

Attachment B

Biological Resources

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

Species	Listing Status ¹ Federal	Listing Status ¹ State	CRPR	Habitat	Potential for Occurrence ²
Pink sand-verbena <i>Abronia umbellata</i> var. <i>breviflora</i>	—	—	1B.1	Coastal dunes and coastal strand. Foredunes and interdunes with sparse cover. <i>Abronia umbellata</i> var. <i>breviflora</i> is usually the plant closest to the ocean. 0–40 feet in elevation. Blooms June–October. Perennial.	<i>Not expected to occur.</i> Project area does not contain coastal dune habitat potentially suitable for this species.
Blasdale's bent grass <i>Agrostis blasdalei</i>	—	—	1B.2	Coastal dunes, coastal bluff scrub, coastal prairie. Sandy or gravelly soil close to rocks; often in nutrient-poor soil with sparse vegetation. 10–1,200 feet in elevation. Blooms May–July. Geophyte.	<i>May occur.</i> Coastal prairie habitat potentially suitable for this species is present in the project area.
Franciscan onion <i>Allium peninsulare</i> var. <i>franciscanum</i>	—	—	1B.2	Cismontane woodland, valley and foothill grassland. Clay soils; often on serpentine; sometimes on volcanics. Dry hillsides. 10–1,150 feet in elevation. Blooms May–June. Geophyte.	<i>May occur.</i> Grassland and woodland habitat with serpentine substrates potentially suitable for this species is present in the project area.
Sonoma alopecurus <i>Alopecurus aequalis</i> var. <i>sonomensis</i>	FE	—	1B.1	Wet areas, marshes, and riparian banks, with other wetland species. 10–1,190 feet in elevation. Blooms May–July. Perennial.	<i>May occur.</i> Wetland and riparian habitat potentially suitable for this species is present in the project area. This species has a documented occurrence from 1997 approximately 0.7 mile southeast of the project area (CNDDDB 2022a).
Napa false indigo <i>Amorpha californica</i> var. <i>napensis</i>	—	—	1B.2	Broadleafed upland forest, chaparral, cismontane woodland. Openings in forest or woodland or in chaparral. 98–2,420 feet in elevation. Blooms April–July. Perennial.	<i>May occur.</i> Chaparral and openings in forest or woodland habitat potentially suitable for this species is present in the project area. This species has been documented at Sonoma Land Trust's Little Black Mountain preserve by Peter Warner in 2013 in three disjunct locations (Warner 2013). The Little Black Mountain preserve is approximately 0.4 mile north of the Jenner Headlands preserve. There are documented historical occurrences from northwest of Cazadero, Austin Creek, and Duncans Mills (Best et al. 1996).
Bent-flowered fiddleneck <i>Amsinckia lunaris</i>	—	—	1B.2	Cismontane woodland, valley and foothill grassland, coastal bluff scrub. 10–2,610 feet in elevation. Blooms March–June. Annual.	<i>May occur.</i> Grassland and cismontane woodland habitat potentially suitable for this species is present in the project area.
Baker's manzanita <i>Arctostaphylos bakeri</i> ssp. <i>bakeri</i>	—	SR	1B.1	Serpentine chaparral near coast. Entire species State-listed Rare. This is the State-listed Rare taxon, also known as <i>Arctostaphylos bakeri</i> in Title 14. 240–760 feet in elevation. Blooms February–April. Perennial.	<i>May occur.</i> Serpentine chaparral habitat near coast potentially suitable for this species is present in the project area.

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The Cedars manzanita <i>Arctostaphylos bakeri</i> ssp. <i>sublaevis</i>	—	SR	1B.2	Serpentine chaparral near coast; typically in canyons and on slopes. 600–2,500 feet in elevation. Blooms February–May. Perennial.	<i>May occur.</i> Serpentine chaparral habitat potentially suitable for this species is present in the project area.
Mt. Tamalpais manzanita <i>Arctostaphylos montana</i> ssp. <i>montana</i> synonym: <i>Arctostaphylos hookeri</i> ssp. <i>montana</i>	—	—	1B.3	Serpentine chaparral. 520–2,500 feet in elevation. Blooms February–April. Perennial.	<i>May occur.</i> Serpentine chaparral habitat potentially suitable for this species is present in the project area.
Rincon Ridge manzanita <i>Arctostaphylos stanfordiana</i> ssp. <i>decumbens</i>	—	—	1B.1	Chaparral, cismontane woodland. Highly restricted endemic to red rhyolites in Sonoma County. 290–1,230 feet in elevation. Blooms February–April. Perennial.	<i>May occur.</i> Chaparral and cismontane woodland habitat potentially suitable for this species is present in the project area. Rhyolite rocks are present in the northwestern corner of the project area with these habitat types.
Marin manzanita <i>Arctostaphylos virgata</i>	—	—	1B.2	Broadleafed upland forest, closed-cone coniferous forest, chaparral, north coast coniferous forest. On sandstone or granitic soils. 190–2,300 feet in elevation. Blooms January–March. Perennial.	<i>May occur.</i> Sandstone habitat potentially suitable for this species is present in the project area.
Sonoma sunshine <i>Blennosperma bakeri</i>	FE	SE	1B.1	Vernal pools, valley and foothill grassland. Vernal pools and swales. 30–360 feet in elevation. Blooms February–May. Annual.	<i>Not expected to occur.</i> Project area out of range of this species.
Point Reyes Blennosperma <i>Blennosperma nanum</i> var. <i>robustum</i>	—	SR	1B.2	Coastal prairie, coastal scrub. On open coastal hills in sandy soil. 30–480 feet in elevation. Blooms February–April. Annual.	<i>May occur.</i> Coastal prairie and coastal scrub habitat potentially suitable for this species is present in the project area.
Thurber's reed grass <i>Calamagrostis crassiglumis</i>	—	—	2B.1	Coastal scrub, marshes and swamps. Usually in marshy swales surrounded by grassland or coastal scrub. 10–170 feet in elevation. Blooms May–August. Geophyte.	<i>May occur.</i> Freshwater marshes in grassland and coastal scrub habitat potentially suitable for this species are present in the project area.
The Cedars fairy-lantern <i>Calochortus raichei</i>	—	—	1B.2	Serpentine chaparral. Usually on shaded slopes, but also on barrens and talus. 830–1,420 feet in elevation. Blooms May–August. Geophyte.	<i>May occur.</i> Serpentine chaparral habitat potentially suitable for this species is present in the project 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. 30–350 feet in elevation. Blooms April–September. Perennial.	<i>May occur.</i> Coastal scrub and conifer forest habitat potentially suitable for this species is present in the project area. This species was documented on a rock outcrop in lower Russian Gulch on the Jenner Headlands Preserve 0.1 mile southwest of the project area during botanical surveys in 2010 (Warner 2010).

