

DOCKETED

Docket Number:	26-OPT-01
Project Title:	Vaca Dixon Power Center Project
TN #:	270283
Document Title:	Appendix DR BIO-3 Special Status Species Evaluation Table
Description:	Appendix to Data Request Response Set #1
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Organization:	Rincon Consultants, Inc.
Submitter Role:	Applicant Consultant
Submission Date:	5/27/2026 9:13:16 AM
Docketed Date:	5/27/2026

Appendix DR BIO-3

Special-Status Species Evaluation Table

Special-Status Species Evaluation Table

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Biological Study Area	Habitat Suitability/Observations
Plants and Lichens				
<i>Arctostaphylos manzanita</i> ssp. <i>laevigata</i> Contra Costa manzanita	None/None G5T2/S2 1B.2	Perennial evergreen shrub. Chaparral. Rocky slopes. Elevations: 1410-3610 feet (430-1100 meters). Blooms Jan-Mar.	Not Expected	The BSA is outside the elevation range for the species. No CNDDDB occurrences have been recorded within 10 miles of the BSA (CDFW 2025). This species was not observed during the 2023 rare plant survey.
<i>Astragalus tener</i> var. <i>ferrisiae</i> Ferris' milk-vetch	None/None G2T1/S1 1B.1	Annual herb. Meadows and seeps, valley and foothill grassland. Subalkaline flats on overflow land in the Central Valley; usually seen in dry, adobe soil. Elevations: 5-245 feet (2-75 meters). Blooms Apr-May.	Not Expected	While non-native annual grassland habitat is present, valley and foothill grassland, subalkaline flats on overflow land, dry adobe soil, and meadows and seeps are not present within the BSA. No CNDDDB occurrences have been recorded within 10 miles of the BSA (CDFW 2025). Jepson records approximately 6.4 miles northeast of site (Jepson eFlora 2025). This species was not observed during the 2023 rare plant survey or during other surveys completed within the BSA throughout 2024 or 2025 that were within the blooming period for this species (April- May).
<i>Astragalus tener</i> var. <i>tener</i> alkali milk-vetch	None/None G2T1/S1 1B.2	Annual herb. Playas, valley and foothill grassland, vernal pools. Alkaline. Elevations: 5-195 feet (1-60 meters). Blooms Mar-Jun.	Low Potential (Northern BSA) Not Expected (Southern BSA)	No suitable playas, valley and/or foothill grassland, vernal pools or alkaline habitat is present within BSA. Non-native grassland and wetlands occur within the northern BSA where this species may occur, though the soil is likely not preferable for this species. Additionally, the grassland area within the northern BSA is routinely mowed and has a recent history of herbicide usage, which reduces the quality of grassland habitat that is available for this species. Due to the presence of agriculture and high levels of human disturbance including but not limited to possible use of herbicides, this species is not expected to occur in the southern BSA. Eighteen CNDDDB occurrences within 10 miles of the BSA. The closest CNDDDB occurrence is approximately 4.6 miles southwest of the site, though this occurrence is historical (1896; CDFW 2025). There are several recorded occurrences on iNaturalist within 10-miles of the BSA, with the closest occurrence approximately 2 miles southwest of the site (iNaturalist 2026). This species was not observed during the 2023 rare plant survey or during other surveys completed within the BSA throughout 2024 or 2025 that were within the blooming period for this species (March - June).
<i>Atriplex cordulata</i> var. <i>cordulata</i> heartscale	None/None G3T2/S2 1B.2	Annual herb. Chenopod scrub, meadows and seeps, valley and foothill grassland, wetlands. Alkaline (sometimes). Elevations: 0-1835 feet (0-560 meters). Blooms Apr-Oct.	Not Expected	No suitable chenopod scrub, meadows and seeps, or valley and foothill grassland are present within the BSA. Marginally suitable non-native annual grassland habitat and seasonal wetlands are present in the northern BSA where this species has a low potential to occur. The grassland area within the northern BSA is routinely mowed and has a recent history of herbicide usage, which reduces the quality of grassland habitat that is available for this species. Due to the presence of agriculture and high levels of human disturbance including but not limited to possible use of herbicides, this species is not expected to occur in the southern BSA. Three CNDDDB occurrences have been recorded within 10 miles of the BSA with the closest occurrence approximately 4.6 miles southwest of the site. All CNDDDB occurrences are historical (1892, 1994, and 2003; CDFW 2025). Jepson records approximately 5 miles southwest of the BSA, however, this record is historical (1887, Jepson eFlora 2026). No iNaturalist occurrences were recorded within 10 miles of the BSA (iNaturalist 2025). This species was not observed during the 2023 rare plant survey or during other surveys completed within the BSA throughout 2024 or 2025 that were within the blooming period for this species (April - October).
<i>Atriplex depressa</i> brittlescale	None/None G2/S2 1B.2	Annual herb. Chenopod scrub, meadows and seeps, playas, valley and foothill grassland, vernal pools, wetlands. Alkaline, clay soils. Elevations: 5-1050 feet (1-320 meters). Blooms Apr-Oct.	Low Potential (Northern BSA) Not Expected (Southern BSA)	No suitable chenopod scrub, meadows and seeps, valley/foothill grassland, or vernal pools are present within the BSA.. Marginally suitable non-native annual grassland habitat and seasonal wetlands are present within the northern BSA where this species has a low potential to occur. The grassland area within the northern BSA is routinely mowed and has a recent history of herbicide usage, which reduces the quality of grassland habitat that is available for this species. Due to the presence of agriculture and high levels of human disturbance including but not limited to possible use of herbicides, this species is not expected to occur in the southern BSA. Two CNDDDB occurrences have been recorded within 10 miles of the BSA, with the closest occurrence approximately 7.8 miles south. Both CNDDDB occurrences are historical (2002 and 1986; CDFW 2025). Jepson records approximately 8.3 miles southwest of site (Jepson eFlora 2025). There are four recorded occurrences on iNaturalist within 10-miles of the BSA, with the closest occurrence approximately 2.5 miles southwest of the site (iNaturalist 2026). This species was not observed during the 2023 rare plant survey or during other surveys completed within the BSA throughout 2024 or 2025 that were within the blooming period for this species (April - October).
<i>Atriplex persistens</i> vernal pool smallscale	None/None G2/S2 1B.2	Annual herb. Vernal pools, wetlands. Alkaline vernal pools, clay loam soils. Elevations: 35-375 feet (10-115 meters). Blooms Jun-Oct.	Not Expected	No suitable alkaline vernal pool habitat is present; however, seasonal wetlands and clay loam soils are present. No CNDDDB occurrences have been recorded within 10 miles of the BSA (CDFW 2025). Jepson records approximately 9.8 miles southeast of site (Jepson eFlora 2025). This species was not observed during the 2023 rare plant survey.

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<i>Centromadia parryi</i> ssp. <i>parryi</i> pappose tarplant	None/None G3T2/S2 1B.2	Annual herb. Chaparral, coastal prairie, marshes and swamps, meadows and seeps, seasonal wetlands, valley and foothill grassland. Alkaline (often). Elevations: 0-1380 feet (0-420 meters). Blooms May-Nov.	Not Expected	No suitable chaparral, coastal prairie, marshes or swamps, meadows and seeps, valley and foothill grassland or alkaline soils are present within the BSA. Marginally suitable grassland habitat and seasonal wetlands are present, though the soil is likely not suitable for this species. The grassland area within the northern BSA is routinely mowed and has a recent history of herbicide usage, which reduces the quality of grassland habitat that is available for this species. There are four CNDDDB occurrences within 10 miles of the BSA with the closest occurrence is approximately 6.3 miles southeast (CDFW 2025). Though most of the positive identifications for the pappose tarplant on CDNNB were observed during the last few months of this species' blooming period, one positive identification was made during the month of April (April 25, 2005), which is outside of this species' blooming period. Jepson records approximately 6.6 miles south of site (Jepson eFlora 2025). This species was not observed during the April 2023 rare plant survey or during other surveys completed within the BSA throughout 2024 or 2025 that were within the blooming period for this species (May – November).
<i>Chloropyron molle</i> ssp. <i>hispidum</i> hispid salty bird's-beak	None/None G2T1/S1 1B.1	Annual herb (hemi-parasitic). Meadows and seeps, playas, vernal pools, valley and foothill grassland. Alkaline. Elevations: 5-510 feet (1-155 meters). Blooms Jun-Sep.	Not Expected	While grassland habitat is present, suitable meadows and seeps, playas, vernal pools, valley/foothill grassland, and alkaline habitats are not present. Though there is non-native grassland within the BSA, alkaline conditions are absent. The grassland area within the northern BSA is routinely mowed and has a recent history of herbicide usage, which reduces the quality of grassland habitat that is available for this species. The remaining grassland within the site is also likely treated with herbicides. No CNDDDB occurrences have been recorded within 10 miles of the BSA (CDFW 2025). The closest CNDDDB occurrence recorded is approximately 11 miles southeast of the BSA and was recorded in 2010 (CDFW 2026). There are two iNaturalist occurrences recorded within 10 miles of the BSA, with the closest occurrence recorded approximately 6 miles south. This species was not observed during the 2023 rare plant survey or during other surveys completed within the BSA throughout 2024 or 2025 that were within the blooming period for this species (June – September).
<i>Cicuta maculata</i> var. <i>bolanderi</i> Bolander's water-hemlock	None/None G5T4T5/S2? 2B.1	Perennial herb. Marshes and swamps. In fresh or brackish water. Elevations: 0-655 feet (0-200 meters). Blooms Jul-Sep.	Not Expected	No suitable marsh or swamp habitat is present within the site. No CNDDDB occurrences have been recorded within 10 miles of the BSA (CDFW 2025). This species was not observed during the 2023 rare plant survey.
<i>Delphinium recurvatum</i> recurved larkspur	None/None G2?/S2 1B.2	Perennial herb. Chenopod scrub, cismontane woodland, valley and foothill grassland. Alkaline. Elevations: 10-2590 feet (3-790 meters). Blooms Mar-Jun.	Not Expected	While non-native annual grassland habitat is present in the BSA, chenopod scrub, cismontane woodland habitats, foothill grassland and alkaline conditions are not present. The grassland area within the site is routinely mowed and has a recent history of herbicide usage, which reduces the quality of grassland habitat that is available for this species. One CNDDDB occurrence was recorded within 10 miles of the BSA, approximately 2.3 miles west of the BSA though this occurrence is historical (1940; CDFW 2025). No iNaturalist occurrences were recorded within 10 miles of the BSA (iNaturalist 2026). Three Jepson records exist within 3 miles of the BSA (Jepson eFlora 2025). This species was not observed during the 2023 rare plant survey or during other surveys completed within the BSA throughout 2024 or 2025 that were within the blooming period for this species (March – June).
<i>Downingia pusilla</i> dwarf downingia	None/None GU/S2 2B.2	Annual herb. Valley and foothill grassland, vernal pools. Vernal lake and pool margins with a variety of associates. In several types of vernal pools. Elevations: 5-1460 feet (1-445 meters). Blooms Mar-May.	Not Expected	While non-native annual grassland habitat is present in the BSA, vernal pools or vernal lakes are not present. The grassland area within the site is routinely mowed and has a recent history of herbicide usage, which reduces the quality of grassland habitat that is available for this species. Fourteen CNDDDB occurrences have been recorded within 10 miles of the BSA with the closest occurrence approximately 1.3 miles west of the site. This record is historical (1998; CDFW 2025). There are several iNaturalist occurrences that have been recorded within 10-miles of the BSA, with the closest occurrence approximately 1.2 miles south of the BSA (iNaturalist 2026). These occurrences are likely within vernal pool habitat. This species was not observed during the 2023 rare plant survey or during other surveys completed within the BSA throughout 2024 or 2025 that were within the blooming period for this species (March – May).
<i>Extriplex joaquinana</i> San Joaquin spearscale	None/None G2/S2 1B.2	Annual herb. Chenopod scrub, meadows and seeps, playas, valley and foothill grassland. In seasonal alkali wetlands or alkali sink scrub with <i>Distichlis spicata</i> , <i>Frankenia</i> , etc. Elevations: 5-2740 feet (1-835 meters). Blooms Apr-Oct.	Not Expected	While grassland habitat is present, chenopod scrub, meadows and seeps, playas and alkaline habitat is not present. The grassland area within the site is routinely mowed and has a recent history of herbicide usage, which reduces the quality of grassland habitat that is available for this species. Three CNDDDB occurrences have been recorded within 10 miles of the BSA, with the closest occurrence approximately 4.6 miles southwest of the site. This occurrence is historical (1891; CDFW 2025). There is one iNaturalist occurrence that was recorded within 10-miles of the BSA, approximately 10-miles southeast of the BSA. This species was not observed during the 2023 rare plant survey or during other surveys that were completed within the BSA throughout 2024 or 2025 that were within the blooming period for this species (April through October).

