

Appendix C

Special Status Species Reported or Potentially Occurring in the Project Study Zones

Table C-1. Special Status Species Reported or Potentially Occurring in the San Francisco Bay Area Study Zones

Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements	Potential to Occur	Period of Identification / Flowering Period
SPECIES LISTED OR PROPOSED FOR LISTING				
<i>Invertebrates</i>				
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	FT/--	Grassland vernal pools	Low Potential. No recorded occurrences within study zones.	March-April
Bay checkerspot butterfly <i>Euphydryas editha bayensis</i>	FT/--	Serpentine bunchgrass grassland	Low Potential. No recorded occurrences within study zones.	March-May
Mission blue butterfly <i>Icaricia icarioides missionensis</i>	FE/--	Grassland with <i>Lupinus albifrons</i> , <i>L. formosa</i> , and <i>L. varicolor</i>	Low Potential. Recorded occurrences near study zones at San Bruno Mt., though alignments are within roads.	March-June
San Bruno elfin butterfly <i>Incisalia mossii bayensis</i>	FE/--	Found in coastal scrub	Low Potential. Recorded occurrences near study zones at San Bruno Mt., though alignments are within roads.	March-April
Vernal pool tadpole shrimp <i>Lepidurus packardi</i>	FE/--	Grassland vernal pools	Low Potential. No recorded occurrences within study zones.	March-April
San Bruno elfin butterfly <i>Incisalia mossii bayensis</i>	FE/--	Found in coastal scrub	Low Potential. Recorded occurrences near study zones at San Bruno Mt., though alignments are within roads.	March-April
Vernal pool tadpole shrimp <i>Lepidurus packardi</i>	FE/--	Grassland vernal pools	Low Potential. No recorded occurrences within study zones.	March-April

LOOKING GLASS NETWORKS

Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements	Potential to Occur	Period of Identification / Flowering Period
Callippe silverspot butterfly <i>Speyeria callippe callippe</i>	FE/--	Found in native grasslands with <i>Viola pedunculata</i> as larval food plant	Low Potential. Recorded occurrences near study zones at San Bruno Mt., though alignments are within roads.	Spring
Myrtle silverspot butterfly <i>Speyeria zerene myrtleae</i>	FE/--	Found in native grasslands with <i>Viola pedunculata</i> as larval food plant	Low Potential. No recorded occurrences within study zones.	Spring
Fish				
Tidewater goby <i>Eucyclogobius newberryi</i>	FT/CSC	Shallow waters of bays and estuaries	Low Potential. No streams within the study zones support this species.	Year-round
Steelhead – Central California Coast (ESU) <i>Oncorhynchus mykiss</i>	FT/CSC	Unblocked Bay Area and coastal rivers and streams	Moderate to High Potential. Streams within the study zones support this species.	Year-round
Winter-run Chinook salmon <i>Oncorhynchus tshawytscha</i>	FE/CE	Unblocked Bay Area and coastal rivers and streams	Moderate Potential. Streams within the study zones support this species.	Winter
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 escape cover and egg attachment	Low to Moderate Potential. Several streams within the study zones provide potential habitat and will be avoided by boring.	Year-round
California tiger salamander <i>Ambystoma californiense</i>	FC/CSC	Seasonal freshwater ponds with little or no emergent vegetation	Low Potential. Sightings located in the vicinity of San Francisquito Creek; sighting within study zone is dated pre-1900 and now in built-out area.	November-May

Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements	Potential to Occur	Period of Identification / Flowering Period
Reptiles				
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.	Low Potential. Suitable habitat does not occur within the study zones.	Year-round
Birds				
Marbled murrelet <i>Brachyramphus</i> <i>marmoratus</i>	FT/CE	Nests in dense, old growth forests along coast	Low Potential. Suitable habitat does not occur within the study zones.	Year-round
Aleutian Canada goose <i>Branta canadensis leucopareia</i>	FT/--	Winters in marshes, meadows, and on small islands	Low Potential. The study zones do not provide habitat for this species.	Winter
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	Moderate Potential. Several study zones provide potential nesting and breeding habitat.	Year-round
American peregrine falcon <i>Falco peregrinus anatum</i>	--/CE	Forages in marshes and grasslands. Nesting habitat includes high, protected cliffs and ledges near water	Low Potential. Suitable habitat does not occur within the study zones.	Year-round
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	Low Potential. Suitable habitat does not occur within the study zones.	Winter
California black rail <i>Laterallus jamaicensis</i> <i>coturniculus</i>	FSC/CT/3511	Nests and forages in tidal emergent wetland with pickleweed and cordgrass	Low Potential. Suitable nesting habitat does not occur within the study zones.	Year-round
California clapper rail <i>Rallus longirostris obsoletus</i>	FE/CE	Nests and forages in emergent wetlands with pickleweed, cordgrass, and bulrush	Moderate Potential. Suitable salt marsh nesting habitat occurs within the study zones.	Year-round

