

Appendix D

Special-Status Bird and Mammal Species That May Occur in the Project Area

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American Peregrine Falcon

The American peregrine falcon has been delisted from the federal Endangered Species Act, but is still a California Department of Fish and Game (CDFG) endangered and fully protected species. This species is protected under California Fish and Game Codes 3503, 3503.5, and 3511 and the federal Migratory Bird Treaty Act.

Peregrines generally feed and breed near water. This species nests on protected ledges of high cliffs, banks, dunes, and mounds in woodland, forest, and coastal habitats. However, pairs are also known to nest on human-made structures such as bridges and buildings (CDFG 2005). Riparian areas and coastal and inland wetlands are important yearlong habitats. Peregrine falcons forage over most wetland habitats, including salt ponds that harbor many bird species it uses as prey. Peregrines prey on bird species such as ducks, shorebirds, and doves (Goals Project 2000).

This species has the potential to forage year-round in the project area.

Ferruginous Hawk

The ferruginous hawk is a CDFG species of special concern and is protected under California Fish and Game Codes 3503 and 3503.5 and the federal Migratory Bird Treaty Act.

An uncommon winter resident and migrant in open grasslands of the Modoc Plateau, Central Valley, and Coastal Ranges, ferruginous hawks are more commonly found wintering in grassland and agricultural areas in southwestern California (Zeiner et al. 1990). No breeding records are known from California. Ferruginous hawks forage primarily on rabbits, ground squirrels, and mice, although birds, reptiles, and amphibians may also be consumed. This species is generally found in California between September and mid-April (Zeiner et al. 1990).

This species has the potential to winter and forage over Annual Grassland in the project area.

Loggerhead Shrike

The loggerhead shrike is a CDFG species of special concern and is protected under California Fish and Game Code 3503 and the federal Migratory Bird Treaty Act. This species frequents open habitats with sparse shrubs and trees, other suitable perches, bare ground, and low or sparse herbaceous cover.

The loggerhead shrike feeds mostly on large insects, but it also eats small birds, mammals, amphibians, reptiles, fish, carrion, and various other invertebrates. It usually flies directly to its prey on the ground or in a shrub and sometimes hovers. Frequently, loggerhead shrikes skewer their prey on a thorn, sharp twig, barbed wire, or force it into the crotch of a tree or shrub to feed on, or to cache for feeding later.

In California, loggerhead shrikes lay their eggs from March into May, and their young become independent in July or August. A monogamous, solitary nester, the loggerhead shrike lays a clutch of four to eight eggs and may be double-brooded.

This species has the potential to forage year-round and nest in California bay/Coast live oak/Poison oak woodland adjacent to Annual Grassland in the project area.

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Northern Harrier

Northern harrier is a CDFG species of special concern and is protected under California Fish and Game Codes 3503 and 3503.5 and the federal Migratory Bird Treaty Act.

Harriers occur throughout California except for the Sierra Nevada and the Cascade Range. Loss of wetland and grassland habitats has reduced the harrier population in California. Breeding usually occurs in shrubby vegetation within marshes although nesting may also occur in grasslands or other dry habitats away from water. Harriers forage primarily on small mammals that inhabit a variety of wet and dry habitats (CDFG 2005).

This species has the potential to forage year-round and nest in the Annual Grassland in the project area.

Townsend's Big-Eared Bat

Townsend's big-eared bat is a CDFG species of special concern. They inhabit arid western desert scrub and pine forest regions. These bats often hibernate near the entrances of caves or mines where the temperature is 12°C (54°F) or less, but usually above freezing (Museum of Southwestern Biology 2003). They hibernate in caves often near the entrance. If temperatures near entrances become extreme, they move to more thermally stable parts of the cave. They hibernate in clusters of a few to more than 100 individuals. These bats forage only after dark, using their keen echolocation to hunt moths and other insects. This bat species may feed entirely on moths (Museum of Southwestern Biology 2003).

In the spring and summer, females form maternity colonies in mines, caves, or buildings, while males roost individually (Batcon 2003). In winter, they hibernate in caves and abandoned mines. These bats are extremely sensitive to disturbance at their roosting sites and have suffered severe population declines throughout much of the U.S. (Batcon 2003). Mating occurs from autumn through winter, sperm are stored during winter, and fertilization occurs shortly after arousal from hibernation (Museum of Southwestern Biology 2003). One young is born in June. Lifespan may be 16 or more years.

Unidentified species of bats are known to roost in the Cal Park Hill tunnel underneath the San Quentin tank site. The Townsend's big-eared bat has the potential to forage in the California bay/Coast live oak/Poison oak woodland above the tunnel in the project area.

Pallid Bat

The pallid bat is a CDFG species of special concern. This species is broadly distributed in California, and found in a number of habitats from sea level to over 3,000 meters in the Sierra Nevada. It will utilize a variety of roosting sites. Although better known from anthropogenic structures (buildings and bridges), it also roosts in caves, rock crevices, mines, and tree hollows. It occupies grasslands, shrublands, woodlands, and forests. At lower elevations it is particularly strongly associated with oak savannah habitat. It feeds primarily on ground dwelling arthropods (e.g., scorpions, Jerusalem crickets) and large long-horned beetles and katydids (CDFG 2005).

