

Attachment B

Special-Status Species Tables

Table B-1 Special-Status Plant Species Known to Occur in the Vicinity of the Project Site and Potential for Occurrence on the Project Site

Species	Listing Status ¹ Federal	Listing Status ¹ State	CRPR	Habitat	Potential for Occurrence ²
Blasdale's bent grass <i>Agrostis blasdalei</i>	–	–	1B.2	Dunes, coastal bluffs, scrub. Sandy or gravelly soil close to rocks; often in nutrient-poor soil with sparse vegetation. 15–495 feet in elevation. Blooms May–July.	Little Black Mountain/Pole Mountain: <i>Not expected to occur</i> . Coastal habitat potentially suitable for this species is not present on either project site. Live Oak Ranch/Laufenburg Ranch: Not in nine quad search area.
Franciscan onion <i>Allium peninsulare</i> var. <i>franciscanum</i>	–	–	1B.2	Clay soils; often on serpentine; sometimes on volcanics. Dry hillsides. 16–1,148 feet in elevation. Blooms May–June.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>May occur</i> . Clay and volcanic soils and dry hillside habitat potentially suitable for this species is present on both project sites.
Sonoma alopecurus <i>Alopecurus aequalis</i> var. <i>sonomensis</i>	FE	–	1B.1	Wet areas, marshes, and riparian banks, with other wetland species. 15–1,180 feet in elevation. Blooms May–July.	Little Black Mountain/Pole Mountain: <i>May occur</i> . Riparian bank and seep habitat potentially suitable for this species is present on both project sites. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur</i> . Project sites are out of species geographical range.
Napa false indigo <i>Amorpha californica</i> var. <i>napensis</i>	–	–	1B.2	Openings in forest or woodland or in chaparral. 95–2,410 feet in elevation. Blooms April–July.	Little Black Mountain/Pole Mountain: <i>Known to occur</i> . Species has been documented at Little Black Mountain by Peter Warner in 2013 in three disjunct locations (Warner 2013). Woodland and forest habitat potentially suitable for this species is present on both project sites. Live Oak Ranch/Laufenburg Ranch: <i>Known to occur</i> . Species was found at Laufenburg Ranch during botanical inventory survey in 2013 in southern Knights Valley, approximately 1 mile northwest of Live Oaks Ranch (Warner 2013). Both project sites have habitat potentially suitable for this species.
Bent-flowered fiddleneck <i>Amsinckia lunaris</i>	–	–	1B.2	Cismontane woodland, valley and foothill grassland, coastal bluff scrub. 10–2,608 feet in elevation. Blooms March–June.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>May occur</i> . Woodland and grassland habitat potentially suitable for this species is present on both project sites.

Species	Listing Status ¹ Federal	Listing Status ¹ State	CRPR	Habitat	Potential for Occurrence ²
Baker's manzanita <i>Arctostaphylos bakeri</i> ssp. <i>bakeri</i>	–	SR	1B.1	Strict serpentine endemic in broadleafed upland forest, and chaparral. 245–755 feet in elevation. Blooms February–April.	Little Black Mountain/Pole Mountain: <i>Not expected to occur.</i> Serpentine soils suitable for this species are not present on either project site. Live Oak Ranch/Laufenburg Ranch: Not in nine quad search area.
The Cedars manzanita <i>Arctostaphylos bakeri</i> ssp. <i>sublaevis</i>	–	SR	1B.2	In serpentine chaparral and Sargent cypress woodland; typically in canyons and on slopes. 607–2,493 feet in elevation. Blooms February–May.	Little Black Mountain/Pole Mountain: <i>Not expected to occur.</i> Serpentine soil and Sargent cypress woodland habitat is not present on either project site. Live Oak Ranch/Laufenburg Ranch: Not in nine quad search area.
Vine Hill manzanita <i>Arctostaphylos densiflora</i>	–	SE	1B.1	Chaparral. Acid marine sand. 164–394 feet in elevation. Blooms February–April.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Project sites are out of species geographical range.
Konocti manzanita <i>Arctostaphylos manzanita</i> ssp. <i>elegans</i>	–	–	1B.3	Woodland, chaparral, conifer forests. Volcanic soils. 738–6,004 feet in elevation. Blooms January–May.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>May occur.</i> Woodland and volcanic soil habitat potentially suitable for this species is present on both project sites.
Rincon Ridge manzanita <i>Arctostaphylos stanfordiana</i> ssp. <i>decumbens</i>	–	–	1B.1	Highly restricted endemic to red rhyolites in Sonoma County. 295–1,230 feet in elevation. Blooms February–April.	Little Black Mountain/Pole Mountain: <i>Not expected to occur.</i> Red rhyolite habitat is not present on either project site. Live Oak Ranch/Laufenburg Ranch: <i>May occur.</i> Red rhyolite habitat potentially suitable for this species is present on both project sites.
Clara Hunt's milk-vetch <i>Astragalus claranus</i>	FE	ST	1B.1	Open grassy hillsides, especially on exposed shoulders in thin, clay soil moist in spring. Sometimes on volcanics. 246–902 feet in elevation. Blooms March–May.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>May occur.</i> Open grassy hillsides with clay and volcanic soil habitat potentially suitable for this species is present on both project sites.
Jepson's milk-vetch <i>Astragalus rattanii</i> var. <i>jepsonianus</i>	–	–	1B.2	Commonly on serpentine in grassland or openings in chaparral. 574–3,297 feet in elevation. Blooms March–June.	Little Black Mountain/Pole Mountain: Not in nine quad search area.

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					Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Vertic clay or serpentine soil habitat suitable for this species is not present on either project site.
Big-scale balsamroot <i>Balsamorhiza macrolepis</i>	–	–	1B.2	Chaparral, woodland, valley or foothill grassland. Sometimes on serpentine. 115–4,806 feet in elevation. Blooms March–June.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Project sites are out of species geographical range.
Sonoma sunshine <i>Blennosperma bakeri</i>	FE	SE	1B.1	Mesic valley and foothill grassland. Vernal pools and grassy margins of swales. 33–361 feet in elevation. Blooms March–May.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Project sites are out of species geographical range.
Narrow-anthered brodiaea <i>Brodiaea leptandra</i>	–	–	1B.2	Broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland. Volcanic substrates. 98–1,936 feet in elevation. Blooms May–July.	Little Black Mountain/Pole Mountain: <i>May occur.</i> Woodland and grassland with volcanic substrate and open rocky habitat potentially suitable for this species is present on both project sites. Live Oak Ranch/Laufenburg Ranch: <i>May occur.</i> Volcanic soil habitat potentially suitable for this species is present on both project sites.
Thurber's reed grass <i>Calamagrostis crassiglumis</i>	–	–	2B.1	Slopes, meadows, coastal marshes. Usually in marshy swales surrounded by grassland or coastal scrub. 16–164 feet in elevation. Blooms May–August.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Project sites are out of species geographical range.
The Cedars fairy-lantern <i>Calochortus raichei</i>	–	–	1B.2	On serpentine. Usually on shaded slopes, but also on barrens and talus. 835–1,410 feet in elevation. Blooms May–August.	Little Black Mountain/Pole Mountain: <i>Not expected to occur.</i> Serpentine soil habitat is not present on either project site. Live Oak Ranch/Laufenburg Ranch: Not in nine quad search area.
Coastal bluff morning-glory <i>Calystegia purpurata</i> ssp. <i>saxicola</i>	–	–	1B.2	Coastal dunes, coastal scrub, coastal bluff scrub, North Coast coniferous forest. 33–345 feet in elevation. Blooms April–September.	Little Black Mountain/Pole Mountain: <i>May occur.</i> Scrub and North Coast coniferous forest habitat potentially suitable for this species is present on both project sites.

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					Live Oak Ranch/Laufenburg Ranch: Not in nine quad search area.
Swamp harebell <i>Campanula californica</i>	–	–	1B.2	Bogs and marshes in a variety of habitats; uncommon where it occurs. 3–1,330 feet in elevation. Blooms June–October.	Little Black Mountain/Pole Mountain: <i>May occur.</i> Mesic habitat potentially suitable for this species is present on both project sites. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Project sites are out of species geographical range.
Bristly sedge <i>Carex comosa</i>	–	–	2B.1	Lake margins, wet places; site below sea level is on a Delta island. -16–3,345 feet in elevation. Blooms May–September.	Little Black Mountain/Pole Mountain: <i>May occur.</i> Mesic habitat potentially suitable for this species is present on both project sites. Live Oak Ranch/Laufenburg Ranch: Not in nine quad search area.
Deceiving sedge <i>Carex saliniformis</i>	–	–	1B.2	Coastal prairie, coastal scrub, meadows and seeps, marshes and swamps (coastal salt). Mesic sites. 10–820 feet in elevation. Blooms June.	Little Black Mountain/Pole Mountain: <i>May occur.</i> Mesic habitat potentially suitable for this species is present on both project sites. Live Oak Ranch/Laufenburg Ranch: Not in nine quad search area.
Pitkin Marsh paintbrush <i>Castilleja uliginosa</i>	–	SE	1A	Last known remaining plant died in 1987; was known from overgrown freshwater marsh. 197 feet in elevation. Blooms June–July.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Project sites are out of species geographical range.
Rincon Ridge ceanothus <i>Ceanothus confusus</i>	–	–	1B.1	Volcanic slopes, chaparral, pine/oak woodland. Known usually from volcanic or serpentine soils. 246–3,494 feet in elevation. Blooms February–June.	Little Black Mountain/Pole Mountain: <i>May occur.</i> Woodland habitat potentially suitable for this species is present on both project sites. Chaparral habitat potentially suitable for this species is present on Little Black Mountain. Live Oak Ranch/Laufenburg Ranch: <i>May occur.</i> Volcanic soils and dry slopes in woodland habitat potentially suitable for this species is present on both project sites.
Calistoga ceanothus <i>Ceanothus divergens</i>	–	–	1B.2	Chaparral, pine/oak woodland. Rocky, serpentine, or volcanic sites. 558–3,117 feet in elevation. Blooms February–April.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>May occur.</i> Volcanic soils and oak woodland habitat potentially suitable

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					for this species is present on both project sites.
Vine Hill ceanothus <i>Ceanothus foliosus</i> var. <i>vineatus</i>	–	–	1B.1	Sandy, acidic soil in chaparral. 148–1,001 feet in elevation. Blooms March–May.	Little Black Mountain/Pole Mountain: <i>Not expected occur.</i> Chaparral with sandy, acidic soil habitat potentially suitable for this species is not present on either project site. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Project sites are out of species geographical range.
Holly-leaved ceanothus <i>Ceanothus purpureus</i>	–	–	1B.2	Chaparral, cismontane woodland. Rocky, volcanic slopes. 476–2,559 feet in elevation. Blooms February–June.	Little Black Mountain/Pole Mountain: <i>May occur.</i> Woodland with rocky, volcanic slope habitat potentially suitable for this species is present on both project sites. Species has been documented approximately 2 miles west of Little Black Mountain (CNDDDB 2021). Live Oak Ranch/Laufenburg Ranch: <i>May occur.</i> Volcanic soils potentially suitable for this species is present on both project sites.
Sonoma ceanothus <i>Ceanothus sonomensis</i>	–	–	1B.2	Sandy, serpentine or volcanic soils. Chaparral. 459–2,608 feet in elevation. Blooms February–April.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>May occur.</i> Volcanic soil and chaparral habitat potentially suitable for this species is present on both project sites.
Pappose tarplant <i>Centromadia parryi</i> ssp. <i>parryi</i>	–	–	1B.2	Grassland, coastal salt marshes, alkaline springs, seeps. Vernal mesic, often alkaline sites. 7–1,378 feet in elevation. Blooms May–November.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>May occur.</i> Mesic grassland habitat potentially suitable for this species is present on the project sites.
Dwarf soaproot <i>Chlorogalum pomeridianum</i> var. <i>minus</i>	–	–	1B.2	Chaparral. Serpentine. 1,001–3,281 feet in elevation. Blooms May–August.	Little Black Mountain/Pole Mountain: <i>Not expected to occur.</i> Serpentine habitat potentially suitable for this species is not present on either project site. Live Oak Ranch/Laufenburg Ranch: Not in nine quad search area.
Sonoma spineflower <i>Chorizanthe valida</i>	FE	SE	1B.1	Coastal prairie. Sandy soil. 16–164 feet in elevation. Blooms June–August.	Little Black Mountain/Pole Mountain: <i>Not expected to occur.</i> Project sites are out of elevation range of this species.