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

LOOKING GLASS NETWORKS

Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements	Potential to Occur	Period of Identification / Flowering Period
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	Moderate Potential. Potential habitat is located within the study zones.	Spring-Summer
Northern spotted owl <i>Strix occidentalis caurina</i>	FT/--	Nests in old growth forests	Low Potential. Suitable habitat does not occur within the study zones.	Year-round
Mammals				
Salt marsh harvest mouse <i>Reithrodontomys raviventris</i>	FE/CE	Saline emergent marsh with dense pickleweed	Moderate Potential. Suitable habitat exists in the pickleweed salt marshes of the study zones.	Year-round
Plants				
San Bruno Mtn. Manzanita <i>Arctostaphylos imbricata</i>	FSC/CE/List1B	Chaparral, coastal scrub	Low Potential. Suitable habitat does not occur within the study zones.	February-May
Pacific manzanita <i>Arctostaphylos pacifica</i>	FSC/CE/--	Chaparral, coastal scrub	Low Potential. Suitable habitat does not occur within the study zones.	February-May
Robust spineflower <i>Chorizanthe robusta</i>	FE/--/List 1B	Coastal scrub, coastal sand dunes, openings in oak woodlands with sandy or gravelly soil	Low Potential. The study zones do not provide habitat for this species.	April-September
Fountain thistle <i>Cirsium fontinale var fontinale</i>	FE/CE/List 1B	Grassland and openings in chaparral, in serpentinite seeps	Low Potential. Serpentinite soils do not occur within the study zones.	June-October
Presidio clarkia <i>Clarkia franciscana</i>	FE/CE/List 1B	Coastal scrub, grassland (ultramafic)	Low Potential. Suitable habitat does not occur within the study zones.	May-July
Santa Clara Valley dudleya <i>Dudleya setchellii</i>	FE/--/List1B	Ultramafic grasslands	Low Potential. Suitable habitat does not occur within the study zones.	May-June
San Mateo woolly sunflower <i>Eriophyllum latilobum</i>	FE/CE/List 1B	Grassland, woodland slopes	Low Potential. The study zones do not provide habitat for this species.	May-June

Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements	Potential to Occur	Period of Identification / Flowering Period
Marin dwarf flax <i>Hesperolinon congestum</i>	FT/CT/List 1B	Grassland and openings in chaparral, often on serpentinite	Low Potential. Serpentinite soils do not occur within the study zones.	May-July
Santa Cruz tarplant <i>Holocarpha macradenia</i>	FPT/CE/List 1B	Coastal scrub, coastal sand dunes, openings in oak woodlands with sandy or gravelly soil	Low Potential. The study zones do not provide habitat for this species.	June-October
Contra Costa goldfields <i>Lasthenia conjugens</i>	FE/--/List 1B	Moist grasslands, vernal pools	Low Potential. The study zones do not provide habitat for this species.	March-June
White rayed pentachaeta <i>Pentachaeta bellidiflora</i>	FE/CE/List 1B	Coastal scrub, grassland	Low Potential. The study zones do not provide habitat for this species.	March-May

FEDERAL OR STATE SPECIES OF SPECIAL CONCERN

Invertebrates				
Opler's longhorn moth <i>Adella oplerella</i>	FSC/--	Serpentine grasslands	Low Potential. Suitable habitat is not present within the study zones.	Spring
Serpentine phalangid <i>Calcina serpentina</i>	FSC/--	Serpentine rocks and barrens	Low Potential. Suitable habitat is not present within the study zones.	Fall-Winter
Monarch butterfly <i>Danaus plexippus</i>	--/*	Eucalyptus groves (winter sites)	Low Potential. Potential wintering sites within study zones are not historically used.	Winter
Ricksecker's water scavenger beetle <i>Hydrochara rickseckeri</i>	FSC/--	Found in freshwater ponds, shallow water of streams marshes and lakes	Low Potential. Suitable habitat is not present within the study zones.	January-July
Leech's skyline diving beetle <i>Hydroporus leechi</i>	FSC/--	Found in freshwater ponds, shallow water of streams marshes and lakes	Low Potential. Suitable habitat is not present within the study zones.	January-July
Curved-foot hygrotus diving beetle <i>Hygrotus curvipes</i>	FSC/--	Found in vernal pools and alkali flats	Low Potential. Suitable habitat is not present within the study zones.	January-July

LOOKING GLASS NETWORKS

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Opler's longhorn moth <i>Adella oplerella</i>	FSC/--	Serpentine bunchgrass grassland	Low Potential. Suitable habitat is not present within the study zones.	Spring
Edgewood blind harvestman <i>Calcinia minor</i>	FSC/--	Serpentine rock outcrops and barrens	Low Potential. Suitable habitat is not present within the study zones.	Fall-Winter
San Francisco forked- tailed damselfly <i>Ischnura gemina</i>	FSC/--	Wetlands with emergent vegetation	Low Potential. Suitable habitat is not present within the study zones.	April-October
San Francisco lacewing <i>Nothochrysa californica</i>	FSC/--	Grasslands	Low Potential. Suitable habitat is not present within the study zones.	Spring
Unsilvered fritillary butterfly <i>Speyeria adiastrae adiastrae</i>	FSC/--	Found in native grasslands with <i>Viola pedunculata</i> as larval food plant	Low Potential. Suitable habitat is not present within the study zones.	Spring
Fish				
Sacramento Perch <i>Archoplites interruptus</i>	FSC/CSC	Slow moving sloughs, streams, rivers, and lakes	Low to Moderate Potential. Species may occur in South Bay streams such as Coyote Creek and the Guadalupe River.	Year-round
River lamprey <i>Lampetra ayresi</i>	FSC/CSC	Pacific Ocean and estuaries; spawning in coastal streams from Alaska to San Francisco Bay	Low Potential. In California, this species has only been recorded from the lower reaches of the Russian, Sacramento, and San Joaquin rivers.	April-July
Pacific lamprey <i>Lampetra tridentata</i>	FSC/--	Pacific Ocean and estuaries; spawning in coastal streams from Alaska to Baja California	Moderate to High Potential. Several streams within the study zones support this species.	April-July