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Unidentified species of bats are known to roost in the Cal Park Hill tunnel underneath the San Quentin tank site. The pallid bat has the potential to forage in the California bay/Coast live oak/Poison oak woodland above the tunnel in the project area.

Short-Eared Owl

Short-eared owl is a CDFG species of special concern and is protected under California Fish and Game Codes 3503 and 3503.5 and the federal Migratory Bird Treaty Act. Short-eared owls are found throughout North America, northern Eurasia, and the southern portion of South America. These owls inhabit freshwater and saltwater marshes and grasslands where tall vegetation grows. They feed on a variety of prey, including small mammals, birds, reptiles, amphibians, and arthropods (Zeiner et al. 1990). Destruction of marsh and grassland habitat and grazing present the greatest threat to the species (Zeiner et al. 1990).

This species has the potential to winter and forage over Annual Grassland in the project area.

White-Tailed Kite

The white-tailed kite is a CDFG fully protected species and is protected under California Fish and Game Codes 3503, 3503.5, and 3511 and the federal Migratory Bird Treaty Act. Kites are common to uncommon residents in coastal and valley lowlands throughout California. Their nests are usually constructed of loosely piled sticks placed near the tops of dense oak, willow, or other tree stands (Zeiner et al. 1990). Kites forage over grasslands, marshes, agricultural areas, and wetlands, where they prey mostly on small mammals (Zeiner et al. 1990).

Kites have the potential to forage year-round over Annual Grassland in the project area. They may also nest in California bay/Coast live oak/Poison oak woodland.

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Table D-1
Special-Status Species with the Potential to Occur in the Region

Scientific Name	Common Name	Status			Supporting Habitat/Flowering Period	Potential Occurrence in the Study Area
		Federal ^a	State ^b	CNPS ^c		
PLANTS						
<i>Alopecurus aequalis</i> var. <i>sonomensis</i>	Sonoma alopecurus	E	None	1B.1	Marshes and swamps; riparian scrub; May-Jul	No potential to occur
<i>Amorpha californica</i> var. <i>napensis</i>	Napa false indigo	None	None	1B.2	Broad-leafed upland forest (openings); chaparral; cismontane woodland; Apr-Jul	No potential to occur
<i>Amsinckia lunaris</i>	Bent-flowered fiddleneck	None	None	1B.2	Coastal bluff scrub; cismontane woodland; valley and foothill grassland; Mar-Jun	No potential to occur; Survey conducted in May 2004
<i>Arctostaphylos hookeri</i> ssp. <i>franciscana</i>	Franciscan manzanita	None	None	1A	Coastal scrub; Feb-Apr	No potential to occur; Survey conducted in May 2004
<i>Arctostaphylos hookeri</i> ssp. <i>montana</i>	Mt. Tamalpais manzanita	None	None	1B.3	Chaparral; valley and foothill grassland; serpentinite; Feb-Apr	No potential to occur; Surveys conducted in March 2004
<i>Arctostaphylos hookeri</i> ssp. <i>ravenii</i>	Presidio manzanita	E	E	1B.1	Chaparral, coast prairie, coastal scrub (serpentinite outcrops); Feb-Mar	No potential to occur; Survey conducted in May 2004
<i>Arctostaphylos virgata</i>	Marin manzanita	None	None	1B.2	Broad-leafed upland forest; closed-cone coniferous forest; chaparral; North Coast coniferous forest (sandstone or granitic); Jan-Mar	No potential to occur
<i>Arenaria paludicola</i>	Marsh sandwort	E	E	1B.1	Freshwater marsh; May-Aug	No potential to occur
<i>Aster lentus</i>	Suisun Marsh aster	None	None	1B.2	Marshes and swamps; May-Nov	No potential to occur; Survey conducted in May 2004

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<i>Astragalus pycnostachyus</i> var. <i>pycnostachyus</i>	Coastal marsh milk-vetch	None	None	1B.2	Coastal dunes (mesic); marshes and swamps (coastal salt, streamsides); Apr-Oct	No potential to occur
<i>Astragalus tener</i> var. <i>tener</i>	Alkali milk-vetch	None	None	1B.2	Playas, grassland (adobe clay), vernal pools; alkaline; Mar-Jun	No potential to occur; Survey conducted in May 2004
<i>Boschniakia hookeri</i>	Small groundcone	None	None	2.3	North Coast coniferous forest; Apr-Aug	No potential to occur
<i>Calochortus tiburonensis</i>	Tiburon mariposa lily	T	T	1B.1	Valley and foothill grassland (serpentinite); known only from Ring Mountain on the Tiburon peninsula; Mar-Jun	No potential to occur
<i>Carex lyngbyei</i>	Lyngbye's sedge	None	None	2.2	Marshes and swamps (brackish or freshwater); May, Aug	No potential to occur
<i>Castilleja affinis</i> ssp. <i>neglecta</i>	Tiburon Indian paintbrush	E	T	1B.2	Serpentine bunchgrass; Apr-Jun	No potential to occur;
<i>Ceanothus masonii</i>	Mason's ceanothus	None	R	1B.2	Chaparral (serpentinite, rocky); Mar-Apr	No potential to occur
<i>Chorizanthe sucpidata</i> var. <i>cuspidata</i>	San Francisco Bay spineflower	None	None	1B.2	Coastal bluff scrub; coastal dunes; coastal prairie; coastal scrub (sandy); Apr-Jul (Aug)	No potential to occur; Survey conducted in May 2004
<i>Chorizanthe valida</i>	Sonoma spineflower	E	E	1B.1	Coastal prairie (sandy); Jun-Aug	No potential to occur
<i>Cirsium andrewsii</i>	Franciscan thistle	None	None	1B.2	Broad-leafed upland forest, coastal bluff scrib, coastal prairie, coastal scrub (mesic, sometimes serpentinite); Mar-Jul	No potential to occur; Survey conducted in May 2004
<i>Cirsium hydrophilum</i> var. <i>vaseyi</i>	Mt. Tamalpais thistle	None	None	1B.2	Broad-leafed upland forest; chaparral; meadows and seeps; serpentinite seeps; May-Aug	No potential to occur