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					Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Coastal prairie habitat potentially suitable for this species is not present on either project site. Out of species geographical range.
Vine Hill clarkia <i>Clarkia imbricata</i>	FE	SE	1B.1	Chaparral, valley and foothill grassland. Acidic, sandy soil. 197–262 feet in elevation. Blooms June–August.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Projects sites are out of species geographical range.
Pennell's bird's-beak <i>Cordylanthus tenuis</i> ssp. <i>capillaris</i>	FE	SR	1B.2	In open or disturbed areas on serpentine within forest or chaparral. 295–705 feet in elevation. Blooms June–September.	Little Black Mountain/Pole Mountain: <i>Not expected to occur.</i> Serpentine habitat potentially suitable for this species is not present on either project site. Live Oak Ranch/Laufenburg Ranch: Not in nine quad search area.
Serpentine cryptantha <i>Cryptantha dissita</i>	–	–	1B.2	Chaparral. Serpentine outcrops. 443–2,411 feet in elevation. Blooms April–June.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Serpentine soil habitat potentially suitable for this species is not present on either project site.
Peruvian dodder <i>Cuscuta obtusiflora</i> var. <i>glandulosa</i>	–	–	2B.2	Freshwater marsh. 49–919 feet in elevation. Blooms July–October.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Freshwater marsh habitat potentially suitable for this species is not present on either project site. Out of species geographical range.
Baker's larkspur <i>Delphinium bakeri</i>	FE	SE	1B.1	Broadleafed upland forest, coastal scrub, valley and foothill grassland. Only site occurs on northwest-facing slope, on decomposed shale. Often on mesic sites. Also historically known from grassy areas along fence lines. 260–1,000 feet in elevation. Blooms March–May.	Little Black Mountain/Pole Mountain: <i>May occur.</i> Broadleafed upland forest, decomposed shale soil, and mesic habitat potentially suitable for this species is present on both project sites. Live Oak Ranch/Laufenburg Ranch: Not in nine quad search area.
Golden larkspur <i>Delphinium luteum</i>	FE	SR	1B.1	Chaparral, coastal prairie, coastal scrub. North-facing rocky slopes. 0–330 feet in elevation. Blooms March–May.	Little Black Mountain/Pole Mountain: <i>Not expected to occur.</i> Coastal habitat potentially suitable for this species is not present on project sites.

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					Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Project sites are out of species geographical range.
Dwarf downingia <i>Downingia pusilla</i>	–	–	2B.2	Vernal lake and pool margins with a variety of associates. In several types of vernal pools. Mesic sites in valley and foothill grassland. 3–1,608 feet in elevation. Blooms March–May.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Project sites are out of species geographical range.
Greene's narrow-leaved daisy <i>Erigeron greenei</i>	–	–	1B.2	Chaparral, woodland, conifer forest. Serpentine and volcanic substrates, generally in shrubby vegetation. 295–2,740 feet in elevation. Blooms May–September.	Little Black Mountain/Pole Mountain: <i>May occur.</i> Woodland, scrub, and volcanic substrate habitat potentially suitable for this species is present on both project sites. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Serpentine or rocky alluvium habitat suitable for this species is not present on either project site.
Serpentine daisy <i>Erigeron serpentinus</i>	–	–	1B.3	Chaparral. Serpentine seeps. 394–1,312 feet in elevation. Blooms May–August.	Little Black Mountain/Pole Mountain: <i>Not expected to occur.</i> Serpentine habitat potentially suitable for this species is not present on either project site. Live Oak Ranch/Laufenburg Ranch: Not in nine quad search area.
The Cedars buckwheat <i>Eriogonum cedrorum</i>	–	–	1B.3	Serpentine. Barren rock and talus steep slopes. 1,198–1,804 feet in elevation. Blooms June–September.	Little Black Mountain/Pole Mountain: <i>Not expected to occur.</i> Serpentine habitat potentially suitable for this species is not present on either project site. Live Oak Ranch/Laufenburg Ranch: Not in nine quad search area.
Snow Mountain buckwheat <i>Eriogonum nervulosum</i>	–	–	1B.2	Dry serpentine outcrops, balds, and barrens. 1,460–6,906 feet in elevation. Blooms June–September.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Serpentine soil habitat potentially suitable for this species is not present on either project site.
Loch Lomond button-celery <i>Eryngium constancei</i>	FE	SE	1B.1	Volcanic ash flow vernal pools. 1,509–2,805 feet in elevation. Blooms April–June.	Little Black Mountain/Pole Mountain: Not in nine quad search area.

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					Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Vernal pool habitat potentially suitable for this species is not present on either project site.
Bluff wallflower <i>Erysimum concinnum</i>	–	–	1B.2	More or less a coastal generalist within coastal habitat types. 0–605 feet in elevation. Blooms February–July.	Little Black Mountain/Pole Mountain: <i>Not expected to occur.</i> Coastal habitat potentially suitable for this species is not present on either project site. Live Oak Ranch/Laufenburg Ranch: Not in nine quad search area.
Coast fawn lily <i>Erythronium revolutum</i>	–	–	2B.2	Bogs and fens, broadleaved upland forest, North Coast coniferous forest. Streambanks, wet places in woodlands. 0–605 feet in elevation. Blooms March–August.	Little Black Mountain/Pole Mountain: <i>May occur.</i> Mesic areas in broadleaved upland forest habitat potentially suitable for this species is present on both project sites. Mesic areas in North Coast coniferous forest potentially suitable for this species is present on Little Black Mountain. Live Oak Ranch/Laufenburg Ranch: Not in nine quad search area.
Minute pocket moss <i>Fissidens pauperculus</i>	–	–	1B.2	Moss growing on damp soil along the coast. In dry streambeds and stream banks. 33–3,360 feet in elevation.	Little Black Mountain/Pole Mountain: <i>May occur.</i> Damp soil and streambed habitat potentially suitable for this species is present on both project sites. Live Oak Ranch/Laufenburg Ranch: Not in nine quad search area.
Fragrant fritillary <i>Fritillaria liliacea</i>	–	–	1B.2	Cismonte woodland, coastal prairie, coastal scrub, valley and foothill grassland. Often on serpentine; various soils reported though usually on clay. 10–1,312 feet in elevation. Blooms February–April.	Little Black Mountain/Pole Mountain: <i>May occur.</i> Woodland, grassland, and scrub habitat potentially suitable for this species is present on both project sites. Peter Warner reports that from his observations this species will most likely be on seasonally moist grassland (Warner 2013). Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Project sites are out of species geographical range.
Blue coast gilia <i>Gilia capitata</i> ssp. <i>chamissonis</i>	–	–	1B.1	Coastal dunes, coastal scrub. 10–656 feet in elevation. Blooms April–July.	Little Black Mountain/Pole Mountain: <i>Not expected to occur.</i> Coastal habitat potentially suitable for this species is not present either project site.

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					Live Oak Ranch/Laufenburg Ranch: Not in nine quad search area.
Pacific gilia <i>Gilia capitata</i> ssp. <i>pacifica</i>	–	–	1B.2	Coastal bluff scrub, chaparral, coastal prairie, valley and foothill grassland. 16–4,413 feet in elevation. Blooms April–August.	Little Black Mountain/Pole Mountain: <i>May occur</i> on Pole Mountain. Foothill grassland habitat potentially suitable for this species is present on Pole Mountain. Live Oak Ranch/Laufenburg Ranch: Not in nine quad search area.
Woolly-headed gilia <i>Gilia capitata</i> ssp. <i>tomentosa</i>	–	–	1B.1	Rocky outcrops on the coast, serpentine. 66–410 feet in elevation. Blooms May–July.	Little Black Mountain/Pole Mountain: <i>Not expected to occur</i> . Serpentine habitat potentially suitable for this species is not present on either project site. Live Oak Ranch/Laufenburg Ranch: Not in nine quad search area.
Boggs Lake hedge-hyssop <i>Gratiola heterosepala</i>	–	SE	1B.2	Clay soils; usually in vernal pools, sometimes on lake margins. 33–7,792 feet in elevation. Blooms April–August.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur</i> . Vernal pool and lake habitat potentially suitable for this species is not present on either project site.
Hall's harmonia <i>Harmonia hallii</i>	–	–	1B.2	Serpentine hills and ridges. Open, rocky areas within chaparral. 1,099–3,051 feet in elevation. Blooms April–June.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur</i> . Serpentine soil habitat potentially suitable for this species is not present on either project site.
Congested-headed hayfield tarplant <i>Hemizonia congesta</i> ssp. <i>congesta</i>	–	–	1B.2	Grassy valleys and hills, often in fallow fields; sometimes along roadsides. 66–2,133 feet in elevation. Blooms April–November.	Little Black Mountain/Pole Mountain: <i>May occur</i> . Grassland and roadside habitat potentially suitable for this species is present on both project sites. Live Oak Ranch/Laufenburg Ranch: <i>May occur</i> at Laufenburg Ranch. Grassland habitat potentially suitable for this species is present on the Laufenburg Ranch site.
Two-carpellate western flax <i>Hesperolinon bicarpellatum</i>	–	–	1B.2	Serpentine barrens at edge of chaparral. 197–3,297 feet in elevation. Blooms May–July.	Little Black Mountain/Pole Mountain: Not in nine quad search area.

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					Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Serpentine soil habitat suitable for this species is not present on either project site.
Sharsmith's western flax <i>Hesperolinon sharsmithiae</i>	–	–	1B.2	Chaparral. Serpentine substrates. 886–984 feet in elevation. Blooms May–July.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Serpentine soil habitat suitable for this species is not present on either project site.
Short-leaved evax <i>Hesperovax sparsiflora</i> var. <i>brevifolia</i>	–	–	1B.2	Coastal bluff scrub, coastal dunes, coastal prairie. Sandy bluffs and flats. 0–705 feet in elevation. Blooms March–June.	Little Black Mountain/Pole Mountain: <i>Not expected to occur.</i> Coastal habitat potentially suitable for this species is not present on either project site. Live Oak Ranch/Laufenburg Ranch: Not in nine quad search area.
Parry's horkelia <i>Horkelia parryi</i>	–	–	1B.2	Openings in chaparral or woodland; especially known from the lone formation in Amador County. 279–3,658 feet in elevation. Blooms April–September.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Project sites are out of species geographical range.
Thin-lobed horkelia <i>Horkelia tenuiloba</i>	–	–	1B.2	Broadleafed upland forest, chaparral, valley and foothill grassland. Sandy soils; mesic openings. 164–1640 feet in elevation. Blooms May–July.	Little Black Mountain/Pole Mountain: <i>May occur.</i> Mesic and sandy soil habitat potentially suitable for this species is present on both project sites. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Project sites are out of species geographical range.
Small groundcone <i>Kopsiopsis hookeri</i>	–	–	2B.3	North coast coniferous forest. Open woods, shrubby places, generally on <i>Gaultheria shallon</i> . 394–4,708 feet in elevation. Blooms April–August.	Little Black Mountain/Pole Mountain: <i>May occur</i> on Pole Mountain. Forest and open woodland habitat potentially suitable for this species is present on Pole mountain. Live Oak Ranch/Laufenburg Ranch: Not in nine quad search area.
Santa Lucia dwarf rush <i>Juncus luciensis</i>	–	–	1B.2	Vernal pools, ephemeral drainages, seeps, wet meadow habitats and streamsides. 984–6,693 feet in elevation. Blooms April–July.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Project sites are out of species geographical range.