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Amphibians				
Foothill yellow-legged frog <i>Rana boylei</i>	FSC/CSC	Streams with quiet pools absent of predatory fish	Low Potential. Suitable habitat not present in streams within the study zones.	April-June
Western spadefoot toad <i>Scaphiopus hammondi</i>	FSC/CSC	Floodplains and grassland pools	Low Potential. Suitable habitat is not present; out of species range.	February-August
Reptiles				
Western pond turtle <i>Clemmys marmorata</i>	FSC/CSC	Freshwater ponds and slow streams edged with sandy soils for laying eggs	Low to Moderate Potential. Some degraded habitat is present in upper reaches of streams within study zones.	Year-round
San Joaquin coachwhip <i>Masticophis flagellum ruddocki</i>	FSC/CSC	Prairie, scrublands, woodlands, farmlands or grasslands with varying amounts of cover	Low Potential. Suitable habitat not present within study zones, range may include east San Francisco Bay.	Year-round
California horned lizard <i>Phrynosoma coronatum frontale</i>	FSC/CSC	Patchy open areas with sandy soils	Low Potential. Suitable habitat is not present within study zones.	Year-round
Birds				
Cooper's hawk <i>Accipiter cooperi</i>	--/CSC	Nests in riparian growths of deciduous trees and live oak woodlands	Moderate Potential. Nesting habitat identified in dense riparian habitats.	March-July
Sharp-shinned hawk <i>Accipiter striatus</i>	--/CSC	Nests in riparian growths of deciduous trees and live oaks	Moderate Potential. Nesting habitat identified in dense riparian habitats.	March-July
Tricolored blackbird <i>Agelaius tricolor</i>	FSC/CSC	Riparian thickets and emergent vegetation	Low to Moderate Potential. Potential habitat identified in South Bay study zones.	Spring
Great blue heron <i>Ardea herodias</i>	--/*	Nests in trees along lakes and estuaries	Low Potential. No suitable nesting habitat was identified within the study zones.	December-July

LOOKING GLASS NETWORKS

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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.	Moderate Potential. Nesting habitat may occur within study zone grasslands.	Year-round
White-tailed kite <i>Elanus leucurus</i>	--/3511	Nests near wet meadows and open grasslands, dense oak, willow or other large tree stands.	Moderate Potential. Nesting habitat identified within study zones.	March-July
Saltmarsh common yellowthroat <i>Geothlypic trichas sinuosa</i>	FSC/CSC	Saline and freshwater marshes	Moderate Potential. Nesting habitat for this species is located within the study zones.	Year-round
Loggerhead shrike <i>Lanius ludovicianus</i>	FSC/CSC	Nests in shrublands and forages in open grasslands	Low to Moderate Potential. Suitable habitat occurs in Fremont Study Zone, though no breeding reported nearby.	March-Sept.
Osprey <i>Pandion haliaetus</i>	--/CSC	Nests near fresh water lakes and large streams on large snags	Low Potential. Suitable habitat is not present within study zones.	March-June
American white pelican <i>Pelecanus erythrorhynchos</i>	--/CSC	Nests on protected islets near freshwater lakes for protection from predators	Low Potential. Suitable habitat is not present within study area.	May-July
Burrowing owl <i>Athene cucularia (burrow sites)</i>	FSC/CSC	Nests in mammal burrows in open, sloping grasslands	Moderate to High Potential. Suitable habitat identified within study zones throughout the South Bay.	February-June
California spotted owl <i>Strix occidentalis occidentalis</i>	FSC/CSC	Nests in old growth forests	Low Potential. Suitable habitat is not present within study zones.	March-Sept.
Mammals				
Salt marsh wandering shrew <i>Sorex vagrans halicoetes</i>	FSC/CSC	Salt-marshes	Moderate Potential. Suitable habitat identified in pickleweed salt marsh.	Year-round