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<i>Clarkia franciscana</i>	Presidio clarkia	E	E	1B.1	Coastal scrub, grassland; serpentine; San Francisco and Alameda counties; May-Jul	No potential to occur; Survey conducted in June 2004
<i>Collinsia corymbosa</i>	Round-headed chinese houses	None	None	1B.2	Coastal dunes; April-Jun	No potential to occur
<i>Collinsia multicolor</i>	San Francisco collinsia	None	None	1B.2	Closed-cone coniferous forest; coastal scrub (sometimes serpentine); Mar-May	No potential to occur; Survey conducted in May 2004
<i>Cordylanthus maritimus</i> <i>ssp. palustris</i>	Point Reyes bird's-beak	None	None	1B.2	Marshes and swamps (coastal salt); Jun-Oct	No potential to occur
<i>Dirca occidentalis</i>	Western leatherwood	None	None	1B.2	Broad-leaved upland forests, chaparral, cismontane woodland, riparian; Jan-Apr	No potential to occur; Survey conducted in March 2004
<i>Entosthodon kochii</i>	Koch's cord-moss	None	None	1B.3	Cismontane woodland (soil); NA; occurs at elevations from 180-1000 meters.	No potential to occur; Survey conducted in May 2004
<i>Eriognum luteolum</i> var <i>caninum</i>	Tiburon buckwheat	None	None	3.2	Chaparral; coastal prairie; valley and foothill grassland; serpentine; Jun-Sep	No potential to occur; Surveys conducted in June and August 2004
<i>Fissidens pauperculus</i>	Minute pocket-moss	None	None	1B.2	North Coastal coniferous forest (damp coastal soil); NA; occurs at elevations from 10-100 meters	No potential to occur; Survey conducted in May 2004
<i>Fritillaria lanceolata</i> var. <i>tristulis</i>	Marin checker lily	None	None	1B.1	Coastal bluff scrub; Coastal prairie; Coastal scrub; Feb-Apr	No potential to occur; Survey conducted in May 2004

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<i>Erysimum fransiscanum</i>	San Francisco wallflower	None	None	4.2	Coastal dunes, coastal scrub, grassland; often serpentinite or granitic; Mar-Jun	No potential to occur; Surveys conducted in May 2004
<i>Fritillaria liliacea</i>	Fragrant fritillary	None	None	1B.2	Coastal prairie, coastal scrub, grassland; often serpentinite; Feb-Apr	No potential to occur; Survey conducted in March 2004
<i>Gilia capitata</i> ssp. <i>chamissonis</i>	Dune gilia	None	None	1B.1	Coastal dunes; Coastal scrub; Jun-July	No potential to occur
<i>Gilia capitata</i> ssp. <i>tomentosa</i>	Woolly-headed gilia	None	None	1B.1	Coastal bluff scrub (rocky, outcrops); May-July	No potential to occur; Survey conducted in May 2004
<i>Gilia millefoliata</i>	Dark-eyed gilia	None	None	1B.2	Coastal dunes; Apr-Jul	No potential to occur
<i>Grindelia hirsutula</i> var. <i>maritima</i>	San Francisco gumplant	None	None	1B.2	Coastal bluff scrub, coastal scrub, grassland; sandy, serpentinite; Aug-Sept	No potential to occur; Survey conducted in August 2004
<i>Helianthella castanea</i>	Diablo helianthella (rock-rose)	None	None	1B.2	Broadleafed upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, grassland; Apr-Jun	No potential to occur; Survey conducted in May 2004
<i>Hemizonia congesta</i> ssp. <i>leucophala</i>	Hayfield tarplant	None	None	3	Coastal scrub; valley and foothill grassland; Apr-Oct	No potential to occur; Surveys conducted in June and August 2004
<i>Hesperolinon congestum</i>	Marin dwarf (western)-flax	T	T	1B.1	Chaparral, grassland; serpentinite; Apr-Jul	No potential to occur

