i>Circus cyaneus</i>	--/CSC	Mostly nests in emergent vegetation, wet meadows or near rivers and lakes, but may nest in grasslands away from water.
Black swift <i>Cypseloides niger</i>	FSC/CSC	Colonial breeders using cliffs in deep canyons
Hermit warbler <i>Dendroica occidentalis</i>	FSC/--	Prefers coniferous habitat
Snowy egret <i>Egretta thula</i>	--/*	Marshes, tidal flats, lakes, streams
White-tailed kite <i>Elanus leucurus</i>	--/3511	Nests near wet meadows and open grasslands, dense oak, willow or other large tree stands.
Little willow flycatcher <i>Empidonax traillii brewsteri</i>	FSC/CSC	Willow riparian habitat, dry, brushy upland pastures, orchards
American peregrine falcon <i>Falco peregrinus anatum</i>	Delisted	Nests near wetlands, lakes, rivers, or other water on cliffs, banks, human structures
Saltmarsh common yellowthroat <i>Geothlypis trichas sinuosa</i>	FSC/CSC	Saline and freshwater marshes. Requires thick cover down to water surface for foraging; tall grasses, tules, or willows for nesting.
Harlequin duck <i>Histrionicus histrionicus</i>	FSC/CSC	Nests along shores of shallow, swift rivers with plentiful aquatic invertebrates.

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

MARIN COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Loggerhead shrike <i>Lanius ludovicianus</i>	FSC/CSC	Nests in shrublands and forages in open grasslands
Lewis's woodpecker <i>Melanerpes lewis</i>	FSC/--	Open woodlands in interior foothills and valleys
San Pablo song sparrow <i>Melospiza melodia samuelis</i>	FSC/	Salt marshes of eastern and south San Francisco Bay
Long-billed curlew <i>Numenius americanus</i>	FSC/--	Lake beaches, nests in both dry and wet uplands
Black-crowned night heron <i>Nycticorax nycticorax</i>	--/*	Lake margins, mud bordered bays, marshy areas
Ashy storm petrel <i>Oceanodroma homochroa</i>	FSC/	Coastal/oceanic habitats. Nests on islands with natural cavities or provided burrows.
Double-crested cormorant <i>Phalacrocorax auritus</i>	--/CSC	Nests along coast on isolated islands or in trees along lake margins.
Rufous hummingbird <i>Selasphorus rufus</i>	FSC/--	Forests, woodland edges, thickets
Allen's hummingbird <i>Selasphorus sasin</i>	FSC/--	Brush and woodlands
Elegant tern <i>Sterna elegans</i>	FSC/CSC	Does not nest in northern California, forages in inshore coastal waters, bays, and estuaries
Mammals		
Pallid bat <i>Antrozous pallidus</i>	--/CSC	Open, dry habitats with rocky outcrops, cliffs, caverns, and crevices for roosting
Point Reyes mountain beaver <i>Aplodontia rufa phaea</i>	FSC/CSC	Digs burrows in thickets of riparian-deciduous and open, brushy forests, often near water, subspecies found only in West Marin County
Townsend's western big-eared bat <i>Corynorhinus townsendi townsendii</i>	FSC/CSC	Humid coastal regions, will only roost in the open, extremely sensitive to disturbance
Greater western mastiff bat <i>Eumops perotis californicus</i>	FSC/CSC	Open arid to semi-arid habitats, including woodlands, coastal scrub, chaparral, and grasslands. Roosts in trees, cliffs, dwellings
Long-eared myotis <i>Myotis evotis</i>	FSC/--	Brush, woodland, and forest habitats, prefers coniferous habitat types. Nursery colonies in buildings, crevices, spaces under tree bark, and snags.
Fringed myotis <i>Myotis thysanodes</i>	FSC/--	A wide variety of habitats. Optimal habitats are valley-foothill hardwood and hardwood-conifer types. Uses caves, buildings, or crevices for roosting and nursery colonies.

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

MARIN COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Long-legged myotis <i>Myotis volans</i>	FSC/--	Most common in woodland and forest habitats above 4000 feet. Use trees and caves for roosting, hollow trees or spaces under tree bark for nursery colonies.
Yuma myotis <i>Myotis yumanensis</i>	FSC/--	Optimal habitat is open forests or woodlands with sources of water and flying insects. Nursery colonies in caves, buildings, or crevices.
San Pablo vole <i>Microtus californicus sanpabloensis</i>	--/CSC	Salt-marshes
Angel Island mole <i>Scapanus latimanus insularis</i>	--/CSC	Primarily grasslands but found in a variety of habitat types, needs friable soil for burrowing
Suisun ornate shrew <i>Sorex ornatus sinuosus</i>	FSC/CSC	Tidal and brackish marshes with species such as pickleweed, cordgrass, gumplant, and bulrush
Salt marsh wandering shrew <i>Sorex vagrans halicoetes</i>	FSC/CSC	Salt-marshes
Point Reyes jumping mouse <i>Zapus trinotatus orarius</i>	FSC/CSC	Coastal prairie habitat, requires dense herbaceous cover near water
Plants		
Pink sand-verbena <i>Abronia umbellata</i> ssp. <i>umbellata</i>	FSLC/--/List 1B	Sandy areas, coastal dunes
Franciscan onion <i>Allium peninsulare</i> var. <i>franciscanum</i>	FSC/--/List 1B	Dry valley grasslands and foothill woodlands
Napa false indigo <i>Amorpha californica</i> var. <i>napensis</i>	--/--/List 1B	Dry slopes in yellow pine forest, chaparral, mixed evergreen forest, northern oak woodland
Bent-flowered fiddleneck <i>Amsinckia lunaris</i>	--/--/List 1B	Coastal bluff scrub, cismontane woodland, valley and foothill grassland
Franciscan manzanita <i>Arctostaphylos hookeri</i> ssp. <i>franciscana</i>	--/--/List 1A	Chaparral on serpentine soils. Formerly endemic to San Francisco area.
Mt. Tamalpais manzanita <i>Arctostaphylos hookeri</i> ssp. <i>montana</i>	FSC/--/List 1B	Coastal scrub, coniferous forests
Montara manzanita <i>Arctostaphylos montaraensis</i>	FSC/--/List 1B	Maritime chaparral, coastal scrub

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

MARIN COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Marin manzanita <i>Arctostaphylos virgata</i>	--/--/List 1B	Granitic sedimentary sandstone in chaparral and coniferous forest habitats.
Nuttall's milk-vetch <i>Astragalus nuttallii</i> var. <i>virgatus</i>	FSLC/--/List 4	Coastal habitats
Marsh milk-vetch <i>Astragalus pycnostachyus</i> var. <i>pycnostachyus</i>	FSLC/--/List 1B	Coastal and saltmarsh habitats
Alkali milk-vetch <i>Astragalus tener</i> var. <i>tener</i>	--/--/List 1B	Alkali flats and vernal pools in valley grasslands
California saltbush <i>Atriplex californica</i>	FSLC/	Coastal and salt-marsh habitats; sandy, coastal areas, and at seaside.
Small groundcone <i>Boschniakia hookeri</i>	--/--/List 2	Redwood forests
Coast Indian paintbrush <i>Castilleja affinis</i> ssp. <i>affinis</i>	FSLC/	Chapparal and coastal scrub.
Salt marsh owl's clover <i>Castilleja ambigua</i> ssp. <i>ambigua</i>	FSLC/--/List 1B	Salt marshes
San Francisco Bay spineflower <i>Chorizanthe cuspidata</i> var. <i>cuspidata</i>	FSC/--/List 1B	Coastal bluff scrub, coastal dunes, coastal prairie, on sandy soils
Franciscan thistle <i>Cirsium andrewsii</i>	--/--/List 1B	Mesic locales in broadleaved upland forests, coastal bluff scrub, coastal prairie, sometimes on serpentine soils
Mt. Tamalpais thistle <i>Cirsium hydrophilum</i> var. <i>vaseyi</i>	FSC/--/List 1B	Ultramafic seeps, sandy streams
Davy's clarkia <i>Clarkia davyi</i>	FSLC/	Coastal grassland and bluffs.
Round-headed collinsia <i>Collinsia corymbosa</i>	--/--/List 1B	Coastal dunes and coastal prairie
San Francisco collinsia <i>Collinsia multicolor</i>	--/--/List 1B	Closed-cone coniferous forests, coastal scrub, sometimes on serpentinite derived soils
Point Reyes bird's-beak <i>Cordylanthus maritimus</i> ssp. <i>palustris</i>	--/--/List 1B	Upper zones of coastal salt marsh

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

MARIN COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Western leatherwood <i>Dirca occidentalis</i>	--/--/List 1B	Broadleaved upland forests, closed-cone coniferous forests, chaparral, cismontane woodland, North coast coniferous forests, riparian forests, riparian woodland; mesic sites
Tiburon buckwheat <i>Eriogonum luteolum</i> var. <i>caninum</i>	FSLC/--/List 3	Serpentine soils in coastal prairie, chaparral, valley grassland habitats
Round-leaved filaree <i>Erodium macrophyllum</i>	--/--/List 2	Clay soils in cismontane woodland and valley and foothill grassland
San Francisco wallflower <i>Erysimum franciscanum</i>	FSC/	Coastal dunes, coastal scrub, grasslands, often on serpentinite or granitic soils
Fissidens moss <i>Fissidens pauperculus</i>	--/--/List 1B	Damp soils in north coast coniferous forests
Marin checker lily <i>Fritillaria affinis</i> var. <i>tristulis</i>	--/--/List 1B	Coastal prairie, northern coastal scrub
Fragrant fritillary <i>Fritillaria liliacea</i>	FSC/--/List 1B	Coastal scrub, valley and foothill grassland, coastal prairie; on heavy clay soils, often on ultramafic soils
Dune gilia <i>Gilia capitata</i> ssp. <i>chamissonis</i>	--/--/List 1B	Coastal dunes and coastal scrub
Woolly-headed gilia <i>Gilia capitata</i> ssp. <i>tomentosa</i>	--/--/List 1B	Dry sandy and rocky soils in coastal habitats
Dark-eyed gilia <i>Gilia millefoliata</i>	--/--/List 1B	Coastal dunes
San Francisco gumplant <i>Grindelia hirsutula</i> var. <i>maritima</i>	FSC/--/List 1B	Coastal bluff scrub, coastal scrub, grasslands, on sandy or serpentinite derived soils
Diablo helianthella <i>Helianthella castanea</i>	FSC/--/List 1B	Openings in chaparral and broadleaved upland forest, extirpated in Marin County.
Tiburon tarplant <i>Hemizonia multicaulis</i> ssp. <i>vernalis</i>	FSC/	Highly restricted distribution in coastal scrub and grassland habitats
Congdon's tarplant <i>Hemizonia parryi</i> ssp. <i>congdonii</i>	FSC/CSC/List 1B	Valley grassland
Short-leaved evax <i>Hesperavex sparsiflora</i> var. <i>brevifolia</i>	--/--/List 2	Coastal dunes and on sandy substrate in coastal bluff scrub
Kellogg's horkelia <i>Horkelia cuneata</i> ssp. <i>sericea</i>	FSC/--/List 1B	Closed-cone coniferous forests, coastal scrub, extirpated in Marin County.

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

MARIN COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Thin-lobed horkelia <i>Horkelia tenuiloba</i>	--/--/List 1B	Moist openings in chaparral habitats
Tamalpais lessingia <i>Lessingia micradenia</i> var. <i>micradenia</i>	FSC/--/List 1B	Disturbed serpentine soils in chaparral, and valley grassland habitats
Rose linanthus <i>Linanthus rosaceus</i>	--/--/List 1B	Coastal bluff scrub
Marsh microseris <i>Microseris paludosa</i>	--/--/List 1B	Wet areas in a variety of habitats, including coastal scrub and valley and foothill grassland
Curly-leaved monardella <i>Monardella undulata</i>	FSC/--/List 4	Sandy soils in dune and coastal habitats
Baker's navarretia <i>Navarretia leucocephala</i> ssp. <i>bakeri</i>	--/--/List 1B	Vernal pools and swales
Marin County navarretia <i>Navarretia rosulata</i>	--/--/List 1B	Rocky serpentine soils in closed-cone coniferous forest and chaparral habitat
Gairdner's yampah <i>Perideridia gairdneri</i> ssp. <i>gairdneri</i>	FSC/	Moist vernal pools in grassland, scrub, and forest habitats.
Hairless popcorn-flower <i>Plagiobothrys glaber</i>	--/--/List 1A	Coastal salt-marsh, alkaline flats, meadows, and seeps
Petaluma popcorn-flower <i>Plagiobothrys mollis</i> var. <i>vestitus</i>	FSC/--/List 1A	Marshes and swamps, valley and foothill grassland, presumed extinct in California
Marin knotweed <i>Polygonum marinense</i>	FSC/--/List 3	Marshes and swamps
Tamalpais oak <i>Quercus parvula</i> var. <i>tamalpaisensis</i>	--/--/List 1B	Known only from Mt. Tamalpais, lower montane coniferous forest
Point Reyes checkerbloom <i>Sidalcea calycosa</i> ssp. <i>rhizomata</i>	--/--/List 1B	Coastal freshwater marshes and swamps
Marin checkerbloom <i>Sidalcea hickmanii</i> ssp. <i>viridis</i>	FSC/--/List 1B	Chaparral, usually on serpentinite
San Francisco champion <i>Silene verecunda</i> ssp. <i>verecunda</i>	FSC/--/List 1B	Coastal bluff scrub, chaparral, coastal prairie, coastal scrub, grasslands with sandy soil
Pacific cordgrass <i>Spartina foliosa</i>	FSLC/--/--	Salt marshes

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

MARIN COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Santa Cruz microseris <i>Stebbinsoseris decipiens</i>	--/--/List 1B	In a variety of habitats, including forests, chaparral, and coastal prairie and scrub. On seaward slopes in open areas with loose or disturbed soils.
Tamalpais jewelflower <i>Streptanthus batrachopus</i>	FSC/--/List 1B	Serpentine soils in closed-cone coniferous forests and chaparral habitat
Mt. Tamalpais jewelflower <i>Streptanthus glandulosus</i> ssp. <i>pulchellus</i>	--/--/List 1B	Serpentine soils in valley and foothill grassland and chaparral habitat
San Francisco owl's-clover <i>Triphysaria floribunda</i>	FSC/--/List 1B	Coastal prairie and grasslands, often on serpentinite substrates
<i>Triquetrella californica</i>	--/--/List 1B	Coastal bluff scrub, coastal scrub

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

MARIN COUNTY		
SENSITIVE PLANT COMMUNITIES		
Name	Global Rank	State Rank
Coastal brackish marsh	G2	S2.1
Coastal terrace prairie	G2	S2.1
Northern coastal salt marsh	G3	S3.2
Northern vernal pool	G2	S2.1
Serpentine bunchgrass	G2	S2.2

SAN FRANCISCO COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
SPECIES LISTED OR PROPOSED FOR LISTING		
<i>Invertebrates</i>		
Bay checkerspot butterfly <i>Euphydryas editha bayensis</i>	FT/--	Serpentine bunchgrass grassland, require healthy populations of <i>Plantago erecta</i> as a host plant for larvae.
Mission blue butterfly <i>Icaricia icarioides missionensis</i>	FE/--	Grassland with <i>Lupinus albifrons</i> , <i>L. formosa</i> , and <i>L. varicolor</i>
San Bruno elfin butterfly <i>Incisalia mossii bayensis</i>	FE/--	Coastal scrub
Callippe silverspot butterfly <i>Speyeria callippe callippe</i>	FE/--	Found in native grasslands with <i>Viola pedunculata</i> as larval food plant
<i>Fish</i>		
Tidewater goby <i>Eucyclogobius newberryi</i>	FT/CSC	Shallow waters of bays and estuaries
Delta smelt <i>Hypomesus transpacificus</i> Critical Habitat designated	FT/CT	Restricted to the Sacramento-San Joaquin Delta, including Suisun and San Pablo Bays and the Carquinez Strait.

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

SAN FRANCISCO COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Coho salmon—Central California coast ESU <i>Oncorhynchus kisutch</i> Critical Habitat designated	FT/CE	Accessible Bay Area and coastal rivers and streams with cover, cool water and sufficient dissolved oxygen. Require beds of loose, silt-free gravel for spawning.
Steelhead – Central California Coast ESU <i>Oncorhynchus mykiss irideus</i> Critical Habitat designated	FT/CSC	Accessible Bay Area and coastal rivers and streams
Steelhead-Central Valley ESU <i>Oncorhynchus mykiss irideus</i> Critical Habitat designated	FT/CSC	Spawn in the Sacramento and San Joaquin Rivers and their tributaries, migrate through San Francisco and Suisun Bays, as well as the Delta region
Chinook salmon—Central Valley ESU spring run <i>Oncorhynchus tshawytscha</i> Critical Habitat designated	FT/CT	Spawning and rearing restricted to Sacramento River basin, migrate through San Francisco Bay and Sacramento-SanJoaquin Delta
Chinook salmon—Central Valley ESU fall/late fall run <i>Oncorhynchus tshawytscha</i> Critical Habitat designated	FC/CSC	Spawning and rearing restricted to Sacramento River basin, migrate through San Francisco Bay and Sacramento-SanJoaquin Delta, require clean, cold water and gravel beds for spawning
Chinook salmon—Central Valley ESU winter run <i>Oncorhynchus tshawytscha</i> Critical Habitat designated	FE/CE	Spawning restricted to the Sacramento River. Requires clean, cold water with gravel beds.
Sacramento splittail <i>Pogonichthys macrolepidotus</i>	FT/CSC	Slow moving river sections and dead-end sloughs with flooded vegetation for spawning and foraging for young.
Birds		
Western snowy plover <i>Charadrius alexandrinus nivosus</i>	FT/CSC	Nests and forages on sandy beaches on marine and estuarine shores - requires sandy, gravelly, or friable soils for nesting
Bald eagle ² <i>Haliaeetus leucocephalus</i>	FT/CE	Nests and forages on inland lakes, reservoirs, and rivers; winter foraging at lakes and along major rivers
California black rail <i>Laterallus jamaicensis coturniculus</i>	FSC/CT/3511	Nests and forages in tidal emergent wetland with pickleweed and cordgrass
California brown pelican <i>Pelecanus occidentalis californicus</i>	FE/3511	Nests on coastal islands of small to moderate size that afford protection from predators.
California clapper rail <i>Rallus longirostris obsoletus</i>	FE/CE	Nests and forages in emergent wetlands with pickleweed, cordgrass, and bulrush
Bank swallow <i>Riparia riparia</i>	--/CT	Nests primarily in riparian and other lowland habitat. Requires vertical banks or cliffs with fine textured or sandy soils near water.

² The bald eagle was proposed for delisting by the U.S. Fish and Wildlife Service on July 6, 1999.

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

SAN FRANCISCO COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
California least tern <i>Sterna antillarum browni</i>	FE/CE	Colonial breeder on bare or sparsely vegetated flat substrates including sand beaches, alkali flats, land fills, or paved areas
Mammals		
Salt marsh harvest mouse <i>Reithrodontomys raviventris</i>	FE/CE	Saline emergent marsh with dense pickleweed
Plants		
Presidio Manzanita <i>Arctostaphylos hookeri</i> ssp. <i>ravenii</i>	FE/CE/List 1B	Chaparral, coastal prairie, coastal scrub. Endemic to San Francisco area.
San Bruno Mtn. Manzanita <i>Arctostaphylos imbricata</i>	FSC/CE/List 1B	Chaparral, coastal scrub
Marsh sandwort <i>Arenaria paludicola</i>	FE/CE/List 1B	Marshes and swamps; Growing up through dense mats of <i>Typha</i> , <i>Juncus</i> , <i>Scirpus</i> , etc. in freshwater marsh.
Robust spineflower <i>Chorizanthe robusta</i> var. <i>robusta</i>	FE/--/List 1B	Coastal scrub, coastal sand dunes, openings in oak woodlands with sandy or gravelly soil
Fountain thistle <i>Cirsium fontinale</i> var. <i>fontinale</i>	FE/CE/List 1B	Grassland and openings in chaparral, in serpentinite seeps
Presidio clarkia <i>Clarkia franciscana</i>	FE/CE/List 1B	Coastal scrub, grassland on serpentine and other ultramafic soils
Marin dwarf flax <i>Hesperolinon congestum</i>	FT/CT/List 1B	Grassland and openings in chaparral, often on serpentinite
Santa Cruz tarplant <i>Holocarpha macradenia</i>	FT/CE/List 1B	Coastal scrub, coastal sand dunes, openings in oak woodlands with sandy or gravelly soil
Beach layia <i>Layia carnosa</i>	FE/CE/List 1B	Sparsely vegetated semi-stabilized coastal sand dunes, usually behind foredunes and in coastal scrub on sandy substrate.
San Francisco lessingia <i>Lessingia germanorum</i>	FE/CE/List 1B	Coastal scrub on remnant dunes. In sandy soils where cover is open and competition from other species is low.
White rayed pentachaeta <i>Pentachaeta bellidiflora</i>	FE/CE/List 1B	Open dry rocky slopes and grassland, often on soils derived from serpentinite.
San Francisco popcorn flower <i>Plagiobothrys diffusus</i>	--/CE/List 1B	Coastal prairie, valley and foothill grassland.
Adobe sanicle <i>Sanicula maritima</i>	--/CR/List 1B	Moist clay or ultramafic soils in meadows and seeps, grasslands
California seablite <i>Suaeda californica</i>	FE/--/List 1B	Coastal salt marshes and swamps

FEDERAL OR STATE SPECIES OF SPECIAL CONCERN

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

SAN FRANCISCO COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Invertebrates		
Tomales isopod <i>Caecidotea tomalensis</i>	FSC/--	Freshwater streams or ponds with still or slow water
Serpentine phalangid <i>Calcina serpentina</i>	FSC/--	Serpentine rocks and barrens
Sandy beach tiger beetle <i>Cicindela hirticollis gravida</i>	FSC/--	Sandy areas around water; larva live in burrows in sand along sea beaches, creeks, seepages, and lake shores.
Globose dune beetle <i>Coelus globosus</i>	FSC/--	California's coastal dune system; primarily subterranean, tunneling through sand underneath dune vegetation.
Monarch butterfly <i>Danaus plexippus</i>	--/*	Winter in California. Roost in wind protected eucalyptus, Monterey pine, and cypress groves, with water and nectar sources nearby.
Ricksecker's water scavenger beetle <i>Hydrochara rickseckeri</i>	FSC/--	Found in freshwater ponds, shallow water of streams marshes and lakes
Leech's skyline diving beetle <i>Hydroporus leechi</i>	FSC/--	Found in freshwater ponds, shallow water of streams marshes and lakes
Bumblebee scarab beetle <i>Lichananthe ursina</i>	FSC/--	Inhabits coastal sand dunes.
Mimic tryonia <i>Tryonia imitator</i>	FSC/--	Inhabits coastal lagoons, estuaries, and salt marshes. Found only in permanently submerged areas, able to adapt to a wide range of salinities.
Fish		
Pacific lamprey <i>Lampetra tridentata</i>	FSC/--	Pacific Ocean and estuaries; spawning in coastal streams from Alaska to Baja California
Longfin smelt <i>Spirinchus thaleichthys</i>	FSC/--	Sacramento-San Joaquin estuary in the salt or brackish water portions of the estuary, require fresh water, sandy-gravel substrates, rocks, and aquatic vegetation for spawning
Amphibians		
Foothill yellow-legged frog <i>Rana boylei</i>	FSC/CSC	Streams with quiet pools absent of predatory fish
Reptiles		
Western pond turtle <i>Clemmys marmorata marmorata</i>	FSC/CSC	Freshwater ponds and slow streams, marshes, rivers, and irrigation ditches with upland sandy soils for laying eggs
Southwestern pond turtle <i>Clemmys marmorata pallida</i>	FSC/--	Permanent or nearly permanent bodies of water in a variety of habitat types. Require basking sites such as partially submerged logs or open mud banks.

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

SAN FRANCISCO COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
California horned lizard <i>Phrynosoma coronatum frontale</i>	FSC/CSC	Patchy open areas with sandy soils
Birds		
Tricolored blackbird <i>Agelaius tricolor</i>	FSC/CSC	Riparian thickets and emergent vegetation
Grasshopper sparrow <i>Ammodramus savannarum</i>	FSC/--	Riparian thickets and emergent vegetation near open water
Bell's sage sparrow <i>Amphispiza belli belli</i>	FSC/CSC	Prefer chaparral with fairly dense stands of chamise
Short-eared owl <i>Asio flammeus</i>	--/CSC	Fresh water and salt marshes and swamps, lowland meadows, irrigated fields
Western burrowing owl	FSC/CSC	Nests in mammal burrows in open, sloping grasslands
Ferruginous hawk <i>Buteo regalis</i>	FSC/CSC	Dry open country with a variety of habitats
Costa's hummingbird <i>Calypte costae</i>	FSC/--	Dry chaparral, desert washes
Lawrence's goldfinch <i>Carduelis lawrencei</i>	FSC/--	Dry grassy slopes and chaparral
Vaux's swift <i>Chaetura vauxi</i>	FSC/--	Riparian woodlands and woodlands near lakes
Black tern <i>Chlidonias niger</i>	FSC/CSC	Freshwater lakes, marshes, ponds, and flooded agricultural fields
Black swift <i>Cypseloides niger</i>	FSC/CSC	Colonial breeders using cliffs in deep canyons
Hermit warbler <i>Dendroica occidentalis</i>	FSC/--	Prefers coniferous habitat
White-tailed kite <i>Elanus leucurus</i>	--/3511	Nests near wet meadows and open grasslands, dense oak, willow or other large tree stands.
Little willow flycatcher <i>Empidonax traillii brewsteri</i>	FSC/CSC	Willow riparian habitat, dry, brushy upland pastures
American peregrine falcon <i>Falco peregrinus anatum</i>	Delisted	Nests near wetlands, lakes, rivers, or other water on cliffs, banks, human structures
Saltmarsh common yellowthroat <i>Geothlypis trichas sinuosa</i>	FSC/CSC	Saline and freshwater marshes. Requires thick cover down to water surface for foraging; tall grasses, tules, or willows for nesting.
Harlequin duck <i>Histrionicus histrionicus</i>	FSC/CSC	Rocky coastal islets, forested mountain streams with fast-flowing water, occ. On open tundra.

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

SAN FRANCISCO COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Loggerhead shrike <i>Lanius ludovicianus</i>	FSC/CSC	Nests in shrublands and forages in open grasslands
Lewis's woodpecker <i>Melanerpes lewis</i>	FSC/--	Open woodlands in interior foothills and valleys
Alameda (South Bay) song sparrow <i>Melospiza melodia pusillula</i>	FSC/CSC	Salt marshes of eastern and south San Francisco Bay
Long-billed curlew <i>Numenius americanus</i>	FSC/--	Lake beaches, nests in both dry and wet uplands
Ashy storm petrel <i>Oceanodroma homochroa</i>	FSC/	Coastal/oceanic habitats. Nests on islands with natural cavities or provided burrows.
Double-crested cormorant <i>Phalacrocorax auritus</i>	--/CSC	Nests along coast on isolated islands or in trees along lake margins
Rufous hummingbird <i>Selasphorus rufus</i>	FSC/--	Forests, woodland edges, thickets
Allen's hummingbird <i>Selasphorus sasin</i>	FSC/--	Brush and woodlands
Elegant tern <i>Sterna elegans</i>	FSC/CSC	Salt marsh dikes, sand beaches, and flats
Mammals		
Townsend's western big-eared bat <i>Corynorhinus townsendi townsendii</i>	FSC/CSC	Humid coastal regions, will only roost in the open, extremely sensitive to disturbance
Greater western mastiff bat <i>Eumops perotis californicus</i>	FSC/CSC	Open arid to semi-arid habitats, including woodlands, coastal scrub, chaparral, and grasslands. Roosts in trees, cliffs, dwellings
Long-eared myotis <i>Myotis evotis</i>	FSC/--	Brush, woodland, and forest habitats, prefers coniferous habitat types. Nursery colonies in buildings, crevices, spaces under tree bark, and snags.
Fringed myotis <i>Myotis thysanodes</i>	FSC/--	A wide variety of habitats. Optimal habitats are valley-foothill hardwood and hardwood-conifer types. Uses caves, buildings, or crevices for roosting and nursery colonies.
Long-legged myotis <i>Myotis volans</i>	FSC/--	Most common in woodland and forest habitats above 4000 feet. Use trees and caves for roosting, hollow trees or spaces under tree bark for nursery colonies.
Yuma myotis <i>Myotis yumanensis</i>	FSC/--	Optimal habitat is open forests or woodlands with sources of water and flying insects. Nursery colonies in caves, buildings, or crevices.
San Francisco dusky-footed woodrat <i>Neotoma fuscipes annectens</i>	FSC/CSC	Hardwood forests and scrub communities

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

SAN FRANCISCO COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Angel Island mole <i>Scapanus latimanus insularis</i>	--/CSC	Primarily grasslands but found in a variety of habitat types, needs friable soil for burrowing
Salt marsh wandering shrew <i>Sorex vagrans halicoetes</i>	FSC/CSC	Salt-marshes
Plants		
Pink sand-verbena <i>Abronia umbellata</i> ssp. <i>umbellata</i>	FSLC/--/List 1B	Sandy, dry and sunny habitat; Sonoma and Contra Costa, Counties and Baja, CA.
Bent-flowered fiddleneck <i>Amsinckia lunaris</i>	--/--/List 1B	Coastal bluff scrub, cismontane woodland, valley and foothill grassland
Coast rock crest <i>Arabis blepharophylla</i>	FSLC/--/List 4	Rocky outcrops, grassy slopes
Franciscan manzanita <i>Arctostaphylos hookeri</i> ssp. <i>franciscana</i>	--/--/List 1A	Chaparral on serpentine soils. Formerly endemic to San Francisco area.
San Bruno Mountain manzanita <i>Arctostaphylos imbricata</i>	--/CE/List 1B	Chapparal
Montara manzanita <i>Arctostaphylos montaraensis</i>	FC/--/List 1B	Maritime chaparral, coastal scrub
Nuttall's milk-vetch <i>Astragalus nuttallii</i> var. <i>virgatus</i>	FSLC/--/List 4	Open bluffs, dunes, and sandy areas
Marsh milk-vetch <i>Astragalus pycnostachyus</i> var. <i>pycnostachyus</i>	FSLC/--/List 1B	Coastal marshes or sweeps
Alkali milk-vetch <i>Astragalus tener</i> var. <i>tener</i>	--/--/List 1B	Alkali flats and vernal pools in valley grasslands
California saltbush <i>Atriplex californica</i>	FSLC/--/--	Coastal and salt-marsh habitats; sandy, coastal areas, and at seaside.
Coast Indian paintbrush <i>Castilleja affinis</i> ssp. <i>affinis</i>	FSLC/--/--	Chaparral and coastal scrub.
Salt marsh owl's clover <i>Castilleja ambigua</i> ssp. <i>ambigua</i>	FSLC/--/List 1B	Salt marshes
California goosefoot <i>Chenopodium californicum</i>	FSLC/--/--	Generally open sites; sandy to clay soils.
San Francisco Bay spineflower <i>Chorizanthe cuspidata</i> var. <i>cuspidata</i>	FSC/--/List 1B	Coastal bluff scrub, coastal dunes, coastal prairie, on sandy soils
Franciscan thistle <i>Cirsium andrewsii</i>	--/--/List 1B	Mesic locales in broadleaved upland forests, coastal bluff scrub, coastal prairie, sometimes on serpentine soils

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

SAN FRANCISCO COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Compact cobwebby thistle <i>Cirsium occidentale</i> var. <i>compactum</i>	--/--/List 1B	On coastal dunes and clay soils in chaparral, coastal prairie, coastal scrub
Davy's clarkia <i>Clarkia davyi</i>	FSLC/--/--	Coastal grassland and bluffs.
Round-headed collinsia <i>Collinsia corymbosa</i>	--/--/List 1B	Coastal dunes and coastal prairie
San Francisco collinsia <i>Collinsia multicolor</i>	--/--/List 1B	Closed-cone coniferous forests, coastal scrub, sometimes on serpentinite derived soils
Point Reyes bird's-beak <i>Cordylanthus maritimus</i> ssp. <i>palustris</i>	--/--/List 1B	Upper zones of coastal salt marsh
California croton <i>Croton californicus</i>	FSLC/--/--	Sandy soils, dunes and washes.
Round-leaved filaree <i>Erodium macrophyllum</i>	--/--/List 2	Clay soils in cismontane woodland and valley and foothill grassland
San Francisco wallflower <i>Erysimum franciscanum</i>	FSC/--/List 4	Coastal dunes, coastal scrub, grasslands, often on serpentinite or granitic soils
Fragrant fritillary <i>Fritillaria liliacea</i>	FSC/--/List 1B	Coastal scrub, valley and foothill grassland, coastal prairie; on heavy clay soils, often on ultramafic soils
Dune gilia <i>Gilia capitata</i> ssp. <i>chamissonis</i>	--/--/List 1B	Coastal dunes and coastal scrub
Dark-eyed gilia <i>Gilia millefolia</i>	--/--/List 1B	Coastal dunes
San Francisco gumplant <i>Grindelia hirsutula</i> var. <i>maritima</i>	FSC/--/List 1B	Coastal bluff scrub, coastal scrub, grasslands, on sandy or serpentinite derived soils
Diablo helianthella <i>Helianthella castanea</i>	FSC/--/List 1B	Openings in chaparral and broadleaved upland forest
Congdon's tarplant <i>Hemizonia parryi</i> ssp. <i>congdonii</i>	FSC/CSC/List 1B	Valley grassland
Short-leaved evax <i>Hesperevax sparsiflora</i> var. <i>brevifolia</i>	--/--/List 2	Coastal dunes and on sandy substrate in coastal bluff scrub
Wedgeleaf horkelia <i>Horkelia cuneata</i> ssp. <i>cuneata</i>	FSLC/--/--	Old dunes and coastal sandhills.
Kellogg's horkelia <i>Horkelia cuneata</i> ssp. <i>sericea</i>	FSC/--/List 1B	Closed-cone coniferous forests, coastal scrub
Crystal Springs lessingia <i>Lessingia arachnoidea</i>	FSC/--/List 1B	Cismontane woodland, coastal scrub, grasslands, on serpentinite, often on roadcuts

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

SAN FRANCISCO COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Large-flowered linanthus <i>Linanthus grandiflorus</i>	FSC/--/List 4	Open graasy flats, generally in sandy soils
Rose linanthus <i>Linanthus rosaceus</i>	--/--/List 1B	Coastal bluff scrub
Marsh microseris <i>Microseris paludosa</i>	--/--/List 1B	Wet areas in a variety of habitats, including coastal scrub and valley and foothill grassland
Curly-leaved monardella <i>Monardella undulata</i>	FSC/--/List 4	Dunes, sandy soils in sagebrush scrub; Contra Costa and San Francisco
Skunkweed <i>Navarretia squarrosa</i>	FSLC/--/--	Open, wet, gravely flats and slopes.
California broomrape <i>Orobanche californica</i> ssp. <i>californica</i>	FSLC/--/--	Sandy or heavy soils of coastal bluffs; uncommon.
Coast rein-orchid <i>Piperia elegans</i>	FSLC/--/List 1B	Generally dry, open sites, shrubland, and coniferous forest.
Choris's popcorn-flower <i>Plagiobothrys chorisianus</i> var. <i>chorisianus</i>	--/--/List 1B	Chaparral, coastal prairie, coastal scrub, on mesic sites
San Francisco popcorn flower <i>Plagiobothrys diffusus</i>	--/CSC/List 1B	Coastal prairie, valley and foothill grasslands, found in Alameda and Santa Cruz Counties.
Hairless popcorn-flower <i>Plagiobothrys glaber</i>	--/--/List 1A	Coastal salt-marsh, alkaline flats, meadows, and seeps
Greene's popcorn flower <i>Plagiobothrys reticulatus</i> var. <i>rossianorum</i>	FSLC/--/--	Moist places in forests and grasslands-northwest San Francisco.
Adobe sanicle <i>Sanicula maritima</i>	FSC/--/List 1B	Chaparral, coastal prairie, meadows, valley and foothill grasslands; clay and serpentine soils. Monterey and San Luis Obispo Counties.
Marin checkerbloom <i>Sidalcea hickmanii</i> ssp. <i>viridis</i>	FSC/--/List 1B	Chaparral, usually on serpentinite
San Francisco campion <i>Silene verecunda</i> ssp. <i>verecunda</i>	FSC/--/List 1B	Coastal bluff scrub, chaparral, coastal prairie, coastal scrub, grasslands with sandy soil
Pacific cordgrass <i>Spartina foliosa</i>	FSLC/--/--	Salt marshes
Santa Cruz microseris <i>Stebbinsoseris decipiens</i>	--/--/List 1B	In a variety of habitats, including forests, chaparral, and coastal prairie and scrub on seaward slopes in open areas with loose or disturbed soils.
Dune tansy <i>Tanacetum camphoratum</i>	FSLC/--/--	Coastal dunes; uncommon.

