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APPENDIX 5.2A

**Summary of Special Status-Species
within the Study Area**

Appendix 5.2A: Special-Status Plant Species

Scientific Name / Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur within the Project Area	Potential to Occur within the Study Area	Rationale
<i>Arctostaphylos obispoensis</i> / Bishop manzanita	None/None G3/S3 4.3	Closed-cone coniferous forest, cismontane woodland, chaparral. Rocky, serpentine sites at elevations of 150-1005 meters. Blooms Feb-Jun.	Not Expected	Low Potential	Suitable habitat is not present within the Project area. Manzanita species were not detected within the Project area during the botanical surveys. Some suitable habitat is present within the study area, though no occurrences of the species are documented within the study area (Calflora 2021).
<i>Arctostaphylos osoensis</i> / Oso manzanita	None/None G1/S1 1B.2	Occurs on dacite porphyry buttes within chaparral and cismontane woodland. Blooms Feb-Mar and typically occurs at elevations of 50-500 meters.	Not Expected	Present	Suitable habitat is not present within the Project area. Manzanita species were not detected within the Project area during the botanical surveys. Suitable habitat occurs within the study area and multiple occurrences of the species are documented in the study area south of the Project site (Calflora 2021).
<i>Arctostaphylos pechoensis</i> / Pecho manzanita	None/None G2/S2 1B.2	Occurs on siliceous shale substrates within closed-cone coniferous forest, chaparral, and coastal scrub. Blooms Nov-Mar and typically occurs at elevations of 60-850 meters.	Not Expected	Low Potential	Suitable habitat is not present within the Project area. Manzanita species were not detected within the Project area during the botanical surveys. Some potentially suitable habitat for the species occurs in the study area, though there are no documented occurrences within the study area (Calflora 2021).
<i>Arctostaphylos pilosula</i> / Santa Margarita manzanita	None/None G2?/S2? 1B.2	Closed-cone coniferous forest, chaparral, broad leafed upland forest, cismontane woodland. Shale outcrops & slopes; reported growing on decomposed granite or sandstone. Occurs at elevations of 30-1220 meters. Blooms Dec-Mar.	Not Expected	Low Potential	Suitable habitat is not present within the Project area. Manzanita species were not detected within the Project area during the botanical surveys. Some potentially suitable habitat occurs within the study area, though there are no documented occurrences within the study area (Calflora 2021).

Scientific Name / Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur within the Project Area	Potential to Occur within the Study Area	Rationale
<i>Arctostaphylos rudis</i> / sand mesa manzanita	None/None G2/S2 1B.2	Chaparral, coastal scrub. On sandy soils in Lompoc/ Nipomo area. Occurs at elevations of 20-335 meters. Blooms Nov-Feb.	Not Expected	Not Expected	The study area is outside of the known range of the species. Manzanita species were not detected within the Project area during the botanical surveys.
<i>Abronia maritima</i> / red sand-verbena	None/None G4/S3? 4.2	Perennial herb. Blooms Feb-Nov. Occurs in coastal dunes of central and southern California, as well as the Channel Islands. Formerly fairly widespread, but available habitat has decreased, especially in Southern California. Found at elevations under 100 meters.	Not Expected	Not Expected	No coastal dune habitat is present within the study area.
<i>Agrostis hooveri</i> / Hoover's bent grass	None/None G2/S2 1B.2	Usually occurs on sandy substrates within closed-cone coniferous forest, chaparral, cismontane woodland, and valley and foothill grassland. Species blooms from April to July and typically occurs at elevations ranging from 6-610 meters.	Low Potential	Low Potential	Some suitable habitat exists within the study area in chaparral and oak woodland habitat south and west of the Project site, and in grassland habitat north of SR-1 along the proposed gen-tie routes. One historic occurrence of the species (from 1963) is documented in Calflora approximately one mile south of the Project area (Calflora 2021).
<i>Arctostaphylos Luciana</i> / Santa Lucia manzanita	None/None G2/S2 1B.2	Occurs on shale substrates within chaparral and cismontane woodland. This species blooms between December and March and typically occurs at elevations ranging from 100 to 800 meters.	Not Expected	Not Expected	Suitable habitat is not present within the Project area. Manzanita species were not detected within the Project area during the botanical surveys. Some suitable habitat is present within the study area, but only one historical occurrence (1936) is documented within five miles of the Project area (Calflora 2021).