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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. Geophyte.	Known to occur. This species has a documented occurrence in the project area from a plant checklist Peter Warner conducted in 2018 (Calflora 2022). Marsh and other wetland habitat potentially suitable for this species are present in other parts of the project area.
Bristly sedge <i>Carex comosa</i>	—	—	2B.1	Marshes and swamps, coastal prairie, valley and foothill grassland. Lake margins, wet places. 10–5,320 feet in elevation. Blooms May–September. Geophyte.	May occur. Mesic habitat potentially suitable for this species is present in the project area.
Deceiving sedge <i>Carex saliniformis</i>	—	—	1B.2	Coastal prairie, coastal scrub, meadows and seeps, marshes and swamps (coastal salt). Mesic sites. 10–780 feet in elevation. Blooms June. Geophyte.	May occur. Mesic habitat potentially suitable for this species is present in the project area. This species has a documented occurrence from 1991 0.2 mile southwest of the project area (CNDDDB 2022).
Rincon Ridge ceanothus <i>Ceanothus confusus</i>	—	—	1B.1	Closed-cone coniferous forest, chaparral, cismontane woodland. Known from volcanic or serpentine soils, dry shrubby slopes. 240–3,500 feet in elevation. Blooms February–June. Perennial.	May occur. Chaparral and cismontane woodland habitat with volcanic and serpentine soils potentially suitable for this species are present in the project area.
Vine Hill ceanothus <i>Ceanothus foliosus</i> var. <i>vineatus</i>	—	—	1B.1	Rocky slopes, flats, chaparral, woodland, mixed-evergreen forest. 140–1,010 feet in elevation. Blooms March–May. Perennial.	May occur. Chaparral, woodland, and mixed evergreen forest habitat potentially suitable for this species are present in the project area. This species has a documented historical occurrence along the Russian River from 1941 1.3 miles south of the southeast portion of the project area (CCH2 2022).
Mason's ceanothus <i>Ceanothus masonii</i>	—	SR	1B.2	Chaparral. Serpentine ridges or slopes in chaparral or transition zone. 750–1,640 feet in elevation. Blooms March–April. Perennial.	May occur. Serpentine chaparral habitat potentially suitable for this species is present in the project area.
Holly-leaved ceanothus <i>Ceanothus purpureus</i>	—	—	1B.2	Chaparral, cismontane woodland. Rocky, volcanic slopes. 470–2,560 feet in elevation. Blooms February–June. Perennial.	May occur. Volcanic slope habitat potentially suitable for this species is present in the project area. This species has a historical documented occurrence from 1964 1.1 miles northwest of the project area (CNDDDB 2022).
Dwarf soaproot <i>Chlorogalum pomeridianum</i> var. <i>minus</i>	—	—	1B.2	Ultramafic. Chaparral. Serpentine. 600–3,290 feet in elevation. Blooms May–August. Geophyte.	May occur. Chaparral habitat with serpentine soils potentially suitable for this species are present in the project area. This species has a documented occurrence from 2014 6.4 miles north of the project area (CCH2 2022).

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Point Reyes salty bird's-beak <i>Chloropyron maritimum</i> ssp. <i>palustre</i>	—	—	1B.2	Salt marsh, Wetland. Coastal salt marsh. Usually in coastal salt marsh with species in the genera <i>Salicornia</i> , <i>Distichlis</i> , <i>Jaumea</i> , <i>Spartina</i> , etc. 0–380 feet in elevation. Blooms June–October. Annual.	<i>Not expected to occur.</i> Project area does not contain coastal salt marsh habitat potentially suitable for this species.
San Francisco Bay spineflower <i>Chorizanthe cuspidata</i> var. <i>cuspidata</i>	—	—	1B.2	Coastal bluff scrub, coastal dunes, coastal prairie, coastal scrub. Closely related to <i>Chorizanthe pungens</i> . Sandy soil on terraces and slopes. 10–710 feet in elevation. Blooms April–July. Annual.	<i>May occur.</i> Coastal scrub and coastal prairie habitat potentially suitable for this species is present in the project area.
Woolly-headed spineflower <i>Chorizanthe cuspidata</i> var. <i>villosa</i>	—	—	1B.2	Coastal scrub, coastal dunes, coastal prairie. Sandy places near the beach. 10–200 feet in elevation. Blooms May–July. Annual.	<i>Not expected to occur.</i> Near beach habitat potentially suitable for this species is present in the project area.
Sonoma spineflower <i>Chorizanthe valida</i>	FE	SE	1B.1	Coastal prairie. Sandy soil. 10–170 feet in elevation. Blooms June–August. Annual.	<i>May occur.</i> Coastal prairie habitat with sandy soil potentially suitable for this species is present in the project area.
Bolander's water-hemlock <i>Cicuta maculata</i> var. <i>bolanderi</i>	—	—	2B.1	Marshes and swamps. In fresh or brackish water. 0–660 feet in elevation. Blooms July–September. Perennial.	<i>May occur.</i> Freshwater marsh habitat potentially suitable for this species is present in the project area.
Franciscan thistle <i>Cirsium andrewsii</i>	—	—	1B.2	Coastal bluff scrub, broadleaved upland forest, coastal scrub, coastal prairie. Sometimes serpentine seeps. 0–500 feet in elevation. Blooms March–July. Perennial.	<i>May occur.</i> Broadleaved upland forest, coastal prairie, coastal scrub, and serpentine seep habitat (Berger, pers. comm., 2022) potentially suitable for this species is present in the project area.
Raiche's red ribbons <i>Clarkia concinna</i> ssp. <i>raichei</i>	—	—	1B.1	Coastal bluff scrub. Highly exposed rocky bluffs with a near-vertical slope. 0–330 feet in elevation. Blooms April–May. Annual.	<i>Not expected to occur.</i> Project area does not contain coastal bluff scrub habitat potentially suitable for this species.
Pennell's bird's-beak <i>Cordylanthus tenuis</i> ssp. <i>capillaris</i>	FE	SR	1B.2	Closed-cone coniferous forest, chaparral. In open or disturbed areas on serpentine within forest or chaparral. 290–710 feet in elevation. Blooms June–September. Annual.	<i>May occur.</i> Chaparral habitat with serpentine soils potentially suitable for this species is present in the project area.
Mendocino dodder <i>Cuscuta pacifica</i> var. <i>papillata</i>	—	—	1B.2	Coastal dunes. Interdune depressions. Annual parasitic vine observed on <i>Gnaphalium</i> spp., <i>Silene</i> spp. And <i>Lupinus</i> spp. 0–170 feet in elevation. Blooms July–October. Annual.	<i>Not expected to occur.</i> Project area does not contain coastal dune habitat potentially suitable for this species.
Baker's larkspur <i>Delphinium bakeri</i>	FE	SE	1B.1	Broadleaved upland forest, coastal scrub, valley and foothill grassland. Only site occurs on northwest-facing slope, on decomposed shale. Historically known from grassy areas along fencelines as well. 340–680 feet in elevation. Blooms March–May. Perennial.	<i>May occur.</i> Broadleaved upland forest, coastal scrub, and grassland habitat on northwest facing slopes with shale potentially suitable for this species is present in the project area. There is critical habitat for this species located 5.5 miles southeast of the project area (USFWS 2022).