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<i>Fritillaria liliacea</i> fragrant fritillary	None/None G2/S2 1B.2	Perennial bulbiferous herb. Cismontane woodland, coastal prairie, coastal scrub, valley and foothill grassland. Often on serpentine; various soils reported though usually on clay, in grassland. Elevations: 10-1345 feet (3-410 meters). Blooms Feb-Apr.	Low Potential (Northern BSA) Not Expected (Southern BSA)	While grassland habitat is present, serpentine soils, cismontane woodland, coastal prairie, and coastal prairie habitats are not present. The grassland area within the northern BSA is routinely mowed and has a recent history of herbicide usage, which reduces the quality of grassland habitat that is available for this species. Due to the presence of agriculture and high levels of human disturbance including but not limited to possible use of herbicides, this species is not expected to occur in the southern BSA. There are no CNDDDB occurrences within 10 miles of the BSA (CDFW 2025). Jepson records approximately 10 miles southeast (Jepson eFlora 2025). There are several iNaturalist occurrences that have been recorded within 10-miles of the BSA (iNaturalist 2026), with the closest occurrence less than 0.25-miles from the BSA (iNaturalist 2026). This species was not observed during the 2023 rare plant survey or during other surveys that were completed within the BSA throughout 2024 or 2025 that were within the blooming period for this species (February through April).
<i>Fritillaria pluriflora</i> adobe-lily	None/None G2G3/S2S3 1B.2	Perennial bulbiferous herb. Chaparral, cismontane woodland, valley and foothill grassland. Usually on clay soils; sometimes serpentine. Elevations: 195-2315 feet (60-705 meters). Blooms Feb-Apr.	Not Expected	The BSA is outside the elevation range of the species. There are no CNDDDB occurrences within 10 miles of the BSA (CDFW 2025). This species was not observed during the 2023 rare plant survey.
<i>Gratiola heterosepala</i> Boggs Lake hedge-hyssop	None/SE G2/S2 1B.2	Annual herb. Marshes and swamps, vernal pools. Clay soils; usually in vernal pools, sometimes on lake margins. 4-. Elevations: 35-7790 feet (10-2375 meters). Blooms Apr-Aug.	Not Expected	Marshes, swamps, and vernal pool habitat is not present. There are two CNDDDB occurrences within 10 miles of the BSA, with the closest occurrence recorded approximately 8.4 miles southwest. This record is historical (1991; CDFW 2025). Jepson records approximately 10 miles southeast of site (Jepson eFlora 2025). This species was not observed during the 2023 rare plant survey.
<i>Hesperolinon breweri</i> Brewer's western flax	None/None G2/S2 1B.2	Annual herb. Chaparral, cismontane woodland, valley and foothill grassland. Often in rocky serpentine soil in serpentine chaparral and serpentine grassland. Elevations: 100-3100 feet (30-945 meters). Blooms May-Jul.	Not Expected	No chaparral or cismontane woodlands are present. Serpentine soil and habitat is not present. Two CNDDDB occurrences have been recorded within 10 miles of the BSA, with the closest occurrence approximately 6.75 miles west (CDFW 2025). This record is historical (1892). Jepson records approximately 5.4 miles southwest of site (Jepson eFlora 2025). This species was not observed during the 2023 rare plant survey.
<i>Hibiscus lasiocarpus</i> var. <i>occidentalis</i> woolly rose-mallow	None/None G5T3/S3 1B.2	Perennial rhizomatous herb (emergent). Marshes and swamps. Moist, freshwater-soaked river banks and low peat islands in sloughs; can also occur on riprap and levees. In California, known from the delta watershed. Elevations: 0-395 feet (0-120 meters). Blooms Jun-Sep.	Not Expected	No freshwater marsh or swamp habitat is present. No CNDDDB occurrences have been recorded within 10 miles of the BSA (CDFW 2025). This species was not observed during the 2023 rare plant survey.
<i>Isocoma arguta</i> Carquinez goldenbush	None/None G1/S1 1B.1	Perennial shrub. Valley and foothill grassland. Alkaline soils, flats, lower hills. On low benches near drainages and on tops and sides of mounds in swale habitat. Elevations: 5-65 feet (1-20 meters). Blooms Aug-Dec.	Not Expected	While grassland habitat is present, no suitable alkaline habitat is present, which this species prefers. The grassland area within the northern BSA is routinely mowed and has a recent history of herbicide usage, which reduces the quality of grassland habitat that is available for this species. Due to the presence of agriculture and high levels of human disturbance including but not limited to possible use of herbicides, this species is not expected to occur in the southern BSA. Three CNDDDB occurrences have been recorded within 10 miles of the BSA, with the closest occurrence approximately 6.9 miles southeast. This occurrence is historical (1959; CDFW 2025). There are several iNaturalist occurrences that have been recorded within 10-miles of the BSA (iNaturalist 2026), with the closest occurrence less than 0.25-miles from the BSA (iNaturalist 2026). Jepson records approximately 5.5 miles east of site (Jepson eFlora 2025). This species was not observed during the 2023 rare plant survey or during other surveys that were completed within the BSA throughout 2024 or 2025 that were within the blooming period for this species (August through December).
<i>Lasthenia chrysantha</i> alkali-sink goldfields	None/None G2/S2 1B.1	Annual herb. Vernal pools. Alkaline. Elevations: 0-655 feet (0-200 meters). Blooms Feb-Apr.	Not Expected	No vernal pool or alkaline habitat is present. One CNDDDB occurrence is recorded within 10 miles of the BSA, approximately 9.6 miles southeast. This occurrence date is unknown (CDFW 2025). This species was not observed during the 2023 rare plant survey.
<i>Lasthenia conjugens</i> Contra Costa goldfields	FE/None G1/S1 1B.1	Annual herb. Cismontane woodland, playas, valley and foothill grassland, vernal pools. Vernal pools, swales, low depressions, in open grassy areas. Elevations: 0-1540 feet (0-470 meters). Blooms Mar-Jun.	Not Expected	Grassland habitat and seasonal wetland depressions occur in the BSA and may provide suitable habitat. Fifty CNDDDB occurrences are recorded within 10 miles of the BSA, with the closest occurrence approximately 4.6 miles southwest. This record is historical (1918). Additionally, there is designated critical habitat for the species 5.2 miles south of the site (CDFW 2025). This species, however, was not observed during the 2023 rare plant survey.
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i> Coulter's goldfields	None/None G4T2/S2 1B.1	Annual herb. Marshes and swamps, playas, vernal pools. Usually found on alkaline soils in playas, sinks, and grasslands. 1-. Elevations: 5-4005 feet (1-1220 meters). Blooms Feb-Jun.	Not Expected	No suitable marsh or swamp habitat or alkaline soils are present. One CNDDDB occurrence was recorded within 10 miles of the BSA, approximately 9.6 miles south (CDFW 2025). This species was not observed during the 2023 rare plant survey.
<i>Lathyrus jepsonii</i> var. <i>jepsonii</i> Delta tule pea	None/None G5T2/S2 1B.2	Perennial herb. Marshes and swamps. In freshwater and brackish marshes. Often found with <i>Typha</i> , <i>Aster lentus</i> , <i>Rosa californica</i> , <i>Juncus</i> spp., <i>Scirpus</i> , etc. Usually on marsh and slough edges. Elevations: 0-15 feet (0-5 meters). Blooms May-Jul (Aug-Sep).	Not Expected	No suitable marsh habitat is present. No CNDDDB occurrences have been recorded within 10 miles of the BSA (CDFW 2025). This species was not observed during the 2023 rare plant survey.

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<i>Layia septentrionalis</i> Colusa layia	None/None G2/S2 1B.2	Annual herb. Chaparral, cismontane woodland, valley and foothill grassland. Scattered colonies in fields and grassy slopes in sandy or serpentine soil. Elevations: 330-3595 feet (100-1095 meters). Blooms Apr-May.	Not Expected	The BSA is outside the elevation range of the species. No CNDDDB occurrences have been recorded within 10 miles of the BSA (CDFW 2025). This species was not observed during the 2023 rare plant survey.
<i>Legenere limosa</i> legenere	None/None G2/S2 1B.1	Annual herb. Vernal pools. In beds of vernal pools. 1-. Elevations: 5-2885 feet (1-880 meters). Blooms Apr-Jun.	Not Expected	No suitable vernal pool habitat present. Three CNDDDB occurrences have been recorded within 10 miles of the BSA, with the closest occurrence approximately 2.4 miles southeast. This occurrence is historical (1909; CDFW 2025). This species was not observed during the 2023 rare plant survey.
<i>Lepidium latipes</i> var. <i>heckardii</i> Heckard's pepper-grass	None/None G4T1/S1 1B.2	Annual herb. Valley and foothill grassland. Grassland, and sometimes vernal pool edges. Alkaline soils. Elevations: 5-655 feet (2-200 meters). Blooms Mar-May.	Not Expected	While grassland habitat is present, vernal pools and alkaline soil/flats are not present, which this species prefers. The grassland area within the northern BSA is routinely mowed and has a recent history of herbicide usage, which reduces the quality of grassland habitat that is available for this species. Due to the presence of agriculture and high levels of human disturbance including but not limited to possible use of herbicides, this species is not expected to occur in the southern BSA. There are two iNaturalist occurrences recorded within 10-miles of the BSA, with the closest occurring approximately 7.5 miles south (iNaturalist 2026)No CNDDDB occurrences have been recorded within 10 miles of the BSA (CDFW 2025). This species was not observed during the 2023 rare plant survey or during other surveys that were completed within the BSA throughout 2024 or 2025 that were within the blooming period for this species (March through May).
<i>Leptosiphon jepsonii</i> Jepson's leptosiphon	None/None G2G3/S2S3 1B.2	Annual herb. Chaparral, cismontane woodland, valley and foothill grassland. Open to partially shaded grassy slopes. On volcanics or the periphery of serpentine substrates. Elevations: 330-1640 feet (100-500 meters). Blooms Mar-May.	Not Expected	The BSA is outside the elevation range of the species and volcanic and serpentine substrates are absent. One CNDDDB occurrence was recorded within 10 miles of the BSA, approximately 9.9 miles southeast. This occurrence is historical (1991, CDFW 2025). This species was not observed during the 2023 rare plant survey.
<i>Lilaeopsis masonii</i> Mason's lilaeopsis	None/SR G2/S2 1B.1	Perennial rhizomatous herb. Marshes and swamps, riparian scrub. Tidal zones, in muddy or silty soil formed through river deposition or riverbank erosion. In brackish or freshwater. Elevations: 0-35 feet (0-10 meters). Blooms Apr-Nov.	Not Expected	No suitable marsh and swamp habitat within the tidal zone or exhibiting silty soils is present on site. No CNDDDB occurrences recorded within 10 miles of the BSA (CDFW 2025). This species was not observed during the 2023 rare plant survey.
<i>Limosella australis</i> Delta mudwort	None/None G4G5/S2 2B.1	Perennial stoloniferous herb. Marshes and swamps, riparian scrub. Usually on mud banks of the Delta in marshy or scrubby riparian associations; often with <i>Lilaeopsis masonii</i> . Elevations: 0-10 feet (0-3 meters). Blooms May-Aug.	Not Expected	No suitable marsh, swamp, or riparian scrub habitat is present within the site. No CNDDDB occurrences have been recorded within 10 miles of the BSA (CDFW 2025). Jepson records approximately 10 miles southeast of site (Jepson eFlora 2025). This species was not observed during the 2023 rare plant survey.
<i>Navarretia leucocephala</i> ssp. <i>bakeri</i> Baker's navarretia	None/None G4T2/S2 1B.1	Annual herb. Cismontane woodland, lower montane coniferous forest, meadows and seeps, valley and foothill grassland, vernal pools. Vernal pools and swales; adobe or alkaline soils. Elevations: 15-5710 feet (5-1740 meters). Blooms Apr-Jul.	Low Potential	Grassland habitat is present within the BSA; however, alkaline or adobe soils, cismontane woodland, lower montane coniferous forest, meadows and seeps and vernal pools are not present. Eleven CNDDDB occurrences have been recorded within 10 miles of the BSA, with the closest occurrence approximately 0.75 mile southwest (CDFW 2025). iNaturalist has multiple recorded occurrences within 10 miles of the BSA, with the closest occurrence along Quinn Road just south of the Vaca-Dixon substation, though this record has not been confirmed (2018; iNaturalist 2025). This species was not observed within the northern BSA during the 2023 rare plant survey. Due to the proximity of the previously documented occurrence, it was determined that this species has a low potential for occurrence.
<i>Neostapfia colusana</i> Colusa grass	FT/SE G1/S1 1B.1	Annual herb. Vernal pools. Usually in the bottoms of large, or deep vernal pools; adobe soils. Elevations: 15-655 feet (5-200 meters). Blooms May-Aug.	Not Expected	No vernal pool habitat or adobe soils are present. No CNDDDB occurrences have been recorded within 10 miles of the BSA (CDFW 2025). Jepson records approximately 10 miles southeast of site (Jepson eFlora 2025). This species was not observed during the 2023 rare plant survey.
<i>Orcuttia inaequalis</i> San Joaquin Valley Orcutt grass	FT/SE G1/S1 1B.1	Annual herb. Vernal pools. Elevations: 35-2475 feet (10-755 meters). Blooms Apr-Sep.	Not Expected	No suitable vernal pool habitat present. Species is primarily documented in the San Joaquin region which is outside this Project Area region. One CNDDDB occurrence was recorded within 10 miles of the BSA, approximately 9.1 miles south (CDFW 2025). This species was not observed during the 2023 rare plant survey.
<i>Plagiobothrys hystriculus</i> bearded popcornflower	None/None G2/S2 1B.1	Annual herb. Valley and foothill grassland, vernal pools. Wet sites. Elevations: 0-900 feet (0-274 meters). Blooms Apr-May.	Low Potential	Grassland habitat is present within the northern BSA. Ten CNDDDB occurrences have been recorded within 10 miles of the BSA, with the closest occurrence approximately 1.5 miles northwest (CDFW 2025). This species was not observed during the 2023 rare plant survey. However, due to the proximity of the previously documented occurrence, the species may have a low potential for occurrence in the BSA.