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Plants				
Santa Clara thorn mint <i>Acanthomintha lanceolata</i>	--/--/List 4	Chaparral, shale scree	Low Potential. Suitable habitat does not occur within the study zones.	March-June
Montara manzanita <i>Arctostaphylos montaraensis</i>	FC/--/List 1B	Maritime chaparral, coastal scrub	Low Potential. Suitable habitat does not occur within the study zones.	January-March
Alkali milk-vetch <i>Astragalus tener var tener</i>	--/--/List 1B	Alkali flats, valley grasslands	Low Potential. Suitable habitat does not occur within the study zones.	March-June
Big-scale balsamroot <i>Balsamorhiza macrolepis var macrolepis</i>	--/--/List 1B	Cismontane woodland, grassland	Low Potential. Suitable habitat does not occur within the study zones.	March-June
Brewer's calandrinia <i>Calandrinia breweri</i>	--/--/List 4	Burns and disturbed areas in coastal scrub and chaparral	Low Potential. Suitable habitat does not occur within the study zones.	March-June
Oakland star-tulip <i>Calochortus umbellatus</i>	--/--/List 4	Broadleafed upland forests, chaparral, lower montane coniferous forests, grasslands, often on serpentinite	Low Potential. Suitable habitat does not occur within the study zones.	March-May
Sharsmith's harebell <i>Campanula sharsmithiae</i>	FSC/--/List 1B	Chaparral, ultramafic talus	Low Potential. The study zones does not provide habitat for this species.	May-June
San Francisco Bay spineflower <i>Chorizanthe cuspidata var cuspidata</i>	FSC/--/List 1B	Coastal bluff scrub, coastal dunes, coastal prairie, on sandy soils	Low Potential. Suitable habitat does not occur within the study zones.	April-July
Franciscan thistle <i>Cirsium andrewsii</i>	--/--/List 4	Broadleafed upland forests, coastal bluff scrub, sometimes on serpentinite	Low Potential. Suitable habitat does not occur within the study zones.	June-July
Mt. Hamilton thistle <i>Cirsium fontinale var campylon</i>	FSC/--/List 1B	Ultramafic seeps, sandy streams	Low Potential. Suitable habitat does not occur within the study zones.	February-October
Palo alto thistle <i>Cirsium praeteriens</i>	--/--/List 1B	Ultramafic seeps, sandy streams	Low Potential. Suitable habitat does not occur within the study zones.	February-October

LOOKING GLASS NETWORKS

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San Francisco collinsia <i>Collinsia multicolor</i>	--/--/List 4	Closed-cone coniferous forests, coastal scrub	Low Potential. Suitable habitat does not occur within the study zones.	March-May
Serpentine collomia <i>Collomia diversifolia</i>	--/--/List 4	Serpentine seeps, streams	Low Potential. Suitable habitat does not occur within the study zones.	May-June
Mt. Hamilton coreopsis <i>Coreopsis hamiltonii</i>	FSC/--/List 1B	Steep, shale talus, woodland	Low Potential. Suitable habitat does not occur within the study zones.	March-May
Clustered lady's-slipper <i>Cypripedium fasciculatum</i>	FSC/--/List 4	Lower montane coniferous forests, North coast coniferous forests, usually serpentine seeps and streambanks	Low Potential. Suitable habitat does not occur within the study zones.	March-July
Mountain lady's-slipper <i>Cypripedium montanum</i>	FCS/--/List 4	Broadleafed upland forests, lower montane coniferous forests	Low Potential. Suitable habitat does not occur within the study zones.	March-July
Inner Co. range Larkspur <i>Delphinium californicum</i> ssp. <i>interius</i>	FSC/--/List 1B	Dry ravines	Low Potential. Suitable habitat does not occur within the study zones.	April-June
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	Low Potential. Suitable habitat does not occur within the study zones.	January-April
Jepson's woolly sunflower <i>Eriophyllum jepsonii</i>	--/--/List 4	Coastal scrub	Low Potential. Suitable habitat does not occur within the study zones.	April-June
Ben Lomond buckwheat <i>Eriogonum nudum</i> var <i>decurrens</i>	--/--/List 1B	Chaparral, coastal prairie, grasslands, usually on serpentine	Low Potential. Suitable habitat does not occur within the study zones.	June-September
Marsh horsetail <i>Equisetum palustre</i>	--/--/List 3	Marshes	Low Potential. Suitable habitat does not occur within the study zones.	--

