

APPENDIX J

Special Status Wildlife Species with Potential to Occur within the Biological Study Area

Special-Status Wildlife Species with Potential to Occur Within the BSA

Federal Status Designations:

FE Listed as Endangered under the federal Endangered Species Act
 FT Listed as Threatened under the federal Endangered Species Act
 FD Delisted; was formerly listed as Threatened or Endangered
 BGEPA Protected under the Bald and Golden Eagle Protection Act
 -- No federal status

State of California Status Designations:

SE Listed as Endangered under the California Endangered Species Act
 ST Listed as Threatened under the California Endangered Species Act
 SC Candidate for listing under the California Endangered Species Act
 SD Delisted; was formerly listed as Threatened or Endangered
 FP Fully Protected Species under California Fish and Game Code
 SSC California Species of Special Concern
 SA Included on the California Department of Fish and Wildlife's Special Animals List

Common Name	Scientific Name	Status (Federal/State)	Habitat Requirements	Potential to Occur in the BSA	Effect Finding for Federally Listed Species
Invertebrates					
Opler's longhorn moth	<i>Adela oplerella</i>	-- / SA	Serpentine habitats where its host plant, California cream-cups (<i>Platystemon californicus</i>) occurs.	Not Expected - No serpentine habitat in BSA.	n/a
Conservancy fairy shrimp	<i>Branchinecta conservatio</i>	FE / SA	Vernal pools in a variety of soil types, including clays and playas. Often found in pools that are relatively large and turbid.	Not Expected - No vernal pool habitat in BSA.	No Effect – Not present
Longhorn fairy shrimp	<i>Branchinecta longiantenna</i>	FE / SA	Clear to turbid vernal pools in varying habitat types, including grasslands, sandstone outcrops, and playas.	Not Expected - No vernal pool habitat in BSA.	No Effect – Not present
Vernal pool fairy shrimp	<i>Branchinecta lynchi</i>	FT / SA	Wide variety of vernal pool habitats, most commonly in grass or mud bottomed swales, or basalt flow depression pools in unplowed grasslands.	Not Expected - No vernal pool habitat in BSA.	No Effect – Not present

Common Name	Scientific Name	Status (Federal/State)	Habitat Requirements	Potential to Occur in the BSA	Effect Finding for Federally Listed Species
Monarch butterfly (winter roosting)	<i>Danaus plexippus</i>	-- / SA	Winter roosting sites extend along the coast from northern Mendocino County south to San Diego County. Roosts are typically located in wind-protected tree groves within a half mile of the coast. Commonly found in eucalyptus, Monterey pine and/or cypress groves, with nectar and water sources in the vicinity. Larvae develop on milkweed (<i>Asclepias</i> spp.) throughout California.	Not Expected – No suitable tree groves within BSA.	n/a
Bay checkerspot butterfly	<i>Euphydryas editha bayensis</i>	FT / SA	Serpentine areas in Santa Clara and San Mateo Counties where its hostplant, dwarf plantain (<i>Plantago erecta</i>) is present.	Not Expected - No serpentine habitat in BSA.	No effect – Not present
Vernal pool tadpole shrimp	<i>Lepidurus packardii</i>	FE / SA	Vernal pools and swales containing clear to highly turbid water. Pools commonly found in grass bottomed swales of unplowed grasslands. Some pools are mud-bottomed and highly turbid.	Not Expected - No vernal pool habitat in BSA.	No effect – Not present
California linderiella	<i>Linderiella occidentalis</i>	-- / SA	Wide variety of vernal pool and other seasonal wetland habitats, often in deeper pools.	Not Expected - No vernal pool habitat in BSA.	n/a
Hom's micro-blind harvestman	<i>Microcina homi</i>	-- / SA	Found under rocks in serpentine grasslands. Known only from serpentine hillsides southeast of the Santa Clara Valley, Santa Clara County.	Not Expected - No serpentine habitats in BSA.	n/a
Lum's micro-blind harvestman	<i>Microcina lumi</i>	-- / SA	Found under rocks in serpentine grasslands. Known only from serpentine hillsides near San Leandro, Alameda County.	Not Expected - No serpentine habitat in BSA.	n/a
Mimic tryonia (=California brackishwater snail)	<i>Tryonia imitator</i>	-- / SA	Inhabits coastal lagoons, estuaries and salt marshes, from Sonoma County south to San Diego County.	Not Expected - No lagoon, estuary, or salt marsh in BSA.	n/a