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

SAN FRANCISCO COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
San Francisco owl's-clover <i>Triphysaria floribunda</i>	FSC/--/List 1B	Coastal prairie and grasslands, often on serpentinite substrates
California triquetrella moss <i>Triquetrella californica</i>	--/--/List 1B	Coastal bluff scrub, coastal scrub

SAN FRANCISCO COUNTY		
SENSITIVE PLANT COMMUNITIES		
Name	Global Rank	State Rank
Northern coastal salt marsh	G3	S3.2

CONTRA COSTA COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements

SPECIES LISTED OR PROPOSED FOR LISTING

Invertebrates		
Lange's metalmark butterfly <i>Apodemia mormo langei</i>	FE/--	Stabilized dunes, primary host plant is <i>Eriogonum nudum</i> var. <i>auriculatum</i>
Longhorn fairy shrimp <i>Branchinecta longiantenna</i>	FE/--	Endemic to small, rain-filled grassland pools of the Central Valley
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	FT/--	Grassland vernal pools
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i> Critical Habitat designated	FT/--	Occurs only in the California Central Valley in association with blue elderberry (<i>Sambucus mexicana</i>); eggs laid in 1" plus diameter elderberry trees with a preference shown for "stressed" plants
Delta green ground beetle <i>Elaphrus viridis</i>	FT/--	Muddy substrate at edges of vernal pools between Jepson Prairie and Travis AFB.
Bay checkerspot butterfly <i>Euphydryas editha bayensis</i>	FT/--	Serpentine bunchgrass grassland with healthy populations of larval host, <i>Plantago erecta</i>
Vernal pool tadpole shrimp <i>Lepidurus packardii</i>	FE/--	Vernal pools
Callippe silverspot butterfly <i>Speyeria callippe</i> <i>callippe</i>	FE/--	Found in native grasslands with <i>Viola pedunculata</i> as larval food plant

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

CONTRA COSTA COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
California freshwater shrimp <i>Syncaris pacifica</i>	FE/CE	Permanent streams with fishes. Pool areas of low-elevation, low-gradient streams, among exposed live tree roots of undercut banks, overhanging woody debris, or overhanging vegetation. Found in 17 stream segments within Marin, Napa and Sonoma counties. Many of these stream segments are isolated from the others by barriers, dewatered areas and low quality habitat.
Fish		
Tidewater goby <i>Eucyclogobius newberryi</i>	FE/CSC	Shallow waters of bays and estuaries, in lower stream reaches
Delta smelt <i>Hypomesus transpacificus</i> Critical Habitat designated	FT/CT	Restricted to the Sacramento-San Joaquin Delta, including Suisun and San Pablo Bays and the Carquinez Strait.
Steelhead – Central California Coast ESU <i>Oncorhynchus mykiss irideus</i>	FT/CSC	Unblocked Bay Area and coastal rivers and streams
Steelhead-Central Valley ESU <i>Oncorhynchus mykiss</i>	FT/--	Spawn in the Sacramento and San Joaquin Rivers and their tributaries, migrate through San Francisco and Suisun Bays, as well as the Delta region
Chinook salmon—Central Valley spring-run <i>Oncorhynchus tshawytscha</i> Critical Habitat designated	FT/CT	Spawning and rearing restricted to Sacramento River basin, migrate through San Francisco Bay and Sacramento-SanJoaquin Delta
Chinook salmon—Central Valley fall/late fall-run <i>Oncorhynchus tshawytscha</i> Critical Habitat proposed	FC/CSC	Spawning and rearing restricted to Sacramento River basin, migrate through San Francisco Bay and Sacramento-SanJoaquin Delta, require clean, cold water and gravel beds for spawning
Chinook salmon—winter run <i>Oncorhynchus tshawytscha</i> Critical Habitat designated	FE/CE	Spawning restricted to the Sacramento River. Requires clean, cold water with gravel beds.
Sacramento splittail <i>Pogonichthys macrolepidotus</i>	FT/--	Slow moving rivers, dead end sloughs, require flooded vegetation for spawning and foraging for young
Amphibians		
California tiger salamander <i>Ambystoma californiense</i>	FC/CSC	Seasonal freshwater ponds with little or no emergent vegetation. Utilizes mammal burrows in upland habitat for aestivation during the dry season.

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

CONTRA COSTA COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
California red-legged frog <i>Rana aurora draytonii</i>	FT/CSC	Breed in stock ponds, pools, and slow-moving streams with emergent vegetation for escape cover and egg attachment. Where water is seasonal often utilizes mammal burrows in upland habitat for aestivation
Reptiles		
Alameda whipsnake <i>Masticophis lateralis euryxanthus</i> Critical habitat designated	FT/CT	Preferred habitat a mosaic of open coastal scrub or chaparral and grassland with rocky outcrops
Giant garter snake <i>Thamnophis gigas</i>	FT/CT	Freshwater marsh and slow streams
Birds		
Swainson's hawk <i>Buteo swainsoni</i>	--/CT	Breeds in riparian areas and oak savannah, requires adjacent foraging habitat such as grasslands or fields supporting rodent populations
Mountain plover <i>Charadrius montanus</i>	FPT/CSC	Winters in areas with short-grassed or plowed fields with bare ground and flat topography. Prefer grazed areas and those with burrowing rodents.
Greater sandhill crane <i>Grus canadensis tabida</i>	--/CT	Winters in the Central Valley. Prefers grain fields within 4 miles of a shallow body of water.
Bald eagle <i>Haliaeetus leucocephalus</i>	FT/CE	Nests and forages on inland lakes, reservoirs, and rivers; winter foraging at lakes and along major rivers.
California black rail <i>Laterallus jamaicensis coturniculus</i>	FSC/CT	Nests and forages in tidal emergent wetland with pickleweed and cordgrass
California brown pelican <i>Pelecanus occidentalis californicus</i>	FE/3511	Nests on coastal islands of small to moderate size that afford protection from predators.
California clapper rail <i>Rallus longirostris obsoletus</i>	FE/CE	Nests and forages in emergent wetlands with pickleweed, cordgrass, and bulrush
Bank swallow <i>Riparia riparia</i>	--/CT	Nests primarily in riparian and other lowland habitat. Requires vertical banks or cliffs with fine textured or sandy soils near water.
California least tern <i>Sterna antillarum browni</i>	FE/CE	Colonial breeder on bare or sparsely vegetated flat substrates including sand beaches, alkali flats, land fills, or paved areas
Mammals		

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

CONTRA COSTA COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Riparian woodrat <i>Neotoma fuscipes riparia</i>	FE/CSC	Generally found in riparian areas supporting a mixture of trees and brush. Require suitable nesting sites such as cavities in trees, snags, or logs; spaces in talus; or lodges built of downed woody material, which are usually a conspicuous feature of areas inhabited by the species.
Salt marsh harvest mouse <i>Reithrodontomys raviventris</i>	FE/CE	Saline emergent marsh with dense pickleweed
Riparian brush rabbit <i>Sylvilagus bachmani riparius</i>	FE/CE	Found in San Joaquin Valley native riparian areas with large clumps of dense shrubs, low growing vines, some tall shrubs and scrubby trees.
San Joaquin kit fox <i>Vulpes macrotis mutica</i>	FE/CT	Annual grasslands or open scrublands with loose textures soils for burrowing and suitable prey base
Plants		
Large-flowered fiddleneck <i>Amsinckia grandiflora</i>	FE/CE	Cismontane woodland, valley and foothill grassland
Pallid manzanita <i>Arctostaphylos pallida</i>	FT/CE	Occurs on siliceous shale or thin chert in broadleaved upland forest, chaparral, cismontane woodland, coastal scrub
Robust spineflower <i>Chorizanthe robusta</i> var. <i>robusta</i>	FE/--/List 1B	Coastal scrub, coastal sand dunes, openings in oak woodlands with sandy or gravelly soil
Presidio clarkia <i>Clarkia franciscana</i>	FE/CE/List 1B	Coastal scrub, grassland (ultramafic)
Soft bird's beak <i>Cordylanthus mollis</i> ssp. <i>mollis</i>	FE/CR/List 1B	Coastal salt marsh
Mt. Diablo bird's beak <i>Cordylanthus nidularis</i>	FSC/CR/List 1B	Grassy or rocky areas within serpentine chaparral
Palmate-bracted bird's-beak <i>Cordylanthus palmatus</i>	FE/CE/List 1B	Alkaline areas in chenopod scrub or valley and foothill grassland
Contra Costa wallflower <i>Erysimum capitatum</i> ssp. <i>angustatum</i>	FE/CE/List 1B	Inland, stabilized dunes of sand and clay
Critical Habitat designated		
Santa Cruz tarplant <i>Holocarpha macradenia</i>	FT/CE/List 1B	Coastal scrub, coastal sand dunes, openings in oak woodlands with sandy or gravelly soil
Critical Habitat designated		
Contra Costa goldfields <i>Lasthenia conjugens</i>	FE/--/List 1B	Moist grasslands, vernal pools, cismontane woodlands, alkaline playas
Mason's lilaepsis <i>Lilaeopsis masonii</i>	--/CR/List 1B	Brackish or freshwater marshes and swamps, riparian scrub

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

CONTRA COSTA COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Colusa grass <i>Neostapfia colusana</i>	FT/CE/List 1B	Vernal pools
Antioch dunes evening primrose <i>Oenothera deltooides ssp howellii</i> Critical Habitat designated	FE/CE/List 1B	Interior dunes and river bluffs
San Francisco popcorn flower <i>Plagiobothrys diffusus</i>	--/CE/List 1B	Coastal prairie, valley and foothill grassland.
Adobe sanicle <i>Sanicula maritima</i>	--/CR/List 1B	Moist clay or ultramfic soils in meadows and seeps, grasslands
Rock sanicle <i>Sanicula saxitilis</i>	--/CR/List 1B	Rocky areas in valley and foothill grassland, broadleaved upland forest, chaparral
California seablite <i>Suaeda californica</i>	FE/--/List 1B	Coastal salt marshes and swamps
FEDERAL OR STATE SPECIES OF SPECIAL CONCERN		
Invertebrates		
Ciervo aegialian scarab beetle <i>Aegialia concinna</i>	FSC/--	Lives only in loose sands (i.e. sand dunes); associated with Delta and inland dune systems and sandy substrates. Distribution: four localities in Contra Costa, Fresno, San Benito, and San Joaquin counties.
Antioch Dunes anthicid beetle <i>Anthicus antiochensis</i>	FSC/--	Sandy beach habitat within a few hundred yards of water.
Sacramento anthicid beetle <i>Anthicus sacramento</i>	FSC/--	Well-developed riparian habitat.
Midvalley fairy shrimp <i>Branchinecta mesovallensis</i>	FSC/--	Vernal pools in Sacramento, Solano, Merced, Madera, San Joaquin, Fresno, and Contra Costa Counties.
San Joaquin dune beetle <i>Coelus gracilis</i>	FSC/--	Inhabits fossil dunes and sites with other sandy substrates along the western edge of the San Joaquin valley
Antioch cophuran robberfly <i>Cophura hurdi</i>	FSC/--	Antioch dunes
Monarch butterfly <i>Danaus plexippus</i>	--/*	Winter in California. Roost in wind protected eucalyptus,) Monterey pine, and cypress groves, with water and nectar sources nearby.
Antioch efferian robberfly <i>Efferia antiochi</i>	FSC/--	Known only from Contra Costa County (Antioch) and Fresno County (Fresno).
Bridge's coast range shoulderband <i>Helminthoglypta nickliniana bridgesi</i>	FSC/--	Found in tall grasses and weeds on open grassy hillsides

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

Common name <i>Scientific name</i>	CONTRA COSTA COUNTY	
	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Ricksecker's water scavenger beetle <i>Hydrochara rickseckeri</i>	FSC/--	Aquatic
Curved-foot hygrotus diving beetle <i>Hygrotus curvipes</i>	FSC/--	Found in vernal pools and alkali flats
Middlekauf's shieldback katydid <i>Idiostatus middlekaufi</i>	FSC/--	Antioch Dunes
California linderiella <i>Linderiella occidentalis</i>	FSC/--	Seasonal pools in intact grasslands where alluvial soils are underlaid by hardpan or in sandstone depressions
Molestan blister beetle <i>Lytta molesta</i>	FSC/--	Inhabits the Central Valley of California; from Contra Costa to Kern and Tulare Counties.
Hurd's metapogon robberfly <i>Metapogon hurdi</i>	FSC/--	Habitat information unavailable
Antioch mutilid wasp <i>Myrmulosa pacifica</i>	FSC/--	Antioch Dunes
San Francisco lacewing <i>Nothochrysa californica</i>	FSC/--	Grasslands
Yellow-banded andrenid bee <i>Perdita hirticeps luteocincta</i>	FSC/--	Antioch Dunes
Antioch andrenid bee <i>Perdita scituta antiochensis</i>	FSC/--	Visits flowers of a variety of native plants
Antioch sphecid wasp <i>Philanthus nasilis</i>	FSC/--	Known only from the Antioch Dunes of the Sacramento-San Joaquin Delta area, in the vicinity of Antioch, Contra Costa County.
Mimic tryonia <i>Tryonia imitator</i>	FSC/--	Coastal lagoons, estuaries, and salt marshes
Fish		
Sacramento perch <i>Archoplites interruptus</i>	FSC/CSC	Slow moving sloughs, streams, rivers, and lakes
Green sturgeon <i>Acipenser medirostris</i>	FSC/--	Estuaries, lower reaches of large rivers, and salt or brackish water off river mouths. Ascends far up Trinity and Klamath rivers, CA.
River lamprey <i>Lampetra ayresi</i>	FSC/--	Pacific Ocean and estuaries; spawning in coastal streams from Alaska to San Francisco Bay
Pacific lamprey <i>Lampetra tridentata</i>	FSC/--	Pacific Ocean and estuaries; spawning in coastal streams from Alaska to Baja California
Longfin smelt <i>Spirinchus thaleichthys</i>	FSC/--	Nearshore; bays and estuaries. Ascends coastal streams from October to December to spawn.
Amphibians		

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

CONTRA COSTA COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Foothill yellow-legged frog <i>Rana boylei</i>	FSC/CSC	Partly shaded streams with riffles and quiet pools absent of predatory fish
Western spadefoot toad <i>Spea hammondi</i>	FSC/CSC	Floodplains and grassland pools
Reptiles		
Silvery legless lizard <i>Aniella pulchra pulchra</i>	FSC/--	Sandy or loose loamy soils in areas with sparse vegetation
Northwestern pond turtle <i>Clemmys marmorata marmorata</i>	FSC/CSC	Freshwater ponds and slow streams, marshes, rivers, and irrigation ditches with upland sandy soils for laying eggs
Southwestern pond turtle <i>Clemmys marmorata pallida</i>	FSC/CSC	Valley locations with slow-moving waterways. Upland habitat and basking sites must be easily accessible. Range: South of San Francisco to northwest Baja California and west of the Mojave Desert.
San Joaquin coachwhip <i>Masticophis flagellum ruddocki</i>	FSC/CSC	Open dry vegetative associations with little or no tree cover; occurs in valley grassland and saltbush scrub in western San Joaquin Valley.
California horned lizard <i>Phrynosoma coronatum frontale</i>	FSC/CSC	Patchy open areas with sandy soils
Birds		
Cooper's hawk <i>Accipiter cooperi</i>	--/CSC	Nests in riparian growths of deciduous trees and live oak woodlands
Sharp-shinned hawk <i>Accipiter striatus</i>	--/CSC	Nests in riparian growths of deciduous trees and live oaks
Tricolored blackbird <i>Agelaius tricolor</i>	FSC/CSC	Riparian thickets and emergent vegetation near open water
Grasshopper sparrow <i>Ammodramus saviannarum</i>	FSC/	Pastures, grasslands, old fields
Golden eagle <i>Aquila chrysaetos</i>	CSC/3511	Open hills with grassland, open scrub, adequate prey base, large trees or cliffs for nesting
Great blue heron <i>Ardea herodias</i>	--/*	Nests in trees along lakes and estuaries
Short-eared owl <i>Asio flammeus</i>	--/CSC	Fresh water and salt marshes and swamps, lowland meadows, irrigated fields
Western burrowing owl <i>Athene cunicularia hypugea</i>	FSC/CSC	Nests in mammal burrows in open, sloping grasslands
Aleutian Canada goose <i>Branta canadensis leucopareia</i>	Delisted	Winters in marshes, meadows, and on small islands

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

CONTRA COSTA COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Ferruginous hawk <i>Buteo regalis</i>	FSC/CSC	Dry open country with a variety of habitats
Costa's hummingbird <i>Calypte costae</i>	FSC/--	Dry chaparral, desert washes
Lawrence's goldfinch <i>Carduelis lawrencei</i>	FSC/--	Dry grassy slopes and chaparral
Vaux's swift <i>Chaetura vauxi</i>	FSC/--	Riparian woodlands and woodlands near lakes
Black tern <i>Chlidonias niger</i>	FSC/CSC	Freshwater lakes, marshes, ponds, and flooded agricultural fields
Northern harrier <i>Circus cyaneus</i>	--/CSC	Mostly nests in emergent vegetation, wet meadows or near rivers and lakes, but may nest in grasslands away from water.
Hermit warbler <i>Dendroica occidentalis</i>	FSC/--	Prefers coniferous habitat
Yellow warbler <i>Dendroica petechia brewsteri</i>	--/CSC	Prefers riparian habitat with willows, cottonwoods, sycamores, or alders for nesting and foraging
Snowy egret <i>Egretta thula</i>	--/*	Marshes, tidal flats, lakes, streams
White-tailed kite <i>Elanus leucurus</i>	--/3511	Nests near wet meadows and open grasslands dense oak, willow or other large tree stands.
Little willow flycatcher <i>Empidonax traillii brewsteri</i>	FSC/CSC	Willow riparian habitat, dry, brushy upland pastures, orchards
California horned lark <i>Eremophila alpestris actia</i>	--/CSC	Short grass prairie, fallow grain fields, open areas with short vegetation
American peregrine falcon <i>Falco peregrinus anatum</i>	Delisted	Nests near wetlands, lakes, rivers, or other water on cliffs, banks, human structures
Saltmarsh common yellowthroat <i>Geothlypis trichas sinuosa</i>	FSC/CSC	Saline and freshwater marshes
Loggerhead shrike <i>Lanius ludovicianus</i>	FSC/CSC	Nests in shrublands and forages in open grasslands
Lewis's woodpecker <i>Melanerpes lewis</i>	FSC/--	Open woodlands in interior foothills and valleys
Suisun song sparrow <i>Melospiza melodia maxillaris</i>	FSC/CSC	Brackish water marshes and sloughs with cattails, tules, and pickleweed
San Pablo song sparrow <i>Melospiza melodia samuelis</i>	FSC/CSC	Tidal sloughs in salt marshes with pickleweed, restricted to north side of San Francisco Bay and Suisun Bay

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

CONTRA COSTA COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Long-billed curlew <i>Numenius americanus</i>	FSC/--	Lake beaches, nests in both dry and wet uplands
Black-crowned night heron <i>Nycticorax nycticorax</i>	--/*	Lake margins, mud bordered bays, marshy areas
Osprey <i>Pandion haliaetus</i>	--/CSC	Along rivers, lakes, and coasts
White-faced ibis <i>Pelgadis chihi</i>	FSC/--	Marshes, swamps, ponds, and rivers; mostly freshwater habitats.
Nuttall's woodpecker <i>Picoides nuttallii</i>	FSLC/--	Oak woodland, chaparral, riparian (esp-willow-cottonwood) woodland; often foothill canyons.
Rufous hummingbird <i>Selasphorus rufus</i>	FSC/--	Coniferous forest, thickets, and brushy slopes; foraging adjacent meadows.
Allen's hummingbird <i>Selasphorus sasin</i>	FSC/--	Chaparral, thickets, brushy slopes, open coniferous forest.
Caspian tern <i>Sterna caspia</i>	--/*	Inland fresh water lakes and marshes, brackish or salt waters of estuaries and bays
California thrasher <i>Toxostoma redivivum</i>	FSC/--	Chaparral covered foothills and brushy parklands where there is open ground under a dense shrub layer ⁴⁵
Mammals		
Townsend's western big-eared bat <i>Corynorhinus townsendi townsendii</i>	FSC/CSC	The distribution of this bat is correlated largely with rocky situations where caves or abandoned mine tunnels are available. Humid coastal regions, will only roost in the open, extremely sensitive to disturbance
Berkeley kangaroo rat <i>Dipodomys heermanni berkeleyensis</i>	FSC/--	Open grasslands and open spaces in chaparral with fine, deep, weeldrained soil for burrowing
Greater western mastiff bat <i>Eumops perotis californicus</i>	FSC/CSC	Open arid to semi-arid habitats, including woodlands, coastal scrub, chaparral, and grasslands. Roosts in trees, cliffs, dwellings
San Pablo vole <i>Microtus californicus sanpabloensis</i>	--/CSC	Salt-marshes
Small-footed myotis <i>Myotis ciliolabrum</i>	FSC/--	Brush, woodland, and forest habitats, prefers coniferous habitat types. Nursery colonies in buildings, crevices, spaces under tree bark, and snags.
Long-eared myotis <i>Myotis evotis</i>	FSC/--	Most common in woodland and forest habitats above 4000 feet. Use trees and caves for roosting, hollow trees or spaces under tree bark for nursery colonies.

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

CONTRA COSTA COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Fringed myotis <i>Myotis thysanodes</i>	FSC/--	A wide variety of habitats. Optimal habitats are valley-foothill hardwood and hardwood-conifer types. Uses caves, buildings, or crevices for roosting and nursery colonies.
Long-legged myotis <i>Myotis volans</i>	FSC/--	Most common in woodland and forest habitats above 4000 feet. Use trees and caves for roosting, hollow trees or spaces under tree bark for nursery colonies.
Yuma myotis <i>Myotis yumanensis</i>	FSC/--	Optimal habitat is open forests or woodlands with sources of water and flying insects. Nursery colonies in caves, buildings, or crevices.
San Francisco dusky-footed woodrat <i>Neotoma fuscipes annectens</i>	FSC/CSC	Hardwood forests and scrub communities
San Joaquin pocket mouse <i>Perognathus inornatus inornatus</i>	FSC/--	Grasslands and blue oak savanna with friable soils
Alameda Island mole <i>Scapanus latimanus parvus</i>	FSC/CSC	Light, sandy soils, especially those with high moisture content and invertebrate populations
Suisun shrew <i>Sorex ornatus sinuosus</i>	FSC/CSC	Tidal marshes, require dense low cover above the mean tide line for nesting and foraging
Salt marsh wandering shrew <i>Sorex vagrans halicoetes</i>	FSC/CSC	Salt-marshes
Plants		
Bent-flowered fiddleneck <i>Amsinckia lunaris</i>	--/--List 1B	Coastal bluff scrub, cismontane woodland, valley and foothill grassland
Mt. Diablo manzanita <i>Arctostaphylos auriculata</i>	--/--List 1B	On sandstone in chaparral
Contra Costa manzanita <i>Arctostaphylos manzanita</i> ssp. <i>laevigata</i>	--/--List 1B	Rocky slopes in chaparral
Suisun marsh aster <i>Aster lentus</i>	FSC/--List 1B	Brackish and freshwater marshes, sloughs
Alkali milk-vetch <i>Astragalus tener</i> var. <i>tener</i>	--/--List 1B	Alkali flats, valley grasslands
Heartscale <i>Atriplex cordulata</i>	FSC/--List 1B	Chenopod scrub, alkaline meadows, sandy soils in valley and foothill grassland
Brittlescale <i>Atriplex depressa</i>	--/--List 1B	Chenopod scrub, meadows, playas, valley and foothill grassland, vernal pools, often in alkaline situations
San Joaquin spearscale <i>Atriplex joaquiniana</i>	FSC/--List 1B	Alkaline soils in chenopod scrub, meadows, playas, valley and foothill grassland

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

CONTRA COSTA COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Big-scale balsamroot <i>Balsamorhiza macrolepis</i> var. <i>macrolepis</i>	--/--/List 1B	Cismontane woodland, grassland
Big tarplant <i>Blepharizonia plumosa</i> var. <i>plumosa</i>	--/--/List 1B	Sometime on serpentine soils in chaparral, cismontane woodland, valley and foothill grassland
Mt. Diablo fairy lantern <i>Calochortus pulchellus</i>	--/--/List 1B	Chaparral, cismontane woodland, riparian woodland, valley and foothill grassland
Chaparral harebell <i>Campanula exigua</i>	--/--/List 1B	Rocky areas in chaparral, usually on serpentinite derived soils
Salt marsh owl's clover <i>Castilleja ambigua</i> ssp. <i>ambigua</i>	FSLC/--List 1B	Salt marshes
Congdon's tarplant <i>Centromadia parryi</i> ssp. <i>congdonii</i>	FSC/CSC/List 1B	Alkaline areas in valley and foothill grassland
San Francisco Bay spineflower <i>Chorizanthe cuspidata</i> var. <i>cuspidata</i>	FSC/--List 1B	Coastal bluff scrub, coastal dunes, coastal prairie, on sandy soils
Franciscan thistle <i>Cirsium andrewsii</i>	--/--/List 1B	Mesic locales in broadleaved upland forests, coastal bluff scrub, coastal prairie, sometimes on serpentine soils
Point Reyes bird's beak <i>Cordylanthus maritimus</i> ssp. <i>palustris</i>	FSC/--List 1B	Coastal salt marsh
California croton <i>Croton californica</i>	FSLC/--/--	Sandy soils, dunes, and washes
Hoover's cryptantha <i>Cryptantha hooveri</i>	--/--/List 1B	Sandy soils in valley and foothill grassland
Hospital Canyon larkspur <i>Delphinium californicum</i> ssp. <i>interius</i>	FSC/--List 1B	Opening in chaparral, cismontane woodland
Western leatherwood <i>Dirca occidentalis</i>	--/--/List 1B	Broadleaved upland forests, closed-cone coniferous forests, chaparral, cismontane woodland, North coast coniferous forests, riparian forests, riparian woodland; mesic sites
Dwarf downingia <i>Downingia pusilla</i>	--/--/List 1B	Mesic sites in valley and foothill grassland, vernal pools
Tiburon buckwheat <i>Eriogonum luteolum</i> var. <i>caninum</i>	FSLC/--List 3	Serpentine soils in coastal prairie, chaparral, and valley and foothill grasslands
Mt. Diablo buckwheat <i>Eriogonum truncatum</i>	--/--/List 1A	Sandy soils in chaparral, coastal scrub, and valley and foothill grassland
Round-leaved filaree <i>Erodium macrophyllum</i>	--/--/List 2	Clay soils in cismontane woodland and valley and foothill grassland

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

CONTRA COSTA COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Diamond-petaled poppy <i>Eschscholzia rhombipetala</i>	FSC/--/List 1B	Alkaline areas and clay soils in valley and foothill grassland
Fragrant fritillary <i>Fritillaria liliacea</i>	FSC/--/List 1B	Coastal scrub, valley and foothill grassland, coastal prairie; on heavy clay soils, often on ultramafic soils
Diablo helianthella <i>Helianthella castanea</i>	FSC/--/List 1B	Openings in chaparral and broadleaved upland forest
Brewer's western flax <i>Hesperolinon breweri</i>	FSC/--/List 1B	Often in rocky serpentine soils in chaparral and grasslands, also cismontane woodland
Rose-mallow <i>Hibiscus lasiocarpus</i>	--/--/List 2	Freshwater marshes and swamps, sloughs
Kellogg's horkelia <i>Horkelia cuneata</i> ssp. <i>sericea</i>	FSC/--/List 1B	Closed-cone coniferous forests, coastal scrub
Carquinez goldenbush <i>Isocoma arguta</i>	FSC/--/List 1B	Valley and foothill grassland, alkaline soils, flats
Northern California black walnut <i>Juglans hindsii</i>	FSC/--/List 1B	Riparian forest and woodland
Delta tule pea <i>Lathyrus jepsonii</i> var. <i>jepsonii</i>	FSC/--/List 1B	Freshwater and brackish marshes and swamps, usually on marsh and slough edges
Delta mudwort <i>Limosella subulata</i>	--/--/List 2	On mud banks in freshwater and brackish marshes and swamps, riparian scrub
Showy madia <i>Madia radiata</i>	--/--/List 1B	Often on adobe clay in cismontane woodland, valley and foothill grassland
Hall's bush mallow <i>Malacothamnus hallii</i>	--/--/List 1B	Chaparral, sometimes on serpentine soils
Oregon meconella <i>Meconella oregana</i>	FSC/--/List 1B	Coastal prairie, coastal scrub
Robust monardella <i>Monardella villosa</i> ssp. <i>globosa</i>	--/--/List 1B	Cismontane woodland, openings in chaparral
Mt. Diablo phacelia <i>Phacelia phacelioides</i>	FSC/--/List 1B	Rocky substrates in chaparral, cismontane woodland
Hairless popcorn-flower <i>Plagiobothrys glaber</i>	--/--/List 1A	Coastal salt-marsh, alkaline flats, meadows, and seeps
Bearded popcorn-flower <i>Plagiobothrys hystriculus</i>	--/--/1A	Vernal pools, mesic areas in valley and foothill grassland
Slender-leaved pondweed <i>Potamogeton filiformis</i>	--/--/List 2	Shallow areas in freshwater marshes and swamps
Eel-grass pondweed <i>Potamogeton zosteriformis</i>	--/--/List 2	Freshwater swamps and marshes

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

CONTRA COSTA COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Blue skullcap <i>Scutellaria lateriflora</i>	--/--/List 1B	Mesic meadows, marshes, and swamps
Rayless ragwort <i>Senecio aphanactis</i>	--/--/List 2	Alkaline flats in coastal scrub, chaparral, cismontane woodland
Pacific cordgrass <i>Spartina foliosa</i>	FSLC/--/--	Salt marshes
Most beautiful jewelflower <i>Streptanthus albidus</i> ssp. <i>peramoenus</i>	FSC/--/List 1B	Serpentine grassland, chaparral
Mt. Diablo jewelflower <i>Streptanthus hispidus</i>	FSC/--/List 1B	Talus or rocky outcrops in chaparral, valley and foothill grassland
Saline clover <i>Trifolium depauperatum</i> var. <i>hydrophilum</i>	--/--/List 1B	Marshes and swamps, mesic alkaline areas in valley and foothill grassland
<i>Triquetrella californica</i>	--/--/List 1B	Coast bluff scrub, coastal scrub
Caper-fruited tropidocarpum <i>Tropidocarpum capparideum</i>	FSC/--/List 1A	Alkaline hills, grasslands

CONTRA COSTA COUNTY		
SENSITIVE PLANT COMMUNITIES		
Name	Global Rank	State Rank
Alkali meadow	G3	S2.1
Alkali seep	G3	S2.1
Cismontane alkali marsh	G1	S1.1
Coastal and valley freshwater marsh	G3	S2.1
Coastal brackish marsh	G2	S2.1
Northern coastal salt marsh	G3	S3.2
Northern maritime chaparral	G1	S1.2
Serpentine bunchgrass	G2	S2.2
Stabilized interior dunes	G1	S1.1
Sycamore alluvial woodland	G1	S1.1
Valley needlegrass grassland	G1	S3.1
Valley sink scrub	G1	S1.1

ALAMEDA COUNTY

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
SPECIES LISTED OR PROPOSED FOR LISTING		
<i>Invertebrates</i>		
Longhorn fairy shrimp <i>Branchinecta longiantenna</i>	FE/--	Endemic to small, rain-filled grassland pools of the Central Valley
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	FT/--	Grassland vernal pools
Bay checkerspot butterfly <i>Euphydryas editha bayensis</i>	FT/--	Serpentine bunchgrass grassland with healthy populations of larval host, <i>Plantago erecta</i>
San Bruno elfin butterfly <i>Incisalia mossii bayensis</i>	FE/--	Steep north facing slopes within the fog belt with grassy ground cover. Larval host plant is <i>Sedum spathulifolium</i> .
Vernal pool tadpole shrimp <i>Lepidurus packardii</i>	FE/--	Vernal pools
Callippe silverspot butterfly <i>Speyeria callippe callippe</i>	FE/--	Found in native grasslands with <i>Viola pedunculata</i> as larval food plant
<i>Fish</i>		
Tidewater goby <i>Eucyclogobius newberryi</i>	FE/CSC	Shallow waters of bays and estuaries, in lower stream reaches
Delta smelt <i>Hypomesus transpacificus</i> Critical habitat designated	FT/CT	Restricted to the Sacramento-San Joaquin Delta, including Suisun and San Pablo Bays and the Carquinez Strait.
Coho salmon—Central California coast ESU <i>Oncorhynchus kisutch</i>	FT/CE	Accessible Bay Area and coastal rivers and streams with cover, cool water and sufficient dissolved oxygen. Require beds of loose, silt-free gravel for spawning.
Steelhead – Central California Coast ESU <i>Oncorhynchus mykiss irideus</i> Critical Habitat designated	FT/CSC	Accessible Bay Area and coastal rivers and streams
Steelhead-Central Valley ESU <i>Oncorhynchus mykiss irideus</i> Critical Habitat designated	FT/--	Spawn in the Sacramento and San Joaquin Rivers and their tributaries, migrate through San Francisco and Suisun Bays, as well as the Delta region
Chinook salmon—Central Valley spring-run <i>Oncorhynchus tshawytscha</i> Critical Habitat designated	FT/CT	Spawning and rearing restricted to Sacramento River basin, migrate through San Francisco Bay and Sacramento-SanJoaquin Delta
Chinook salmon—fall/late fall-run <i>Oncorhynchus tshawytscha</i> Critical Habitat proposed	FC/CSC	Spawning and rearing restricted to Sacramento River basin, migrate through San Francisco Bay and Sacramento-SanJoaquin Delta, require clean, cold water and gravel beds

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

ALAMEDA COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Chinook salmon—winter run <i>Oncorhynchus tshawytscha</i>	FE/CE	Spawning restricted to the Sacramento River. Requires clean, cold water with gravel beds.
Critical Habitat designated		
Sacramento splittail <i>Pogonichthys macrolepidotus</i>	FT/CSC	Slow moving river sections and dead-end sloughs with flooded vegetation for spawning and foraging for young.
Amphibians		
California tiger salamander <i>Ambystoma californiense</i>	FC/CSC	Seasonal freshwater ponds with little or no emergent vegetation. Utilizes mammal burrows in upland habitat for aestivation during the dry season.
California red-legged frog <i>Rana aurora draytonii</i>	FT/CSC	Breed in stock ponds, pools, and slow-moving streams with emergent vegetation for escape cover and egg attachment. Where water is seasonal often utilizes mammal burrows in upland habitat for aestivation
Reptiles		
Alameda whipsnake <i>Masticophis lateralis euryxanthus</i>	FT/CT	Preferred habitat a mosaic of open coastal scrub or chaparral and grassland with rocky outcrops
Critical Habitat designated		
Birds		
Western snowy plover <i>Charadrius alexandrinus nivosus</i>	FT/CSC	Nests and forages on sandy beaches on marine and estuarine shores - requires sandy, gravely, or friable soils for nesting
Mountain plover <i>Charadrius montanus</i>	FPT/CSC	Winters in areas with short-grasses or plowed fields with bare ground and flat topography. Prefer grazed areas and those with burrowing rodents.
Greater sandhill crane <i>Grus canadensis tabida</i>	--/CT	Winters in the Central Valley. Prefers grain fields within 4 miles of a shallow body of water.
Bald eagle ³ <i>Haliaeetus leucocephalus</i>	FT/CE	Nests and forages on inland lakes, reservoirs, and rivers; winter foraging at lakes and along major rivers
California black rail <i>Laterallus jamaicensis coturniculus</i>	FSC/CT	Nests and forages in tidal emergent wetland with pickleweed and cordgrass

³ The bald eagle was proposed for delisting by the U.S. Fish and Wildlife Service on July 6, 1999.