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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. Perennial.	<i>May occur.</i> Chaparral, coastal prairie, and coastal scrub habitat potentially suitable for this species is present in the project area.
Western leatherwood <i>Dirca occidentalis</i>	—	—	1B.2	Broadleafed upland forest, chaparral, closed-cone coniferous forest, cismontane woodland, north coast coniferous forest, riparian forest, riparian woodland. On brushy slopes, mesic sites; mostly in mixed evergreen and foothill woodland communities. 80–1,400 feet in elevation. Blooms January–March. Perennial.	<i>May occur.</i> Forest and woodland habitat potentially suitable for this species is present in the project area.
Greene's narrow-leaved daisy <i>Erigeron greenei</i>	—	—	1B.2	Ultramafic. Chaparral. Serpentine and volcanic substrates, generally in shrubby vegetation. 290–2,740 feet in elevation. Blooms May–September. Perennial.	<i>May occur.</i> Chaparral habitat with volcanic and serpentine substrates potentially suitable for this species is present in the project area. This species has a historical documented occurrence from 1943 approximately 2 miles north of the project area (CNDDDB 2022).
Serpentine daisy <i>Erigeron serpentinus</i>	—	—	1B.3	Serpentine scrub, streamsides. 390–1,320 feet in elevation. Blooms May–August. Perennial.	<i>Known to occur.</i> This species has two documented occurrences in the project area (CCH2) and was observed onsite during botanical surveys conducted in 2010 (Warner 2010). Serpentine scrub and streamside habitat potentially suitable for this habitat is present in multiple locations in the project area.
Supple daisy <i>Erigeron supplex</i>	—	—	1B.2	Coastal bluff scrub, coastal prairie, coastal scrub. Usually in grassy sites. 30–170 feet in elevation. Blooms May–July. Perennial.	<i>May occur.</i> Coastal scrub and coastal prairie habitat potentially suitable for this species is present in the project area.
The Cedars buckwheat <i>Eriogonum cedrorum</i>	—	—	1B.3	Closed-cone coniferous forest. Serpentine. Barren rock and talus steep slopes. 1,190–1,810 feet in elevation. Blooms June–September. Perennial.	<i>Not expected to occur.</i> Project area does not contain closed-cone coniferous forest habitat potentially suitable for this species.
Snow Mountain buckwheat <i>Eriogonum nervulosum</i>	—	—	1B.2	Chaparral. Dry serpentine outcrops, balds, and barrens. 980–6,910 feet in elevation. Blooms May–October. Geophyte.	<i>May occur.</i> Chaparral habitat with serpentine substrates potentially suitable for this species is present in the project area.
Bluff wallflower <i>Erysimum concinnum</i>	—	—	1B.2	Coastal dunes, coastal bluff scrub, coastal prairie. More or less a coastal generalist within coastal habitat types. 10–200 feet in elevation. Blooms February–July. Annual/Perennial.	<i>May occur.</i> Coastal prairie habitat potentially suitable for this species is present in the project area.
Coast fawn lily <i>Erythronium revolutum</i>	—	—	2B.2	Bogs and fens, broadleafed upland forest, and north coast coniferous forest. Mesic sites; streambanks. 0–5,250 feet in elevation. Blooms March–July. Geophyte.	<i>May occur.</i> Mesic and streambank habitat potentially suitable for this species is present in the project area.

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Minute pocket moss <i>Fissidens pauperculus</i>	—	—	1B.2	Redwood. North coast coniferous forest. Moss growing on damp soil along the coast. In dry streambeds and on streambanks. 30–3,360 feet in elevation. Perennial.	<i>May occur.</i> Streams in north coast coniferous forest habitat potentially suitable for this species is present in the project area. This species has a documented historical occurrence along the Russian River 1.7 miles south of the project area (CNDDDB 2022).
Marin checker lily <i>Fritillaria lanceolata</i> var. <i>tristulis</i>	—	—	1B.1	Coastal bluff scrub, coastal scrub, coastal prairie. Occurrences reported from canyons and riparian areas as well as rock outcrops; often on serpentine. 50–490 feet in elevation. Blooms February–May. Geophyte.	<i>May occur.</i> Coastal scrub and coastal prairie habitat potentially suitable for this species is present in the project area.
Fragrant fritillary <i>Fritillaria liliacea</i>	—	—	1B.2	Coastal scrub, valley and foothill grassland, coastal prairie, cismontane woodland. Often on serpentine; various soils reported though usually on clay, in grassland. 10–1,320 feet in elevation. Blooms February–April. Geophyte.	<i>May occur.</i> Coastal scrub, woodland, coastal prairie, and grassland habitat potentially suitable for this species is present in the project area.
Blue coast gilia <i>Gilia capitata</i> ssp. <i>chamissonis</i>	—	—	1B.1	Coastal dunes, coastal scrub. 10–660 feet in elevation. Blooms April–July. Annual.	<i>May occur.</i> Coastal scrub habitat potentially suitable for this species is present in the project area.
Pacific gilia <i>Gilia capitata</i> ssp. <i>pacifica</i>	—	—	1B.2	Coastal bluff scrub, chaparral, coastal prairie, valley and foothill grassland. 10–4,420 feet in elevation. Blooms April–August. Annual.	<i>Known to occur.</i> This species has documented occurrences in the project area observed during botanical surveys conducted in 2010 (Warner 2010; CNDDDB 2022) and 2018 (Calflora 2022). Chaparral, coastal prairie and grassland habitat potentially suitable for this species is present in other parts of the project area.
Woolly-headed gilia <i>Gilia capitata</i> ssp. <i>tomentosa</i>	—	—	1B.1	Coastal bluff scrub and valley and foothill grassland. Rocky outcrops on the coast, serpentine. 60–410 feet in elevation. Blooms May–July. Annual.	<i>Known to occur.</i> This species was documented in the project area during 2010 botanical surveys (Warner 2010). P. Warner went back to the preserve in 2011 and documented this species again (CNDDDB 2022). Serpentine grassland with rock outcrop habitat potentially suitable for this species is present in other parts of the project area.
Dark-eyed gilia <i>Gilia millefoliata</i>	—	—	1B.2	Coastal dunes. 3–200 feet in elevation. Blooms April–July. Annual.	<i>Not expected to occur.</i> Project area does not contain coastal dune habitat potentially suitable for this species.
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. 60–2,140 feet in elevation. Blooms April–November. Annual.	<i>Known to occur.</i> This species has documented occurrences in the project area from 2014 and 2018 (Calflora 2022). Grassy and roadside habitat potentially suitable for this species is present in other parts of the project area.