Common Name	Scientific Name	Status (Federal/State)	Habitat Requirements	Potential to Occur in the BSA	Effect Finding for Federally Listed Species
Fish					
Green sturgeon - southern DPS	<i>Acipenser medirostris</i>	FT / SSC	Spawn in deep pools or "holes" in large, turbulent, freshwater river main-stems. Adults live in oceanic waters, bays, and estuaries when not spawning.	Not Expected - Outside of species' current range.	No effect – Not present
Delta smelt	<i>Hypomesus transpacificus</i>	FT/ SE	Found in the Sacramento-San Joaquin delta, seasonally in Suisun Bay, Carquinez Strait and San Pablo Bay. Seldom found at salinities > 10 ppt. Most often occurs at salinities < 2ppt.	Not Expected - Outside species' range, no suitable habitat in BSA.	No effect – Not present
Coho salmon - central California coast ESU	<i>Oncorhynchus kisutch</i>	FE / SE	Spawning habitat is small streams with stable gravel substrates. The remainder of the life cycle is spent foraging in estuarine and marine waters of the Pacific Ocean.	Not Expected - Outside of species' current range.	No effect– Not present
Steelhead - central California coast DPS	<i>Oncorhynchus mykiss irideus</i>	FT / SA	Freshwater spawning sites with water quantity and quality conditions and substrate supporting spawning, incubation and larval development. Natural cover such as shade, submerged and overhanging large wood, log jams and beaver dams, aquatic vegetation, large rocks and boulders, side channels, and undercut banks. This DPS includes spawning populations from the Russian River to Aptos Creek, including San Francisco Bay.	High - Suitable habitat present in Alameda Creek. Currently, anadromous form is excluded by downstream passage barriers; but is likely to occur if barriers removed as planned in 2016. Resident rainbow trout form is present in Alameda Creek.	May affect, likely to adversely affect – Likely to be present
Steelhead - Central Valley DPS	<i>Oncorhynchus mykiss irideus</i>	FT / SA	Freshwater spawning sites with water quantity and quality conditions and substrate supporting spawning, incubation and larval development. Natural cover such as shade, submerged and overhanging large wood, log jams and beaver dams, aquatic vegetation, large rocks and boulders, side channels, and undercut banks. This DPS includes spawning populations from the Sacramento and San Joaquin River systems.	Not Expected - Outside species' range.	No effect – Not present

Common Name	Scientific Name	Status (Federal/State)	Habitat Requirements	Potential to Occur in the BSA	Effect Finding for Federally Listed Species
Chinook salmon - Central Valley spring-run ESU	<i>Oncorhynchus tshawytscha</i>	FT / ST	Prefer streams that are deeper and larger than those used by other Pacific salmon species.	Not Expected - Outside species' range.	No effect – Not present
Chinook salmon - Sacramento River winter-run ESU	<i>Oncorhynchus tshawytscha</i>	FE / SE	Prefer streams that are deeper and larger than those used by other Pacific salmon species.	Not Expected - Outside species' range.	No effect – Not present
Amphibians					
California tiger salamander	<i>Ambystoma californiense</i>	FT / ST	Vernal pools and/or seasonal water sources; requires underground refuges in adjacent upland areas, especially ground squirrel burrows.	High - Known to occur within the BSA based on a previous CNDDDB occurrence. Suitable upland habitat present within and adjacent to the BSA, suitable breeding ponds present within dispersal range.	May affect, likely to adversely affect – Likely to be present
Foothill yellow-legged frog	<i>Rana boylei</i>	-- / SSC	Breeds and forages in rocky or cobble-bottomed streams. Found in a variety of forest, woodland, scrub, riparian, and meadow habitats where suitable streams are present.	Not Expected – No suitable habitat within BSA.	n/a
California red-legged frog	<i>Rana draytonii</i>	FT / SSC	Breeds in ponds and pools in slow-moving streams with emergent vegetation; adjacent upland habitats are often used for temporary refuges or dispersal movements.	High - Known to occur very close to the BSA based on recent survey results. Suitable upland habitat present within and adjacent to the BSA, suitable breeding ponds present within dispersal range.	May affect, likely to adversely affect – Likely to be present