Scientific Name / Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur within the Project Area	Potential to Occur within the Study Area	Rationale
<i>Arctostaphylos morroensis</i> / Morro manzanita	FT/NoneG1/S1 1B.1	Occurs in baywood fine sand substrates within maritime chaparral, cismontane woodland, pre-Flandrian coastal dunes, and coastal scrub. Species blooms between December and March and typically occurs at elevations ranging from 5-205 meters.	Not Expected	Present	Suitable habitat is not present within the Project area. Manzanita species were not detected within the Project area during the botanical surveys. Suitable habitat does occur within the study area and one occurrence of the species is documented within the study area, approximately one mile southwest of the Project site along the Crespi trail in Morro Bay State Park (Calflora 2021).
<i>Arctostaphylos obispoensis</i> / Bishop manzanita	None/None G3/S3 4.3	Closed-cone coniferous forest, cismontane woodland, chaparral. Rocky, serpentine sites at elevations of 150-1005 meters. Blooms Feb-Jun.	Not Expected	Low Potential	Suitable habitat is not present within the Project area. Manzanita species were not detected within the Project area during the botanical surveys. Some suitable habitat is present within the study area, though no occurrences of the species are documented within the study area (Calflora 2021).
<i>Arctostaphylos osoensis</i> / Oso manzanita	None/None G1/S1 1B.2	Occurs on dacite porphyry buttes within chaparral and cismontane woodland. Blooms Feb-Mar and typically occurs at elevations of 50-500 meters.	Not Expected	Present	Suitable habitat is not present within the Project area. Manzanita species were not detected within the Project area during the botanical surveys. Suitable habitat occurs within the study area and multiple occurrences of the species are documented in the study area south of the Project site (Calflora 2021).
<i>Arctostaphylos pechoensis</i> / Pecho manzanita	None/None G2/S2 1B.2	Occurs on siliceous shale substrates within closed-cone coniferous forest, chaparral, and coastal scrub. Blooms Nov-Mar and typically occurs at elevations of 60-850 meters.	Not Expected	Low Potential	Suitable habitat is not present within the Project area. Manzanita species were not detected within the Project area during the botanical surveys. Some potentially suitable habitat for the species occurs in the study area, though there are no documented occurrences within the study area (Calflora 2021).

Scientific Name / Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur within the Project Area	Potential to Occur within the Study Area	Rationale
<i>Arctostaphylos pilosula</i> / Santa Margarita manzanita	None/None G2/S2? 1B.2	Closed-cone coniferous forest, chaparral, broad leaved upland forest, cismontane woodland. Shale outcrops & slopes; reported growing on decomposed granite or sandstone. Occurs at elevations of 30-1220 meters. Blooms Dec-Mar.	Not Expected	Low Potential	Suitable habitat is not present within the Project area. Manzanita species were not detected within the Project area during the botanical surveys. Some potentially suitable habitat occurs within the study area, though there are no documented occurrences within the study area (Calflora 2021).
<i>Arctostaphylos rudis</i> / sand mesa manzanita	None/None G2/S2 1B.2	Chaparral, coastal scrub. On sandy soils in Lompoc/ Nipomo area. Occurs at elevations of 20-335 meters. Blooms Nov-Feb.	Not Expected	Not Expected	The study area is outside of the known range of the species. Manzanita species were not detected within the Project area during the botanical surveys.
<i>Arctostaphylos tomentosa</i> ssp. <i>Daciticola</i> / dacite manzanita	None/None G4T1/S1 1B.1	Occurs on dacite porphyry buttes within chaparral and cismontane woodland. Blooms Mar-May and typically occurs at elevations ranging from 100-300 meters.	Not Expected	Present	Suitable habitat is not present within the Project area. Manzanita species were not detected within the Project area during the botanical surveys. Suitable habitat occurs within the study area and multiple occurrences of the species are documented in the study area south of the Project site (Calflora 2021).
<i>Arenaria paludicola</i> / marsh sandwort	FE/SE G1/S1 1B.1	Occurs in sandy substrates and openings within freshwater or brackish marshes and swamps. This species blooms between May and August, and typically occurs at elevations ranging from 3- 170 meters.	Not Expected	Not Expected	Marsh habitat exists within the study area, but it is not suitable for marsh sandwort. Populations of this species are extremely limited, known in only several locations. This species was not detected during the botanical surveys.