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Hoover's button-celery <i>Eryngium aristulatum</i> var <i>hooveri</i>	FSC /--/List 1B	Vernal pools	Low Potential. Suitable habitat does not occur within the study zones.	May-August
San Francisco wallflower <i>Erysimum franciscanum</i>	FSC/--/List 4	Coastal dunes, coastal scrub, grasslands, often on serpentinite or granitic soils	Low Potential. Suitable habitat does not occur within the study zones.	March-June
Stink bells <i>Fritillaria agrestis</i>	--/--/List 4	Valley and foothill grasslands, oak woodlands; on clay flats; sometimes on serpentine	Low Potential. Suitable habitat does not occur within the study zones.	March-April
Hillsborough chocolate lily <i>Fritillaria biflora</i> var <i>ineziana</i>	--/--/List 1B	Cismontane woodland, grassland, on serpentinite	Low Potential. Suitable habitat does not occur within the study zones.	March-April
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	Low Potential. Suitable habitat does not occur within the study zones.	February-April
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	Low Potential. Suitable habitat does not occur within the study zones.	August-September
Marsh gumplant <i>Grindelia stricta</i> var <i>angustifolia</i>	--/--/4	Coastal salt marsh	Low Potential. Suitable habitat does not occur within the study zones.	August-October
Diablo rock-rose <i>Helianthella castanea</i>	FSC/--/List 1B	Openings in chaparral and broadleaved upland forest	Low Potential. Suitable habitat does not occur within the study zones.	April-June
Congdon's tarplant <i>Hemizonia parryi</i> ssp <i>congdonii</i>	FSC/CSC/List 1B	Valley grassland	Low Potential. Suitable habitat does not occur within the study zones.	June-October
Kellogg's horkelia <i>Horkelia cuneata</i> ssp. <i>sericea</i>	FSC/--/List 1B	Closed-cone coniferous forests, coastal scrub	Low Potential. Suitable habitat does not occur within the study zones.	April-September
Crystal Springs lessingia <i>Lessingia arachnoidea</i>	FSC/--/List 1B	Cismontane woodland, coastal scrub, grasslands, on serpentinite, often on roadcuts	Low Potential. Suitable habitat does not occur within the study zones.	July-October

LOOKING GLASS NETWORKS

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Woolly-headed lessingia <i>Lessingia hololeuca</i>	--/--List 3	Coastal scrub, lower montane coniferous forests, grasslands, usually on clay or serpentinite	Low Potential. Suitable habitat does not occur within the study zones.	June-October
Bristly linanthus <i>Linanthus acicularis</i>	--/--List 4	Chaparral, Cismontane woodland, coastal prairie	Low Potential. Suitable habitat does not occur within the study zones.	April-July
Serpentine linanthus <i>Linanthus ambiguus</i>	--/--List 4	Cismontane woodland, coastal scrub, grassland, usually on serpentinite	Low Potential. Suitable habitat does not occur within the study zones.	March-June
Large-flower linanthus <i>Linanthus grandiflorus</i>	--/--List 4	Coastal bluff scrub, closed-cone coniferous forests, cismontane woodland, coastal dunes, coastal prairie, coastal scrub, grasslands	Low Potential. Suitable habitat does not occur within the study zones.	April-July
San Mateo tree lupine <i>Lupinus eximius</i>	FSC/--/List 3	Chaparral and coastal	Low Potential. Suitable habitat does not occur within the study zones.	April-July
Arcuate bush mallow <i>Malacothamnus arcuatus</i>	--/--List 4	Chaparral	Low Potential. Suitable habitat does not occur within the study zones.	April-July
Hall's bush mallow <i>Malacothamnus hallii</i>	--/--List 4	Chaparral	Low Potential. Suitable habitat does not occur within the study zones.	May-September
Robust monardella <i>Monardella villosa ssp. globosa</i>	--/--List 1B	Cismontane woodland, openings in chaparral	Low Potential. Suitable habitat does not occur within the study zones.	June-July
Gairdner's yampah <i>Perideridia gairdneri ssp. gairdneri</i>	FSC/--/List 4	Broadleafed upland forests, chaparral, valley and foothill grasslands, vernal pools, usually in mesic sites	Low Potential. Suitable habitat does not occur within the study zones.	June-October
Mt. Diablo phacelia <i>Phacelia phacelioides</i>	FSC/--/List 1B	Cismontane woodland, chaparral	Low Potential. Suitable habitat does not occur within the study zones.	April-May
White-flowered rein orchid <i>Piperia candida</i>	--/--/List 4	Lower montane coniferous forests, North Coast coniferous forests, sometimes on serpentinite	Low Potential. Suitable habitat does not occur within the study zones.	May-August

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Michael's rein orchid <i>Piperia michaelii</i>	--/--/List 4	Coastal bluff scrub, closed-cone coniferous forests, cismontane woodland, lower montane coniferous forests	Low Potential. Suitable habitat does not occur within the study zones.	May-August
Choris's popcorn-flower <i>Plagiobothrys chorisianus</i> <i>var chorisianus</i>	--/--/List 3	Chaparral, coastal prairie, coastal scrub, on mesic sites	Low Potential. Suitable habitat does not occur within the study zones.	April-June
Hairless popcorn-flower <i>Plagiobothrys glaber</i>	--/--/List 1A	Coastal salt-marsh, alkali flats	Low Potential. Suitable habitat does not occur within the study zones.	April-May
Forget-me-not popcorn flower <i>Plagiobothrys myosotoides</i>	--/--/List 4	Chaparral	Low Potential. Suitable habitat does not occur within the study zones.	April-May
Lobb's aquatic buttercup <i>Ranunculus lobbii</i>	--/--/List 4	Ponds, pools, watering holes	Low Potential. Suitable habitat does not occur within the study zones.	February-April
Rock sanicle <i>Sanicula saxatilis</i>	FSC/CR/List 1B	Broad-leaved upland forest, chaparral, valley and foothill grassland	Low Potential. Suitable habitat does not occur within the study zones.	April-May
Hoffman's sanicle <i>Sanicula hoffmannii</i>	/--/List 4	Broadleaved upland forests, chaparral, coastal scrub, often on serpentinite or clay	Low Potential. Suitable habitat does not occur within the study zones.	March-May
Marin checkerbloom <i>Sidalcea hickmanii</i> ssp. <i>viridis</i>	FSC/--/List 1B	Chaparral, usually on serpentinite	Low Potential. Suitable habitat does not occur within the study zones.	May-June
Maple-leaved checkerbloom <i>Sidalcea malachroides</i>	--/--/List 1B	Grasslands	Low Potential. Suitable habitat does not occur within the study zones.	April-June
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	Low Potential. Suitable habitat does not occur within the study zones.	March-June
Most beautiful jewelflower <i>Streptanthus albidus</i> ssp. <i>peramoenus</i>	FSC/--/List 1B	Serpentine grassland, chaparral	Low Potential. Suitable habitat does not occur within the study zones.	April-June

