

Attachment B

Biological Resources

Special-Status Plant Species Known to Occur in the Vicinity of the Treatment Areas and Their Potential for Occurrence in the Treatment Areas

Species	Listing Status ¹ Federal	Listing Status ¹ State	CRPR	Habitat	Potential for Occurrence ²
Large-flowered fiddleneck <i>Amsinckia grandiflora</i>	FE	SE	1B.1	Cismontane woodland, valley and foothill grassland. Annual grassland in various soils. 900–1,800 feet in elevation. Blooms (March), April–May. Annual.	May occur. Suitable woodland and grassland habitat is present in the project area. There are two documented occurrences of large-flowered fiddleneck within Mount Diablo SP (Calflora 2022) and one extant occurrence from 2012 in the project vicinity (CNDDDB 2022).
Bent-flowered fiddleneck <i>Amsinckia lunaris</i>	—	—	1B.2	Cismontane woodland, valley and foothill grassland, coastal bluff scrub. 10–2,610 feet in elevation. Blooms March–June. Annual.	Not expected to occur. Although suitable woodland and grassland habitat for this species is present in the project area, bent-flowered fiddleneck has not been documented east of I-680. The closest known occurrence is approximately 4 miles southwest of the project area (CNDDDB 2022).
California androsace <i>Androsace elongata</i> ssp. <i>acuta</i>	—	—	4.2L	Chaparral, cismontane woodland, coastal sage scrub, valley and foothill grassland, meadows and seeps, pinyon and juniper woodland. Highly localized and often overlooked little plant. 490–3,940 feet in elevation. Blooms March–June. Annual.	May occur. Suitable chaparral, woodland, coastal sage scrub, and grassland habitat for this species is present in the project area. There are several documented occurrences within Mount Diablo SP and adjacent to the project area (Calflora 2022).
Mt. Diablo manzanita <i>Arctostaphylos auriculata</i>	—	—	1B.3	Endemic to Mount Diablo. In canyons and on slopes. On sandstone. 590–1,850 feet in elevation. Blooms January–March. Perennial.	Known to occur. Suitable canyon and slope habitat for this species is present in the project area. This species is endemic to Mount Diablo and is known to occur in the project area. There are many documented occurrences of this species in the project area, and they are concentrated in the ecological restoration treatment area (CNDDDB 2022).
Contra Costa manzanita <i>Arctostaphylos manzanita</i> ssp. <i>Laevigata</i>	—	—	1B.2	Chaparral. Rocky slopes. 490–2,000 feet in elevation. Blooms January–March (April). Perennial.	Known to occur. Suitable chaparral and rocky slope habitat for Contra Costa manzanita is present and this species is known to occur in the project area. There are many documented occurrences of this species in the project area, and they are mainly concentrated in the ecological restoration treatment area (CNDDDB 2022).
Alkali milk-vetch <i>Astragalus tener</i> var. <i>tener</i>	—	—	1B.2	Wetland. Alkali playa, valley and foothill grassland, vernal pools. Low ground, alkali flats, and flooded lands; in annual grassland or in playas or vernal pools less than 200 feet in elevation. Blooms March–June. Annual.	Not expected to occur. The project area is outside of the elevational range for this species.

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Heartscale <i>Atriplex cordulata</i> var. <i>cordulata</i>	—	—	1B.2	Chenopod scrub, valley and foothill grassland, meadows, and seeps. Alkaline flats and scalds in the Central Valley, sandy soils. 10–900 feet in elevation. Blooms April–October. Annual.	Not expected to occur. Suitable alkaline habitat is not present in the project area. The closest documented occurrence of heartscale is more than 10 miles east of the project area (Calflora 2022).
Brittlescale <i>Atriplex depressa</i>	—	—	1B.2	Usually in alkali scalds or alkaline clay in meadows or annual grassland; rarely associated with riparian, marshes, or vernal pools. 0–1,070 feet in elevation. Blooms April–October. Annual.	Not expected to occur. Suitable alkaline habitat is not present in the project area. The closest documented occurrence of brittlescale is approximately 5 miles east of the project area (Calflora 2022).
Lesser saltscale <i>Atriplex minuscula</i>	—	—	1B.1	Chenopod scrub, playas, valley and foothill grassland. In alkali sink and grassland in sandy, alkaline soils. 0–740 feet in elevation. Blooms May–October. Annual.	Not expected to occur. Suitable alkaline habitat is not present in the project area. The closest documented occurrence of lesser saltscale is more than 8 miles southeast of the project area (Calflora 2022).
Big-scale balsamroot <i>Balsamorhiza macrolepis</i>	—	—	1B.2	Chaparral, valley and foothill grassland, cismontane woodland. Sometimes on serpentine. 115–4,800 feet in elevation. Blooms March–June. Perennial.	Not expected to occur. Although suitable chaparral, grassland, and woodland habitat is present in the project area, big-scale balsamroot has not been documented in Contra Costa county and the closest documented occurrence is more than 11 miles southeast of the project area.
Big tarplant <i>Blepharizonia plumosa</i>	—	—	1B.1	Dry hills and plains in annual grassland. Clay to clay-loam soils; usually on slopes and often in burned areas. 100–1,660 feet in elevation. Blooms July–October. Annual.	Known to occur. Suitable grassland habitat is present in the project area and there is one documented occurrence of big tarplant in the project area (CNDD 2022).
Brewer's calandrinia <i>Calandrinia breweri</i>	—	—	4.2	Chaparral and costal scrub. Sandy or loamy soils. Disturbed sites, burns. 30–3,940 feet in elevation. Blooms March–June. Annual.	Known to occur. Suitable disturbed habitat and sandy or loamy soils are present in the project area. There are two documented occurrences in and immediately adjacent to the project area and several more in Mount Diablo SP (Calflora 2022).
Mt. Diablo fairy-lantern <i>Calochortus pulchellus</i>	—	—	1B.2	Chaparral, cismontane woodland, riparian woodland, and valley and foothill grassland. On wooded and brushy slopes. 100–3,000 feet in elevation. Blooms April–June. Geophyte.	Known to occur. Suitable chaparral, woodland, and grassland habitat is present in the project area and there are many documented occurrences in the project area (CNDD 2022).
Oakland star-tulip <i>Calochortus umbellatus</i>	—	—	4.2	Ultramafic. Chaparral, lower montane coniferous forest, broad-leafed upland forest, valley and foothill grassland, cismontane woodland. Often on serpentine. 330–2,300 feet in elevation. Blooms March–May. Geophyte.	Known to occur. Suitable chaparral, woodland, forest, and grassland habitat is present in the project area and there are several documented occurrences of Oakland star-tulip in the project area (Calflora 2022).

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Chaparral harebell <i>Campanula exigua</i>	—	—	1B.2	Ultramafic. Chaparral. Rocky sites, usually on serpentine in chaparral. 900–4,100 feet in elevation. Blooms May–June. Annual.	Known to occur. Suitable chaparral habitat is present in the project area and there are several documented occurrences in the project area (CNDDDB 2022).
Congdon's tarplant <i>Centromadia parryi</i> ssp. <i>congdonii</i>	—	—	1B.1	Valley and foothill grassland. Alkaline soils, sometimes described as heavy white clay. 0–755 feet in elevation. Blooms May–October (November). Annual.	Not expected to occur. Suitable grassland habitat is present in the project area; however, suitable alkaline soils are not present and suitable clay soil microhabitat is limited. The closest documented occurrence is approximately 1 mile southeast of the project area.
Hispid salty bird's-beak <i>Chloropyron molle</i> ssp. <i>hispidum</i>	—	—	1B.1	Alkali playa, wetland. Meadows and seeps, playas, valley and foothill grassland. In damp alkaline soils, especially in alkaline meadows and alkali sinks with <i>Distichlis</i> . 0–510 feet in elevation. Blooms June–September. Annual.	Not expected to occur. Suitable alkaline habitat is not present in the project area. This species is not known from Contra Costa County and the closest documented occurrence is more than 9 miles southeast of the project area (Calflora 2022).
Soft salty bird's-beak <i>Chloropyron molle</i> ssp. <i>molle</i>	FE	SR	1B.2	Wetland. Coastal salt marsh. In coastal salt marsh with <i>Distichlis</i> , <i>Salicornia</i> , <i>Frankenia</i> . 0–20 feet in elevation. Blooms July–November. Annual.	Not expected to occur. The project area is entirely outside of the elevational range for this species and suitable coastal salt marsh habitat is not present in the project area.
Palmate-bracted salty bird's-beak <i>Chloropyron palmatum</i>	FE	SE	1B.1	Chenopod scrub, valley and foothill grassland, meadow and seep, wetland. Usually on Pescadero silty clay that is alkaline, with <i>Distichlis</i> , <i>Frankenia</i> . 15–510 feet in elevation. Blooms May–October. Annual.	Not expected to occur. Suitable alkaline habitat is not present in the project area. This species is not known from Contra Costa County and the closest documented occurrence is more than 9 miles southeast of the project area (Calflora 2022).
Bolander's water-hemlock <i>Cicuta maculata</i> var. <i>bolanderi</i>	—	—	2B.1	Coastal saltmarshes and swamps, saline. 0–720 feet in elevation. Blooms July–September. Perennial.	Not expected to occur. Suitable coastal salt marsh and swamp habitat is not present in the project area.
Serpentine collomia <i>Collomia diversifolia</i>	—	—	4.3	Ultramafic. Chaparral, cismontane woodland. On ultramafic soils, rocky or gravelly sites. 980–1,970 feet in elevation. Blooms May–June. Annual.	Known to occur. Suitable chaparral and woodland habitat on ultramafic soils are present in the project area. There are several documented occurrences in and adjacent to the project area (Calflora 2022).
Mt. Diablo bird's-beak <i>Cordylanthus nidularius</i>	—	SR	1B.1	Strictly endemic to ultramafic soils on Mount Diablo. Chaparral. Grassy or rocky areas within serpentine chaparral. 1,590–2,410 feet in elevation. Blooms June–August. Annual.	Known to occur. Suitable serpentine chaparral habitat is present in the project area, and there are two current (less than 20 years old) documented occurrences in the project area (CNDDDB 2022).
Hoover's cryptantha <i>Cryptantha hooveri</i>	—	—	1A	Valley and foothill grassland, inland dunes. In coarse sand. 0–400 feet in elevation. Blooms April–May. Annual.	Not expected to occur. Suitable inland dune and coarse sandy grassland habitat is not present in the project area. This species is presumed extinct.