Common Name	Scientific Name	Status (Federal/State)	Habitat Requirements	Potential to Occur in the BSA	Effect Finding for Federally Listed Species
Reptiles					
Western pond turtle	<i>Emys marmorata</i>	-- / SSC	Occurs in both permanent and seasonal waters, including marshes, streams, rivers, ponds, and lakes. Also found in agricultural irrigation and drainage canals. They favor habitats with large amounts of emergent logs or boulders, where several individuals may congregate to bask.	Moderate - Moderate potential to occur in BSA at Alameda Creek crossing, or during upland dispersal from nearby pond and deep water stream habitats.	n/a
Alameda whipsnake	<i>Masticophis lateralis euryxanthus</i>	FT / ST	Typically found in chaparral and scrub habitats, but will also use adjacent grassland, oak savanna, and woodland habitats. Often found on south-facing slopes and ravines with rock outcrops, deep crevices, or abundant rodent burrows.	High - Likely to disperse through the BSA, based on habitat within and adjacent to BSA, and proximity to critical habitat units.	May affect, likely to adversely affect – Likely to be present
Birds					
Cooper's hawk	<i>Accipiter cooperii</i>	-- / SA	Found in woodland, chiefly of open, interrupted or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.	Moderate - Suitable nesting and foraging habitat within BSA.	n/a
Sharp-shinned hawk	<i>Accipiter striatus</i>	-- / SA	Found in ponderosa pine, black oak, riparian deciduous, mixed conifer and Jeffrey pine habitats. Prefers riparian areas. Nest sites with plucking perches on north-facing slopes are critical requirements. Nests usually within 275 feet of water.	Low - May forage or occur during migration. Not expected to nest within the BSA.	n/a
Tricolored blackbird	<i>Agelaius tricolor</i>	-- / SSC	Highly colonial species that typically nests in freshwater marshes containing emergent vegetation such as cattail (<i>Typha</i> sp.) and bulrush (<i>Schoenoplectus</i> sp.), but will also use blackberry thickets and dense patches of ruderal vegetation such as thistles and mustard adjacent to marshes or wetlands.	Low - No nesting habitat present, may occasionally forage within BSA.	n/a