Scientific Name / Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur within the Project Area	Potential to Occur within the Study Area	Rationale
<i>Aspidotis carlotta-halliae</i> / Carlotta Hall's lacefern	None/None G3/S3 4.2	Chaparral, cismontane woodland. Generally serpentine slopes, crevices, or outcrops. Occurs at elevations of 100-1400 meters.	Not Expected	Low Potential	Suitable habitat and elevation for the species does not exist within the Project area. Some potentially suitable habitat occurs within the study area. One occurrence of the species is documented within the <i>Morro Bay South</i> USGS quad (California 2021).
<i>Astragalus didymocarpus</i> var. <i>milesianus</i> / Miles' milk-vetch	None/None G5T2/S2 1B.2	Occurs in clay substrates within coastal scrub. This species blooms between March and June, and typically occurs at elevations ranging from 20-90 meters.	Low Potential	Low Potential	Some marginally suitable coastal scrub habitat is present within the study area along proposed gen-tie routes and south of the Project site. Two historical occurrences (in 1936 and 1969) are documented in the CNDDDB within five miles of the Project area (CDFW 2021a). One occurrence of the species was documented within the <i>Morro Bay South</i> USGS quad in 2019 (California 2021).
<i>Astragalus nuttallii</i> var. <i>nuttallii</i> / ocean bluff milk-vetch	None/None G4T4/S4 4.2	Coastal bluff scrub, coastal dunes. Occurs at 3-120 meters in elevation. Blooms Jan-Nov.	Not Expected	Not Expected	No coastal bluff scrub or coastal dunes habitat exists within the study area.
<i>Atriplex coulteri</i> / Coulter's saltbush	None/None G3/S1S2 1B.2	Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland. Ocean bluffs, ridgetops, as well as alkaline low places. Alkaline or clay soils. Occurs at elevations of 2-460 meters. Blooms Mar-Oct.	Not Expected	Low Potential	Suitable habitat is not present in the Project area. This species was not observed within the Project area during botanical surveys. Some potentially suitable habitat for the species occurs within the study area, though no occurrences of the species are documented within the study area (California 2021).
<i>Bryoria spiralifera</i> / twisted horsehair lichen	None/None G1G2/S1S2 1B.1	North coast coniferous forest. Usually on conifers. Occurs at elevations ranging from 5-30 meters.	Not Expected	Not Expected	North coast coniferous forest habitat is not present within the study area. One occurrence of the species (from 1991) is documented in the CNDDDB within five miles of the study area (CDFW 2021a).
<i>Calandrinia breweri</i> / Brewer's calandrinia	None/None G4/S4 4.2	Chaparral, coastal scrub. Sandy or loamy soils. Disturbed sites, burns. Occurs at elevations ranging from 10-1200 meters. Blooms Mar-Jun.	Low Potential	Moderate Potential	The study area does not contain suitable burn sites; however, marginally suitable habitat is present within disturbed areas throughout the study area.

Scientific Name / Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur within the Project Area	Potential to Occur within the Study Area	Rationale
<i>Calochortus clavatus</i> var. <i>clavatus</i> / club-haired mariposa-lily	None/None G4T3/S3 4.3	Chapparal, cismontane woodland, valley and foothill grassland, coastal scrub. Generally, occurs on serpentine clay in rocky soils. Occurs at elevations ranging from 75-1300 meters. Blooms May-Jun.	Moderate Potential	Moderate Potential	Within the study area, suitable woodland habitat is present south of the Project site and suitable grassland habitat is present north of SR-1 along gen-tie routes 1 and 1-A. No occurrences of the species are documented within the study area (Calflora 2021).
<i>Calochortus obispoensis</i> / San Luis mariposa-lily	None/None G2/S2 1B.2	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. Often in serpentine grassland. Occurs at elevations ranging from 15-550 meters. Blooms May-Jul.	Moderate Potential	Moderate Potential	Within the study area, suitable woodland habitat is present south of the Project site and suitable grassland habitat is present north of SR-1 along gen-tie routes 1 and 1-A.
<i>Calochortus simulans</i> / La Panza mariposa-lily	None/None G2/S2 1B.3	Valley and foothill grassland, cismontane woodland, chaparral, lower montane coniferous forest. Decomposed granite, or sometimes on serpentine. Occurs at elevations of 150-1160 meters. Blooms Apr-Jul.	Not Expected	Not Expected	The study area is outside the known range of the species.
<i>Calystegia subacaulis</i> ssp. <i>episcopalis</i> / Cambria morning-glory	None/None G3T2/S2? 4.2	Usually occurs in clay substrates within chaparral, cismontane woodland, coastal prairie, and valley and foothill grassland. This species blooms between March and July and typically occurs at elevations ranging from 5-500 meters.	Present	Present	This species was observed within the Project area and study area during the botanical surveys. See Section 4.1.1 for details on specific locations of populations within the study area.