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Livermore tarplant <i>Deinandra bacigalupii</i>	—	SE	1B.1	Meadows and seeps. Alkaline meadows. 330–660 feet in elevation. Blooms June–October. Annual.	Not expected to occur. Suitable alkaline habitat is not present in the project area. This species is not known from Contra Costa County and the closest documented occurrence is more than 9 miles southeast of the project area (Calflora 2022).
Hospital Canyon larkspur <i>Delphinium californicum</i> <i>ssp. interius</i>	—	—	1B.2	Cismontane woodland, chaparral, coastal scrub. In wet, boggy meadows, openings in chaparral and in canyons. 640–3,595 feet in elevation. Blooms April–June. Perennial.	Known to occur. Suitable woodland, chaparral, and coastal scrub habitat is present in the project area. There are four documented occurrences in the project area (CNDDDB 2022).
Recurved larkspur <i>Delphinium recurvatum</i>	—	—	1B.2	Chenopod scrub, valley and foothill grassland, cismontane woodland. On alkaline soils; often in valley saltbush or valley chenopod scrub. 10–2,590 feet in elevation. Blooms March–June. Perennial.	Not expected to occur. Suitable alkaline habitat is not present in the project area. The closest documented occurrence is more than 11 miles east of the project area (Calflora 2022).
Dwarf downingia <i>Downingia pusilla</i>	—	—	2B.2	Valley and foothill grassland (mesic sites), vernal pools. Vernal lake and pool margins with a variety of associates. In several types of vernal pools. 0–1,610 feet in elevation. Blooms March–May. Annual.	Not expected to occur. Suitable vernal pool habitat is limited in the project area and the closest documented occurrence of dwarf downingia is in Solano County, north of Suisun Bay (Calflora 2022). The project area is outside of species' current range.
Lime Ridge eriastrum <i>Eriastrum erterrae</i>	—	—	1B.1	Hard packed sand at edges of chaparral. Openings or edges; alkaline or semi-alkaline, sandy soil. 660–950 feet in elevation. Blooms June–July. Annual.	Not expected to occur. Although suitable sandy chaparral patch habitat is present in the project area, this species is only known from the Lime Ridge area (Calflora 2022; CNDDDB 2022).
Antioch Dunes buckwheat <i>Eriogonum nudum</i> var. <i>psychicola</i>	—	—	1B.1	Interior dunes. Grows on the Antioch Dunes (interior dune system) with <i>Lupinus albifrons</i> , <i>Gutierrezia californica</i> , and introduced grasses and other weeds. Primary host plant for endangered Lange's metalmark butterfly. 0–65 feet in elevation. Blooms July–October. Perennial.	Not expected to occur. Interior dune habitat is not present in the project area and the project area is outside the elevational range of this species.
Mt. Diablo buckwheat <i>Eriogonum truncatum</i>	—	—	1B.1	Chaparral, coastal scrub, valley and foothill grassland. Dry, exposed clay or sandy substrates. 344–1,148 feet in elevation. Blooms April–September. Annual.	Known to occur. Suitable chaparral, coastal scrub, and grassland habitat is present in the project area and there is one current documented occurrence of this species in the project area (CNDDDB 2022). Mount Diablo buckwheat was presumed extinct and rediscovered in 2005.

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Bay buckwheat <i>Eriogonum umbellatum</i> var. <i>bahiiforme</i>	—	—	4.2	Ultramafic. Cismontane woodland, lower montane coniferous forest. Rocky sites; often serpentine. 2,297–7,218 feet in elevation. Blooms July–September. Perennial.	Known to occur. Suitable woodland and forest habitat is present in the project area. There are several documented occurrences in and adjacent to the project area (Calflora 2022).
Jepson's woolly sunflower <i>Eriophyllum jepsonii</i>	—	—	4.3	Coastal scrub, chaparral, cismontane woodland. Sometimes on serpentine. 655–3,365 feet in elevation. Blooms April–July. Perennial.	May occur. Suitable coastal scrub, chaparral, and woodland habitat is present in the project area. There are two current (less than 20 years old) documented occurrences adjacent to the project area and several historical occurrences in the vicinity of the project (Calflora 2022).
Jepson's coyote-thistle <i>Eryngium jepsonii</i>	—	—	1B.2	Vernal pools, valley and foothill grassland. Clay. 10–984 feet in elevation. Blooms April–August. Perennial.	May occur. Suitable vernal pool habitat is limited in the project area. Plants in the genus <i>Eryngium</i> were observed during the reconnaissance survey conducted on October 12, 2022. However, the plants could not be identified to species because plants had senesced. The closest documented occurrences of Jepson's coyote-thistle are approximately 2.5 miles east and northwest of the project area (Calflora 2022).
Contra Costa wallflower <i>Erysimum capitatum</i> var. <i>angustatum</i>	FE	SE	1B.1	Inland dunes. Stabilized dunes of sand and clay near Antioch along the San Joaquin River. 10–66 feet in elevation. Blooms March–July. Perennial.	Not expected to occur. Suitable inland dune habitat is not present in the project area and the project area is outside the elevational range of this species.
Diamond-petaled California poppy <i>Eschscholzia rhombipetala</i>	—	—	1B.1	Valley and foothill grassland. Alkaline, clay slopes and flats. 100–2,050 feet in elevation. Blooms March–April. Annual.	Not expected to occur. Suitable alkaline grassland habitat is not present in the project area and suitable clay soils are limited. The closest documented occurrence of this species is a 1994 observation from the Antioch Dunes National Wildlife Refuge. All other occurrences in the vicinity are historical occurrences from the 1880's (Calflora 2022).
San Joaquin spearscale <i>Extriplex joaquinana</i>	—	—	1B.2	Alkali playa. In seasonal alkali wetlands or alkali sink scrub with <i>Distichlis spicata</i> , <i>Frankenia</i> . 0–2,740 feet in elevation. Blooms April–October. Annual.	Not expected to occur. Suitable alkali habitat is not present in the project area. The closest current (less than 20 years ago) documented occurrence is approximately 1 mile south of the project area (CNDDDB 2022).
Fragrant fritillary <i>Fritillaria liliacea</i>	—	—	1B.2	Coastal scrub, valley and foothill grassland, coastal prairie, cismontane woodland. Often on serpentine; various soils reported though usually on clay, in grassland. 10–1,310 feet in elevation. Blooms February–April. Geophyte.	May occur. Suitable coastal scrub, grassland, and woodland habitat is present in the project area. Several documented occurrences are approximately 0.5-mile northwest of the project area (CNDDDB 2022 and Calflora 2022).

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Phlox-leaf serpentine bedstraw <i>Galium andrewsii</i> ssp. <i>gatense</i>				Chaparral, cismontane woodland, lower montane coniferous forest. Rocky, serpentinite. 490–4,755 feet in elevation. April–July. Perennial.	Known to occur. Suitable chaparral, woodland, and forest habitat is present in the project area. There are several documented occurrences in the summit and Long Ridge fuel break project areas (Calflora 2022).
Toren's grimmia <i>Grimmia torenii</i>	—	—	1B.3	Cismontane woodland, lower montane coniferous forest, chaparral. Openings, rocky, boulder and rock walls, carbonate, volcanic. 1,070–3,800 feet in elevation. Bryophyte (moss).	Known to occur. Suitable rocky habitat within woodland, forest, and chaparral is present in the project area. There are two documented occurrences in the project area (CNDDDB 2022).
Diablo helianthella <i>Helianthella castanea</i>	—	—	1B.2	Usually in chaparral/oak woodland interface in rocky, azonal soils. Often in partial shade. 148–3,510 feet in elevation. Blooms March–June. Perennial.	Known to occur. Suitable chaparral and woodland interface habitat is present in the project area. There are many documented occurrences in the project area (CNDDDB 2022).
Brewer's western flax <i>Hesperolinon breweri</i>	—	—	1B.2	Ultramafic. Chaparral, cismontane woodland, valley and foothill grassland. Often in rocky serpentine soil in serpentine chaparral and serpentine grassland. 640–2,904 feet in elevation. Blooms May–July. Annual.	Known to occur. Suitable chaparral, woodland, and grassland habitat, and serpentine microhabitat is present in the project area. Several current and historical occurrences are present in the fuel break treatment areas (CNDDDB 2022 and Calflora 2022).
Woolly rose-mallow <i>Hibiscus lasiocarpus</i> var. <i>occidentalis</i>	—	—	1B.2	Moist, freshwater-soaked riverbanks and low peat islands in sloughs; can also occur on riprap and levees. In California, known from the delta watershed. 0–395 feet in elevation. Blooms June–September. Geophyte.	Not expected to occur. Suitable riverbank, peat island, or levee microhabitat is not present in the project area and the project area is outside the elevational range of this species.
Loma Prieta hoita <i>Hoita strobilina</i>	—	—	1B.1	Ultramafic. Chaparral, cismontane woodland, riparian woodland. Serpentine; mesic sites. 200–3,200 feet in elevation. Blooms May–July. Perennial.	Not expected to occur. Suitable serpentine and mesic microhabitat in chaparral and woodland habitat are present in the project area. However, this species is only known in the project vicinity from a possibly extirpated historic (1856) occurrence documented approximately 6 miles southwest of the project area.
Santa Cruz tarplant <i>Holocarpha macradenia</i>	FT	SE	1B.1	Coastal prairie, coastal scrub, valley and foothill grassland. Light, sandy soil or sandy clay; often with nonnatives. Less than 650 feet in elevation. Blooms June–October. Annual.	Not expected to occur. Although suitable grassland and coastal scrub habitat is present in the project area, the only extant population of Santa Cruz tarplant in the east bay is at Wildcat Canyon Regional Park (CNDDDB 2022 and Calflora 2022).
Carquinez goldenbush <i>Isocoma arguta</i>	—	—	1B.1	Alkaline soils, flats, lower hills. On low benches near drainages and on tops and sides of mounds in swale habitat. 0–165 feet in elevation. Blooms August–December. Perennial.	Not expected to occur. Suitable alkaline microhabitat is not present in the project area and the project area is outside the elevational range of this species.