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Burke's goldfields <i>Lasthenia burkei</i>	FE	SE	1B.1	Meadows and seeps. Most often in vernal pools and swales. 49–1,969 feet in elevation. Blooms April–June.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Vernal pool and wet meadow habitat potentially suitable for this species is not present on either project site.
Baker's goldfields <i>Lasthenia californica</i> ssp. <i>bakeri</i>	–	–	1B.2	Closed-cone coniferous forest, coastal scrub, meadows and seeps, marshes and swamps. Openings. 197–1,706 feet in elevation. Blooms April–October.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Project sites are out of species geographical range.
Perennial goldfields <i>Lasthenia californica</i> ssp. <i>macrantha</i>	–	–	1B.2	Coastal bluff scrub, coastal dunes, coastal scrub. 16–607 feet in elevation. Blooms January–November.	Little Black Mountain/Pole Mountain: <i>Not expected to occur.</i> Coastal scrub and dune habitat potentially suitable for this species is not present on either project site. Live Oak Ranch/Laufenburg Ranch: Not in nine quad search area.
Marsh pea <i>Lathyrus palustris</i>	–	–	2B.2	Moist coastal areas. 7–459 feet in elevation. Blooms March–August.	Little Black Mountain/Pole Mountain: <i>Not expected to occur.</i> Project sites are out of elevation range for this species. Live Oak Ranch/Laufenburg Ranch: Not in nine quad search area.
Colusa layia <i>Layia septentrionalis</i>	–	–	1B.2	Scattered colonies in fields and grassy slopes in sandy or serpentine soil. 49–3,609 feet in elevation. Blooms April–May.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Habitat potentially suitable for this species is not present on either project site.
Legenere <i>Legenere limosa</i>	–	–	1B.1	Wet areas, vernal pools, ponds. In beds of vernal pools. 3–2,887 feet in elevation. Blooms April–June.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Vernal pool habitat potentially suitable for this species is not present on either project site.
Jepson's leptosiphon <i>Leptosiphon jepsonii</i>	–	–	1B.2	Open to partially shaded grassy slopes. On volcanics or the periphery of serpentine substrates. 180–2,805 feet in elevation. Blooms March–May.	Little Black Mountain/Pole Mountain: <i>May occur.</i> Grassy slope and volcanic soil habitat potentially suitable for this species is present on both project sites.

Species	Listing Status ¹ Federal	Listing Status ¹ State	CRPR	Habitat	Potential for Occurrence ²
					Live Oak Ranch/Laufenburg Ranch: <i>May occur.</i> Grassy slope habitat potentially suitable for this species is present on both project sites.
Crystal Springs lessingia <i>Lessingia arachnoidea</i>	–	–	1B.2	Grassy slopes on serpentine; sometimes on roadsides. 295–656 feet in elevation. Blooms July–October.	Little Black Mountain/Pole Mountain: <i>Not expected to occur.</i> Serpentine habitat potentially suitable for this species is not present on either project site. Live Oak Ranch/Laufenburg Ranch: Not in nine quad search area.
Pitkin Marsh lily <i>Lilium pardalinum</i> ssp. <i>pitkinense</i>	FE	SE	1B.1	Saturated, sandy soils with grasses and shrubs. 148–213 feet in elevation. Blooms June–July.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Project sites are out of species geographical range.
Sebastopol meadowfoam <i>Limnanthes vinculans</i>	FE	SE	1B.1	Swales, wet meadows and marshy areas in valley oak savanna; on poorly drained soils of clays and sandy loam. 49–377 feet in elevation. Blooms April–May.	Little Black Mountain/Pole Mountain: <i>Not expected to occur.</i> Project sites are out of elevation range for this species. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Swale, wet meadow, and marsh habitat potentially suitable for this species is not present on either project site.
Cobb Mountain lupine <i>Lupinus sericatus</i>	–	–	1B.2	In stands of knobcone pine-oak woodland, on open wooded slopes in gravelly soils; sometimes on serpentine. 902–5,003 feet in elevation. Blooms March–June.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>May occur.</i> Open oak woodland slope habitat potentially suitable for this species is present on both project sites.
Tidestrom's lupine <i>Lupinus tidestromii</i>	FE	SE	1B.1	Partially stabilized dunes, immediately near the ocean. 13–82 feet in elevation. Blooms April–June.	Little Black Mountain/Pole Mountain: <i>Not expected to occur.</i> Dune habitat potentially suitable for this species is not present on the project sites. Project sites are out of elevation range for this species. Live Oak Ranch/Laufenburg Ranch: Not in nine quad search area.
Marsh microseris <i>Microseris paludosa</i>			1B.2	Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland. 16–984 feet in elevation. Blooms April–June.	Little Black Mountain/Pole Mountain: Not in nine quad search area.

Species	Listing Status ¹ Federal	Listing Status ¹ State	CRPR	Habitat	Potential for Occurrence ²
					Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Project sites are out of species geographical range.
Baker's navarretia <i>Navarretia leucocephala</i> ssp. <i>bakeri</i>	–	–	1B.1	Vernal pools and swales; adobe or alkaline soils. 16–5,709 feet in elevation. Blooms April–July.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Vernal pool and swale habitat potentially suitable for this species is not present on either project site.
Many-flowered navarretia <i>Navarretia leucocephala</i> ssp. <i>plieantha</i>	FE	SE	1B.2	Volcanic ash flow vernal pools. 98–3,002 feet in elevation. Blooms May–June.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Vernal pool habitat potentially suitable for this species is not present on either project site.
Small pincushion navarretia <i>Navarretia myersii</i> ssp. <i>deminuta</i>	–	–	1B.1	Known from only one site in Lake County in vernal pool habitat on clay-loam soil; also in roadside depressions. 1165 feet in elevation. Blooms April–May.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Project sites are out of species geographical range.
Porter's navarretia <i>Navarretia paradoxinota</i>	–	–	1B.3	Meadows and seeps. Serpentinite, openings, vernal mesic, often drainages. 540–2,756 feet in elevation. Blooms May–June.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Serpentine soil habitat suitable for this species is not present on either project site.
Sonoma beardtongue <i>Penstemon newberryi</i> var. <i>sonomensis</i>	–	–	1B.3	Crevice in rock outcrops and talus slopes. 590–4,610 feet in elevation. Blooms April–August.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Mountain peak habitat potentially suitable for this species is not present on either project site.
White-flowered rein orchid <i>Piperia candida</i>	–	–	1B.2	Open to shady sites, conifer and mixed-evergreen forest, broadleafed upland forest. Sometimes on serpentine. Forest duff, mossy banks, rock outcrops, and muskeg. 148–5,299 feet in elevation. Blooms May–September.	Little Black Mountain/Pole Mountain: <i>May occur.</i> Open to shady forest habitat potentially suitable for this species is present on both project sites. Live Oak Ranch/Laufenburg Ranch: Not in nine quad search area.

Species	Listing Status ¹ Federal	Listing Status ¹ State	CRPR	Habitat	Potential for Occurrence ²
Calistoga popcornflower <i>Plagiobothrys strictus</i>	FE	ST	1B.1	Alkaline sites near thermal springs and on margins of vernal pools in heavy, dark, adobe-like clay. 295–410 feet in elevation. Blooms March–June.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Alkaline soil and vernal pool habitat potentially suitable for this species is not present on either project site. Out of species geographical range.
North Coast semaphore grass <i>Pleuropogon hooverianus</i>	–	ST	1B.1	Wet grassy, usually shady areas, sometimes freshwater marsh; associated with forest environments. 148–3,806 feet in elevation. Blooms April–June.	Little Black Mountain/Pole Mountain: <i>May occur.</i> Mesic grassland associated with forest habitat potentially suitable for this species is present on both project sites. Live Oak Ranch/Laufenburg Ranch: Not in nine quad search area.
Napa blue grass <i>Poa napensis</i>	FE	SE	1B.1	Moist alkaline meadows fed by runoff from nearby hot springs. 328–394 feet in elevation. Blooms May–August.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Alkaline soil habitat potentially suitable for this species is not present on either project site. Out of species geographical range.
California alkali grass <i>Puccinellia simplex</i>	–	–	1B.2	Alkaline, vernal mesic. Sinks, flats, and lake margins. 3–3,002 feet in elevation. Blooms March–May.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Alkaline soil habitat potentially suitable for this species is not present on either project site. Out of species geographical range.
Angel's hair lichen <i>Ramalina thrausta</i>	–	–	2B.1	North coast coniferous forest. On dead twigs and other lichens. 246–1,411 feet in elevation.	Little Black Mountain/Pole Mountain: <i>May occur.</i> Coniferous forest habitat potentially suitable for this species is present on the project sites. Live Oak Ranch/Laufenburg Ranch: Not in nine quad search area.
White beaked-rush <i>Rhynchospora alba</i>	–	–	2B.2	Freshwater marshes and sphagnum bogs. 197–6,693 feet in elevation. Blooms June–August.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Freshwater marsh and sphagnum bog habitat potentially suitable for this species is not present on either project site.

Species	Listing Status ¹ Federal	Listing Status ¹ State	CRPR	Habitat	Potential for Occurrence ²
California beaked-rush <i>Rhynchospora californica</i>	–	–	1B.1	Freshwater seeps and open marshy areas. 148–3,314 feet in elevation. Blooms May–July.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Seep and marsh and sphagnum bog habitat potentially suitable for this species is not present on either project site. Out of species geographical range.
Brownish beaked-rush <i>Rhynchospora capitellata</i>	–	–	2B.2	Lower montane coniferous forest, meadows and seeps, marshes and swamps, upper montane coniferous forest. Mesic sites. 148–5,610 feet in elevation. Blooms July–August.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Project sites are out of species geographical range.
Round-headed beaked-rush <i>Rhynchospora globularis</i>	–	–	2B.1	Freshwater marsh. 148–197 feet in elevation. Blooms July–August.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Freshwater marsh habitat potentially suitable for this species is not present on either project site. Out of species geographical range.
Point Reyes checkerbloom <i>Sidalcea calycosa</i> ssp. <i>rhizomata</i>	–	–	1B.2	Freshwater marshes near the coast. 16–312 feet in elevation. Blooms April–September.	Little Black Mountain/Pole Mountain: <i>Not expected to occur.</i> Freshwater marsh habitat potentially suitable for this species is not present on either project site. Live Oak Ranch/Laufenburg Ranch: Not in nine quad search area.
Napa checkerbloom <i>Sidalcea hickmanii</i> ssp. <i>napensis</i>	–	–	1B.1	Chaparral. Rhyolitic substrates. 1,362–2,001 feet in elevation. Blooms April–June.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Project sites are out of species geographical range.
Purple-stemmed checkerbloom <i>Sidalcea malviflora</i> ssp. <i>purpurea</i>	–	–	1B.2	Broadleafed upland forest, coastal prairie, meadows. 49–279 feet in elevation. Blooms May–June.	Little Black Mountain/Pole Mountain: <i>May occur.</i> Broadleafed upland forest habitat potentially suitable for this species is present on both project sites. Live Oak Ranch/Laufenburg Ranch: Not in nine quad search area.
Kenwood Marsh checkerbloom	FE	SE	1B.1	Edges of freshwater marshes. 377–410 feet in elevation. Blooms June–September.	Little Black Mountain/Pole Mountain: Not in nine quad search area.