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<i>Puccinellia simplex</i> California alkali grass	None/None G2/S2 1B.2	Annual herb. Chenopod scrub, meadows and seeps, valley and foothill grassland, vernal pools. Alkaline, vernal mesic. Sinks, flats, and lake margins. Elevations: 5-3050 feet (2-930 meters). Blooms Mar-May.	Not Expected	While grassland habitat is present, no suitable alkaline habitat is present within the site, which this species prefers. This species is found growing in saline soils, which is absent from this site. The grassland area within the northern BSA is routinely mowed and has a recent history of herbicide usage, which reduces the quality of grassland habitat that is available for this species. Due to the presence of agriculture and high levels of human disturbance including but not limited to possible use of herbicides, this species is not expected to occur in the southern BSA. There are several iNaturalist occurrences that have been recorded within 10 miles of the site, though all occurrences are concentrated near the Travis Air Force base. One CNDDDB occurrence was recorded within 10 miles of the BSA, approximately 9.4 miles southeast. This occurrence is historical (1963; CDFW 2025). This species was not observed during the 2023 rare plant survey or during other surveys that were completed within the BSA throughout 2024 or 2025 that were within the blooming period for this species (March through May).
<i>Sidalcea keckii</i> Keck's checkerbloom	FE/None G2/S2 1B.1	Annual herb. Cismontane woodland, valley and foothill grassland. Grassy slopes in blue oak woodland. On serpentine-derived, clay soils, at least sometimes. Elevations: 245-2135 feet (75-650 meters). Blooms Apr-May.	Not Expected	The BSA is outside the elevation range of the species. Four CNDDDB occurrences have been recorded within 10 miles of the BSA, with the closest occurrence approximately 2.8 miles north (CDFW 2025). This species was not observed during the 2023 rare plant survey.
<i>Spergularia macrotheca</i> var. <i>longistyla</i> long-styled sand-spurrey	None/None G5T2/S2 1B.2	Perennial herb. Marshes and swamps, meadows and seeps. Alkaline. Elevations: 0-835 feet (0-255 meters). Blooms Feb-May.	Not Expected	No marshes, swamps, meadows, or seeps occur in the BSA. No CNDDDB occurrences have been recorded within 10 miles of the BSA (CDFW 2025). This species was not observed during the 2023 rare plant survey.
<i>Stuckenia filiformis</i> ssp. <i>alpina</i> northern slender pondweed	None/None G5T5/S2S3 2B.2	Perennial rhizomatous herb (aquatic). Marshes and swamps. Shallow, clear water of lakes and drainage channels. Elevations: 985-7055 feet (300-2150 meters). Blooms May-Jul.	Not Expected	No suitable marsh and swamp habitat present within the site and the BSA is outside the elevation range of the species. No CNDDDB occurrences have been recorded within 10 miles of the BSA (CDFW 2025). Jepson records approximately 10 miles southeast of site (Jepson eFlora 2025). This species was not observed during the 2023 rare plant survey.
<i>Symphotrichum lentum</i> Suisun Marsh aster	None/None G2/S2 1B.2	Perennial rhizomatous herb. Marshes, swamps and wetlands. Most often seen along sloughs with <i>Phragmites</i> , <i>Scirpus</i> , blackberry, <i>Typha</i> , etc. Elevations: 0-10 feet (0-3 meters). Blooms May-Nov.	Not Expected	No marshes, swamps, meadows, or seeps occur in the BSA. One CNDDDB occurrence was recorded within 10 miles of the BSA, approximately 8.5 miles south. This occurrence is historical (1920; CDFW 2025). This species was not observed during the 2023 rare plant survey.
<i>Trifolium amoenum</i> two-fork clover	FE/None G1/S1 1B.1	Annual herb. Coastal bluff scrub, valley and foothill grassland. Sometimes on serpentine soil, open sunny sites, swales. Most recently cited on roadside and eroding cliff face. Elevations: 15-1360 feet (5-415 meters). Blooms Apr-Jun.	Not Expected	While grassland habitat is present, serpentine soil and coastal bluff scrub are not present. The grassland area within the northern BSA is routinely mowed and has a recent history of herbicide usage, which reduces the quality of grassland habitat that is available for this species. A swale is present within the northern BSA, though this species was not identified in the swale during the rare plant survey that took place in the southern portion of the northern BSA or during other surveys that were completed within the BSA throughout 2024 or 2025 that were within the blooming period for this species (April through June). Due to the presence of agriculture and high levels of human disturbance including but not limited to possible use of herbicides, this species is not expected to occur in the southern BSA. Three CNDDDB occurrences have been recorded within 10 miles, with the closest occurrence approximately 3.3 miles southeast of the BSA. This occurrence is historical (1909; CDFW 2025). There are no iNaturalist occurrences recorded within 10-miles of the BSA (iNaturalist 2026).
<i>Trifolium hydrophilum</i> saline clover	None/None G2/S2 1B.2	Annual herb. Marshes and swamps, valley and foothill grassland, vernal pools. Mesic, alkaline sites. Elevations: 0-985 feet (0-300 meters). Blooms Apr-Jun.	Not Expected	No suitable marsh, swamp, vernal pool, or alkaline habitat are present. Non-native annual grassland is present within the BSA, which is not preferable for this species as non-native species likely outcompete this species' ability to survive. Additionally, the grassland area within the northern BSA is routinely mowed and has a recent history of herbicide usage, which reduces the quality of grassland habitat that is available for this species. A swale is present within the northern BSA. Due to the presence of agriculture and high levels of human disturbance including but not limited to possible use of herbicides, this species is not expected to occur in the southern BSA. Eight CNDDDB occurrences have been recorded within 10 miles of the BSA, with the closest occurrence approximately 6.6 miles southwest. This record is historical (1960; CDFW 2025). There is one iNaturalist occurrence recorded within 10-miles of the BSA, though this occurrence is approximately 7.5 miles southwest (iNaturalist 2026). Jepson records approximately 8 miles southeast of site (Jepson eFlora 2025). This species was not observed during the 2023 rare plant survey or during other surveys that were completed within the BSA throughout 2024 or 2025 that were within the blooming period for this species (April through June).

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Biological Study Area	Habitat Suitability/Observations
<i>Tuctoria mucronata</i> Crampton's tuctoria or Solano grass	FE/SE G1/S1 1B.1	Annual herb. Valley and foothill grassland, vernal pools. Clay bottoms of drying vernal pools and lakes in valley grassland. Elevations: 15-35 feet (5-10 meters). Blooms Apr-Aug.	Not Expected	While grassland habitat is present, vernal pools are present. Non-native annual grassland is present within the BSA, which is not preferable for this species as non-native species likely outcompete this species' ability to survive. This species is often found growing in drought cracks, which are absent in the grassland areas/ Additionally, the grassland area within the northern BSA is routinely mowed and has a recent history of herbicide usage, which reduces the quality of grassland habitat that is available for this species. A swale is present within the northern BSA. Due to the presence of agriculture and high levels of human disturbance including but not limited to possible use of herbicides, this species is not expected to occur in the southern BSA. No CNDDDB occurrences have been recorded within 10 miles of the BSA (CDFW 2025). Jepson records approximately 10 miles southeast of site (Jepson eFlora 2024). This species was not observed during the 2023 rare plant survey.
<i>Viburnum ellipticum</i> oval-leaved viburnum	None/None G4G5/S3 2B.3	Perennial deciduous shrub. Chaparral, cismontane woodland, lower montane coniferous forest. Elevations: 705-4595 feet (215-1400 meters). Blooms May-Jun.	Not Expected	The BSA is outside the elevation range of the species. One CNDDDB occurrence was recorded within 10 miles of the BSA, approximately 9.1 miles southwest (CDFW 2025). This species was not observed during the 2023 rare plant survey.
Animals				
Invertebrates				
<i>Andrena blennospermatis</i> Blennosperma vernal pool andrenid bee	None/None G2/S1	This bee is oligolectic on vernal pool Blennosperma. Bees nest in the uplands around vernal pools.	Not Expected	No suitable vernal pool habitat present. Two CNDDDB occurrences have been recorded within 10-miles of the BSA, with the closest occurrence approximately 7.5 miles southeast. This occurrence is historical (1900s [exact year unknown], CDFW 2025).
<i>Bombus crotchii</i> Crotch's bumble bee	None/SCE G2/S2	Coastal California east to the Sierra-Cascade crest and south into Mexico. Habitats include open grassland, shrublands, chaparral, desert margins, including Joshua tree and creosote scrub, and semi-urban settings. Food plant genera include <i>Antirrhinum</i> , <i>Amsinckia</i> , <i>Phacelia</i> , <i>Clarkia</i> , <i>Carduus</i> , <i>Dendromecon</i> , <i>Eschscholzia</i> , <i>Eriogonum</i> , and <i>Vicia</i> .	Low Potential (Northern BSA); Not Expected (Southern BSA)	Grassland habitat, small mammal burrows, and food genera associated with this species are present within the BSA. Two CNDDDB occurrences were recorded within 10 miles of the BSA, approximately 6.6 miles southwest (CDFW 2025). Additionally, the California Bumble Bee Atlas database documents three observations approximately 9 miles south of the BSA, with the most recent occurrence in 2023 (Xerces Society 2025). This species was not observed during the 2025 focused surveys in the southern BSA.
<i>Bombus occidentalis</i> western bumble bee	None/SCE G3/S1	Once common and widespread, this species has declined precipitously from central CA to southern B.C., perhaps from disease. Limited information regarding habitat requirements is known or available on this species; however, it is a known pollinator of a variety of blooming plants.	Not Expected	Two CNDDDB occurrences have been recorded within 10 miles of the BSA, with the closest approximately 3.5 miles southwest. This occurrence is historical (1913; CDFW 2025). Additionally, the California Bumble Bee Atlas database documents no active bumble bee occurrences within 80 miles of the BSA (Xerces Society 2025).
<i>Bombus pensylvanicus</i> American bumble bee	None/None G3G4/S2	Long-tongued; forages on a wide variety of flowers including vetches (<i>Vicia</i>), clovers (<i>Trifolium</i>), thistles (<i>Cirsium</i>), sunflowers (<i>Helianthus</i>), etc. Nests above ground under long grass or underground. Queens overwinter in rotten wood or underground.	Not Expected	Five CNDDDB occurrences have been recorded within 10-miles of the BSA, with the closest occurrence approximately 5-miles southwest. This occurrence is historical (1992, CDFW 2025). The California Bumble Bee Atlas database documents no active American bumble bee occurrences outside of the Los Angeles area (Xerces Society 2025).
<i>Branchinecta conservatio</i> Conservancy fairy shrimp	FE/None G2/S2	Endemic to the grasslands of the northern two-thirds of the Central Valley; found in large, turbid pools. Inhabit astatic pools located in swales formed by old, braided alluvium; filled by winter/spring rains, last until June.	Not Expected	Suitable habitat of astatic pools is not present. Several CNDDDB occurrences have been recorded within 10 miles of the BSA and there is critical habitat for the species 9.4 miles south of the site (CDFW 2025). Jepson prairie population of Conservancy fairy shrimp is fragmented from the Project area by development and agricultural cultivation.
<i>Branchinecta lynchi</i> vernal pool fairy shrimp	FT/None G3/S3	Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	High Potential (northern BSA); Not Expected (southern BSA)	Grasslands with seasonal wetland depressions are present within the northern BSA. Several CNDDDB occurrences have been recorded within 10 miles of the BSA, with the closest occurrence in the immediate vicinity of the site. Additionally, there is designated critical habitat for the species 6 miles south of the site (CDFW 2025). Wet and dry-season sampling protocols yielded cysts belonging to the <i>Branchinecta</i> genus within the northern BSA. None of the cysts could be identified at the species level (Helm Biological Consulting 2024a and 2024b). Low quality suitable habitat was identified in the southern BSA in 2025 during a habitat assessment conducted by Helm Biological Consulting (Helm Biological Consulting 2025), though dry-season sampling efforts completed in September 2025 yielded negative results. Due to the proximity of previously documented occurrences, potentially suitable habitat occurring within the northern BSA, and communications with the USFWS, this species was determined to have a high potential to occur in the northern BSA and is not expected to occur within the southern BSA.
<i>Branchinecta mesovallensis</i> midvalley fairy shrimp	None/None G2/S2S3	Vernal pools in the Central Valley.	Not Expected	No suitable vernal pool habitat present. Ten CNDDDB occurrences have been recorded within 10-miles of the BSA, with the closest occurrence approximately 5.5-miles southeast. This occurrence is historical (1994, CDFW 2025). This species was not observed during the wet- and dry-season large branchiopod surveys that were conducted within the BSA.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Biological Study Area	Habitat Suitability/Observations
<i>Danaus plexippus</i> monarch	FPT/None G4T1T2Q/S2	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.	Low Potential	A small patch of milkweed was observed in the western central portion of the site. No roost habitat present. No CNDDDB occurrences have been recorded within 10 miles of the BSA (CDFW 2025). The species may be present temporarily for foraging; however, due to the lack of overwintering roost habitat within the BSA, and lack of reported occurrences in the vicinity, this species was determined to have a low potential to occur for foraging only.
<i>Desmocerus californicus dimorphus</i> valley elderberry longhorn beetle	FT/None G3T3/S3	Occurs only in the Central Valley of California, in association with blue elderberry (<i>Sambucus mexicana</i>). Prefers to lay eggs in elderberries 2-8 inches in diameter; some preference shown for "stressed" elderberries.	Not Expected	Blue elderberry is not present on site. Seven CNDDDB occurrences have been recorded within 10 miles of the BSA, with the closest occurrence 5.3 miles southwest (CDFW 2025).
<i>Elaphrus viridis</i> Delta green ground beetle	FT/None G1/S1	Restricted to the margins of vernal pools in the grassland area between Jepson Prairie and Travis AFB. Prefers the sandy mud substrate where it slopes gently into the water, with low-growing vegetation, 25-100% cover.	Not Expected	No suitable vernal pool habitat present. Several CNDDDB occurrences have been recorded within 10 miles of the BSA, with the closest occurrence approximately 8 miles southeast. Additionally, there is designated critical habitat for the species 8.6 miles southeast of the site (CDFW 2025).
<i>Gonidea angulata</i> western ridged mussel	None/None G3/S2	Primarily creeks and rivers and less often lakes. Originally in most of state, now extirpated from Central and Southern California.	Not Expected	One CNDDDB occurrence has been recorded within 10-miles of the BSA, approximately 9 miles northwest (2009, CDFW 2025).
<i>Hydrochara rickseckeri</i> Ricksecker's water scavenger beetle	None/None G2?/S2?	Aquatic. Other habitat requirements unknown.	Not Expected	Three CNDDDB occurrences have been recorded within 10-miles of the BSA, with the closest occurrence approximately 8.5 miles southeast. This occurrence is historical (2005, CDFW 2025).
<i>Lepidurus packardii</i> vernal pool tadpole shrimp	FE/None G3/S3	Inhabits vernal pools and swales in the Sacramento Valley containing clear to highly turbid water. Pools commonly found in grass-bottomed swales of unplowed grasslands. Some pools are mud-bottomed and highly turbid.	Not Expected	Suitable grassland and seasonal wetlands are present within the BSA; however, vernal pools are not present. Several CNDDDB occurrences have been recorded within 10 miles of the BSA, with the closest approximately 2.6 miles southwest. This record is historical (1995). A more recent occurrence (2017) was recorded with iNaturalist as occurring approximately 1.0 mile from the BSA. Additionally, there is designated critical habitat for the species 6 miles south of the BSA (CDFW 2025). Wet-season protocol-level large branchiopod surveys were completed in 2023/2024 in which no <i>Lepidurus</i> species were identified. Dry-season sampling yielded cysts belonging to the <i>Branchinecta</i> genus, and no <i>Lepidurus</i> species (Helm Biological Consulting 2024a and 2024b). Due to the negative findings of the species during protocol wet and dry-season sampling the species is not expected to occur.
<i>Linderiella occidentalis</i> California linderiella	None/None G2G3/S2S3	Seasonal pools in unplowed grasslands with old alluvial soils underlain by hardpan or in sandstone depressions. Water in the pools has very low alkalinity, conductivity, and total dissolved solids.	Not Expected	Suitable undisturbed seasonal pools are not present. Ten CNDDDB occurrences have been recorded within 10-miles of the BSA, with the most recent occurrence approximately 6.4 miles east (2003, CDFW 2025). All occurrences are historical.
<i>Saldula usingeri</i> Wilbur Springs shorebug	None/None G2/S2	Requires springs/creeks with high concentrations of Na, Cl, and Li. Found only on wet substrate of spring outflows.	Not Expected	Suitable springs and creeks are not present. One CNDDDB occurrence has been recorded within 10-miles of the BSA, approximately 9.5 miles southwest ([year unknown], CDFW 2025).
Amphibians				
<i>Ambystoma californiense pop. 1</i> California tiger salamander - Central California DPS	FT/ST G2G3T3/S3 WL	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	Suitable seasonal wetlands that maintain a 12-week hydroperiod are not present within the northern BSA. The southern BSA is highly disturbed by human activity as it is predominantly active agriculture. Additionally, significant movement barriers are present within and around the BSA. Several CNDDDB occurrences have been recorded within 10 miles of the BSA, with the closest occurrence approximately 6.2 miles south, south of Interstate 80. This occurrence is historical (1991). Additionally, there is designated critical habitat for the species 8.6 miles southeast of the site (CDFW 2025).
<i>Rana boylei pop. 1</i> foothill yellow-legged frog - north coast DPS	None/None G3T4/S4 SSC	Northern Coast Ranges north of San Francisco Bay Estuary, Klamath Mountains, and Cascade Range, including watershed subbasins (HU 8) Lower Pit, Battle Creek, Thomes Creek, and Big Chico Creek in Lassen, Shasta, Tehama, and Butte Counties. Partly shaded shallow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying and at least 15 weeks to attain metamorphosis.	Not Expected	No suitable rocky-substrate stream habitat is present and the seasonal wetlands on site do not hold water long enough to support this species. Six CNDDDB occurrences have been recorded within 10 miles of the BSA, with the closest occurrence approximately 3.4 miles south. This occurrence is historical (1912; CDFW 2025).
<i>Spea hammondi</i> western spadefoot	FPT/None G2G3/S3S4 SSC	Occurs primarily in grassland habitats but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	Not Expected	Marginally suitable grassland habitat present, though no vernal pool habitat is present. Though seasonal wetlands are present, these features do not hold water long enough to support this species. No aquatic amphibians (including western spadefoot) were observed during protocol-level large branchiopod surveys conducted in the pools by Helm Consulting in 2023/2024 in the northern BSA and 2025/2026 in the southern BSA. No CNDDDB or iNaturalist occurrences have been recorded within 10 miles of the BSA (CDFW 2025).