Scientific Name / Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur within the Project Area	Potential to Occur within the Study Area	Rationale
<i>Camissoniopsis hardhamiae</i> Hardham's / evening-primrose	None/None G2/S2 1B.2	Occurs in sandy, decomposed carbonate, and disturbed or burned areas within chaparral and cismontane woodland. This species blooms between March and May, and typically occurs at elevations ranging from 140-945 meters.	Not Expected	Not Expected	Suitable habitat and soils for this species are not present within the study area.
<i>Carex comosa</i> / bristly sedge	None/None G5/S2 2B.1	Marshes and swamps, coastal prairie, valley and foothill grassland. Lake margins, wet places; site below sea level is on a Delta Island. Occurs at elevations ranging from 5-1010 meters. Blooms May-Sep.	Not Expected	Not Expected	The study area is outside the known range of this species.
<i>Carex obispoensis</i> / San Luis Obispo sedge	None/None G3?/S3? 1B.2	Found in seeps within closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, valley and foothill grassland. Usually in transition zone on sand, clay, serpentine, or gabbro. Occurs at elevations ranging from 5-845 meters. Blooms Apr-Jun.	Not Expected	Low Potential	Suitable seep habitat is likely not present within the Project area. Some potentially suitable habitat exists within the study area and one historical occurrence (1910) of the species is documented within the study area, between gen-tie routes 1 and 1-A (Calflora 2021).
<i>Castilleja densiflora</i> var. <i>obispoensis</i> San Luis Obispo owl's-clover	None/None G5T2/S2 1B.2	Valley and foothill grassland, meadows and seeps. Sometimes on serpentine. Occurs at elevations ranging from 9-485 meters. Blooms Mar-May.	Moderate Potential	Moderate Potential	The study area contains suitable grassland habitat north of SR-1 along gen-tie routes 1 and 1-A.

Scientific Name / Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur within the Project Area	Potential to Occur within the Study Area	Rationale
<i>Caulanthus californicus</i> California jewelflower	FE/SE G1/S1 1B.1	Occurs in chenopod scrub, valley and foothill grassland, pinyon and juniper woodland. Occurs in sandy soils at elevations of 65-1860 meters. Blooms Feb-May.	Not Expected	Not Expected	The study area is outside the known range of this species.
<i>Ceanothus cuneatus</i> <i>var. fascicularis</i> Lompoc ceanothus	None/None G5T4/S4 4.2	Occurs in chaparral on sandy soils. Occurs at elevations ranging from 5-400 meters. Blooms Feb-Apr.	Not Expected	Not Expected	Suitable chaparral habitat and sandy soil is not present within the study area.
<i>Ceanothus impressus</i> <i>var. nipomensis</i> Nipomo Mesa ceanothus	None/None G3T2/S2 1B.2	Occurs in chaparral in sandy soils at elevations ranging from 10-215 meters. Blooms Apr-May.	Not Expected	Not Expected	The study area is outside the known range of this species.
<i>Ceanothus thyrsiflorus</i> <i>var. obispoensis</i> / San Luis Obispo ceanothus	None/None G5T1/S1 1B.1	Chaparral, cismontane woodland. Occurs at elevations ranging from 140-225 meters. Blooms in June.	Not Expected	Not Expected	The study area is outside the known range of this species.
<i>Centromadia parryi</i> sp. <i>congdonii</i> / Congdon's tarplant	None/None G3T1T2/S1S2 1B.1	Valley and foothill grassland. Alkaline soils, sometimes described as heavy white clay. Occurs at elevations of 300-245 meters. Blooms May-Oct.	Not Expected	Not Expected	Marginally suitable habitat and soils are present within the study area. However, there are no documented occurrences of the species within five miles of the Project area (CDFW 2021a, Calflora 2021), and the species was not detected during botanical surveys.
<i>Cercocarpus betuloides</i> <i>var. blancheae</i> / island mountain-mahogany	None/None G5T4/S4 4.3	Chaparral, closed-cone coniferous forest. Occurs at elevations of 30-600 meters. Blooms Feb-May.	Not Expected	Not Expected	The study area is outside the known range of the variety.
<i>Chenopodium littoreum</i> / coastal goosefoot	None/None G1/S1 1B.2	Occurs in coastal dunes. Blooms between April and August, and typically occurs at elevations ranging from 10-30 meters.	Not Expected	Not Expected	Suitable coastal dune habitat is not present in the study area.