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<i>Holocarpha macradenia</i>	Santa Cruz tarplant	PT	E	1B.1	Coastal prairie, grasslands; often clay; Jun-Oct	No potential to occur; Survey conducted in June 2004
<i>Horkelia cuneata</i> ssp. <i>sericea</i>	Kellogg's horkelia	None	None	1B.1	Closed-cone coniferous forest; chaparral (maritime); coastal scrub (sandy or gravelly, openings); Apr-Sep	No potential to occur
<i>Horkelia tenuiloba</i>	Thin-lobed horkelia	None	None	1B.2	Broad-leafed upland forest; chaparral; valley and foothill grassland; mesic openings, sand; May-Jul	No potential to occur; Surveys conducted in May and June 2004
<i>Lathyrus glandulosus</i>	Sticky pea	None	None	4.3	Cismontane woodland; Apr-June	No potential to occur
<i>Layia carnosa</i>	Beach layia	E	E	1B.1	Coastal dunes, coastal scrub; Mar-Jul	No potential to occur; Survey conducted in May 2004
<i>Leptosiphon croceus</i>	Coast yellow leptosiphon	None	None	1B.1	Coastal bluff scrub; coastal prairie; Apr-May	No potential to occur; Survey conducted in May 2004
<i>Leptosiphon rosaceus</i>	Rose leptosiphon	None	None	1B.1	Coastal bluff scrub; Apr-Jul	No potential to occur; Survey conducted in May 2004
<i>Lessingia germanorum</i>	San Francisco lessingia	E	E	1B.1	Coastal scrub (remnant dunes); (Jun) Aug-Nov	No potential to occur; Survey conducted in May 2004
<i>Lessingia hololeuca</i>	Woolly-headed lessingia	None	None	3	Broad-leafed upland forest; coastal scrub; lower montane coniferous forest; valley and foothill grassland; clay; serpentinite; Jun-Oct	No potential to occur; Surveys conducted in June and August 2004

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<i>Lessingia micradenia</i> var. <i>micradenia</i>	Tamalpais lessingia	None	None	1B.2	Chaparral; valley and foothill grassland; usually serpentinite, often roadsides; Jun-Oct	No potential to occur; Survey conducted in June and August 2004
<i>Linanthus grandiflorus</i>	Large-flowered linanthus	None	None	4.2	Coastal bluff scrub; closed-cone coniferous forest; cismontane woodland; coastal dunes; coastal prairie; coastal scrub; valley and foothill grassland; usually sandy; Apr-Aug	No potential to occur; Survey conducted in June 2004
<i>Micropus amphibolus</i>	Mt. Diablo cottonweed	None	None	3.2	Broad-leafed upland forest; chaparral; cismontane woodland; valley and foothill grassland; rocky; Mar-May	No potential to occur; Surveys conducted in March and May 2004
<i>Microseris paludosa</i>	Marsh microseris	None	None	1B.2	Closed-cone coniferous forest; cismontane woodland; coastal scrub; valley and foothill grassland; Apr-Jun	No potential to occur; Survey conducted in May 2004
<i>Mielichhoferia elongata</i>	Elongate copper-moss	None	None	2.2	Cismontane woodland (metamorphic, rock usually vernal mesic); NA; elevation: 500-1300 meters	No potential to occur; Survey conducted in May 2004
<i>Navarretia leucocephala</i> ssp. <i>bakeri</i>	Baker's navarretia	None	None	1B.1	Cismontane woodland; lower montane coniferous forest; meadows and seeps; valley and foothill grassland, vernal pools; Apr-Jul	No potential to occur; Survey conducted in May 2004
<i>Pentachaeta bellidiflora</i>	White-rayed pentachaeta	E	E	1B.1	Serpentine bunchgrass; known from only one serpentine bunchgrass community in San Mateo County; Mar-May	No potential to occur
<i>Plagiobothrys chorisianus</i> var. <i>chorisianus</i>	Choris's popcorn-flower	None	None	1B.2	Chaparral, coastal prairie, coastal scrub; Mar-Jun	No potential to occur; Survey conducted in May 2004

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<i>Perideridia gairdneri</i> ssp. <i>gairdneri</i>	Gairdner's yampah	None	None	4.2	Broad-leafed upland forest, chaparral, grassland, vernal pools; mesic; Jun-Oct	No potential to occur; Surveys conducted in June and August 2004
<i>Plagiobothrys diffusus</i>	San Francisco popcorn-flower	None	E	1B.1	Coastal prairie, valley and foothill grasslands; Apr-Jun	No potential to occur; extirpated from the San Francisco Bay area
<i>Plagiobothrys glaber</i>	Hairless popcorn-flower	None	None	1A	Meadows and seeps (alkaline); marshes and swamps (coastal salt); Mar-May	No potential to occur
<i>Polygonum marinense</i>	Marin knotweed	None	None	3	Marshes and swamps (coastal salt or brackish); Apr-Oct	No potential to occur
<i>Quercus parvula</i> var. <i>tamalpaisensis</i>	Tamalpais oak	None	None	1B.3	Lower montane coniferous forest; Mar-Apr	No potential to occur; Survey conducted in May 2004
<i>Sanicula maritima</i>	Adobe sanicle	None	R	1B.1	Chaparral, coastal prairie, meadows, grassland; clay, serpentine; Feb-May	No potential to occur; Survey conducted in March 2004
<i>Sidalcea calycosa</i> ssp. <i>rhizomata</i>	Point Reyes checkerbloom	None	None	1B.2	Marshes and swamps (MshSw) (freshwater, near coast); Apr-Sep	No potential to occur
<i>Sidalcea hickmanii</i> ssp. <i>viridis</i>	Marin checkerbloom	None	None	1B.3	Chaparral (serpentine); May-Jun	No potential to occur
<i>Silene verecunda</i> ssp. <i>verecunda</i>	San Francisco campion	None	None	1B.2	Coastal bluff scrub, chaparral, coastal prairie, coastal scrub, valley and foothill grassland (sandy); Mar-Jun	No potential to occur; Survey conducted in May 2004
<i>Stebbinsoseris decipiens</i>	Santa Cruz microseris	None	None	1B.2	Broad-leafed upland forest; closed-cone coniferous forest; chaparral; coastal prairie; coastal scrub; valley and foothill grassland; open areas, sometimes serpentine; Apr-May	No potential to occur