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Short-leaved evax <i>Hesperevax sparsiflora</i> var. <i>brevifolia</i>	—	—	1B.2	Coastal bluff scrub, coastal dunes, coastal prairie. Sandy bluffs and flats. 0–710 feet in elevation. Blooms March–June. Annual.	<i>May occur.</i> Coastal prairie habitat potentially suitable for this species is present in the project area. This species has a documented occurrence from 2011 0.5 mile southwest of the project area (CNDDDB 2022).
Point Reyes horkelia <i>Horkelia marinensis</i>	—	—	1B.2	Coastal dunes, coastal prairie, coastal scrub. Sandy, grassy or wooded coastal bluffs, terraces, dunes. 5–2,550 feet in elevation. Blooms May–September. Perennial.	<i>May occur.</i> Coastal scrub and coastal prairie habitat potentially suitable for this species is present in the project area.
Thin-lobed horkelia <i>Horkelia tenuiloba</i>	—	—	1B.2	Broadleaved upland forest and valley and foothill grassland. Sandy soils; mesic openings. 160–1,640 feet in elevation. Blooms May–July. Perennial.	<i>May occur.</i> Broadleaved upland forest and grassland habitat potentially suitable for this species is present in the project area. This species has been documented at numerous mesic to dry grassland, chaparral, and woodland sites in western Sonoma County (Best et al. 1996; CCH2 2022).
Small groundcone <i>Kopsiopsis hookeri</i> synonym: <i>Boschniakia hookeri</i>	—	—	2B.3	North coast coniferous forest. Open woods, shrubby places, generally on <i>Gaultheria shallon</i> or <i>Vaccinium</i> spp. 390–4,710 feet in elevation. Blooms April–August. Geophyte.	<i>May occur.</i> Coniferous forest habitat potentially suitable for this species is present in the project area.
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. 190–1,710 feet in elevation. Blooms April–October. Perennial.	<i>May occur.</i> Coastal scrub, meadows, and freshwater marsh habitat potentially suitable for this species is present in the project area.
Perennial goldfields <i>Lasthenia californica</i> ssp. <i>macrantha</i>	—	—	1B.2	Coastal bluff scrub, coastal dunes, coastal scrub. 10–610 feet in elevation. Blooms January–November. Perennial.	<i>May occur.</i> Coastal scrub habitat potentially suitable for this species is present in the project area. This species has a historical documented occurrence from 1950 mapped south of the project area in the vicinity of Jenner, CA (CNDDDB 2022).
Contra Costa goldfields <i>Lasthenia conjugens</i>	FE	—	1B.1	Alkali playa, wetland. Valley and foothill grassland, vernal pools, alkaline playas, cismontane woodland. Vernal pools, swales, low depressions, in open grassy areas. 3–1,480 feet in elevation. Blooms March–June. Annual.	<i>May occur.</i> Mesic areas in grassland and cismontane woodland habitat potentially suitable for this species is present in the project area.
Marsh pea <i>Lathyrus palustris</i>	—	—	2B.2	Bogs and fens, lower montane coniferous forest, marshes and swamps, north coast coniferous forest, coastal prairie, coastal scrub. Moist coastal areas. 5–460 feet in elevation. Blooms March–August. Perennial.	<i>May occur.</i> Mesic habitat potentially suitable for this species is present in the project area. This species has documented occurrences from 1999 and 2018 approximately 6 miles up the coastline from the project area in Fort Ross (Calflora 2022).

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Coast yellow leptosiphon <i>Leptosiphon croceus</i>	—	SE	1B.1	Coastal bluff scrub, coastal scrub, coastal prairie. 30–490 feet in elevation. Blooms April–June. Annual.	<i>May occur.</i> Coastal scrub and coastal prairie habitat potentially suitable for this species is present in the project area.
Jepson's leptosiphon <i>Leptosiphon jepsonii</i>	—	—	1B.2	Ultramafic. Chaparral, cismontane woodland. Open to partially shaded grassy slopes. On volcanics or the periphery of serpentine substrates. 180–2,810 feet in elevation. Blooms March–May. Annual.	<i>May occur.</i> Chaparral and cismontane woodland habitat with serpentine or volcanic substrates potentially suitable for this species is present in the project area.
Rose leptosiphon <i>Leptosiphon rosaceus</i>	—	—	1B.1	Coastal bluff scrub. 30–460 feet in elevation. Blooms April–July. Annual.	<i>Not expected to occur.</i> Project area does not contain coastal bluff scrub habitat potentially suitable for this species.
Crystal Springs lessingia <i>Lessingia arachnoidea</i>	—	—	1B.2	Coastal scrub and valley and foothill grassland. Grassy slopes on serpentine; sometimes on roadsides. 290–660 feet in elevation. Blooms July–October. Annual.	<i>May occur.</i> Serpentine and non-serpentine coastal scrub and grassland habitat potentially suitable for this species are present in the project area.
Coast lily <i>Lilium maritimum</i>	—	—	1B.1	Coastal scrub, coastal prairie, and marshes. 10–1,560 feet in elevation. Blooms May–August. Geophyte.	<i>May occur.</i> Coastal scrub, coastal prairie, and marsh habitat potentially suitable for this species is present in the project area.
Point Reyes meadowfoam <i>Limnanthes douglasii</i> ssp. <i>sulphurea</i>	—	SE	1B.2	Coastal prairie, marshes, seeps. 0–460 feet in elevation. Blooms March–May. Annual.	<i>May occur.</i> Coastal prairie, marsh, and seep habitat potentially suitable for this species is present in the project area.
Sebastopol meadowfoam <i>Limnanthes vincularis</i>	FE	SE	1B.1	Meadows and seeps, vernal pools, valley and foothill grassland. Swales, wet meadows, and marshy areas in valley oak savanna; on poorly drained soils of clays and sandy loam. 50–380 feet in elevation. Blooms April–May. Annual.	<i>May occur.</i> Wetland habitat potentially suitable for this species is present in the project area.
Tidestrom's lupine <i>Lupinus tidestromii</i>	FE	SE	1B.1	Coastal dunes. Partially stabilized dunes, immediately near the ocean. 10–90 feet in elevation. Blooms April–June. Geophyte.	<i>Not expected to occur.</i> Project area does not contain coastal dune habitat potentially suitable for this species.
Marsh microseris <i>Microseris paludosa</i>	—	—	1B.2	Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland. 10–904 feet in elevation. Blooms April–June. Perennial.	<i>May occur.</i> Cismontane woodland, grassland, and coastal scrub habitat potentially suitable for this species is present in the project area.
White-flowered rein orchid <i>Piperia candida</i>	—	—	1B.2	North coast coniferous forest, lower montane coniferous forest, broadleafed upland forest. Sometimes on serpentine. Forest duff, mossy banks, rock outcrops, and muskeg. 150–5,300 feet in elevation. Blooms May–September. Perennial.	<i>May occur.</i> Conifer and broadleafed upland forest habitat potentially suitable for this species is present in the project area.
Point Reyes rein orchid <i>Piperia elegans</i> ssp. <i>decurtata</i>	—	—	1B.1	Generally dry, open sites, coastal scrub, coastal prairie. 50–610 feet in elevation. Blooms July–October. Perennial.	<i>May occur.</i> Coastal prairie and coastal scrub habitat potentially suitable for this species is present in the project area.