Common Name	Scientific Name	Status (Federal/State)	Habitat Requirements	Potential to Occur in the BSA	Effect Finding for Federally Listed Species
Golden eagle	<i>Aquila chrysaetos</i>	BGEPA / FP	Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas provide good nesting sites.	Low - Marginal nesting habitat within the BSA, may forage or migrate through.	n/a
Great blue heron (rookery)	<i>Ardea herodias</i>	-- / SA	Variety of habitats close to bodies of water including fresh and saltwater marshes, wet meadows, lake edges and shorelines. Nests colonially in tall trees, cliffsides, and sequestered spots on marshes.	Not Expected - No suitable rookery habitat in the BSA, but individuals may forage on site.	n/a
Western burrowing owl	<i>Athene cunicularia hypugaea</i>	-- / SSC	Nests in burrows (often constructed by ground squirrels) and forages in low-growing grasslands and other open, semi-arid habitats.	Low - Not likely to occur within the BSA due to tall, thick vegetation, but may occur in surrounding habitats.	n/a
Marbled murrelet	<i>Brachyramphus marmoratus</i>	FT/SE	Adults spend most of their lives on the ocean, but nest in trees in coastal forests. In California, nests are typically found in coastal redwood and Douglas fir forests. These forests must be located close enough to the marine environment for the birds to fly to and from nest sites.	Not Expected - No coastal redwood or Douglas fir forests in BSA.	No effect – Not present
Ferruginous hawk (wintering)	<i>Buteo regalis</i>	-- / SA	Forages over open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon-juniper habitats. Does not nest in California.	Low - Does not nest in California, but may occur within BSA while foraging or during migration.	n/a
Western snowy plover	<i>Charadrius alexandrinus nivosus</i>	FT / SSC	Found on sandy beaches, salt pond levees & shores of large alkali lakes. Requires sandy, gravelly or friable soils for nesting.	Not Expected - No suitable sandy beach or shoreline habitat in the BSA.	No effect – Not present
Northern harrier (nesting)	<i>Circus cyaneus</i>	-- / SSC	Wet and dry open country such as marshes and grasslands with good ground cover. Nests on the ground among tall vegetation.	Low – Not likely to nest within the BSA due to continual human disturbance, may forage occasionally within BSA.	n/a

Common Name	Scientific Name	Status (Federal/State)	Habitat Requirements	Potential to Occur in the BSA	Effect Finding for Federally Listed Species
Yellow warbler	<i>Dendroica petechia brewsteri</i>	-- / SSC	Nest and forage in riparian woodlands, often associated with willows (<i>Salix</i> spp.) and cottonwoods (<i>Populus</i> spp.), though specific vegetation varies by locality.	Moderate - Suitable nesting habitat in riparian area along Alameda Creek. May also forage or occur as a migrant within the BSA.	n/a
Snowy egret (rookery)	<i>Egretta thula</i>	-- / SA	Colonial nester, with nest sites situated in trees and protected beds of dense bulrush. Rookery sites situated close to foraging areas: marshes, tidal-flats, streams, wet meadows, and borders of lakes.	Not Expected - No suitable rookery habitat in the BSA, but individuals may forage on site.	n/a
White-tailed kite	<i>Elanus leucurus</i>	-- / FP	Nests in oak, willow or other trees and forages over open grasslands. A coast live oak tree is often chosen as a nest site.	Moderate - Suitable nesting habitat in trees within and adjacent to BSA.	n/a
California horned lark	<i>Eremophila alpestris actia</i>	-- / SA	Grasslands and other open habitats that lack trees or brushy areas. Nests on the ground, usually near grass clumps or earth clods.	Low – Marginally suitable nesting habitat in grassland habitats within the BSA.	n/a
Prairie falcon	<i>Falco mexicanus</i>	-- / SA	Found in dry, open terrain, either level or hilly. Breeding sites are located on cliffs. Forages far afield, even to marshlands and ocean shores.	Low - No suitable nesting habitat present, but individuals may occasionally forage or occur as a migrant within the BSA.	n/a
American peregrine falcon	<i>Falco peregrinus anatum</i>	FD / SD, SA	Nests on cliffs, banks, dunes, mounds, large bridges, and tall buildings, typically near wetlands, lakes, rivers, or other water bodies. Nest consists of a scrape or a depression or ledge in an open site.	Low - No suitable nesting habitat present, but individuals may occasionally forage or occur as a migrant within the BSA.	n/a
Saltmarsh common yellowthroat	<i>Geothlypis trichas sinuosa</i>	-- / SSC	Resident of fresh and salt water marshes fringing the San Francisco Bay region. Requires thick, continuous cover down to water's surface for foraging, and tall grasses, bulrush patches, or willows for nesting.	Not Expected - No salt or freshwater marshes with thick, continuous cover in the BSA.	n/a