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<i>Streptanthus batrachopus</i>	Tamalpais jewel-flower	None	None	1B.3	Closed-cone coniferous forest; chaparral (serpentinite); Apr-Jun	No potential to occur
<i>Streptanthus glandulosus</i> <i>ssp. pulchellus</i>	Mt. Tamalpais jewel-flower	None	None	1B.2	Chaparral; valley and foothill grassland; serpentinite; May-Jul	No potential to occur; Surveys conducted in May and June 2004
<i>Streptanthus niger</i>	Tiburon jewel-flower	E	E	1B.1	Valley and foothill grassland (serpentinite); Limited to St.Hilary's Church and the Middle Ridge on the Tiburon Peninsula. The entire range of this species is less than a third of a square mile; May-Jun	No potential to occur; Survey conducted in June 2004
<i>Trifolium amoenum</i>	Showy Indian clover	E	None	1B.1	Coastal bluff scrub; valley and foothill grassland: (sometimes serpentinite); Apr-Jun	No potential to occur; Survey conducted in May 2004
<i>Triphysaria floribunda</i>	San Francisco owl's-clover	None	None	1B.2	Coastal prairie, coastal scrub, grassland; usually serpentinite; Apr-Jun	No potential to occur; Survey conducted in May 2004
<i>Triquetrella californica</i>	Coastal triquetrella	None	None	1B.2	Coastal bluff scrub; coastal scrub (soil); NA	No potential to occur
INVERTEBRATES						
<i>Haliotes cracherodii</i>	Black abalone	C	None	NA	Mid to low rocky intertidal.	No potential to occur
<i>Haliotes sorenseni</i>	White abalone	E	None	NA	Rocky pinnacles and deep reefs in southern California; especially those off the channel islands. Lives at depths of a least 80 feet to over 200 feet.	No potential to occur

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<i>Icaricia icaroides missionensis</i>	Mission blue butterfly	E	None	NA	Coastal scrub, grassland; host plants are perennial lupines: <i>Lupinus albifrons</i> , <i>L. variicolor</i> , and <i>L. formosus</i> ; preferred nectar plants of adults are coast buckwheat (<i>Eriogonum latifolium</i>) and golden aster (<i>Heterotheca sessiliflora</i>)	No potential to occur
<i>Incisalia mossii bayensis</i>	San Bruno elfin butterfly	E	None	NA	Coastal scrub with cliffs or rock outcrops, north facing slopes; host plant is stonecrop (<i>Sedum spathulifolium</i>) Stonecrop is associated with rocky outcrops that occur at 900- to 1075-foot elevation.	No potential to occur
<i>Speyeria zerene myrtleae</i>	Myrtle's silverspot butterfly	E	None	NA	Coastal terrace prairie, coastal bluff scrub, and associated nonnative grassland habitats in western Marin; host plant (<i>Viola adunca</i>)	No potential to occur
<i>Syncaris pacifica</i>	California freshwater shrimp	E	E	NA	Low elevation, low gradient freshwater coastal streams.	No potential to occur
FISH						
<i>Acipenser medirostris</i>	Green sturgeon	T	SC	NA	Rivers and estuaries	Potential to occur
<i>Eucyclogobius newberryi</i>	Tidewater goby	E	SC	NA	Estuaries and lagoons of coastal creeks with low salinity	No potential to occur
<i>Hypomesus transpacificus</i>	Delta smelt	T	T	NA	Sacramento-San Joaquin Delta, Suisun Bay, San Pablo Bay, river channels and sloughs	No potential to occur
<i>Oncorhynchus kisutch</i>	Coho salmon, Central California Coast ESU	E, CH	E	NA	Between Punta Gordo and San Lorenzo River; loose, silt-free, gravel beds for spawning, cover, cool water, sufficient dissolved oxygen	Potential to occur