Species	Listing Status ¹ Federal	Listing Status ¹ State	CRPR	Habitat	Potential for Occurrence ²
North Coast semaphore grass <i>Pleuropogon hooverianus</i>	—	ST	1B.1	Broadleafed upland forest, meadows and seeps, north coast coniferous forest. Wet grassy, usually shady areas, sometimes freshwater marsh; associated with forest environments. 150–3,810 feet in elevation. Blooms April–June. Geophyte.	<i>May occur.</i> Mesic areas in broadleafed upland forest, meadows and seeps, and coniferous forest habitat potentially suitable for this species is present in the project area.
Oregon polemonium <i>Polemonium carneum</i>	—	—	2B.2	Coastal prairie, coastal scrub, lower montane coniferous forest. Moist to dry, open areas. 0–6,010 feet in elevation. Blooms April–September. Perennial.	<i>May occur.</i> Coastal prairie, coastal scrub and coniferous forest habitat potentially suitable for this species is present in the project area.
Hickman's cinquefoil <i>Potentilla hickmanii</i>	FE	SE	1B.1	Coastal bluff scrub, closed-cone coniferous forest, meadows and seeps, marshes and swamps. Freshwater marshes, seeps, and small streams in open or forested areas along the coast. 30–490 feet in elevation. Blooms April–August. Perennial.	<i>May occur.</i> Freshwater marsh, seep, and stream habitat potentially suitable for this species is present in the project area.
Angel's hair lichen <i>Ramalina thrausta</i>	—	—	2B.1	North coast coniferous forest. On dead twigs and other lichens. 240–1,420 feet in elevation. Perennial.	<i>May occur.</i> North coast coniferous forest habitat near the coast potentially suitable for this species is present in the project area. This species has a documented occurrence from 2004 3 miles northwest of the project area (CNDDDB 2022).
Point Reyes checkerbloom <i>Sidalcea calycosa</i> ssp. <i>rhizomata</i>	—	—	1B.2	Marshes and swamps. Freshwater marshes near the coast. 10–320 feet in elevation. Blooms April–September. Geophyte.	<i>May occur.</i> Freshwater marsh habitat potentially suitable for this species is present in the project area.
Marin checkerbloom <i>Sidalcea hickmanii</i> ssp. <i>viridis</i>	—	—	1B.1	Chaparral. Serpentine or volcanic soils; sometimes appears after burns. 0–1,400 feet in elevation. Blooms May–June. Perennial.	<i>May occur.</i> Chaparral habitat potentially suitable for this species is present in the project area. This species has a documented occurrence from 2006 0.4 mile southwest of the project area (CCH2 2022).
Purple-stemmed checkerbloom <i>Sidalcea malviflora</i> ssp. <i>purpurea</i>	—	—	1B.2	Broadleafed upland forest, coastal prairie. Meadows, open coastal forest, prairie. 50–280 feet in elevation. Blooms May–June. Geophyte.	<i>May occur.</i> Meadows, open coastal forest, and coastal prairie habitat potentially suitable for this species is present in the project area.
Scouler's catchfly <i>Silene scouleri</i> ssp. <i>scouleri</i>	—	—	2B.2	Coastal bluff scrub, coastal prairie, valley and foothill grassland. 0–1,970 feet in elevation. Blooms June–August. Perennial.	<i>May occur.</i> Coastal prairie and grassland habitat potentially suitable for this species is present in the project area.
Hoffman's bristly jewelflower <i>Streptanthus glandulosus</i> ssp. <i>hoffmanii</i>	—	—	1B.3	Chaparral, cismontane woodland, valley and foothill grassland. Moist, steep rocky banks, in serpentine and non-serpentine soil. 190–2,510 feet in elevation. Blooms March–July. Annual.	<i>May occur.</i> Chaparral, woodland, and grassland habitat potentially suitable for this species is present in the project area. This species has a documented occurrence 0.2 mile south-southwest of project area (CNDDDB 2022).

Species	Listing Status ¹ Federal	Listing Status ¹ State	CRPR	Habitat	Potential for Occurrence ²
Three Peaks jewelflower <i>Streptanthus morrisonii</i> <i>ssp. elatus</i> (synonym: <i>Streptanthus morrisonii</i>)	—	—	1B.2	Chaparral. Serpentine barrens, outcrops, and talus. 290–2,680 feet in elevation. Blooms June–September. Perennial.	<i>May occur.</i> Chaparral serpentine habitat potentially suitable for this species is present in the project area. <i>Streptanthus morrisonii</i> has a documented occurrence along Austin Creek 1.2 miles west of the project area (CCH2 2022). California Consortium of Herbaria maps all subspecies under <i>Streptanthus morrisonii</i> (CCH2 2022). <i>Streptanthus morrisonii</i> <i>ssp. elatus</i> has documented occurrences in the two quads Fort Ross and Cazadero directly north of the project area (Calflora 2022).
Dorr's Cabin jewelflower <i>Streptanthus morrisonii</i> <i>ssp. hirtiflorus</i>	—	—	1B.2	Chaparral and closed-cone coniferous forest. On the serpentine barrens at the head of Austin Creek. 600–2,690 feet in elevation. Blooms June. Perennial.	<i>May occur.</i> Serpentine chaparral habitat potentially suitable for this species is present in the project area.
Morrison's jewelflower <i>Streptanthus morrisonii</i> <i>ssp. morrisonii</i>	—	—	1B.2	Ultramafic. Chaparral. Serpentine outcrops in the Austin Creek area. 390–1,920 feet in elevation. Blooms May–September. Perennial.	<i>May occur.</i> Chaparral serpentine habitat potentially suitable for this species is present in the project area. <i>Streptanthus morrisonii</i> has a documented occurrence along Austin Creek 1.2 miles west of the project area (CCH2 2022). California Consortium of Herbaria maps all subspecies under <i>Streptanthus morrisonii</i> (CCH2 2022). <i>Streptanthus morrisonii</i> <i>ssp. morrisonii</i> has two historical documented occurrences from 1947 and 1950 and a documented occurrence from 1986 along Gilliam Creek 5.5 miles northeast of project area (Calflora 2022; CNDDDB 2022).
Whiteworm lichen <i>Thamnolia vermicularis</i>	—	—	2B.1	Chaparral, valley and foothill grassland. On rocks derived from sandstone. Perennial.	<i>May occur.</i> Chaparral and grassland habitat in sandstone derived soils potentially suitable for this species is present in the project area.
Two-fork clover <i>Trifolium amoenum</i>	FE	—	1B.1	Valley and foothill grassland, coastal bluff scrub. Sometimes on serpentine soil, open sunny sites, swales. Most recently cited on roadside and eroding cliff face. 10–1,020 feet in elevation. Blooms April–June. Annual.	<i>May occur.</i> Grassland habitat potentially suitable for this species is present in the project area.
Santa Cruz clover <i>Trifolium buckwestiorum</i>	—	—	1B.1	Coastal prairie, broadleaved upland forest, cismontane woodland. Grassy or disturbed areas. 340–2,010 feet in elevation. Blooms April–October. Annual.	<i>May occur.</i> Coastal prairies, broadleaved upland forest, and cismontane woodland habitat potentially suitable for this species is present in the project area.

Species	Listing Status ¹ Federal	Listing Status ¹ State	CRPR	Habitat	Potential for Occurrence ²
Saline clover <i>Trifolium hydrophilum</i>	—	—	1B.2	Wetland. Marshes and swamps, valley and foothill grassland, vernal pools. Mesic, alkaline sites. 0–990 feet in elevation. Blooms April–June. Annual.	<i>Not expected to occur.</i> Project area does not contain alkaline habitat potentially suitable for this species.
Monterey clover <i>Trifolium trichocalyx</i>	FE	SE	1B.1	Openings, burned areas, and roadsides. Sandy soils. 100–1,000 feet in elevation. Blooms April–June. Annual.	<i>May occur.</i> Openings and roadside habitat with sandy soils potentially suitable for this species is present in the project area. This species was first thought to be endemic to Monterey County but was documented in 2011 (CCH2 2022), 2014, and 2017 (CNDDDB 2022) in Mendocino County.
San Francisco owl's-clover <i>Triphysaria floribunda</i>	—	—	1B.2	Coastal prairie, coastal scrub, valley and foothill grassland. On serpentine and non-serpentine substrate (such as at Point Reyes). 3–500 feet in elevation. Blooms April–June. Annual.	<i>May occur.</i> Coastal prairie, coastal scrub, and grassland habitat potentially suitable for this species is present in the project area.
Coastal triquetrella <i>Triquetrella californica</i>	—	—	1B.2	Coastal bluff scrub, coastal scrub. 30–330 feet in elevation. Perennial.	<i>May occur.</i> Coastal scrub habitat potentially suitable for this species is present in the project area.