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Biological Study Area	Habitat Suitability/Observations
Reptiles				
<i>Actinemys marmorata</i> northwestern pond turtle	FPT/None G2/SNR SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 feet elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying. Occurs in northern California, south along the Sierra Nevada Mountains and the Coast Range down to Monterey and Kern Counties.	Not Expected	Suitable aquatic and nesting habitat is not present within the Project area. Though there are irrigation ditches within the BSA, only Agricultural Ditch 1 holds water regularly but does not contain any aquatic vegetation for basking. The orchard and barren areas within the southern BSA are also not considered to be suitable habitat for this species as they do not provide enough ground cover for this species to use. The man-made pond to the west of the northern BSA may contain some aquatic vegetation but is likely not dense enough to provide protection for this species, and there are likely no basking sites available at this pond for this species to use. The pond to the north of the northern BSA does contain dense vegetation (<i>Typha</i> spp.) and is near basking sites for this species to use, however, nearby grassy open fields within and in the vicinity of the BSA are heavily disturbed by agricultural activities, and would likely deter this species from laying eggs in the BSA. Twenty CNDDDB occurrences have been recorded within 10 miles of the BSA, with the closest approximately 1.1 miles southwest (CDFW 2025).
<i>Thamnophis gigas</i> giant gartersnake	FT/ST G2/S2	Prefers freshwater marsh and low gradient streams. Adapted to drainage canals and irrigation ditches. This is the most aquatic of the garter snakes in California.	Not Expected	No freshwater marshes or low gradient stream habitat are present within the Project area. Though irrigation ditches are present outside of the Project area, only Agricultural Ditch 1 would provide the aquatic habitat needed for this species. No CNDDDB occurrence have been recorded within 10 miles of the BSA (CDFW 2025). The closest iNaturalist occurrence was recorded approximately 9 miles northeast of the BSA in 2004 (iNaturalist 2025).
Birds				
<i>Agelaius tricolor</i> tricolored blackbird	None/ST G1G2/S2 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 km of the colony.	Low Potential (foraging); Not Expected (nesting)	Open water and foraging habitat present, though no nesting substrate is present within the BSA. Nine CNDDDB occurrences have been recorded within 10 miles of the BSA, with the closest occurrence approximately 5.5 miles southeast (CDFW 2025). The species was determined to have a low potential to occur in the BSA for foraging; however, nesting habitat for the species is absent.
<i>Ammodramus savannarum</i> grasshopper sparrow	None/None G5/S3 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.	Not Expected	Marginally suitable grassland habitat is present, yet the grassland on site is mostly non-native and is highly disturbed. One CNDDDB occurrence was recorded within 10 miles of the BSA, approximately 6.4 miles southeast (CDFW 2025). Additionally, the species has not been documented in eBird (2025) within 10 miles of the BSA since 2018.
<i>Athene cucularia</i> burrowing owl	None/None G4/S2 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.	Low Potential (foraging, nesting)	Suitable dry perennial grasslands are present, yet there are few suitable small mammal burrows present. Several CNDDDB occurrences have been recorded within 10 miles of the BSA, with the closest approximately 1.4 miles southwest (CDFW 2025). This site does contain marginally suitable habitat for burrowing owls after mowing events when the grass is much shorter (i.e., 2-3 inches tall). Some small mammal burrows were observed on site, but are not of sufficient size for burrowing owl and no sign was observed. Therefore, this species was determined to have a low potential to occur within the BSA. This species was not observed during the 2025 focused surveys.
<i>Ardea alba</i> great egret	None/None G5/S4	Colonial nester in large trees. Rookery sites located near marshes, tide-flats, irrigated pastures, and margins of rivers and lakes.	Not Expected	Irrigated pastures are present within the agricultural fields south of the BSA, though no suitable foraging habitat or nesting trees are present within the BSA. This species may transient the area, but is not expected to forage or nest within the BSA. One CNDDDB occurrence has been recorded within 10-miles of the BSA, approximately 9.1 miles southeast. This occurrence is historical (1990, CDFW 2025). Several iNaturalist occurrences have been recorded 1.5 miles southwest of the BSA, primarily along a marsh south of Vaca Valley Parkway (iNaturalist 2025).
<i>Buteo swainsoni</i> Swainson's hawk	None/ST G5/S4	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	Present (foraging); Low Potential (nesting)	Suitable scattered trees within the survey buffer are present. Foraging habitat is present within the northern BSA, is minimal in the eastern portion of the southern BSA outside the limits of disturbance, and in the immediate vicinity of the site. Several CNDDDB nest occurrences have been recorded within 10 miles of the BSA, with the closest occurrence approximately 0.25 mile west of the site (CDFW 2025). This species was observed flying overhead during multiple field surveys.
<i>Charadrius montanus</i> mountain plover	None/None G3/S2 SSC	Short grasslands, freshly plowed fields, newly sprouting grain fields, and sometimes sod farms. Short vegetation, bare ground, and flat topography. Prefers grazed areas and areas with burrowing rodents.	Not Expected	Grassland habitat occurs in the BSA; however, the site does not provide optimal foraging or nesting habitat. No CNDDDB occurrences have been recorded within 10 miles of the BSA (CDFW 2025). Additionally, no documented occurrences of the species were documented with eBird (2025) within 10 miles of the BSA.
<i>Circus hudsonius</i> northern harrier	None/None G5/S3 SSC	Coastal salt and freshwater marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain cienagas. Nests on the ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.	Moderate Potential (Foraging); Not Expected (Nesting)	No salt and freshwater marsh habitat present; however, grassland habitat is present. Two CNDDDB occurrences were recorded within 10 miles of the BSA, with the closest occurrence approximately 4.8 miles south (CDFW 2025). The species was not observed during field visits to the BSA. However, several occurrences of the species were documented in eBird (2025) within the nearby vicinity of the BSA. It was determined that the species has a moderate potential for foraging in the norther BSA and no potential for nesting.

Appendix DR BIO-3

Red-Line Revisions: Special-Status Species Evaluation Table

Special-Status Species Evaluation Table

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Biological Study Area	Habitat Suitability/Observations
Plants and Lichens				
<i>Arctostaphylos manzanita</i> ssp. <i>laevigata</i> Contra Costa manzanita	None/None G5T2/S2 1B.2	Perennial evergreen shrub. Chaparral. Rocky slopes. Elevations: 1410-3610 feet (430-1100 meters). Blooms Jan-Mar.	Not Expected	The BSA is outside the elevation range for the species. No CNDDB occurrences have been recorded within 10 miles of the BSA (CDFW 2025). This species was not observed during the 2023 rare plant survey.
<i>Astragalus tener</i> var. <i>ferrisiae</i> Ferris' milk-vetch	None/None G2T1/S1 1B.1	Annual herb. Meadows and seeps, valley and foothill grassland. Subalkaline flats on overflow land in the Central Valley; usually seen in dry, adobe soil. Elevations: 5-245 feet (2-75 meters). Blooms Apr-May.	Not Expected	While <u>non-native annual</u> grassland habitat is present, <u>valley and foothill grassland, subalkaline flats on overflow land, dry adobe soil, and meadows and seeps</u> are not present within the BSA. No CNDDB occurrences have been recorded within 10 miles of the BSA (CDFW 2025). Jepson records approximately 6.4 miles northeast of site (Jepson eFlora 2025). This species was not observed during the 2023 rare plant survey <u>or during other surveys completed within the BSA throughout 2024 or 2025 that were within the blooming period for this species (April- May).</u>
<i>Astragalus tener</i> var. <i>tener</i> alkali milk-vetch	None/None G2T1/S1 1B.2	Annual herb. Playas, valley and foothill grassland, vernal pools. Alkaline. Elevations: 5-195 feet (1-60 meters). Blooms Mar-Jun.	Not Expected Low Potential (Northern BSA) Not Expected (Southern BSA)	No suitable playas, <u>valley and/or foothill grassland, vernal pools or alkaline habitat</u> is present within BSA. <u>Non-native grassland and wetlands occur within the northern BSA where this species may occur, though the soil is likely not preferable for this species. Additionally, the grassland area within the northern BSA is routinely mowed and has a recent history of herbicide usage, which reduces the quality of grassland habitat that is available for this species. Due to the presence of agriculture and high levels of human disturbance including but not limited to possible use of herbicides, this species is not expected to occur in the southern BSA.</u> Eighteen CNDDB occurrences within 10 miles of the BSA. The closest CNDDB occurrence is approximately 4.6 miles southwest of the site, though this occurrence is historical (1896; CDFW 2025). <u>There are several recorded occurrences on iNaturalist within 10-miles of the BSA, with the closest occurrence approximately 2 miles southwest of the site (iNaturalist 2026).</u> This species was not observed during the 2023 rare plant survey <u>or during other surveys completed within the BSA throughout 2024 or 2025 that were within the blooming period for this species (March - June).</u>
<i>Atriplex cordulata</i> var. <i>cordulata</i> heartscale	None/None G3T2/S2 1B.2	Annual herb. Chenopod scrub, meadows and seeps, valley and foothill grassland, wetlands. Alkaline (sometimes). Elevations: 0-1835 feet (0-560 meters). Blooms Apr-Oct.	Not Expected	No suitable chenopod scrub, or meadows and seeps, <u>or valley and foothill grassland are</u> present within the BSA. Marginally <u>suitable non-native annual</u> grassland habitat and seasonal wetlands are present <u>in the northern BSA where this species has a low potential to occur. The grassland area within the northern BSA is routinely mowed and has a recent history of herbicide usage, which reduces the quality of grassland habitat that is available for this species. Due to the presence of agriculture and high levels of human disturbance including but not limited to possible use of herbicides, this species is not expected to occur in the southern BSA.</u> Three CNDDB occurrences have been recorded within 10 miles of the BSA with the closest occurrence approximately 4.6 miles southwest of the site. All CNDDB occurrences are historical (1892, 1994, and 2003; CDFW 2025). <u>Jepson records approximately 5 miles southwest of the BSA, however, this record is historical (1887, Jepson eFlora 2026).</u> No iNaturalist occurrences were recorded within 10 miles of the BSA (iNaturalist 2025). This species was not observed during the 2023 rare plant survey <u>or during other surveys completed within the BSA throughout 2024 or 2025 that were within the blooming period for this species (April - October).</u>
<i>Atriplex depressa</i> brittlescale	None/None G2/S2 1B.2	Annual herb. Chenopod scrub, meadows and seeps, playas, valley and foothill grassland, vernal pools, wetlands. Alkaline, clay soils. Elevations: 5-1050 feet (1-320 meters). Blooms Apr-Oct.	Low Potential (Northern BSA) Not Expected (Southern BSA) Not Expected	No suitable chenopod scrub, or meadows and seeps, <u>valley/foothill grassland, or vernal pools are present within the BSA, present on site.</u> Marginally suitable <u>non-native annual</u> grassland habitat and seasonal wetlands are present within the <u>northern BSA where this species has a low potential to occur. The grassland area within the northern BSA is routinely mowed and has a recent history of herbicide usage, which reduces the quality of grassland habitat that is available for this species. Due to the presence of agriculture and high levels of human disturbance including but not limited to possible use of herbicides, this species is not expected to occur in the southern BSA.</u> Two CNDDB occurrences have been recorded within 10 miles of the BSA, with the closest occurrence approximately 7.8 miles south. Both CNDDB occurrences are historical (2002 and 1986; CDFW 2025). Jepson records approximately 8.3 miles southwest of site (Jepson eFlora 2025). <u>There are four recorded occurrences on iNaturalist within 10-miles of the BSA, with the closest occurrence approximately 2.5 miles southwest of the site (iNaturalist 2026).</u> No iNaturalist occurrences were recorded within 10 miles of the BSA (iNaturalist 2025). This This species was not observed during the 2023 rare plant survey <u>or during other surveys completed within the BSA throughout 2024 or 2025 that were within the blooming period for this species (April - October).</u>
<i>Atriplex persistens</i> vernal pool smallscale	None/None G2/S2 1B.2	Annual herb. Vernal pools, wetlands. Alkaline vernal pools, clay loam soils. Elevations: 35-375 feet (10-115 meters). Blooms Jun-Oct.	Not Expected	No suitable alkaline vernal pool habitat is present; however, seasonal wetlands and clay loam soils are present. No CNDDB occurrences have been recorded within 10 miles of the BSA (CDFW 2025). Jepson records approximately 9.8 miles southeast of site (Jepson eFlora 2025). This species was not observed during the 2023 rare plant survey.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Biological Study Area	Habitat Suitability/Observations
<i>Centromadia parryi</i> ssp. <i>parryi</i> pappose tarplant	None/None G3T2/S2 1B.2	Annual herb. Chaparral, coastal prairie, marshes and swamps, meadows and seeps, seasonal wetlands, valley and foothill grassland. Alkaline (often). Elevations: 0-1380 feet (0-420 meters). Blooms May-Nov.	Not Expected	<u>No suitable chaparral, coastal prairie, marshes or swamps, meadows and seeps, valley and foothill grassland or alkaline soils are present within the BSA.</u> Marginally suitable grassland habitat and seasonal wetlands are present, <u>though the soil is likely not suitable for this species.</u> <u>The grassland area within the northern BSA is routinely mowed and has a recent history of herbicide usage, which reduces the quality of grassland habitat that is available for this species.</u> There are four CNDDDB occurrences within 10 miles of the BSA with the closest occurrence is approximately 6.3 miles southeast (CDFW 2025). <u>Though most of the positive identifications for the pappose tarplant on CDNNB were observed during the last few months of this species' blooming period, one positive identification was made during the month of April (April 25, 2005), which is outside of this species' blooming period.</u> Jepson records approximately 6.6 miles south of site (Jepson eFlora 2025). This species was not observed during the <u>April 2023 rare plant survey or during other surveys completed within the BSA throughout 2024 or 2025 that were within the blooming period for this species (May – November).</u>
<i>Chloropyron molle</i> ssp. <i>hispidum</i> hispid salty bird's-beak	None/None G2T1/S1 1B.1	Annual herb (hemi-parasitic). Meadows and seeps, playas, vernal pools, valley and foothill grassland. Alkaline. Elevations: 5-510 feet (1-155 meters). Blooms Jun-Sep.	Not Expected	While grassland habitat is present, suitable meadows and seeps, playas, vernal pools, <u>valley/foothill grassland,</u> and alkaline habitats are not present. <u>Though there is non-native grassland within the BSA, alkaline conditions are absent.</u> <u>The grassland area within the northern BSA is routinely mowed and has a recent history of herbicide usage, which reduces the quality of grassland habitat that is available for this species.</u> <u>The remaining grassland within the site is also likely treated with herbicides.</u> No CNDDDB occurrences have been recorded within 10 miles of the BSA (CDFW 2025). <u>The closest CNDDDB occurrence recorded is approximately 11 miles southeast of the BSA and was recorded in 2010 (CDFW 2026).</u> <u>There are two iNaturalist occurrences recorded within 10 miles of the BSA, with the closest occurrence recorded approximately 6 miles south.</u> This species was not observed during the 2023 rare plant survey <u>or during other surveys completed within the BSA throughout 2024 or 2025 that were within the blooming period for this species (June – September).</u>
<i>Cicuta maculata</i> var. <i>bolanderi</i> Bolander's water-hemlock	None/None G5T4T5/S2? 2B.1	Perennial herb. Marshes and swamps. In fresh or brackish water. Elevations: 0-655 feet (0-200 meters). Blooms Jul-Sep.	Not Expected	No suitable marsh or swamp habitat is present within the site. No CNDDDB occurrences have been recorded within 10 miles of the BSA (CDFW 2025). This species was not observed during the 2023 rare plant survey.
<i>Delphinium recurvatum</i> recurved larkspur	None/None G2?/S2 1B.2	Perennial herb. Chenopod scrub, cismontane woodland, valley and foothill grassland. Alkaline. Elevations: 10-2590 feet (3-790 meters). Blooms Mar-Jun.	Not Expected	While <u>non-native annual</u> grassland habitat is present in the BSA, chenopod scrub, cismontane woodland habitats, <u>foothill grassland</u> and alkaline conditions are not present. <u>The grassland area within the site is routinely mowed and has a recent history of herbicide usage, which reduces the quality of grassland habitat that is available for this species.</u> One CNDDDB occurrence was recorded within 10 miles of the BSA, approximately 2.3 miles west <u>of the BSA though this occurrence is historical (1940; CDFW 2025).</u> <u>No iNaturalist occurrences were recorded within 10 miles of the BSA (iNaturalist 2026).</u> Three Jepson records exist within 3 miles of the BSA (Jepson eFlora 2025). This species was not observed during the 2023 rare plant survey <u>or during other surveys completed within the BSA throughout 2024 or 2025 that were within the blooming period for this species (March – June).</u>
<i>Downingia pusilla</i> dwarf downingia	None/None GU/S2 2B.2	Annual herb. Valley and foothill grassland, vernal pools. Vernal lake and pool margins with a variety of associates. In several types of vernal pools. Elevations: 5-1460 feet (1-445 meters). Blooms Mar-May.	Not Expected	While <u>non-native annual</u> grassland habitat is present in the BSA, vernal pools or vernal lakes are not present. <u>The grassland area within the site is routinely mowed and has a recent history of herbicide usage, which reduces the quality of grassland habitat that is available for this species.</u> Fourteen CNDDDB occurrences have been recorded within 10 miles of the BSA with the closest occurrence approximately 1.3 miles west of the site. This record is historical (1998; CDFW 2025). <u>There are several iNaturalist occurrences that have been recorded within 10-miles of the BSA, with the closest occurrence approximately 1.2 miles south of the BSA (iNaturalist 2026).</u> This species was not observed during the 2023 rare plant survey <u>or during other surveys completed within the BSA throughout 2024 or 2025 that were within the blooming period for this species (March – May).</u>
<i>Extriplex joaquinana</i> San Joaquin spearscale	None/None G2/S2 1B.2	Annual herb. Chenopod scrub, meadows and seeps, playas, valley and foothill grassland. In seasonal alkali wetlands or alkali sink scrub with <i>Distichlis spicata</i> , <i>Frankenia</i> , etc. Elevations: 5-2740 feet (1-835 meters). Blooms Apr-Oct.	Not Expected	While grassland habitat is present, chenopod scrub, meadows and seeps, playas and alkaline habitat is not present. <u>The grassland area within the site is routinely mowed and has a recent history of herbicide usage, which reduces the quality of grassland habitat that is available for this species.</u> Three CNDDDB occurrences have been recorded within 10 miles of the BSA, with the closest occurrence approximately 4.6 miles southwest of the site. This occurrence is historical (1891; CDFW 2025). <u>There is one iNaturalist occurrence that was recorded within 10-miles of the BSA, approximately 10-miles southeast of the BSA.</u> This species was not observed during the 2023 rare plant survey <u>or during other surveys that were completed within the BSA throughout 2024 or 2025 that were within the blooming period for this species (April through October).</u>