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Contra Costa goldfields <i>Lasthenia conjugens</i>	FE	—	1B.1	Valley and foothill grassland, vernal pools, alkaline playas, cismontane woodland. Vernal pools, swales, low depressions, in open grassy areas. Less than 330 feet in elevation. Blooms March–June. Annual.	Not expected to occur. Suitable vernal pool and swale habitat is present in the project area. However, Contra Costa goldfields is extirpated from the vicinity of the project area (CNDDDB 2022) and the project area is outside the elevational range of this species.
Delta tule pea <i>Lathyrus jepsonii</i> var. <i>jepsonii</i>	—	—	1B.2	Freshwater and brackish marshes. Often found with <i>Typha</i> , <i>Aster lentus</i> , <i>Rosa californica</i> , <i>Juncus</i> spp., <i>Scirpus</i> . Usually on marsh and slough edges. 0–20 feet in elevation. Blooms May–July. Perennial.	Not expected to occur. The project area is outside the elevational range of this species.
Serpentine leptosiphon <i>Leptosiphon ambiguus</i>	—	—	4.2	Ultramafic. Cismontane woodland, coastal scrub, valley and foothill grassland (margin with chaparral). Grassy areas on serpentine soil. 394–3,707 feet in elevation. Blooms March–June. Annual.	Known to occur. Suitable woodland, coastal scrub, and grassland habitat and serpentine microhabitat are present in the project area. There is one documented occurrence in the fuel break treatment area and a couple other occurrences adjacent to the project area (Calflora 2022).
Mason's lilaeopsis <i>Lilaeopsis masonii</i>	—	SR	1B.1	Freshwater and brackish marshes, riparian scrub. Tidal zones, in muddy or silty soil formed through river deposition or river bank erosion. 0–35 feet in elevation. Blooms April–November. Geophyte.	Not expected to occur. Suitable tidal zone habitat is not present in the project area and the project area is outside of the elevational range of this species.
Delta mudwort <i>Limosella australis</i>	—	—	2B.1	Usually on mud banks of the Delta in marshy or scrubby riparian associations; often with <i>Lilaeopsis masonii</i> . 0–20 feet in elevation. Blooms May–August. Perennial.	Not expected to occur. Suitable mud bank habitat is not present in the project area and the project area is outside the elevational range and known distribution of this species.
Showy golden madia <i>Madia radiata</i>	—	—	1B.1	Valley and foothill grassland, cismontane woodland. Mostly on adobe clay in grassland or among shrubs. 250–4,000 feet in elevation. Blooms March–May. Annual.	Not expected to occur. Although suitable grassland and woodland habitat is present in the project area, this species is currently only known from the Antioch Dunes (Calflora 2022 and CNDDDB 2022).
Hall's bush-mallow <i>Malacothamnus hallii</i>	—	—	1B.2	Ultramafic. Chaparral, coastal scrub. Some populations on serpentine. 0–2,500 feet in elevation. Blooms May–September (October). Perennial.	Known to occur. Suitable chaparral and coastal scrub habitat is present in the project area. There are several occurrences in the project area and vicinity, but this species has not been confirmed in the project area since 1998 (CNDDDB 2022 and Calflora 2022).
Sylvan microseris <i>Microseris sylvatica</i> = <i>Sylvan scorzonella</i>	—	—	4.2	Chaparral, cismontane woodland, Great Basin scrub, pinyon-juniper woodland, valley and foothill grassland. 150–4,920 feet in elevation. Blooms March–June. Perennial.	May occur. Suitable chaparral, woodland, and grassland habitat is present in the project area. There are several historical documented occurrences adjacent to the project area (Calflora 2022).

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Woodland woollythreads <i>Monolopia gracilens</i>	—	—	1B.2	Sometimes on ultramafic soil, serpentine grassland. Chaparral, valley and foothill grassland, cismontane woodland, broad-leaved upland forest, north coast coniferous forest. Grassy sites, in openings; sandy to rocky soils. Often seen on serpentine after burns but may have only weak affinity to serpentine. 330–3,940 feet in elevation. Blooms March–July. Annual.	Known to occur. Suitable chaparral, grassland, woodland, and forest habitat are present in the project area. There are several documented occurrences in the project area (CNDDDB 2022).
Lime Ridge navarretia <i>Navarretia gowenii</i>	—	—	1B.1	Chaparral. On calcium carbonate-rich soil with high clay content. 590–1,000 feet in elevation. Blooms May–June. Annual.	Not expected to occur. Although suitable clay soils in chaparral are present in the project area, this species is only known from the Lime Ridge area (CNDDDB 2022 and Calflora 2022).
Tehama navarretia <i>Navarretia heterandra</i>	—	—	4.3	Wetland. Vernal pools, valley and foothill grassland. Mesic sites in grassland or vernal pools. 100–3,315 feet in elevation. Blooms April–June. Annual.	Known to occur. Suitable vernal pool and mesic habitat in grassland are present in the project area. There are several documented occurrences in and adjacent to the project area (Calflora 2022).
Shining navarretia <i>Navarretia nigelliformis</i> ssp. <i>radians</i>	—	—	1B.2	In grassland, and sometimes in vernal pools. 200–3,200 feet in elevation. Blooms, April–July. Annual.	May occur. Suitable grassland habitat is present in the project area. Vernal pool habitat is limited. The closest known occurrence is approximately 3.5 miles northeast of the project area (CNDDDB 2022).
Prostrate vernal pool navarretia <i>Navarretia prostrata</i>	—	—	1B.2	Alkaline floodplains, coastal scrub, valley and foothill grassland, vernal pools, meadows and seeps. Mesic, alkaline sites. 10–4,050 feet in elevation. Blooms April–July. Annual.	Not expected to occur. Suitable alkaline habitat is not present in the project area. There are no documented occurrences of this species in Contra Costa county (Calflora 2022).
Antioch Dunes evening-primrose <i>Oenothera deltooides</i> ssp. <i>howellii</i>	FE	SE	1B.1	Interior dunes. Remnant river bluffs and sand dunes east of Antioch. 0–100 feet in elevation. Blooms March–September. Perennial.	Not expected to occur. Suitable dune habitat is not present in the project area and the project area is outside of the elevational range of this species.
Mt. Diablo phacelia <i>Phacelia phacelioides</i>	—	—	1B.2	Strongly associated with ultramafic soil. Chaparral, cismontane woodland. Adjacent to trails, on rock outcrops and talus slopes; sometimes on serpentine. 1985–4,410 feet in elevation. Blooms April–May. Annual.	Known to occur. Suitable chaparral and woodland habitat with ultramafic soil are present in the project area. There are four documented occurrences in the project area (CNDDDB 2022).
Michael's rein orchid <i>Piperia michaelii</i>	—	—	4.2	Coastal bluff scrub, coastal scrub, cismontane woodland, chaparral, closed-cone coniferous forest, lower montane coniferous forest. Mudstone and humus, generally dry sites. 10–3,000 feet in elevation. Blooms April–August. Perennial.	May occur. Suitable coastal scrub, woodland, chaparral, and forest habitat is present in the project area. There are four documented occurrences of this species adjacent to the project area in Mount Diablo SP (Calflora 2022).