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

ALAMEDA COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
California brown pelican <i>Pelecanus occidentalis californicus</i>	FE/3511	Nests on coastal islands of small to moderate size that afford protection from predators.
California clapper rail <i>Rallus longirostris obsoletus</i>	FE/CE	Nests and forages in emergent wetlands with pickleweed, cordgrass, and bulrush
Bank swallow <i>Riparia riparia</i>	--/CT	Nests primarily in riparian and other lowland habitat. Requires vertical banks or cliffs with fine textured or sandy soils near water.
California least tern <i>Sterna antillarum browni</i>	FE/CE	Colonial breeder on bare or sparsely vegetated flat substrates including sand beaches, alkali flats, land fills, or paved areas
Mammals		
Riparian woodrat <i>Neotoma fuscipes riparia</i>	FE/CSC	Generally found in riparian areas supporting a mixture of trees and brush. Require suitable nesting sites such as cavities in trees, snags, or logs; spaces in talus; or lodges built of downed woody material, which are usually a conspicuous feature of areas inhabited by the species.
Salt marsh harvest mouse <i>Reithrodontomys raviventris</i>	FE/CE	Saline emergent marsh with dense pickleweed
Riparian brush rabbit <i>Sylvilagus bachmani riparius</i>	FE/CE	Found in San Joaquin Valley native riparian areas with large clumps of dense shrubs, low growing vines, some tall shrubs and scrubby trees.
San Joaquin kit fox <i>Vulpes macrotis mutica</i>	FE/CT	Annual grasslands or open scrublands with loose textures soils for burrowing and suitable prey base
Plants		
Large-flowered fiddleneck <i>Amsinckia grandiflora</i>	FT/CE/List 1B	Cismontane woodland, valley and foothill grassland
Pallid manzanita <i>Arctostaphylos pallida</i>	FT/CE/List 1B	Occurs on siliceous shale or thin chert in broadleaved upland forest, chaparral, cismontane woodland, coastal scrub
Robust spineflower <i>Chorizanthe robusta</i> var. <i>robusta</i>	FE/--/List 1B	Coastal scrub, coastal sand dunes, openings in oak woodlands with sandy or gravelly soil

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

ALAMEDA COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Presidio clarkia <i>Clarkia franciscana</i>	FE/CE/List 1B	Coastal scrub, grassland on ultramafic substrate
Palmate-bracted bird's-beak <i>Cordylanthus palmatus</i>	FE/CE/List 1B	Alkaline areas in chenopod scrub or valley and foothill grassland
Santa Cruz tarplant <i>Holocarpha macradenia</i> Critical Habitat designated	FT/CE/List 1B	Coastal scrub, coastal sand dunes, openings in oak woodlands with sandy or gravelly soil
Contra Costa goldfields <i>Lasthenia conjugens</i>	FE/--/List 1B	Moist grasslands, vernal pools, cismontane woodlands, alkaline playas
Beach layia <i>Layia carnosa</i>	FE/CE/List 1B	Sparsely vegetated semi-stabilized coastal sand dunes, usually behind foredunes and in coastal scrub on sandy substrate.
San Francisco popcorn flower <i>Plagiobothrys diffusus</i>	--/CE/List 1B	Coastal prairie, valley and foothill grassland.
Adobe sanicle <i>Sanicula maritima</i>	--/CR/List 1B	Moist clay or ultramafic soils in meadows and seeps, grasslands
California seablite <i>Suaeda californica</i>	FE/--/List 1B	Coastal salt marshes and swamps

FEDERAL OR STATE SPECIES OF SPECIAL CONCERN

Invertebrates		
Opler's longhorn moth <i>Adela oplerella</i>	FSC/--	Serpentine grasslands, larvae feed on <i>Platystemon californicus</i>
Monarch butterfly <i>Danaus plexippus</i>	--/*	Winter in California. Roost in wind protected eucalyptus, Monterey pine, and cypress groves, with water and nectar sources nearby.
Bridge's coast range shoulderband <i>Helminthoglypta nickliniana bridgesi</i>	FSC/--	Found in tall grasses and weeds on open grassy hillsides
Ricksecker's water scavenger beetle <i>Hydrochara rickseckeri</i>	FSC/--	Aquatic
Curved-foot hygrotus diving beetle <i>Hygrotus curvipes</i>	FSC/--	Found in vernal pools and alkali flats
California linderiella <i>Linderiella occidentalis</i>	FSC/--	Seasonal pools in intact grasslands where alluvial soils are underlaid by hardpan or in sandstone depressions
Fairmont microblind harvestman <i>Microcina lumi</i>	FSC/--	Serpentine grassland with rocky outcrops for cover

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

ALAMEDA COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
San Francisco lacewing <i>Nothochrysa californica</i>	FSC/--	A variety of habitat types, including grasslands, coastal scrub, and oak woodland
Mimic tryonia <i>Tryonia imitator</i>	FSC/--	Coastal lagoons, estuaries, and salt marshes
Fish		
Green sturgeon <i>Acipenser medirostris</i>	FSC/--	Spawn in the Sacramento River and its tributaries, the San Francisco Bay system provides rearing habitat for juveniles
Sacramento perch <i>Archoplites interruptus</i>	FSC/CSC	Slow moving sloughs, streams, rivers, and lakes
River lamprey <i>Lampetra ayresi</i>	FSC/--	Larger coastal streams in the San Francisco Bay drainage system
Kern brook lamprey <i>Lampetra hubbsi</i>	FSC/--	San Joaquin River system and Kern River, require gravel bottomed areas for spawning and muddy bottomed areas for young
Pacific lamprey <i>Lampetra tridentata</i>	FSC/--	Pacific Ocean and estuaries; spawning in coastal streams from Alaska to Baja California
Longfin smelt <i>Spirinchus thaleichthys</i>	FSC/--	Sacramento-San Joaquin estuary in the salt or brackish water portions of the estuary, require fresh water, sandy-gravel substrates, rocks, and aquatic vegetation for spawning
Amphibians		
Foothill yellow-legged frog <i>Rana boylei</i>	FSC/CSC	Partly shaded streams with riffles and quiet pools absent of predatory fish
Western spadefoot toad <i>Spea hammondi</i>	FSC/CSC	Floodplains and grassland pools
Reptiles		
Silvery legless lizard <i>Aniella pulchra pulchra</i>	FSC/CSC	Sparsely vegetated areas with sandy or loose loamy soils having a high moisture content
Western pond turtle <i>Clemmys marmorata marmorata</i>	FSC/CSC	Freshwater ponds and slow streams, marshes, rivers, and irrigation ditches with upland sandy soils for laying eggs
Southwestern pond turtle <i>Clemmys marmorata pallida</i>	FSC/--	Permanent or nearly permanent bodies of water in a variety of habitat types. Require basking sites such as partially submerged logs or open mud banks.

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

ALAMEDA COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
San Joaquin coachwhip <i>Masticophis flagellum ruddocki</i>	FSC/CSC	Open dry habitats with little or no tree cover, such as grassland or open scrub. Requires mammal burrows for oviposition and refuge.
California horned lizard <i>Phrynosoma coronatum frontale</i>	FSC/CSC	Patchy open areas with sandy soils
Birds		
Cooper's hawk <i>Accipiter cooperi</i>	--/CSC	Nests in riparian growths of deciduous trees and live oak woodlands
Sharp-shinned hawk <i>Accipiter striatus</i>	--/CSC	Nests in riparian growths of deciduous trees and live oaks
Tricolored blackbird <i>Agelaius tricolor</i>	FSC/CSC	Riparian thickets and emergent vegetation near open water
Grasshopper sparrow <i>Ammodramus savannarum</i>	FSC/	Pastures, grasslands, old fields
Bell's sage sparrow <i>Amphispiza belli belli</i>	FSC/CSC	Prefer chaparral with fairly dense stands of chamise
Golden eagle <i>Aquila chrysaetos</i>	CSC/3511	Open hills with grassland, open scrub, adequate prey base, large trees or cliffs for nesting
Great blue heron <i>Ardea herodias</i>	--/*	Nests in trees along lakes and estuaries
Short-eared owl <i>Asio flammeus</i>	--/CSC	Fresh water and salt marshes and swamps, lowland meadows, irrigated fields
Western burrowing owl <i>Athene cucularia hypugaea</i>	FSC/CSC	Nests in mammal burrows in open, sloping grasslands
Oak titmouse <i>Baeolophus inornatus</i>	FSLC/--	Deciduous or oak woodlands
Aleutian Canada goose <i>Branta canadensis leucopareia</i>	Delisted	Winters on lakes, reservoirs, and ponds and inland prairies with natural pasture or grain fields nearby
Ferruginous hawk <i>Buteo regalis</i>	FSC/CSC	Dry open country with a variety of habitats
Costa's hummingbird <i>Calypte costae</i>	FSC/--	Dry chaparral, desert washes
Lawrence's goldfinch <i>Carduelis lawrencei</i>	FSC/--	Dry grassy slopes and chaparral
Vaux's swift <i>Chaetura vauxi</i>	FSC/--	Riparian woodlands and woodlands near lakes

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

ALAMEDA COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Black tern <i>Chlidonias niger</i>	FSC/CSC	Freshwater lakes, marshes, ponds, and flooded agricultural fields
Northern harrier <i>Circus cyaneus</i>	--/CSC	Mostly nests in emergent vegetation, wet meadows or near rivers and lakes, but may nest in grasslands away from water.
Black swift <i>Cypseloides niger</i>	FSC/CSC	Colonial breeders using cliffs in deep canyons
Hermit warbler <i>Dendroica occidentalis</i>	FSC/--	Prefers coniferous habitat
Yellow warbler <i>Dendroica petechia brewsteri</i>	--/CSC	Prefers riparian habitat with willows, cottonwoods, sycamores, or alders for nesting and foraging
Snowy egret <i>Egretta thula</i>	--/*	Marshes, tidal flats, lakes, streams
White-tailed kite <i>Elanus leucurus</i>	--/3511	Nests near wet meadows and open grasslands dense oak, willow or other large tree stands.
Little willow flycatcher <i>Empidonax traillii brewsteri</i>	FSC/CSC	Willow riparian habitat, dry, brushy upland pastures, orchards
California horned lark <i>Eremophila alpestris actia</i>	--/CSC	Short grass prairie, fallow grain fields, open areas with short vegetation
American peregrine falcon <i>Falco peregrinus anatum</i>	Delisted	Nests near wetlands, lakes, rivers, or other water on cliffs, banks, human structures
Saltmarsh common yellowthroat <i>Geothlypis trichas sinuosa</i>	FSC/CSC	Saline and freshwater marshes
Loggerhead shrike <i>Lanius ludovicianus</i>	FSC/CSC	Nests in shrublands and forages in open grasslands
Lewis's woodpecker <i>Melanerpes lewis</i>	FSC/--	Open woodlands in interior foothills and valleys
Alameda (South Bay) song sparrow <i>Melospiza melodia pusillula</i>	FSC/CSC	Salt marshes of eastern and south San Francisco Bay
San Pablo song sparrow <i>Melospiza melodia samuelis</i>	FSC/CSC	Tidal sloughs in salt marshes with pickleweed, restricted to north side of San Francisco Bay and Suisun Bay
Long-billed curlew <i>Numenius americanus</i>	FSC/--	Lake beaches, nests in both dry and wet uplands
Black-crowned night heron <i>Nycticorax nycticorax</i>	--/*	Lake margins, mud bordered bays, marshy areas

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

ALAMEDA COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Double-crested cormorant <i>Phalacrocorax auritus</i>	--/CSC	Nests along coast on isolated islands or in trees along lake margins.
Black skimmer <i>Rynchops niger</i>	--/CSC	Nests on gravel bars, low islets, and sandy beaches in unvegetated sites
Rufous hummingbird <i>Selasphorus rufus</i>	FSC/--	Forests, woodland edges, thickets
Allen's hummingbird <i>Selasphorus sasin</i>	FSC/--	Brush and woodlands
Caspian tern <i>Sterna caspia</i>	--/*	Inland fresh water lakes and marshes, brackish or salt waters of estuaries and bays
California thrasher <i>Toxostoma redivivum</i>	FSC/--	Chaparral covered foothills and brushy parklands where there is open ground under a dense shrub layer
Mammals		
Townsend's western big-eared bat <i>Corynorhinus townsendi townsendii</i>	FSC/CSC	Humid coastal regions, will only roost in the open, extremely sensitive to disturbance
Berkeley kangaroo rat <i>Dipodomys heermanni berkeleyensis</i>	FSC/--	Open grasslands and open chaparral, blue oak-gray pine woodland, with fine, deep, well drained soil
Greater western mastiff bat <i>Eumops perotis californicus</i>	FSC/CSC	Open arid to semi-arid habitats, including woodlands, coastal scrub, chaparral, and grasslands. Roosts in trees, cliffs, dwellings
San Pablo vole <i>Microtus californicus sanpabloensis</i>	--/CSC	Salt-marshes
Small-footed myotis <i>Myotis ciliolabrum</i>	FSC/--	A variety of habitats, excluding coastal redwoods. Nursery colonies in caves, crevices, clay banks. Roosts in caves, dwellings, crevices.
Long-eared myotis <i>Myotis evotis</i>	FSC/--	Brush, woodland, and forest habitats, prefers coniferous habitat types. Nursery colonies in buildings, crevices, spaces under tree bark, and snags.
Fringed myotis <i>Myotis thysanodes</i>	FSC/--	A wide variety of habitats. Optimal habitats are valley-foothill hardwood and hardwood-conifer types. Uses caves, buildings, or crevices for roosting and nursery colonies.

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

ALAMEDA COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Long-legged myotis <i>Myotis volans</i>	FSC/--	Most common in woodland and forest habitats above 4000 feet. Use trees and caves for roosting, hollow trees or spaces under tree bark for nursery colonies.
Yuma myotis <i>Myotis yumanensis</i>	FSC/--	Optimal habitat is open forests or woodlands with sources of water and flying insects. Nursery colonies in caves, buildings, or crevices.
San Francisco dusky-footed woodrat <i>Neotoma fuscipes annectens</i>	FSC/CSC	Hardwood forests and scrub communities
San Joaquin pocket mouse <i>Perognathus inornatus inornatus</i>	FSC/--	Grasslands and blue oak savanna with friable soils
Alameda Island mole <i>Scapanus latimanus parvus</i>	FSC/CSC	Light, sandy soils, especially those with high moisture content and invertebrate populations
Salt marsh wandering shrew <i>Sorex vagrans halicoetes</i>	FSC/CSC	Salt-marshes
Plants		
Bent-flowered fiddleneck <i>Amsinckia lunaris</i>	--/--List 1B	Coastal bluff scrub, cismontane woodland, valley and foothill grassland
Alkali milk-vetch <i>Astragalus tener</i> var. <i>tener</i>	--/--List 1B	Alkali flats, valley grasslands
Heartscale <i>Atriplex cordulata</i>	FSC/--List 1B	Chenopod scrub, alkaline meadows, sandy soils in valley and foothill grassland
Brittlescale <i>Atriplex depressa</i>	FSC/--List 1B	Chenopod scrub, meadows, playas, valley and foothill grassland, vernal pools, often in alkaline situations
San Joaquin spearscale <i>Atriplex joaquiniana</i>	FSC/--List 1B	Alkaline soils in chenopod scrub, meadows, playas, valley and foothill grassland
Big-scale balsamroot <i>Balsamorhiza macrolepis</i> var. <i>macrolepis</i>	FSLC/--List 1B	Cismontane woodland, grassland
Big tarplant <i>Blepharizonia plumosa</i> var. <i>plumosa</i>	FSC/--List 1B	Sometime on serpentine soils in chaparral, cismontane woodland, valley and foothill grassland
Chaparral harebell <i>Campanula exigua</i>	--/--List 1B	Rocky areas in chaparral, usually on serpentinite derived soils

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

ALAMEDA COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Salt marsh owl's clover <i>Castilleja ambigua</i> ssp. <i>ambigua</i>	FSLC/--List 1B	Salt marshes
Congdon's tarplant <i>Centromadia parryi</i> ssp. <i>congdonii</i>	FSC/CSC/List 1B	Alkaline areas in valley and foothill grassland
San Francisco Bay spineflower <i>Chorizanthe cuspidata</i> var. <i>cuspidata</i>	FSC/--List 1B	Coastal bluff scrub, coastal dunes, coastal prairie, on sandy soils
South Bay clarkia (=Santa Clara red ribbons) <i>Clarkia concinna</i> ssp. <i>automixa</i>	FSC/--List 4	Chaparral, cismontane woodland
Point Reyes bird's beak <i>Cordylanthus maritimus</i> ssp. <i>palustris</i>	FSC/--List 1B	Coastal salt marsh
Hispid bird's beak <i>Cordylanthus mollis</i> ssp. <i>hispidus</i>	FSC/--List 1B	Alkaline microhabitat in meadows, playas, valley and foothill grassland
Livermore tarplant <i>Deinandra bacigalupii</i>	--/--List 1B	Alkaline meadows
Western leatherwood <i>Dirca occidentalis</i>	--/--List 1B	Broadleaved upland forests, closed-cone coniferous forests, chaparral, cismontane woodland, North coast coniferous forests, riparian forests, riparian woodland; mesic sites
Tiburon buckwheat <i>Eriogonum luteolum</i> var. <i>caninum</i>	FSLC/--List 3	Serpentine soils in coastal prairie, chaparral, and valley and foothill grasslands
Mt. Diablo buckwheat <i>Eriogonum truncatum</i>	--/--List 1A	Sandy soils in chaparral, coastal scrub, and valley and foothill grassland
Round-leaved filaree <i>Erodium macrophyllum</i>	--/--List 2	Clay soils in cismontane woodland and valley and foothill grassland
Diamond-petaled poppy <i>Eschscholzia rhombipetala</i>	FSC/--List 1B	Alkaline areas and clay soils in valley and foothill grassland
Fragrant fritillary <i>Fritillaria liliacea</i>	FSC/--List 1B	Coastal scrub, valley and foothill grassland, coastal prairie; on heavy clay soils, often on ultramafic soils
Dune gilia <i>Gilia capitata</i> ssp. <i>chamissonis</i>	--/--List 1B	Coastal dunes and coastal scrub
Diablo helianthella <i>Helianthella castanea</i>	FSC/--List 1B	Openings in chaparral and broadleaved upland forest
Kellogg's horkelia <i>Horkelia cuneata</i> ssp. <i>sericea</i>	FSC/--List 1B	Closed-cone coniferous forests, coastal scrub
Delta tule pea <i>Lathyrus jepsonii</i> var. <i>jepsonii</i>	FSC/--List 1B	Freshwater and brackish marshes along slough and marsh edges, mostly restricted to Sacramento-San Joaquin Delta

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

ALAMEDA COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Rose linanthus <i>Linanthus rosaceus</i>	--/--/List 1B	Coastal bluff scrub
Oregon meconella <i>Meconella oregana</i>	FSC/--/List 1B	Coastal prairie, coastal scrub
Robust monardella <i>Monardella villosa</i> ssp. <i>globosa</i>	--/--/List 1B	Cismontane woodland, openings in chaparral
Little mousetail <i>Myosurus minimus</i> ssp. <i>apus</i>	FSC/--/List 3	Vernal pools in alkaline soils
Choris's popcorn-flower <i>Plagiobothrys chorisianus</i> var. <i>chorisianus</i>	--/--/List 1B	Mesic areas in chaparral, coastal prairie, coastal scrub
Hairless popcorn-flower <i>Plagiobothrys glaber</i>	--/--/List 1A	Coastal salt-marsh, alkaline flats, meadows, and seeps
Slender-leaved pondweed <i>Potamogeton filiformis</i>	--/--/List 2	Shallow areas in freshwater marshes and swamps
Rayless ragwort <i>Senecio aphanactis</i>	--/--/List 2	Drying alkaline flats in coastal scrub and cismontane woodland
Pacific cordgrass <i>Spartina foliosa</i>	FSLC/--/--	Salt marshes
Most beautiful jewelflower <i>Streptanthus albidus</i> ssp. <i>peramoenus</i>	FSC/--/List 1B	Serpentine grassland, chaparral
Saline clover <i>Trifolium depauperatum</i> var. <i>hydrophilum</i>	--/--/List 1B	Marshes and swamps, mesic alkaline areas in valley and foothill grassland
Caper-fruited tropidocarpum <i>Tropidocarpum capparideum</i>	FSC/--/List 1A	Alkaline hills, grasslands

ALAMEDA COUNTY

SENSITIVE PLANT COMMUNITIES

Name	Global Rank	State Rank
Northern coastal salt marsh	G3	S3.2
Northern maritime chaparral	G1	S1.2
Serpentine bunchgrass	G2	S2.2
Sycamore alluvial woodland	G1	S1.1
Valley needlegrass grassland	G1	S3.1
Valley sink scrub	G1	S1.1

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

SAN MATEO COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
SPECIES LISTED OR PROPOSED FOR LISTING		
<i>Invertebrates</i>		
Ohlone tiger beetle <i>Cicindela ohlone</i>	FE/--	Coastal terrace prairies in Santa Cruz County with open, native grasslands
Bay checkerspot butterfly <i>Euphydryas editha bayensis</i>	FT/--	Serpentine bunchgrass grassland
Mission blue butterfly <i>Icaricia icarioides missionensis</i>	FE/--	Grassland with <i>Lupinus albifrons</i> , <i>L. formosa</i> , and <i>L. varicolor</i>
San Bruno elfin butterfly <i>Incisalia mossii bayensis</i>	FE/--	Found in coastal scrub
Callippe silverspot butterfly <i>Speyeria callippe callippe</i>	FE/--	Found in native grasslands with <i>Viola pedunculata</i> as larval food plant
Myrtle silverspot butterfly <i>Speyeria zerene myrtleae</i>	FE/--	Found in native grasslands with <i>Viola pedunculata</i> as larval food plant
<i>Fish</i>		
Tidewater goby <i>Eucyclogobius newberryi</i>	FT/CSC	Shallow waters of bays and estuaries
Delta smelt <i>Hypomesus transpacificus</i> Critical Habitat designated	FT/CT	Restricted to the Sacramento-San Joaquin Delta, including Suisun and San Pablo Bays and the Carquinez Strait.
Coho salmon—Central California coast ESU <i>Oncorhynchus kisutch</i> Critical Habitat designated	FT/CE	Accessible Bay Area and coastal rivers and streams with cover, cool water and sufficient dissolved oxygen. Require beds of loose, silt-free gravel for spawning.
Steelhead – Central California Coast (ESU) <i>Oncorhynchus mykiss irideus</i> Critical Habitat designated	FT/CSC	Unblocked Bay Area and coastal rivers and streams
Steelhead-Central Valley ESU <i>Oncorhynchus mykiss irideus</i> Critical Habitat designated	FT/CSC	Spawn in the Sacramento and San Joaquin Rivers and their tributaries, migrate through San Francisco and Suisun Bays, as well as the Delta region
Chinook salmon—Central Valley ESU spring run <i>Oncorhynchus tshawytscha</i> Critical Habitat designated	FT/CT	Unblocked Bay Area and coastal rivers and streams Spawning and rearing restricted to Sacramento River basin, migrate through San Francisco Bay and Sacramento-SanJoaquin Delta

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

SAN MATEO COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Chinook salmon—Central Valley ESU fall/late fall run <i>Oncorhynchus tshawytscha</i> Critical Habitat designated	FC/CSC	Unblocked Bay Area and coastal rivers and streams
Chinook salmon—Central Valley ESU winter run <i>Oncorhynchus tshawytscha</i> Critical Habitat designated	FE/CE	Spawning restricted to the Sacramento River. Requires clean, cold water with gravel beds.
Sacramento splittail <i>Pogonichthys macrolepidotus</i>	FT/CSC	Slow moving river sections and dead-end sloughs with flooded vegetation for spawning and foraging for young.
Amphibians		
California tiger salamander <i>Ambystoma californiense</i>	FC/CSC	Seasonal freshwater ponds with little or no emergent vegetation
California red-legged frog <i>Rana aurora draytonii</i>	FT/CSC	Breed in stock ponds, pools, and slow-moving streams with emergent vegetation for escape cover and egg attachment
Reptiles		
San Francisco garter snake <i>Thamnophis sirtalis tetrataenia</i>	FE/CE	Freshwater ponds and slow streams with emergent vegetation; nearby upland grasslands with small rodent burrows may also provide habitat for this species (USFWS, 1985). Little is known about the seasonal movements of this species or their capacity for using upland areas.
Birds		
Marbled murrelet <i>Brachyramphus marmoratus</i> Critical Habitat designated	FT/CE	Nests in dense, old growth forests along coast
Western snowy plover <i>Charadrius alexandrinus nivosus</i>	FT/CSC	Nests and forages on sandy beaches on marine and estuarine shores - requires sandy, gravelly, or friable soils for nesting
Bald eagle ⁴ <i>Haliaeetus leucocephalus</i>	FT/CE	Nests and forages on inland lakes, reservoirs, and rivers; winter foraging at lakes and along major rivers
California black rail <i>Laterallus jamaicensis coturniculus</i>	FSC/CT/3511	Nests and forages in tidal emergent wetland with pickleweed and cordgrass
California brown pelican <i>Pelecanus occidentalis californicus</i>	FE/3511	Nests on coastal islands of small to moderate size that afford protection from predators.
California clapper rail <i>Rallus longirostris obsoletus</i>	FE/CE	Nests and forages in emergent wetlands with pickleweed, cordgrass, and bulrush

⁴ The bald eagle was proposed for delisting by the U.S. Fish and Wildlife Service on July 6, 1999.

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

SAN MATEO COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Bank swallow <i>Riparia riparia</i>	--/CT	Nests primarily in riparian and other lowland habitat. Requires vertical banks or cliffs with fine textured or sandy soils near water.
California least tern <i>Sterna antillarum browni</i>	FE/CE	Colonial breeder on bare or sparsely vegetated flat substrates including sand beaches, alkali flats, land fills, or paved areas
Mammals		
Salt marsh harvest mouse <i>Reithrodontomys raviventris</i>	FE/CE	Saline emergent marsh with dense pickleweed
Plants		
San Mateo thornmint <i>Acanthomintha duttonii</i>	FE/CE/List 1B	Serpentine soils in chaparral and valley grassland
San Bruno Mtn. Manzanita <i>Arctostaphylos imbricata</i>	FSC/CE/List 1B	Chaparral, coastal scrub
Robust spineflower <i>Chorizanthe robusta</i> var. <i>robusta</i>	FE/--/List 1B	Coastal scrub, coastal sand dunes, openings in oak woodlands with sandy or gravelly soil
Fountain thistle <i>Cirsium fontinale</i> var. <i>fontinale</i>	FE/CE/List 1B	Grassland and openings in chaparral, in serpentinite seeps
Santa Cruz cypress <i>Cupressus abramsiana</i>	FE/CE/List 1B	Closed-cone pine forests with granitic sedimentary sandstone substrate
San Mateo woolly sunflower <i>Eriophyllum latilobum</i>	FE/CE/List 1B	Grassland, woodland slopes
Marin dwarf flax <i>Hesperolinon congestum</i>	FT/CT/List 1B	Grassland and openings in chaparral, often on serpentinite
Beach layia <i>Layia carnosa</i>	FE/CE/List 1B	Sparsely vegetated semi-stabilized coastal sand dunes, usually behind foredunes and in coastal scrub on sandy substrate.
San Francisco lessingia <i>Lessingia germanorum</i>	FE/CE/List 1B	Coastal scrub on remnant dunes. In sandy soils where cover is open and competition from other species is low.
Dudley's lousewort <i>Pedicularis dudleyi</i>	FSC/CR/List 1B	Coastal chaparral, valley grassland or redwood habitats
White rayed pentachaeta <i>Pentachaeta bellidiflora</i>	FE/CE/List 1B	Coastal scrub, grassland
Hickman's cinquefoil <i>Potentilla hickmanii</i>	FE/CE/List 1B	Wet meadows, freshwater marsh, and moist coastal habitats
California seablite <i>Suaeda californica</i>	FE/--/List 1B	Coastal salt marshes and swamps

FEDERAL OR STATE SPECIES OF SPECIAL CONCERN

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

SAN MATEO COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Invertebrates		
Opler's longhorn moth <i>Adella oplerella</i>	FSC/--	Serpentine grasslands
Tomales isopod <i>Caecidotea tomalensis</i>	FSC/--	Freshwater streams or ponds with still or slow water
Edgewood blind harvestman <i>Calcina minor</i>	FSC/--	Inhabits moist areas under rocks in serpentine soils, known from Edgewood Park, San Mateo County
Sandy beach tiger beetle <i>Cicindela hirticollis gravida</i>	FSC/--	Sandy areas around water; larva live in burrows in sand along sea beaches, creeks, seepages, and lake shores.
Globose dune beetle <i>Coelus globosus</i>	FSC/--	California's coastal dune system; primarily subterranean, tunneling through sand underneath dune vegetation.
Monarch butterfly <i>Danaus plexippus</i>	--/*	Eucalyptus groves (winter sites)
Ricksecker's water scavenger beetle <i>Hydrochara rickseckeri</i>	FSC/--	Found in freshwater ponds, shallow water of streams marshes and lakes
Leech's skyline diving beetle <i>Hydroporus leechi</i>	FSC/--	Found in freshwater ponds, shallow water of streams marshes and lakes
Marin elfin butterfly <i>Incisalia mossii marinensis</i>	FSC/--	Rocky outcrops and cliffs in coastal scrub; little species information available
Bumblebee scarab beetle <i>Lichnanthe ursina</i>	FSC/--	Dune habitats
Edgewood microblind harvestman <i>Microcina edgewoodensis</i>	FSC/--	Inhabits moist areas under rocks in serpentine soils; known from Edgewood Park, San Mateo County
Unsilvered fritillary butterfly <i>Speyeria adiaste adiaste</i>	FSC/--	Meadows and seeps in higher elevation evergreen forests
Fish		
Sacramento perch <i>Archoplites interruptus</i>	FSC/CSC	Slow moving sloughs, streams, rivers, and lakes
Green sturgeon <i>Acipenser medirostris</i>	FSC/CSC	Pacific Ocean and estuaries; spawning in lower reaches of large rivers from Alaska to Mexico
River lamprey <i>Lampetra ayresi</i>	FSC/CSC	Coastal streams from Alaska to San Francisco Bay; spawning in small, tributary streams to Sacramento-San Joaquin river system
Pacific lamprey <i>Lampetra tridentata</i>	FSC/--	Pacific Ocean and estuaries; spawning in coastal streams from Alaska to Baja California

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

SAN MATEO COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Longfin smelt <i>Spirinchus thaleichthys</i>	FSC/--	Sacramento-San Joaquin estuary in the salt or brackish water portions of the estuary, require fresh water, sandy-gravel substrates, rocks, and aquatic vegetation for spawning
Amphibians		
Foothill yellow-legged frog <i>Rana boylei</i>	FSC/CSC	Streams with quiet pools absent of predatory fish
Reptiles		
Northwestern pond turtle <i>Clemmys marmorata marmorata</i>	FSC/CSC	Freshwater ponds and slow streams edged with sandy soils for laying eggs
Southwestern pond turtle <i>Clemmys marmorata pallida</i>	FSC/--	Permanent or nearly permanent bodies of water in a variety of habitat types. Require basking sites such as partially submerged logs or open mud banks.
California horned lizard <i>Phrynosoma coronatum frontale</i>	FSC/CSC	Patchy open areas with sandy soils
Birds		
Tricolored blackbird <i>Agelaius tricolor</i>	FSC/CSC	Riparian thickets and emergent vegetation
Grasshopper sparrow <i>Ammodramus savannarum</i>	FSC/--	Riparian thickets and emergent vegetation near open water
Bell's sage sparrow <i>Amphispiza belli belli</i>	FSC/CSC	Prefer chaparral with fairly dense stands of chamise
Short-eared owl <i>Asio flammeus</i>	--/CSC	Fresh water and salt marshes and swamps, lowland meadows, irrigated fields
Western burrowing owl <i>Athene cunicularia hypugaea</i>	FSC/CSC	Nests in mammal burrows in open, sloping grasslands
Ferruginous hawk <i>Buteo regalis</i>	FSC/CSC	Dry open country with a variety of habitats
Costa's hummingbird <i>Calypte costae</i>	FSC/--	Dry chaparral, desert washes
Lawrence's goldfinch <i>Carduelis lawrencei</i>	FSC/--	Dry grassy slopes and chaparral
Vaux's swift <i>Chaetura vauxi</i>	FSC/--	Riparian woodlands and woodlands near lakes
Black tern <i>Chlidonias niger</i>	FSC/CSC	Freshwater lakes, marshes, ponds, and flooded agricultural fields
Northern harrier <i>Circus cyaneus</i>	--/CSC	Mostly nests in emergent vegetation, wet meadows or near rivers and lakes, but may nest in grasslands away from water.