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<i>Oncorhynchus mykiss irideus</i>	Steelhead, Central California Coast ESU	T, CH	None	NA	Delta, Suisun Bay and associated marshes, slow moving sections of rivers, dead end sloughs; San Francisco Bay west to the Golden Gate Bridge designated as critical habitat.	Potential to occur
<i>Oncorhynchus mykiss</i>	Steelhead, Central Valley ESU	T	None	NA	Central Valley rivers and their tributaries, west to the Pacific ocean, inclusive.	Potential to occur
<i>Oncorhynchus tshawytscha</i>	Chinook salmon, California coastal ESU	T	None	NA	Coastal waterways and tributaries from Redwood Ck. south to the Russian River.	Potential to occur
<i>Oncorhynchus tshawytscha</i>	Chinook salmon, Central Valley fall/late fall-run ESU	C, CCH	SC	NA	Central Valley rivers and their tributaries, west to the Pacific ocean, inclusive	Potential to occur
<i>Oncorhynchus tshawytscha</i>	Chinook salmon, Sacramento Valley winter-run ESU	E	E	NA	Sacramento River from Keswick Dam (near Redding) south to Chipps Island, then west through Carquinez Straight, San Pablo Bay and San Francisco Bay; Pacific Ocean	Potential to occur
<i>Oncorhynchus tshawytscha</i>	Chinook salmon, spring-run ESU	T	T	NA	This species is found in the Pacific Ocean and spawn in large, permanent coastal streams and rivers, over gravel beds. Spring-run Chinook salmon are primarily found in four tributaries of the Sacramento River: Butte, Big Chico, Deer, and Mill creeks.	Potential to occur
<i>Pogonichthys macrolepidotus</i>	Sacramento splittail	None	SC	NA	Slow-moving sections of rivers and sloughs, and in the Delta and Suisun Marsh. Low-salinity, shallow-water habitat	No potential to occur
<i>Spirinchus thaleichthys</i>	Longfin smelt	None	SC	NA	Moderately saline estuaries and lower reaches of rivers ⁴	No potential to occur

Appendix D
Special-Status Bird and Mammal Species That May Occur in the Project Area

Table D-1
Special-Status Species with the Potential to Occur in the Region

Scientific Name	Common Name	Status			Supporting Habitat/Flowering Period	Potential Occurrence in the Study Area
		Federal ^a	State ^b	CNPS ^c		
AMPHIBIANS						
<i>Rana aurora aurora</i>	Northern red-legged frog	None	SC	NA	Lowlands and foothills with deep water remaining for at least 11 weeks; water source is usually associated with abundant emergent and or shoreline vegetation ^{1b}	No potential to occur
<i>Rana aurora draytonii</i>	California red-legged frog	T	SC,P	NA	Lowlands and foothills with deep water remaining for at least 11 weeks; water source is usually associated with abundant emergent and or shoreline vegetation ^{1b}	No potential to occur
<i>Rana boylei</i>	Foothill yellow-legged frog	None	SC,P	NA	Partly shaded, shallow streams and riffles with cobble size or larger rocky substrate ^{1b}	No potential to occur
<i>Spea hammondi</i>	Western spadefoot	None	SC,P	NA	Quiet streams and temporary pools in grassland, open chaparral, and pine-oak woodlands ¹³	No potential to occur
REPTILES						
<i>Caretta caretta</i>	Loggerhead turtle	T	None	NA	Open ocean, seldom California coast	No potential to occur
<i>Chelonia mydas</i> (including <i>agassizi</i>)	Green (sea) turtle	T	None	NA	Warm-water bays and lagoons	No potential to occur
<i>Clemmys marmorata marmorata</i>	Northwestern pond turtle	None	SC,P	NA	Permanent or nearly permanent water with basking sites and upland for nest sites ^{1b}	No potential to occur
<i>Clemmys marmorata pallida</i>	Southwestern pond turtle	None	SC,P	NA	Permanent or nearly permanent water with basking sites and upland for nest sites ^{1b}	No potential to occur
<i>Dermochelys coriacea</i>	Leatherback turtle	E	None	NA	Open ocean, California coast, bays and estuaries	No potential to occur

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<i>Lepidochelys olivacea</i>	Olive (Pacific) ridley sea turtle	T	None	NA	Bay and lagoons, seldom in California	No potential to occur
<i>Phrynosoma coronatum frontale</i>	California horned lizard	None	SC,P	NA	Lowlands along sandy washes with scattered low bushes and open areas for sunning; loose soil ^{lb}	No potential to occur
BIRDS						
<i>Agelaius tricolor</i>	Tricolored blackbird	None	SC	NA	Open valleys and foothills in streamside timber, alfalfa and rice fields, blackberry thickets, tules and cattails on and around marshes and reservoirs	No potential to occur
<i>Athene cunicularia hypugea</i>	Western burrowing owl	None	SC	NA	Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation with underground refuges	No potential to occur
<i>Amphispiza belli belli</i>	Bell's sage sparrow	None	SC	NA	Chaparral, coastal scrub	No potential to occur
<i>Asio flammeus</i>	Short-eared owl	None	SC	NA	Fresh and salt swamp lands, lowland meadows, irrigated alfalfa fields. Tule patches and tall grass required for nesting/day time seclusion.	Potential to occur
<i>Brachyramphus marmoratus</i>	Marbled murrelet	T	E	NA	Mature Douglas fir and redwood forest within 56 kilometers (35 miles) of the coast	No potential to occur
<i>Buteo regalis</i>	Ferruginous hawk	None	SC	NA	Undisturbed grassland and agricultural areas (winter)	Potential to occur
<i>Chaetura vauxi</i>	Vaux's swift	None	SC	NA	Redwood and Douglas fir forests with hollow trees and snags	No potential to occur