Species	Listing Status ¹ Federal	Listing Status ¹ State	CRPR	Habitat	Potential for Occurrence ²
Hairless popcornflower <i>Plagiobothrys glaber</i>	—	—	1A	Salt marsh, vernal pool, wetland. Meadows and seeps, marshes and swamps. Coastal salt marshes and alkaline meadows. 15–590 feet in elevation. Blooms March–May. Annual.	Not expected to occur. Suitable salt marsh and alkaline meadow habitat are not present in the project area, and this species is presumed extinct.
Bearded popcornflower <i>Plagiobothrys hystriculus</i>	—	—	1B.1	Valley and foothill grassland, vernal pools. 0–900 feet in elevation. Blooms April–May. Annual.	Not expected to occur. Suitable vernal pool habitat is limited in the project area and the closest documented occurrence of dwarf downingia is in Solano County, north of Suisun Bay (Calflora 2022).
Oregon polemonium <i>Polemonium carneum</i>	—	—	2B.2	Coastal prairie, coastal scrub, lower montane coniferous forest. 0–6,000 feet in elevation. Blooms April–September. Perennial.	Not expected to occur. Suitable coastal scrub and forest habitat are present in the project area. However, this species is not known from Contra Costa County and the closest documented occurrences are from Alameda County (Calflora 2022).
Eel-grass pondweed <i>Potamogeton zosteriformis</i>	—	—	2B.2	Wetland. Marshes and swamps. Ponds, lakes, streams. 295–7,005 feet in elevation. Blooms June–July. Annual.	Not expected to occur. Suitable marsh, pond, and stream habitat are present in the project area. However, eel-grass pondweed is only known in the region from two 1949 documented occurrences at Webb Island in the Delta (Calflora 2022).
California alkali grass <i>Puccinellia simplex</i>	—	—	1B.2	Meadows and seeps, chenopod scrub, valley and foothill grasslands, vernal pools. Alkaline, vernal mesic. Sinks, flats, and lake margins. 0–3,000 feet in elevation. Blooms March–May. Annual.	Not expected to occur. Suitable alkaline habitat is not present in the project area and vernal mesic habitat is limited. The closest documented occurrences are from the Los Vaqueros Reservoir and Byron areas (CNDDDB 2022 and Calflora 2022).
Lobb's aquatic buttercup <i>Ranunculus lobbii</i>	—	—	4.2	Cismontane woodland, valley and foothill grassland, vernal pools, north coast coniferous forest. Mesic sites. 50–1,540 feet in elevation. Blooms February–May. Annual.	May occur. Suitable mesic habitat in woodland, grassland, and forest is present in the project area. Vernal pool habitat is limited. There are four documented occurrences adjacent to the project area (Calflora 2022).
Rock sanicle <i>Sanicula saxatilis</i>	—	SR	1B.2	Broadleafed upland forest, chaparral, valley and foothill grassland. Bedrock outcrops and talus slopes in chaparral or oak woodland habitat. 2,100–4,100 feet in elevation. Blooms April–May. Perennial.	Known to occur. Suitable talus slopes and bedrock outcrop microhabitats are present in the project area. There are three documented occurrences in the project area and several other documented occurrences adjacent to the project area (CNDDDB 2022 and Calflora 2022).

Species	Listing Status ¹ Federal	Listing Status ¹ State	CRPR	Habitat	Potential for Occurrence ²
Chaparral ragwort <i>Senecio aphanactis</i>	—	—	2B.2	Chaparral, cismontane woodland, coastal scrub. Drying alkaline flats. 65–2,805 feet in elevation. Blooms January–April (May). Annual.	Not expected to occur. Suitable drying alkaline flat microhabitat is not present in the project area. This species is known in the vicinity of the project area from two historical (1933 and 1888) documented occurrences (CNDDDB 2022 and Calflora 2022).
Keck's checkerbloom <i>Sidalcea keckii</i>	FE	—	1B.1	Strongly associated with ultramafic soil. Grassy slopes in blue oak woodland. On serpentine-derived, clay soils, at least sometimes. 280–1,660 feet in elevation. Blooms April–May (June). Annual.	Not expected to occur. Suitable serpentine and clay soils in grassy slopes in woodland are present in the project area. However, Keck's checkerbloom is not known from Contra Costa or Alameda counties and the closest documented occurrence is north of Suisun Bay in the Montezuma Hills (Calflora 2022).
Long-styled sand-spurrey <i>Spergularia macrotheca</i> var. <i>longistyla</i>	—	—	1B.2	Marshes and swamps, meadows and seeps. Alkaline. 0–840 feet in elevation. Blooms February–May. Perennial.	Not expected to occur. Suitable alkaline wetland habitat is not present in the project area. The closest known documented occurrence is in the Los Vaqueros Reservoir area (CNDDDB 2022 and Calflora 2022).
Most beautiful jewelflower <i>Streptanthus albidus</i> ssp. <i>peramoenus</i>	—	—	1B.2	Chaparral, valley and foothill grassland, cismontane woodland. Serpentine outcrops, on ridges and slopes. 310–3,280 feet in elevation. Blooms April–September. Annual.	Known to occur. Suitable serpentine microhabitat is present in the project area. There are four documented occurrences in the project area and several other historical occurrences adjacent to the project area (CNDDDB 2022 and Calflora 2022).
Mt. Diablo jewelflower <i>Streptanthus hispidus</i>	—	—	1B.3	Valley and foothill grassland, chaparral. Talus or rocky outcrops. 804–3,199 feet in elevation. Blooms March–June. Annual.	Known to occur. Suitable talus and rocky outcrop microhabitats are present in the project area. There are several documented occurrences in the project area (CNDDDB 2022). This species is endemic to Mount Diablo.
Northern slender pondweed <i>Stuckenia filliformis</i> ssp. <i>alpina</i>	—	—	2B.2	Shallow, clear water of lakes and drainage channels, freshwater marsh and riparian areas. 980–7,050 feet in elevation. Blooms May – July. Perennial.	Known to occur. Suitable riparian, drainage channel, and marsh habitat are present in the project area. There is one documented occurrence of this species in the project area (CNDDDB 2022).
Suisun Marsh aster <i>Symphotrichum lentum</i>	—	—	1B.2	Marshes and swamps (brackish and freshwater). Most often seen along sloughs with <i>Phragmites</i> , <i>Scirpus</i> , <i>blackberry</i> , <i>Typha</i> . 0–100 feet in elevation. Blooms, May–November. Geophyte.	Not expected to occur. Suitable marsh habitat is limited in the project area and the project area is outside of the elevational range of this species.
Saline clover <i>Trifolium hydrophilum</i> = <i>T. depauperatum</i> var. <i>hydrophilum</i>	—	—	1B.2	Salt marshes and open areas in alkaline soils. Mesic, alkaline sites. 0–990 feet in elevation. Blooms April–June. Annual.	Not expected to occur. Suitable alkaline soil habitat is not present in the project area. The closest documented occurrences are in the Richmond shoreline area (Calflora 2022).

Species	Listing Status ¹ Federal	Listing Status ¹ State	CRPR	Habitat	Potential for Occurrence ²
Coastal triquetrella <i>Triquetrella californica</i>	—	—	1B.2	Coastal bluff scrub, coastal scrub. Grows within 100 feet from the coast in coastal scrub, grasslands and in open gravels on roadsides, hillsides, rocky slopes, and fields. On gravel or thin soil over outcrops. 30–330 feet in elevation. Bryophyte.	Not expected to occur. The project area is outside of the known distribution and elevational range of the species.
Caper-fruited tropidocarpum <i>Tropidocarpum capparideum</i>	—	—	1B.1	Valley and foothill grassland. Alkaline clay. 0–1,180 feet in elevation. Blooms March–April. Annual.	Not expected to occur. Suitable alkaline clay microhabitat is not present in the project area. The closest documented occurrences of this species are an 1896 collection from approximately 1 mile north of the project area and several historical occurrences from the Byron Springs area (CNDDDB 2022 and Calflora 2022).
Oval-leaved viburnum <i>Viburnum ellipticum</i>	—	—	2B.3	Chaparral, cismontane woodland, lower montane coniferous forest. 705–4,590 feet in elevation. Blooms May–June. Perennial.	Known to occur. Suitable chaparral, woodland, and forest habitat are present in the project area. There are two documented occurrences in the project area and two additional occurrences in the project vicinity (CNDDDB 2022).

Notes: CRPR = California Rare Plant Rank; CEQA = California Environmental Quality Act; CESA = California Endangered Species Act; Evolutionarily Significant Unit, California Natural Diversity Database = CNDDDB, ESA = Endangered Species Act; NPPA = Native Plant Protection Act

¹ Legal Status Definitions

Federal:

FE Federally Listed as Endangered (legally protected by ESA)

FT Federally Listed as Threatened (legally protected by ESA)

State:

SE State Listed as Endangered (legally protected by CESA)

SR State Listed as Rare (legally protected by NPPA)

California Rare Plant Ranks (CRPR):

1A Plant species that are presumed extirpated or extinct because they have not been seen or collected in the wild in California for many years.

A plant is extinct if it no longer occurs anywhere. A plant that is extirpated from California has been eliminated from California but may still occur elsewhere in its range.

1B Plant species considered rare or endangered in California and elsewhere (protected under CEQA, but not legally protected under ESA or CESA).

2B Plant species considered rare or endangered in California but more common elsewhere (protected under CEQA, but not legally protected under ESA or CESA).

CRPR Threat Ranks:

0.1 Seriously threatened in California (over 80% of occurrences threatened; high degree and immediacy of threat)

0.2 Moderately threatened in California (20–80% occurrences threatened; moderate degree and immediacy of threat)

0.3 Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

² Potential for Occurrence Definitions

Not expected to occur: Species is unlikely to be present because of poor habitat quality, lack of suitable habitat features, or restricted current distribution of the species.

May occur: Suitable habitat is available and there have been nearby recorded occurrences of the species.

Known to occur: The species has been observed within the treatment areas.

Sources: Calflora 2022, CNDDDB 2022.