Scientific Name / Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur within the Project Area	Potential to Occur within the Study Area	Rationale
<i>Chlorogalum pomeridianum</i> var. <i>minus</i> dwarf soaproot	None/None G5T3/S3 1B.2	Chaparral. Serpentine. Occurs at elevations of 120-1220 meters. Blooms May-Aug.	Not Expected	Low Potential	Suitable habitat and soils are not present within the Project area. Some potentially suitable habitat is present within the study area. There is one documented occurrence of the species within the <i>Morro Bay South</i> USGS quad (California 2021).
<i>Chloropyron</i> [= <i>Cordylanthus</i>] <i>maritimum</i> ssp. / <i>Maritimum</i> salt marsh bird's-beak	FE/SE G4?T1/S1 1B.2	Occurs in coastal dunes and coastal salt marshes and swamps. This species blooms between May and October, and typically occurs at elevations ranging from 0-30 meters.	Not Expected	Not Expected	Suitable coastal dune and coastal salt marsh habitats are not present in the study area.
<i>Chorizanthe aphanantha</i> / Irish Hills spineflower	None/None G1/S1 1B.1	Chaparral, coastal scrub. Serpentine, rocky to gravelly. Occurs at elevations of 100-370 meters. Blooms Apr-Aug.	Not Expected	Not Expected	The study area is outside the known range of the species.
<i>Chorizanthe breweri</i> / Brewer's spineflower	None/None G3/S3 1B.3	Chaparral, cismontane woodland, coastal scrub, closed-cone coniferous forest. Rocky or gravelly serpentine sites; usually in barren areas. Occurs at elevations of 45-765 meters. Blooms Apr-Aug.	Not Expected	Low Potential	Suitable gravelly serpentine sites are not present within the Project area. Some potentially suitable habitat occurs within the study area. There is one documented occurrence of the species within the <i>Morro Bay South</i> USGS quad (California 2021).
<i>Chorizanthe douglasii</i> Douglas' spineflower	None/None G4/S4 4.3	Cismontane woodland, lower montane coniferous forest, chaparral, coastal scrub, valley and foothill grassland. Occurs at elevations of 55-1600 meters. Blooms Apr-Jul.	Not Expected	Not Expected	The study area is outside the known range of the species.

Scientific Name / Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur within the Project Area	Potential to Occur within the Study Area	Rationale
<i>Chorizanthe leptotheca</i> / Peninsular spineflower	None/None G3/S3 4.2	Chaparral, coastal scrub, lower montane coniferous forest. On granitic soils, in alluvial fans. Occurs at elevations of 300-1900 meters. Blooms May-Aug.	Not Expected	Low Potential	The Project area does not contain suitable habitat and soils. Some potentially suitable habitat occurs within the study area. There is one documented occurrence of the species within the <i>Morro Bay South</i> USGS quad (Calflora 2021).
<i>Chorizanthe palmeri</i> / Palmer's spineflower	None/None G4/S4 4.2	Chaparral, cismontane woodland, valley and foothill grassland. Dry, rocky places and hillsides. Serpentine substrates. Occurs at elevations of 60-945 meters. Blooms Apr-Aug.	Moderate Potential	Moderate Potential	Suitable grassland habitat is present north of SR-1 along gen-tie routes 1 and 1-A.
<i>Chorizanthe rectispina</i> / straight-awned spineflower	None/None G2/S2 1B.3	Chaparral, cismontane woodland, coastal scrub. Often on granite in chaparral. Occurs at elevations of 45-1040 meters. Blooms Apr-Jul.	Not Expected	Not Expected	The study area is outside of the known range of the species.
<i>Chorizanthe ventricose</i> / potbellied spineflower	None/None G3/S3 4.3	Valley and foothill grassland, cismontane woodland. Serpentine. Occurs at elevations of 65-1235 meters. Blooms May-Sep.	Not Expected	Not Expected	The study area is outside the known range of the species.
<i>Cirsium fontinale</i> var. <i>obispoense</i> / Chorro Creek bogthistle	FE/SE G2T2/S2 1B.2	Occurs in chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. Also occurs in serpentine seeps. Found at elevations of 5-385 meters. Blooms Feb-Jul.	Low Potential	Low Potential	Some serpentine soil is present within the study area north of SR-1 and south of the Project site. Any seeps present within these areas could potentially contain suitable habitat for the species.