Species	Listing Status ¹ Federal	Listing Status ¹ State	CRPR	Habitat	Potential for Occurrence ²
<i>Sidalcea oregana</i> ssp. <i>valida</i>					Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Freshwater marsh habitat potentially suitable for this species is not present on either project site.
Long-styled sand-spurrey <i>Spergularia macrotheca</i> var. <i>longistyla</i>	–	–	1B.2	Marshes and swamps, meadows and seeps. Alkaline. 0–836 feet in elevation. Blooms February–May.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Alkaline soil habitat potentially suitable for this species is not present on either project site. Out of species geographical range.
Socrates Mine jewelflower <i>Streptanthus brachiatus</i> ssp. <i>brachiatus</i>	–	–	1B.2	Serpentine areas and serpentine chaparral. 1,985–6,398 feet in elevation. Blooms May–June.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Serpentine soil habitat suitable for this species is not present on either project site.
Freed's jewelflower <i>Streptanthus brachiatus</i> ssp. <i>hoffmanii</i>	–	–	1B.2	Serpentine rock outcrops, primarily in geothermal development areas. 1,608–4,003 feet in elevation. Blooms May–July.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Serpentine soil habitat suitable for this species is not present on either project site.
Hoffman's bristly jewelflower <i>Streptanthus glandulosus</i> ssp. <i>hoffmanii</i>	–	–	1B.3	Chaparral, cismonte woodland, valley and foothill grassland. Moist, steep rocky banks, in serpentine and non-serpentine soil. 475–1,560 feet in elevation. Blooms March–July.	Little Black Mountain/Pole Mountain: <i>May occur.</i> Rocky open woodland and grassland habitat potentially suitable for this species is present on both project sites. Live Oak Ranch/Laufenburg Ranch: Not in nine quad search area.
Green jewelflower <i>Streptanthus hesperidis</i>	–	–	1B.2	Openings in chaparral or woodland; serpentine, rocky sites. 787–2,510 feet in elevation. Blooms May–July.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Serpentine soil habitat suitable for this species is not present on either project site.
Three Peaks jewelflower <i>Streptanthus morrisonii</i> ssp. <i>elatus</i>	–	–	1B.2	Serpentine barrens, outcrops, and talus. 262–2,674 feet in elevation. Blooms June–September.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Serpentine soil habitat suitable for this species is not present on either project site.

Species	Listing Status ¹ Federal	Listing Status ¹ State	CRPR	Habitat	Potential for Occurrence ²
Dorr's Cabin jewelflower <i>Streptanthus morrisonii</i> <i>ssp. hirtiflorus</i>	–	–	1B.2	On the serpentine barrens at the head of Austin Creek. 607–2,690 feet in elevation. Blooms June.	Little Black Mountain/Pole Mountain: <i>Not expected to occur.</i> Serpentine habitat potentially suitable for this species is not present on either project site. Live Oak Ranch/Laufenburg Ranch: Not in nine quad search area.
Morrison's jewelflower <i>Streptanthus morrisonii</i> <i>ssp. morrisonii</i>	–	–	1B.2	Serpentine outcrops in the Austin Creek area. 0 feet in elevation. Blooms May–September.	Little Black Mountain/Pole Mountain: <i>Not expected to occur.</i> Serpentine habitat potentially suitable for this species is not present on either project site. Live Oak Ranch/Laufenburg Ranch: Not in nine quad search area.
Northern slender pondweed <i>Stuckenia filiformis</i> <i>ssp. alpina</i>	–	–	2B.2	Shallow, clear water of lakes and drainage channels. 2,150–7,055 feet in elevation. Blooms May–July.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Water habitat potentially suitable for this species is not present on either project site.
Napa bluecurls <i>Trichostema ruygtii</i>	–	–	1B.2	Often in open, sunny areas. Also has been found in vernal pools. 98–2,231 feet in elevation. Blooms June–October.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Project sites are out of species geographical range.
Two-fork clover <i>Trifolium amoenum</i>	FE	–	1B.1	Coastal bluff scrub, valley and foothill grassland. Sometimes on serpentine soil, open sunny sites, swales. Most recently cited on roadside and eroding cliff face. 16–1,017 feet in elevation. Blooms April–June.	Little Black Mountain/Pole Mountain: <i>May occur.</i> Grassland habitat potentially suitable for this species is present on both project sites. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Project sites are out of species geographical range.
Santa Cruz clover <i>Trifolium buckwestiorum</i>	–	–	1B.1	Broadleafed upland forest, woodland, coastal prairie. Grassy or disturbed areas. Gravelly margins. 344–2,001 feet in elevation. Blooms April–October.	Little Black Mountain/Pole Mountain: <i>May occur.</i> Woodland and grassland habitat potentially suitable for this species is present on both project sites. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Project sites are out of species geographical range.

Species	Listing Status ¹ Federal	Listing Status ¹ State	CRPR	Habitat	Potential for Occurrence ²
Saline clover <i>Trifolium hydrophilum</i>	–	–	1B.2	Marshes and swamps, valley and foothill grassland, vernal pools. Mesic, alkaline sites. 0–984 feet in elevation. Blooms April–June.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Alkaline habitat potentially suitable for this species is not present on either project site.
Coastal triquetrella <i>Triquetrella californica</i>	–	–	1B.2	Grows within 30m 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. 33–328 feet in elevation.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>Not expected to occur.</i> Project sites are out of species geographical range.
Oval-leaved viburnum <i>Viburnum ellipticum</i>	–	–	2B.3	Chaparral, cismontane woodland, lower montane coniferous forest. 705–4,593 feet in elevation. Blooms May–June.	Little Black Mountain/Pole Mountain: Not in nine quad search area. Live Oak Ranch/Laufenburg Ranch: <i>May occur.</i> Woodland habitat potentially suitable for this species is present on both project sites.

Notes: CRPR = California Rare Plant Rank; CEQA = California Environmental Quality Act; 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)

ST State Listed as Threatened (legally protected by CESA)

SR State Listed as Rare (legally protected by NPPA)

California Rare Plant Ranks (CRPR):

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)

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: CNDDDB 2021; CNPS 2021

Table B-2 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				
California giant salamander <i>Dicamptodon ensatus</i>	-	SSC	Known from wet coastal forests near streams and seeps from Mendocino County south to Monterey County and east to Napa County. Aquatic larvae found in cold, clear streams, and occasionally in lakes and ponds. Adults known from wet forests under rocks and logs near streams and lakes and are typically found within approximately 165 feet (i.e., 50 meters) of streams.	Little Black Mountain/Pole Mountain: May occur. The treatment areas contain streams that may provide aquatic breeding habitat potentially suitable for California giant salamander. Live Oaks Ranch/Laufenburg Ranch: May occur. The treatment areas contain streams that may provide aquatic breeding habitat potentially suitable for California giant salamander.
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.	Little Black Mountain/Pole Mountain: May occur. The nearest documented California red-legged frog occurrence is approximately 3.1 miles south of the treatment areas within Sheephouse Creek (CNDDDB 2021). A recent survey of a stock pond on the Pole Mountain Preserve was conducted, and no adult frogs or tadpoles were observed; however, the pond would provide habitat suitable for California red-legged frogs if present (Prunuske Chatham, Inc. 2020). Potentially limiting the likelihood of future California red-legged frog occupation in this pond is the presence of introduced mosquitofish, which are potential predators of tadpoles (Prunuske Chatham, Inc. 2020). Stream habitat on the project site likely does not contain deep water long enough for California red-legged frog larval development; all streams were dry during the September 14, 2021 reconnaissance-level survey. However, these streams could be used by California red-legged frogs while dispersing. Live Oaks Ranch/Laufenburg Ranch: May occur. The nearest modern, presumed extant California red-legged frog occurrence is approximately 13.5 miles south of the treatment areas in Trione Annadel State Park (CNDDDB 2021). The treatment areas do not contain pond habitat; however, there are multiple stock ponds present on private property surrounding the treatment areas. Stream habitat on the project site likely does not contain deep water long enough for California red-legged frog larval development; all streams were dry during the September 15, 2021 reconnaissance-level survey. However, these streams could be used by California red-legged frogs while dispersing.

Species	Listing Status ¹ Federal	Listing Status ¹ State	Habitat	Potential for Occurrence ²
California tiger salamander <i>Ambystoma californiense</i>	FE	ST	Need underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding.	Little Black Mountain/Pole Mountain: Not expected to occur. The treatment areas are outside of the known range of this species. Live Oak Ranch/Laufenburg Ranch: Not expected to occur. The treatment areas are outside of the known range of this species.
Coast Range newt <i>Taricha torosa</i>	–	SSC	Coastal drainages from Mendocino County to San Diego County. Lives in terrestrial habitats and will migrate over 0.6 mile to breed in ponds, reservoirs and slow-moving streams.	Little Black Mountain/Pole Mountain: Not expected to occur. The treatment areas are outside of the range of the portion of this species' population that is considered a special-status species (Thomson et al. 2016). Live Oak Ranch/Laufenburg Ranch: Not expected to occur. The treatment areas are outside of the range of the portion of this species' population that is considered a special-status species (Thomson et al. 2016).
Foothill yellow-legged frog <i>Rana boylei</i>	–	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. Treatment areas are within the northwest/north coast clade, which is not listed under the California Endangered Species Act.	Little Black Mountain/Pole Mountain: May occur. Foothill yellow-legged frogs have been documented within Pole Creek approximately 1 mile northwest and Kidd Creek approximately 2 miles east of the treatment areas (CNDDDB 2021). Stream habitat in the treatment areas may provide habitat suitable for this species. Live Oaks Ranch/Laufenburg Ranch: May occur. The nearest documented occurrence of foothill yellow-legged frogs is approximately 2 miles north of the treatment areas near Kellogg Creek (CNDDDB 2021). Stream habitat in the treatment areas may provide habitat suitable for this species.
Red-bellied newt <i>Taricha rivularis</i>	–	SSC	Coastal drainages from Humboldt County south to Sonoma County, inland to Lake County. Isolated population of uncertain origin in Santa Clara County. Lives in terrestrial habitats, juveniles generally underground, adults active at surface in moist environments. Spends dry season underground within root channels. Will migrate over 0.6 mile to breed, typically in streams with moderate flow and clean rocky substrate. Primarily active at night.	Little Black Mountain/Pole Mountain: May occur. Stream habitat and associated upland forest habitat in the treatment areas may provide habitat suitable for red-bellied newts. Live Oaks Ranch/Laufenburg Ranch: May occur. Stream habitat and associated upland forest habitat in the treatment areas may provide habitat suitable for red-bellied newts.