Special-Status Wildlife Species Known to Occur in the Vicinity of the Treatment Areas and Their Potential for Occurrence in the Treatment Areas

Species	Listing Status ¹ Federal	Listing Status ¹ State	Habitat	Potential for Occurrence ²
Amphibians and Reptiles				
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. Mostly south-facing slopes and ravines, with rock outcrops, deep crevices or abundant rodent burrows, where shrubs form a vegetative mosaic with oak trees and grasses.	Known to occur. Habitat suitable for Alameda whipsnake occupancy, breeding, foraging, and dispersal (scrub habitats and adjacent grassland and woodlands, especially with rock outcrops and mammal burrows) is present throughout the project area, and many documented occurrences of the species are recorded in the project area (CNDDDB 2022, iNaturalist 2022). The majority of the project area falls within USFWS-designated Alameda whipsnake critical habitat. A 2004 trapping study of Alameda whipsnake that overlapped the project area determined that a healthy breeding population of Alameda whipsnake is present in Mount Diablo SP (Swaim 2004).
California glossy snake <i>Arizona elegans occidentalis</i>	—	SSC	Patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular ranges south to Baja California. Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils.	May occur. Habitat suitable for California glossy snake (scrub and grassland with sandy soil) is present in the project area. Although no documented occurrences of this species are recorded in Mount Diablo SP or the project area (CNDDDB 2022, iNaturalist 2022), the project is located within the known range of the species. Documentation may be underrepresented because this is an elusive species which is difficult to identify.
California red-legged frog <i>Rana draytonii</i>	FT	SSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	Known to occur. Habitat suitable for breeding and upland dispersal and foraging is present in the project area, and 42 adult California red-legged frogs were observed in Falcon Pond (located in the southeast portion of the project area) during the October 2022 reconnaissance survey. Additionally, California red-legged frogs have been documented in many other waterbodies in the project area, including several breeding populations (CNDDDB 2022), and additional documented occurrences of this species are located within 1 mile of the project area. California red-legged frog is anticipated to use aquatic and upland habitat throughout the project area for breeding, upland dispersal, and foraging. The project area partially overlaps USFWS-designated critical habitat for this species.

Species	Listing Status ¹ Federal	Listing Status ¹ State	Habitat	Potential for Occurrence ²
California tiger salamander - central California DPS <i>Ambystoma californiense</i> pop. 1	FT	ST	Lives in vacant or mammal-occupied burrows throughout most of the year; in grassland, savanna, or open woodland habitats. Need underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding.	Known to occur. Habitat suitable for breeding and foraging is present in the grassland ponds and wetlands in the project area. Recent occurrences are recorded 0.7-mile northeast of the proposed fuel break along Knob Cone Point Road as recently as 2007 (CNDDDB 2022), and aquatic habitat is continuous and consistent between these documented occurrences and the eastern portion of the project area. CSP staff members have observed California tiger salamanders using ponds in the southeast portion of the project area in 2021 on the Save Mount Diablo property, where conditions may support California tiger salamander breeding (McClain pers. comm, 2022).
Coast horned lizard <i>Phrynosoma blainvillii</i>	—	SSC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	Known to occur. Habitat suitable for coast horned lizard (sandy washes with plentiful ants for foraging) is present in chaparral and open areas throughout the project area, especially along roads and in chaparral near the peak of Mount Diablo. Occurrences have been documented in the project area (CNDDDB 2022, iNaturalist 2022).
Foothill yellow-legged frog <i>Rana boylei</i>	—	SE SSC	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Need at least some cobble-sized substrate for egg-laying. Need at least 15 weeks to attain metamorphosis.	Not expected to occur. Habitat suitable for foothill yellow-legged frog (shaded, flowing streams with a rocky substrate) is not present in the project area. There are four historic (1912, 1931, 1953, and 1953) occurrences documented within the vicinity of the project area, marked in the CNDDDB as “extirpated” or “possibly extirpated” (CNDDDB 2022). Streams and waterways in the area do not currently convey water for a long enough period during the year to support this species. Additionally, Mount Diablo SP is well-surveyed, and no recent records are known. Biological survey efforts occur frequently in the project area through volunteers, CSP staff, and public citizens documenting their occurrences in citizen science applications such as iNaturalist. No modern records of this species are documented within the park, and the species is not expected to occur.
Giant gartersnake <i>Thamnophis gigas</i>	FT	ST	Prefers freshwater marsh and low gradient streams. Has adapted to drainage canals and irrigation ditches. This is the most aquatic of the garter snakes in California.	Not expected to occur. Habitat suitable for giant garter snake (freshwater marsh and drainage canals) is not present in the project area, and the species’ range does not extend into the project area.

Species	Listing Status ¹ Federal	Listing Status ¹ State	Habitat	Potential for Occurrence ²
Northern California legless lizard <i>Anniella pulchra</i>	—	SSC	Sandy or loose loamy soils under sparse vegetation in coastal dunes and scrub. Soil moisture is essential. They prefer soils with a high moisture content.	Not expected to occur. Habitat suitable for northern California legless lizard (sandy soils in coastal dunes and scrub) is not present in the project area.
San Joaquin coachwhip <i>Masticophis flagellum ruddocki</i>	—	SSC	Open, dry habitats with little or no tree cover. Found in valley grassland and saltbush scrub in the San Joaquin Valley. Needs mammal burrows for refuge and oviposition sites.	May occur. Habitat suitable for San Joaquin coachwhip (open areas in grassland and saltbush scrub) is present in the project area. Although there are no documented occurrences of this species in the project area (CNDDDB 2022, iNaturalist 2022), portions of the project area are mapped in the San Joaquin coachwhip connectivity modeling as “core” and “patch” habitat (BIOS 2014a).
Western pond turtle <i>Emys marmorata</i>	—	SSC	Ponds, marshes, rivers, streams, and irrigation ditches, usually with aquatic vegetation, below 6,000 feet elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.3-mile from water for egg-laying.	May occur. Habitat suitable for western pond turtle (streams and ponds and uplands surrounding them) is present in the project area in Falcon Pond, Pine Creek, and other waterways throughout the project area. Although no records of this species are documented within the project area, several occurrences are documented in nearby Morgan Territory Regional Preserve, and there are other occurrences associated with Marsh Creek that has aquatic connectivity to the project area (CNDDDB 2022).
Western spadefoot <i>Spea hammondi</i>	—	SSC	Cismontane woodland, coastal scrub, valley and foothill grassland, vernal pool, and wetlands. Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	May occur. Habitat suitable for western spadefoot (grasslands and wetland habitat) is present in the project area. Mount Diablo SP is located at the western edge of the known range for western spadefoot, and a portion of the project area is mapped as predicted habitat for western spadefoot (BIOS 2016a). No occurrences of this species are documented in the project area (CNDDDB 2022, iNaturalist 2022).
Birds				
American peregrine falcon <i>Falco peregrinus anatum</i>	FD	SD FP	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures. Nest consists of a scrape or a depression or ledge in an open site.	Known to occur. Habitat suitable for American peregrine falcon nesting (cliffs and structures near waterways) is present throughout the project area. At least one pair of peregrine falcons are known to nest in the southwest corner of Mount Diablo SP (McClain pers. comm, 2022), and this species is known to forage throughout the park.

Species	Listing Status ¹ Federal	Listing Status ¹ State	Habitat	Potential for Occurrence ²
American white pelican <i>Pelecanus erythrorhynchos</i>	—	SSC	Colonial nester on large interior lakes. Nests on large lakes, providing safe roosting and breeding places in the form of well-sequestered islets.	Not expected to occur. American white pelican may potentially fly overhead en route from inland breeding sites to the coast. However, habitat suitable for American white pelican nesting and foraging (large interior lakes) is not present in the project area.
Bald eagle <i>Haliaeetus leucocephalus</i>	FD	SE FP	Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water. Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.	Not expected to occur. Habitat suitable for bald eagle nesting, foraging, and overwintering (large trees adjacent to fish-bearing waterways) is not present in the project area.
Bank swallow <i>Riparia riparia</i>	—	ST	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	Not expected to occur. Although habitat suitable for bank swallow nesting (riparian areas with eroded banks) is present along several streams in the project area, the east bay including Mount Diablo SP is outside of the range for this species (BIOS 2016b).
Black skimmer <i>Rynchops niger</i>	—	SSC	Nests on gravel bars, low islets, and sandy beaches, in unvegetated sites. Nesting colonies usually less than 200 pairs.	Not expected to occur. Habitat suitable for black skimmer nesting and foraging (gravel bars and sandy beaches) or foraging habitat (aquatic habitat) is present in the project area.
Bryant's savannah sparrow <i>Passerculus sandwichensis alaudinus</i>	—	SSC	Requires low, tidally influenced areas and grasslands, sometimes pickleweed or saltgrass marsh extending into grasslands adjacent to marshlands. Also known to breed in dairy pastures where grasses grow tall along fences and canals. Breeding usually occurs adjacent to a moist drainage, and generally breeding does not occur in drier grasslands. Range is restricted to the coastal fog belt in California.	Not expected to occur. This species known range does not overlap with the project area (Shuford and Gardali, 2008).
Burrowing owl <i>Athene cunicularia</i>	—	SSC	Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	May occur. Habitat suitable for burrowing owl overwintering and nesting (grazed or mowed grassland with suitable mammal activity to provide burrow habitat) is present at and adjacent to the project area. Visitors to the park have documented occurrences of burrowing owl with photos (iNaturalist 2022). The project area is mapped as "patch" habitat, and areas to the north and south of Mount Diablo SP are considered "core" habitat (BIOS 2016c).
California (Ridgway's) clapper rail <i>Rallus obsoletus obsoletus</i>	FE	SE FP	Brackish marsh, marsh and swamp, salt marsh, wetlands. Salt-water and brackish marshes traversed by tidal sloughs in the vicinity of San Francisco Bay. Associated with abundant growths of pickleweed, but feeds away from cover on invertebrates from mud-bottomed sloughs.	Not expected to occur. Habitat suitable for California Ridgway's rail (tidally influenced marsh and wetland) is not present in the project area.