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Biological Study Area	Habitat Suitability/Observations
<i>Fritillaria liliacea</i> fragrant fritillary	None/None G2/S2 1B.2	Perennial bulbiferous herb. Cismontane woodland, coastal prairie, coastal scrub, valley and foothill grassland. Often on serpentine; various soils reported though usually on clay, in grassland. Elevations: 10-1345 feet (3-410 meters). Blooms Feb-Apr.	Not Expected Low Potential (Northern BSA) Not Expected (Southern BSA)	While grassland habitat is present, serpentine soils, cismontane woodland, coastal prairie, and coastal prairie habitats are not present. The grassland area within the northern BSA is routinely mowed and has a recent history of herbicide usage, which reduces the quality of grassland habitat that is available for this species. Due to the presence of agriculture and high levels of human disturbance including but not limited to possible use of herbicides, this species is not expected to occur in the southern BSA. There are no CNDDDB occurrences within 10 miles of the BSA (CDFW 2025). Jepson records approximately 10 miles southeast (Jepson eFlora 2025). There are several iNaturalist occurrences that have been recorded within 10-miles of the BSA (iNaturalist 2026), with the closest occurrence less than 0.25-miles from the BSA (iNaturalist 2026). This species was not observed during the 2023 rare plant survey or during other surveys that were completed within the BSA throughout 2024 or 2025 that were within the blooming period for this species (February through April). -
<i>Fritillaria pluriflora</i> adobe-lily	None/None G2G3/S2S3 1B.2	Perennial bulbiferous herb. Chaparral, cismontane woodland, valley and foothill grassland. Usually on clay soils; sometimes serpentine. Elevations: 195-2315 feet (60-705 meters). Blooms Feb-Apr.	Not Expected	The BSA is outside the elevation range of the species. There are no CNDDDB occurrences within 10 miles of the BSA (CDFW 2025). This species was not observed during the 2023 rare plant survey.
<i>Gratiola heterosepala</i> Boggs Lake hedge-hyssop	None/SE G2/S2 1B.2	Annual herb. Marshes and swamps, vernal pools. Clay soils; usually in vernal pools, sometimes on lake margins. 4-. Elevations: 35-7790 feet (10-2375 meters). Blooms Apr-Aug.	Not Expected	Marshes, swamps, and vernal pool habitat is not present. There are two CNDDDB occurrences within 10 miles of the BSA, with the closest occurrence recorded approximately 8.4 miles southwest. This record is historical (1991; CDFW 2025). Jepson records approximately 10 miles southeast of site (Jepson eFlora 2025). This species was not observed during the 2023 rare plant survey.
<i>Hesperolinon breweri</i> Brewer's western flax	None/None G2/S2 1B.2	Annual herb. Chaparral, cismontane woodland, valley and foothill grassland. Often in rocky serpentine soil in serpentine chaparral and serpentine grassland. Elevations: 100-3100 feet (30-945 meters). Blooms May-Jul.	Not Expected	No chapparral or cismontane woodlands are present. Serpentine soil and habitat is not present. Two CNDDDB occurrences have been recorded within 10 miles of the BSA, with the closest occurrence approximately 6.75 miles west (CDFW 2025). This record is historical (1892). Jepson records approximately 5.4 miles southwest of site (Jepson eFlora 2025). This species was not observed during the 2023 rare plant survey.
<i>Hibiscus lasiocarpus</i> var. <i>occidentalis</i> woolly rose-mallow	None/None G5T3/S3 1B.2	Perennial rhizomatous herb (emergent). Marshes and swamps. Moist, freshwater-soaked river banks and low peat islands in sloughs; can also occur on riprap and levees. In California, known from the delta watershed. Elevations: 0-395 feet (0-120 meters). Blooms Jun-Sep.	Not Expected	No freshwater marsh or swamp habitat is present. No CNDDDB occurrences have been recorded within 10 miles of the BSA (CDFW 2025). This species was not observed during the 2023 rare plant survey.
<i>Isocoma arguta</i> Carquinez goldenbush	None/None G1/S1 1B.1	Perennial shrub. Valley and foothill grassland. Alkaline soils, flats, lower hills. On low benches near drainages and on tops and sides of mounds in swale habitat. Elevations: 5-65 feet (1-20 meters). Blooms Aug-Dec.	Not Expected	While grassland habitat is present, no suitable alkaline habitat is present, which this species prefers. The grassland area within the northern BSA is routinely mowed and has a recent history of herbicide usage, which reduces the quality of grassland habitat that is available for this species. Due to the presence of agriculture and high levels of human disturbance including but not limited to possible use of herbicides, this species is not expected to occur in the southern BSA. Three CNDDDB occurrences have been recorded within 10 miles of the BSA, with the closest occurrence approximately 6.9 miles southeast. This occurrence is historical (1959; CDFW 2025). There are several iNaturalist occurrences that have been recorded within 10-miles of the BSA (iNaturalist 2026), with the closest occurrence less than 0.25-miles from the BSA (iNaturalist 2026). Jepson records approximately 5.5 miles east of site (Jepson eFlora 2025). This species was not observed during the 2023 rare plant survey or during other surveys that were completed within the BSA throughout 2024 or 2025 that were within the blooming period for this species (August through December). -
<i>Lasthenia chrysantha</i> alkali-sink goldfields	None/None G2/S2 1B.1	Annual herb. Vernal pools. Alkaline. Elevations: 0-655 feet (0-200 meters). Blooms Feb-Apr.	Not Expected	No vernal pool or alkaline habitat is present. One CNDDDB occurrence is recorded within 10 miles of the BSA, approximately 9.6 miles southeast. This occurrence date is unknown (CDFW 2025). This species was not observed during the 2023 rare plant survey.
<i>Lasthenia conjugens</i> Contra Costa goldfields	FE/None G1/S1 1B.1	Annual herb. Cismontane woodland, playas, valley and foothill grassland, vernal pools. Vernal pools, swales, low depressions, in open grassy areas. Elevations: 0-1540 feet (0-470 meters). Blooms Mar-Jun.	Not Expected	Grassland habitat and seasonal wetland depressions occur in the BSA and may provide suitable habitat. Fifty CNDDDB occurrences are recorded within 10 miles of the BSA, with the closest occurrence approximately 4.6 miles southwest. This record is historical (1918). Additionally, there is designated critical habitat for the species 5.2 miles south of the site (CDFW 2025). This species, however, was not observed during the 2023 rare plant survey.
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i> Coulter's goldfields	None/None G4T2/S2 1B.1	Annual herb. Marshes and swamps, playas, vernal pools. Usually found on alkaline soils in playas, sinks, and grasslands. 1-. Elevations: 5-4005 feet (1-1220 meters). Blooms Feb-Jun.	Not Expected	No suitable marsh or swamp habitat or alkaline soils are present. One CNDDDB occurrence was recorded within 10 miles of the BSA, approximately 9.6 miles south (CDFW 2025). This species was not observed during the 2023 rare plant survey.
<i>Lathyrus jepsonii</i> var. <i>jepsonii</i> Delta tule pea	None/None G5T2/S2 1B.2	Perennial herb. Marshes and swamps. In freshwater and brackish marshes. Often found with <i>Typha</i> , <i>Aster lentus</i> , <i>Rosa californica</i> , <i>Juncus</i> spp., <i>Scirpus</i> , etc. Usually on marsh and slough edges. Elevations: 0-15 feet (0-5 meters). Blooms May-Jul (Aug-Sep).	Not Expected	No suitable marsh habitat is present. No CNDDDB occurrences have been recorded within 10 miles of the BSA (CDFW 2025). This species was not observed during the 2023 rare plant survey.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Biological Study Area	Habitat Suitability/Observations
<i>Layia septentrionalis</i> Colusa layia	None/None G2/S2 1B.2	Annual herb. Chaparral, cismontane woodland, valley and foothill grassland. Scattered colonies in fields and grassy slopes in sandy or serpentine soil. Elevations: 330-3595 feet (100-1095 meters). Blooms Apr-May.	Not Expected	The BSA is outside the elevation range of the species. No CNDDDB occurrences have been recorded within 10 miles of the BSA (CDFW 2025). This species was not observed during the 2023 rare plant survey.
<i>Legenere limosa</i> legenere	None/None G2/S2 1B.1	Annual herb. Vernal pools. In beds of vernal pools. 1-. Elevations: 5-2885 feet (1-880 meters). Blooms Apr-Jun.	Not Expected	No suitable vernal pool habitat present. Three CNDDDB occurrences have been recorded within 10 miles of the BSA, with the closest occurrence approximately 2.4 miles southeast. This occurrence is historical (1909; CDFW 2025). This species was not observed during the 2023 rare plant survey.
<i>Lepidium latipes</i> var. <i>heckardii</i> Heckard's pepper-grass	None/None G4T1/S1 1B.2	Annual herb. Valley and foothill grassland. Grassland, and sometimes vernal pool edges. Alkaline soils. Elevations: 5-655 feet (2-200 meters). Blooms Mar-May.	Not Expected	While grassland habitat is present, vernal pools and alkaline soil/flats are not present, <u>which this species prefers. The grassland area within the northern BSA is routinely mowed and has a recent history of herbicide usage, which reduces the quality of grassland habitat that is available for this species. Due to the presence of agriculture and high levels of human disturbance including but not limited to possible use of herbicides, this species is not expected to occur in the southern BSA. There are two iNaturalist occurrences recorded within 10-miles of the BSA, with the closest occurring approximately 7.5 miles south (iNaturalist 2026).</u> No CNDDDB occurrences have been recorded within 10 miles of the BSA (CDFW 2025). This species was not observed during the 2023 rare plant survey <u>or during other surveys that were completed within the BSA throughout 2024 or 2025 that were within the blooming period for this species (March through May).</u>
<i>Leptosiphon jepsonii</i> Jepson's leptosiphon	None/None G2G3/S2S3 1B.2	Annual herb. Chaparral, cismontane woodland, valley and foothill grassland. Open to partially shaded grassy slopes. On volcanics or the periphery of serpentine substrates. Elevations: 330-1640 feet (100-500 meters). Blooms Mar-May.	Not Expected	The BSA is outside the elevation range of the species and volcanic and serpentine substrates are absent. One CNDDDB occurrence was recorded within 10 miles of the BSA, approximately 9.9 miles southeast. This occurrence is historical (1991, CDFW 2025). This species was not observed during the 2023 rare plant survey.
<i>Lilaeopsis masonii</i> Mason's lilaeopsis	None/SR G2/S2 1B.1	Perennial rhizomatous herb. Marshes and swamps, riparian scrub. Tidal zones, in muddy or silty soil formed through river deposition or riverbank erosion. In brackish or freshwater. Elevations: 0-35 feet (0-10 meters). Blooms Apr-Nov.	Not Expected	No suitable marsh and swamp habitat within the tidal zone or exhibiting silty soils is present on site. No CNDDDB occurrences recorded within 10 miles of the BSA (CDFW 2025). This species was not observed during the 2023 rare plant survey.
<i>Limosella australis</i> Delta mudwort	None/None G4G5/S2 2B.1	Perennial stoloniferous herb. Marshes and swamps, riparian scrub. Usually on mud banks of the Delta in marshy or scrubby riparian associations; often with <i>Lilaeopsis masonii</i> . Elevations: 0-10 feet (0-3 meters). Blooms May-Aug.	Not Expected	No suitable marsh, swamp, or riparian scrub habitat is present within the site. No CNDDDB occurrences have been recorded within 10 miles of the BSA (CDFW 2025). Jepson records approximately 10 miles southeast of site (Jepson eFlora 2025). This species was not observed during the 2023 rare plant survey.
<i>Navarretia leucocephala</i> ssp. <i>bakeri</i> Baker's navarretia	None/None G4T2/S2 1B.1	Annual herb. Cismontane woodland, lower montane coniferous forest, meadows and seeps, valley and foothill grassland, vernal pools. Vernal pools and swales; adobe or alkaline soils. Elevations: 15-5710 feet (5-1740 meters). Blooms Apr-Jul.	Low Potential	Grassland habitat is present within the BSA; however, alkaline or adobe soils, cismontane woodland, lower montane coniferous forest, meadows and seeps and vernal pools are not present. Eleven CNDDDB occurrences have been recorded within 10 miles of the BSA, with the closest occurrence approximately 0.75 mile southwest (CDFW 2025). iNaturalist has multiple recorded occurrences within 10 miles of the BSA, with the closest occurrence along Quinn Road just south of the Vaca-Dixon substation, though this record has not been confirmed (2018; iNaturalist 2025). This species was not observed within the northern BSA during the 2023 rare plant survey. Due to the proximity of the previously documented occurrence, it was determined that this species has a low potential for occurrence.
<i>Neostapfia colusana</i> Colusa grass	FT/SE G1/S1 1B.1	Annual herb. Vernal pools. Usually in the bottoms of large, or deep vernal pools; adobe soils. Elevations: 15-655 feet (5-200 meters). Blooms May-Aug.	Not Expected	No vernal pool habitat or adobe soils are present. No CNDDDB occurrences have been recorded within 10 miles of the BSA (CDFW 2025). Jepson records approximately 10 miles southeast of site (Jepson eFlora 2025). This species was not observed during the 2023 rare plant survey.
<i>Orcuttia inaequalis</i> San Joaquin Valley Orcutt grass	FT/SE G1/S1 1B.1	Annual herb. Vernal pools. Elevations: 35-2475 feet (10-755 meters). Blooms Apr-Sep.	Not Expected	No suitable vernal pool habitat present. Species is primarily documented in the San Joaquin region which is outside this Project Area region. One CNDDDB occurrence was recorded within 10 miles of the BSA, approximately 9.1 miles south (CDFW 2025). This species was not observed during the 2023 rare plant survey.
<i>Plagiobothrys hystriculus</i> bearded popcornflower	None/None G2/S2 1B.1	Annual herb. Valley and foothill grassland, vernal pools. Wet sites. Elevations: 0-900 feet (0-274 meters). Blooms Apr-May.	Low Potential	Grassland habitat is present within the northern BSA. Ten CNDDDB occurrences have been recorded within 10 miles of the BSA, with the closest occurrence approximately 1.5 miles northwest (CDFW 2025). This species was not observed during the 2023 rare plant survey. However, due to the proximity of the previously documented occurrence, the species may have a low potential for occurrence in the BSA.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Biological Study Area	Habitat Suitability/Observations
<i>Puccinellia simplex</i> California alkali grass	None/None G2/S2 1B.2	Annual herb. Chenopod scrub, meadows and seeps, valley and foothill grassland, vernal pools. Alkaline, vernal mesic. Sinks, flats, and lake margins. Elevations: 5-3050 feet (2-930 meters). Blooms Mar-May.	Not Expected	While grassland habitat is present, no suitable alkaline habitat is present within the site, <u>which this species prefers. This species is found growing in saline soils, which is absent from this site. The grassland area within the northern BSA is routinely mowed and has a recent history of herbicide usage, which reduces the quality of grassland habitat that is available for this species. Due to the presence of agriculture and high levels of human disturbance including but not limited to possible use of herbicides, this species is not expected to occur in the southern BSA. There are several iNaturalist occurrences that have been recorded within 10 miles of the site, though all occurrences are concentrated near the Travis Air Force base.</u> One CNDDDB occurrence was recorded within 10 miles of the BSA, approximately 9.4 miles southeast. This occurrence is historical (1963; CDFW 2025). This species was not observed during the 2023 rare plant survey <u>or during other surveys that were completed within the BSA throughout 2024 or 2025 that were within the blooming period for this species (March through May).</u>
<i>Sidalcea keckii</i> Keck's checkerbloom	FE/None G2/S2 1B.1	Annual herb. Cismontane woodland, valley and foothill grassland. Grassy slopes in blue oak woodland. On serpentine-derived, clay soils, at least sometimes. Elevations: 245-2135 feet (75-650 meters). Blooms Apr-May.	Not Expected	The BSA is outside the elevation range of the species. Four CNDDDB occurrences have been recorded within 10 miles of the BSA, with the closest occurrence approximately 2.8 miles north (CDFW 2025). This species was not observed during the 2023 rare plant survey.
<i>Spergularia macrotheca</i> var. <i>longistyla</i> long-styled sand-spurrey	None/None G5T2/S2 1B.2	Perennial herb. Marshes and swamps, meadows and seeps. Alkaline. Elevations: 0-835 feet (0-255 meters). Blooms Feb-May.	Not Expected	No marshes, swamps, meadows, or seeps occur in the BSA. No CNDDDB occurrences have been recorded within 10 miles of the BSA (CDFW 2025). This species was not observed during the 2023 rare plant survey.
<i>Stuckenia filiformis</i> ssp. <i>alpina</i> northern slender pondweed	None/None G5T5/S2S3 2B.2	Perennial rhizomatous herb (aquatic). Marshes and swamps. Shallow, clear water of lakes and drainage channels. Elevations: 985-7055 feet (300-2150 meters). Blooms May-Jul.	Not Expected	No suitable marsh and swamp habitat present within the site and the BSA is outside the elevation range of the species. No CNDDDB occurrences have been recorded within 10 miles of the BSA (CDFW 2025). Jepson records approximately 10 miles southeast of site (Jepson eFlora 2025). This species was not observed during the 2023 rare plant survey.
<i>Symphotrichum lentum</i> Suisun Marsh aster	None/None G2/S2 1B.2	Perennial rhizomatous herb. Marshes, swamps and wetlands. Most often seen along sloughs with <i>Phragmites</i> , <i>Scirpus</i> , blackberry, <i>Typha</i> , etc. Elevations: 0-10 feet (0-3 meters). Blooms May-Nov.	Not Expected	No marshes, swamps, meadows, or seeps occur in the BSA. One CNDDDB occurrence was recorded within 10 miles of the BSA, approximately 8.5 miles south. This occurrence is historical (1920; CDFW 2025). This species was not observed during the 2023 rare plant survey.
<i>Trifolium amoenum</i> two-fork clover	FE/None G1/S1 1B.1	Annual herb. Coastal bluff scrub, valley and foothill grassland. Sometimes on serpentine soil, open sunny sites, swales. Most recently cited on roadside and eroding cliff face. Elevations: 15-1360 feet (5-415 meters). Blooms Apr-Jun.	Not Expected	While grassland habitat is present, serpentine soil and coastal bluff scrub are not present. <u>The grassland area within the northern BSA is routinely mowed and has a recent history of herbicide usage, which reduces the quality of grassland habitat that is available for this species. A swale is present within the northern BSA, though this species was not identified in the swale during the rare plant survey that took place in the southern portion of the northern BSA or during other surveys that were completed within the BSA throughout 2024 or 2025 that were within the blooming period for this species (April through June). Due to the presence of agriculture and high levels of human disturbance including but not limited to possible use of herbicides, this species is not expected to occur in the southern BSA.</u> Three CNDDDB occurrences have been recorded within 10 miles, with the closest occurrence approximately 3.3 miles southeast of the BSA. <u>This occurrence is historical (1909; CDFW 2025). There are no iNaturalist occurrences recorded within 10-miles of the BSA (iNaturalist 2026). This occurrence is historical (1909; CDFW 2025). This species was not observed during the 2023 rare plant survey.</u>
<i>Trifolium hydrophilum</i> saline clover	None/None G2/S2 1B.2	Annual herb. Marshes and swamps, valley and foothill grassland, vernal pools. Mesic, alkaline sites. Elevations: 0-985 feet (0-300 meters). Blooms Apr-Jun.	Not Expected	No suitable marsh, swamp, vernal pool, or alkaline habitat are present. <u>Non-native annual grassland is present within the BSA, which is not preferable for this species as non-native species likely outcompete this species' ability to survive. Additionally, the grassland area within the northern BSA is routinely mowed and has a recent history of herbicide usage, which reduces the quality of grassland habitat that is available for this species. A swale is present within the northern BSA. Due to the presence of agriculture and high levels of human disturbance including but not limited to possible use of herbicides, this species is not expected to occur in the southern BSA.</u> Eight CNDDDB occurrences have been recorded within 10 miles of the BSA, with the closest occurrence approximately 6.6 miles southwest. This record is historical (1960; CDFW 2025). <u>There is one iNaturalist occurrence recorded within 10-miles of the BSA, though this occurrence is approximately 7.5 miles southwest (iNaturalist 2026).</u> Jepson records approximately 8 miles southeast of site (Jepson eFlora 2025). This species was not observed during the 2023 rare plant survey <u>or during other surveys that were completed within the BSA throughout 2024 or 2025 that were within the blooming period for this species (April through June).</u>