LOOKING GLASS NETWORKS

Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements	Potential to Occur	Period of Identification / Flowering Period
Mt. Hamilton jewelflower <i>Streptanthus callistus</i>	FSC/--/List 1B	Shale talus	Low Potential. Suitable habitat does not occur within the study zones.	April-May
Mt. Diablo jewelflower <i>Streptanthus hispidus</i>	FSC/--/List 1B	Grassland	Low Potential. Suitable habitat does not occur within the study zones.	March-June
Mt. Diablo cottonweed <i>Stylocline amphibola</i>	--/--/List 4	Broad-leaved upland forest, chaparral	Low Potential. Suitable habitat does not occur within the study zones.	April-May
Showy Indian clover <i>Trifolium amoenum</i>	FSC/--/List 1A	Grasslands	Low Potential. Suitable habitat does not occur within the study zones.	April-June
San Francisco owl's-clover <i>Triphysaria floribunda</i>	FSC/--/List 1B	Coastal prairie and grasslands, on serpentinite	Low Potential. Suitable habitat does not occur within the study zones.	April-May
Caper-fruited tropidocarpum <i>Tropidocarpum capparideum</i>	FSC/--/List 1A	Alkaline hills, grasslands	Low Potential. Suitable habitat does not occur within the study zones.	March-April

STATUS CODES:

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California Native Plant Society (CNPS)

List 1A = Plants presumed extinct in California
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 List 3 = Plants about which more information is needed
 List 4 = Plants of limited distribution

3511 = A Fully Protected Species
 * = Special Animals
 CSC = California Species of Special Concern

High Potential = Species expected to occur and meets all habitats as defined in list

Moderate Potential = Habitat only marginally suitable or suitable but not within species geographic range

Low Potential = Habitat does not meet species requirements as currently understood in the scientific community

Table C-2. Special Status Species Reported or Potentially Occurring in the Los Angeles Basin Study Zones

Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements	Period of Identification / Flowering Period
SPECIES LISTED OR PROPOSED FOR LISTING²			
<i>Invertebrates</i>			
San Diego fairy shrimp <i>Branchinecta sandiegonensis</i>	FE/--	Endemic to San Diego County mesas	February-March
El Segundo blue butterfly <i>Euphilotes battoides allyni</i>	FE/--	Restricted to remnant coastal dune habitat	Spring
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	February-March
<i>Fish</i>			
Santa Ana sucker <i>Catostomus santaanae</i>	FPT/CSC	Los Angeles Basin coastal streams	Year-round
Tidewater goby <i>Eucyclogobius newberryi</i>	FE/CSC	Brackish water along California coast	Year-round
Southern steelhead trout <i>Oncorhynchus mykiss irideus</i>	FE/CSC	Freshwater streams	Year-round
<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	March-July
Mountain yellow-legged frog <i>Rana muscosa</i>	FE/CSC	Streams with quiet pools absent of predatory fish	April-June
<i>Birds</i>			
Western snowy plover <i>Charadrius alexandrinus nivosus</i>	FT/CSC	Sandy beaches, estuarine shores, salt pond levees and alkali lakes	Year-round
Western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	--/CE	Riparian forests along flood bottoms of large river systems	Spring-Summer

² Only six of the species identified in the Los Angeles Basin Region had a moderate or greater potential to occur in the Study Zones; thus no "Potential to Occur" determination was provided. These six species include: coastal California gnatcatcher, light-footed clapper rail, least Bell's vireo, California clapper rail, burrowing owl, and southwestern pond turtle. Based upon the urbanized setting in the project corridor, with the exception of the six described species in the Irvine/Costa Mesa Study Zone, the likelihood of special status species occurrence in the Los Angeles Basin Study Zone is considered low.