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<i>Charadrius alexandrinus nivosus</i>	Western snowy plover	T	SC	NA	Coastal beaches, sandy areas near estuaries, salt ponds, river mouths, levees along inland salt ponds	No potential to occur
<i>Circus cyaneus</i>	Norther harrier (marsh hawk)	None	SC	NA	Nests in coastal salt and freshwater marsh. Forages in grasslands, from salt grass in desert sink to mountain cienagas.	Potential to occur
<i>Cypseloides niger</i>	Black swift	None	SC	NA	Near cliffs in mountainous and coastal regions	No potential to occur
<i>Diomedea albatrus</i>	Short-tailed Albatross	E	None	NA	Open waters of the Pacific Ocean	No potential to occur
<i>Elanus leucurus</i>	White-tailed (black-shouldered) kite	None	FP	NA	Nests among dense-topped trees; forages in open grasslands, meadows, or marshes	Potential to occur
<i>Falco peregrinus anatum</i>	American peregrine falcon	D	E, FP	NA	Open country including tundra, coastal, mountainous and forested regions; nests on rocky cliff ledges, large trees or tall urban structures near water	Potential to occur; foraging only
<i>Geothlypis trichas sinuosa</i>	Salt marsh common yellowthroat	None	SC	NA	San Francisco Bay region in fresh and saltwater marshes with thick continuous cover to water surface, tall grasses, tule patches, and willows for nesting	No potential to occur
<i>Haematopus bachmani</i>	Black oystercatcher	None	None	NA	Rocky coastlines	No potential to occur
<i>Haliaeetus leucocephalus</i>	Bald eagle	PD	E	NA	Lakes, rivers, and reservoirs adjacent to large trees away from human disturbance	No potential to occur
<i>Histrionicus histrionicus</i>	Harlequin duck	None	SC	NA	Prefers cold, shallow, rapidly flowing mountain streams in forested regions, but also inhabits ponds and lakes; winters on marine waters, in heavy surf along rocky coasts	No potential to occur

Special-Status Bird and Mammal Species That May Occur in the Project Area

Table D-1
Special-Status Species with the Potential to Occur in the Region

Scientific Name	Common Name	Status			Supporting Habitat/Flowering Period	Potential Occurrence in the Study Area
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<i>Lanius ludovicianus</i>	Loggerhead shrike	None	SC	NA	Open canopied valley and foothill hardwood, riparian	Potential to occur
<i>Laterallus jamaicensis coturniculus</i>	California black rail	None	T,FP	NA	Tidal salt marshes, freshwater and brackish marshes	No potential to occur
<i>Melospiza melodia pusillula</i>	Alameda song sparrow	None	SC	NA	Salt marshes bordering south arm of San Francisco Bay.	No potential to occur
<i>Melospiza melodia samuelis</i>	San Pablo song sparrow	None	SC	NA	Dense shrubs at the edge of open areas in San Pablo Bay	No potential to occur
<i>Numenius phaeopus</i>	Whimbrel	None	None	NA	Winter along fresh or saltwater, agricultural fields	No potential to occur
<i>Oceanodroma homochroa</i>	Ashy storm-petrel	None	SC	NA	Isolated coast and island nester	No potential to occur
<i>Pelecanus occidentalis californicus</i>	California brown pelican	E	E	NA	Nests on coastal islands lacking ground predators; roost on piers, buoys, and other structures on water bodies near the coast	No potential to occur
<i>Rallus longirostris obsoletus</i>	California clapper rail	E	E,FP	NA	Salt marshes dominated by pickleweed and cordgrass, brackish marshes, tidal sloughs, channels	No potential to occur
<i>Riparia riparia</i>	Bank swallow	None	T	NA	Riparian vegetation, vertical banks or cliffs near streams, rivers, lakes, and oceans	No potential to occur
<i>Rynchops niger</i>	Black skimmer	None	SC	NA	Coastal areas	No potential to occur
<i>Sterna antillarum (albifrons) browni</i>	California least tern	E	E,FP	NA	Flat, open areas along coast near inshore estuaries, river mouths, or shallows, sandy ground with little or no vegetation, bays, freshwater ponds, channels, lakes	No potential to occur

Appendix D Special-Status Bird and Mammal Species That May Occur in the Project Area

**Table D-1
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Scientific Name	Common Name	Status			Supporting Habitat/Flowering Period	Potential Occurrence in the Study Area
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<i>Sterna elegans</i>	Elegant tern	None	SC	NA	Inland coastal waters, bays, estuaries, and harbors	No potential to occur
<i>Strix occidentalis caurina</i>	Northern spotted owl	T	None	NA	Mature forests; typically conifer, occasionally hardwood	No potential to occur
MAMMALS						
<i>Aplodontia rufa phaea</i>	Point Reyes mountain beaver	None	None	NA	Thickets of dense vegetation in Point Reyes National Seashore	No potential to occur
<i>Antrozous pallidus</i>	Pallid bat	None	SC	NA	Deserts, grasslands, shrublands, woodlands, and forest. Most common in open, dry habitats with rocky areas for roosting. Roosts in rock crevices, caves, mine shafts, under bridges, in buildings and tree hollows.	Potential to occur
<i>Arctocephalus townsendi</i>	Guadalupe fur seal	T, P	T, FP&P	NA	Coastal waters, islands, isolated, rocky haul-outs.	No potential to occur
<i>Balaena glacialis</i>	Right whale	E	None	NA	Near shore in shallow waters, large bays	No potential to occur
<i>Balaenoptera borealis</i>	Sei whale	E	None	NA	Temperate open seas, nearshore and offshore, from Gulf of Alaska to Baja California	No potential to occur
<i>Balaenoptera musculus</i>	Blue Whale	E	None	NA	Open waters, occasional inshore waters	No potential to occur
<i>Balaenoptera physalus</i>	Finback whale	E	None	NA	Open waters, occasional inshore waters	No potential to occur
<i>Corynorhinus (Plecotus) townsendii</i>	Townsend's big-eared bat	None	SC	NA	Humid coastal regions; roosts include caves, mines, and buildings	Potential to occur
<i>Eschirichthius robustus</i>	Gray whale	D	None	NA	Shallow coastal waters	No potential to occur