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Biological Study Area	Habitat Suitability/Observations
<i>Tuctoria mucronata</i> Crampton's tuctoria or Solano grass	FE/SE G1/S1 1B.1	Annual herb. Valley and foothill grassland, vernal pools. Clay bottoms of drying vernal pools and lakes in valley grassland. Elevations: 15-35 feet (5-10 meters). Blooms Apr-Aug.	Not Expected	While grassland habitat is present, vernal pools are present. <u>Non-native annual grassland is present within the BSA, which is not preferable for this species as non-native species likely outcompete this species' ability to survive. This species is often found growing in drought cracks, which are absent in the grassland areas/ Additionally, the grassland area within the northern BSA is routinely mowed and has a recent history of herbicide usage, which reduces the quality of grassland habitat that is available for this species. A swale is present within the northern BSA. Due to the presence of agriculture and high levels of human disturbance including but not limited to possible use of herbicides, this species is not expected to occur in the southern BSA.</u> No CNDDDB occurrences have been recorded within 10 miles of the BSA (CDFW 2025). Jepson records approximately 10 miles southeast of site (Jepson eFlora 2024). This species was not observed during the 2023 rare plant survey.
<i>Viburnum ellipticum</i> oval-leaved viburnum	None/None G4G5/S3 2B.3	Perennial deciduous shrub. Chaparral, cismontane woodland, lower montane coniferous forest. Elevations: 705-4595 feet (215-1400 meters). Blooms May-Jun.	Not Expected	The BSA is outside the elevation range of the species. One CNDDDB occurrence was recorded within 10 miles of the BSA, approximately 9.1 miles southwest (CDFW 2025). This species was not observed during the 2023 rare plant survey.
Animals				
Invertebrates				
<i>Andrena blennospermatis</i> Blennosperma vernal pool andrenid bee	None/None G2/S1	This bee is oligolectic on vernal pool Blennosperma. Bees nest in the uplands around vernal pools.	Not Expected	No suitable vernal pool habitat present. Two CNDDDB occurrences have been recorded within 10-miles of the BSA, with the closest occurrence approximately 7.5 miles southeast. This occurrence is historical (1900s [exact year unknown], CDFW 2025).
<i>Bombus crotchii</i> Crotch's bumble bee	None/SCE G2/S2	Coastal California east to the Sierra-Cascade crest and south into Mexico. Habitats include open grassland, shrublands, chaparral, desert margins, including Joshua tree and creosote scrub, and semi-urban settings. Food plant genera include <i>Antirrhinum</i> , <i>Amsinckia</i> , <i>Phacelia</i> , <i>Clarkia</i> , <i>Carduus</i> , <i>Dendromecon</i> , <i>Eschscholzia</i> , <i>Eriogonum</i> , and <i>Vicia</i> .	Low Potential (Northern BSA); Not Expected (Southern BSA)	Grassland habitat, small mammal burrows, and food genera associated with this species are present within the BSA. Two CNDDDB occurrences were recorded within 10 miles of the BSA, approximately 6.62 miles southwest (CDFW 2025). Additionally, the California Bumble Bee Atlas database documents three observations approximately 9 miles south of the BSA, with the most recent occurrence in 2023 (Xerces Society 2025). This species was not observed during the 2025 focused surveys in the southern BSA.
<i>Bombus occidentalis</i> western bumble bee	None/SCE G3/S1	Once common and widespread, this species has declined precipitously from central CA to southern B.C., perhaps from disease. Limited information regarding habitat requirements is known or available on this species; however, it is a known pollinator of a variety of blooming plants.	Not Expected	Two CNDDDB occurrences have been recorded within 10 miles of the BSA, with the closest approximately 3.5 miles southwest. This occurrence is historical (1913; CDFW 2025). Additionally, the California Bumble Bee Atlas database documents no active bumble bee occurrences within 80 miles of the BSA (Xerces Society 2025).
<i>Bombus pensylvanicus</i> American bumble bee	None/None G3G4/S2	Long-tongued; forages on a wide variety of flowers including vetches (<i>Vicia</i>), clovers (<i>Trifolium</i>), thistles (<i>Cirsium</i>), sunflowers (<i>Helianthus</i>), etc. Nests above ground under long grass or underground. Queens overwinter in rotten wood or underground.	Not Expected	Five CNDDDB occurrences have been recorded within 10-miles of the BSA, with the closest occurrence approximately 5-miles southwest. This occurrence is historical (1992, CDFW 2025). The California Bumble Bee Atlas database documents no active American bumble bee occurrences outside of the Los Angeles area (Xerces Society 2025).
<i>Branchinecta conservatio</i> Conservancy fairy shrimp	FE/None G2/S2	Endemic to the grasslands of the northern two-thirds of the Central Valley; found in large, turbid pools. Inhabit astatic pools located in swales formed by old, braided alluvium; filled by winter/spring rains, last until June.	Not Expected	Suitable habitat of astatic pools is not present. Several CNDDDB occurrences have been recorded within 10 miles of the BSA and there is critical habitat for the species 9.4 miles south of the site (CDFW 2025). Jepson prairie population of Conservancy fairy shrimp is fragmented from the Project area by development and agricultural cultivation.
<i>Branchinecta lynchi</i> vernal pool fairy shrimp	FT/None G3/S3	Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	High Potential (northern BSA); Not Expected (southern BSA)	Grasslands with seasonal wetland depressions are present within the northern BSA. Several CNDDDB occurrences have been recorded within 10 miles of the BSA, with the closest occurrence in the immediate vicinity of the site. Additionally, there is designated critical habitat for the species 6 miles south of the site (CDFW 2025). Wet and dry-season sampling protocols yielded cysts belonging to the <i>Branchinecta</i> genus within the northern BSA. None of the cysts could be identified at the species level (Helm Biological Consulting 2024a and 2024b). Low quality suitable habitat was identified in the southern BSA in 2025 during a habitat assessment conducted by Helm Biological Consulting (Helm Biological Consulting 2025), though dry-season sampling efforts completed in September 2025 yielded negative results. Due to the proximity of previously documented occurrences, potentially suitable habitat occurring within the northern BSA, and communications with the USFWS, this species was determined to have a high potential to occur in the northern BSA and is not expected to occur within the southern BSA.
<i>Branchinecta mesovallensis</i> midvalley fairy shrimp	None/None G2/S2S3	Vernal pools in the Central Valley.	Not Expected	No suitable vernal pool habitat present. Ten CNDDDB occurrences have been recorded within 10-miles of the BSA, with the closest occurrence approximately 5.5-miles southeast. This occurrence is historical (1994, CDFW 2025). This species was not observed during the wet- and dry-season large branchiopod surveys that were conducted within the BSA.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Biological Study Area	Habitat Suitability/Observations
<i>Danaus plexippus</i> monarch	FPT/None G4T1T2Q/S2	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.	Low Potential	A small patch of milkweed was observed in the western central portion of the site. No roost habitat present. No CNDDDB occurrences have been recorded within 10 miles of the BSA (CDFW 2025). The species may be present temporarily for foraging; however, due to the lack of overwintering roost habitat within the BSA, and lack of reported occurrences in the vicinity, this species was determined to have a low potential to occur for foraging only.
<i>Desmocerus californicus dimorphus</i> valley elderberry longhorn beetle	FT/None G3T3/S3	Occurs only in the Central Valley of California, in association with blue elderberry (<i>Sambucus mexicana</i>). Prefers to lay eggs in elderberries 2-8 inches in diameter; some preference shown for "stressed" elderberries.	Not Expected	Blue elderberry is not present on site. Seven CNDDDB occurrences have been recorded within 10 miles of the BSA, with the closest occurrence 5.3 miles southwest (CDFW 2025).
<i>Elaphrus viridis</i> Delta green ground beetle	FT/None G1/S1	Restricted to the margins of vernal pools in the grassland area between Jepson Prairie and Travis AFB. Prefers the sandy mud substrate where it slopes gently into the water, with low-growing vegetation, 25-100% cover.	Not Expected	No suitable vernal pool habitat present. Several CNDDDB occurrences have been recorded within 10 miles of the BSA, with the closest occurrence approximately 8 miles southeast. Additionally, there is designated critical habitat for the species 8.6 miles southeast of the site (CDFW 2025).
<i>Gonidea angulata</i> western ridged mussel	None/None G3/S2	Primarily creeks and rivers and less often lakes. Originally in most of state, now extirpated from Central and Southern California.	Not Expected	One CNDDDB occurrence has been recorded within 10-miles of the BSA, approximately 9 miles northwest (2009, CDFW 2025).
<i>Hydrochara rickseckeri</i> Ricksecker's water scavenger beetle	None/None G2?/S2?	Aquatic. Other habitat requirements unknown.	Not Expected	Three CNDDDB occurrences have been recorded within 10-miles of the BSA, with the closest occurrence approximately 8.5 miles southeast. This occurrence is historical (2005, CDFW 2025).
<i>Lepidurus packardii</i> vernal pool tadpole shrimp	FE/None G3/S3	Inhabits vernal pools and swales in the Sacramento Valley containing clear to highly turbid water. Pools commonly found in grass-bottomed swales of unplowed grasslands. Some pools are mud-bottomed and highly turbid.	Not Expected	Suitable grassland and seasonal wetlands are present within the BSA; however, vernal pools are not present. Several CNDDDB occurrences have been recorded within 10 miles of the BSA, with the closest approximately 2.6 miles southwest. This record is historical (1995). A more recent occurrence (2017) was recorded with iNaturalist as occurring approximately 1.0 mile from the BSA. Additionally, there is designated critical habitat for the species 6 miles south of the BSA (CDFW 2025). Wet-season protocol-level large branchiopod surveys were completed in 2023/2024 in which no <i>Lepidurus</i> species were identified. Dry-season sampling yielded cysts belonging to the <i>Branchinecta</i> genus, and no <i>Lepidurus</i> species (Helm Biological Consulting 2024a and 2024b). Due to the negative findings of the species during protocol wet and dry-season sampling the species is not expected to occur.
<i>Linderiella occidentalis</i> California linderiella	None/None G2G3/S2S3	Seasonal pools in unplowed grasslands with old alluvial soils underlain by hardpan or in sandstone depressions. Water in the pools has very low alkalinity, conductivity, and total dissolved solids.	Not Expected	Suitable undisturbed seasonal pools are not present. Ten CNDDDB occurrences have been recorded within 10-miles of the BSA, with the most recent occurrence approximately 6.4 miles east (2003, CDFW 2025). All occurrences are historical.
<i>Saldula usingeri</i> Wilbur Springs shorebug	None/None G2/S2	Requires springs/creeks with high concentrations of Na, Cl, and Li. Found only on wet substrate of spring outflows.	Not Expected	Suitable springs and creeks are not present. One CNDDDB occurrence has been recorded within 10-miles of the BSA, approximately 9.5 miles southwest ([year unknown], CDFW 2025).
Amphibians				
<i>Ambystoma californiense pop. 1</i> California tiger salamander - Central California DPS	FT/ST G2G3T3/S3 WL	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	Suitable seasonal wetlands that maintain a 12-week hydroperiod are not present within the northern BSA. The southern BSA is highly disturbed by human activity as it is predominantly active agriculture. Additionally, significant movement barriers are present within and around the BSA. Several CNDDDB occurrences have been recorded within 10 miles of the BSA, with the closest occurrence approximately 6.2 miles south, south of Interstate 80. This occurrence is historical (1991). Additionally, there is designated critical habitat for the species 8.6 miles southeast of the site (CDFW 2025).
<i>Rana boylei pop. 1</i> foothill yellow-legged frog - north coast DPS	None/None G3T4/S4 SSC	Northern Coast Ranges north of San Francisco Bay Estuary, Klamath Mountains, and Cascade Range, including watershed subbasins (HU 8) Lower Pit, Battle Creek, Thomes Creek, and Big Chico Creek in Lassen, Shasta, Tehama, and Butte Counties. Partly shaded shallow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying and at least 15 weeks to attain metamorphosis.	Not Expected	No suitable rocky-substrate stream habitat is present and the seasonal wetlands on site do not hold water long enough to support this species. Six CNDDDB occurrences have been recorded within 10 miles of the BSA, with the closest occurrence approximately 3.4 miles south. This occurrence is historical (1912; CDFW 2025).
<i>Spea hammondi</i> western spadefoot	FPT/None G2G3/S3S4 SSC	Occurs primarily in grassland habitats but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	Not Expected	Marginally suitable grassland habitat present, though no vernal pool habitat is present. Though seasonal wetlands are present, these features do not hold water long enough to support this species. No aquatic amphibians (including western spadefoot) were observed during protocol-level large branchiopod surveys conducted in the pools by Helm Consulting in 2023/2024 in the northern BSA and 2025/2026 in the southern BSA. No CNDDDB occurrences-or iNaturalist occurrences have been recorded within 10 miles of the BSA (CDFW 2025).