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

SAN MATEO COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Olive-sided flycatcher <i>Contopus cooperi</i>	FSC/--	Forest and woodland habitats with tall trees for nesting and roosting
Black swift <i>Cypseloides niger</i>	FSC/CSC	Colonial breeders using cliffs in deep canyons
Hermit warbler <i>Dendroica occidentalis</i>	FSC/--	Prefers coniferous habitat
Snowy egret <i>Egretta thula</i>	FSC/--	Forages in estuaries and wetlands, nests in dense emergent wetland or nearby trees.
White-tailed kite <i>Elanus leucurus</i>	--/3511	Nests near wet meadows and open grasslands, dense oak, willow or other large tree stands.
Little willow flycatcher <i>Empidonax traillii brewsteri</i>	FSC/CSC	Willow riparian habitat, dry, brushy upland pastures, orchards
American peregrine falcon <i>Falco peregrinus anatum</i>	Delisted	Nests near wetlands, lakes, rivers, or other water on cliffs, banks, human structures
Saltmarsh common yellowthroat <i>Geothlypis trichas sinuosa</i>	FSC/CSC	Saline and freshwater marshes. Requires thick cover down to water surface for foraging; tall grasses, tules, or willows for nesting.
Harlequin duck <i>Histrionicus histrionicus</i>	FSC/CSC	Marine waters and rocky shores; nests along shallow, swift rivers
Loggerhead shrike <i>Lanius ludovicianus</i>	FSC/CSC	Nests in shrublands and forages in open grasslands
Lewis's woodpecker <i>Melanerpes lewis</i>	FSC/--	Open woodlands in interior foothills and valleys
Long-billed curlew <i>Numenius americanus</i>	FSC/--	Lake beaches, nests in both dry and wet uplands
Double-crested cormorant <i>Phalacrocorax auritus</i>	--/CSC	Nests along coast on isolated islands or in trees along lake margins.
Rufous hummingbird <i>Selasphorus rufus</i>	FSC/--	Forests, woodland edges, thickets
Allen's hummingbird <i>Selasphorus sasin</i>	FSC/--	Brush and woodlands
Mammals		
Townsend's western big-eared bat <i>Corynorhinus townsendii townsendii</i>	FSC/CSC	The distribution of this bat is correlated largely with rocky situations where caves or abandoned mine tunnels are available. Humid coastal regions, will only roost in the open, extremely sensitive to disturbance
Greater western mastiff bat <i>Eumops perotis californicus</i>	FSC/CSC	Open arid to semi-arid habitats, including woodlands, coastal scrub, chaparral, and grasslands. Roosts in trees, cliffs, dwellings

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

SAN MATEO COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Western small-footed myotis <i>Myotis ciliolabrum</i>	FSC/--	Inhabits arid, upland habitats; roosts in caves, building, and crevices
Long-eared myotis <i>Myotis evotis</i>	FSC/--	Brush, woodland, and forest habitats, prefers coniferous habitat types. Nursery colonies in buildings, crevices, spaces under tree bark, and snags.
Long-legged myotis <i>Myotis volans</i>	FSC/--	Most common in woodland and forest habitats above 4000 feet. Use trees and caves for roosting, hollow trees or spaces under tree bark for nursery colonies.
Fringed myotis <i>Myotis thysanodes</i>	FSC/--	A wide variety of habitats. Optimal habitats are valley-foothill hardwood and hardwood-conifer types. Uses caves, buildings, or crevices for roosting and nursery colonies.
Yuma myotis <i>Myotis yumanensis</i>	FSC/--	Optimal habitat is open forests or woodlands with sources of water and flying insects. Nursery colonies in caves, buildings, or crevices.
San Francisco dusky-footed woodrat <i>Neotoma fuscipes annectens</i>	FSC/CSC	Hardwood forests and scrub communities
Salt marsh wandering shrew <i>Sorex vagrans halicoetes</i>	FSC/CSC	Salt-marshes
Plants		
Franciscan onion <i>Allium peninsulare</i> var. <i>franciscanum</i>	FSC/--/List 1B	Dry valley grassland and foothill woodland habitats
Santa Cruz manzanita <i>Arctostaphylos andersonii</i>	FSC/--/List 1B	Openings in chaparral, mixed evergreen and redwood forest habitats
Franciscan manzanita <i>Arctostaphylos hookeri</i> ssp. <i>franciscana</i>	--/--/List 1A	Chaparral on serpentine soils. Formerly endemic to San Francisco area.
Montara manzanita <i>Arctostaphylos montaraensis</i>	FSC/--/List 1B	Maritime chaparral, coastal scrub
King's Mtn. Manzanita <i>Arctostaphylos regismontana</i>	FSC/--/List 1B	Chaparral, coniferous forests with granitic sedimentary sandstone
Coastal marsh milk-vetch <i>Astragalus pycnostachyus</i> var. <i>pycnostachyus</i>	FSC/--/List 1B	Coastal and salt marsh habitats
Alkali milk-vetch <i>Astragalus tener</i> var. <i>tener</i>	--/--/List 1B	Alkali flats, vernal pools in valley grasslands
Congdon's tarplant <i>Centromadia parryi</i> ssp. <i>congdonii</i>	FSC/CSC/List 1B	Alkaline areas in valley and foothill grassland

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

SAN MATEO COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
San Francisco Bay spineflower <i>Chorizanthe cuspidata</i> var. <i>cuspidata</i>	FSC/--/List 1B	Coastal bluff scrub, coastal dunes, coastal prairie, on sandy soils
Compact cobwebby thistle <i>Cirsium occidentale</i> var. <i>compactum</i>	--/--/List 1B	On coastal dunes and clay soils in chaparral, coastal prairie, coastal scrub
Palo alto thistle <i>Cirsium praeteriens</i>	--/--/List 1B	Ultramafic seeps, sandy streams
South Bay clarkia <i>Clarkia concinna</i> ssp. <i>automixa</i>	FSC/--/List 4	Mixed evergreen forest, oak woodland, douglas-fir forest
Point Reyes bird's-beak <i>Cordylanthus maritimus</i> ssp. <i>palustris</i>	--/--/List 1B	Upper zones of coastal salt marsh
Clustered lady's-slipper <i>Cypripedium fasciculatum</i>	FSC/--/List 4	Lower montane coniferous forests, North coast coniferous forests, usually serpentinite seeps and streambanks
Western leatherwood <i>Dirca occidentalis</i>	--/--/List 1B	Broadleaved upland forests, closed-cone coniferous forests, chaparral, cismontane woodland, North coast coniferous forests, riparian forests, riparian woodland; mesic sites
Hoover's button-celery <i>Eryngium aristulatum</i> var. <i>hooveri</i>	FSC /--/List 1B	Vernal pools
Hillsborough chocolate lily <i>Fritillaria biflora</i> var. <i>ineziana</i>	--/--/List 1B	Cismontane woodland, grassland, on serpentinite
Fragrant fritillary <i>Fritillaria liliacea</i>	FSC/--/List 1B	Coastal scrub, valley and foothill grassland, coastal prairie; on heavy clay soils, often on ultramafic soils
Dune gilia <i>Gilia capitata</i> ssp. <i>chamissonis</i>	--/--/List 1B	Coastal dunes and coastal scrub
San Francisco gumplant <i>Grindelia hirsutula</i> var. <i>maritima</i>	FSC/--/List 1B	Coastal bluff scrub, coastal scrub, grasslands, on sandy or serpentinite soils
Diablo helianthella <i>Helianthella castanea</i>	FSC/--/List 1B	Openings in chaparral and broadleaved upland forest
Kellogg's horkelia <i>Horkelia cuneata</i> ssp. <i>sericea</i>	FSC/--/List 1B	Closed-cone coniferous forests, coastal scrub
Point Reyes horkelia <i>Horkelia marinensis</i>	FSC/--/List 1B	Dune and coastal habitats
Delta tule-pea <i>Lathyrus jepsonii</i> var. <i>jepsonii</i>	FSC/--/List 1B	Freshwater marsh or brackish marsh habitats

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

SAN MATEO COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Crystal Springs lessingia <i>Lessingia arachnoidea</i>	FSC/--/List 1B	Cismontane woodland, coastal scrub, grasslands, on serpentinite, often on roadcuts
Coast lily <i>Lilium maritimum</i>	FSC/--/List 1B	Coastal scrub, coastal prairie, and coniferous forests
Coast yellow linanthus <i>Linanthus croceus</i>	--/--/List 1B	Montara Mountain coastal bluffs
Rose linanthus <i>Linanthus rosaceus</i>	--/--/List 1B	Coastal bluff scrub
San Mateo tree lupine <i>Lupinus eximius</i>	FSC/--/List 3	Chaparral and coastal scrub
Arcuate bush mallow <i>Malacothamnus arcuatus</i>	--/--/List 1B	Chaparral
Dudley's lousewort <i>Pedicularis dudleyi</i>	FSC/CR/List 1B	Coastal chaparral, valley grassland and redwood forest habitats
Gairdner's yampah <i>Perideridia gairdneri</i> ssp. <i>gairdneri</i>	FSC/--/List 4	Wet meadows and vernal pools
Choris's popcorn-flower <i>Plagiobothrys chorisianus</i> var. <i>chorisianus</i>	--/--/List 1B	Chaparral, coastal prairie, coastal scrub, on mesic sites
Slender-leaved pondweed <i>Potamogeton filiformis</i>	--/--/List 2	Shallow areas in freshwater marshes and swamps
Marin checkerbloom <i>Sidalcea hickmanii</i> ssp. <i>viridis</i>	FSC/--/List 1B	Chaparral, usually on serpentinite
San Francisco campion <i>Silene verecunda</i> ssp. <i>verecunda</i>	FSC/--/List 1B	Coastal bluff scrub, chaparral, coastal prairie, coastal scrub, grasslands with sandy soil
Pacific cordgrass <i>Spartina foliosa</i>	FSLC/--/--	Salt marshes
Saline clover <i>Trifolium depauperatum</i> var. <i>hydrophilum</i>	--/--/List 1B	Marshes and swamps, mesic alkaline areas in valley and foothill grassland
San Francisco owl's-clover <i>Triphysaria floribunda</i>	FSC/--/List 1B	Coastal prairie and grasslands, on serpentinite
<i>Triquetrella californica</i>	--/--/List 1B	Coastal bluff scrub, coastal scrub
Caper-fruited tropidocarpum <i>Tropidocarpum capparideum</i>	FSC/--/List 1A	Alkaline hills, grasslands

SAN MATEO COUNTY

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

SENSITIVE PLANT COMMUNITIES		
Name	Global Rank	State Rank
Northern coastal salt marsh	G3	S3.2
Northern maritime chaparral	G1	S1.2
Serpentine Bunchgrass	G2	S2.2
Valley Needlegrass Grassland	G1	S3.1
Valley oak woodland	G3	S2.1

SANTA CLARA COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
SPECIES LISTED OR PROPOSED FOR LISTING		
Invertebrates		
Bay checkerspot butterfly <i>Euphydryas editha bayensis</i> Critical Habitat designated	FT/--	Serpentine bunchgrass grassland
San Bruno elfin butterfly <i>Incisalia mossii bayensis</i>	FE/--	Steep north facing slopes within the fog belt with grassy ground cover. Larval host plant is <i>Sedum spathulifolium</i> .
Vernal pool tadpole shrimp <i>Lepidurus packardi</i>	FE/--	
Fish		
Tidewater goby <i>Eucyclogobius newberryi</i>	FT/CSC	Shallow waters of bays and estuaries
Delta smelt <i>Hypomesus transpacificus</i> Critical Habitat designated	FT/CT	Restricted to the Sacramento-San Joaquin Delta, including Suisun and San Pablo Bays and the Carquinez Strait.
Steelhead – Central California Coast (ESU) <i>Oncorhynchus mykiss irideus</i> Critical Habitat designated	FT/CSC	Unblocked Bay Area and coastal rivers and streams with cool water and clean gravels for spawning
Steelhead – Central Valley (ESU) <i>Oncorhynchus mykiss irideus</i> Critical Habitat designated	FT/CSC	Unblocked Bay Area and coastal rivers and streams with cool water and clean gravels for spawning
Coho salmon-South/Central California Coast ESU <i>Oncorhynchus kisutch</i>	FT/CE	Accessible Bay Area and coastal rivers and streams with cover, cool water and sufficient dissolved oxygen. Require beds of loose, silt-free gravel for spawning.
Chinook salmon—Central Valley ESU spring-run <i>Oncorhynchus tshawytscha</i> Critical Habitat designated	FT/CT	Spawning and rearing restricted to Sacramento River basin, migrate through San Francisco Bay and Sacramento-SanJoaquin Delta

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

SANTA CLARA COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Chinook salmon—Central Valley ESU fall/late fall-run <i>Oncorhynchus tshawytscha</i> Critical Habitat proposed	FC/CSC	Spawning and rearing restricted to Sacramento River basin, migrate through San Francisco Bay and Sacramento-SanJoaquin Delta, require clean, cold water and gravel beds for spawning
Chinook salmon—Central Valley ESU winter run <i>Oncorhynchus tshawytscha</i> Critical Habitat designated	FE/CE	Spawning restricted to the Sacramento River. Requires clean, cold water with gravel beds.
Sacramento splittail <i>Pogonichthys macrolepidotus</i>	FT/CSC	Slow moving river sections and dead-end sloughs with flooded vegetation for spawning and foraging for young.
Amphibians		
California tiger salamander <i>Ambystoma californiense</i>	FC/CSC	Seasonal freshwater ponds with little or no emergent vegetation
California red-legged frog <i>Rana aurora draytonii</i>	FT/CSC	Breed in stock ponds, pools, and slow-moving streams with emergent vegetation for escape cover and egg attachment
Reptiles		
Alameda whipsnake <i>Masticophis lateralis euryxanthus</i> Critical Habitat designated	FT/CT	Preferred habitat a mosaic of open coastal scrub or chaparral and grassland with rocky outcrops
San Francisco garter snake <i>Thamnophis sirtalis tetrataenia</i>	FE/CE	Freshwater ponds and slow streams with emergent vegetation; nearby upland grasslands with small rodent burrows may also provide habitat for this species (USFWS, 1985). Little is known about the seasonal movements of this species or their capacity for using upland areas.
Birds		
Marbled murrelet <i>Brachyramphus marmoratus</i> Critical Habitat designated	FT/CE	Nests in dense, old growth forests along coast
Western snowy plover <i>Charadrius alexandrinus nivosus</i>	FT/CSC	Nests and forages on sandy beaches on marine and estuarine shores - requires sandy, gravelly, or friable soils for nesting
Mountain plover <i>Charadrius montanus</i>	FPT/CSC	Winters in areas with short-grassed or plowed fields with bare ground and flat topography. Prefer grazed areas and those with burrowing rodents.
Bald eagle ⁵ <i>Haliaeetus leucocephalus</i>	FT/CE	Nests and forages on inland lakes, reservoirs, and rivers; winter foraging at lakes and along major rivers
California black rail <i>Laterallus jamaicensis coturniculus</i>	FSC/CT/3511	Nests and forages in tidal emergent wetland with pickleweed and cordgrass

⁵ The bald eagle was proposed for delisting by the U.S. Fish and Wildlife Service on July 6, 1999.

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

SANTA CLARA COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
California clapper rail <i>Rallus longirostris obsoletus</i>	FE/CE	Nests and forages in emergent wetlands with pickleweed, cordgrass, and bulrush
Bank swallow <i>Riparia riparia</i>	--/CT	Nests primarily in riparian and other lowland habitat. Requires vertical banks or cliffs with fine textured or sandy soils near water.
California least tern <i>Sterna antillarum browni</i>	FE/CE	Colonial breeder on bare or sparsely vegetated flat substrates including sand beaches, alkali flats, land fills, or paved areas
Least Bell's vireo <i>Vireo bellii pusillus</i>	FE/CE	Low elevation riparian habitat near water or dry river bottoms
Mammals		
Riparian brush rabbit <i>Sylvilagus bachmani riparius</i>	FE/CE	Found in San Joaquin Valley native riparian areas with large clumps of dense shrubs, low growing vines, some tall shrubs and scrubby trees.
Salt marsh harvest mouse <i>Reithrodontomys raviventris</i>	FE/CE	Saline emergent marsh with dense pickleweed
San Joaquin kit fox <i>Vulpes macrotis mutica</i>	FE/CT	Annual grasslands or open scrublands with loose textures soils for burrowing and suitable prey base
Plants		
San Mateo thornmint <i>Acanthomintha duttonii</i>	FE/CE/List 1B	Serpentine soils in chaparral and valley grassland
Tiburon indian paintbrush <i>Castilleja affinis</i> ssp. <i>neglecta</i>	FE/CT/List 1B	Open serpentine slopes
Coyote ceanothus <i>Ceanothus ferrisiae</i>	FE/--/List 1B	Serpentine sites in chaparral, valley and foothill grassland, and coastal scrub
Ben Lomond spineflower <i>Chorizanthe pungens</i> var. <i>hartegiana</i>	FE/	Highly restricted to Zayante coarse sands in maritime ponderosa pine sandhills
Monterey spineflower <i>Chorizanthe pungens</i> var. <i>pungens</i>	FT/CE/List 1B	Sandy soils in coastal dunes or further inland in chaparral, cismontane woodland, or costal scrub
Robust spineflower <i>Chorizanthe robusta</i> var. <i>robusta</i>	FE/--/List 1B	Coastal scrub, coastal sand dunes, openings in oak woodlands with sandy or gravelly soil
Santa Clara Valley dudleya <i>Dudleya setchellii</i>	FE/--/List1B	Ultramafic grasslands
Marin dwarf flax <i>Hesperolinon congestum</i>	FT/CT/List 1B	Grassland and openings in chaparral, often on serpentinite
Santa Cruz tarplant <i>Holocarpha macradenia</i>	FT/CE/List 1B	Coastal scrub, coastal sand dunes, openings in oak woodlands with sandy or gravelly soil
Contra Costa goldfields <i>Lasthenia conjugens</i>	FE/--/List 1B	Moist grasslands, vernal pools, cismontane woodlands, alkaline playas

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

SANTA CLARA COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Dudley's lousewort <i>Pedicularis dudleyi</i>	FSC/CR/List 1B	Maritime chaparral, north coast coniferous forest (redwoods), valley and foothill grassland
White-rayed pentachaeta <i>Pentachaeta bellidiflora</i>	FE/CE/List 1B	Coastal scrub, grassland
Yadon's rein orchid <i>Piperia yadonii</i>	FE/--/List 1B	Coastal bluff scrub, closed-cone coniferous forest, maritime chaparral on sandy soils
Hickman's cinquefoil <i>Potentilla hickmanii</i>	FE/CE/List 1B	Wet meadows, freshwater marsh, and moist coastal habitats
Rock sanicle <i>Sanicula saxitilis</i>	--/CR/List 1B	Rocky areas in valley and foothill grassland, broadleaved upland forest, chaparral
Metcalf Canyon jewelflower <i>Streptanthus albidus</i> ssp. <i>albidus</i>	FE/--/List 1B	Serpentine derived soils in valley and foothill grassland
California seablite <i>Suaeda californica</i>	FE/--/List 1B	Coastal salt marshes and swamps
Showy indian clover <i>Trifolium amoenum</i>	FE/--/List 1B	Moist, heavy soils, disturbed areas
FEDERAL OR STATE SPECIES OF SPECIAL CONCERN		
Invertebrates		
Opler's longhorn moth <i>Adela oplerella</i>	FSC/--	Serpentine grasslands
Edgewood blind harvestman <i>Calcina minor</i>	FSC/--	Inhabits moist areas under rocks in serpentine soils, known from Edgewood Park, San Mateo County
Ricksecker's water scavenger beetle <i>Hydrochara rickseckeri</i>	FSC/--	Aquatic
Hom's microblind harvestman <i>Microcina homi</i>	FSC/	Open grassland habitat, typically under medium to large serpentine rocks undisturbed in the soil.
Jung's microblind harvestman <i>Microcina jungi</i>	FSC/	Open grassland habitat, typically under medium to large serpentine rocks undisturbed in the soil.
Unsilvered fritillary butterfly <i>Speyeria adiastrae adiastrae</i>	FSC/--	Meadows and seeps in higher elevation evergreen forests
Mimic tryonia <i>Tryonia imitator</i>	FSC/--	Coastal lagoons, estuaries, and salt marshes
Fish		
Sacramento perch <i>Archoplites interruptus</i>	FSC/CSC	Slow moving sloughs, streams, rivers, and lakes
Longfin smelt <i>Spirinchus thaleichthys</i>	FSC/--	Sacramento-San Joaquin estuary in the salt or brackish water portions of the estuary, require fresh water, sandy-gravel substrates, rocks, and aquatic vegetation for spawning

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

SANTA CLARA COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Amphibians		
Foothill yellow-legged frog <i>Rana boylei</i>	FSC/CSC	Partly shaded streams with riffles and quiet pools absent of predatory fish
Western spadefoot toad <i>Spea hammondi</i>	FSC/CSC	Floodplains and grassland pools
Reptiles		
Silvery legless lizard <i>Aniella pulchra pulchra</i>	FSC/CSC	Sparsely vegetated areas with sandy or loose loamy soils having a high moisture content
Western pond turtle <i>Clemmys marmorata</i>	FSC/CSC	Freshwater ponds and slow streams edged with sandy soils for laying eggs and emergent vegetation for cover
Southwestern pond turtle <i>Clemmys marmorata pallida</i>	FSC/CSC	Freshwater ponds and slow streams edged with sandy soils for laying eggs and emergent vegetation for cover
California horned lizard <i>Phrynosoma coronatum frontale</i>	FSC/CSC	Patchy open areas with sandy soils
San Joaquin coachwhip <i>Masticophis flagellum ruddocki</i>	FSC/CSC	Open dry habitats with little or no tree cover, such as grassland or open scrub. Requires mammal burrows for oviposition and refuge.
Birds		
Tricolored blackbird <i>Agelaius tricolor</i>	FSC/CSC	Riparian thickets and emergent vegetation
Grasshopper sparrow <i>Ammodramus savannarum</i>	FSC/CSC	Riparian thickets and emergent vegetation near open water
Bell's sage sparrow <i>Amphispiza belli belli</i>	FSC/CSC	Prefer chaparral with fairly dense stands of chamise
Golden eagle <i>Aquila chrysaetos</i>	CSC/3511	Open hills with grassland, open scrub, adequate prey base, large trees or cliffs for nesting
Great blue heron <i>Ardea herodias</i>	--/*	Nests in trees along lakes and estuaries
Short-eared owl <i>Asio flammeus</i>	--/CSC	Fresh water and salt marshes and swamps, lowland meadows, irrigated fields
Western burrowing owl	FSC/CSC	Nests in mammal burrows in open, sloping grasslands
Ferruginous hawk <i>Buteo regalis</i>	FSC/CSC	Dry open country with a variety of habitats
Costa's hummingbird <i>Calypte costae</i>	FSC/--	Dry chaparral, desert washes
Lawrence's goldfinch <i>Carduelis lawrencei</i>	FSC/--	Dry grassy slopes and chaparral

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

SANTA CLARA COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Vaux's swift <i>Chaetura vauxi</i>	FSC/--	Riparian woodlands and woodlands near lakes
Black tern <i>Chlidonias niger</i>	FSC/CSC	Freshwater lakes, marshes, ponds, and flooded agricultural fields
Northern harrier <i>Circus cyaneus</i>	--/CSC	Mostly nests in emergent vegetation, wet meadows or near rivers and lakes, but may nest in grasslands away from water.
Black swift <i>Cypseloides niger</i>	MBT/CSC	Breeds in small colonies near waterfalls in coastal canyons and on sea bluffs
Yellow warbler <i>Dendroica petechia brewsteri</i>	--/CSC	Prefers riparian habitat with willows, cottonwoods, sycamores, or alders for nesting and foraging
White-tailed kite <i>Elanus leucurus</i>	--/3511	Nests near wet meadows and open grasslands, dense oak, willow or other large tree stands.
Little willow flycatcher <i>Empidonax traillii brewsteri</i>	FSC/CSC	Willow riparian habitat, dry, brushy upland pastures, orchards
Prairie falcon <i>Falco mexicanus</i>	--/CSC	Open grasslands with cliffs for nesting
American peregrine falcon <i>Falco peregrinus anatum</i>	Delisted	Nests near wetlands, lakes, rivers, or other water on cliffs, banks, human structures
Saltmarsh common yellowthroat <i>Geothlypis trichas sinuosa</i>	FSC/CSC	Saline and freshwater marshes
Loggerhead shrike <i>Lanius ludovicianus</i>	FSC/CSC	Nests in shrublands and forages in open grasslands
Lewis's woodpecker <i>Melanerpes lewis</i>	FSC/--	Open woodlands in interior foothills and valleys
Long-billed curlew <i>Numenius americanus</i>	FSC/--	Lake beaches, nests in both dry and wet uplands
Rufous hummingbird <i>Selasphorus rufus</i>	FSC/--	Forests, woodland edges, thickets
Allen's hummingbird <i>Selasphorus sasin</i>	FSC/--	Brush and woodlands
California thrasher <i>Toxostoma redivivum</i>	FSC/--	Chaparral covered foothills and brushy parklands where there is open ground under a dense shrub layer
Mammals		
Townsend's western big-eared bat <i>Corynorhinus townsendi townsendii</i>	FSC/CSC	The distribution of this bat is correlated largely with rocky situations where caves or abandoned mine tunnels are available. Humid coastal regions, will only roost in the open, extremely sensitive to disturbance

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

SANTA CLARA COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Berkeley kangaroo rat <i>Dipodomys heermanni berkeleyensis</i>	FSC/--	Open grasslands and open chaparral, blue oak-gray pine woodland, with fine, deep, well drained soil
Greater western mastiff bat <i>Eumops perotis californicus</i>	FSC/CSC	Open arid to semi-arid habitats, including woodlands, coastal scrub, chaparral, and grasslands. Roosts in trees, cliffs, dwellings
Small-footed myotis <i>Myotis ciliolabrum</i>	FSC/--	A variety of habitats, excluding coastal redwoods. Nursery colonies in caves, crevices, clay banks. Roosts in caves, dwellings, crevices.
Long-eared myotis <i>Myotis evotis</i>	FSC/--	Brush, woodland, and forest habitats, prefers coniferous habitat types. Nursery colonies in buildings, crevices, spaces under tree bark, and snags.
Fringed myotis <i>Myotis thysanodes</i>	FSC/--	A wide variety of habitats. Optimal habitats are valley-foothill hardwood and hardwood-conifer types. Uses caves, buildings, or crevices for roosting and nursery colonies.
Long-legged myotis <i>Myotis volans</i>	FSC/--	Most common in woodland and forest habitats above 4000 feet. Use trees and caves for roosting, hollow trees or spaces under tree bark for nursery colonies.
Yuma myotis <i>Myotis yumanensis</i>	FSC/--	Optimal habitat is open forests or woodlands with sources of water and flying insects. Nursery colonies in caves, buildings, or crevices.
San Francisco dusky-footed woodrat <i>Neotoma fuscipes annectens</i>	FSC/CSC	Hardwood forests and scrub communities
Salt marsh wandering shrew <i>Sorex vagrans halicoetes</i>	FSC/CSC	Salt-marshes
Plants		
Franciscan onion <i>Allium peninsulare</i> var. <i>franciscanum</i>	FSC/--/List 1B	
Santa Cruz manzanita <i>Arctostaphylos andersonii</i>	FSC/--/List 1B	Open sites in broadleaved upland forest, lower montane coniferous and north coast coniferous forests
Pajaro manzanita <i>Arctostaphylos pajaroensis</i>	FSC/--/List 1B	Sandy soils in chaparral
King's Mtn. Manzanita <i>Arctostaphylos regismontana</i>	FSC/--/List 1B	Soils derived from granite or sandstone in chaparral, broadleaved upland forest, and north coast coniferous forest
Silver-leaved manzanita <i>Arctostaphylos silvicola</i>	FSC/	Occurs on inland marine sand deposits in chaparral, closed-cone coniferous forest, and lower montane coniferous forest
Alkali milk-vetch <i>Astragalus tener</i> var. <i>tener</i>	--/--/List 1B	Alkali flats, valley grasslands

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

SANTA CLARA COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
San Joaquin spearscale <i>Atriplex joaquiniana</i>	FSC/--List 1B	Alkaline soils in chenopod scrub, meadows, playas, valley and foothill grassland
Big-scale balsamroot <i>Balsamorhiza macrolepis</i> var. <i>macrolepis</i>	--/--List 1B	Cismontane woodland, grassland
Salt marsh owl's clover <i>Castilleja ambigua</i> ssp. <i>ambigua</i>	FSLC/--List 1B	Salt marshes
Chaparral harebell <i>Campanula exigua</i>	--/--List 1B	Rocky areas in chaparral, usually on serpentinite derived soils
Congdon's tarplant <i>Centromadia parryi</i> ssp. <i>congdonii</i>	FSC/CSC/List 1B	Alkaline areas in valley and foothill grassland
Mt. Hamilton thistle <i>Cirsium fontinale</i> var. <i>camplyon</i>	FSC/--List 1B	Occurs in chaparral, cismontane woodland, valley and foothill grassland, often in serpentine seeps
Palo Alto thistle <i>Cirsium praeteriens</i>	--/--List 1B	Ultramafic seeps, sandy streams
South Bay clarkia (=Santa Clara red ribbons) <i>Clarkia concinna</i> ssp. <i>automixa</i>	FSC/--List 4	Chaparral, cismontane woodland
San Francisco collinsia <i>Collinsia multicolor</i>	--/--List 4	Closed-cone coniferous forests, coastal scrub
Point Reyes bird's-beak <i>Cordylanthus maritimus</i> ssp. <i>palustris</i>	--/--List 1B	Upper zones of coastal salt marsh
Mt. Hamilton coreopsis <i>Coreopsis hamiltonii</i>	FSC/--List 1B	Rocky substrates in cismontane woodland
Western leatherwood <i>Dirca occidentalis</i>	--/--List 1B	Broadleafed upland forests, closed-cone coniferous forests, chaparral, cismontane woodland, North coast coniferous forests, riparian forests, riparian woodland; mesic sites
Tiburon buckwheat <i>Eriogonum luteolum</i> var. <i>caninum</i>	FSLC/--List 3	Open serpentine; found in Alameda, Colusa, Lake, Marin, Napa, Santa Clara, San Mateo, and Sonoma Counties.
Ben Lomond buckwheat <i>Eriogonum nudum</i> var. <i>decurrens</i>	--/--List 1B	Ponderosa pine sand hills, chaparral, cismontane woodland
Hoover's button-celery <i>Eryngium aristulatum</i> var. <i>hooveri</i>	FSC /--List 1B	Vernal pools
Fragrant fritillary <i>Fritillaria liliacea</i>	FSC/--List 1B	Coastal scrub, valley and foothill grassland, coastal prairie; on heavy clay soils, often on ultramafic soils
Dune gilia <i>Gilia capitata</i> ssp. <i>chamissonis</i>	--/--List 1B	Coastal dunes and coastal scrub

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

SANTA CLARA COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
San Francisco gumplant <i>Grindelia hirsutula</i> var. <i>maritima</i>	FSC/--/List 1B	Coastal bluff scrub, coastal scrub, grasslands, on sandy or serpentinite soils
Congdon's tarplant <i>Hemizonia parryi</i> ssp. <i>congdonii</i>	FSC/CSC/List 1B	Alkaline areas in valley and foothill grassland
Loma Prieta hoita <i>Hoita strobilinia</i>	--/--/List 1B	Usually on mesic serpentinite derived soils in chaparral, cismontane woodland, or riparian woodland
Kellogg's horkelia <i>Horkelia cuneata</i> ssp. <i>sericea</i>	FSC/--/List 1B	Closed-cone coniferous forests, coastal scrub
Point Reyes horkelia <i>Horkelia marinensis</i>	FSC/--/List 1B	Sandy soils in coastal dune, coastal prairie, or coastal scrub plant communities
Delta tule pea <i>Lathyrus jepsonii</i> var. <i>jepsonii</i>	FSC/--/List 1B	Freshwater and brackish marshes and swamps, usually on marsh and slough edges
Legenere <i>Legenere limosa</i>	FSC/--/List 1B	Vernal pools
Smooth lessingia <i>Lessingia micradenia</i> var. <i>glabrata</i>	FSC/--/List 1B	Serpentine chaparral, often found on roadsides
Large-flowered linanthus <i>Linanthus grandiflorus</i>	FSC/--/List 4	Open grassy flats, generally in sandy soils
Mt. Hamilton lomatium <i>Lomatium observatorium</i>	--/--/List 1B	Occurs in cismontane woodland
Arcuate bush mallow <i>Malacothamnus arcuatus</i>	--/--/List 1B	Chaparral
Hall's bush mallow <i>Malacothamnus hallii</i>	--/--/List 1B	Chaparral, sometimes on serpentine soils
Robust monardella <i>Monardella villosa</i> ssp. <i>globosa</i>	--/--/List 1B	Cismontane woodland, openings in chaparral
Prostrate navarretia <i>Navarretia prostrata</i>	--/--/List 1B	Vernal pools and other mesic sites in coastal scrub and valley and foothill grassland
Dudley's lousewort <i>Pedicularis dudleyi</i>	FSC/CR/List 1B	Coastal chaparral, valley grassland and redwood forest habitats
Santa Cruz Mountains beardtongue <i>Penstemon rattanii</i> var. <i>kleei</i>	--/--/List 1B	Sandy shale slopes in chaparral and lower montane coniferous forest, sometimes in the edge between the two habitat types
Mt. Diablo phacelia <i>Phacelia phacelioides</i>	FSC/--/List 1B	Rocky substrates in chaparral, cismontane woodland
Hairless popcorn-flower <i>Plagiobothrys glaber</i>	--/--/List 1A	Coastal salt-marsh, alkaline flats, meadows, and seeps

TABLE E-2 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN FRANCISCO BAY AREA REGION OF THE PROJECT AREA

SANTA CLARA COUNTY

Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Slender-leaved pondweed <i>Potamogeton filiformis</i>	--/--/List 2	Shallow areas in freshwater marshes and swamps
Rock sanicle <i>Sanicula saxatilis</i>	FSC/	Rocky substrates in chaparral, valley and foothill grassland, and broadleaved upland forest
Rayless ragwort <i>Senecio aphanactis</i>	--/--/List 2	Alkaline flats in coastal scrub, chaparral, cismontane woodland
Maple-leaved checkerbloom <i>Sidalcea malachroides</i>	--/--/List 1B	Coastal prairie, coastal scrub, broadleaved upland forest, north coast coniferous forest; often in disturbed areas in clearings or woodlands
Pacific cordgrass <i>Spartina foliosa</i>	FSLC/--/--	Salt marshes
Most beautiful jewelflower <i>Streptanthus albidus</i> ssp. <i>peramoenus</i>	FSC/--/List 1B	Serpentine grassland, chaparral
Mt. Hamilton jewelflower <i>Streptanthus callistus</i>	FSC/--/List 1B	Chaparral and cismontane woodland
Saline clover <i>Trifolium depauperatum</i> var. <i>hydrophilum</i>	--/--/List 1B	Marshes and swamps, mesic alkaline areas in valley and foothill grassland
Caper-fruited tropidocarpum <i>Tropidocarpum capparideum</i>	FSC/--/List 1A	Alkaline hills, grasslands
Long-beard lichen <i>Usnea longissima</i>	CNDDDB ranks as S2: endangered	Grows on a variety of trees, including big-leaf maple, oaks, and bay in north coast coniferous forest and broadleaved upland forest

SANTA CLARA COUNTY

SENSITIVE PLANT COMMUNITIES

Name	Global Rank	State Rank
Northern coastal salt marsh	G3	S3.2
Serpentine bunchgrass	G2	S2.2
Valley oak woodland	G3	S2.1

**TABLE E-3
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SANTA CRUZ REGION OF THE PROJECT AREA¹**

SANTA CRUZ COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
SPECIES LISTED OR PROPOSED FOR LISTING		
<i>Invertebrates</i>		
Ohlone tiger beetle <i>Cincindela ohlone</i>	FE/--	Coastal terraces supporting remnant patches of native grassland habitat
Smith's blue butterfly <i>Euphilotes enoptes smithi</i>	FE/--	Most commonly associated with coastal dunes and coastal sage scrub communities. Require presence of <i>Eriogonum latifolium</i> and <i>E. parvifolium</i> larval and adult as host plants.
Bay checkerspot butterfly <i>Euphydryas editha bayensis</i>	FT/--	Serpentine bunchgrass grassland
Critical Habitat designated		
Mt. Hermon june beetle <i>Polyphylla barbata</i>	FE/--	Known only from sand hills at Mt. Hermon, Santa Cruz County
Zayante band-winged grasshopper <i>Trimeropteris infantilis</i>	FE/--	Endemic to isolated sandstone deposits in the Zayante Sand Hills ecosystem
<i>Fish</i>		
Tidewater goby <i>Eucyclogobius newberryi</i>	FT/CSC	Shallow waters of bays and estuaries
Coho salmon-South/Central California ESU <i>Oncorhynchus kisutch</i>	FT/CE	Unblocked coastal rivers and streams with cool water and clean gravels for spawning
Steelhead – Central California Coast ESU <i>Oncorhynchus mykiss irideus</i>	FT/CSC	Unblocked coastal rivers and streams with cool water and clean gravels for spawning
Critical Habitat designated		
Steelhead – Central California Coast ESU <i>Oncorhynchus mykiss irideus</i>	FT/CSC	Unblocked coastal rivers and streams with cool water and clean gravels for spawning
Critical Habitat designated		
<i>Amphibians</i>		
California tiger salamander <i>Ambystoma californiense</i>	FC/CSC	Seasonal freshwater ponds with little or no emergent vegetation
Santa Cruz long-toed salamander <i>Ambystoma macrodactylum croceum</i>	FE/CE	Wet meadows near sea level with shallow water and mammal burrows present
California red-legged frog <i>Rana aurora draytonii</i>	FT/CSC	Breed in stock ponds, pools, and slow-moving streams with emergent vegetation for escape cover and egg attachment
<i>Reptiles</i>		

¹ ESA was unable to obtain an official list of special status species list for the area covered by this table and the online list for the county only covers species listed as threatened or endangered. Therefore this table was compiled using the CNDDDB and CNPS databases and the online FWS list, it may not include all species of concern to USFWS for the area of interest.

TABLE E-3 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SANTA CRUZ REGION OF THE PROJECT AREA

SANTA CRUZ COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
San Francisco garter snake <i>Thamnophis sirtalis</i> <i>tetrataenia</i>	FE/CE	Freshwater ponds and slow streams with emergent vegetation; nearby upland grasslands with small rodent burrows may also provide habitat for this species (USFWS, 1985). Little is known about the seasonal movements of this species or their capacity for using upland areas.
Birds		
Marbled murrelet <i>Brachyramphus marmoratus</i> Critical Habitat designated	FT/CE	Nests in burrows or crevices. Common resident of northwestern coastal forests (temperate rainforest)
Western snowy plover <i>Charadrius alexandrinus nivosus</i>	FT/CSC	Nests and forages on sandy beaches on marine and estuarine shores - requires sandy, gravely, or friable soils for nesting
Bald eagle ² <i>Haliaeetus leucocephalus</i>	FT/CE	Nests and forages on inland lakes, reservoirs, and rivers; winter foraging at lakes and along major rivers
California brown pelican <i>Pelecanus occidentalis</i> <i>californicus</i>	FE/3511	Nests on coastal islands of small to moderate size that afford protection from predators.
California clapper rail <i>Rallus longirostris obsoletus</i>	FE/CE	Nests and forages in emergent wetlands with pickleweed, cordgrass, and bulrush
Plants		
Marsh sandwort <i>Arenaria paludicola</i>	FE/CE/List 1B	Freshwater marshes and swamps with dense <i>Typha</i> , <i>Juncus</i> , and <i>Scirpus</i>
Coyote ceanothus <i>Ceanothus ferrisiae</i>	FE/--/List 1B	Serpentine sites in chaparral, valley and foothill grassland, and coastal scrub
Ben Lomond spineflower <i>Chorizanthe pungens</i> var. <i>hartwegiana</i>	FE/--/List 1B	Highly restricted to Zayante coarse sands in maritime ponderosa pine sandhills
Monterey spineflower <i>Chorizanthe pungens</i> var. <i>pungens</i> Critical Habitat designated	FT/CE/List 1B	Sandy soils in coastal dunes or further inland in chaparral, cismontane woodland, or coastal scrub
Scott's Valley spineflower <i>Chorizanthe robusta</i> var. <i>Hartwegii</i> Critical Habitat designated	FE/--/List 1B	In meadows and valley and foothill grassland with mudstone and sandstone outcrops
Robust spineflower <i>Chorizanthe robusta</i> var. <i>robusta</i> Critical Habitat designated	FE/--/List 1B	Coastal scrub, coastal sand dunes, openings in oak woodlands with sandy or gravelly soil

² The bald eagle was proposed for delisting by the U.S. Fish and Wildlife Service on July 6, 1999.