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Scientific Name	Common Name	Status			Supporting Habitat/Flowering Period	Potential Occurrence in the Study Area
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<i>Enhydra lutris nereis</i>	Southern sea otter	T	None	NA	This species occurs in nearshore marine environments from about Ano Nuevo, San Mateo County to Point Sal., Santa Barbara County.	No potential to occur
<i>Eumetopias jubatus</i>	Steller (northern) sea-lion	T	None	NA	Isolated shoreline and rocky islands from San Mateo County north	No potential to occur
<i>Eumops perotis</i>	Western mastiff-bat	None	SC	NA	Coniferous and deciduous woodlands, coastal scrub, grasslands, chaparral, and urban areas	No potential to occur; project area outside of the range of this species
<i>Microtus californicus sanpabloensis</i>	San Pablo vole	None	SC	NA	Salt marshes of San Pablo Creek, on the south shore of San Pablo Bay.	No potential to occur
<i>Neotoma fuscipes annectens</i>	San Francisco dusky-footed woodrat	None	SC	NA	Riparian woodland, hardwood forest, chaparral ² (not specific to subspecies)	No potential to occur
<i>Neotoma fuscipes riparia</i>	Riparian woodrat	PE	SC	NA	Brushy habitats with scattered trees	No potential to occur
<i>Physeter macrocephalus</i>	Sperm whale	E	None	NA	Temperate and tropical oceans, near continental shelf, from Bering Sea to equator	No potential to occur
<i>Reithrodontomys raviventris</i>	Salt marsh harvest mouse	E	E,FP	NA	Salt marsh where pickleweed is dominate vegetation	No potential to occur
<i>Sorex ornatus sinuosus</i>	Suisun ornate shrew	None	SC	NA	Tidal marsh habitat in San Pablo and Suisun Bays	No potential to occur
<i>Sorex vagrans halicoetes</i>	Salt marsh wandering shrew	None	SC	NA	Salt marshes 6-8 feet above sea level where abundant driftwood is scattered throughout pickleweed	No potential to occur

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Scientific Name	Common Name	Status			Supporting Habitat/Flowering Period	Potential Occurrence in the Study Area
		Federal ^a	State ^b	CNPS ^c		
<i>Taxidea taxus</i>	American badger	None	SC	NA	Survive in low numbers in peripheral parts of the valley and adjacent lowlands to the west in eastern Monterey, San Benito, and San Luis Obispo counties. Principal requirements: sufficient food, friable soils, and relatively open, uncultivated ground. Grasslands, savannas, and mountain meadows near timberline are preferred.	No potential to occur
<i>Zapus trinotatus orarius</i>	Point Reyes jumping mouse	None	SC	NA	Riparian, grassland, and wet meadow habitats, also prefers habitat near coniferous forest (not specific to subspecies)	No potential to occur

Notes:

N = Not known to occur; no suitable habitat

^aFederal Status Codes:

E=Endangered. Species in danger of extinction throughout all or a significant portion of its range.

T=Threatened. Species likely to become endangered within the foreseeable future.

PE=Proposed for listing as endangered.

PT=Proposed for listing as threatened.

PD=Proposed for delisting

C=Candidate for listing.

D=Delisted.

CH=Critical habitat designated in the San Rafael 7.5-minute USGS quadrangle.

CCH=Candidate critical habitat designated in the San Rafael 7.5-minute USGS quadrangle.

P=Protected under the Marine Mammal Protection Act

^bCalifornia Status Codes:

E=Endangered. Species whose continued existence in California is in jeopardy.

T=Threatened. Species likely to become endangered within the foreseeable future.

R=Rare. Plant species, although not presently threatened with extinction, that may become endangered in the foreseeable future.

SC=California Department of Fish and Game species of special concern.

FP&P=Fully protected and protected species defined in the State of California under Sections 3511, 4700, 5050, and 5515 of the Fish and Game Code.

^cCalifornia Native Plant Society (CNPS) Status Codes:

1A=Plants presumed extinct in California.

Special-Status Bird and Mammal Species That May Occur in the Project Area

**Table D-1
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Scientific Name	Common Name	Status			Supporting Habitat/Flowering Period	Potential Occurrence in the Study Area
		Federal ^a	State ^b	CNPS ^c		

1B=Plants that are rare, threatened, or endangered in California and elsewhere.

2=Plants that are rare, threatened, or endangered in California, but more common elsewhere.

3=Plants about which more information is needed.

4=Plants of limited distribution. CNPS suffixes indicate distribution in California:

- .1 Seriously endangered
- .2 Fairly endangered
- .3 Not very endangered

H=Hybrid. Rejected for classification by the California Native Plant Society Inventory.

NA=Not Applicable

Appendix D

Special-Status Bird and Mammal Species That May Occur in the Project Area

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