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Biological Study Area	Habitat Suitability/Observations
Reptiles				
<i>Actinemys marmorata</i> northwestern pond turtle	FPT/None G2/SNR SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 feet elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying. Occurs in northern California, south along the Sierra Nevada Mountains and the Coast Range down to Monterey and Kern Counties.	Not Expected	Suitable aquatic and nesting habitat is not present within the Project area. Though there are irrigation ditches within the BSA, only Agricultural Ditch 1 holds water regularly but does not contain any aquatic vegetation for basking. <u>The orchard and barren areas within the southern BSA are also not considered to be suitable habitat for this species as they do not provide enough ground cover for this species to use. The man-made pond to the west of the northern BSA may contain some aquatic vegetation but is likely not dense enough to provide protection for this species, and there are likely no basking sites available at this pond for this species to use. The pond to the north of the northern BSA does contain dense vegetation (<i>Typha</i> spp.) and is near basking sites for this species to use, however, Additionally,</u> nearby grassy open fields within and in the vicinity of the BSA are heavily disturbed by agricultural activities, and would likely deter this species from laying eggs in the BSA. Twenty CNDDDB occurrences have been recorded within 10 miles of the BSA, with the closest approximately 1.1 miles southwest (CDFW 2025).
<i>Thamnophis gigas</i> giant gartersnake	FT/ST G2/S2	Prefers freshwater marsh and low gradient streams. Adapted to drainage canals and irrigation ditches. This is the most aquatic of the garter snakes in California.	Not Expected	No freshwater marshes or low gradient stream habitat are present within the Project area. Though irrigation ditches are present outside of the Project area, only Agricultural Ditch 1 would provide the aquatic habitat needed for this species. No CNDDDB occurrence have been recorded within 10 miles of the BSA (CDFW 2025). The closest iNaturalist occurrence was recorded approximately 9 miles northeast of the BSA in 2004 (iNaturalist 2025).
Birds				
<i>Agelaius tricolor</i> tricolored blackbird	None/ST G1G2/S2 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 km of the colony.	Low Potential (foraging); Not Expected (nesting)	Open water and foraging habitat present, though no nesting substrate is present within the BSA. Nine CNDDDB occurrences have been recorded within 10 miles of the BSA, with the closest occurrence approximately 5.5 miles southeast (CDFW 2025). The species was determined to have a low potential to occur in the BSA for foraging; however, nesting habitat for the species is absent.
<i>Ammodramus savannarum</i> grasshopper sparrow	None/None G5/S3 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.	Not Expected	Marginally suitable grassland habitat is present, yet the grassland on site is mostly non-native and is highly disturbed. One CNDDDB occurrence was recorded within 10 miles of the BSA, approximately 6.4 miles southeast (CDFW 2025). Additionally, the species has not been documented in eBird (2025) within 10 miles of the BSA since 2018.
<i>Athene cucularia</i> burrowing owl	None/None G4/S2 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.	Low Potential (foraging, nesting)	Suitable dry perennial grasslands are present, yet there are few suitable small mammal burrows present. Several CNDDDB occurrences have been recorded within 10 miles of the BSA, with the closest approximately 1.4 miles southwest (CDFW 2025). This site does contain marginally suitable habitat for burrowing owls after mowing events when the grass is much shorter (i.e., 2-3 inches tall). Some small mammal burrows were observed on site, but are not of sufficient size for burrowing owl and no sign was observed. Therefore, this species was determined to have a low potential to occur within the BSA. This species was not observed during the 2025 focused surveys.
<i>Ardea alba</i> great egret	None/None G5/S4	Colonial nester in large trees. Rookery sites located near marshes, tide-flats, irrigated pastures, and margins of rivers and lakes.	Not Expected	Irrigated pastures are present within the agricultural fields south of the BSA, though no suitable foraging habitat or nesting trees are present within the BSA. This species may transient the area, but is not expected to forage or nest within the BSA. One CNDDDB occurrence has been recorded within 10-miles of the BSA, approximately 9.1 miles southeast. This occurrence is historical (1990, CDFW 2025). Several iNaturalist occurrences have been recorded 1.5 miles southwest of the BSA, primarily along a marsh south of Vaca Valley Parkway (iNaturalist 2025).
<i>Buteo swainsoni</i> Swainson's hawk	None/ST G5/S4	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	Present (foraging); Low Potential (nesting)	Suitable scattered trees within the survey buffer are present. Foraging habitat is present within the northern BSA, is minimal in the eastern portion of the southern BSA outside the limits of disturbance, and in the immediate vicinity of the site. Several CNDDDB nest occurrences have been recorded within 10 miles of the BSA, with the closest occurrence approximately 0.25 mile west of the site (CDFW 2025). This species was observed flying overhead during multiple field surveys.
<i>Charadrius montanus</i> mountain plover	None/None G3/S2 SSC	Short grasslands, freshly plowed fields, newly sprouting grain fields, and sometimes sod farms. Short vegetation, bare ground, and flat topography. Prefers grazed areas and areas with burrowing rodents.	Not Expected	Grassland habitat occurs in the BSA; however, the site does not provide optimal foraging or nesting habitat. No CNDDDB occurrences have been recorded within 10 miles of the BSA (CDFW 2025). Additionally, no documented occurrences of the species were documented with eBird (2025) within 10 miles of the BSA.
<i>Circus hudsonius</i> northern harrier	None/None G5/S3 SSC	Coastal salt and freshwater marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain cienagas. Nests on the ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.	Moderate Potential (Foraging); Not Expected (Nesting)	No salt and freshwater marsh habitat present; however, grassland habitat is present. Two CNDDDB occurrences were recorded within 10 miles of the BSA, with the closest occurrence approximately 4.8 miles south (CDFW 2025). The species was not observed during field visits to the BSA. However, several occurrences of the species were documented in eBird (2025) within the nearby vicinity of the BSA. It was determined that the species has a moderate potential for foraging in the norther BSA and no potential for nesting.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Biological Study Area	Habitat Suitability/Observations
<i>Coccyzus americanus occidentalis</i> western yellow-billed cuckoo	FT/SE G5T2T3/S1	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	No riparian forest habitat is present. No CNDDDB occurrences have been recorded within 10 miles of the BSA (CDFW 2025).
<i>Elanus leucurus</i> white-tailed kite	None/None G5/S3S4 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.	Moderate Potential (Foraging); Not Expected (Nesting)	Open grassland habitat is present for foraging with suitable nesting trees within 0.5 mile of site. Five CNDDDB occurrences have been recorded within 10 miles of the BSA, with the closest approximately 0.85 mile south. This occurrence is historical (2001; CDFW 2025). The species was not observed during field visits to the BSA. However, several occurrences of the species were documented in eBird (2025) within the nearby vicinity of the BSA. It was determined that the species has a moderate potential for foraging in the BSA and no potential for nesting.
<i>Falco peregrinus anatum</i> American peregrine falcon	FD/SD G4T4/S3S4	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.	Not Expected	Though marginally suitable man-made structures and some aquatic habitat is present within the BSA, this species is only likely to transient the area if at all. One CNDDDB occurrence has been recorded within 10 miles of the BSA, approximately 8 miles northwest. This occurrence is historical (1999; CDFW 2025). Few occurrences of the species were documented in eBird (2025) within the nearby vicinity of the BSA in 2023 or earlier. Suitable foraging and nesting habitat are absent in the BSA and therefore determined as not expected to occur.
<i>Haliaeetus leucocephalus</i> bald eagle	FD/SE G5/S3 FP	Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water. Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.	Not Expected	No suitable large, old-growth, or dominant live trees with open branches present. Gibson Canyon Creek is present within the site; however, the creek is concrete-lined and does not provide suitable aquatic habitat for this species. One CNDDDB occurrence has been recorded within 10 miles of the BSA, approximately 9.4 miles south (CDFW 2025).
<i>Icteria virens</i> yellow-breasted chat	None/None G5/S4 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 ft of ground.	Not Expected	No riparian thickets habitat present. One CNDDDB occurrence has been recorded within 10 miles of the BSA, approximately 8.4 miles northwest. This occurrence is historical (1987, CDFW 2025).
<i>Laterallus jamaicensis coturniculus</i> California black rail	None/ST G3T1/S2 FP	Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	Not Expected	No freshwater marsh, wet meadow, or saltwater marsh habitat present. No CNDDDB occurrences have been recorded within 10 miles of the BSA (CDFW 2025).
Mammals				
<i>Antrozous pallidus</i> pallid bat	None/None G4/S3 SSC	Found in a variety of habitats, including deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts in crevices of rock outcrops, caves, mine tunnels, buildings, bridges, and hollows of live and dead trees which must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	Not Expected	No suitable deserts, shrublands, woodlands, forests or roosting habitat is present. No CNDDDB occurrences have been recorded within 10 miles of the BSA (CDFW 2025).
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	None/None G4/S2 SSC	Occurs throughout California in a wide variety of habitats. Most common in mesic sites, typically coniferous or deciduous forests. Roosts in the open, hanging from walls, ceilings in caves, lava tubes, bridges, and buildings. This species is extremely sensitive to human disturbance.	Not Expected	No suitable roosting habitat present in the BSA. No CNDDDB occurrences have been recorded within 10 miles of the BSA (CDFW 2025).
<i>Lasiurus frantzii</i> western red bat	None/None G4/S3 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.	Not Expected	No suitable roosting habitat present in the BSA. <u>There are some trees present on site, however, they are likely not considered suitable roosting habitat as all trees are not protected above the canopy, which is preferred by this species. The BSA is also not considered an 'edge habitat', which would ideally provide enough cover for this species in addition to open areas for foraging. Though foraging habitat is present within the grassland of the northern BSA, the high levels of human disturbance throughout the site and from the nearby I-80 would likely deter this species.</u> One CNDDDB occurrence was recorded within 10 miles of the BSA, approximately 8.4 miles north (CDFW 2025). <u>One iNaturalist occurrence has been recorded approximately 9.5 miles southwest of the BSA (iNaturalist 2026).</u>
<i>Myotis yumanensis</i> Yuma myotis	None/None G5/S4	Occurs in a variety of lowland and upland habitats including desert scrub, riparian, and woodlands and forests. Distribution is closely tied to bodies of water. Roosts in a variety of areas including caves, cliffs, mines, crevices in live trees, and buildings and other man-made structures.	Not Expected	No suitable desert scrub, riparian, or woodland forest habitat are present. Roosting habitat is also not present. One CNDDDB occurrence has been recorded within 10-miles of the BSA, approximately XX miles X. This occurrence is historical (CDFW 2025). No iNaturalist occurrences have been recorded within 10-miles of the BSA (iNaturalist 2025).
<i>Taxidea taxus</i> American badger	None/None G5/S3 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.	Not Expected	Grassland habitat and burrows of small rodents are present within the BSA; however, no large burrows or evidence of badger was observed in the BSA. Two CNDDDB occurrences were recorded within 10 miles of the BSA, with the closest occurrence approximately 2.8 miles southwest (CDFW 2025). Due to the significant Interstate 80 barrier to the south of the BSA, this reduces the likelihood for potential occurrence of the species in the BSA. Additionally, due to the lack of evidence of badger during site visits, such as excavated burrows, claw marks, scat or tracks, the species is not expected to occur on site.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Biological Study Area	Habitat Suitability/Observations
<i>Sorex ornatus sinuosus</i> Suisun shrew	None/None G5T1T2Q/S1S2 SSC	Tidal marshes of the northern shores of San Pablo and Suisun bays. Require dense low-lying cover and driftweed and other litter above the mean high tide line for nesting and foraging.	Not Expected	No suitable tidal marsh habitat is present. No CNDDDB occurrences were recorded within 10 miles of the BSA (CDFW 2025).