LOOKING GLASS NETWORKS

Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements	Period of Identification / Flowering Period
California black rail <i>Laterallus jamaicensis coturniculus</i>	FSC/CT	Salt-marshes bordering large bays	Year-round
Belding's savannah sparrow <i>Passericulus sandwichensis beldingi</i>	FSC/CE	Coastal salt-marshes	Year-round
Coastal California gnatcatcher <i>Polioptila californica californica</i>	FT/CSC	Coastal sage scrub	Year-round
Light-footed clapper rail <i>Rallus longirostris levipes</i>	FE/CE	Salt-marshes with cordgrass and pickleweed	Year-round
California least tern <i>Sterna antillarum browni</i>	FE/CE	Coastal beaches and sandbars	Spring-Summer
Least Bell's vireo <i>Vireo bellii pusillus</i>	FE/CE	Low riparian vegetation near river bottoms	Summer
Mammals			
Pacific pocket mouse <i>Perognathus longimembris pacificus</i>	FE/CSC	Narrow coastal plains	Year-round
Plants			
Braunton's milk-vetch <i>Astragalus brauntonii</i>	FE/--/List 1B	Closed-cone conifer forest, chaparral, coastal scrub, and valley foothill grasslands	February-June
Ventura marsh milk-vetch <i>Astragalus pchnostachyus var lanosissimus</i>	FPE/CC	Coastal salt-marsh	June-October
Nevin's barberry <i>Berberis nevinii</i>	FE/CE	Chaparral, cismontane woodland, coastal scrub, riparian scrub	March-April
Thread-leaved brodiaea <i>Brodiaea filifolia</i>	FT/CE	Cismontane woodland, coastal scrub, playas, valley and foothill grasslands, vernal pools	May-June
Salt marsh bird's-beak <i>Cordylanthus maritimus ssp maritimus</i>	FE/CE	Coastal salt-marsh, coastal dunes	May-October
Beach spectaclepod <i>Dithyrea maritima</i>	FSC/CT	Coastal dunes, coastal scrub	March-May
Slender-horned spineflower <i>Dodecahema leptoceras</i>	FE/CE	Chaparral, coastal scrub	March-May
Santa Monica mountains dudleya <i>Dudleya cymosa ssp ovatifolia</i>	FT/--/List 1B	Chaparral, coastal scrub	March-May
Laguna Beach dudleya <i>Dudleya stolonifera</i>	FT/CT	Chaparral, coastal scrub, cismontane woodland, valley and foothill grassland	May-July

Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements	Period of Identification / Flowering Period
Santa Ana River woollystar <i>Eriastrum densifolium ssp sanctorum</i>	FE/CE	Coastal sage scrub, chaparral	June-August
California Orcutt grass <i>Orcuttia californica</i>	FE/CE	Vernal pools	May-June
Crownbeard <i>Verbesina dissita</i>	FT/CT	Coastal chaparral, coastal sage scrub	May

FEDERAL OR STATE SPECIES OF SPECIAL CONCERN

Invertebrates			
Sandy beach tiger beetle <i>Cicindela hirticollis gravidia</i>	FSC/--	Areas adjacent to non-brackish water along the coast	January-July
Globose dune beetle <i>Coelus globosus</i>	FSC/--	Coastal sand dunes	January-July
Henne's Eucosma moth <i>Eucosma hennei</i>	FSC/--	El Segundo dunes	Spring
Santa Monica shieldback katydid <i>Neduba longipennis</i>	FSC/--	Chaparral, canyon stream bottoms	Spring
Lange's El Segundo dune weevil <i>Onychobaris langei</i>	FSC/--	El Segundo dunes	Spring
Wandering skipper <i>Panoquina errans</i>	FSC/--	Coastal salt-marsh	February-October
Dorothy's El Segundo dune weevil <i>Trigonoscuta dorothea dorothea</i>	FSC/--	El Segundo dunes, coastal sand dunes	Spring
Mimic tryonia <i>Tryonia imitator</i>	FSC/--	Coastal lagoons, estuaries and salt-marshes	Year-round
Fish			
Santa Ana speckled dace <i>Rhinichthys osculus ssp 3</i>	--/CSC	Headwaters of the Santa Ana and San Gabriel rivers	Year-round
Amphibians			
Western spadefoot toad <i>Scaphiopus hammondii</i>	FSC/CSC	Floodplains and grassland pools	February-August
Reptiles			
Southwestern pond turtle <i>Clemmys marmorata pallida</i>	FSC/CSC	Permanent freshwater ponds and slow streams edged with sandy soils for laying eggs	Year-round