Common Name	Scientific Name	Status (Federal/State)	Habitat Requirements	Potential to Occur in the BSA	Effect Finding for Federally Listed Species
Loggerhead shrike	<i>Lanius ludovicianus</i>	-- / SSC	Found in a wide variety of habitats including woodlands, savannah, pinyon-juniper, Joshua tree, riparian woodlands, desert oases, scrub and washes. Prefers open habitat for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	Moderate - May nest and forage in grassland and woodland habitats within the BSA.	n/a
California black rail	<i>Laterallus jamaicensis coturniculus</i>	-- / ST	Found in freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Requires water depths of about one inch that does not fluctuate during the year & dense vegetation for nesting habitat.	Not Expected - No suitable marsh or tidal slough habitats in BSA.	n/a
Alameda song sparrow	<i>Melospiza melodia pusillula</i>	-- / SSC	Resident of salt marshes bordering south arm of San Francisco Bay. Inhabits pickleweed (<i>Salicornia</i> spp.) marshes; nests low in pickleweed and gumweed (<i>Grindelia</i> spp.) bushes, but high enough to escape high tides.	Not Expected - No suitable salt marsh habitat in the BSA.	n/a
California brown pelican	<i>Pelecanus occidentalis californicus</i>	FD / SD, FP	Nest on the Channel Islands in southern California and islands off the coast of Baja California. Roost during the winter on near-shore rocks and undisturbed human-made structures such as breakwaters and abandoned piers.	Not Expected - No shoreline habitat in BSA.	n/a
California clapper rail	<i>Rallus longirostris obsoletus</i>	FE / SE	Salt-water & brackish marshes traversed by tidal sloughs in the vicinity of San Francisco Bay.	Not Expected - No suitable marsh or tidal slough habitats in BSA.	No effect – Not present
Bank swallow	<i>Riparia riparia</i>	-- / ST	Nests colonially in vertical banks of sand or dirt along rivers, lake shores, road cuts, or similar sites. Nests primarily in riparian and other lowland habitats in central and northern California.	Not Expected - No suitable habitat for nesting colonies within the BSA.	n/a

Common Name	Scientific Name	Status (Federal/State)	Habitat Requirements	Potential to Occur in the BSA	Effect Finding for Federally Listed Species
California least tern	<i>Sternula antillarum browni</i>	FE / SE, FP	Nest colonially on the ground in sandy or gravelly beaches. Forage over open water in coastal regions, including within San Francisco Bay.	Not Expected - No sandy or gravelly beach habitat in the BSA.	No effect – Not present
Mammals					
Pallid bat	<i>Antrozous pallidus</i>	-- / SSC	Occurs throughout California and most abundant in grasslands, shrublands, and woodlands. Roosts in crevices and cavities of buildings, bridges, tunnels, rocks, cliffs, and trees.	Moderate - Known to occur in the region and occupy bridges. Not likely to use urbanized areas but may occur in woodland and riparian areas, and roost in the bridges in undeveloped areas.	n/a
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	-- / SC, SSC	Found throughout California in a wide variety of habitats; most commonly associated with mesic sites. Usually roosts in caves, mines, bridges, trees, and structures in or near woodlands and forests, often near water. Extremely sensitive to human disturbance.	Moderate - Known to occur in the region. The Alameda Creek corridor is suitable habitat. May roost in bridge interiors within the BSA that offer cave-like spaces.	n/a
Berkeley kangaroo rat	<i>Dipodomys heermanni berkeleyensis</i>	-- / SA	Species was considered extinct for several decades until recent rediscovery. Habitat requirements not fully understood, but likely to be found in open grassy hilltops and open spaces in chaparral and blue oak/California foothill pine woodlands. Requires fine, deep, well-drained soil for burrowing.	Low - Marginal habitat present based on the information available.	n/a
Western mastiff bat	<i>Eumops perotis californicus</i>	-- / SSC	Found in open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices in cliff faces, high buildings, trees, and/or tunnels.	Low - No suitable roosting habitat present, but may forage in riparian and woodland habitat within the BSA.	n/a