TABLE E-3 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SANTA CRUZ REGION OF THE PROJECT AREA

SANTA CRUZ COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Santa Cruz cypress <i>Cupressus abramsiana</i>	FE/CE/List 1B	On soils derived from sandstone and granite in closed-cone coniferous forest and lower montane coniferous forest. Endemic to Santa Cruz and Santa Clara Counties.
Santa Clara Valley dudleya <i>Dudleya setchellii</i>	FE/--/List 1B	Ultramafic grasslands
Santa Cruz wallflower <i>Erysimum teretifolium</i>	FE/CE/List 1B	Chaparral and lower montane coniferous forest on inland marine sands (Zayante coarse sand)
Sand gilia <i>Gilia tenuiflora</i> ssp. <i>arenaria</i>	FE/CT/List 1B	Coastal dunes, coastal scrub, maritime chaparral, and cismontane woodlands often in bare, wind-sheltered areas
Santa Cruz tarplant <i>Holocarpha macradenia</i> Critical Habitat proposed	FT/CE/List 1B	Coastal scrub, coastal sand dunes, openings in oak woodlands with sandy or gravelly soil
Tidestrom's lupine <i>Lupinus tidestromii</i>	FE/CE/List 1B	Coastal dunes
Dudley's lousewort <i>Pedicularis dudleyi</i>	FSC/CR/List 1B	Maritime chaparral, north coast coniferous forest (redwoods), valley and foothill grassland
White rayed pentachaeta <i>Pentachaeta bellidiflora</i>	FE/CE/List 1B	Coastal scrub, grassland
Yadon's rein orchid <i>Piperia yadonii</i>	FE/--/List 1B	Coastal bluff scrub, closed-cone coniferous forest, maritime chaparral on sandy soils
San Francisco popcorn flower <i>Plagiobothrys diffusus</i>	--/CE/List 1B	Coastal prairie, valley and foothill grassland.
Scott's Valley polygonum <i>Polygonum hickmanii</i>	FPE/--/List 1B	On mudstone and sandstone derived soils in valley and foothill grassland

FEDERAL OR STATE SPECIES OF SPECIAL CONCERN

Invertebrates		
Opler's longhorn moth <i>Adela oplerella</i>	FSC/--	Serpentine grasslands
Edgewood blind harvestman <i>Calcina minor</i>	FSC/--	Open serpentine grasslands with permanent springs
Monarch butterfly <i>Danaus plexippus</i>	--/*	Winter in California. Roost in wind protected eucalyptus, Monterey pine, and cypress groves, with water and nectar sources nearby.
California linderiella <i>Linderiella occidentalis</i>	FSC/--	Vernal pools
Mimic tryonia <i>Tryonia imitator</i>	FSC/--	Coastal lagoons, estuaries, and salt marshes
Amphibians		

TABLE E-3 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SANTA CRUZ REGION OF THE PROJECT AREA

SANTA CRUZ COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Foothill yellow-legged frog <i>Rana boylei</i>	FSC/CSC	Partly shaded streams with riffles and quiet pools absent of predatory fish
Reptiles		
Black legless lizard <i>Aniella pulchra nigra</i>	--/CSC	Sandy soils and sand dunes with moist soil, bush lupine, and mock heather as essential habitat components
Western pond turtle <i>Clemmys marmorata</i>	FSC/CSC	Freshwater ponds and slow streams edged with sandy soils for laying eggs and emergent vegetation for cover
Southwestern pond turtle <i>Clemmys marmorata pallida</i>	FSC/CSC	Freshwater ponds and slow streams edged with sandy soils for laying eggs and emergent vegetation for cover
Birds		
Cooper's hawk <i>Accipiter cooperi</i>	--/CSC	Nests in riparian growths of deciduous trees and live oak woodlands
Tricolored blackbird <i>Agelaius tricolor</i>	FSC/CSC	Riparian thickets and emergent vegetation
Western burrowing owl	FSC/CSC	Nests in mammal burrows in open, sloping grasslands
Black swift <i>Cypseloides niger</i>	--/CSC	Breeds in small colonies near waterfalls in coastal canyons and on sea bluffs
Plants		
<i>Anomobryum filiforme</i>	--/--/List 2	Damp rocks and soil, roadcuts in a variety of upland forest types
Santa Cruz manzanita <i>Arctostaphylos andersonii</i>	FSC/--/List 1B	Open sites in broadleaved upland forest, lower montane coniferous and north coast coniferous forests
Hooker's manzanita <i>Arctostaphylos hookeri</i> ssp. <i>hookeri</i>	--/--/List 1B	Sandy soils and sandstone outcrops in chaparral, coastal scrub, closed-cone coniferous forest, and cismontane woodland
Pajaro manzanita <i>Arctostaphylos pajaroensis</i>	FSC/--/List 1B	Sandy soils in chaparral
King's Mtn. Manzanita <i>Arctostaphylos regismontana</i>	FSC/--/List 1B	Soils derived from granite or sandstone in chaparral, broadleaved upland forest, and north coast coniferous forest
Bonny Doon manzanita <i>Arctostaphylos silvicola</i>	FSC/--/List 1B	Zayante sands in chaparral, closed-cone coniferous forest, lower montane coniferous forest
Swamp harebell <i>Campanula californica</i>	FSC/--/List 1B	Bogs and marshes in meadows, coastal prairie, and closed-cone forest, uncommon where it occurs
Bristly sedge <i>Carex comosa</i>	--/--/List 2	Wet places, marshes and swamps, lake margins
Deceiving sedge <i>Carex saliniformis</i>	--/--/List 1B	Mesic sites in coastal scrub, coastal scrub, meadows and seeps, as well as coastal salt marshes and swamps

TABLE E-3 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SANTA CRUZ REGION OF THE PROJECT AREA

SANTA CRUZ COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Congdon's tarplant <i>Centromadia parryi</i> ssp. <i>congdonii</i>	FSC/CSC/List 1B	Alkaline areas in valley and foothill grassland
Ben Lomond buckwheat <i>Eriogonum nudum</i> var. <i>decurrens</i>	--/--/List 1B	Ponderosa pine sand hills, chaparral, cismontane woodland
Coast wallflower <i>Erysimum ammophilum</i>	FSC/--/List 1B	Sandy openings in maritime chaparral, coastal dunes, coastal scrub
Fragrant fritillary <i>Fritillaria liliacea</i>	FSC/--/List 1B	Coastal scrub, valley and foothill grassland, coastal prairie; on heavy clay soils, often on ultramafic soils
San Francisco gumplant <i>Grindelia hirsutula</i> var. <i>maritima</i>	FSC/--/List 1B	Coastal bluff scrub, coastal scrub, grasslands, on sandy or serpentinite soils
Loma Prieta hoita <i>Hoita strobilinia</i>	--/--/List 1B	Usually on mesic serpentinite derived soils in chaparral, cismontane woodland, or riparian woodland
Kellogg's horkelia <i>Horkelia cuneata</i> ssp. <i>sericea</i>	FSC/--/List 1B	Closed-cone coniferous forests, coastal scrub
Point Reyes horkelia <i>Horkelia marinensis</i>	FSC/--/List 1B	Sandy soils in coastal dune, coastal prairie, or coastal scrub plant communities
Smooth lessingia <i>Lessingia micradenia</i> var. <i>glabrata</i>	FSC/--/List 1B	Serpentine chaparral, often found on roadsides
Hall's bush mallow <i>Malacothamnus hallii</i>	--/--/List 1B	Chaparral, sometimes on serpentinite soils
Marsh microseris <i>Microseris paludosa</i>	--/--/List 1B	Coastal scrub, valley and foothill grassland, cismontane woodland, closed-cone coniferous forest
Santa Cruz Mountains beardtongue <i>Penstemon rattanii</i> var. <i>kleei</i>	--/--/List 1B	Sandy shale slopes in chaparral and lower montane coniferous forest, sometimes in the edge between the two habitat types
Monterey pine <i>Pinus radiata</i>	FSC/--/List 1B	Closed cone coniferous forest, cismontane woodland. Only three native stands remaining at Ano Nuevo, Cambria, and the Monterey peninsula; introduced in many areas, however only native stands are protected.
Maple-leaved checkerbloom <i>Sidalcea malachroides</i>	--/--/List 1B	Coastal prairie, coastal scrub, broadleaved upland forest, north coast coniferous forest; often in disturbed areas in clearings or woodlands
San Francisco champion <i>Silene verecunda</i> ssp. <i>verecunda</i>	FSC/--/List 1B	Coastal bluff scrub, chaparral, coastal prairie, coastal scrub, grasslands with sandy soil
Most beautiful jewelflower <i>Streptanthus albidus</i> ssp. <i>peramoenus</i>	FSC/--/List 1B	Serpentine grassland, chaparral
Santa Cruz clover <i>Trifolium buckwestiorum</i>	--/--/List 1B	Coastal prairie, in moist grasslands in cismontane woodland or broadleaved upland forest

TABLE E-3 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SANTA CRUZ REGION OF THE PROJECT AREA

SANTA CRUZ COUNTY

SENSITIVE PLANT COMMUNITIES AND HABITATS		
Name	Global Rank	State Rank
Central dune scrub	G2	S2.2
Coastal and valley freshwater marsh	G3	S2.1
Northern coastal salt marsh	G3	S3.2
Northern maritime chaparral	G1	S1.2

TABLE E-4
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN
THE FRESNO REGION OF THE PROJECT AREA

FRESNO COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
SPECIES LISTED OR PROPOSED FOR LISTING		
Invertebrates		
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	FT/--	Grassland vernal pools
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	FT/--	Occurs only in the California Central Valley in association with blue elderberry (<i>Sambucus mexicana</i>); eggs laid in 1" plus diameter elderberry trees with a preference shown for "stressed" plants.
Vernal pool tadpole shrimp <i>Lepidurus packardii</i>	FE/--	Vernal pools
Fish		
Delta smelt <i>Hypomesus transpacificus</i> Critical Habitat designated	FT/CT	Restricted to the Sacramento-San Joaquin Delta, including Suisun and San Pablo Bays and the Carquinez Strait.
Steelhead-Central Valley ESU <i>Oncorhynchus mykiss irideus</i>	FT/--	Present in the Sacramento and San Joaquin Rivers and their tributaries. Require cool water and gravels for spawning.
Sacramento splittail <i>Pogonichthys macrolepidotus</i>	FT/CSC	Primarily a freshwater fish, but tolerant of moderate salinities and can live in water with salinities of 10-18 ppt; mostly found in slow-moving sections of rivers and sloughs, and in the Delta and Suisun Marsh in dead-end, shallow sloughs.
Amphibians		
California tiger salamander <i>Ambystoma californiense</i>	FC/CSC	Seasonal freshwater ponds with little or no emergent vegetation. Utilize mammal burrows in upland habitat for aestivation during the dry season.
California red-legged frog <i>Rana aurora draytonii</i>	FT/CSC	Breed in stock ponds, pools, and slow-moving streams with emergent vegetation for cover and egg attachment. Where water is seasonal often utilize mammal burrows in upland habitat for aestivation
Reptiles		
Blunt-nosed leopard lizard <i>Gambelia sila</i>	FE/3511	Inhabits sparsely vegetated plains, alkali flats, low foothills, grasslands, canyon floors, large river washes and arroyos.
Giant garter snake <i>Thamnophis gigas</i>	FT/--	Freshwater marsh and slow streams
Birds		

TABLE E-4 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
FRESNO REGION OF THE PROJECT AREA

FRESNO COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Swainson's hawk <i>Buteo swainsoni</i>	--/CT	Require large, open grasslands with abundant prey in association with suitable nest trees. Nest peripherally to riparian systems of the valley as well as utilizing lone trees or groves of trees in agricultural fields. Large valley oak, Fremont cottonwood, walnut, and willow are the most commonly used nest trees.
Mountain plover <i>Charadrius montanus</i>	FPT/CSC	Alkaline flats, plowed ground, grazed pasture, and dry short grass prairie
Western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	--/CE	Riparian areas in larger river systems, especially where willow is present and mixed with cottonwoods, and an understory of blackberry, nettles and wild grape
Greater sandhill crane <i>Grus canadensis tabida</i>	--/CT	Establish territories in wet meadows interspersed with emergent marsh. Often nest in open habitat in association with a dense cover of bulrush and bur reed.
Bald eagle <i>Haliaeetus leucocephalus</i>	FT/CE	Breeds mainly in mountainous habitats near reservoirs, lakes and rivers. Large nests are normally built in the upper canopy of large trees, usually conifers.
Mammals		
San Joaquin (=Nelson's) antelope squirrel <i>Ammospermophilus nelsoni</i>	FSC/CT	Grasslands with moderate shrub cover which includes such species as salt bush, ephedra, bladder pod, goldenbush, snakeweed
Fresno kangaroo rat <i>Dipodomys nitratoides exilis</i>	FE/CE	Alkaline clay-based soils in grasslands subject to seasonal inundation with more friable soil mounds around shrubs & grasses
Plants		
Succulent owl's clover <i>Castilleja campestris</i> ssp. <i>succulenta</i>	FT/CE/List 1B	Moist soil, often acidic, in vernal pools, valley & foothill grassland
San Joaquin Valley orcutt grass <i>Orcuttia inaequalis</i>	FT/CE/List 1B	Vernal pools
Hairy orcutt grass <i>Orcuttia pilosa</i>	FE/CE/List 1B	Vernal pools
Hartweg's golden sunburst <i>Psuedobahia bahiifolia</i>	FE/CE	Clay soils in cismontane woodland, valley & foothill grassland
Greene's tuctoria <i>Tuctoria greenei</i>	FE/CR	Vernal pools, valley and foothill grassland

TABLE E-4 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
FRESNO REGION OF THE PROJECT AREA

FRESNO COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
FEDERAL OR STATE SPECIES OF SPECIAL CONCERN		
<i>Invertebrates</i>		
Midvalley fairy shrimp <i>Branchinecta mesovallensis</i>	FSC/--	Vernal pools
California linderiella <i>Linderiella occidentalis</i>	FSC/--	Seasonal pools in intact grasslands where alluvial soils are underlaid by hardpan or in sandstone depressions
Moestan blister beetle <i>Lytta moesta</i>	FSC/--	San Joaquin Valley grasslands
Molestan blister beetle <i>Lytta molesta</i>	FSC/--	Central Valley vernal pool vegetation and grasslands; historically collected from Lake Yosemite site
<i>Fish</i>		
River lamprey <i>Lampetra ayresi</i>	FSC/--	Larger coastal streams in the San Francisco Bay drainage system
Kern brook lamprey <i>Lampetra hubbsi</i>	FSC/--	San Joaquin River system and Kern River, require gravel bottomed areas for spawning and muddy bottomed areas for young
Pacific lamprey <i>Lampetra tridentata</i>	FSC/--	Pacific Ocean and estuaries; spawning in coastal streams from Alaska to Baja California
Hardhead <i>Mylopharodon conocephalus</i>	--/CSC	Pools and side pools of rivers and creeks; Freshwater habitats w/gravel, sand, and decomposed granite and rocky areas for substrate. Distribution: Napa River near Tountville, Sacramento River near Red Bluff, and upper San Joaquin River both above and below Kerckhoff Dam.
Longfin smelt <i>Spirinchus thaleichthys</i>	FSC/--	Sacramento-San Joaquin estuary in the salt or brackish water portions of the estuary, require fresh water, sandy-gravel substrates, rocks, and aquatic vegetation for spawning
<i>Amphibians</i>		
Foothill yellow-legged frog <i>Rana boylei</i>	FSC/CSC	Partly shaded streams with riffles and quiet pools absent of predatory fish
Western spadefoot toad <i>Spea hammondi</i>	FSC/CSC	Floodplains and grassland pools
<i>Reptiles</i>		
Northwestern pond turtle <i>Clemmys marmorata marmorata</i>	FSC/CSC	Ponds, marshes, rivers, streams, and irrigation ditches with rocky or muddy bottoms – next to which grow watercress, cattails, water lilies or other aquatic vegetation
Southwestern pond turtle <i>Clemmys marmorata pallida</i>	FSC/--	Ponds, marshes, slow moving streams and rivers, and irrigation ditches with emergent aquatic vegetation and basking sites available

TABLE E-4 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
FRESNO REGION OF THE PROJECT AREA

FRESNO COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Reptiles		
California horned lizard <i>Phrysonomoa coronatum</i> <i>frontale</i>	FSC/--	Patchy open areas with sandy soils
Birds		
Tricolored blackbird <i>Agelaius tricolor</i>	FSC/CSC	Riparian thickets and emergent vegetation near open water
Grasshopper sparrow <i>Ammodramus savannarum</i>	FSC/--	Pastures, grasslands, and savanna in rolling hills and lower mountains
Short-eared owl <i>Asio flammeus</i>	--/CSC	Fresh water and salt marshes and swamps, lowland meadows, irrigated fields
Western burrowing owl <i>Athene cunicularia hypugaea</i>	FSC/CSC	Nests in mammal burrows in open, sloping grasslands
Ferruginous hawk <i>Buteo regalis</i>	FSC/CSC	Dry open country with a variety of habitats
Costa's hummingbird <i>Calypte costae</i>	FSC/--	Dry chaparral, desert washes
Lawrence's goldfinch <i>Carduelis lawrencei</i>	FSC/--	Dry grassy slopes and chaparral
Vaux's swift <i>Chaetura vauxi</i>	FSC/--	Riparian woodlands and woodlands near lakes
Black tern <i>Chlidonias niger</i>	FSC/CSC	Freshwater lakes, marshes, ponds, and flooded agricultural fields
Black swift <i>Cypseloides niger</i>	FSC/CSC	Colonial breeders using cliffs in deep canyons
White-tailed kite <i>Elanus leucurus</i>	--/3511	Nests near wet meadows and open grasslands dense oak, willow or other large tree stands.
Little willow flycatcher <i>Empidonax traillii brewsteri</i>	FSC/CSC	Willow riparian habitat, dry, brushy upland pastures, orchards
California horned lark <i>Eremophila alpestris actia</i>	--/CSC	Short grass prairie, fallow grain fields, open areas with short vegetation
American peregrine falcon <i>Falco peregrinus anatum</i>	Delisted	Nests near wetlands, lakes, rivers, or other water on cliffs, banks, human structures
Loggerhead shrike <i>Lanius ludovicianus</i>	FSC/CSC	Nests in shrublands and forages in open grasslands
Lewis's woodpecker <i>Melanerpes lewis</i>	FSC/--	Open woodlands in interior foothills and valleys
Long-billed curlew <i>Numenius americanus</i>	FSC/--	Lake beaches, nests in both dry and wet uplands

TABLE E-4 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
FRESNO REGION OF THE PROJECT AREA

FRESNO COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Nuttall's woodpecker <i>Picoides nuttallii</i>	FSLC/--	Riparian habitat oak woodlands of northern California. In other more arid areas, these woodpeckers inhabit deciduous trees alongside streams as well as oak scrublands and chaparral.
White-faced ibis <i>Plegadis chihi</i>	FSC/--	Nests and feeds in freshwater marshes.
Rufous hummingbird <i>Selasphorus rufus</i>	FSC/--	Forests, woodland edges, thickets
California thrasher <i>Toxostoma redivivum</i>	FSC/--	Chaparral covered foothills and brushy parklands where there is open ground under a dense shrub layer
Mammals		
Townsend's western big-eared bat <i>Corynorhinus townsendi townsendii</i>	FSC/CSC	Humid coastal regions, will only roost in the open, extremely sensitive to disturbance
Short-nosed kangaroo rat <i>Dipodomys nitratooides brevinasus</i>	FSC/CSC	Shrublands and grasslands with scattered shrubs, powdery soils
Spotted bat <i>Euderma maculatum</i>	FSC/--	Found in western North America, from British Columbia down into Mexico. Habitat: Lives in desert scrub and open forest areas. Roosts in cliff faces and rock crevices.
Greater western mastiff bat <i>Eumops perotis californicus</i>	FSC/CSC	Open arid to semi-arid habitats, including woodlands, coastal scrub, chaparral, and grasslands. Roosts in trees and cliffs dwellings.
Small-footed myotis <i>Myotis ciliolabrum</i>	FSC/--	A variety of habitats, excluding coastal redwoods. Nursery colonies in caves, crevices, clay banks. Roosts in caves, dwellings, crevices.
Long-eared myotis <i>Myotis evotis</i>	FSC/--	Brush, woodland, and forest habitats, prefers coniferous habitat types. Nursery colonies in buildings, crevices, spaces under tree bark, and snags.
Fringed myotis <i>Myotis thysanodes</i>	FSC/--	A wide variety of habitats. Optimal habitats are valley-foothill hardwood and hardwood-conifer types. Uses caves, buildings, or crevices for roosting and nursery colonies.
Long-legged myotis <i>Myotis volans</i>	FSC/--	Most common in woodland and forest habitats above 4000 feet. Use trees and caves for roosting, hollow trees or spaces under tree bark for nursery colonies.
Yuma myotis <i>Myotis yumanensis</i>	FSC/--	Optimal habitat is open forests or woodlands with sources of water and flying insects. Nursery colonies in caves, buildings, or crevices
Southern grasshopper mouse <i>Onychomys torridus ramona</i>	FSC/CSC	Arid grassland, shrubland, and woodland habitats

TABLE E-4 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
FRESNO REGION OF THE PROJECT AREA

FRESNO COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
San Joaquin pocket mouse <i>Perognathus inornatus inornatus</i>	FSC/--	Grasslands and blue oak savanna with friable soils
Plants		
Heartscale <i>Atriplex cordulata</i>	FSC/--/List 1B	Chenopod scrub, alkaline meadows, sandy soils in valley and foothill grassland
Brittlescale <i>Atriplex depressa</i>	--/--/List 1B	Chenopod scrub, meadows, playas, valley and foothill grassland, vernal pools, often in alkaline situations
San Joaquin spearscale <i>Atriplex joaquiniana</i>	FSC/--/List 1B	Alkaline soils in chenopod scrub, meadows, playas, valley and foothill grassland
Dwarf downingia <i>Downingia pusilla</i>	--/--/List 1B	Mesic sites in valley and foothill grassland, vernal pools
Madera linanthus <i>Linanthus serrulatus</i>	--/--/List 1B	Yellow pine forest, foothill woodland
Showy madia <i>Madia radiata</i>	--/--/List 1B	Often on adobe clay in cismontane woodland, valley and foothill grassland
Sanford's arrowhead <i>Sagittaria sanfordii</i>	FSC/--/List 1B	Shallow freshwater marshes, swamps, ditches, and ponds

FRESNO COUNTY

SENSITIVE PLANT COMMUNITIES

Name	Global Rank	State Rank
Great Valley mixed riparian forest	G2	S2.2
Northern claypan vernal pool	G1	S1.1
Northern hardpan vernal pool	G3	S3.1
Sycamore alluvial woodland	G1	S1.1

TABLE E-5
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
LOS ANGELES BASIN REGION OF THE PROJECT AREA

LOS ANGELES COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
SPECIES LISTED OR PROPOSED FOR LISTING		
Invertebrates		
El Segundo blue butterfly <i>Euphilotes battoides allyni</i>	FE/--	Restricted to remnant coastal dune habitat
Palos Verdes blue butterfly <i>Glaucopsyche lygdamus palosverdesensis</i> Critical Habitat designated	FE/--	Coastal sage scrub. Host plant is southern California locoweed (<i>Astragalus trichopodes</i> var. <i>lonchus</i>).
Riverside fairy shrimp <i>Streptocephalus woottoni</i> Critical Habitat designated	FE/--	Endemic to W. Riverside and San Diego Counties in swales and basins of grassland and coastal sage scrub
Fish		
Santa Ana sucker <i>Catostomus santaanae</i>	FT/CSC	Los Angeles Basin coastal streams
Tidewater goby <i>Eucyclogobius newberryi</i>	FE/CSC	Brackish water along California coast
Unarmored threespine stickleback <i>Gasterosteus aculeatus williamsoni</i>	FE/--	Coastal stream and rivers of southern California
Mohave tui chub <i>Gila bicolor mohavensis</i>	FE/CE	Deep pools, ponds or slough-like areas with vegetation, adapted to alkaline, mineralized waters, endemic to the Mohave River basin
Southern steelhead-Southern California ESU <i>Oncorhynchus mykiss irideus</i> Critical Habitat designated	FE/CSC	Freshwater streams with cool water and gravels for spawning
Amphibians		
Arroyo toad <i>Bufo microscaphus californicus</i>	FE/CSC	Semi-arid, near washes or intermittent streams, including valley-foothill and desert riparian
California red-legged frog <i>Rana aurora draytonii</i>	FT/CSC	Breed in stock ponds, pools, and slow-moving streams with emergent vegetation for escape cover and egg attachment. Where water is seasonal often utilizes mammal burrows in upland habitat for aestivation. Require a permanent water source for successful reproduction
Mountain yellow-legged frog <i>Rana muscosa</i>	FPE/--	Requires perennial water sources
Birds		
Western snowy plover <i>Charadrius alexandrinus nivosus</i>	FT/CSC	Sandy beaches, estuarine shores, salt pond levees and alkali lakes

TABLE E-5 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
LOS ANGELES BASIN REGION OF THE PROJECT AREA

LOS ANGELES COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Mountain plover <i>Charadrius montanus</i>	FPT/--	Winters in areas with short-grassed or plowed fields with bare ground and flat topography. Prefer grazed areas and those with burrowing rodents.
Western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	--/CE	Riparian forests along flood bottoms of large river systems
Southwestern willow flycatcher <i>Empidonax traillii eximius</i>	FE/--	Nests in riparian woodlands, but also found in low, brushy areas, especially near water.
California black rail <i>Laterallus jamaicensis coturniculus</i>	FSC/CT	Salt-marshes bordering large bays
Belding's savannah sparrow <i>Passericulus sandwichensis beldingi</i>	FSC/CE	Coastal salt-marshes
Coastal California gnatcatcher <i>Polioptila californica californica</i>	FT/CSC	Coastal sage scrub
Light-footed clapper rail <i>Rallus longirostris levipes</i>	FE/CE	Salt-marshes with cordgrass and pickleweed
Bank swallow <i>Riparia riparia</i>	--/CT	Near streams, rivers, lakes, or the ocean, requires vertical banks or cliffes with fine-textured, sandy soils for nesting, nests primarily in riparian and other lowland habitats
California least tern <i>Sterna antillarum browni</i>	FE/CE	Coastal beaches and sandbars
Least Bell's vireo <i>Vireo bellii pusillus</i>	FE/CE	Low elevation riparian habitat near water or dry river bottoms
Mammals		
San Bernadino kangaroo rat <i>Dipodomys merriami parvus</i>	FE/--	Prefers early to intermediate seral stages in alluvial scrub vegetation on sandy loam substrates typical of alluvial fans and flood plains
Pacific pocket mouse <i>Perognathus longimembris pacificus</i>	FE/CSC	Narrow coastal plains, seems to prefer soils of fine alluvial sands
Plants		
Marsh sandwort <i>Arenaria paludicola</i>	FE/CE/List 1B	Grows up through dense mats of cattails, rushes, sedges in freshwater marshes, in addition to living in swamps
Braunton's milk-vetch <i>Astragalus brauntonii</i>	FE/--/List 1B	Closed-cone conifer forest, chaparral, coastal scrub, and valley foothill grasslands
Ventura marsh milk-vetch <i>Astragalus pycnostachyus</i> var. <i>lanosissimus</i>	FE/CE/List 1B	Coastal salt-marsh

TABLE E-5 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
LOS ANGELES BASIN REGION OF THE PROJECT AREA

LOS ANGELES COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Coastal dunes milk-vetch <i>Astragalus tener</i> var. <i>titi</i>	FE/CE/List 1B	Moist, sandy depressions in coastal bluff scrub or coastal dunes
Nevin's barberry <i>Berberis nevinii</i>	FE/CE/List 1B	Chaparral, cismontane woodland, coastal scrub, riparian scrub
Thread-leaved brodiaea <i>Brodiaea filifolia</i>	FT/CE/List 1B	Cismontane woodland, coastal scrub, playas, valley and foothill grasslands, vernal pools
Mt. Gleason indian paintbrush <i>Castilleja gleasonii</i>	--/CR/List 1B	Open flats or slopes in granitic soils in lower montane coniferous forest
San Fernando Valley spineflower <i>Chorizanthe parryi</i> var. <i>fernandina</i>	FC/CE/List 1B	Sandy soils in coastal scrub
Salt marsh bird's-beak <i>Cordylanthus maritimus</i> ssp. <i>maritimus</i>	FE/CE/List 1B	Coastal salt-marsh, coastal dunes
Santa Susana tarplant <i>Deinandra minthornii</i>	--/CR/List 1B	Sandstone outcrops and crevices in chaparral and coastal scrub
Beach spectaclepod <i>Dithyrea maritima</i>	FSC/CT/List 1B	Coastal dunes, coastal scrub
Slender-horned spineflower <i>Dodecahema leptoceras</i>	FE/CE/List 1B	Chaparral, coastal scrub
Santa Monica mountains dudleya <i>Dudleya cymosa</i> ssp. <i>agourensis</i>	FT/--/List 1B	Rocky, volcanic substrates in chaparral or cismontane woodland
Marescent dudleya <i>Dudleya cymosa</i> ssp. <i>marescens</i>	FT/CR/List 1B	Chaparral, coastal scrub
Santa Monica mountains dudleya <i>Dudleya cymosa</i> ssp. <i>ovatifolia</i>	FT/--/List 1B	Cliff faces and rocky outcrops on primarily north facing slopes in chaparral, coastal scrub
Conejo dudleya <i>Dudleya parva</i>	FT/--/List 1B	Clay or volcanic soils on rocky slopes and grassy hillsides in coastal scrub and valley and foothill grassland
Santa Ana River woollystar <i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>	FE/CE/List 1B	Coastal sage scrub, chaparral
Conejo buckwheat <i>Eriogonum crocatum</i>	--/CR/List 1B	Rocky volcanic outcrops in chaparral, coastal scrub, or valley and foothill grassland
Mexican flannelbush <i>Fremontodendron mexicanum</i>	FE/CR/List 1B	Closed-cone coniferous forest, chaparral, cismontane woodland, usually scattered along creeks or in dry canyons
Spreading navarretia <i>Navarretia fossalis</i>	FT/--/List 1B	Vernal pools in chenopod scrub, marshes and swamps, playas
California orcutt grass <i>Orcuttia californica</i>	FE/CE/List 1B	Vernal pools

TABLE E-5 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
LOS ANGELES BASIN REGION OF THE PROJECT AREA

LOS ANGELES COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Lyon's pentachaeta <i>Pentachaeta lyonii</i>	FE/CE/List 1B	Chaparral and valley and foothill grassland, often at the edges of clearings in chaparral or the edges between grassland and chaparral habitat types
Gambel's watercress <i>Rorippa gambelii</i>	FE/CT/List 1B	Freshwater or brackish marshes and swamps
FEDERAL OR STATE SPECIES OF SPECIAL CONCERN		
<i>Invertebrates</i>		
Belkin's dune tabanid fly <i>Brennania belkini</i>	CNDDDB ranks as S2: endangered	Coastal sand dunes
Tiger beetle <i>Cicindela gabbii</i>	FSC/--	Coastal estuarine mudflats, occasionally found on dry saline flats
Sandy beach tiger beetle <i>Cicindela hirticollis gravida</i>	FSC/--	Areas adjacent to non-brackish water along the coast
Tiger beetle <i>Cicindela senilis frosti</i>	FSC/--	Marine shoreline in mud and on dried salt pans
Globose dune beetle <i>Coelus globosus</i>	FSC/--	Coastal sand dunes
Monarch butterfly <i>Danaus plexippus</i>	--/*	Eucalyptus groves (winter sites)
Henne's Eucosma moth <i>Eucosma hennei</i>	FSC/--	El Segundo dunes
Santa Monica shieldback katydid <i>Neduba longipennis</i>	FSC/--	Chaparral, canyon stream bottoms
Lange's El Segundo dune weevil <i>Onychobaris langei</i>	FSC/--	El Segundo dunes
Wandering skipper <i>Panoquina errans</i>	FSC/--	Coastal salt-marshes
Dorothy's El Segundo dune weevil <i>Trigonoscuta dorothea dorothea</i>	FSC/--	El Segundo dunes, coastal sand dunes
Mimic tryonia <i>Tryonia imitator</i>	FSC/--	Coastal lagoons, estuaries and salt-marshes
<i>Fish</i>		
Arroyo chub <i>Gila orcutti</i>	FSC/CSC	Coastal streams with slow water sections having mud or sand bottoms and aquatic vegetation
Santa Ana speckled dace <i>Rhinichthys osculus</i> ssp 3	--/CSC	Headwaters of the Santa Ana and San Gabriel rivers in perennial streams
<i>Amphibians</i>		
San Gabriel slender salamander <i>Batrachoseps gabrieli</i>	Listed as sensitive by US Forest Service	Known only from the San Gabriel Mountains. Found under rocks, wood, vegetation

TABLE E-5 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
LOS ANGELES BASIN REGION OF THE PROJECT AREA

LOS ANGELES COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Western spadefoot toad <i>Scaphiopus hammondi</i>	FSC/CSC	Floodplains and grassland pools
Coast range newt <i>Taricha torosa torosa</i>	--/CSC	Coastal drainages from Mendocino to San Diego County. Require upland habitat for aestivation during the dry season and slow moving streams, ponds, or reservoirs for breeding and reproduction.
Reptiles		
Silvery legless lizard <i>Aniella pulchra pulchra</i>	FSC/CSC	Sparsely vegetated areas with sandy or loose loamy soils having a high moisture content
Southwestern pond turtle <i>Clemmys marmorata pallida</i>	FSC/CSC	Permanent freshwater ponds and slow streams edged with sandy soils for laying eggs
Orange-throated whiptail <i>Cnemidophorus hyperythrus</i>	FSC/CSC	Coastal scrub, chaparral, and valley-foothill hardwood habitats
Northern red-diamond rattlesnake <i>Crotalus ruber ruber</i>	FSC/CSC	Chaparral, woodland, grassland and desert areas
San Bernadino ringneck snake <i>Diadophis punctatus modestus</i>	FSC/--	Most common in open, relatively rocky areas, often in moister microhabitats near intermittent streams
San Diego mountain kingsnake <i>Lampropeltis zonata pulchra</i>	FSC/CSC	Restricted to the San Gabriel and San Jacinto Mountains
Rosy boa <i>Lichanura trivirgata</i>	FSC/--	Chaparral and scrub, prefers moderate to dense vegetation and rocky soils
San Diego horned lizard <i>Phrynosoma coronatum blainvillei</i>	FSC/CSC	Coastal sage scrub, arid chaparral
California horned lizard <i>Phrynosoma coronatum frontale</i>	FSC/CSC	Coastal sage scrub, arid chaparral
Coast patch-nosed lizard <i>Salvadora hexalepis virgultea</i>	FSC/CSC	Scrub and chaparral habitat types with small mammal burrows available for refuge and overwintering
Two-striped garter snake <i>Thamnophis hammondi</i>	--/CSC	Highly aquatic, found in or near perennial streams, often those with rocky beds and well developed riparian vegetation
Birds		
Tricolored blackbird <i>Agelaius tricolor</i>	FSC/CSC	Riparian thickets and emergent vegetation
Southern California rufous-crowned sparrow <i>Aimophila ruficeps canescens</i>	--/CSC	Coastal sage scrub and sparse mixed chaparral, frequents relatively steep, often rocky hillsides with patches of grass and forbs
Long-eared owl <i>Asio otus</i>	--/CSC	Riparian bottomlands with well developed canopies of willows and cottonwoods or live oak, require adjacent open lands for foraging and old crow, hawk, or magpie nests for breeding