Species	Listing Status ¹ Federal	Listing Status ¹ State	Habitat	Potential for Occurrence ²
Western pond turtle <i>Actinemys marmorata</i>	–	SSC	Aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6,000 feet elevation. Need basking sites and suitable (sandy banks or grassy open fields) upland habitat up to approximately 1,000 feet from water for egg-laying.	Little Black Mountain/Pole Mountain: May occur. Stream habitat and associated uplands (e.g., stream banks, grassy areas adjacent to streams, open woodlands and forests adjacent to streams) potentially suitable for western pond turtles is present in the treatment areas. Live Oaks Ranch/Laufenburg Ranch: May occur. Stream habitat and associated uplands (e.g., stream banks, grassy areas adjacent to streams, open woodlands and forests adjacent to streams) potentially suitable for western pond turtles is present in the treatment areas.
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.	Little Black Mountain/Pole Mountain: Known to occur. American peregrine falcon is known to nest in cliff habitat on Little Black Mountain (Edwards, pers. comm. 2021). Live Oak Ranch/Laufenburg Ranch: Not expected to occur. The treatment areas do not contain cliff habitat or human-made structures suitable for American peregrine falcon nesting.
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.	Little Black Mountain/Pole Mountain: Not expected to occur. The treatment areas are located greater than 1 mile from any significant water body (e.g., Pacific Ocean, Russian River, Gualala River, lake, reservoir); thus, likely do not provide suitable nesting habitat for bald eagles. Live Oak Ranch/Laufenburg Ranch: Not expected to occur. The treatment areas are not located within 1 mile of appropriate aquatic habitat (e.g., lake, river, reservoir).
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.	Little Black Mountain/Pole Mountain: Not expected to occur. The treatment areas are outside of the known range of this species. Live Oak Ranch/Laufenburg Ranch: Not expected to occur. The treatment areas are outside of the known range of this species.
Bryant's savannah sparrow <i>Passerculus sandwichensis alaudinus</i>	–	SSC	Occupies low, tidally influenced habitats, adjacent ruderal areas, moist grasslands within and just above the fog belt, and, infrequently, drier grasslands. Adjacent to salt marshes, also occupies weedy spoil areas, canal banks, and bottomland pastures.	Little Black Mountain/Pole Mountain: Not expected to occur. The treatment areas do not contain salt marsh habitat. Live Oak Ranch/Laufenburg Ranch: Not expected to occur. The treatment areas do not contain salt marsh habitat.

Species	Listing Status ¹ Federal	Listing Status ¹ State	Habitat	Potential for Occurrence ²
Burrowing owl <i>Athene cucularia</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.	Little Black Mountain/Pole Mountain: May occur. The treatment areas are outside of the known burrowing owl breeding range and are near the boundary of the currently known extent of the species' wintering range. Open grassy areas within the treatment areas may provide overwintering habitat suitable for burrowing owls. Live Oaks Ranch/Laufenburg Ranch: May occur. The treatment areas are outside of the known burrowing owl breeding range and are near the boundary of or just within the currently known extent of the species' wintering range. Grasslands and open grassy woodland habitats within the treatment areas may provide overwintering habitat suitable for burrowing owls.
California brown pelican <i>Pelecanus occidentalis californicus</i>	FD	SD FP	Colonial nester on coastal islands just outside the surf line. Nests on coastal islands of small to moderate size which afford immunity from attack by ground-dwelling predators. Roosts communally.	Little Black Mountain/Pole Mountain: Not expected to occur. The treatment areas do not contain breeding, roost, or loafing habitat suitable for California brown pelicans. Live Oak Ranch/Laufenburg Ranch: Not expected to occur. The treatment areas do not contain breeding, roost, or loafing habitat suitable for California brown pelicans.
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.	Little Black Mountain/Pole Mountain: Known to occur. Golden eagle is known to nest in cliff habitat on Little Black Mountain (Edwards, pers. comm. 2021). Live Oaks Ranch/Laufenburg Ranch: May occur. The treatment areas contain large trees that may provide nesting habitat suitable for golden eagles.
Grasshopper sparrow <i>Ammodramus savannarum</i>	–	SSC	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.	Little Black Mountain/Pole Mountain: May occur. Open grassy areas within the treatment areas may provide habitat suitable for grasshopper sparrow. Live Oak Ranch/Laufenburg Ranch: May occur. Open grassy areas within the treatment areas may provide habitat suitable for grasshopper sparrow.
Loggerhead shrike <i>Lanius ludovicianus</i>	–	SSC	Broken woodlands, savannah, pinyon-juniper, Joshua tree, and riparian woodlands, desert oases, scrub and washes. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	Little Black Mountain/Pole Mountain: May occur. The treatment areas contain open woodlands and shrub habitats potentially suitable for nesting loggerhead shrikes. Live Oaks Ranch/Laufenburg Ranch: May occur. The treatment areas contain open woodlands and shrub habitats potentially suitable for nesting loggerhead shrikes.

Species	Listing Status ¹ Federal	Listing Status ¹ State	Habitat	Potential for Occurrence ²
Long-eared owl <i>Asio otus</i>	–	SSC	Riparian bottomlands including 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.	Little Black Mountain/Pole Mountain: May occur. The treatment areas contain riparian and forest habitat adjacent to streams that may provide nesting habitat suitable for long-eared owls. Live Oak Ranch/Laufenburg Ranch: May occur. The treatment areas contain riparian and forest habitat adjacent to streams that may provide nesting habitat suitable for long-eared owls.
Northern spotted owl <i>Strix occidentalis caurina</i>	FT	ST SSC	Old growth forests or mixed stands of old growth and mature trees. Occasionally in younger forests with patches of big trees. High, multistory canopy dominated by big trees, many trees with cavities or broken tops, woody debris and space under canopy.	Little Black Mountain/Pole Mountain: Not expected to occur. The nearest known documented northern spotted owl nest is approximately 0.6 mile south of the Pole Mountain preserve (CNDDDB 2021). The treatment areas do not contain old growth habitat suitable for this species. Live Oak Ranch/Laufenburg Ranch: Not expected to occur. The nearest known documented northern spotted owl nest is approximately 4 miles northeast of the Live Oak Ranch preserve (CNDDDB 2021). The treatment areas do not contain old growth habitat suitable for this species.
Purple martin <i>Progne subis</i>	–	SSC	Inhabits woodlands, low elevation coniferous forest of Douglas fir, ponderosa pine, and Monterey pine. Nests in old woodpecker cavities mostly, also in human-made structures. Nest often located in tall, isolated tree/snag.	Little Black Mountain/Pole Mountain: May occur. The treatment areas contain large trees and snags that may provide nesting habitat suitable for purple martin. Live Oak Ranch/Laufenburg Ranch: May occur. The treatment areas contain large trees and snags that may provide nesting habitat suitable for purple martin.
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 a few kilometers of the colony.	Little Black Mountain/Pole Mountain: Not expected to occur. The treatment areas are outside of the current known range of this species. Live Oak Ranch/Laufenburg Ranch: May occur. The treatment areas contain streams and seeps with associated vegetation (e.g., Himalayan blackberry) which may provide nesting habitat suitable for tricolored blackbirds.
Tufted puffin <i>Fratercula cirrhata</i>	–	SSC	Protected deepwater coastal communities. Open-ocean bird; nests along the coast on islands, islets, or (rarely) mainland cliffs. Requires sod or earth into which the birds can burrow, on island cliffs or grassy island slopes.	Little Black Mountain/Pole Mountain: Not expected to occur. The treatment areas do not contain marine habitat suitable for this species. Live Oak Ranch/Laufenburg Ranch: Not expected to occur. The treatment areas do not contain marine habitat suitable for this species.

Species	Listing Status ¹ Federal	Listing Status ¹ State	Habitat	Potential for Occurrence ²
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.	Little Black Mountain/Pole Mountain: May occur. The treatment areas contain large trees and snags that may provide nesting habitat suitable for Vaux's swift. Live Oak Ranch/Laufenburg Ranch: May occur. The treatment areas contain large trees and snags that may provide nesting habitat suitable for Vaux's swift.
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.	Little Black Mountain/Pole Mountain: May occur. The treatment areas contain woodland habitat that may provide nesting habitat suitable for white-tailed kites. Live Oak Ranch/Laufenburg Ranch: May occur. The treatment areas contain woodland habitat that may provide nesting habitat suitable for white-tailed kites.
Yellow rail <i>Coturnicops noveboracensis</i>	–	SSC	Freshwater marsh, meadow, and seep. Summer resident in eastern Sierra Nevada in Mono County.	Little Black Mountain/Pole Mountain: Not expected to occur. The treatment areas do not contain marsh, meadow, or seep habitat with sufficient cover to provide nesting habitat suitable for this species. Live Oak Ranch/Laufenburg Ranch: Not expected to occur. The treatment areas do not contain marsh, meadow, or seep habitat with sufficient cover to provide nesting habitat suitable for this species.
Yellow warbler <i>Setophaga petechia</i>	–	SSC	Riparian plant associations in close 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.	Little Black Mountain/Pole Mountain: May occur. The treatment areas contain riparian habitat associated with streams that may provide nesting habitat suitable for yellow warbler. Live Oak Ranch/Laufenburg Ranch: May occur. The treatment areas contain riparian habitat associated with streams that may provide nesting habitat suitable for yellow warbler.
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.	Little Black Mountain/Pole Mountain: May occur. The treatment areas contain riparian habitat associated with streams that may provide nesting habitat suitable for yellow-breasted chat. Live Oak Ranch/Laufenburg Ranch: May occur. The treatment areas contain riparian habitat associated with streams that may provide nesting habitat suitable for yellow-breasted chat.
Fish				
Chinook salmon - California coastal ESU <i>Oncorhynchus tshawytscha</i> pop. 17	FT	–	Federal listing refers to wild spawned, coastal, spring and fall runs between Redwood Creek, Humboldt County and Russian River, Sonoma County.	Little Black Mountain/Pole Mountain: May occur. The segments of Pole Mountain Creek, Saint Elmo Creek, and Kidd Creek within the treatment area may provide habitat suitable for Chinook salmon. Live Oak Ranch/Laufenburg Ranch: May occur. The segment of Bidwell Creek within the treatment areas may provide stream habitat suitable for Chinook salmon.

Species	Listing Status ¹ Federal	Listing Status ¹ State	Habitat	Potential for Occurrence ²
Clear Lake - Russian River roach <i>Lavinia symmetricus</i> ssp. 4	-	SSC	Found in a wide variety of habitats in the Russian River, including the main river where there is cover (e.g., fallen trees) to protect them from predators. They are most abundant, however, in tributaries.	Little Black Mountain/Pole Mountain: May occur. The segments of Pole Mountain Creek, Saint Elmo Creek, and Kidd Creek within the treatment area may provide habitat suitable for Clear Lake – Russian River roach. Live Oak Ranch/Laufenburg Ranch: May occur. The segment of Bidwell Creek within the treatment areas may provide stream habitat suitable for Clear Lake – Russian River roach.
Coho salmon - central California coast ESU <i>Oncorhynchus kisutch</i> pop. 4	FE	SE	Federal listing includes populations between Punta Gorda and San Lorenzo River. State listing includes populations south of Punta Gorda. Require beds of loose, silt-free, coarse gravel for spawning. Also need cover, cool water and sufficient dissolved oxygen.	Little Black Mountain/Pole Mountain: May occur. Coho salmon have been documented in Austin Creek, from which several tributary creeks (i.e., Saint Elmo Creek, Kidd Creek) flow into the treatment areas (CNDDDB 2021). These streams may provide habitat suitable for Coho salmon. Live Oak Ranch/Laufenburg Ranch: May occur. The segment of Bidwell Creek within the treatment areas may provide stream habitat suitable for Coho salmon.
Gualala roach <i>Lavinia symmetricus parvipinnis</i>	-	SSC	Found only in the Gualala River.	Little Black Mountain/Pole Mountain: Not expected to occur. The treatment areas are outside of the known range of this species. Live Oak Ranch/Laufenburg Ranch: Not expected to occur. The treatment areas are outside of the known range of this species.
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.	Little Black Mountain/Pole Mountain: May occur. The segments of Pole Mountain Creek, Saint Elmo Creek, and Kidd Creek within the treatment area may provide habitat suitable for hardhead. Live Oak Ranch/Laufenburg Ranch: May occur. The segment of Bidwell Creek within the treatment areas may provide stream habitat suitable for hardhead.
Longfin smelt <i>Spirinchus thaleichthys</i>	FC	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.	Little Black Mountain/Pole Mountain: Not expected to occur. The treatment areas are outside of the known range of this species. Live Oak Ranch/Laufenburg Ranch: Not expected to occur. The treatment areas are outside of the known range of this species.
Navarro roach <i>Lavinia symmetricus navarroensis</i>	-	SSC	Habitat generalists. Found in warm intermittent streams as well as cold, well-aerated streams.	Little Black Mountain/Pole Mountain: Not expected to occur. The treatment areas are outside of the known range of this species. Live Oak Ranch/Laufenburg Ranch: Not expected to occur. The treatment areas are outside of the known range of this species.