Common Name	Scientific Name	Status (Federal/State)	Habitat Requirements	Potential to Occur in the BSA	Effect Finding for Federally Listed Species
Western red bat	<i>Lasiurus blossevillii</i>	-- / SA	Occurs throughout California primarily in riparian and woodland areas. Roosts singly or in small groups in shrub and tree foliage.	Moderate - Known to occur in the region, but does not roost in bridges. Suitable riparian and woodland roosting habitat within BSA.	n/a
Hoary bat	<i>Lasiurus cinereus</i>	-- / SA	Occurs throughout California, primarily in habitat mosaics with cover and open areas or habitat edges for feeding. Roosts singly or in small groups in shrub and tree foliage of riparian, woodland, and forest habitats.	Moderate - Known to occur in the region, but does not roost in bridges. Suitable riparian and woodland roosting habitat within BSA.	n/a
Long-eared myotis	<i>Myotis evotis</i>	-- / SA	Occurs throughout California in suitable habitat such as conifer and deciduous woodlands, coastal scrub, and chaparral. Roosts in crevices and cavities in buildings, bridges, trees, snags and stumps.	Moderate - Known to occur in the region. Suitable riparian and woodland habitats within the BSA; may roost in bridges.	n/a
Fringed myotis	<i>Myotis thysanodes</i>	-- / SA	Occurs throughout California in suitable habitat such as conifer and deciduous woodlands, coastal scrub, and chaparral. Roosts in crevices and cavities in buildings, bridges, trees, snags and stumps.	Moderate - Known to occur in the region. Suitable riparian and woodland habitats within the BSA; may roost in bridges.	n/a
Yuma myotis	<i>Myotis yumanensis</i>	-- / SA	Commonly occurs throughout California especially near water features. Roosts in crevices and cavities of buildings, bridges, caves, tunnels, mines and trees. Forages primarily over open water such as reservoirs, lakes, streams, creeks, canals, and ponds.	High - Known to occur in the region, and is relatively common. Likely to occur in bridges within the BSA.	n/a
San Francisco dusky-footed woodrat	<i>Neotoma fuscipes annectens</i>	-- / SSC	Found in forest habitats of moderate canopy and moderate to dense understory. May prefer chaparral and redwood habitats. Constructs nests of shredded grass, leaves, and other material. May be limited by availability of nest-building materials.	High - Woodrat nests observed in areas of dense vegetation at the SR 84/I-680 interchange. May occur in riparian and oak woodland areas within the BSA.	n/a

Common Name	Scientific Name	Status (Federal/State)	Habitat Requirements	Potential to Occur in the BSA	Effect Finding for Federally Listed Species
Salt-marsh harvest mouse	<i>Reithrodontomys raviventris</i>	FE / SE	Only in the saline emergent wetlands of San Francisco bay and its tributaries. Pickleweed (<i>Salicornia</i> sp.) is primary habitat. Builds loosely organized nests and requires higher areas to escape high tides.	Not Expected - No suitable salt marsh or pickleweed habitat in BSA.	n/a
Salt-marsh wandering shrew	<i>Sorex vagrans halicoetes</i>	-- / SSC	Found in salt marshes of the south arm of San Francisco Bay. Medium high marsh 6-8 feet above sea level where abundant driftwood is scattered among pickleweed.	Not Expected - No salt marsh or driftwood habitat in BSA.	n/a
American badger	<i>Taxidea taxus</i>	-- / SSC	Prefers dry open stages of most shrub, forest, and herbaceous habitats. Requires sufficient prey base (mostly burrowing rodents), friable soils, and open, uncultivated ground.	Low - Marginal habitat occurs in open space adjacent to the BSA. Individuals may forage or disperse through the BSA.	n/a
San Joaquin kit fox	<i>Vulpes macrotis mutica</i>	FE / ST	Annual grassland or grassy open stages with scattered shrubby vegetation. Need loose-textured sandy soils for burrowing and suitable prey base.	Low – Marginally suitable habitat within the BSA. Rare and sparsely distributed in the region.	May affect, not likely to adversely affect – Very unlikely to be present