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)

State:

SE State Listed as Endangered (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)

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

Sources: Best et al. 1996; Calflora 2022; CCH2 2022; CNDDDB 2022; CNPS 2022; Warner 2010; Warner 2012.

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

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	Meadows and seeps within north coast coniferous forest, and riparian forest. 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, occasionally in lakes and ponds. Adults known from wet forests under rocks and logs near streams and lakes.	Known to occur. Forest stands and streams within the project area provide upland and aquatic habitat suitable for this species. Larval California giant salamanders have been documented to occur within Jenner Gulch and East Branch Russian Gulch (FEC 2010).
California red-legged frog <i>Rana draytonii</i>	FT	SSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	Known to occur. The species has been documented to occur within the project area along the East Fork Sheepphouse Creek (CNDDDB 2022a). The other perennial streams, and wetlands within the project area may also provide aquatic habitat suitable for the species. The entirety of the project area is potentially upland and dispersal habitat.
California tiger salamander - Sonoma County Distinct Population Segment <i>Ambystoma californiense</i> pop. 3	FE	ST	Lives in vacant or mammal-occupied burrows throughout most of the year; in grassland, savanna, or open woodland habitats. Need underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding.	Not expected to occur. The project area is outside of the range of the species. The California tiger salamander - Sonoma County Distinct Population Segment is restricted to areas east of Sebastopol in central Sonoma County.
Foothill yellow-legged frog <i>Rana boylei</i>	—	SSC	Largely confined to areas directly adjacent to 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. North Coast population not listed under CESA.	Known to occur. Streams and adjacent uplands are within the project area provide habitat suitable for this species. Foothill yellow-legged frogs were detected during focused surveys on the project area in East Branch Russian Gulch (FEC 2010).
Green sea turtle <i>Chelonia mydas</i>	FT	—	Marine. Completely herbivorous; needs adequate supply of seagrasses and algae.	Not expected to occur. The project area does not contain nor is it directly adjacent to the marine habitat potentially occupied by 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. Will migrate over 0.6 mile to breed, typically in streams with moderate flow and clean, rocky substrate.	Known to occur. Streams and adjacent uplands are within the project area provide habitat suitable for this species. Red-bellied newt larvae have been detected in Mainstem Russian Gulch (FEC 2010).

Species	Listing Status ¹ Federal	Listing Status ¹ State	Habitat	Potential for Occurrence ²
Western pond turtle <i>Emys marmorata</i>	—	SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6,000 ft elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.3 mile from water for egg-laying.	<i>May occur.</i> The portions of Russian Gulch and Jenner Gulch within the project area where these streams and associated narrow riparian areas are located adjacent to grasslands that provide habitat potentially suitable for this species. The creeks within forested habitats on the project area are not likely to be suitable because the forest canopy does not provide the needed basking sites.
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.	<i>Known to occur.</i> American peregrine falcons are known to occur on the project area (FEC 2010). While the species is known to occur in the project area, it is unlikely that nesting would occur due to a lack of suitable nesting habitat. However, foraging habitat is present in the project area.
Bald eagle <i>Haliaeetus leucocephalus</i>	FD	SE FP	Lower montane coniferous forest, old growth. 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.	<i>Known to occur.</i> Bald eagles have been documented on the project area (FEC 2010). Larger trees in the project area could be potential nesting habitat for this species, due to the proximity to the Russian River; however, nesting eagles have not been documented in the project area.
Bank swallow <i>Riparia riparia</i>	—	ST	Riparian scrub, riparian woodland. Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks or cliffs with fine-textured, sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	<i>Not expected to occur.</i> The project area lacks the vertical banks or cliffs along lowland streams that are required nesting habitat for this species.
Black swift <i>Cypseloides niger</i>	—	SSC	Coastal belt of Santa Cruz and Monterey counties; central and southern Sierra Nevada; and San Bernardino and San Jacinto Mountains. Breeds in small colonies on cliffs behind or adjacent to waterfalls in deep canyons and sea-bluffs above the surf; forages widely.	<i>Not expected to occur.</i> Although there are historical records of the species within coastal Marin County to the south of the project area, the project area is outside of the current range of the species (CNDDDB 2022a).
Bryant's savannah sparrow <i>Passerculus sandwichensis laudinus</i>	—	SSC	Coastal prairie and tidal marshes of northern California within the fog belt from Humboldt Bay to south to Morro Bay.	<i>Known to occur.</i> The species has been documented in the project area (FEC 2010). The grassland portions of the project area support nesting and foraging habitat for this species.
Burrowing owl <i>Athene cunicularia</i>	—	SSC	Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	<i>Known to occur.</i> The species has been documented in the project area (FEC 2010). Grasslands on the project area where vegetation is kept low by grazing may provide wintering habitat suitable for the species; however, the project is outside of the nesting range of the species.

Species	Listing Status ¹ Federal	Listing Status ¹ State	Habitat	Potential for Occurrence ²
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.	<i>Not expected to occur.</i> The project area does not contain nor is it directly adjacent to the island nesting habitat, nor open water foraging habitat potentially occupied by this species
Cassin's auklet <i>Ptychoramphus aleuticus</i>	—	SSC	Offshore islands with enough soil for burrowing. Will also nest in rock crevices, under buildings, and in debris.	<i>Not expected to occur.</i> The project area does not contain nor is it directly adjacent to the island nesting habitat, nor open water foraging habitat potentially occupied by this species
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.	<i>Known to occur.</i> The species has been documented to occur in the project area (FEC 2010). Large trees in the project area may support nesting; although, no nests have been observed on site.
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.	<i>Known to occur.</i> The species has documented to occur in the project area (FEC 2010). The grassland portions of the project area provide habitat suitable for the species.
Hawaiian petrel <i>Pterodroma sandwichensis</i>	FE	—	Breeds in remote montane locations within the Hawaiian islands. May be found offshore throughout the Central Pacific during the non-breeding season.	<i>Not expected to occur.</i> The project area does not contain nor is it directly adjacent to the marine habitat potentially occupied by this species.
Marbled murrelet <i>Brachyramphus marmoratus</i>	FT	SE	Lower montane coniferous forest, old growth, redwood. Feeds near-shore; nests inland along coast from Eureka, CA to the Oregon border and from Half Moon Bay, CA to Santa Cruz, CA. Nests in old growth redwood-dominated forests, up to six miles inland, often in Douglas fir.	<i>May occur.</i> While there are no documented occurrences of the species within the project area or Russian River drainage, the nearest documented occurrence is approximately 18.5 miles north of the project area. A portion of the project area was evaluated for suitable nesting trees in 2015 during consultation related to the previously approved Timber Harvest Plan, and several large trees were determined by CDFW to not be suitable (Sonoma Land Trust 2015). However, the project area contains other large Douglas fir and coast redwood trees that may provide suitable nesting habitat for the species, and the cryptic nature of the species makes it possible that existing nests in the project area have gone undetected.
Northern spotted owl <i>Strix occidentalis caurina</i>	FT	ST SSC	North coast coniferous forest, old growth, redwood. 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.	<i>Known to occur.</i> The species has documented to occur on the project area (FEC 2010). The dense forested habitats in the project area are suitable nesting and foraging habitat for this species.