Species	Listing Status ¹ Federal	Listing Status ¹ State	Habitat	Potential for Occurrence ²
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. Size of runs is declining. Swift-current gravel-bottomed areas for spawning with water temperatures between 12-18 degrees Celsius.	Little Black Mountain/Pole Mountain: May occur. The segments of Pole Mountain Creek, Saint Elmo Creek, and Kidd Creek within the treatment area may provide habitat suitable for Pacific lamprey. Live Oak Ranch/Laufenburg Ranch: May occur. The segment of Bidwell Creek within the treatment areas may provide stream habitat suitable for Pacific lamprey.
Riffle sculpin <i>Cottus gulosus</i>	–	SSC	Found in headwater streams with cold water and rocky or gravelly substrate. Prefer permanent streams where the water does not exceed 25-26 degrees Celsius, and where ample flow keeps the dissolved oxygen level near saturation.	Little Black Mountain/Pole Mountain: May occur. The segments of Pole Mountain Creek, Saint Elmo Creek, and Kidd Creek within the treatment area may provide habitat suitable for riffle sculpin. Live Oak Ranch/Laufenburg Ranch: Not expected to occur. The treatment areas are outside of the known range of this species.
Russian River tule perch <i>Hysterocarpus traski pomo</i>	–	SSC	Low-elevation streams of the Russian River system. Requires clear, flowing water with abundant cover. They also require deep (i.e., greater than 3 feet) pool habitat.	Little Black Mountain/Pole Mountain: Not expected to occur. The treatment areas are outside of the known range of this species. Live Oak Ranch/Laufenburg Ranch: Not expected to occur. The treatment areas are outside of the known range of this species.
Sacramento hitch <i>Lavinia exilicauda exilicauda</i>	–	SSC	Found in cool, clear, low-gradient streams, hiding among aquatic vegetation in sandy runs or pools. Can withstand water temperatures greater than 30 degrees Celsius under some conditions.	Little Black Mountain/Pole Mountain: Not expected to occur. The treatment areas are outside of the known range of this species. Live Oak Ranch/Laufenburg Ranch: May occur. The segment of Bidwell Creek within the treatment areas may provide stream habitat suitable for this species.
Steelhead - central California coast DPS <i>Oncorhynchus mykiss irideus</i> pop. 8	FT	–	From Russian River, south to Soquel Creek and to, but not including Pajaro River. Also San Francisco and San Pablo Bay basins.	Little Black Mountain/Pole Mountain: May occur. The nearest documented occurrence of steelhead is within Austin Creek approximately 4.5 miles north of the treatment areas (CNDDDB 2021). The segments of Pole Mountain Creek, Saint Elmo Creek, and Kidd Creek within the treatment area may provide habitat suitable for steelhead. Live Oak Ranch/Laufenburg Ranch: May occur. Steelhead have been documented previously in the segment of Bidwell Creek within the treatment area during snorkel surveys and may provide habitat suitable for the species (Hammar, pers. comm. 2021).

Species	Listing Status ¹ Federal	Listing Status ¹ State	Habitat	Potential for Occurrence ²
Steelhead - northern California DPS <i>Oncorhynchus mykiss irideus</i> pop. 16	FT	–	Coastal basins from Redwood Creek south to the Gualala River, inclusive. Does not include summer-run steelhead.	Little Black Mountain/Pole Mountain: Not expected to occur. A portion of the northern California DPS steelhead range overlaps the eastern half of the treatment areas; however, no streams that could support steelhead are present within that portion of the treatment areas. Live Oak Ranch/Laufenburg Ranch: Not expected to occur. The treatment areas are outside of the range of the northern California DPS of steelhead.
Western river lamprey <i>Lampetra ayresii</i>	–	SSC	Lower Sacramento River, San Joaquin River, and Russian River. May occur in coastal streams north of San Francisco Bay. Adults need clean, gravelly riffles and ammocoetes need sandy backwaters or stream edges.	Little Black Mountain/Pole Mountain: Not expected to occur. Stream habitat in the treatment areas do not contain gravelly riffles or sandy stream edges suitable for western river lamprey. Live Oak Ranch/Laufenburg Ranch: Not expected to occur. The treatment areas are outside of the known range of this species.
Invertebrates				
California freshwater shrimp <i>Syncaris pacifica</i>	FE	SE	Endemic to Marin, Napa, and Sonoma counties. Found in low-elevation, low-gradient streams where riparian cover is moderate to heavy. Shallow pools away from main streamflow. In winter, found in streams with undercut banks with exposed roots. In summer, found in streams with leafy branches touching water.	Little Black Mountain/Pole Mountain: May occur. The treatment areas contain stream habitat that may provide habitat suitable for California freshwater shrimp. Live Oak Ranch/Laufenburg Ranch: May occur. The treatment areas contain stream habitat that may provide habitat suitable for California freshwater shrimp.
Monarch - California overwintering population <i>Danaus plexippus</i> pop. 1	–	–	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (e.g., eucalyptus, Monterey pine, cypress), with nectar and water sources nearby. Most overwintering roosts are located within 1.5 miles of the coast and at low elevations (i.e., 200–300 feet) (Xerces Society 2016).	Little Black Mountain/Pole Mountain: Not expected to occur. The treatment areas are located approximately 3 miles from the coast and at an elevation of approximately 1,000–2,200 feet. The treatment areas do not contain the conditions favored by overwintering monarchs. Live Oak Ranch/Laufenburg Ranch: Not expected to occur. The treatment areas are not located along the coast, where monarch winter roost sites typically occur.
Myrtle's silverspot butterfly <i>Speyeria zerene myrtleae</i>	FE	–	Restricted to the foggy, coastal dunes/hills of the Point Reyes peninsula; extirpated from coastal San Mateo County. Larval foodplant thought to be <i>Viola adunca</i> .	Little Black Mountain/Pole Mountain: Not expected to occur. The treatment areas are outside of the current known range of this species. Live Oak Ranch/Laufenburg Ranch: Not expected to occur. The treatment areas are outside of the current known range of this species.

Species	Listing Status ¹ Federal	Listing Status ¹ State	Habitat	Potential for Occurrence ²
Western bumble bee <i>Bombus occidentalis</i>	–	–	Bumble bees have three basic habitat requirements: 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.	<p>Little Black Mountain/Pole Mountain: Not expected to occur. The treatment areas are within the historic range of this species. However, western bumble bee has recently undergone a dramatic decline in abundance and distribution and is no longer present across much of its historic range. In California, western bumble bee populations are currently largely restricted to high elevation sites in the Sierra Nevada (Xerces Society 2018). It is unlikely that the range of western bumble bee would expand into the Sonoma County region during the life of the project. Treatment activities may, however, result in improved habitat conditions for this species by treating invasive plant infestations, restoring native vegetation, and creating openings in dense forest habitat that may promote the growth of native floral resources.</p> <p>Live Oak Ranch/Laufenburg Ranch: Not expected to occur. The treatment areas are within the historic range of this species. However, western bumble bee has recently undergone a dramatic decline in abundance and distribution and is no longer present across much of its historic range. In California, western bumble bee populations are currently largely restricted to high elevation sites in the Sierra Nevada (Xerces Society 2018). It is unlikely that the range of western bumble bee would expand into the Sonoma County region during the life of the project. Treatment activities may, however, result in improved habitat conditions for this species by treating invasive plant infestations, restoring native vegetation, and creating openings in dense forest habitat that may promote the growth of native floral resources.</p>
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.	<p>Little Black Mountain/Pole Mountain: May occur. Grassland and open woodland habitat within the treatment areas may provide habitat suitable for this species.</p> <p>Live Oak Ranch/Laufenburg Ranch: May occur. Grassland and open woodland habitat within the treatment areas may provide habitat suitable for this species. Additionally, several large, inactive burrows potentially associated with American badgers were observed on the Laufenburg Ranch site during the reconnaissance-level survey for biological resources.</p>

Species	Listing Status ¹ Federal	Listing Status ¹ State	Habitat	Potential for Occurrence ²
Fisher - West Coast DPS <i>Pekania pennanti</i>	–	SSC	Intermediate to large-tree stages of coniferous forests and deciduous-riparian areas with high percent canopy closure. Uses cavities, snags, logs and rocky areas for cover and denning. Needs large areas of mature, dense forest.	Little Black Mountain/Pole Mountain: Not expected to occur. There is one recent (2013) occurrence of fisher approximately 7.5 miles north of the treatment areas (CNDDDB 2021). This occurrence is the southernmost documented sighting of a fisher on the California coast, and it is possible that the species is experiencing a recent range expansion (Allen et al. 2015). However, the treatment areas do not contain mature, dense forest required for fisher; thus, the species is unlikely to den within the treatment areas. Live Oak Ranch/Laufenburg Ranch: Not expected to occur. The treatment areas are outside of the current known range of this species.
Pallid bat <i>Antrozous pallidus</i>	–	SSC	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.	Little Black Mountain/Pole Mountain: May occur. The treatment areas contain large trees with cavities, snags, and rocky areas, which may provide roosting habitat suitable for pallid bat. Live Oak Ranch/Laufenburg Ranch: May occur. The treatment areas contain large trees with cavities, snags, and rocky areas, which may provide roosting habitat suitable for pallid bat.
Ringtail <i>Bassariscus astutus</i>	–	FP	Riparian habitats, forest habitats, and shrub habitats in lower to middle elevations.	Little Black Mountain/Pole Mountain: May occur. The treatment areas contain riparian, forest, and shrub habitat suitable for ringtail. The treatment areas contain large trees with cavities and rocky areas which may provide den habitat suitable for this species. Live Oak Ranch/Laufenburg Ranch: May occur. The treatment areas contain riparian, forest, and shrub habitat suitable for ringtail. The treatment areas contain large trees with cavities and rocky areas which may provide den habitat suitable for this species.
San Francisco dusky-footed woodrat <i>Neotoma fuscipes annectens</i>	–	SSC	Forest habitats of moderate canopy and moderate to dense understory. May prefer chaparral and redwood habitats. Constructs nests of shredded grass, leaves and other material. May be limited by availability of nest-building materials.	Little Black Mountain/Pole Mountain: Not expected to occur. The treatment areas are outside of the known range of this subspecies. Live Oak Ranch/Laufenburg Ranch: Not expected to occur. The treatment areas are outside of the known range of this subspecies.