Regional Vicinity refers to within a 9 quad search radius of proposed Project area.

Status (Federal/State)

FE = Federal Endangered
 FT = Federal Threatened
 FPE = Federal Proposed Endangered
 FPT = Federal Proposed Threatened
 FD = Federal Delisted
 FC = Federal Candidate
 SE = State Endangered
 ST = State Threatened
 SCE = State Candidate Endangered
 SCT = State Candidate Threatened
 SSC = CDFW Species of Special Concern
 FP = CDFW Fully Protected

CRPR (CNPS California Rare Plant Rank)

1A = Presumed extirpated in California, and rare or extinct elsewhere
 1B = Rare, Threatened, or Endangered in California and elsewhere
 2A = Presumed extirpated in California, but common elsewhere
 2B = Rare, Threatened, or Endangered in California, but more common elsewhere

CRPR Threat Code Extension

.1 = Seriously endangered in California (>80% of occurrences threatened/high degree and immediacy of threat)
 .2 = Moderately threatened in California (20-80% of occurrences threatened/moderate degree and immediacy of threat)
 .3 = Not very endangered in California (<20% of occurrences threatened/low degree and immediacy of threat)

Other Statures

G1 or S1 Critically Imperiled Globally or Subnationally (state)
 G2 or S2 Imperiled Globally or Subnationally (state)
 G3 or S3 Vulnerable to extirpation or extinction Globally or Subnationally (state)
 G4/5 or S4/5 Apparently secure, common and abundant
 BSA = Biological Study Area
 amsl = above mean sea level

Sources

California Department of Fish and Wildlife (CDFW). 2025. California Natural Diversity Database (CNDDDB), Rarefind VI: Accessed August 2025.
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 _____. 2025. Habitat Assessment for Federally-listed Large Branchiopods at the Vaca Dixon Battery Energy Storage System Project – Site B, Solano County, California (USFWS# RP-Vaca Dixon Site-2023-0824).
 Jepson eFlora. 2025. *Jepson eFlora*. Available from <https://ucjeps.berkeley.edu/eflora/>. Accessed July 2025.
 Xerces Society, Wildlife Preservation Canada, York University, University of Ottawa, The Montreal Insectarium, The London Natural History Museum, BeeSpotter. 2025. Data accessed from Bumble Bee Watch. Available from <https://www.bumblebeewatch.org/maps/>. Accessed July 2025.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Biological Study Area	Habitat Suitability/Observations
<i>Coccyzus americanus occidentalis</i> western yellow-billed cuckoo	FT/SE G5T2T3/S1	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	No riparian forest habitat is present. No CNDDDB occurrences have been recorded within 10 miles of the BSA (CDFW 2025).
<i>Elanus leucurus</i> white-tailed kite	None/None G5/S3S4 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.	Moderate Potential (Foraging); Not Expected (Nesting)	Open grassland habitat is present for foraging with suitable nesting trees within 0.5 mile of site. Five CNDDDB occurrences have been recorded within 10 miles of the BSA, with the closest approximately 0.85 mile south. This occurrence is historical (2001; CDFW 2025). The species was not observed during field visits to the BSA. However, several occurrences of the species were documented in eBird (2025) within the nearby vicinity of the BSA. It was determined that the species has a moderate potential for foraging in the BSA and no potential for nesting.
<i>Falco peregrinus anatum</i> American peregrine falcon	FD/SD G4T4/S3S4	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.	Not Expected	Though marginally suitable man-made structures and some aquatic habitat is present within the BSA, this species is only likely to transient the area if at all. One CNDDDB occurrence has been recorded within 10 miles of the BSA, approximately 8 miles northwest. This occurrence is historical (1999; CDFW 2025). Few occurrences of the species were documented in eBird (2025) within the nearby vicinity of the BSA in 2023 or earlier. Suitable foraging and nesting habitat are absent in the BSA and therefore determined as not expected to occur.
<i>Haliaeetus leucocephalus</i> bald eagle	FD/SE G5/S3 FP	Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water. Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.	Not Expected	No suitable large, old-growth, or dominant live trees with open branches present. Gibson Canyon Creek is present within the site; however, the creek is concrete-lined and does not provide suitable aquatic habitat for this species. One CNDDDB occurrence has been recorded within 10 miles of the BSA, approximately 9.4 miles south (CDFW 2025).
<i>Icteria virens</i> yellow-breasted chat	None/None G5/S4 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 ft of ground.	Not Expected	No riparian thickets habitat present. One CNDDDB occurrence has been recorded within 10 miles of the BSA, approximately 8.4 miles northwest. This occurrence is historical (1987, CDFW 2025).
<i>Laterallus jamaicensis coturniculus</i> California black rail	None/ST G3T1/S2 FP	Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	Not Expected	No freshwater marsh, wet meadow, or saltwater marsh habitat present. No CNDDDB occurrences have been recorded within 10 miles of the BSA (CDFW 2025).
Mammals				
<i>Antrozous pallidus</i> pallid bat	None/None G4/S3 SSC	Found in a variety of habitats, including deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts in crevices of rock outcrops, caves, mine tunnels, buildings, bridges, and hollows of live and dead trees which must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	Not Expected	No suitable deserts, shrublands, woodlands, forests or roosting habitat is present. No CNDDDB occurrences have been recorded within 10 miles of the BSA (CDFW 2025).
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	None/None G4/S2 SSC	Occurs throughout California in a wide variety of habitats. Most common in mesic sites, typically coniferous or deciduous forests. Roosts in the open, hanging from walls, ceilings in caves, lava tubes, bridges, and buildings. This species is extremely sensitive to human disturbance.	Not Expected	No suitable roosting habitat present in the BSA. No CNDDDB occurrences have been recorded within 10 miles of the BSA (CDFW 2025).
<i>Lasiurus frantzii</i> western red bat	None/None G4/S3 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.	Not Expected	There are some trees present on site, however, they are likely not considered suitable roosting habitat as all trees are not protected above the canopy, which is preferred by this species. The BSA is also not considered an 'edge habitat', which would ideally provide enough cover for this species in addition to open areas for foraging. Though foraging habitat is present within the grassland of the northern BSA, the high levels of human disturbance throughout the site and from the nearby I-80 would likely deter this species. One CNDDDB occurrence was recorded within 10 miles of the BSA, approximately 8.4 miles north (CDFW 2025). One iNaturalist occurrence has been recorded approximately 9.5 miles southwest of the BSA (iNaturalist 2026).
<i>Myotis yumanensis</i> Yuma myotis	None/None G5/S4	Occurs in a variety of lowland and upland habitats including desert scrub, riparian, and woodlands and forests. Distribution is closely tied to bodies of water. Roosts in a variety of areas including caves, cliffs, mines, crevices in live trees, and buildings and other man-made structures.	Not Expected	No suitable desert scrub, riparian, or woodland forest habitat are present. Roosting habitat is also not present. One CNDDDB occurrence has been recorded within 10-miles of the BSA. This occurrence is historical (CDFW 2025). No iNaturalist occurrences have been recorded within 10-miles of the BSA (iNaturalist 2025).
<i>Taxidea taxus</i> American badger	None/None G5/S3 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.	Not Expected	Grassland habitat and burrows of small rodents are present within the BSA; however, no large burrows or evidence of badger was observed in the BSA. Two CNDDDB occurrences were recorded within 10 miles of the BSA, with the closest occurrence approximately 2.8 miles southwest (CDFW 2025). Due to the significant Interstate 80 barrier to the south of the BSA, this reduces the likelihood for potential occurrence of the species in the BSA. Additionally, due to the lack of evidence of badger during site visits, such as excavated burrows, claw marks, scat or tracks, the species is not expected to occur on site.