Species	Listing Status ¹ Federal	Listing Status ¹ State	Habitat	Potential for Occurrence ²
California black rail <i>Laterallus jamaicensis coturniculus</i>	—	ST FP	Brackish marsh, freshwater marsh, marsh and swamp, salt marsh, wetland. Inhabits freshwater marshes, wet meadows, and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	Not expected to occur. Habitat suitable for California black rail (tidally influenced marsh and wetland) is not present in the project area.
California least tern <i>Sternula antillarum browni</i>	FE	SE FP	Nests along the coast from San Francisco Bay south to northern Baja California. Colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, landfills, or paved areas.	Not expected to occur. Habitat suitable for California least tern breeding (coastal sandy beaches) is not present in the project area.
Golden eagle <i>Aquila chrysaetos</i>	—	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.	Known to occur. Habitat suitable for golden eagle breeding (diverse array of large trees in forests, open areas in grasslands, cliffs, and structures) is present in the project area, and golden eagles are known to nest in the project area. The foothills of Mount Diablo SP support the largest concentration of breeding golden eagles on earth (Kindsvater 2019).
Grasshopper sparrow <i>Ammodramus savannarum</i>	—	SSC	Valley and foothill grassland. Dense grasslands on rolling hills, lowland plains, in valleys and on hillsides on lower mountain slopes. Favors native grasslands with a mix of grasses, forbs and scattered shrubs. Loosely colonial when nesting.	May occur. Habitat suitable for grasshopper sparrow breeding (native grassland and rolling plains) is present in the project area.
Loggerhead shrike <i>Lanius ludovicianus</i>	—	SSC	Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	May occur. Habitat suitable for loggerhead shrike breeding (open to forested areas with barbed wire or thorn bushes for perching) is present in the project area, and while infrequent, loggerhead shrike is documented year-round in the vicinity (eBird 2022).
Long-eared owl <i>Asio otus</i>	—	SSC	Riparian bottomlands grown to tall willows and cottonwoods; also, belts of live oak paralleling stream courses. Require adjacent open land productive of mice and the presence of old nests of crows, hawks, or magpies for breeding.	May occur. Long-eared owl may use the project area for overwintering or as a migration corridor, however, the project area is considered the species non-breeding habitat (Marks et al 2020). This species has been documented in the town of Clayton (iNaturalist 2022), approximately 0.5 mile north of the proposed project, and suitable foraging habitat is present in the project area.
Mountain plover <i>Charadrius montanus</i>	—	SSC	Short grasslands, freshly plowed fields, newly sprouting grain fields, and sometimes sod farms. Short vegetation, bare ground, and flat topography. Prefers grazed areas and areas with burrowing rodents.	Not expected to occur. This species does not breed in California, and its range is restricted to the Central Valley. Mountain plover range does not overlap the project area, and this species is not anticipated to occur (BIOS 2016d).

Species	Listing Status ¹ Federal	Listing Status ¹ State	Habitat	Potential for Occurrence ²
Northern harrier <i>Circus hudsonius</i>	—	SSC	Nest and forage in grasslands, from salt grass in desert sink to mountain cienagas. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.	Not expected to occur. Habitat suitable for northern harrier (wide, open marshland) is not present in the project area.
Saltmarsh common yellowthroat <i>Geothlypis trichas sinuosa</i>	—	SSC	Resident of the San Francisco Bay region, in fresh and saltwater marshes. Requires thick, continuous cover down to water surface for foraging; tall grasses, tule patches, willows for nesting.	Not expected to occur. Habitat suitable for saltmarsh common yellowthroat (saltwater marsh) is not present in the project area.
San Pablo song sparrow <i>Melospiza melodia samuelis</i>	—	SSC	Resident of salt marshes along the north side of San Francisco and San Pablo bays. Inhabits tidal sloughs in the Salicornia marshes; nests in <i>Grindelia</i> bordering slough channels.	Not expected to occur. Habitat suitable for San Pablo song sparrow (tidal sloughs) is not present in the project area.
Short-eared owl <i>Asio flammeus</i>	—	SSC	Found in swamp lands, both fresh and salt water; lowland meadows; irrigated alfalfa fields. Tule patches/tall grass needed for nesting/daytime seclusion. Nests on dry ground in depression concealed in vegetation.	Not expected to occur. Habitat suitable for short-eared owl (swampland or alfalfa fields) is not present in the project area.
Song sparrow ("Modesto" population) <i>Melospiza melodia</i>	—	SSC	Emergent freshwater marshes, riparian willow thickets, riparian forests of valley oak (<i>Quercus lobata</i>), and vegetated irrigation canals and levees.	Not expected to occur. The project area is outside of this species' known range, which is restricted to the Sacramento Valley, Sacramento-San Joaquin River Delta, and northern San Joaquin Valley.
Suisun song sparrow <i>Melospiza melodia maxillaris</i>	—	SSC	Resident of brackish-water marshes surrounding Suisun Bay. Inhabits cattails, tules, and other sedges, and Salicornia; also known to frequent tangles bordering sloughs.	Not expected to occur. The project area is outside of this species known range, which is restricted to tidal marshes along the Suisun Marsh from the Carquinez Strait to the Sacramento and San Joaquin River confluence near Antioch (northern Contra Costa County).
Swainson's hawk <i>Buteo swainsoni</i>	—	ST	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	May occur. The project area is outside of the breeding range for Swainson's hawks (BIOS 2016e). This species prefers to nest in lower elevation areas of the Central Valley. However, nonbreeding Swainson's hawk adults may forage in Mount Diablo SP.
Tricolored blackbird <i>Agelaius tricolor</i>	—	ST SSC	Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within 1 mile of the colony.	May occur. Suitable nesting habitat may be present in the wet margins of waterways and ponds in the project area, especially waterways with emergent vegetation that retain water year-round, such as Falcon Pond and Pine Creek.
Vaux's swift <i>Chaetura vauxi</i>	—	SSC	Redwood, Douglas-fir, and other coniferous forests. Nests in large hollow trees and snags. Often nests in flocks. Forages over most terrains and habitats but shows a preference for foraging over rivers and lakes.	Not expected to occur. The project is outside of this species' known range (BIOS 2016f).

Species	Listing Status ¹ Federal	Listing Status ¹ State	Habitat	Potential for Occurrence ²
Western snowy plover <i>Charadrius nivosus nivosus</i>	FT	SSC	Sandy beaches, salt pond levees, and shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting.	Not expected to occur. Habitat suitable for western snowy plover (sandy beaches and lake shores) is not present in the project area.
White-tailed kite <i>Elanus leucurus</i>	—	FP	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	May occur. Habitat suitable for white-tailed kite (grasslands with scattered oaks and river bottoms) is present in the project area.
Yellow rail <i>Coturnicops noveboracensis</i>	—	SSC	Freshwater marsh, meadow, and seep. Summer resident in eastern Sierra Nevada in Mono County. Fresh-water marshlands.	Not expected to occur. While yellow rail is an infrequent overwintering species in parts of the San Francisco Bay Area, the project area is outside of the current known breeding range for this species (Leston and Bookhout 2020).
Yellow warbler <i>Setophaga petechia</i>	—	SSC	Riparian plant associations in proximity to water. Also nests in montane shrubbery in open conifer forests in Cascades and Sierra Nevada. Frequently found nesting and foraging in willow shrubs and thickets, and in other riparian plants including cottonwoods, sycamores, ash, and alders.	May occur. Habitat suitable for yellow warbler nesting (riparian vegetation including willow thickets in proximity to water) is present in the project area.
Yellow-breasted chat <i>Icteria virens</i>	—	SSC	Summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 feet of ground.	May occur. Habitat suitable for yellow-breasted chat (riparian thickets of dense vegetation) is present in the project area. Suitable habitat was observed in the vicinity of Pine Creek during the reconnaissance survey.
Fish				
Central California roach <i>Hesperoleucus symmetricus symmetricus</i>	—	SSC	Generally found in small streams of the Sierra Nevada foothills flowing into the Central Valley and are particularly well adapted to life in intermittent watercourses; dense populations are frequently observed in isolated pools. Rarely above 3,280 feet in elevation. Tolerant of wide temperature ranges and dissolved oxygen levels. Most abundant when only species present, occupying large pools in open water. With other fish, found in shallow margins, pool edges, or dense cover.	May occur. Habitat suitable for this species (intermittent watercourses and isolated pools below 1,000 feet in elevation) is present in the project area, and the western side of the project area is within the species mapped range (BIOS 2015a).