Species	Listing Status ¹ Federal	Listing Status ¹ State	Habitat	Potential for Occurrence ²
Sonoma tree vole <i>Arborimus pomo</i>	–	SSC	North coast fog belt from Oregon border to Sonoma County. In Douglas fir, redwood, and montane hardwood-conifer forests. Favors old growth and mature forests. Feeds almost exclusively on Douglas fir needles. Will occasionally take needles of grand fir, hemlock, or spruce.	Little Black Mountain/Pole Mountain: May occur. While the treatment areas do not contain old growth habitat, some large trees are present, including Douglas fir, which may provide nesting habitat suitable for this species. Live Oak Ranch/Laufenburg Ranch: Not expected to occur. The treatment areas are outside of the known range of this species.
Southern sea otter <i>Enhydra lutris nereis</i>	FT	FP	Nearshore marine environments from about Ano Nuevo, San Mateo County to Point Sal, Santa Barbara County. Needs canopies of giant kelp and bull kelp for rafting and feeding. Prefers rocky substrates with abundant invertebrates.	Little Black Mountain/Pole Mountain: Not expected to occur. The treatment areas do not contain marine habitat suitable for this species. Live Oak Ranch/Laufenburg Ranch: Not expected to occur. The treatment areas do not contain marine habitat suitable for this species.
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.	Little Black Mountain/Pole Mountain: May occur. Rocky areas in the treatment area may provide cavities large enough to be used as roost habitat by Townsend's big-eared bats. Live Oak Ranch/Laufenburg Ranch: May occur. Potential roost habitat is present within human-made structures (e.g., barns) in the treatment areas.
Western red bat <i>Lasiurus blossevillei</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.	Little Black Mountain/Pole Mountain: May occur. The treatment areas contain broadleaf tree species that may provide roosting habitat suitable for this species. Live Oak Ranch/Laufenburg Ranch: May occur. The treatment areas contain broadleaf tree species that may provide roosting habitat suitable for this species.

Notes: CNDDDB = California Natural Diversity Database; CEQA = California Environmental Quality Act; DPS=distinct population segment; ESU=evolutionarily significant unit

¹ Legal Status Definitions

Federal:

FE Federally Listed as Endangered (legally protected)

FT Federally Listed as Threatened (legally protected)

FD Federally Delisted

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)

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 and there have been nearby recorded occurrences of the species.

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

Sources: CNDDDB 2021; CNPS 2021; Edwards, pers. comm. 2021; Hammar, pers. comm. 2021; Sonoma Land Trust 2021; Prunuske Chatham, Inc. 2020; USFWS 2021; Warner 2013a; Warner 2013b

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Attachment C

Hazardous Materials

ENVIROSTOR

pole mountain preserve, sonoma, c

Map Address

Sites and Facilities

Cleanup Sites

- Federal Superfund
- State Response
- Voluntary Cleanup
- School Cleanup
- Evaluation
- School Investigation
- Military Evaluation
- Tiered Permit
- Corrective Action
- Field Points

STATUS

[All Statuses](#)

Permitted Sites

- Operating
- Post-Closure
- Non-Operating

Other Sites

GIS Layers

Tools

[TAKE A TOUR](#) [SHARE THIS MAP](#)



2000 ft

RMap data ©2021

SITES CURRENTLY VISIBLE ON MAP

2 SITES LISTED

[EXPORT THIS LIST TO EXCEL](#)

PROJECT NAME	STATUS	PROJECT TYPE	ADDRESS	CITY
■ CALTRANS FORT ROSS MAINTENANCE STATION	NO FURTHER ACTION	EVALUATION	21265 COAST HWY	FORT ROSS
■ RADAR SITE B-76 (J09CA0910)	INACTIVE - ACTION REQUIRED	MILITARY EVALUATION	ACROSS RUSSIAN RIVER FROM THE COMMUNITY OF JENNER	JENNER

ENVIROSTOR

Live Oaks Ranch Preserve, Sonoma, CA

Map Address

Sites and Facilities

Cleanup Sites

- Federal Superfund
- State Response
- Voluntary Cleanup
- School Cleanup
- Evaluation
- School Investigation
- Military Evaluation
- Tiered Permit
- Corrective Action
- Field Points

STATUS

[All Statuses](#)

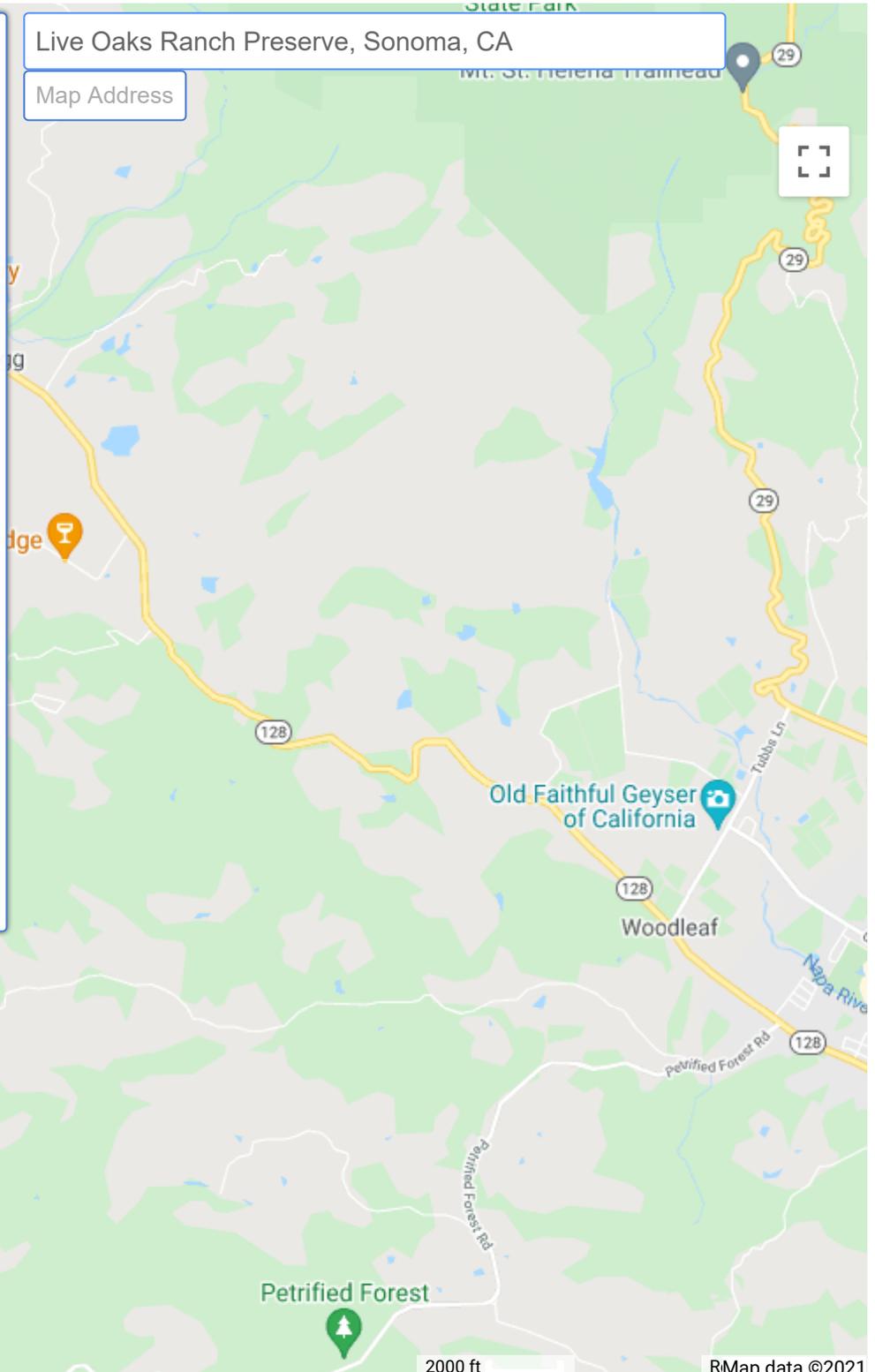
Permitted Sites

- Operating
- Post-Closure
- Non-Operating

Other Sites

GIS Layers

Tools

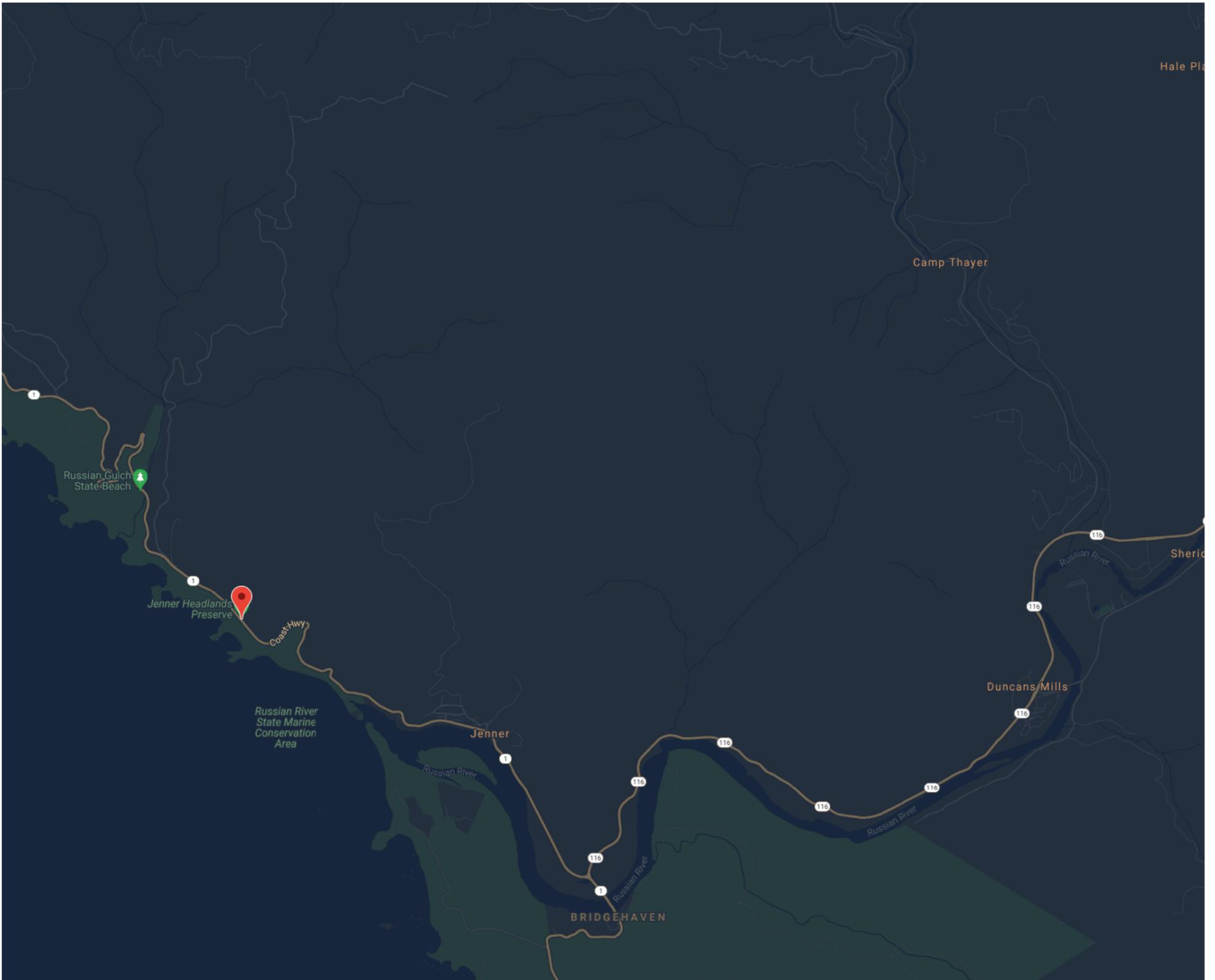


SITES CURRENTLY VISIBLE ON MAP

2 SITES LISTED

[EXPORT THIS LIST TO EXCEL](#)