TABLE E-5 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
LOS ANGELES BASIN REGION OF THE PROJECT AREA

LOS ANGELES COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Western burrowing owl <i>Athene cunicularia hypugaea</i>	FSC/CSC	Nests in mammal burrows in open, sloping grasslands
Coastal cactus wren <i>Campylorhynchus brunneicapillus couesi</i>	--/CSC	Coastal sage scrub, require tall opuntia cactus for nesting
Black swift <i>Cypseloides niger</i>	--/CSC	Coastal and mountain bluffs or cliffs
Mammals		
San Diego black-tailed jackrabbit <i>Lepus californicus bennettii</i>	FSC/CSC	Coastal sage scrub in intermediate canopy stages, open shrub habitats with herbaceous edges, or habitat with herbaceous and tree edges
San Diego desert woodrat <i>Neotoma lepida intermedia</i>	FSC/CSC	A variety of habitat types with moderate to dense canopies and rock outcrops or rocky cliffs and slopes
Plants		
Chaparral sand-verbena <i>Abronia villosa</i> var. <i>aurita</i>	--/--/List 1B	Sandy areas in chaparral and coastal scrub
Aphanisma <i>Aphanisma blitoides</i>	FSC/--/List 1B	Coastal bluff scrub, coastal dunes
Greata's aster <i>Aster greatae</i>	--/--/List 1B	Mesic areas in riparian woodland, cismontane woodland, broadleaved upland forest, chaparral
Coulter's saltbush <i>Atriplex coulteri</i>	--/--/List 1B	Alkaline or clay soils in coastal dunes, coastal bluff scrub, coastal scrub, or valley and foothill grassland
South Coast saltscale <i>Atriplex pacifica</i>	FSC/--/List 1B	Coastal bluff scrub, coastal dunes, playas, chenopod scrub
Parish's brittle scale <i>Atriplex parishii</i>	FSC/--/List 1B	Alkali meadows, vernal pools, chenopod scrub, playas
Davidson's saltscale <i>Atriplex serenana</i> var. <i>davidsonii</i>	--/--/List 1B	Coastal bluff scrub, coastal scrub
Malibu baccharis <i>Baccharis malibuensis</i>	--/--/List 1B	Chaparral, cismontane woodland, coastal scrub, known only from 4 occurrences near Malibu Lake in the Santa Monica Mtns.
Slender mariposa lily <i>Calochortus clavatus</i> var. <i>gracilis</i>	--/--/List 1B	Chaparral and coastal scrub, shaded foothill canyons, often on grassy slopes within other habitat types
Plummer's mariposa lily <i>Calochortus plummerae</i>	--/--/List 1B	Coastal scrub, chaparral, valley and foothill grassland, cismontane woodland, lower coniferous forest
Intermediate mariposa lily <i>Calochortus weedii</i> var. <i>intermedius</i>	--/--/List 1B	Coastal scrub, chaparral, valley and foothill grassland
Santa Barbara morning-glory <i>Calystegia sepium</i> ssp. <i>binghamiae</i>	--/--/List 1B	Coastal marshes

TABLE E-5 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
LOS ANGELES BASIN REGION OF THE PROJECT AREA

LOS ANGELES COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Southern tarplant <i>Centromadia parryi</i> ssp. <i>australis</i>	--/--/List 1B	Margins of marshes and swamps, vernal mesic valley and foothill grasslands, vernal pools, often in disturbed areas, sometimes in alkaline soils
Orcutt's pincushion <i>Chaenactis glabriuscula</i> var. <i>orcuttiana</i>	--/--/List 1B	Coastal dunes, sandy soils in coastal bluff scrub
Catalina crossosoma <i>Crossosoma californicum</i>	--/--/List 1B	Rocky substrates in chaparral or coastal scrub
Dune larkspur <i>Delphinium parryi</i> ssp. <i>blochmaniae</i>	--/--/List 1B	Maritime chaparral, coastal dunes
Blochman's dudleya <i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i>	--/--/List 1B	Open, rocky slopes, sometimes on serpentine, in coastal scrub, coastal bluff scrub, valley and foothill grassland, chaparral
San Gabriel River dudleya <i>Dudleya cymosa</i> ssp. <i>crebrifolia</i>	--/--/List 1B	Granitic cliffs and outcrops in chaparral
San Gabriel Mtns. dudleya <i>Dudleya densiflora</i>	--/--/List 1B	Chaparral, coastal scrub, lower montane coniferous forest, in crevices and on decomposed granite on cliffs and canyon walls
Many-stemmed dudleya <i>Dudleya multicaulis</i>	FSC/--/List 1B	In heavy, often clay soils or on grassy slopes in chaparral, coastal scrub, and valley and foothill grassland
Island green dudleya <i>Dudleya virens</i> ssp. <i>insularis</i>	--/--/List 1B	Rocky substrates in coastal bluff scrub or coastal scrub
Round-leaved filaree <i>Erodium macrophyllum</i>	--/--/List 1B	Clay soils in cismontane woodland or valley and foothill grassland
San Gabriel bedstraw <i>Galium grande</i>	FSC/--/List 1B	Cismontane woodland, chaparral, broadleaved upland forest, lower montane conifer forest, on rocky slopes in open areas
Los Angeles sunflower <i>Helianthus nuttallii</i> ssp. <i>parishii</i>	FSC/--/List 1A	Coastal salt and freshwater marshes and swamps
Mesa horkelia <i>Horkelia cuneata</i> ssp. <i>puberula</i>	--/--/List 1B	Sandy or gravelly substrates in chaparral, cismontane woodland, coastal scrub
Coulter's goldfields <i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	FSC/--/List 1B	Coastal salt-marsh, playas, valley and foothill grassland, vernal pools
Robinson's pepper-grass <i>Lepidium virginicum</i> var. <i>robinsonii</i>	--/--/List 1B	Chaparral, coastal scrub
Lemon lily <i>Lilium parryi</i>	--/--/List 1B	Meadows and seeps, riparian forest, lower and upper montane coniferous forest from 1300-2800 meters elevation
San Gabriel linanthus <i>Linanthus concinnus</i>	--/--/List 1B	Dry, rocky slopes in montane coniferous forest

TABLE E-5 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
LOS ANGELES BASIN REGION OF THE PROJECT AREA

LOS ANGELES COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Orcutt's linanthus <i>Linanthus orcuttii</i>	--/--/List 1B	Openings in chaparral, lower montane coniferous forest, pinyon and juniper woodland
Santa Catalina Island desert-thorn <i>Lycium brevipes</i> var. <i>hassei</i>	--/--/List 1B	Coastal bluff scrub, coastal scrub
Davidson's bush mallow <i>Malacothamnus davidsonii</i>	FSC/--/List 1B	Sandy washes in coastal scrub, riparian woodland, chaparral
Hall's monardella <i>Monardella macrantha</i> ssp. <i>hallii</i>	--/--/List 1B	Dry slopes and ridges in openings in broadleaved upland forest, chaparral, cismontane woodland, valley and foothill grassland
Mud nama <i>Nama stenocarpum</i>	--/--/List 2	Marshes and swamps, lakeshores, river banks, intermittently wet areas
Prostrate navarretia <i>Navarretia prostrata</i>	--/--/List 1B	Vernal pools or mesic sites in coastal scrub and valley and foothill grassland with alkaline soils
Coast woolly-heads <i>Nemacaulis denudata</i> var. <i>denudata</i>	--/--/List 1B	Coastal dunes
Chaparral nolina <i>Nolina cismontana</i>	--/--/List 1B	Sandstone or gabbro substrates in chaparral and coastal scrub
Rock Creek broomrape <i>Orobanche valida</i> ssp. <i>valida</i>	--/--/List 1B	Granitic soils in chaparral or pinyon and juniper woodland
Brand's phacelia <i>Phacelia stellaris</i>	--/--/List 1B	Coastal scrub, coastal dunes
Ballona cinquefoil <i>Potentilla multijuga</i>	--/--/List 1A	Meadows and seeps
Parish's gooseberry <i>Ribes divaricatum</i> var. <i>parishii</i>	FSC/--/List 1B	Riparian woodland
Sanford's arrowhead <i>Sagittaria sanfordii</i>	--/--/List 1B	Marshes and swamps
Southern skullcap <i>Scutellaria bolanderi</i> ssp. <i>austromontana</i>	--/--/List 1B	In gravelly soils on streambanks or in mesic sites in chaparral, cismontane woodland or lower montane coniferous forest
Rayless ragwort <i>Senecio aphanactis</i>	--/--/List 1B	Drying alkaline flats in cismontane woodland or coastal scrub
Salt spring checkerbloom <i>Sidalcea neomexicana</i>	--/--/List 1B	Alkali springs, marshes, and playas; brackish marshes in chaparral, coastal scrub
Estuary seablite <i>Suaeda esteroa</i>	--/--/List 1B	Coastal salt marshes and swamps
Sonoran maiden fern <i>Thelypteris puberula</i> var. <i>sonorensis</i>	--/--/List 2	Meadows and seeps

TABLE E-5 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
LOS ANGELES BASIN REGION OF THE PROJECT AREA

LOS ANGELES COUNTY		
SENSITIVE PLANT COMMUNITIES		
Name	Global Rank	State Rank
California walnut woodland	G2	S2.1
Canyon live oak ravine forest	G3	S3.3
Cismontane alkali marsh	G1	S1.1
Open Engelmann oak woodland	G2	S2.2
Riversidian alluvial fan sage scrub	G1	S1.1
Southern coast live oak riparian forest	G4	S4
Southern coastal bluff scrub	G1	S1.1
Southern coastal salt marsh	G2	S2.1
Southern cottonwood willow riparian forest	G3	S3.2
Southern dune scrub	G1	S1.1
Southern foredunes	G2	S2.1
Southern mixed riparian forest	G2	S2.1
Southern sycamore alder riparian woodland	G4	S4
Southern willow scrub	G3	S2.1
Valley needlegrass grassland	G1	S3.1
Valley oak woodland	G3	S2.1
Walnut forest	G1	S1.1

ORANGE COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
SPECIES LISTED OR PROPOSED FOR LISTING		
<i>Invertebrates</i>		
San Diego fairy shrimp <i>Branchinecta sandiegoensis</i>	FE/--	Inhabits vernal pools on mesas and floodplains in San Diego, Orange and Riverside counties
Quino checkerspot butterfly <i>Euphydryas editha quino</i>	FE/	Frequents openings in a variety of habitat types including coastal sage scrub, chaparral, and oak woodland. Larval host plants are <i>Plantago erecta</i> and <i>Castilleja exserta</i> .
Riverside fairy shrimp <i>Streptocephalus woottoni</i>	FE/--	Endemic to W. Riverside and San Diego Counties in swales and basins of grassland and coastal sage scrub

TABLE E-5 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
LOS ANGELES BASIN REGION OF THE PROJECT AREA

ORANGE COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Fish		
Santa Ana sucker <i>Catostomus santaanae</i>	FT/CSC	Los Angeles Basin coastal streams
Tidewater goby <i>Eucyclogobius newberryi</i>	FE/CSC	Brackish water along California coast
Southern steelhead-Southern California ESU <i>Oncorhynchus mykiss irideus</i> Critical habitat designated	FE/CSC	Freshwater streams with cool water and gravel for spawning
Amphibians		
Arroyo toad <i>Bufo microscaphus californicus</i>	FE/CSC	Semi-arid, near washes or intermittent streams, including valley-foothill and desert riparian
California red-legged frog <i>Rana aurora draytonii</i>	FT/CSC	Breed in stock ponds, pools, and slow-moving streams with emergent vegetation for escape cover and egg attachment. Where water is seasonal often utilizes mammal burrows in upland habitat for aestivation. Require a permanent water source for successful reproduction
Birds		
Western snowy plover <i>Charadrius alexandrinus nivosus</i>	FT/CSC	Sandy beaches, estuarine shores, salt pond levees and alkali lakes
Mountain plover <i>Charadrius montanus</i>	FPT/--	Winters in areas with short-grassed or plowed fields with bare ground and flat topography. Prefer grazed areas and those with burrowing rodents.
Western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	--/CE	Riparian forests along flood bottoms of large river systems
Willow flycatcher <i>Empidonax traillii</i>	--/CE	Willow thickets on edge of wet meadows, ponds or backwaters from 2,000'-8,000'
Southwestern willow flycatcher <i>Empidonax traillii extimus</i>	FE/--	Nests in riparian woodlands, but also found in low, brushy areas, especially near water.
Bald eagle <i>Haliaeetus leucocephalus</i>	FT/CE	Nests in large, old-growth or dominant live trees within 1-mile of water where it may also spend winters along ocean shore, lake margins & rivers
California black rail <i>Laterallus jamaicensis coturniculus</i>	FSC/CT	Salt-marshes bordering large bays
Belding's savannah sparrow <i>Passerculus sandwichensis beldingi</i>	FSC/CE	Coastal salt-marshes
Coastal California gnatcatcher <i>Poliophtila californica californica</i>	FT/CSC	Coastal sage scrub

TABLE E-5 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
LOS ANGELES BASIN REGION OF THE PROJECT AREA

ORANGE COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Light-footed clapper rail <i>Rallus longirostris levipes</i>	FE/CE	Salt-marshes with cordgrass and pickleweed
California least tern <i>Sterna antillarum browni</i>	FE/CE	Coastal beaches and sandbars
Least Bell's vireo <i>Vireo bellii pusillus</i>	FE/CE	Low riparian vegetation near river bottoms
Mammals		
Stephens' kangaroo rat <i>Dipodomys stephensi</i>	FE/CT	Prefers buckwheat, chamise, brome grass & filaree, but also occurs in coastal scrub & sagebrush with sparse canopy cover
Pacific pocket mouse <i>Perognathus longimembris pacificus</i>	FE/CSC	Narrow coastal plains
Plants		
Braunton's milk-vetch <i>Astragalus brauntonii</i>	FE/--/List 1B	Closed-cone conifer forest, chaparral, coastal scrub, and valley foothill grasslands
Ventura marsh milk-vetch <i>Astragalus pycnostachyus</i> var. <i>lanosissimus</i>	FE/CE/List 1B	Coastal salt-marsh
Coastal dunes milk-vetch <i>Astragalus tener</i> var. <i>titi</i>	FE/CE/List 1B	Moist depressions on clay soils in coastal terrace grasslands and in coastal strand vegetation on sand dunes.
Thread-leaved brodiaea <i>Brodiaea filifolia</i>	FT/CE/List 1B	Cismontane woodland, coastal scrub, playas, valley and foothill grasslands, vernal pools
San Fernando Valley spineflower <i>Chorizanthe parryi</i> var. <i>fernandina</i>	FC/CE/List 1B	Sandy soils in coastal scrub
Salt marsh bird's-beak <i>Cordylanthus maritimus</i> ssp. <i>maritimus</i>	FE/CE/List 1B	Coastal salt-marsh, coastal dunes
Slender-horned spineflower <i>Dodecahema leptoceras</i>	FE/CE/List 1B	Chaparral, coastal scrub
Santa Monica mountains dudleya <i>Dudleya cymosa</i> ssp. <i>ovatifolia</i>	FT/--/List 1B	Chaparral, coastal scrub
Laguna Beach dudleya <i>Dudleya stolonifera</i>	FT/CT/List 1B	Chaparral, cismontane woodland, coastal scrub & valley and foothill grassland, in addition to north-facing sandstone cliffs
Santa Ana River woollystar <i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>	FE/CE/List 1B	Coastal sage scrub, chaparral

TABLE E-5 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
LOS ANGELES BASIN REGION OF THE PROJECT AREA

ORANGE COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
California Orcutt grass <i>Orcuttia californica</i>	FE/CE/List 1B	Valley vernal pools
Gambel's water cress <i>Rorippa gambelii</i>	FE/CT/List 1B	Freshwater or brackish marsh habitats at the margins of lakes and along slow-flowing streams. It grows in or just above the water level and requires a permanent source of water.
Crownbeard <i>Verbesina dissita</i>	FT/CT/List 1B	Primarily on steep, rocky, north-facing slopes within 1.5 miles of the ocean in a maritime chaparral plant community. The densest populations are found on shaded slopes under a layer of shrubs.
FEDERAL OR STATE SPECIES OF SPECIAL CONCERN		
<i>Invertebrates</i>		
Tiger beetle <i>Cicindela gabbii</i>	FSC/--	Often on dark-colored mud in the lower zone of estuaries & mudflats along the coast; sometimes on dry saline flats of estuaries
Sandy beach tiger beetle <i>Cicindela hirticollis gravida</i>	FSC/--	Areas adjacent to non-brackish water along the coast
Tiger beetle <i>Cicindela senilis frosti</i>	FSC/--	Dark-colored mud in the lower zone & dried salt pans in the upper zone along marine shorelines and salt marshes
Monarch butterfly <i>Danaus plexippus</i>	--/*	Eucalyptus groves (winter sites)
Wandering skipper <i>Panoquina errans</i>	FSC/--	Coastal salt-marsh
Dorothy's El Segundo dune weevil <i>Trigonoscuta dorothea dorothea</i>	FSC/--	El Segundo dunes, coastal sand dunes
Mimic tryonia <i>Tryonia imitator</i>	FSC/--	Coastal lagoons, estuaries and salt-marshes
<i>Fish</i>		
Arroyo chub <i>Gila orcutti</i>	FSC/CSC	Slow-moving stream sections with mud or sandy bottoms in coastal streams
Santa Ana speckled dace <i>Rhinichthys osculus</i> ssp 3	--/CSC	Headwaters of the Santa Ana and San Gabriel rivers
<i>Amphibians</i>		
Western spadefoot toad <i>Scaphiopus hammondi</i>	FSC/CSC	Floodplains and grassland pools
Coast range newt <i>Taricha torosa torosa</i>	--/CSC	Coastal drainages and in terrestrial habitats when migrating over 1 km to breed in ponds, reservoirs & slow-moving streams
<i>Reptiles</i>		

TABLE E-5 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
LOS ANGELES BASIN REGION OF THE PROJECT AREA

ORANGE COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Southwestern pond turtle <i>Clemmys marmorata pallida</i>	FSC/CSC	Permanent freshwater ponds and slow streams edged with sandy soils for laying eggs
Orange-throated whiptail <i>Cnemidophorus hyperythrus</i>	FSC/CSC	Coastal scrub, chaparral, and valley-foothill hardwood habitats
Northern red-diamond rattlesnake <i>Crotalus ruber ruber</i>	FSC/CSC	Chaparral, woodland, grassland and desert areas
San Diego mountain kingsnake <i>Lampropeltis zonata pulchra</i>	FSC/CSC	Restricted to the San Gabriel and San Jacinto Mountains
Rosy boa <i>Lichanura trivirgata</i>	FSC/--	Moderate to dense vegetation and rocky cover amid desert & chaparral, in addition to coastal canyons/hillsides, desert canyons, washes & mountains
San Diego horned lizard <i>Phrynosoma coronatum blainvillei</i>	FSC/CSC	Coastal sage scrub, arid chaparral
Coast patch-nosed snake <i>Salvadora hexalepis virgultea</i>	FSC/CSC	Use small mammal burrows for refuge/overwintering in brushy or shrubby vegetation in desert sinks to around 7,000'
Two-striped garter snake <i>Thamnophis hammondi</i>	--/CSC	In or near permanent fresh water, often along streams with rocky beds and riparian growth from sea to about 7,000'
Birds		
Cooper's hawk <i>Accipiter cooperi</i>	--/CSC	Nests in riparian growths of deciduous trees and live oak woodlands
Tricolored blackbird <i>Agelaius tricolor</i>	FSC/CSC	Riparian thickets and emergent vegetation
Golden eagle <i>Aquila chrysaetos</i>	CSC/3511	Open hills with grassland, open scrub, adequate prey base, large trees or cliffs for nesting
Long-eared owl <i>Asio otus</i>	--/CSC	Only nesting birds are protected
Western burrowing owl <i>Athene cunicularia hypugea</i>	FSC/CSC	Nests in mammal burrows in open, sloping grasslands
Coastal cactus wren <i>Campylorhynchus brunneicapillus couesi</i>	--/CSC	Coastal sage scrub
Northern harrier <i>Circus cyaneus</i>	--/CSC	Mostly nests in emergent vegetation, wet meadows or near rivers and lakes, but may nest in grasslands away from water.
Yellow-breasted chat <i>Icteria virens</i>	--/CSC	Riparian corridors with willows or other dense foliage

TABLE E-5 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
LOS ANGELES BASIN REGION OF THE PROJECT AREA

ORANGE COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Mammals		
Pallid bat <i>Antrozous pallidus</i>	--/CSC	Open, dry habitats with rocky outcrops, cliffs, caverns, and crevices for roosting, most commonly in deserts, grasslands, and shrublands, in addition to woodlands & forests
Dulzura pocket mouse <i>Chaetodipus californicus femoralis</i>	--/CSC	Coastal scrub, chaparral & grassland, with grass-chaparral edges especially preferred
California mastiff bat <i>Eumops perotis californicus</i>	FSC/CSC	Breeds in rugged, rocky canyons and forages in a variety of habitats. Roosts in crevices in cliff faces, high buildings, trees & tunnels
San Diego desert woodrat <i>Neotoma lepida intermedia</i>	FSC/CSC	Chaparral, coastal sage scrub, and desert habitats, with preference for moderate to dense canopies, especially in rock outcrops/cliffs/slopes
Plants		
Chaparral sand-verbena <i>Abronia villosa</i> var. <i>aurita</i>	--/--/List 1B	Chaparral, coastal scrub, sandy areas
Aphanisma <i>Aphanisma blitoides</i>	FSC/--/List 1B	Coastal bluff scrub, coastal dunes
Coulter's saltbush <i>Atriplex coulteri</i>	--/--/List 1B	Coastal bluff scrub, coastal dunes, coastal scrub, valley & foothill grassland in alkaline or clay soils
South Coast saltscale <i>Atriplex pacifica</i>	FSC/--/List 1B	Coastal bluff scrub, coastal dunes, playas, chenopod scrub
Parish's brittle scale <i>Atriplex parishii</i>	FSC/--/List 1B	Alkali meadows, vernal pools, chenopod scrub, playas
Davidson's saltscale <i>Atriplex serenana</i> var. <i>davidsonii</i>	--/--/List 1B	Coastal bluff scrub, coastal scrub
Plummer's mariposa lily <i>Calochortus plummerae</i>	--/--/List 1B	Coastal scrub, chaparral, valley and foothill grassland, cismontane woodland, lower coniferous forest
Intermediate mariposa lily <i>Calochortus weedii</i> var. <i>intermedius</i>	--/--/List 1B	Coastal scrub, chaparral, valley and foothill grassland
Southern tarplant <i>Centromadia parryi</i> ssp. <i>australis</i>	--/--/List 1B	Often in disturbed sites near the coast amid marshes and margins of swamps, valley, foothill grassland & vernal pools
Orcutt's pincushion <i>Chaenactis glabriuscula</i> var. <i>orcuttiana</i>	--/--/List 1B	Dunes near the coast and coastal strand
Summer holly <i>Comarostaphylis diversifolia</i> spp. <i>diversifolia</i>	--/--/List 1B	Mixed chaparral and chaparral, as well as cismontane woodland
Tecate cypress <i>Cupressus forbesii</i>	--/--/List 1B	Coniferous forest and chaparral, especially on north-facing slopes with groves associated with chaparral

TABLE E-5 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
LOS ANGELES BASIN REGION OF THE PROJECT AREA

ORANGE COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Blochman's dudleya <i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i>	--/--/List 1B	Coastal scrub, coastal bluff scrub, valley & foothill grassland; sometimes in open, rocky slopes with little soil where clay is over serpentine
Many-stemmed dudleya <i>Dudleya multicaulis</i>	FSC/--/List 1B	Chaparral, coastal scrub, valley and foothill grassland
Sticky dudleya <i>Dudleya viscida</i>	--/--/List 1B	Coastal scrub, coastal bluff scrub, chaparral; microhabitat includes north- and south-facing cliffs & banks
Pendelton button-celery <i>Eryngium pendeltonensis</i>	--/--/List 1B	Coastal bluff scrub, valley & foothill grassland, vernal pools
Cliff spurge <i>Euphorbia misera</i>	--/--/List 2	Coastal bluff scrub, coastal scrub; microhabitat includes rocky sites
Los Angeles sunflower <i>Helianthus nuttallii</i> ssp. <i>parishii</i>	FSC/--/List 1A	Coastal salt and freshwater marshes and swamps
Mesa horkelia <i>Horkelia cuneata</i> ssp. <i>puberula</i>	--/--/List 1B	Chaparral, cismontane woodland, coastal scrub
Decumbent goldenbush <i>Isocoma menziesii</i> var. <i>decumbens</i>	--/--/List 1B	Often in sandy, disturbed areas in chaparral & coastal scrub
Coulter's goldfields <i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	FSC/--/List 1B	Coastal salt-marsh, playas, valley and foothill grassland, vernal pools
Heart-leaved pitcher sage <i>Lepichinia cardiophylla</i>	--/--/List 1B	Closed-cone coniferous forest, chaparral, cismontane woodland from 555-1,370 meters
Robinson's pepper-grass <i>Lepidium vigenicum</i> var. <i>robinsonii</i>	--/--/List 1B	Chaparral, coastal scrub
Felt-leaved monardella <i>Monardella hypoleuca</i> ssp. <i>lanata</i>	--/--/List 1B	Chaparral, cismontane woodland
Hall's monardella <i>Monardella macrantha</i> ssp. <i>hallii</i>	--/--/List 1B	Dry slopes and ridges in openings within broadleaved upland forest, chaparral, lower montane coniferous forest, cismontane woodland, valley & foothill grassland
Mud nama <i>Nama stenocarpum</i>	--/--/List 2	Marshes and swamps
Prostrate navarretia <i>Navarretia prostrata</i>	--/--/List 1B	Coastal scrub, valley & foothill grassland (alkaline), vernal pools
Coast woolly-heads <i>Nemacaulis denudata</i> var. <i>denudata</i>	--/--/List 1B	Coastal dunes
Chaparral nolina <i>Nolina cismontana</i>	--/--/List 1B	Chaparral, coastal scrub in sandstone or gabbro substrates
Santiago Peak phacelia <i>Phacelia suaveolens</i> ssp. <i>keckii</i>	--/--/List 1B	Closed-cone coniferous forest, chaparral

TABLE E-5 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
LOS ANGELES BASIN REGION OF THE PROJECT AREA

ORANGE COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Nuttall's scrub oak <i>Quercus dumosa</i>	--/--/List 1B	Sandy soils, less often clay loam, in closed-cone coniferous forest, chaparral, coastal scrub from 15 to 400 meters
Sanford's arrowhead <i>Sagittaria sanfordii</i>	--/--/List 1B	Standing or slow-moving freshwater ponds, marshes, ditches & swamps
San Miguel savory <i>Satureja chandleri</i>	--/--/List 1B	Rocky, gabbroic or metavolcanic substrates in chaparral, cismontane woodland, coastal scrub, riparian woodland, valley & foothill grassland
Desert spike-moss <i>Selaginella eremophila</i>	--/--/List 2	Gravelly or rocky areas in Sonoran desert scrub
Rayless ragwort <i>Senecio aphanactis</i>	--/--/List 1B	Cismontane woodland & coastal scrub; microhabitat is drying alkaline flats from 20 to 575 meters
Salt spring checkerbloom <i>Sidalcea neomexicana</i>	--/--/List 1B	Alkalai playas, brackish marshes, chaparral, coastal scrub, lower montane, coniferous forest, Mojavean desert scrub; microhabitat is alkalai springs and marshes
Estuary seablite <i>Suaeda esteroa</i>	--/--/List 1B	Marshes, swamps (especially coastal saltwater areas)
Parry's tetracoccus <i>Tetracoccus dioicus</i>	--/--/List 1B	Chaparral, coastal scrub

ORANGE COUNTY		
SENSITIVE PLANT COMMUNITIES		
Name	Global Rank	State Rank
California walnut woodland	G2	S2.1
Canyon live oak ravine forest	G3	S3.3
Riversidian alluvial fan sage scrub	G1	S1.1
Southern coast live oak riparian forest	G4	S4
Southern coastal salt marsh	G2	S2.1
Southern cottonwood willow riparian forest	G3	S3.2
Southern dune scrub	G1	S1.1
Southern foredunes	G2	S2.1
Southern interior cypress forest	G2	S2.1
Southern mixed riparian forest	G2	S2.1
Southern sycamore alder riparian woodland	G4	S4

TABLE E-5 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
LOS ANGELES BASIN REGION OF THE PROJECT AREA

Southern willow scrub	G3	S2.1
Valley needlegrass grassland	G1	S3.1

**TABLE E-6
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN BERNADINO REGION OF THE PROJECT AREA**

SAN BERNARDINO COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
SPECIES LISTED OR PROPOSED FOR LISTING		
<i>Invertebrates</i>		
Quino checkerspot butterfly <i>Euphydryas editha quino</i> Critical Habitat designated	FE/--	Frequents openings in a variety of habitat types including coastal sage scrub, chaparral, and oak woodland. Larval host plants are <i>Plantago erecta</i> and <i>Castilleja exserta</i> .
Delhi Sands flower-loving fly <i>Rhaphiomidas terminatus abdominalis</i>	FE/--	Fine, sandy soils, often amid wholly or partly consolidated dunes & sparse vegetation (only within Delphi sands formation)
Riverside fairy shrimp <i>Streptocephalus woottoni</i> Critical Habitat designated	FE/--	Endemic to W. Riverside and San Diego Counties in swales and basins of grassland and coastal sage scrub
<i>Fish</i>		
Santa Ana sucker <i>Catostomus santaanae</i>	FT/CSC	Los Angeles Basin coastal streams
Unarmored threespine stickleback <i>Gasterosteus aculeatus williamsoni</i>	FE/CE	Coastal stream and rivers of southern California
Mohave tui chub <i>Gila bicolor mohavensis</i>	FE/CE	Deep pools and slough-like areas of the Mohave River and tributary drainages, introduced populations in springs and ponds
Bonytail chub <i>Gila elegans</i> Critical Habitat designated	FE/CE	Larger channels of the Colorado River system with swift water
Colorado pikeminnow <i>Ptychocheilus lucius</i> Critical Habitat designated	FE/CE	Historically present in rivers and streams of the Colorado River system
Razorback sucker <i>Xyrauchen texanus</i> Critical Habitat designated	FE/CE	Rivers and streams of the Colorado River system
<i>Amphibians</i>		
Arroyo toad <i>Bufo microscaphus californicus</i>	FE/CSC	Semi-arid, near washes or intermittent streams, including valley-foothill and desert riparian
California red-legged frog <i>Rana aurora draytonii</i>	FT/CSC	Breed in stock ponds, pools, and slow-moving streams with emergent vegetation for escape cover and egg attachment. Where water is seasonal often utilizes mammal burrows in upland habitat for aestivation. Require a permanent water source for successful reproduction
Mountain yellow-legged frog <i>Rana muscosa</i>	FPE/CSC	In or near high mountain rivers, riverbanks, meadow streams, isolated pools, and lake borders in the Sierra Nevada and rocky stream courses in the mountains of s. CA

TABLE E-6 (Continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN BERNADINO REGION OF THE PROJECT AREA

SAN BERNARDINO COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Reptiles		
SOUTHERN RUBBER BOA <i>Charina bottae umbricata</i>	--/CT	Found in the vicinity of streams or wet meadows in a variety of montane forest habitats. Restricted to the San Bernadino and San Jacinto Mountains.
DESERT TORTOISE <i>Gopherus agassizii</i>	FT/CT	Desert oases, riverbanks, washes, dunes, and occasionally rocky slopes. Requires firm ground for construction of burrows in banks of washes or compacted sand and adequate ground moisture for survival of eggs and young
Birds		
Mountain plover <i>Charadrius montanus</i>	FPT/CSC	Winters in areas with short-grassed or plowed fields with bare ground and flat topography. Prefer grazed areas and those with burrowing rodents.
Western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	--/CE	Riparian forests along flood bottoms of large river systems
Willow flycatcher <i>Empidonax traillii</i>	--/CE	Willow thickets on edge of wet meadows, ponds or backwaters from 2,000'-8,000'
Southwestern willow flycatcher <i>Empidonax traillii eximus</i>	FE/--	Nests in riparian woodlands, but also found in low, brushy areas, especially near water.
Bald eagle <i>Haliaeetus leucocephalus</i>	FT/CE	Nests in large, old-growth or dominant live trees within 1-mile of water where it may also spend winters along ocean shore, lake margins & rivers
Coastal California gnatcatcher <i>Poliophtila californica californica</i>	FT/CSC	Coastal sage scrub
Least Bell's vireo <i>Vireo bellii pusillus</i>	FE/CE	Low riparian vegetation near river bottoms
Mammals		
San Bernadino kangaroo rat <i>Dipodomys merriami parvus</i>	FE/CSC	Prefers early to intermediate seral stages in alluvial scrub vegetation on sandy loam substrates typical of alluvial fans and flood plains
Stephens' kangaroo rat <i>Dipodomys stephensi</i>	FE/CT	Prefers buckwheat, chamise, brome grass & filaree, but also occurs in coastal scrub & sagebrush with sparse canopy cover
Plants		
Marsh sandwort <i>Arenaria paludicola</i>	FE/CE/List 1B	Grows up through dense mats of cattails, rushes, sedges in freshwater marshes, in addition to living in swamps
Triple-ribbed milk-vetch <i>Astragalus tricarlinatus</i>	FE/--/List 1B	Sandy or gravelly substrates in Sonoran desert scrub and joshua tree woodland
Nevin's barberry <i>Berberis nevinii</i>	FE/CE/List 1B	Chaparral, cismontane woodland, coastal scrub, riparian scrub

TABLE E-6 (Continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN BERNADINO REGION OF THE PROJECT AREA

SAN BERNARDINO COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Thread-leaved brodiaea <i>Brodiaea filifolia</i>	FT/CE/List 1B	Cismontane woodland, coastal scrub, playas, valley and foothill grasslands, vernal pools
Ash-gray indian paintbrush <i>Castilleja cinerea</i>	FT/--/List 1B	Mohavean desert scrub, meadows, pinyon and juniper woodland, openings in upper montane coniferous forest
San Fernando Valley spineflower <i>Chorizanthe parryi</i> var. <i>fernandina</i>	FC/CE/List 1B	Sandy soils in coastal scrub
Slender-horned spineflower <i>Dodecahema leptoceras</i>	FE/CE/List 1B	Chaparral, coastal scrub
Santa Ana River woollystar <i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>	FE/CE/List 1B	Coastal sage scrub, chaparral
Parish's daisy <i>Erigeron parishii</i> Critical Habitat proposed	FT/--/List 1B	Usually occurs on carbonate substrates in Mohavean desert scrub and pinyon and juniper woodland
Southern mountain buckwheat <i>Eriogonum kennedyi</i> var. <i>austromontanum</i>	FT/--/List 1B	Lower montane coniferous forest, pebble plains
Cushenbury buckwheat <i>Eriogonum ovalifolium</i> var. <i>parishii</i>	FE/--/List 1B	Carbonate substrates in Mohavean desert scrub, pinyon and juniper woodland, joshua tree woodland
San Bernadino Mountains bladderpod <i>Lesquerella linoides</i> ssp. <i>vimnea</i>	FE/--/List 1B	Usually occurs on carbonate substrates in lower montane coniferous forest or pinyon and juniper woodland
Cushenbury oxytheca <i>Oxytheca parishii</i> var. <i>goodmaniana</i>	FE/--/List 1B	Carbonate substrates or talus slopes in pinyon and juniper woodland
San Bernadino bluegrass <i>Poa atropurpurea</i>	FE/--/List 1B	Mesic meadows
Gambel's water cress <i>Rorippa gambelii</i>	FE/CT/List 1B	Freshwater or brackish marsh habitats at the margins of lakes and along slow-flowing streams. It grows in or just above the water level and requires a permanent source of water.
Parish's checkerbloom <i>Sidalcea hickmanii</i> ssp. <i>parishii</i>	FC/CR/List 1B	Chaparral, cismontane woodland, yellow pine forest, dry slopes (from 5,000 to 6,000')
Pedate checkerbloom <i>Sidalcea pedata</i>	FE/CE/List 1B	Mesic meadows, pebble plains
California taraxacum <i>Taraxacum californicum</i>	FE/--/List 1B	Mesic meadows
Slender-petaled mustard <i>Thelypodium stenopetalum</i>	FE/CE/List 1B	Mesic, alkaline meadows