Species	Listing Status ¹ Federal	Listing Status ¹ State	Habitat	Potential for Occurrence ²
Northern Harrier <i>Circus hudsonius</i>	—	SSC	Coastal salt and freshwater marsh. Nest and forage in grasslands. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.	Known to occur. The species has documented to occur in the project area (FEC 2010) during nesting season. The grassland portions of the project area provide suitable foraging habitat for the species.
Olive-sided flycatcher <i>Contopus borealis</i>	—	SSC	Nesting habitats are mixed conifer, montane hardwood-conifer, Douglas fir, redwood, red fir and lodgepole pine. Most numerous in montane conifer forests where tall trees overlook canyons, meadows, lakes or other open terrain.	Known to occur. The species has documented to occur in the project area (FEC 2010). Forested portions of the project area are suitable nesting habitat 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.	Known to occur. The species has documented to occur in the project area (FEC 2010).
Short-tailed albatross <i>Phoebastria albatrus</i>	FE	SSC	Breeds on islands of the western Pacific. Found foraging offshore along the west coast of North America from Alaska to Baja California.	Not expected to occur. The project area does not contain nor is it directly adjacent to the marine habitat potentially occupied by this species.
Tricolored blackbird <i>Agelaius tricolor</i>	—	ST SSC	Freshwater marsh, marsh and swamp, swamp, wetland. 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.	May occur. The project area is at the extreme edge of the species range (CNDDDB 2022c). Grazed grassland and small wetlands in the project area may be used as foraging habitat for tricolored blackbird; however, the project lacks the large areas of protected habitat that would be required for colony nesting.
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.	Not expected to occur. The project area does not contain nor is it directly adjacent to the marine or cliff habitat potentially occupied by this species.
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.	Known to occur. The species has been documented to occur in the project area (FEC 2010).
Western snowy plover <i>Charadrius nivosus nivosus</i>	FT	SSC	Sandy beaches, salt pond levees, and shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting.	Not expected to occur. The project area does not contain nor is it directly adjacent to the beach habitat potentially occupied by this species.

Species	Listing Status ¹ Federal	Listing Status ¹ State	Habitat	Potential for Occurrence ²
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.	Known to occur. The species has been documented to occur in the project area (FEC 2010); however, no nests have been documented. The oak woodland and trees within and along the margins of the grassland habitat in the project area provide potentially suitable nesting and foraging habitat for the species.
Willow flycatcher <i>Empidonax traillii</i>	—	SE	Inhabits extensive thickets of low, dense willows on edge of wet meadows, ponds, or backwaters; 2,000-8,000 feet elevation. Requires dense willow thickets for nesting/roosting. Low, exposed branches are used for singing posts/hunting perches.	Known to occur. Willow flycatchers have been observed in the project area as a fall migrant; however, there has been no reported nesting willow flycatchers in Sonoma County (FEC 2010), the project area does not contain flooded riparian or meadow habitat required for nesting, and the project area is outside of the nesting range of the species (CNDDDB 2022d).
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.	Not expected to occur. This species may pass through or forage within the project area; however, the project area does not contain the riparian forest, riparian scrub, or riparian woodland nesting habitat that is required for this species.
Western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	FT	SE	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	Not expected to occur. The project area does not contain nor is it directly adjacent to the multi-layered riparian forest and flood plain habitat required for this species.
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.	Not expected to occur. The project area does not contain the riparian forest, riparian scrub, or riparian woodland that is required habitat for this species.
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.	May occur. Likely not found in Jenner Gulch due to complete fish passage blockage downstream from the project area (CNDDDB 2022e); however, could occur within Sheephouse Creek, as well as the east branch and mainstem of Russian Gulch.
Coho salmon - central California coast Evolutionary Significant Unit <i>Oncorhynchus kisutch</i> pop. 4	FE	SE	Federal listing applies to 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.	Known to occur. Likely not found in Jenner Gulch due to complete fish passage blockage downstream from the project area (CNDDDB 2022e); however, documented to occur within Sheephouse Creek (CDFG 2006), as well as the east branch and mainstem of Russian Gulch (Spencer et al. 2005).

Species	Listing Status ¹ Federal	Listing Status ¹ State	Habitat	Potential for Occurrence ²
Eulachon <i>Thaleichthys pacificus</i>	FT	—	Found in Klamath River, Mad River, Redwood Creek and in small numbers in Smith River and Humboldt Bay tributaries. Spawn in lower reaches of coastal rivers with moderate water velocities and bottom of pea-sized gravel, sand and woody debris	<i>Not expected to occur.</i> While the species is likely to occur within the Russian River, it is not likely to be found within the creeks on the project area, due to water velocities higher than suitable for the species.
Gualala roach <i>Hesperoleucus parvipinnis</i>	—	SSC	Confined to the Gualala River and its tributaries. Warm water adapted.	<i>Not expected to occur.</i> The project area is not within the Gualala River drainage.
Hardhead <i>Mylopharodon conocephalus</i>	—	SSC	Low to mid-elevation streams in the Sacramento-San Joaquin drainage. Also present in the Russian River. Clear, deep pools with sand-gravel-boulder bottoms and slow water velocity. Not found where exotic centrarchids predominate.	<i>May occur.</i> Likely not found in Jenner Gulch due to complete fish passage blockage downstream from the project area (CNDDDB 2022e); however, could occur within lower reaches of Sheephouse Creek.
Longfin smelt <i>Spirinchus thaleichthys</i>	FC	ST SSC	Aquatic, estuary. 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.	<i>Not expected to occur.</i> The project area does not contain nor is it directly adjacent to the estuary habitat potentially occupied by this species.
Northern coastal roach <i>Hesperoleucus venustus navarroensis</i>	—	SSC	Habitat generalists. Found generally in a wide variety of habitats in the Navarro River and Russian River basins where there is cover (e.g., fallen trees) and where alien predators are absent. Most abundant in tributaries with clear, well oxygenated water with dominant substrates of cobble and boulder, and shallow depths (average 4 inches to 20 inches [10–50 cm]) with pools up to approximately 3.3 feet (1 m) deep.	<i>May occur.</i> Likely not found in Jenner Gulch due to complete fish passage blockage downstream from the project area (CNDDDB 2022e); however, could occur within lower reaches of Sheephouse Creek.
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 C. Ammocoetes need soft sand or mud.	<i>May occur.</i> Likely not found in Jenner Gulch due to complete fish passage blockage downstream from the project area (CNDDDB 2022e); however, could occur within Sheephouse Creek, as well as the east branch and mainstem of Russian Gulch.
Riffle sculpin <i>Cottus gulosus</i>	—	SSC	Found in headwater streams with cold water and rocky or gravelly substrate. Prefers permanent streams where the water does not exceed 77–79 degrees Fahrenheit, with oxygen levels near saturation.	<i>May occur.</i> Likely not found in Jenner Gulch due to complete fish passage blockage downstream from the project area (CNDDDB 2022e); however, could occur within Sheephouse Creek, as well as the east branch and mainstem of Russian Gulch.
Russian River tule perch <i>Hysteroecarpus traskii 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 approximately 3.3 feet [1 m]) pool habitat.	<i>Known to occur.</i> Likely not found in Jenner Gulch due to complete fish passage blockage downstream from the project area (CNDDDB 2022e); however, documented to occur within Sheephouse Creek (CDFG 2006).