PROJECT NAME	STATUS	PROJECT TYPE	ADDRESS	CITY
■ CALISTOGA RAD BEA ANNEX	NO FURTHER ACTION	MILITARY EVALUATION	NORTH OF EARL STREET TERMINUS	CALISTOGA
■ GALLIS TRUST PROPERTY	NO FURTHER ACTION	SCHOOL INVESTIGATION	1834 MONEY LANE	CALISTOGA



LEGEND - CHOOSE MORE SITES

- LUST Cleanup Sites - REMOVE
- Cleanup Program Sites - REMOVE
- Military Cleanup Sites - REMOVE
- Military Privatized Sites - REMOVE
- Military UST Sites - REMOVE

Signifies a Closed Site

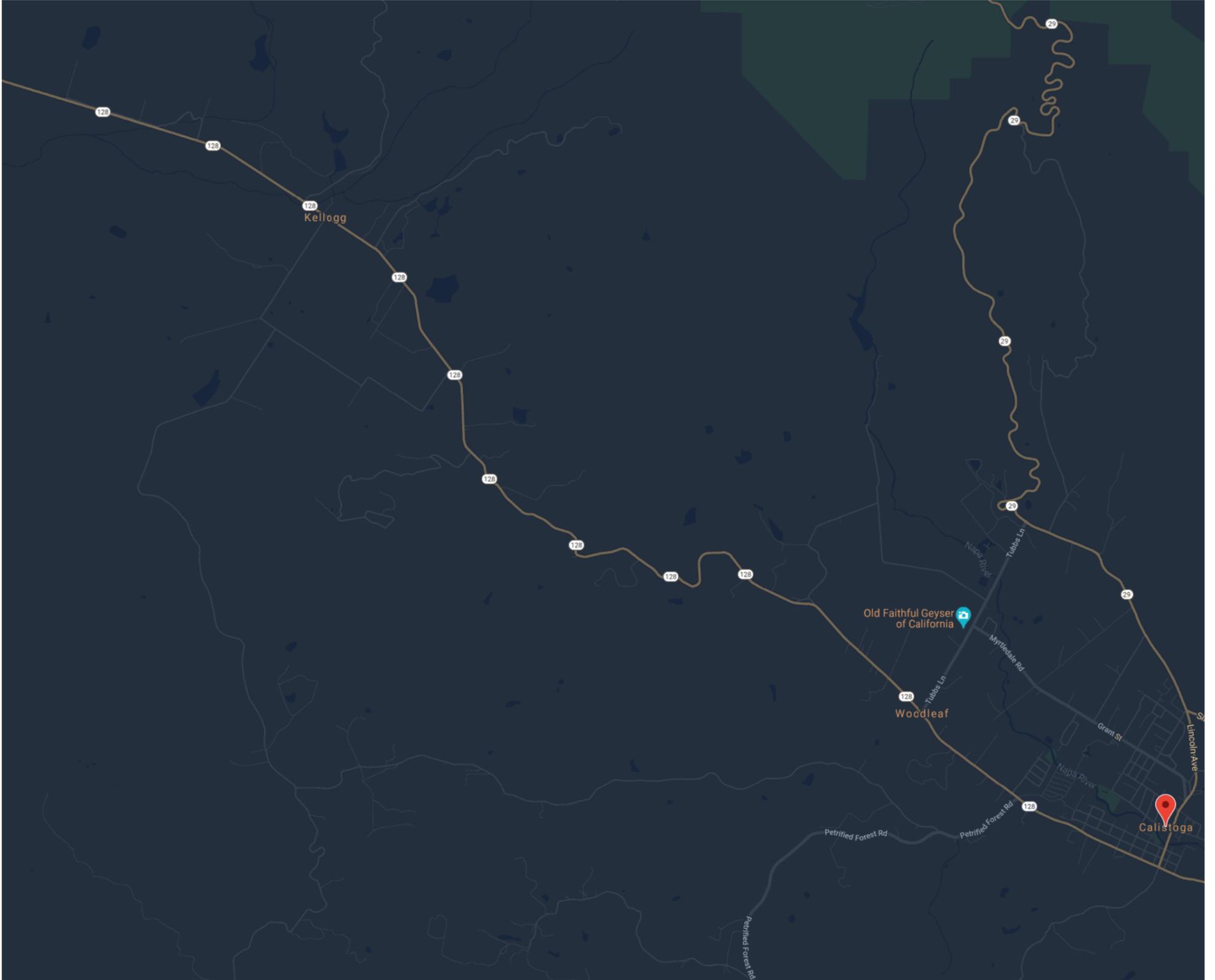
ACTIVE MAP COVERAGES:

- Military Bases - REMOVE

LIST SITES VISIBLE ON MAP

1000 ft Map data ©2021

Sites Shown on Map: 4 Total Sites 0 Open Sites 4 Closed Sites 1 Sites w/Water Quality Data



LEGEND - [CHOOSE MORE SITES](#) ✕

- LUST Cleanup Sites - [REMOVE](#)
- Cleanup Program Sites - [REMOVE](#)
- Military Cleanup Sites - [REMOVE](#)
- Military Privatized Sites - [REMOVE](#)
- Military UST Sites - [REMOVE](#)

Signifies a Closed Site

ACTIVE MAP COVERAGES:

- Military Bases - [REMOVE](#)

LIST SITES VISIBLE ON MAP

1000 ft Map data ©2021

Sites Shown on Map: 21 Total Sites 0 Open Sites 21 Closed Sites 10 Sites w/Water Quality Data

SITES IDENTIFIED WITH WASTE CONSTITUENTS ABOVE HAZARDOUS WASTE LEVELS OUTSIDE THE WASTE MANAGEMENT UNIT

COUNTY	CITY	REGION	SWAT ID	WASTE DISCHARGER SYSTEM NO.	SOLID WASTE ID NO.	WASTE MANAGEMENT UNIT NAME	FACILITY NAME	AGENCY NAME
DEL NORTE	CRESCENT CITY	1	2	1A880520NSL-01		DEL NORTE COUNTY- PESTICIDE STORAGE	DEL NORTE PESTICIDE STORAGE AR	DEL NORTE, COUNTY OF
CONTRA COSTA	PITTSBURG	2	1	2 071059002-02	07-A1-0001	U.S. STEEL CORP.-PITTSBURG SITE LA	WDR-USS-POSCO	USS-POSCO
SOLANO	VALLEJO	2	1	2 482011003-01	48-AA-0008	US NAVY MARE ISLAND SANITARY LANDFILL	WDR-NAVAL SHIPYARD/CLASS I LAN	MARE ISLAND NAVAL SHIPYARD
CONTRA COSTA	RICHMOND	2	3	2 071007002-01		CHEVRON CHEMICAL COMPANY-OLD SITES	WDR-ORTHO DIV-RICHMOND PLANT	CHEVRON CHEMICAL COMPANY
MONTEREY	FORT ORD (Marina)	3	1	3 270301004-01	27-AA-0015	FORT ORD LANDFILL	SANITARY LANDFILL	U.S. ARMY, FORT ORD
SANTA BARBARA	LOMPOC	3	3	3 420305001-01	42-AA-0017	LOMPOC CITY LANDFILL	SOLID WASTE DISPOSAL SITE	LOMPOC CITY
LOS ANGELES	MONTEREY PARK	4	1	4B190332001-01	19-AM-0001	OPERATING INDUSTRIES LANDFILL	OPERATING INDUSTRIES, INC.	OPERATING INDUSTRIES, INC.
TULARE	WOODLAKE	5F	1	5D540300010-01	54-AA-0007	TULARE COUNTY-WOODLAKE LANDFILL	WOODLAKE SWDS	TULARE, COUNTY OF
FRESNO	FRESNO	5F	2	5D100300001-01		MCKINLEY AVE. YARD	T.H. AGRICULTURE AND NUTRITION	NORTH AMERICAN PHILLIPS
KINGS	CORCORAN	5F	2	5D160302001-01	16-AA-0011	KINGS COUNTY-CORCORAN LANDFILL	CORCORAN SWDS	KINGS COUNTY WASTE MGMT AUTH.
FRESNO	FRESNO	5F	3	5D100319001-01	10-AA-0013	ORANGE AVENUE DISPOSAL COMPANY	ORANGE AVENUE LANDFILL	ORANGE AVENUE DISP CO. INC
TULARE	EXETER	5F	3	5D540300003-01	54-AA-0002	TULARE COUNTY-EXETER DISPOSAL SITE	EXETER SWDS	TULARE, COUNTY OF
MERCED	ATWATER	5F	4	5C240115001-01		ATWATER CITY	BERT CRANE ROAD LANDFILL	ATWATER, CITY OF
FRESNO	FOWLER	5F	5	5D100325N01-01		FOWLER CITY	FOWLER CITY LANDFILL (OLD)	FOWLER, CITY OF
BUTTE	OROVILLE	5R	2	5A042005001-01		KOPPERS COMPANY-OROVILLE SITE	KOPPERS WOOD PRESERVING ISW	KOPPERS INDUSTRIES INC.
BUTTE	CHICO	5R	4	5A040302N01-01		CHICO CITY BURN DUMP	HUMBOLDT ROAD LANDFILL	CHICO, CITY OF
SACRAMENTO	SACRAMENTO	5S	1	5A340700003-01	34-AA-0008	US AIR FORCE-MCCLELLAN AFB LANDFILL	CLASS III SITE 8 (CLOSURE)	US AIR FORCE-MCCLELLAN AFB
SACRAMENTO	MATHER (Rancho Cordova)	5S	2	5A340700001-01		US AIR FORCE-MATHER FIELD LANDFILL	MATHER AFB ENVIRONMENTAL MGMT	US AIR FORCE - MATHER AFB
SACRAMENTO	SACRAMENTO	5S	3	5B342000N01-01		SACRAMENTO ARMY DEPOT	SACRAMENTO ARMY DEPOT	U.S. ARMY
SAN JOAQUIN	STOCKTON	5S	3	5 390002NUR-01	39-AA-0006	US NAVY COMMUNICATIONS LANDFILL	U.S.N. COMMUNICATION STA. LANDF	U.S. NAVY COMMUNICATIONS
SAN JOAQUIN	FRENCH CAMP	5S	3	5 390003NUR-01		US ARMY-SHARPE ARMY DEPOT	US ARMY-SHARPE ARMY DEPOT	US ARMY
SAN JOAQUIN	TRACY	5S	5	5 390006NUR-01		SITE 300 (OTHER 39 WMUS)	LAWRENCE LIVERMORE LAB	LAWRENCE LIVERMORE LABS
INYO	KEELER	6V	1	6B142000041-01	14-AA-0008	US TUNGSTEN OWENS LAKE LANDFILL	OWENS LAKE LANDFILL	UMETCO MINERALS CORPORATION
ORANGE	FULLERTON	8	1	8300002NUR-01		MCCOLL SITE	MCCOLL SLUDGE DISPOSAL SITE	TOXIC SUBSTANCES CONTROL DIVIS
RIVERSIDE	RIVERSIDE	8	1	8 330325001-01		STRINGFELLOW QUARRY ACID PITS	STATE OF CALIFORNIA-STRINGFELLOW	TOXIC PROGRAM MANAGEMENT SECT