Species	Listing Status ¹ Federal	Listing Status ¹ State	Habitat	Potential for Occurrence ²
Chinook salmon - Central Valley fall / late fall-run ESU <i>Oncorhynchus tshawytscha</i> pop. 13	—	SSC	Sacramento/San Joaquin flowing waters. Populations spawning in the Sacramento and San Joaquin rivers and their tributaries.	Not expected to occur. The eastern portion of Mount Diablo SP is mapped as Chinook Salmon Essential Fish Habitat by NOAA Fisheries (NOAA 2022). However, habitat suitable for chinook salmon (flowing waters with connectivity to spawning habitat) is not present in the project area. This species may pass through the Delta north of the project, but due to physical barriers, there is no aquatic connectivity or potential for dispersal into the project area for salmon species into Mount Diablo SP.
Chinook salmon - Central Valley spring-run ESU <i>Oncorhynchus tshawytscha</i> pop. 11	FT	ST	Adult numbers depend on pool depth and volume, amount of cover, and proximity to gravel. Water temps >80 degrees F are lethal to adults. Federal listing refers to populations spawning in Sacramento River and tributaries.	Not expected to occur. The eastern portion of the park is mapped as Chinook Salmon Essential Fish Habitat by NOAA Fisheries (NOAA 2022). However, habitat suitable for chinook salmon (flowing waters with connectivity to spawning habitat) is not present in the project area. This species may pass through the Delta north of the project, but due to physical barriers, there is no aquatic connectivity or potential for dispersal into the project area for salmon species into Mount Diablo SP.
Chinook salmon - Sacramento River winter-run ESU <i>Oncorhynchus tshawytscha</i> pop. 7	FE	SE	Sacramento/San Joaquin flowing waters. Sacramento River below Keswick Dam. Spawns in the Sacramento River, but not in tributary streams. Requires clean, cold water over gravel beds with water temperatures between 42 and 65 degrees F for spawning.	Not expected to occur. The eastern portion of the project area is mapped as Chinook Salmon Essential Fish Habitat by NOAA Fisheries (NOAA 2022). However, habitat suitable for chinook salmon (flowing waters with connectivity to spawning habitat) is not present in the project area. This species may pass through the Delta north of the project, but due to physical barriers, there is no aquatic connectivity or potential for dispersal into the project area for salmon species into Mount Diablo SP.
Coho salmon - central California coast ESU <i>Oncorhynchus kisutch</i> pop. 4	FE	SE	Require beds of loose, silt-free, coarse gravel for spawning. Also need cover, cool water, and sufficient dissolved oxygen.	Not expected to occur. The southern portion of the park is mapped as Coho Salmon Essential Fish Habitat by NOAA Fisheries (NOAA 2022). However, habitat suitable for coho salmon (cool, flowing waters with silt-free substrate and connectivity to spawning habitat) is not present in the project area. This species may pass through the Delta north of the project, but due to physical barriers, there is no aquatic connectivity or potential for dispersal into the project area for salmon species into Mount Diablo SP.

Species	Listing Status ¹ Federal	Listing Status ¹ State	Habitat	Potential for Occurrence ²
Delta smelt <i>Hypomesus transpacificus</i>	FT	SE	Sacramento-San Joaquin Delta. Seasonally in Suisun Bay, Carquinez Strait, and San Pablo Bay. Seldom found at salinities > 10 ppt. Most often at salinities < 2ppt.	Not expected to occur. Habitat suitable for delta smelt (saline aquatic habitat) is not present in the project area.
Green sturgeon <i>Acipenser medirostris</i>	FT	SSC	These are the most marine species of sturgeon. Abundance increases northward of Point Conception. Spawns in the Sacramento, Klamath, and Trinity Rivers. Spawns at temperatures between 45-60 degrees F. Preferred spawning substrate is large cobble but can range from clean sand to bedrock.	Not expected to occur. Habitat suitable for green sturgeon (marine aquatic habitat) is not present in the project area.
Hardhead <i>Mylopharodon conocephalus</i>	—	SSC	Low to mid-elevation streams in the Sacramento-San Joaquin drainage. Also present in the Russian River. Clear, deep pools with sand-gravel-boulder bottoms and slow water velocity. Not found where exotic centrarchids predominate.	May occur. Habitat suitable for hardhead (streams with clear, deep pools) is present in the project area, and Mount Diablo SP and falls within this species' known range (BIOS 2015b)
Longfin smelt <i>Spirinchus thaleichthys</i>	FC	ST SSC	Euryhaline, nektonic, and anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefer salinities of 15-30 ppt, but can be found in completely freshwater to almost pure seawater.	Not expected to occur. Habitat suitable for longfin smelt (open estuary) is not present in the project area.
Pacific lamprey <i>Entosphenus tridentatus</i>	—	SSC	Found in Pacific Coast streams north of San Luis Obispo County; however, regular runs in Santa Clara River. Swift-current gravel-bottomed areas for spawning with water temperatures between 50-65 degrees F. Ammocoetes need soft sand or mud.	Not expected to occur. Habitat suitable for this species (swift-current, gravel-bottomed streams) is not present in the project area.
Sacramento hitch <i>Lavinia exilicauda exilicauda</i>	—	SSC	Warm, lowland fresh water streams, sloughs, lakes, and reservoirs, typically with aquatic vegetation. Require mud or small gravel substrate and can endure high temperatures for short periods of time.	May occur. Habitat suitable for this species (freshwater streams with some aquatic vegetation) is present in the project area, and the project area is within this species' known range (BIOS 2015c). All streams in the project area are intermittent or ephemeral and only Pine Creek was observed with suitable aquatic vegetation; this stream was dry during the reconnaissance survey in October 2022. This species may occur in Pine Creek or other waterways during the wet season.
Sacramento perch <i>Archoplites interruptus</i>	—	SSC	Historically found in the sloughs, slow-moving rivers, and lakes of the Central Valley. Prefers warm water. Aquatic vegetation is essential for young. Tolerates wide range of physio-chemical water conditions.	May occur. Habitat suitable for this species (slow-moving rivers and streams) is present in the project area. All streams in the project area are intermittent or ephemeral and only Pine Creek was observed with suitable aquatic vegetation; this stream was dry during the reconnaissance survey in October 2022. This species may occur in Pine Creek or other waterways during the wet season.

Species	Listing Status ¹ Federal	Listing Status ¹ State	Habitat	Potential for Occurrence ²
Sacramento splittail <i>Pogonichthys macrolepidotus</i>	—	SSC	Endemic to the lakes and rivers of the Central Valley, but now confined to the Delta, Suisun Bay and associated marshes. Slow moving river sections, dead end sloughs. Requires flooded vegetation for spawning and foraging for young.	Not expected to occur. The project is outside of the species' known range. The closest occurrences are located in the Suisun and San Pablo bays north of the project area (CNDDDB 2022).
Steelhead - central California coast DPS <i>Oncorhynchus mykiss irideus</i> pop. 8	FT	—	Sacramento/San Joaquin flowing waters. From Russian River, south to Soquel Creek and to, but not including, Pajaro River. Also San Francisco and San Pablo Bay basins.	Not expected to occur. Habitat suitable for steelhead (flowing aquatic habitat with connectivity to downstream marine environments) is not present in the project area. Although the project area is within the boundary for this distinct population segment (DPS) of steelhead, there is no aquatic connectivity to flowing streams in the project area.
Steelhead - Central Valley DPS <i>Oncorhynchus mykiss irideus</i> pop. 11	FT	—	Sacramento/San Joaquin flowing waters. Populations in the Sacramento and San Joaquin rivers and their tributaries.	Not expected to occur. Habitat suitable for steelhead (flowing aquatic habitat with connectivity to downstream marine environments) is not present in the project area. Although the project area is within the boundary for this DPS of steelhead, there is no aquatic connectivity to flowing streams in the project area.
Western river lamprey <i>Lampetra ayresii</i>	—	SSC	Adults need clean, gravelly riffles, ammocoetes need sandy backwaters or stream edges, good water quality and temperatures < 77 degrees F.	Not expected to occur. Habitat suitable for this species (swift-current, cool, gravel-bottomed streams) is not present in the project area.
White sturgeon <i>Acipenser transmontanus</i>	—	SSC	Live in estuaries of large rivers, moving into freshwater to spawn. Most abundant in brackish portions of estuaries. In estuaries adults concentrate in deep areas with soft bottoms.	Not expected to occur. Habitat suitable for white sturgeon (estuaries or large rivers) is not present in the project area.
Invertebrates				
Callippe silverspot butterfly <i>Speyeria callippe callippe</i>	FE	—	Restricted to the northern coastal scrub of the San Francisco peninsula. Hostplant is <i>Viola pedunculata</i> . Most adults found on east facing slopes; males congregate on hilltops in search of females.	Not expected to occur. The project area is entirely outside of this species' known range (USFWS 2020).
Conservancy fairy shrimp <i>Branchinecta conservatio</i>	FE	—	Valley and foothill grassland, vernal pool, wetland. Endemic to the grasslands of the northern two-thirds of the Central Valley; found in large, turbid pools. Inhabit astatic pools located in swales formed by old, braided alluvium; filled by winter/spring rains, last until June.	Not expected to occur. The nearest known occurrences are more than 8 miles away, and vernal pool branchiopods are not expected to disperse into the seasonal wetlands in Mount Diablo SP.

Species	Listing Status ¹ Federal	Listing Status ¹ State	Habitat	Potential for Occurrence ²
Crotch bumble bee <i>Bombus crotchii</i>	—	SC	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include <i>Antirrhinum</i> , <i>Phacelia</i> , <i>Clarkia</i> , <i>Dendromecon</i> , <i>Eschscholzia</i> , and <i>Eriogonum</i> .	May occur. Several occurrences are documented in the vicinity of the project, including a 1958 occurrence that overlaps the project area, and a 2015 occurrence approximately 15 miles west of the project area (CNDDB 2022). Although the range of this species has declined dramatically in California in the past few decades, recent research indicates that the species is extant in the Central Valley into the eastern Mount Diablo foothills (Hatfield and Jepsen 2021).
Lange's metalmark butterfly <i>Apodemia mormo langei</i>	FE	—	Interior dunes. Inhabits stabilized dunes along the San Joaquin River. Endemic to Antioch Dunes, Contra Costa County. Primary host plant is <i>Eriogonum nudum var auriculatum</i> ; feeds on nectar of other wildflowers, as well as host plant.	Not expected to occur. The proposed project is outside of this species' known range.
Longhorn fairy shrimp <i>Branchinecta longiantenna</i>	FE	—	Valley and foothill grassland, vernal pool, wetland. Endemic to the eastern margin of the Central Coast mountains in seasonally astatic grassland vernal pools. Inhabit small, clear-water depressions in sandstone and clear-to-turbid clay/grass-bottomed pools in shallow swales.	Not expected to occur. The nearest known occurrences are more than 8 miles away, and vernal pool branchiopods are not expected to disperse into the seasonal wetlands in Mount Diablo SP.
Monarch <i>Danaus plexippus</i>	FC	—	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.	May occur. Suitable breeding and foraging habitat are present in the project area, and milkweed, monarch individuals, and signs of monarch breeding have been documented in the project area (Xerces Society 2022). Monarchs may roost in forested habitat throughout the project area and may lay eggs in milkweed areas in grassland and scrubland.
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	FT	—	Valley and foothill grassland, vernal pool, wetland. Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	Not expected to occur. The nearest known occurrences are more than 8 miles away, and vernal pool branchiopods are not expected to disperse into the seasonal wetlands in Mount Diablo SP.
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	FT	—	Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	Not expected to occur. The nearest known occurrences are more than 8 miles away, and vernal pool branchiopods are not expected to disperse into the seasonal wetlands in Mount Diablo SP.