FEDERAL OR STATE SPECIES OF SPECIAL CONCERN

Fish		
Arroyo chub <i>Gila orcutti</i>	FSC/CSC	Slow-moving stream sections with mud or sandy bottoms in coastal streams

TABLE E-6 (Continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN BERNADINO REGION OF THE PROJECT AREA

SAN BERNARDINO COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Santa Ana speckled dace <i>Rhinichthys osculus</i> ssp 3	--/CSC	Headwaters of the Santa Ana and San Gabriel rivers
Amphibians		
San Gabriel slender salamander <i>Batrachoseps gabrieli</i>	Designated as sensitive by US Forest Service	Bases of talus slopes, in addition to under rocks, wood, & fern fronds
Reptiles		
Silvery legless lizard <i>Aniella pulchra pulchra</i>	FSC/CSC	Moist to wet sandy or loose loamy soils under sparse vegetation
Southwestern pond turtle <i>Clemmys marmorata pallida</i>	FSC/CSC	Permanent freshwater ponds and slow streams edged with sandy soils for laying eggs
Orange-throated whiptail <i>Cnemidophorus hyperythrus</i>	FSC/CSC	Coastal scrub, chaparral, and valley-foothill hardwood habitats
Northern red-diamond rattlesnake <i>Crotalus ruber ruber</i>	FSC/CSC	Chaparral, woodland, grassland and desert areas
San Bernadino ringneck snake <i>Diadophis punctatus modestus</i>	Designated as sensitive by US Forest Service	Under logs, rocks, dead leaves and most moist debris in a wide variety of canyon and foothill habitats, and occasionally in loose sands of dunes.
San Bernadino mountain kingsnake <i>Lampropeltis zonata parvirubra</i>	--/CSC	Mountainous regions
San Diego horned lizard <i>Phrynosoma coronatum blainvillei</i>	FSC/CSC	Coastal sage scrub, arid chaparral
Two-striped garter snake <i>Thamnophis hammondi</i>	--/CSC	In or near permanent fresh water, often along streams with rocky beds and riparian growth from sea to about 7,000'
Birds		
Bell's sage sparrow <i>Amphispiza belli belli</i>	FSC/CSC	Nests in chaparral dominated by dense stands of chamise.
Golden eagle <i>Aquila chrysaetos</i>	CSC/3511	Open hills with grassland, open scrub, adequate prey base, large trees or cliffs for nesting
Long-eared owl <i>Asio otus</i>	--/CSC	Only nesting birds are protected
Western burrowing owl <i>Athene cuculari hypugea</i>	FSC/CSC	Nests in mammal burrows in open, sloping grasslands
Coastal cactus wren <i>Campylorhynchus brunneicapillus couesi</i>	--/CSC	Coastal sage scrub
Black swift <i>Cypseloides niger</i>	--/CSC	Coastal and mountain cliffs
Yellow warbler <i>Dendroica petechia brewsteri</i>	--/CSC	Prefers riparian habitat with willows, cottonwoods, sycamores, or alders for nesting and foraging

TABLE E-6 (Continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN BERNADINO REGION OF THE PROJECT AREA

SAN BERNARDINO COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Yellow-breasted chat <i>Icteria virens</i>	--/CSC	Riparian corridors with willows or other dense foliage
Mammals		
Northwestern San Diego pocket mouse <i>Chaetodipus fallax fallax</i>	--/CSC	Sandy, herbaceous areas (often in association with rocks or coarse gravel) in coastal scrub, chaparral, grasslands, sagebrush
California mastiff bat <i>Eumops perotis californicus</i>	FSC/CSC	Breeds in rugged, rocky canyons and forages in a variety of habitats
San Diego desert woodrat <i>Neotoma lepida intermedia</i>	FSC/CSC	Abundant in rock outcrops, rocky cliffs & slopes, especially when moderate to dense canopies are present
White-eared pocket mouse <i>Perognathus alticola alticola</i>	--/CSC	Burrows are in loose soils in ponderosa/jeffrey pine; also in mixed chaparral & sagebrush habitats
Los Angeles pocket mouse <i>Perognathus longimembris brevinasus</i>	FSC/CSC	Desert washes, sagebrush, coastal sage scrub, and grasslands
Plants		
Chaparral sand-verbena <i>Abronia villosa</i> var. <i>aurita</i>	--/--/List 1B	Chaparral, coastal scrub, sandy areas
Greata's aster <i>Aster greatae</i>	--/--/List 1B	Mesic soils in broadleaved upland forest, chaparral, cismontane woodland, lower montane coniferous forest, riparian woodland
Coulter's saltbush <i>Atriplex coulteri</i>	--/--/List 1B	Coastal bluff scrub, coastal dunes, coastal scrub, valley & foothill grassland in alkaline or clay soils
Slender mariposa lily <i>Calochortus clavatus</i> var. <i>gracilis</i>	--/--/List 1B	Chaparral and coastal scrub from 360 to 1,000 meters
Plummer's mariposa lily <i>Calochortus plummerae</i>	--/--/List 1B	Coastal scrub, chaparral, valley and foothill grassland, cismontane woodland, lower coniferous forest
Intermediate mariposa lily <i>Calochortus weedii</i> var. <i>intermedius</i>	--/--/List 1B	Coastal scrub, chaparral, valley and foothill grassland
Bristly sedge <i>Carex comosa</i>	--/--/List 2	Wet sites such as lake margins, marshes and swamps; sites below sea level are on delta islands
San Bernadino Mountains owl's clover <i>Castilleja lasiorhyncha</i>	--/--/List 1B	Mesic soils in chaparral, meadows, pebble (pavement) plain, upper montane coniferous forest
Smooth tarplant <i>Centromadia pungens</i> ssp. <i>laevis</i>	--/--/List 1B	Alkaline soils in chenopod scrub, meadows, playas, riparian woodland, valley & foothill grassland
Pierson's spring beauty <i>Claytonia lanceolata</i> var. <i>piersonii</i>	--/--/List 1B	Mohavean desert scrub, pinyon & juniper woodland
Many-stemmed dudleya <i>Dudleya multicaulis</i>	FSC/--/List 1B	Chaparral, coastal scrub, valley and foothill grassland

TABLE E-6 (Continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN BERNADINO REGION OF THE PROJECT AREA

SAN BERNARDINO COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Johnston's buckwheat <i>Eriogonum microthecum</i> var. <i>johnstonii</i>	--/--/List 1B	Rocky areas in subalpine coniferous forest and upper montane coniferous forest from 2,225 to 2,900 meters
Hot springs fimbriatylis <i>Fimbristylis thermalis</i>	--/--/List 2	Meadows (alkaline, near hot springs)
California bedstraw <i>Galium californicum</i> ssp. <i>primum</i>	--/--/List 1B	Prefers shade in ecotone of pine forest-chaparral in the lower montane areas of coniferous forest (lower edge of pine belt)
Los Angeles sunflower <i>Helianthus nuttallii</i> ssp. <i>parishii</i>	FSC/--/List 1A	Coastal salt and freshwater marshes and swamps
Mesa horkelia <i>Horkelia cuneata</i> ssp. <i>puberula</i>	--/--/List 1B	Chaparral, cismontane woodland, coastal scrub from 70 to 810 meters
Lemon lily <i>Lilium parryi</i>	--/--/List 1B	Mesic soils in lower montane coniferous forest, meadows, riparian forest, upper montane coniferous forest
Robinson's pepper-grass <i>Lepidium virginicum</i> var. <i>robinsonii</i>	--/--/List 1B	Chaparral, coastal scrub
San Gabriel linanthus <i>Linanthus concinnus</i>	--/--/List 1B	Montane conifer forest
Parish's desert-thorn <i>Lycium parishii</i>	--/--/List 2	Coastal scrub and Sonoran desert scrub from 305 to 1,000 meters
Parish's bush mallow <i>Malacothamnus parishii</i>	--/--/List 1A	Chaparral, coastal sage scrub from 305 to 455 meters
Hall's monardella <i>Monardella macrantha</i> ssp. <i>hallii</i>	--/--/List 1B	Broadleaved upland forest, chaparral, cismontane woodland, lower montane coniferous forest, valley & foothill grassland from 730 to 2,195 meters
Pringle's monardella <i>Monardella pringlei</i>	--/--/List 1A	Coastal scrub, often sandy, from 300 to 400 meters
Prostrate navarretia <i>Navarretia prostrata</i>	--/--/List 1B	Mesic soils in coastal scrub, valley & foothill grassland (alkaline), vernal pools from 15 to 700 meters
Rock Creek broomrape <i>Orobanche valida</i> ssp. <i>valida</i>	--/--/List 1B	Granitic substrates in chaparral, pinyon & juniper woodland
Parish's yampah <i>Perideridia parishii</i> ssp. <i>parishii</i>	--/--/List 2	Lower montane coniferous forest, meadows, upper montane coniferous forest from 1,465 to 3,000 meters
Narrow-leaved cottonwood <i>Populus angustifolia</i>	--/--/List 2	Riparian forest from 1,200 to 1,800 meters
Parish's gooseberry <i>Ribes divaricatum</i> var. <i>parishii</i>	FSC/--/List 1B	Riparian woodland
Black sedge <i>Schoenus nigricans</i>	--/--/List 2	Marshes and swamps, often alkaline sites

TABLE E-6 (Continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN BERNADINO REGION OF THE PROJECT AREA

SAN BERNARDINO COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Prairie wedge-grass <i>Sphenopholis obtusata</i>	--/--/List 2	Mesic sites in cismontane woodlands and meadows
Salt spring checkerbloom <i>Sidalcea neomexicana</i>	--/--/List 1B	Alkalai playas, brackish marshes, chaparral, coastal scrub, lower montane, coniferous forest, Mojavean desert scrub; microhabitat is alkalai springs and marshes
Sonoran maiden fern <i>Thelypteris puberula</i> var. <i>sonorensis</i>	--/--/List 2	Meadows and seeps

SAN BERNARDINO COUNTY		
SENSITIVE PLANT COMMUNITIES		
Name	Global Rank	State Rank
California walnut woodland	G2	S2.1
Canyon live oak ravine forest	G3	S3.3
Coastal and valley freshwater marsh	G3	S2.1
Riversidian alluvial fan sage scrub	G1	S1.1
Southern coast live oak riparian forest	G4	S4
Southern cottonwood willow riparian forest	G3	S3.2
Southern mixed riparian forest	G2	S2.1
Southern riparian forest	G4	S4
Southern riparian scrub	G3	S3.2
Southern sycamore alder riparian woodland	G4	S4
Southern willow scrub	G3	S2.1

**TABLE E-7
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
RIVERSIDE REGION OF THE PROJECT AREA**

RIVERSIDE COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
SPECIES LISTED OR PROPOSED FOR LISTING		
Invertebrates		
Vernal pool fairy shrimp <i>Branchinecta lynchii</i>	FT/--	Grassland vernal pools
Quino checkerspot butterfly <i>Euphydryas editha quino</i> Critical Habitat designated	FE/--	Frequents openings in a variety of habitat types including coastal sage scrub, chaparral, and oak woodland. Larval host plants are <i>Plantago erecta</i> and <i>Castilleja exserta</i> .
Delhi Sands flower-loving fly <i>Rhaphiomidas terminatus abdominalis</i>	FE/--	Fine, sandy soils, often amid wholly or partly consolidated dunes & sparse vegetation (endemic to Delphi sands formation)
Riverside fairy shrimp <i>Streptocephalus woottoni</i>	FE/--	Endemic to W. Riverside and San Diego Counties in swales and basins of grassland and coastal sage scrub
Fish		
Santa Ana sucker <i>Catostomus santaanae</i>	FT/CSC	Los Angeles Basin coastal streams
Desert pupfish <i>Cyprinodon macularius</i>	FE/CE	Springs, seeps, and slow moving streams in the Salton Sink Basin and and backwaters and sloughs along the Colorado River
Bonytail chub <i>Gila elegans</i> Critical Habitat designated	FE/CE	Larger channels of the Colorado River system with swift water
Colorado pikeminnow <i>Ptychocheilus lucius</i> Critical Habitat designated	FE/CE	Historically present in rivers and streams of the Colorado River system
Razorback sucker <i>Xyrauchen texanus</i> Critical Habitat designated	FE/CE	Rivers and streams of the Colorado River system
Amphibians		
Desert slender salamander <i>Batrachoseps aridus</i>	FE/CE	Limestone seeps
Arroyo toad <i>Bufo microscaphus californicus</i>	FE/CSC	Semi-arid, near washes or intermittent streams, including valley-foothill and desert riparian
California red-legged frog <i>Rana aurora draytonii</i>	FT/CSC	Breed in stock ponds, pools, and slow-moving streams with emergent vegetation for escape cover and egg attachment. Where water is seasonal often utilizes mammal burrows in upland habitat for aestivation. Require a permanent water source for successful reproduction

TABLE E-7 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
RIVERSIDE REGION OF THE PROJECT AREA

RIVERSIDE COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Mountain yellow-legged frog <i>Rana muscosa</i>	FPE/CSC	In or near high mountain rivers, riverbanks, meadow streams, isolated pools, and lake borders in the Sierra Nevada and rocky stream courses in the mountains of southern CA
Birds		
Mountain plover <i>Charadrius montanus</i>	FPT/CSC	Winters in areas with short-grassed or plowed fields with bare ground and flat topography. Prefer grazed areas and those with burrowing rodents.
Western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	--/CE	Riparian forests along flood bottoms of large river systems
Willow flycatcher <i>Empidonax traillii</i>	--/CE	Willow thickets on edge of wet meadows, ponds or backwaters from 2,000'-8,000'
Southwestern willow flycatcher <i>Empidonax traillii eximus</i>	FE/--	Nests in riparian woodlands, but also found in low, brushy areas, especially near water.
Bald eagle <i>Haliaeetus leucocephalus</i>	FT/CE	Nests in large, old-growth or dominant live trees within 1-mile of water where it may also spend winters along ocean shore, lake margins & rivers
Coastal California gnatcatcher <i>Poliophtila californica californica</i>	FT/CSC	Coastal sage scrub
Yuma clapper rail <i>Rallus longirostris levipes</i>	FE/CT	Marshes along the lower Colorado River and the Salton Sea
Least Bell's vireo <i>Vireo belii pusillus</i>	FE/CE	Low elevation riparian habitat near water or dry river bottoms
Mammals		
San Bernadino kangaroo rat <i>Dipodomys merriami parvus</i>	FE/--	Prefers early to intermediate seral stages in alluvial scrub vegetation on sandy loam substrates typical of alluvial fans and flood plains
Stephens' kangaroo rat <i>Dipodomys stephensi</i>	FE/CT	Prefers buckwheat, chamise, brome grass & filaree, but also occurs in coastal scrub & sagebrush with sparse canopy cover
Pacific pocket mouse <i>Perognathus longimembris pacificus</i>	FE/CSC	Narrow coastal plains
Plants		
Munz's onion <i>Allium munzii</i>	FE/CT/List 1B	Grows in heavy clay soils in grasslands & openings within shrublands, woodlands, chaparral, coastal scrub, cismontane woodland, pinyon-juniper woodland valley & foothill grassland; endemic to Riverside Co.
San Diego ambrosia <i>Ambrosia pumila</i>	FPE/--/List 1B	Chaparral, coastal scrub, valley & foothill grassland, vernal pools (especially in disturbed areas)

TABLE E-7 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
RIVERSIDE REGION OF THE PROJECT AREA

RIVERSIDE COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Marsh sandwort <i>Arenaria paludicola</i>	FE/CE/List 1B	Grows up through dense mats of cattails, rushes, sedges in freshwater marshes, in addition to living in swamps
Braunton's milk-vetch <i>Astragalus brauntonii</i>	FE/--/List 1B	Closed-cone conifer forest, chaparral, coastal scrub, and valley foothill grasslands
Triple-ribbed milk-vetch <i>Astragalus tricarinatus</i>	FE/--/List 1B	Sandy or gravelly substrates in Sonoran desert scrub and joshua tree woodland
Nevin's barberry <i>Berberis nevinii</i>	FE/CE/List 1B	Chaparral, cismontane woodland, coastal scrub, riparian scrub
Thread-leaved brodiaea <i>Brodiaea filifolia</i>	FT/CE/List 1B	Cismontane woodland, coastal scrub, playas, valley and foothill grasslands, vernal pools
Salt marsh bird's-beak <i>Cordylanthus maritimus</i> ssp. <i>maritimus</i>	FE/CE/List 1B	Coastal salt-marsh, coastal dunes
Slender-horned spineflower <i>Dodecahema leptoceras</i>	FE/CE/List 1B	Chaparral, coastal scrub
Santa Monica mountains dudleya <i>Dudleya cymosa</i> ssp. <i>ovatifolia</i>	FT/--/List 1B	Chaparral, coastal scrub
Laguna Beach dudleya <i>Dudleya stolonifera</i>	FT/CT/List 1B	Chaparral, cismontane woodland, coastal scrub & valley and foothill grassland, in addition to north-facing sandstone cliffs
Santa Ana River woollystar <i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>	FE/CE/List 1B	Coastal sage scrub, chaparral
Parish's daisy <i>Erigeron parishii</i> Critical Habitat proposed	FT/--/List 1B	Usually occurs on carbonate substrates in Mohavean desert scrub and pinyon and juniper woodland
San Diego button celery <i>Eryngium aristulatum</i> var. <i>parishii</i>	FE/CE/List 1B	Vernal pools in costal scrub or valley and foothill grassland
Spreading navarretia <i>Navarretia fossalis</i>	FT/--/List 1B	Vernal pools in chenopod scrub, marshes and swamps, playas
California orcutt grass <i>Orcuttia californica</i>	FE/CE/List 1B	Vernal pools
Gambel's water cress <i>Rorippa gambelii</i>	FE/CT/List 1B	Freshwater or brackish marsh habitats at the margins of lakes and along slow-flowing streams. Grows in or just above the water level, requires a permanent source of water.
Crownbeard <i>Verbesina dissita</i>	FT/CT/List 1B	Primarily on steep, rocky, north-facing slopes within 1.5 miles of the ocean in a maritime chaparral plant community. The densest populations are found on shaded slopes under a layer of shrubs.

FEDERAL OR STATE SPECIES OF SPECIAL CONCERN

TABLE E-7 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
RIVERSIDE REGION OF THE PROJECT AREA

RIVERSIDE COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Fish		
Arroyo chub <i>Gila orcutti</i>	FSC/CSC	Slow-moving stream sections with mud or sandy bottoms in coastal streams
Santa Ana speckled dace <i>Rhinichthys osculus</i> ssp 3	--/CSC	Headwaters of the Santa Ana and San Gabriel rivers
Amphibians		
Silvery legless lizard <i>Aniella pulchra pulchra</i>	FSC/CSC	Sandy soils in a variety of habitats including dunes, scrub, chaparral, and woodlands
Western spadefoot toad <i>Scaphiopus hammondi</i>	FSC/CSC	Floodplains and grassland pools
Coast range newt <i>Taricha torosa torosa</i>	--/CSC	Coastal drainages and in terrestrial habitats when migrating over 1 km to breed in ponds, reservoirs & slow-moving streams
Reptiles		
Southwestern pond turtle <i>Clemmys marmorata pallida</i>	FSC/CSC	Permanent freshwater ponds and slow streams edged with sandy soils for laying eggs
Orange-throated whiptail <i>Cnemidophorus hyperythrus</i>	FSC/CSC	Coastal scrub, chaparral, and valley-foothill hardwood habitats
Coastal western whiptail <i>Cnemidophorus tigris multiscutatus</i>	FSC/--	Open areas in desert, scrub and grassland habitat
Northern red-diamond rattlesnake <i>Crotalus ruber ruber</i>	FSC/CSC	Chaparral, woodland, grassland and desert areas
San Diego mountain kingsnake <i>Lampropeltis zonata pulchra</i>	FSC/CSC	Restricted to the San Gabriel and San Jacinto Mountains
Rosy boa <i>Lichanura trivirgata</i>	FSC/--	Moderate to dense vegetation and rocky cover amid desert & chaparral, in addition to coastal canyons/hillsides, desert canyons, washes & mountains
San Diego horned lizard <i>Phrynosoma coronatum blainvillei</i>	FSC/CSC	Coastal sage scrub, arid chaparral
Two-striped garter snake <i>Thamnophis hammondi</i>	--/CSC	In or near permanent fresh water, often along streams with rocky beds and riparian growth from sea to about 7,000'
Birds		
Cooper's hawk <i>Accipiter cooperi</i>	--/CSC	Nests in riparian growths of deciduous trees and live oak woodlands
Tricolored blackbird <i>Agelaius tricolor</i>	FSC/CSC	Riparian thickets and emergent vegetation
Golden eagle <i>Aquila chrysaetos</i>	CSC/3511	Open hills with grassland, open scrub, adequate prey base, large trees or cliffs for nesting

TABLE E-7 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
RIVERSIDE REGION OF THE PROJECT AREA

RIVERSIDE COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Long-eared owl <i>Asio otus</i>	--/CSC	Only nesting birds are protected
Western burrowing owl <i>Athene cunicularia hypugaea</i>	FSC/CSC	Nests in mammal burrows in open, sloping grasslands
Coastal cactus wren <i>Campylorhynchus brunneicapillus couesi</i>	--/CSC	Coastal sage scrub
Northern harrier <i>Circus cyaneus</i>	--/CSC	Mostly nests in emergent vegetation, wet meadows or near rivers and lakes, but may nest in grasslands away from water.
Yellow warbler <i>Dendroica petechia brewsteri</i>	--/CSC	Prefers riparian habitat with willows, cottonwoods, sycamores, or alders for nesting and foraging
Yellow-breasted chat <i>Icteria virens</i>	--/CSC	Riparian corridors with willows or other dense foliage
Mammals		
Pallid bat <i>Antrozous pallidus</i>	--/CSC	Open, dry habitats with rocky outcrops, cliffs, caverns, and crevices for roosting, most commonly in deserts, grasslands, and shrublands, in addition to woodlands & forests
Northwestern San Diego pocket mouse <i>Chaetodipus fallax fallax</i>	--/CSC	Sandy, herbaceous areas (often in association with rocks or coarse gravel) in coastal scrub, chaparral, grasslands, sagebrush
Dulzura pocket mouse <i>Chaetodipus californicus femoralis</i>	--/CSC	Coastal scrub, chaparral & grassland, with grass-chaparral edges especially preferred
California mastiff bat <i>Eumops perotis californicus</i>	FSC/CSC	Breeds in rugged, rocky canyons and forages in a variety of habitats
Los Angeles pocket mouse <i>Perognathus longimembris brevinasus</i>	FSC/CSC	Desert washes, sagebrush, coastal sage scrub, and grasslands
Plants		
Chaparral sand-verbena <i>Abronia villosa</i> var. <i>aurita</i>	--/--/List 1B	Chaparral, coastal scrub, sandy areas
Aphanisma <i>Aphanisma blitoides</i>	FSC/--/List 1B	Coastal bluff scrub, coastal dunes
Plummer's mariposa lily <i>Calochortus plummerae</i>	--/--/List 1B	Coastal scrub, chaparral, valley and foothill grassland, cismontane woodland, lower coniferous forest
Intermediate mariposa lily <i>Calochortus weedii</i> var. <i>intermedius</i>	--/--/List 1B	Coastal scrub, chaparral, valley and foothill grassland
Bristly sedge <i>Carex comosa</i>	--/--/List 2	Wet sites such as lake margins, marshes and swamps; sites below sea level are on delta islands

TABLE E-7 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
RIVERSIDE REGION OF THE PROJECT AREA

RIVERSIDE COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Smooth tarplant <i>Centromadia pungens</i> ssp. <i>laevis</i>	--/--/List 1B	Often in disturbed sites near the coast amid marshes and margins of swamps, valley, foothill grassland & vernal pools
Long-spined spineflower <i>Chorizanthe polygonoides</i> var. <i>longispina</i>	--/--/List 1B	Clay soils derived from gabbro in chaparral, coastal scrub, meadows, valley & foothill grassland
White-bracted spineflower <i>Chorizanthe xanti</i> var. <i>leucotheca</i>	--/--/List 1B	Dry slopes and washes from 1,000' to 6,000'
Tecate cypress <i>Cupressus forbesii</i>	--/--/List 1B	Coniferous forest and chaparral, especially on north-facing slopes with groves associated with chaparral
Many-stemmed dudleya <i>Dudleya multicaulis</i>	FSC/--/List 1B	Chaparral, coastal scrub, valley and foothill grassland
Round-leaved filaree <i>Erodium macrophyllum</i>	--/--/List 1B	Clay soils in cismontane woodland, valley & foothill grasslands from 15 to 1,200 meters
California bedstraw <i>Galium californicum</i> ssp. <i>primum</i>	--/--/List 1B	Prefers shade in ecotone of pine forest-chaparral in the lower montane areas of coniferous forest (lower edge of pine belt)
Los Angeles sunflower <i>Helianthus nuttallii</i> ssp. <i>parishii</i>	FSC/--/List 1A	Coastal salt and freshwater marshes and swamps
Mesa horkelia <i>Horkelia cuneata</i> ssp. <i>puberula</i>	--/--/List 1B	Chaparral, cismontane woodland, coastal scrub
Coulter's goldfields <i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	FSC/--/List 1B	Coastal salt-marsh, playas, valley and foothill grassland, vernal pools
Heart-leaved pitcher sage <i>Lepichinia cardiophylla</i>	--/--/List 1B	Closed-cone coniferous forest, chaparral, cismontane woodland from 555-1,370 meters
Robinson's pepper-grass <i>Lepidium virginicum</i> var. <i>robinsonii</i>	--/--/List 1B	Chaparral, coastal scrub
Parish's desert-thorn <i>Lycium parishii</i>	--/--/List 2	Coastal scrub and Sonoran desert scrub from 305 to 1,000 meters
Parish's bush mallow <i>Malacothamnus parishii</i>	--/--/List 1A	Chaparral, coastal sage scrub from 305 to 455 meters
Hall's monardella <i>Monardella macrantha</i> ssp. <i>hallii</i>	--/--/List 1B	Broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, valley & foothill grassland from 730 to 2,195 meters
Pringle's monardella <i>Monardella pringlei</i>	--/--/List 1A	Coastal scrub, often sandy, from 300 to 400 meters
Prostrate navarretia <i>Navarretia prostrata</i>	--/--/List 1B	Mesic soils in coastal scrub, valley & foothill grassland (alkaline), vernal pools from 15 to 700 meters
Chaparral nolina <i>Nolina cismontana</i>	--/--/List 1B	Sandstone or gabbro substrate in chaparral and coastal scrub from 140 to 1,275 meters

TABLE E-7 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
RIVERSIDE REGION OF THE PROJECT AREA

RIVERSIDE COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Santiago Peak phacelia <i>Phacelia suaveolens</i> ssp. <i>keckii</i>	--/--/List 1B	Closed-cone coniferous forest and chaparral from 610 to 1,600 meters
Narrow-leaved cottonwood <i>Populus angustifolia</i>	--/--/List 2	Riparian forest from 1,200 to 1,800 meters
Parish's gooseberry <i>Ribes divaricatum</i> var. <i>parishii</i>	FSC/--/List 1B	Riparian woodland from 65 to 100 meters
Rayless ragwort <i>Senecio aphanactis</i>	--/--/List 1B	Cismontane woodland & coastal scrub; microhabitat is drying alkaline flats from 20 to 575 meters
Salt spring checkerbloom <i>Sidalcea neomexicana</i>	--/--/List 1B	Alkalai playas, brackish marshes, chaparral, coastal scrub, lower montane, coniferous forest, Mojavean desert scrub; microhabitat is alkalai springs and marshes
Prairie wedge-grass <i>Sphenopholis obtusata</i>	--/--/List 2	Mesic soil in cismontane woodland & meadows from 300 to 2,000 meters
Estuary seablite <i>Suaeda esteroa</i>	--/--/List 1B	Marshes, swamps (especially coastal saltwater areas)
Parry's tetracoccus <i>Tetracoccus dioicus</i>	--/--/List 1B	Chaparral, coastal scrub

RIVERSIDE COUNTY

SENSITIVE PLANT COMMUNITIES

Name	Global Rank	State Rank
California walnut woodland	G2	S2.1
Riversidian alluvial fan sage scrub	G1	S1.1
Southern coast live oak riparian forest	G4	S4
Southern cottonwood willow riparian forest	G3	S3.2
Southern interior cypress forest	G2	S2.1
Southern riparian forest	G4	S4
Southern riparian scrub	G3	S3.2
Southern sycamore alder riparian woodland	G4	S4
Southern willow scrub	G3	S2.1

TABLE E-8
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN DIEGO REGION OF THE PROJECT AREA

SAN DIEGO COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
SPECIES LISTED OR PROPOSED FOR LISTING		
<i>Invertebrates</i>		
San Diego fairy shrimp <i>Branchinecta sandiegonensis</i>	FE/--	Inhabits vernal pools on mesas and floodplains in San Diego, Orange and Riverside counties
Quino checkerspot butterfly <i>Euphydryas editha quino</i> Critical Habitat designated	FE/--	Frequents openings in a variety of habitat types including coastal sage scrub, chaparral, and oak woodland. Larval host plants are <i>Plantago erecta</i> and <i>Castilleja exserta</i> .
Riverside fairy shrimp <i>Streptocephalus woottoni</i> Critical Habitat designated	FE/--	Endemic to W. Riverside and San Diego Counties in swales and basins of grassland and coastal sage scrub
<i>Fish</i>		
Desert pupfish <i>Cyprinodon macularius</i> Critical Habitat designated	FE/CE	Springs, seeps, and slow moving streams in the Salton Sink Basin and and backwaters and sloughs along the Colorado River
Tidewater goby <i>Eucyclogobius newberryi</i>	FE/CSC	Brackish water along California coast
Unarmored threespine stickleback <i>Gasterosteus aculeatus williamsoni</i>	FE/CE	Coastal stream and rivers of southern California
Southern steelhead-Southern California ESU <i>Oncorhynchus mykiss irideus</i> Critical Habitat designated	FE/CSC	Freshwater streams with cool water and gravel suitable for spawning
<i>Amphibians</i>		
Arroyo toad <i>Bufo microscaphus californicus</i>	FE/CSC	Semi-arid, near washes or intermittent streams, including valley-foothill and desert riparian habitat
California red-legged frog <i>Rana aurora draytonii</i>	FPE/--	Requires perennial water sources, slow moving streams, ditches, ponds with emergent vegetation
<i>Birds</i>		
Western snowy plover <i>Charadrius alexandrinus nivosus</i>	FT/CSC	Sandy beaches, estuarine shores, salt pond levees and alkali lakes
Mountain plover <i>Charadrius montanus</i>	FPT/	Winters in areas with short-grassed or plowed fields with bare ground and flat topography. Prefer grazed areas and those with burrowing rodents.
Western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	--/CE	Riparian forests along flood bottoms of large river systems
Willow flycatcher <i>Empidonax traillii</i>	--/CE	Extensive stands of low, dense willows on edges of wet meadows, ponds, or backwaters

TABLE E-8 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN DIEGO REGION OF THE PROJECT AREA

SAN DIEGO COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Southwestern willow flycatcher <i>Empidonax traillii extimus</i>	FE/--	Nests in riparian woodlands, but also found in low, brushy areas, especially near water.
Bald eagle <i>Haliaeetus leucocephalus</i>	FT/CE	Nests in large, old-growth or dominant live trees within 1-mile of water where it may also spend winters along ocean shore, lake margins & rivers
California black rail <i>Laterallus jamaicensis coturniculus</i>	FSC/CT	Salt-marshes bordering large bays
Belding's savannah sparrow <i>Passericulus sandwichensis beldingi</i>	FSC/CE	Coastal salt-marshes
California brown pelican <i>Pelecanus occidentalis californicus</i>	FE/CE	Nest on small coastal islands
Coastal California gnatcatcher <i>Polioptila californica californica</i>	FT/CSC	Coastal sage scrub
Light-footed clapper rail <i>Rallus longirostris levipes</i>	FE/CE	Salt-marshes with cordgrass and pickleweed
Bank swallow <i>Riparia riparia</i>	--/CT	Near streams, rivers, lakes, or the ocean, requires vertical banks or cliffes with fine-textured, sandy soils for nesting, nests primarily in riparian and other lowland habitats
California least tern <i>Sterna antillarum browni</i>	FE/CE	Coastal beaches and sandbars
Least Bell's vireo <i>Vireo bellii pusillus</i>	FE/CE	Low elevation riparian habitat near water or dry river bottoms
Mammals		
Stephens' kangaroo rat <i>Dipodomys stephensi</i>	FE/CT	Primarily grasslands but also found in coastal scrub and sagebrush with sparse canopy cover. Prefers buckwheat, chamise, brome grasses, and filaree.
Pacific pocket mouse <i>Perognathus longimembris pacificus</i>	FE/CSC	Narrow coastal plains, seems to prefer soils of fine alluvial sands
Plants		
San Diego thorn-mint <i>Acanthomintha ilicifolia</i>	FT/CE/List 1B	Chaparral, coastal sage scrub, valley and foothill grassland, vernal pools
San Diego ambrosia <i>Ambrosia pumila</i>	FPE/--/List 1B	Sandy loam or clay soils in chaparral, coastal scrub, valley and foothill grassland, vernal pools
Del Mar manzanita <i>Arctostaphylos glandulosa</i> ssp. <i>crassifolia</i>	FE/--/List 1B	Sandy coastal mesas and bluffs in chaparral or closed-cone coniferous forest
Peirson's milk-vetch <i>Astragalus magdalenae</i> var. <i>peirsonii</i>	FT/CE/List 1B	Desert dunes

TABLE E-8 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN DIEGO REGION OF THE PROJECT AREA

SAN DIEGO COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Coastal dunes milk-vetch <i>Astragalus tener</i> var. <i>titi</i>	FE/CE/List 1B	Moist, sandy depressions in coastal bluff scrub or coastal dunes
Encinitas baccharis <i>Baccharis vanessae</i>	FT/CE/List 1B	On sandstone soils in steep, rocky areas in chaparral
Nevin's barberry <i>Berberis nevinii</i>	FE/CE/List 1B	Chaparral, cismontane woodland, coastal scrub, riparian scrub
Thread-leaved brodiaea <i>Brodiaea filifolia</i>	FT/CE/List 1B	Cismontane woodland, coastal scrub, playas, valley and foothill grasslands, vernal pools
Dunn's mariposa lily <i>Calochortus dunnii</i>	--/CR/List 1B	Closed-cone coniferous forest, chaparral
Orcutt's spineflower <i>Chorizanthe orcuttiana</i>	FE/CE/List 1B	Sandy sites and openings in coastal scrub, chaparral, closed-cone coniferous forest
Salt marsh bird's-beak <i>Cordylanthus maritimus</i> ssp. <i>maritimus</i>	FE/CE/List 1B	Coastal salt-marsh, coastal dunes
Otay tarplant <i>Deinandra conjugens</i>	FT/CE/List 1B	Coastal scrub, valley and foothill grassland, often in open, disturbed areas
Short-leaved dudleya <i>Dudleya brevifolia</i>	--/CE/List 1B	Openings in chaparral and coastal scrub
San Diego button-celery <i>Eryngium aristulatum</i> var. <i>parishii</i>	FE/CE/List 1B	Vernal pools in coastal scrub or valley and foothill grassland
Mexican flannelbush <i>Fremontodendron mexicanum</i>	FE/CR/List 1B	Closed-cone coniferous forest, chaparral, cismontane woodland, often scattered along creeks or in dry canyons
Orcutt's hazardia <i>Hazardia orcuttii</i>	--/C?/List 1B	Often on clay soils in chaparral or coastal scrub
Willow monardella <i>Monardella linoides</i> ssp. <i>viminea</i>	FE/CE/List 1B	Riparian woodland, or forest; closed-cone coniferous forest, chaparral, in rocky or sandy locations, sometimes in washes or floodplains
Spreading navarretia <i>Navarretia fossalis</i>	FT/--/List 1B	Vernal pools in chenopod scrub, marshes and swamps, playas
Dehesa nolina <i>Nolina interrata</i>	--/CE/List 1B	On gabbroic, metavolcanic or serpentinite soils in chaparral
California orcutt grass <i>Orcuttia californica</i>	FE/CE/List 1B	Vernal pools
Baja California birdbush <i>Ornithostaphylos oppositifolia</i>	--/CE/List 1B	Chaparral
Lyon's pentachaeta <i>Pentachaeta lyonii</i>	FE/CE/List 1B	Chaparral and valley and foothill grassland, often at the edges of clearings in chaparral or the edges between grassland and chaparral habitat types