Species	Listing Status ¹ Federal	Listing Status ¹ State	Habitat	Potential for Occurrence ²
Sacramento hitch <i>Lavinia exilicauda exilicauda</i>	—	SSC	Sacramento hitch inhabits warm, lowland, waters including clear streams, turbid sloughs, lakes and reservoirs. In streams they are generally found in pools or runs among aquatic vegetation, although small individuals will also use riffles.	<i>May occur</i> : Likely not found in Jenner Gulch due to complete fish passage blockage downstream from the project area (CNDDDB 2022e); however, could occur within Sheephouse Creek.
Steelhead – central California coast Distinct Population Segment <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.	<i>Known to occur</i> : Likely not found in Jenner Gulch due to complete fish passage blockage downstream from the project area (CNDDDB 2022e); however, documented to occur within Sheephouse Creek (CDFG 2006).
Steelhead – northern California Distinct Population Segment <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.	<i>Known to occur</i> : This distinct population segment has been documented to occur on the project area within the mainstem and east branch of Russian Gulch (FEC 2010). Critical habitat is designated for the distinct population segment within these creeks.
Tidewater goby <i>Eucyclogobius newberryi</i>	FE	SSC	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels.	<i>Not expected to occur</i> . The project area does not contain nor is it directly adjacent to the brackish water estuary habitat potentially occupied by this species.
Western brook lamprey <i>Lampetra richardsoni</i>	—	SSC	Species ranges from Southeastern Alaska to California and inland to the Sacramento and San Joaquin River drainages. Requires cold clear water and clean gravel new cover for spawning (Moyle et al. 2015).	<i>May occur</i> . Likely not found in Jenner Gulch due to complete fish passage blockage downstream from the project area (CNDDDB 2022e); however, could occur within Sheephouse Creek, as well as the east branch and mainstem of Russian Gulch.
Invertebrates				
Behren's silverspot butterfly <i>Speyeria zerene behrensii</i>	FE	—	Coastal prairie. Restricted to the Pacific side of the Coast Ranges, from Point Arena to Bodega Bay Inhabits coastal terrace prairie habitat. Foodplant is <i>Viola</i> spp.	<i>May occur</i> . Coastal prairie habitat present on the western portion of the project area is potentially suitable for the species, and <i>Viola</i> spp. were observed during reconnaissance survey.
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. Winter: undercut banks with exposed roots. Summer: leafy branches touching water.	<i>May occur</i> . Streams in the project area provide habitat potentially suitable for the species.
Monarch – California overwintering population <i>Danaus plexippus</i> pop. 1	FC	—	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.	<i>May occur</i> . Potentially suitable winter roost habitat for the species is present on the project area; although the eucalyptus and cypress on the project area are in groves that are too small to likely support winter roosting. The project area is outside of the breeding range for this species.

Species	Listing Status ¹ Federal	Listing Status ¹ State	Habitat	Potential for Occurrence ²
Myrtle's silverspot butterfly <i>Speyeria zerene myrtleae</i>	FE	—	Coastal dunes. Restricted to the foggy, coastal dunes/hills of the Point Reyes peninsula north to the Russian River; extirpated from coastal San Mateo County. Larval foodplant thought to be <i>Viola adunca</i> .	<i>May occur.</i> Coastal prairie habitat potentially suitable for the species is present in the western portion of the project area, and <i>Viola</i> spp. were observed during reconnaissance survey; however, the project area is just north of the northern extent of the species range and the species.
Western bumble bee <i>Bombus occidentalis</i>	—	SC	Once common throughout much of its range, in California, this species is currently largely restricted to high elevation sites in the Sierra Nevada and the northern California coast. Habitat includes open grassy areas, chaparral, scrub, and meadows. Requires suitable nesting sites for the colonies, availability of nectar and pollen from floral resources throughout the duration of the colony period (spring, summer, and fall), and suitable overwintering sites for the queens.	<i>Not likely to occur.</i> Grassland habitat within the project area may provide floral resources suitable to support colonies. There are historic documented occurrences within western Sonoma County; however, the project area is outside of the currently documented range of the species (CDFW 2019).
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.	<i>Known to occur.</i> The species is documented to occur within the grassland portions of the project area (FEC 2010). The species is likely confined to grasslands and oak woodlands within the project area.
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.	<i>Known to occur.</i> The species is documented to occur within the project area (FEC 2010). Cavities in large trees and unused structures on the project area may provide roosts for this species.
Ringtail <i>Bassariscus astutus</i>	—	FP	Riparian habitats, forest habitats, and shrub habitats in lower to middle elevations. Often found near, but not limited to, a permanent water source.	<i>May occur.</i> The project area contains suitable forested and riparian habitat for this species. There are no documented occurrences in the project region, although the species is not tracked in the CNDDB.
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.	<i>Not expected to occur.</i> The project area is outside of the range of this subspecies (Koenig 2015). Woodrat may be present within the project area, but is <i>Neotoma fuscipes monochrourea</i> , which is not a special-status species.
Sonoma tree vole <i>Arborimus pomo</i>	—	SSC	North coast fog belt from the Oregon border to Sonoma County. In Douglas fir, redwood and montane hardwood-conifer forests. Feeds almost exclusively on Douglas fir needles. Will occasionally take needles of grand fir, hemlock, or spruce.	<i>Known to occur.</i> The species has been documented to occur within portions of the project area (FEC 2010), and the forested habitats within the project area are suitable for this species.

Species	Listing Status ¹ Federal	Listing Status ¹ State	Habitat	Potential for Occurrence ²
Southern sea otter <i>Enhydra lutris nereis</i>	FT	FP	Nearshore marine environments from about Año 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.	<i>Not expected to occur.</i> The project area does not contain nor is it directly adjacent to the marine habitat potentially occupied by this species.
Steller sea lion <i>Eumetopias jubatus</i>	FD	—	Marine intertidal, splash zone communities, protected deepwater coastal communities, and rocky shore. Breeds on Año Nuevo, San Miguel Island, the Farallon Islands, the St. George Reef, and Sugarloaf. Hauls out on islands and rocks. Needs haul-out and breeding sites with unrestricted access to water, near aquatic food supply and with no human disturbance.	<i>Not expected to occur.</i> The project area does not contain nor is it directly adjacent to the marine and intertidal habitat potentially occupied by 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.	<i>Known to occur.</i> The species is documented to occur within the project area (FEC 2010). Cavities in large trees and unused structures on the project area may provide roosts for this species.
Western red bat <i>Lasiurus blossevillii</i>	—	SSC	Roosts primarily in trees, 2–40 feet above ground, from sea level up through mixed conifer forests. Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging.	<i>Known to occur.</i> The species is documented to occur within the project area (FEC 2010). This species roosts in dense foliage of broadleaved trees species, and roosting sites suitable for western red bats may be present within the project area.

Notes: CNDDDB = California Natural Diversity Database; CEQA = California Environmental Quality Act

1 Legal Status Definitions

Federal:

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

State:

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

2 Potential for Occurrence Definitions

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

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

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

Sources: CDFG 2006; CDFW 2019; CNDDDB 2022a; CNDDDB 2022b; CNDDDB 2022c; CNDDDB 2022d; CNDDDB 2022e; FEC 2010; Koenig 2015; Moyle et al. 2015; Spencer et al. 2005; USFWS 2022.

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