Species	Listing Status ¹ Federal	Listing Status ¹ State	Habitat	Potential for Occurrence ²
Vernal pool tadpole shrimp <i>Lepidurus packardii</i>	FE	—	Inhabits vernal pools and swales in the Sacramento Valley 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 to occur. The nearest known occurrences are more than 8 miles away, and vernal pool branchiopods are not expected to disperse into the seasonal wetlands in Mount Diablo SP.
Western bumble bee <i>Bombus occidentalis</i>	—	SC	Once common throughout much of its range, in California, this species is currently largely restricted to high elevation sites in the Sierra Nevada and the northern California coast. Habitat includes open grassy areas, chaparral, scrub, and meadows. Requires suitable nesting sites for the colonies, availability of nectar and pollen from floral resources throughout the duration of the colony period (spring, summer, and fall), and suitable overwintering sites for the queens.	Not expected to occur. Although habitat suitable for western bumble bee is present in the project area and Contra Costa County is part of the historic range for this species, western bumble bee is not currently considered extant in the region (Hatfield and Jepsen 2021). There are several historic (1919 through 1972) occurrences of this species documented in the vicinity of Mount Diablo SP, including a 1952 occurrence noted as “exact location unknown” but mapped near the summit of Mount Diablo (CNDDDB 2022). However, all historic occurrences are noted as “exact location unknown,” and recent studies have found that the western bumble bee has experienced an 80 percent decline in California and is considered extirpated from the Pacific coastal areas of its historic range, including the entire Bay Area region (Hatfield and Jepsen 2021).
Mammals				
American badger <i>Taxidea taxus</i>	—	SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	Known to occur. One active badger den was observed during the October 2022 reconnaissance survey, and habitat suitable for American badger is present in the project area. More than a dozen occurrences are documented to the east, south, and west of the park (CNDDDB 2022).
Big free-tailed bat <i>Nyctinomops macrotis</i>	—	SSC	Low-lying arid areas in Southern California. Need high cliffs or rocky outcrops for roosting sites. Feeds principally on large moths.	Not expected to occur. There are very few records for this species in California (CNDDDB 2022), and the only record in Alameda county was documented in 1916. Targeted studies of this species in the 1990’s found the species’ to be extremely rare in California, with the only location where two individuals were found roosting together recorded in San Diego County (Pierson and Rainey, 1998). Records in Alameda County likely represent either vagrant individuals documented outside of their normal range or represent the historic range of this species that is no longer recognized as occupied. This species is not expected to occur because the project area is entirely outside of the known range of this species (Pierson and Rainey 1998).

Species	Listing Status ¹ Federal	Listing Status ¹ State	Habitat	Potential for Occurrence ²
Mountain lion <i>Puma concolor</i>	—	SC	Mountainous regions, forests, deserts, and wetlands. Mountain lions establish and defend large territories and can travel large distances in search of prey or mates. The Central Coast and Southern California Evolutionarily Significant Units (ESUs) were granted emergency listing status in April of 2020, and CDFW is currently reviewing a petition to list these ESUs as threatened under CESA.	May occur. Occurrences have been documented via scat in the project area, and it is likely that the home ranges of individual lions overlap the project area (iNaturalist 2022, Yovovich et al. 2020). Denning in the project area is relatively unlikely as compared to the surrounding areas because the proposed treatment areas are located around roads, trails, and other areas with relatively high human activity. However, potential den habitat (e.g., caves, cavities, thickets) may be present within the project area.
Pallid bat <i>Antrozous pallidus</i>	—	SSC	Chaparral, coastal scrub, desert wash, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, riparian woodland, Sonoran desert scrub, upper montane coniferous forest, valley and foothill grassland. Deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	Known to occur. Suitable habitat is present throughout the project area. Two historic (1917 and 1929) occurrences are documented in the park (CNDDDB 2022), the 1917 occurrence overlaps portions of proposed fuel break and ecological restoration treatment areas along Pine Creek (CNDDDB 2022). Additionally, two occurrences of the species documented near but outside of the project area in Mount Diablo SP in 2010 and 2019 (iNaturalist 2022). Pallid bat is thought to be extant in the park. This species may establish maternity or overwintering roosts in abandoned buildings, caves, or large diameter trees in the project area.
Ringtail <i>Bassariscus astutus</i>	—	FP	Riparian, forest, and shrub habitats in lower to middle elevations.	May occur. Habitat suitable for ringtail (riparian, forested, and shrub-dominated habitat) is present across the project area, and the entire project is within range for this species (BIOS 2016g). Ringtail has not been documented within the project vicinity (iNaturalist 2022); however, this species is known to be elusive and may be underrepresented in databases.
Salt-marsh harvest mouse <i>Reithrodontomys raviventris</i>	FE	SE FP	Only in the saline emergent wetlands of San Francisco Bay and its tributaries. Pickleweed is primary habitat, but may occur in other marsh vegetation types and in adjacent upland areas. Does not burrow, build loosely organized nests. Requires higher areas for flood escape.	Not expected to occur. Habitat suitable for salt-marsh harvest mouse (saline emergent wetland and adjacent emergent vegetation) is not present in the project area.
San Francisco dusky-footed woodrat <i>Neotoma fuscipes annectens</i>	—	SSC	May prefer chaparral and redwood habitats. Constructs nests of shredded grass, leaves, and other material. May be limited by availability of nest-building materials.	Not expected to occur. The project area is outside of the range for this species.

Species	Listing Status ¹ Federal	Listing Status ¹ State	Habitat	Potential for Occurrence ²
San Joaquin kit fox <i>Vulpes macrotis mutica</i>	FE	ST	Annual grasslands or grassy open stages with scattered shrubby vegetation. Need loose-textured sandy soils for burrowing, and suitable prey base.	Not expected to occur. No occurrences of San Joaquin kit fox are documented in Mount Diablo SP; however, several are documented in the vicinity from the south and east of the park. In a 2014 assessment of suitable habitat and connectivity modeling, SC Wildlands did not map any portion of Mount Diablo SP as either "core" or "patch" habitat for the species (BIOS 2014b, USGS 2021).
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	—	SSC	Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.	May occur. Roosting habitat suitable for Townsend's big-eared bats (large diameter trees, abandoned buildings, or caves) is present within the project area.
Western mastiff bat <i>Eumops perotis californicus</i>	—	SSC	Many 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 tunnels.	May occur. Habitat potentially suitable for western mastiff bat (woodland, grassland, and chaparral especially with cliffs and large buildings) is present in forested areas of the project area.
Western red bat <i>Lasiurus blossevillii</i>	—	SSC	Roosts primarily in trees, 2–40 feet above ground, from sea level up through mixed conifer forests. Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging.	May occur. Habitat potentially suitable for western red bat (mixed conifer forest) is present in the project area.

Notes: CNDDDB = California Natural Diversity Database; CEQA = California Environmental Quality Act; CESA = California Endangered Species Act; DPS = Distinct Population Segment; ESA = Endangered Species Act; ESA = Endangered Species Act; ESU = Evolutionarily Significant Unit; National Oceanic and Atmospheric Administration = NOAA

¹ Legal Status Definitions

Federal:

- FE Federally Listed as Endangered (legally protected)
- FT Federally Listed as Threatened (legally protected)
- FD Federally Delisted
- FC Proposed for Listing under the federal Endangered Species Act

State:

- FP Fully Protected (legally protected)
- SSC Species of Special Concern (no formal protection other than CEQA consideration)
- SE State Listed as Endangered (legally protected)
- ST State Listed as Threatened (legally protected)
- SC State Candidate for listing (legally protected)
- SD State Delisted

² Potential for Occurrence Definitions

Not expected to occur: Species is unlikely to be present because of poor habitat quality, lack of suitable habitat features, or restricted current distribution of the species.

May occur: Suitable habitat is available; however, there are little to no other indicators that the species might be present.

Known to occur: Species has been documented within the treatment areas.

Sources: BIOS 2014a, BIOS 2014b, BIOS 2015a, BIOS 2015b, BIOS 2015c, BIOS 2016a, BIOS 2016b, BIOS 2016c, BIOS 2016d, BIOS 2016e, BIOS 2016f, BIOS 2016g, CNDDDB 2022, eBird 2022, Hatfield and Jepson 2021, iNaturalist 2022, Kindsvater 2019, Leston and Bookhout 2020; Marks et al. 2020, McClain pers. comm. 2022, NOAA 2022, Pierson and Rainey 1998, Shuford and Gardali 2008, Swaim 2004, USGS 2001, USFWS 2002, USFWS 2020, Xerces Society 2022, Yovovich et al. 2020

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