TABLE E-8 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN DIEGO REGION OF THE PROJECT AREA

SAN DIEGO COUNTY		
Common name	Listing Status	Habitat
Scientific name	USFWS/ CDFG/CNPS	Requirements
San Bernadino bluegrass <i>Poa atropurpurea</i>	FE/--/List 1B	Mesic meadows
San Diego mesa mint <i>Pogogyne abramsii</i>	FE/CE/List 1B	Vernal pools within grasslands, chamise chaparral, or coastal sage scrub
Otay mesa mint <i>Pogogyne nudiuscula</i>	FE/CE/List 1B	Dry beds of vernal pools and swales
Gambel's water cress <i>Rorippa gambelii</i>	FE/CT/List 1B	Freshwater or brackish marsh habitats at the margins of lakes and along slow-flowing streams. Grows in or just above the water level, requires a permanent source of water.
Small-leaved rose <i>Rosa minutifolia</i>	--/CE/List 1B	Coastal scrub or chaparral
FEDERAL OR STATE SPECIES OF SPECIAL CONCERN		
Invertebrates		
Tiger beetle <i>Cicindela gabbii</i>	CNDDDB ranks as S1: extremely endangered within California	Coastal estuarine mudflats, occasionally found on dry saline flats
Sandy beach tiger beetle <i>Cicindela hirticollis gravida</i>	FSC/--	Areas adjacent to non-brackish water along the coast
Tiger beetle <i>Cicindela latesignata latesignata</i>	CNDDDB ranks as S1: extremely endangered within California	Mudflats and beaches
Tiger beetle <i>Cicindela senilis frosti</i>	CNDDDB ranks as S1: extremely endangered within California	Marine shoreline in mud and on dried salt pans
Globose dune beetle <i>Coelus globosus</i>	FSC/--	Coastal sand dunes
Monarch butterfly <i>Danaus plexippus</i>	--/*	Eucalyptus groves (winter sites)
Peninsular Range shoulderband <i>Helminthoglypta traski coelata</i>	FSC/--	In rock slides beneath bark and rotten logs, in coastal vegetation
Hermes copper butterfly <i>Lycaena hermes</i>	FSC/--	Mixed chaparral and costal sage scrub, host plant is <i>Rhamnus crocea</i>
Wandering skipper <i>Panoquina errans</i>	FSC/--	Coastal salt-marsh
Mimic tryonia <i>Tryonia imitator</i>	FSC/--	Coastal lagoons, estuaries and salt-marshes
Fish		
Arroyo chub <i>Gila orcutti</i>	FSC/CSC	Coastal streams with slow water sections having mud or sand bottoms and aquatic vegetation

TABLE E-8 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN DIEGO REGION OF THE PROJECT AREA

SAN DIEGO COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Amphibians		
San Gabriel slender salamander <i>Batrachoseps gabrieli</i>	Designated as sensitive by US Forest Service	Known only from the San Gabriel Mountains. Found under rocks, wood, vegetation.
Western spadefoot toad <i>Scaphiopus hammondi</i>	FSC/CSC	Floodplains and grassland pools
Coast range newt <i>Taricha torosa torosa</i>	--/CSC	Coastal drainages from Mendocino to San Diego County. Require upland habitat for aestivation during the dry season and slow moving streams, ponds, or reservoirs for breeding and reproduction.
Reptiles		
Silvery legless lizard <i>Aniella pulchra pulchra</i>	FSC/CSC	Sparsely vegetated areas with sandy or loose loamy soils having a high moisture content
Southwestern pond turtle <i>Clemmys marmorata pallida</i>	FSC/CSC	Permanent freshwater ponds and slow streams edged with sandy soils for laying eggs
Orange-throated whiptail <i>Cnemidophorus hyperythrus</i>	FSC/CSC	Coastal scrub, chaparral, and valley-foothill hardwood habitats
Coastal western whiptail <i>Cnemidophorus tigris multiscutatus</i>	CNDDDB ranks as S3: species rare due to restricted range	Deserts and semi-arid areas with sparse vegetation, woodlands, riparian habitat
Northern red-diamond rattlesnake <i>Crotalus ruber ruber</i>	FSC/CSC	Chaparral, woodland, grassland and desert areas
Coronado skink <i>Eumeces skiltonianus interparietalis</i>	--/CSC	Prefers early successional stages or open areas in grassland, chaparral, pinon-juniper and juniper-sage woodlands, pine-oak and pine forests; rocky areas near streams and dry hillsides
Rosy boa <i>Lichanura trivirgata</i>	FSC/--	Chaparral and scrub, prefers moderate to dense vegetation and rocky soils
San Diego horned lizard <i>Phrynosoma coronatum blainvillei</i>	FSC/CSC	Coastal sage scrub, arid chaparral
Coast patch-nosed lizard <i>Salvadora hexalepis virgultea</i>	FSC/CSC	Scrub and chaparral habitat types with small mammal burrows available for refuge and overwintering
Two-striped garter snake <i>Thamnophis hammondi</i>	--/CSC	Highly aquatic, found in or near perennial streams, often those with rocky beds and well developed riparian vegetation
Birds		
Cooper's hawk <i>Accipiter cooperi</i>	--/CSC	Nests in riparian growths of deciduous trees and live oak woodlands
Tricolored blackbird <i>Agelaius tricolor</i>	FSC/CSC	Riparian thickets and emergent vegetation
Southern California rufous-crowned sparrow <i>Aimophila ruficeps canescens</i>	--/CSC	Coastal sage scrub and sparse mixed chaparral, frequents relatively steep, often rocky hillsides with patches of grass and forbs

TABLE E-8 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN DIEGO REGION OF THE PROJECT AREA

SAN DIEGO COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Golden eagle <i>Aquila chrysaetos</i>	CSC/3511	Open hills with grassland, open scrub, adequate prey base, large trees or cliffs for nesting
Western burrowing owl <i>Athene cunicularis hypugaea</i>	FSC/CSC	Nests in mammal burrows in open, sloping grasslands
Coastal cactus wren <i>Campylorhynchus brunneicapillus couesi</i>	--/CSC	Coastal sage scrub
Northern harrier <i>Circus cyaneus</i>	--/CSC	Mostly nests in emergent vegetation, wet meadows or near rivers and lakes, but may nest in grasslands away from water.
Yellow warbler <i>Dendroica petechia brewsteri</i>	--/CSC	Prefers riparian habitat with willows, cottonwoods, sycamores, or alders for nesting and foraging
White-tailed kite <i>Elanus leucurus</i>	--/3511	Nests near wet meadows and open grasslands dense oak, willow or other large tree stands.
California horned lark <i>Eremophila alpestris actia</i>	--/CSC	Short grass prairie, fallow grain fields, open areas with short vegetation
Prairie falcon <i>Falco mexicanus</i>	--CSC	Dry, open terrain, flat or hilly with breeding sites located on cliffs
Yellow-breasted chat <i>Icteria virens</i>	--/CSC	Riparian corridors with willows or other dense foliage
Double-crested cormorant <i>Phalacrocorax auritus</i>	--/CSC	Nests along coast on isolated islands or in trees along lake margins.
Mammals		
Dulzura pocket mouse <i>Chaetodipus californicus femoralis</i>	--/CSC	Grass/chaparral edges in coastal scrub or chaparral, in grasslands
Northwestern San Diego pocket mouse <i>Chaetodipus fallax fallax</i>	--/CSC	Sandy soils with rocks or coarse gravel, areas with herbaceous cover in coastal scrub, chaparral, in grasslands
Mexican long-tongued bat <i>Choeronycteris mexicana</i>	FSC/CSC	Roosts in caves, in and around buildings
San Diego black-tailed jackrabbit <i>Lepus californicus bennettii</i>	FSC/CSC	Coastal sage scrub in intermediate canopy stages, open shrub habitats with herbaceous edges, or habitat with herbaceous and tree edges
San Diego desert woodrat <i>Neotoma lepida intermedia</i>	FSC/CSC	A variety of habitat types with moderate to dense canopies and rock outcrops or rocky cliffs and slopes
Pocketed free-tailed bat <i>Nyctinomops femorasaccus</i>	--/CSC	Rocky areas with high cliffs in a variety of arid habitats including pine-juniper woodlands, desert scrub, and desert riparian

TABLE E-8 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN DIEGO REGION OF THE PROJECT AREA

SAN DIEGO COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
American badger <i>Taxidea taxus</i>	Ranked by CNDDDB as S4: populations apparently secure but factors such as continued habitat loss are of concern	Drier, open stages of most shrub, forest, and herbaceous habitat types with friable soils
Plants		
Chaparral sand-verbena <i>Abronia villosa</i> var. <i>aurita</i>	--/--/List 1B	Sandy areas in chaparral and coastal scrub
California adolphia <i>Adolphia californica</i>	--/--/List 2	Clay soils in chaparral, coastal scrub, and valley and foothill grassland
Shaw's agave <i>Agave shawii</i>	--/--/List 2	Coastal bluff scrub, coastal scrub
San Diego bur-sage <i>Ambrosia chenopodiifolia</i>	--/--/List 2	Maritime coastal scrub, slopes of canyons in open succulent scrub with little herbaceous cover
Aphanisma <i>Aphanisma blitoides</i>	FSC/--/List 1B	Coastal bluff scrub, coastal dunes
Otay manzanita <i>Arctostaphylos otayensis</i>	--/--/List 1B	Chaparral, cismontane woodland on metavolcanic soils
Rainbow manzanita <i>Arctostaphylos rainbowensis</i>	--/--/List 1B	Chaparral
Dean's milk-vetch <i>Astragalus deanei</i>	--/--/List 1B	Open, brushy south facing slopes in costal sage scrub and chaparral, also in riparian forest
San Diego milk-vetch <i>Astragalus oocarpus</i>	--/--/List 1B	Openings in chaparral, cismontane woodland
Jeager's milk-vetch <i>Astragalus pachypus</i> var. <i>jaegeri</i>	--/--/List 1B	Sandy or rocky soils in chaparral, coastal scrub, cismontane woodland, and valley and foothill grassland
Coulter's saltbush <i>Atriplex coulteri</i>	--/--/List 1B	Alkaline or clay soils in coastal dunes, coastal bluff scrub, coastal scrub, or valley and foothill grassland
South Coast saltscale <i>Atriplex pacifica</i>	FSC/--/List 1B	Coastal bluff scrub, coastal dunes, playas, chenopod scrub
Parish's brittle-scale <i>Atriplex parishii</i>	FSC/--/List 1B	Alkali meadows, vernal pools, chenopod scrub, playas
Golden-spined cereus <i>Bergerocactus emoryi</i>	--/--/List 2	Usually on clay soils in costal scrub and on chaparral edges, limited to the coastal belt
Orcutt's brodiaea <i>Brodiaea orcuttii</i>	--/--/List 1B	Mesic habitats on clay soils, vernal pools or small drainages in valley and foothill grassland, closed-cone coniferous forest, cismontane woodlan, chaparral, meadows
Lakeside ceanothus <i>Ceanothus cyaneus</i>	--/--/List 1B	Closed-cone coniferous forest and chaparral

TABLE E-8 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN DIEGO REGION OF THE PROJECT AREA

SAN DIEGO COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Otay Mountain ceanothus <i>Ceanothus otayensis</i>	--/--/List 1B	Chaparral on metavolcanic or gabbroic soils
Wart-stemmed ceanothus <i>Ceanothus verrucosus</i>	--/--/List 2	Chaparral
Southern tarplant <i>Centromadia parryi</i> ssp. <i>australis</i>	--/--/List 1B	Margins of marshes and swamps, vernal mesic valley and foothill grasslands, vernal pools, often in disturbed areas, sometimes in alkaline soils
Smooth tarplant <i>Centromadia pungens</i> ssp. <i>laevis</i>	--/--/List 1B	Alkali soils in valley and foothill grassland, chenopod scrub, meadows, playas, and riparian woodland
Orcutt's pincushion <i>Chaenactis glabriuscula</i> var. <i>orcuttiana</i>	--/--/List 1B	Coastal dunes, sandy soils in coastal bluff scrub
Long-spined spineflower <i>Chorizanthe polygonoides</i> var. <i>longispina</i>	--/--/List 1B	Gabbroic clay soils in chaparral, coastal scrub, meadows, and valley and foothill grassland
Delicate clarkia <i>Clarkia delicata</i>	--/--/List 1B	Cismontane woodland, chaparral
Summer holly <i>Comarostaphylis diversifolia</i> spp. <i>diversifolia</i>	--/--/List 1B	Mixed chaparral, sometimes a fire follower
Orcutt's bird's-beak <i>Cordylanthus orcuttianus</i>	--/--/List 2	On slopes in coastal scrub
Sea dahlia <i>Coreopsis maritima</i>	--/--/List 2	Coastal scrub, coastal bluff scrub
San Diego sand aster <i>Corethrogyne filaginifolia</i> var. <i>incana</i>	--/--/List 1B	Possibly in disturbed sites and ecotones, in coastal scrub, coastal bluff scrub, and chaparral
Tecate cypress <i>Cupressus forbesii</i>	--/--/List 1B	Primarily on north-facing slopes in closed-cone coniferous forest and chaparral
Orcutt's dudleya <i>Dudleya attenuata</i> ssp. <i>orcuttii</i>	--/--/List 2	Rocky mesas, canyons, and ridges in coastal scrub, coastal bluff scrub, and chaparral
Blochman's dudleya <i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i>	--/--/List 1B	Open, rocky slopes, sometimes on serpentine, in coastal scrub, coastal bluff scrub, valley and foothill grassland, chaparral
Many-stemmed dudleya <i>Dudleya multicaulis</i>	FSC/--/List 1B	Chaparral, coastal scrub, valley and foothill grassland
Variiegated dudleya <i>Dudleya variegata</i>	--/--/List 1B	On rocky or clay soils in chaparral, coastal scrub, cismontane woodland, valley and foothill grassland, sometimes associated with margins of vernal pools
Sticky dudleya <i>Dudleya viscida</i>	--/--/List 1B	On cliffs and banks in coastal scrub, coastal bluff scrub, or chaparral

TABLE E-8 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN DIEGO REGION OF THE PROJECT AREA

SAN DIEGO COUNTY		
Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Palmer's goldenbush <i>Ericameria palmeri</i> ssp. <i>palmeri</i>	--/--/List 2	Mesic sites on steep hillsides with granitic soils in coastal scrub or chaparral
Round-leaved filaree <i>Erodium macrophyllum</i>	--/--/List 1B	Clay soils in cismontane woodland or valley and foothill grassland
Pendelton button-celery <i>Eryngium pendeltonensis</i>	--/--/List 1B	Vernally mesic sites in coastal bluff scrub, valley and foothill grassland, vernal pools
Cliff spurge <i>Euphorbia misera</i>	--/--/List 2	Rocky sites in coastal bluff scrub and coastal scrub
San Diego barrel cactus <i>Ferocactus viridescens</i>	--/--/List 2	Chaparral, Diegan costal scrub, valley and foothill grassland
Palmer's frankenia <i>Frankenia palmeri</i>	--/--/List 2	Coastal dunes, coastal salt marshes, playas
Liverwort <i>Geothallus tuberosa</i>	--/--/List 1B	Mesic soils in coastal scrub, vernal pools
San Diego gumplant <i>Grindelia hirsutula</i> var. <i>hallii</i>	--/--/List 1B	Chaparral, lower montane coniferous forest, meadows, valley and foothill grassland
Los Angeles sunflower <i>Helianthus nuttallii</i> ssp. <i>parishii</i>	FSC/--/List 1A	Coastal salt and freshwater marshes and swamps
Ramona horkelia <i>Horkelia truncata</i>	--/--/List 1B	Mixed chaparral, vernal streams, cismontane woodland, disturbed areas near roads
Decumbent goldenbush <i>Isocoma menziesii</i> var. <i>decumbens</i>	--/--/List 1B	Sandy soils in coastal scrub, often in disturbed sites
San Diego marsh aster <i>Iva hayesiana</i>	--/--/List 2	Marshes and swamps, playas, washes
Coulter's goldfields <i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	FSC/--/List 1B	Coastal salt-marsh, playas, valley and foothill grassland, vernal pools
Heart-leaved pitcher sage <i>Lepichinia cardiophylla</i>	--/--/List 1B	Closed-cone coniferous forest, chaparral, cismontane woodland
Gander's pitcher sage <i>Lepichinia ganderi</i>	--/--/List 1B	Gabbro or metavolcanic substrates in closed-cone coniferous forest, chaparral, coastal scrub, valley and foothill grassland
Robinson's pepper-grass <i>Lepidium virginicum</i> var. <i>robinsonii</i>	--/--/List 1B	Chaparral, coastal scrub
Nuttall's lotus <i>Lotus nuttallianus</i>	--/--/List 1B	Coastal sand dunes
Light gray lichen <i>Mobergia calculiformis</i>	--/--/List 1B	Coastal scrub
Felt-leaved monardella <i>Monardella hypoleuca</i> ssp. <i>lanata</i>	--/--/List 1B	Sandy soils in mixed chaparral, chamise chaparral and southern oak woodland

TABLE E-8 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN DIEGO REGION OF THE PROJECT AREA

SAN DIEGO COUNTY		
Common name	Listing Status	Habitat
<i>Scientific name</i>	USFWS/ CDFG/CNPS	Requirements
San Diego goldenstar <i>Muilla clevelandii</i>	--/--/List 1B	Chaparral, coastal scrub, valley and foothill grassland, often on mounds between vernal pools
Mud nama <i>Nama stenocarpum</i>	--/--/List 2	Marshes and swamps
Prostrate navarretia <i>Navarretia prostrata</i>	--/--/List 1B	Vernal pools or mesic sites in coastal scrub and valley and foothill grassland with alkaline soils
Coast woolly-heads <i>Nemacaulis denudata</i> var. <i>denudata</i>	--/--/List 1B	Coastal dunes
Slender woolly-heads <i>Nemacaulis denudata</i> var. <i>gracilis</i>	--/--/List 2	Coastal dunes
Snake cholla <i>Opuntia californica</i> var. <i>californica</i>	--/--/List 1B	Chaparral, coastal scrub
Brand's phacelia <i>Phacelia stellaris</i>	--/--/List 1B	Coastal scrub, coastal dunes
Torrey pine <i>Pinus torreyana</i> ssp. <i>torreyana</i>	--/--/List 1B	On dry, sandstone slopes in closed-cone coniferous forest and chaparral
Nuttall's scrub oak <i>Quercus dumosa</i>	--/--/List 1B	Generally on sandy soils or clay loam in closed-cone coniferous forest, chaparral, coastal scrub
Moreno currant <i>Ribes canthariforme</i>	--/--/List 1B	Shaded or partially shaded sites in chaparral
Santa Catalina Island currant <i>Ribes viburnifolium</i>	--/--/List 1B	Chaparral, cismontane woodland
Munz's sage <i>Salvia munzii</i>	--/--/List 2	On rocky soils in coastal scrub or chaparral
San Miguel savory <i>Satureja chandleri</i>	--/--/List 1B	Rocky, gabbroic, or metavolcanic soils in chaparral, cismontane woodland, riparian woodland, valley and foothill grassland
Rayless ragwort <i>Senecio aphanactis</i>	--/--/List 1B	Drying alkaline flats in cismontane woodland or coastal scrub
<i>Sphaerocarpos drewei</i>	--/--/List 1B	Openings in chaparral or coastal scrub
Purple stemodia <i>Stemodia durantifolia</i>	--/--/List 2	Mesic, sandy soils in Sonoran desert scrub
Oil neststraw <i>Stylocline citroleum</i>	--/--/List 1B	On flats and clay soils in oil producing areas with chenopod scrub and coastal scrub
Estuary seablite <i>Suaeda esteroa</i>	--/--/List 1B	Coastal salt marshes and swamps
Parry's tetracoccus <i>Tetracoccus dioicus</i>	--/--/List 1B	Rocky soils in chaparral and coastal scrub
Woven-spored lichen <i>Texosporium sancti-jacobi</i>	--/--/List 1B	Open sites in chaparral

TABLE E-8 (continued)
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
SAN DIEGO REGION OF THE PROJECT AREA

SAN DIEGO COUNTY		
Common name	Listing Status	Habitat
Scientific name	USFWS/ CDFG/CNPS	Requirements
<i>Triquetrella californica</i>	--/--List 1B	On soil in coastal bluff scrub and coastal scrub
SAN DIEGO COUNTY		
SENSITIVE PLANT COMMUNITIES		
Name	Global Rank	State Rank
Coastal brackish marsh	G2	S2.1
Maritime succulent scrub	G2	S1.1
San Diego mesa claypan vernal pool	G2	S2.1
San Diego mesa hardpan vernal pool	G2	S2.1
Southern coast live oak riparian forest	G4	S4
Southern coastal salt marsh	G2	S2.1
Southern cottonwood willow riparian forest	G3	S3.2
Southern dune scrub	G1	S1.1
Southern foredunes	G2	S2.1
Southern interior basalt flow vernal pool	G1	S1.2
Southern interior cypress forest	G2	S2.1
Southern maritime chaparral	G1	S1.1
Southern riparian forest	G4	S4
Southern riparian scrub	G3	S3.2
Southern sycamore alder riparian woodland	G4	S4
Southern willow scrub	G3	S2.1
Torrey pine forest	G1	S1.1
Valley needlegrass grassland	G1	S3.1

TABLE E-9
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
IMPERIAL REGION OF THE PROJECT AREA

IMPERIAL COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
SPECIES LISTED OR PROPOSED FOR LISTING		
<i>Reptiles</i>		
Desert tortoise <i>Gopherus agassizii</i>	FT/--	Desert oases, riverbanks, washes, dunes, and occasionally rocky slopes. Requires firm ground for construction of burrows in banks of washes or compacted sand and adequate ground moisture for survival of eggs and young
<i>Birds</i>		
Southwestern willow flycatcher <i>Empidonax traillii extimus</i>	FE/--	Nests in riparian woodlands, but also found in low, brushy areas, especially near water.
Yuma clapper rail <i>Rallus longirostris yumanensis</i>	FE/CT	Nests in freshwater marshes; prefers stands of cattails and tules dissected by narrow channels of flowing water; principle food is crayfish
Least Bell's vireo <i>Vireo bellii pusillus</i>	FE/CE	Low elevation riparian habitat near water or dry river bottoms
<i>Plants</i>		
Peirson's milk-vetch <i>Astragalus magdalanae</i> var. <i>peirsonii</i>	FT/CE/List 1B	Desert dunes
FEDERAL AND STATE SPECIES OF CONCERN		
<i>Amphibians</i>		
Colorado river toad <i>Bufo alvarius</i>	--/CSC	Breeds in ephemeral pools and irrigation ditches along CO River and S. Imperial Valley.
<i>Reptiles</i>		
Flat-tailed horned lizard <i>Phrysonoma mcalli</i>	--/CSC	Desert washes and flats with fine sandy substrate. Require vegetative cover and ants.
<i>Birds</i>		
Western burrowing owl <i>Athene cunicularia hypugaea</i>	FSC/CSC	Open, dry grasslands, deserts, or scrublands with low growing vegetation.
Yellow warbler <i>Dendroica petechia brewsteri</i>	--/CSC	Prefers riparian habitat, including willows, cottonwoods, sycamores, aspens, and alders for nesting.
Crissal thrasher <i>Toxostoma crissale</i>	--/CSC	Nests in dense vegetation in desert riparian and wash habitats.
<i>Mammals</i>		
Colorado valley woodrat <i>Neotoma albigula venusta</i>	CNDDB ranks as SH: no sightings within the past 20 years	Associated with beaver-tail cactus & mesquite in low-lying S.E. CA deserts.

TABLE E-9
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
IMPERIAL REGION OF THE PROJECT AREA

IMPERIAL COUNTY		
Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements
Plants		
Chaparral sand-verbena <i>Abronia villosa</i> var. <i>aurita</i>	--/--/List 1B	Sandy areas in chaparral or coastal scrub
Abram's spurge <i>Chamaesyce abramsiana</i>	--/--/List 2	Sandy sites in desert scrub plant communities
Rock nettle <i>Eucnide rupestris</i>	--/--/List 2	Sonoran desert scrub
Brown turbans <i>Malperia tenuis</i>	--/--/List 2	Sandy substrates and rocky slopes in Sonoran desert scrub
Hairy stickleaf <i>Mentzelia hirsutissima</i>	--/--/List 2	Washes, fans, slopes, and rocky sites in Sonoran desert scrub
Sand food <i>Pholisma sonorae</i>	--/--/List 1B	Desert dunes

TABLE E-9
SPECIAL STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE
IMPERIAL REGION OF THE PROJECT AREA

STATUS CODES FOR TABLES E-1 THROUGH E-9:

Federal Categories (U.S. Fish and Wildlife Service)

FE = Listed as Endangered by the Federal Government

FT = Listed as Threatened by the Federal Government

FPE = Proposed for Listing as Endangered

FPT = Proposed for Listing as Threatened

FC = Candidate for Federal Listing

FSC = Federal Species of Concern

FSLC = Federal Species of Local Concern

BPA = Federal Bald Eagle Protection Act

State Categories (California Department of Fish and Game)

CE = Listed as Endangered by the State of California

CT = Listed as Threatened by the State of California

CR = Listed as Rare by the State of California

**The Nature Conservancy (TNC) – Global Heritage Program
 rarity ranks (for sensitive plant communities)**

G1: Fewer than 6 viable occurrences worldwide and/or 2000 acres

G2: 6-20 viable occurrences worldwide and/or 2000-10,000 acres

G3: 21-100 viable occurrences worldwide and/or 10,000-50,000
 acres

G4: Greater than 100 viable occurrences worldwide and/or greater
 than 50,000 acres

State Rarity Ranks:

S1: Fewer than 6 viable occurrences statewide and/or 2000 acres

S2: 6-20 viable occurrences statewide and/or 2000-10,000 acres

S3: 21-100 viable occurrences statewide and/or 10,000-50,000
 acres

S4: Greater than 100 viable occurrences statewide and/or greater
 than 50,000 acres

California Native Plant Society (CNPS)

List 1A = Plants presumed extinct in California

List 1B = Plants rare, threatened, or endangered in
 California and elsewhere

List 2 = Plants rare, threatened, or endangered in CA

3511 = Fully Protected Species

* = Special Animals

CSC = California Species of Special Concern

Threat Ranks

0.1: Very threatened

0.2: Threatened

0.3: No current threats known

**TABLE E-10
USGS 7.5 MINUTE QUADRANGLES FOR
SEMPRA COMMUNICATIONS PROJECT AREA BIOLOGICAL REGIONS**

Sacramento Region

USGS Code	Quadrangle Name	USGS Code	Quadrangle Name
38121F4	RIO LINDA	38121E1	FOLSOM SE
38121F3	CITRUS HEIGHTS	38121D5	CLARKSBURG
38121F2	FOLSOM	38121D4	FLORIN
38121F1	CLARKSVILLE	38121D3	ELK GROVE
38121E5	SACRAMENTO WEST	38121D2	SLOUGHHOUSE
38121E4	SACRAMENTO EAST	38121F5	TAYLOR MONUMENT
38121E3	CARMICHAEL	38121G2	ROCKLIN
38121E2	BUFFALO CREEK	38121G3	ROSEVILLE

San Francisco Bay Region**Marin County**

USGS Code	Quadrangle Name	USGS Code	Quadrangle Name
38122B6	PETALUMA	37122H5	SAN RAFAEL
38122B5	PETALUMA RIVER	37122H4	SAN QUENTIN
38122A6	SAN GERONIMO	37122G5	POINT BONITA
38122A5	NOVATO	37122G4	SAN FRANCISCO NORTH
38122A4	PETALUMA POINT		

San Francisco County

USGS Code	Quadrangle Name	USGS Code	Quadrangle Name
37122G4	SAN FRANCISCO NORTH	37122G3	OAKLAND WEST
37122F4	SAN FRANCISCO SOUTH	37122F3	HUNTERS POINT

Contra Costa County

USGS Code	Quadrangle Name	USGS Code	Quadrangle Name
37121H8	CLAYTON	38122A3	MARE ISLAND
37121H7	ANTIOCH SOUTH	38122A2	BENICIA
37121H6	BRENTWOOD	38122A1	VINE HILL
37122G2	OAKLAND EAST	38121A8	HONKER BAY
37122G1	LAS TRAMPAS RIDGE	38121A7	ANTIOCH NORTH
37121G8	DIABLO	38121A6	JERSEY ISLAND
37121F7	LIVERMORE	37122H2	BRIONES VALLEY
37121F8	DUBLIN	37122H1	WALNUT CREEK

Alameda County

USGS Code	Quadrangle Name	USGS Code	Quadrangle Name
37121E8	NILES	37122F1	HAYWARD
37121F6	ALTAMONT	37122F2	SAN LEANDRO
37121F7	LIVERMORE	37122G1	LAS TRAMPAS RIDGE
37121F8	DUBLIN	37122G2	OAKLAND EAST
37122E1	NEWARK	37122G3	OAKLAND WEST
37122E2	REDWOOD POINT	37122H3	RICHMOND

San Mateo County

USGS Code	Quadrangle Name	USGS Code	Quadrangle Name
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**TABLE E-10 (continued)
USGS 7.5 MINUTE QUADRANGLES FOR
SEMPRA COMMUNICATIONS PROJECT AREA BIOLOGICAL REGIONS**

San Francisco Bay Region

37122F4	SAN FRANCISCO SOUTH	37122D3	WOODSIDE
31722E4	MONTARA MOUNTAIN	37122D4	HALF MOON BAY
37122E3	SAN MATEO	37122D2	PALO ALTO
37122E2	REDWOOD POINT		

Santa Clara County

37122D2	PALO ALTO	37121C6	LICK OBSERVATORY
37122D1	MOUNTAIN VIEW	37122B1	CASTLE ROCK RIDGE
37121D8	MILPITAS	37121B8	LOS GATOS
37121D7	CALAVERAS RESERVOIR	37121B7	SANTA TERESA HILLS

Santa Clara County (cont.)

37121D6	MT. DAY	37121B6	MORGAN HILL
37122C2	MINDEGO HILL	37121B5	MT. SIZER
37122C1	CUPERTINO	37121A6	MT. MADONNA
37121C8	SAN JOSE WEST	37121A5	GILROY
37121C7	SAN JOSE EAST	36121H6	WATSONVILLE EAST

Santa Cruz Region

USGS Code	Quadrangle Name	USGS Code	Quadrangle Name
37122A1	FELTON	36122 H1	SANTA CRUZ
37121A8	LAUREL	36121H8	SOQUEL
37121A7	LOMA PRIETA	36121H7	WATSONVILLE WEST
37121A6	MT. MADONNA	36121H6	WATSONVILLE EAST

Fresno Region

USGS Code	Quadrangle Name	USGS Code	Quadrangle Name
36119G6	CLOVIS	36119F7	FRESNO SOUTH
36119G7	FRESNO NORTH	36119H6	FRIANT
36119G8	HERNDON	36119H7	LANES BRIDGE
36119F6	MALAGA	36119F8	KEARNEY PARK

Los Angeles Basin Region**Los Angeles County**

USGS Code	Quadrangle Name	USGS Code	Quadrangle Name
34118C2	CONDOR PEAK	34118A2	LOS ANGELES
34118C3	SUNLAND	34118A3	HOLLYWOOD
34118C4	SAN FERNANDO	34118A4	BEVERLY HILLS
34118C5	OAT MOUNTAIN	34118A5	TOPANGA
34118C6	SANTA SUSANA	34118A6	MALIBU BEACH
34117B6	MT. BALDY	34118A7	POINT DUME
34117B7	GLENDORA	34118A8	TRIUNFO PASS
34117B8	AZUSA	33117H7	YORBA LINDA
34118B1	MT. WILSON	33117H8	LA HABRA
34118B2	PASADENA	33118H1	WHITTIER
34118B3	BURBANK	33118H2	SOUTH GATE
34118B4	VAN NUYS	33118H3	INGLEWOOD
34118B5	CANOGA PARK	33118H4	VENICE

TABLE E-10 (continued)
USGS 7.5 MINUTE QUADRANGLES FOR
SEMPRA COMMUNICATIONS PROJECT AREA BIOLOGICAL REGIONS

Los Angeles Basin Region

34118B6	CALABASAS	33118G1	LOS ALAMITOS
34118B7	THOUSAND OAKS	33118G3	TORRANCE
34117A6	ONTARIO	33118F1	SEAL BEACH
34117A7	SAN DIMAS	33118F3	SAN PEDRO
34117A8	BALDWIN PARK	33118F2	LONG BEACH
34118A1	EL MONTE	33118G4	REDONDO BEACH

Orange County

USGS Code	Quadrangle Name	USGS Code	Quadrangle Name
33117H6	PRADO DAM	33117F7	TUSTIN
33117H7	YORBA LINDA	33118F1	SEAL BEACH
33117H8	LA HABRA	33117E5	CANADA GOBERNADORA
33117G6	BLACK STAR CANYON	33117E6	SAN JUAN CAPISTRANO
33117G7	ORANGE	33117E7	LAGUNA BEACH
33117G8	ANAHEIM	33117D5	SAN CLEMENTE
33118G1	LOS ALAMITOS	33117D6	DANA POINT
33117F5	SANTIAGO PEAK	33117E8	NEWPORT BEACH
33117F6	EL TORO		

San Bernardino Region

USGS Code	Quadrangle Name	USGS Code	Quadrangle Name
34116A8	FOREST FALLS	33117H6	PRADO DAM
34117A1	YUCAIPA	34117B3	SAN BERNARDINO NORTH
34117A2	REDLANDS	34117B4	DEVORE
34117A3	SAN BERNARDINO SOUTH	34117B2	HARRISON MTN.
34117A4	FONTANA	34117B5	CUCAMONGA PEAK
34117A5	GUASTI	34117B6	MT. BALDY
34117A6	ONTARIO		

Riverside Region

USGS Code	Quadrangle Name	USGS Code	Quadrangle Name
34117A2	REDLANDS	33117H5	CORONA NORTH
34117A3	SAN BERNARDINO SOUTH	33117H6	PRADO DAM
34117A4	FONTANA	33117G3	STEELE PEAK
34117A5	GUASTI	33117G4	LAKE MATHEWS
33117H2	SUNNYMEAD	33117G5	CORONA SOUTH
33117H3	RIVERSIDE EAST	33117G6	BLACK STAR CANYON
33117H4	RIVERSIDE WEST		

San Diego Region

USGS Code	Quadrangle Name	USGS Code	Quadrangle Name
33117C2	BONSALL	32116H8	SAN VICENTE RESERVOIR
33117C3	MORRO HILL	32116G7	ALPINE
33117C4	LAS PULGAS CANYON	32116G8	EL CAJON

TABLE E-10 (continued)
USGS 7.5 MINUTE QUADRANGLES FOR
SEMPRA COMMUNICATIONS PROJECT AREA BIOLOGICAL REGIONS

33117C5	SAN ONOFRE BLUFF	32117G1	LA MESA
33117B1	VALLEY CENTER	32116F8	JAMUL MOUNTAINS
33117B2	SAN MARCOS	32117F1	NATIONAL CITY
33117B3	SAN LUIS REY	32117F2	POINT LOMA
33117B4	OCEANSIDE	32117E1	IMPERIAL BEACH
33117A1	ESCONDIDO	32116E8	OTAY MESA
33117A2	RANCHO SANTA FE	32117G2	LA JOLLA
33117A3	ENCINITAS	33117D2	TEMECULA
32117H1	POWAY	33117D3	FALLBROOK
32117H2	DEL MAR	33117D5	SAN CLEMENTE

Imperial Region

USGS Code	Quadrangle Name	USGS Code	Quadrangle Name
32115H4	ALAMORIO	32115G6	SEELEY
32115H5	BRAWLEY	32115F4	CALEXICO
32115H6	BRAWLEY NW	32115F5	HEBER
32115G4	HOLTVILLE WEST	32115F6	MOUNT SIGNAL
32115G5	EL CENTRO		