LOOKING GLASS NETWORKS

Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements	Period of Identification / Flowering Period
Orange-throated whiptail <i>Cnemidophorus hyperythrus beldingi</i>	FSC/CSC	Coastal scrub, chaparral, and valley-foothill hardwood habitats	Year-round
Northern red-diamond rattlesnake <i>Crotalus ruber ruber</i>	FSC/CSC	Chaparral, woodland, grassland and desert areas	Spring
San Diego mountain kingsnake <i>Lampropeltis zonata pulchra</i>	FSC/CSC	Restricted to the San Gabriel and San Jacinto Mountains	Year-round
San Diego horned lizard <i>Phrynosoma coronatum blainvillei</i>	FSC/CSC	Coastal sage scrub, arid chaparral	Year-round
Birds			
Cooper's hawk <i>Accipiter cooperi</i>	--/CSC	Nests in riparian growths of deciduous trees and live oaks	March-July
Tricolored blackbird <i>Agelaius tricolor</i>	FSC/CSC	Riparian thickets and emergent vegetation	Spring
Great blue heron <i>Ardea herodias</i>	--/*	Nests in trees along lakes and estuaries	December-July
Burrowing owl <i>Speotyto (=Athene) cunicularia (burrow sites)</i>	FSC/CSC	Nests in mammal burrows in open, sloping grasslands	February-June
Coastal cactus wren <i>Campylorhynchus brunneicapillus couesi</i>	--/CSC	Coastal sage scrub	Year-round
Black Swift <i>Cypseloides niger (nesting)</i>	--/CSC	Coastal and mountain cliffs	March-September
Yellow-breasted chat <i>Icteria virens (nesting)</i>	--/CSC	Riparian corridors with willows or other dense foliage	March-September
Plants			
Aphanisma <i>Aphanisma blitoides</i>	FSC/--/List 1B	Coastal bluff scrub, coastal dunes	April-May
South Coast saltscale <i>Atriplex pacifica</i>	FSC/--/List 1B	Coastal bluff scrub, coastal dunes, playas, chenopod scrub	March-October
Parish's brittle scale <i>Atriplex parishii</i>	FSC/--/List 1B	Alkali meadows, vernal pools, chenopod scrub, playas	June-October
Davidson's saltscale <i>Atriplex serenana var davidsonii</i>	--/--/List 1B	Coastal bluff scrub, coastal scrub	April-September
Plummer's Mariposa lily <i>Calochortus plummerae</i>	FSC/--/List 1B	Coastal scrub, chaparral, valley and foothill grassland, cismontane woodland, lower coniferous forest	May-July
Intermediate Mariposa lily <i>Calochortus weedii var intermedius</i>	FSC/--/List 1B	Coastal scrub, chaparral, valley and foothill grassland	June-July

Common name <i>Scientific name</i>	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements	Period of Identification / Flowering Period
Santa Barbara morning-glory <i>Calystegia sepium ssp binghamiae</i>	--/--List 1B	Coastal marshes	June-August
San Fernando Valley spineflower <i>Chorizanthe parryi var fernandina</i>	FSC/--List 1A	Coastal scrub	April-June
Parry's spineflower <i>Chorizanthe parryi var parryi</i>	FSC/--List 3	Coastal scrub, chaparral	April-June
Many-stemmed Dudleya <i>Dudleya multicaulis</i>	FSC/--List 1B	Chaparral, coastal scrub, valley and foothill grassland	May-June
Cliff spurge <i>Euphorbia misera</i>	--/--List 2	Coastal bluff scrub	January-August
San Gabriel bedstraw <i>Galium grande</i>	FSC/--List 1B	Cismontane woodland, chaparral, broadleaved upland forest, lower montane conifer forest	April-June
Los Angeles sunflower <i>Helianthus nuttallii ssp parishii</i>	FSC/--List 1A	Coastal salt and freshwater marshes and swamps	August-October
Southern tarplant <i>Hemizonia parryi ssp australis</i>	FSC/--List 1B	Marshes, swamps, valley and foothill grassland, vernal pools	June-September
Coulter's goldfields <i>Lasthenia glabrata ssp coulteri</i>	FSC/--List 1B	Coastal salt-marsh, playas, valley and foothill grassland, vernal pools	March-May
Robinson's pepper-grass <i>Lepidium virginicum var robinsonii</i>	--/--List 1B	Chaparral, coastal scrub	January-April
San Gabriel Linanthus <i>Linanthus concinnus</i>	FSC/--List 1B	Montane conifer forest	May-July
Davidson's bush mallow <i>Malacothamnus davidsonii</i>	FSC/--List 1B	Coastal scrub, riparian woodland, chaparral	June-September
California muhly <i>Muhlenbergia californica</i>	--/--List 1B	Coastal sage chaparral, montane conifer forest, meadows	July-September
Mud Nama <i>Nama stenocarpum</i>	--/--List 2	Marshes and swamps	March-May
Coast woolly-heads <i>Nemacaulis denudata var denudata</i>	--/--List 2	Coastal dunes	April-September
Brand's Phacelia <i>Phacelia stellaris</i>	--/--List 1B	Coastal scrub, coastal dunes	March-April
Ballona cinquefoil <i>Potentilla multijuga</i>	FSC/--List 1A	Meadows and seeps	June-July
Nuttall's scrub oak <i>Quercus dumosa</i>	FSC/--List 1B	Closed-cone conifer forest, chaparral, coastal scrub	March-May

LOOKING GLASS NETWORKS

Common name Scientific name	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements	Period of Identification / Flowering Period
Parish's gooseberry <i>Ribes divaricatum var parishii</i>	FSC/--/List 1B	Riparian woodland	March-April
Salt spring checkerbloom <i>Sidalcea hammondii</i>	--/--/List 2	Alkali playas, brackish marshes, chaparral, coastal scrub, lower montane conifer forest, desert scrub	April-June
Sonoran maiden fern <i>Thelypteris puberula var sonorensis</i>	--/--/List 2	Meadows and seeps	Year-round

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 * = Special Animals
 3503.5 = Protection for nesting species of Falconiformes (hawks) and Strigiformes (owls)

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