Scientific Name / Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur within the Project Area	Potential to Occur within the Study Area	Rationale
<i>Cirsium occidentale</i> var. <i>compactum</i> / compact cobwebby thistle	None/None G3G4T2/S21B.2	Occurs in chaparral, coastal dunes, coastal prairie, and coastal scrub. On grasslands, dunes, and on clay in chaparral. Occurs at elevations of 5- 245 meters. Blooms Apr-Jun.	Not Expected	Not Expected	The study area is outside the known range of this variety.
<i>Cirsium occidentale</i> var. <i>lucianum</i> / Cuesta Ridge thistle	None/None G3G4T2/S21B.2	Chaparral. Openings; on serpentinite. Often on steep rocky slopes and along disturbed roadsides. Occurs at elevations of 326-800 meters. Blooms April through June.	Not Expected	Not Expected	The study area is outside the known range and elevation of the variety.
<i>Cirsium rhotophilum</i> / surf thistle	None/STG1/S1 1B.2	Coastal dunes, coastal bluff scrub. Open areas in central dune scrub; usually in coastal dunes. Occurs from 3-60 meters of elevation. Blooms April through June.	Not Expected	Not Expected	No coastal dune or coastal bluff scrub habitat exists within the study area.
<i>Cladonia firma</i> / popcorn lichen	None/None G4/S1 2B.1	Coastal dunes, coastal scrub. On soil and detritus on stabilized sand dunes, in pure stands or intermixed with other lichens and mosses forming biotic soil crusts, covering areas up to several meters. Occurs at elevations of 30-80 meters.	Not Expected	Not Expected	Suitable dune habitat is not present within the study area.
<i>Clarkia speciosa</i> ssp. <i>immaculata</i> / Pismo clarkia	FE/SR G4T1/S1 1B.1	Chaparral, cismontane woodland, valley and foothill grassland. On ancient sand dunes not far from the coast. Sandy soils; openings. Occurs at elevations of 30-185 meters. Blooms May through July.	Not Expected	Not Expected	The study area is outside the known range of the subspecies.

Scientific Name / Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur within the Project Area	Potential to Occur within the Study Area	Rationale
<i>Clinopodium mimuloides</i> / monkey-flower savory	None/None G3/S3 4.2	North coast coniferous forest, chaparral. Streambanks, mesic sites. Occurs at elevations of 305-1800 meters. Blooms June through October.	Not Expected	Not Expected	The study area is outside of the known range of the species.
<i>Deinandra paniculate</i> / paniculate tarplant	None/None G4/S4 4.2	Coastal scrub, valley and foothill grassland, vernal pools. Usually in vernal mesic sites. Sometimes in vernal pools or on mima mounds near them. Occurs at elevations of 25-940 meters. Blooms April through Nov.	Not Expected	Low Potential	Some potentially suitable habitat for the species occurs within the study area north of SR-1 and south of the Project site. The species was not observed within the Project area during the botanical surveys. There is one historical occurrence (1969) of the species documented within the <i>Morro Bay South</i> USGS quad (California 2021).
<i>Delphinium parryi</i> ssp. <i>Blochmaniae</i> / dune larkspur	None/None G4T2/S2 1B.2	Chaparral, coastal dunes (maritime). On rocky areas and dunes. Occurs at elevations of 18-305 meters. Blooms in April and May.	Not Expected	Low Potential	Suitable chaparral and coastal dune habitats are not present within the Project area. Some potentially suitable habitat occurs within the southern portion of the study area. There is one historical occurrence (1899) of the species documented within the <i>Morro Bay South</i> USGS quad (California 2021).
<i>Delphinium parryi</i> ssp. <i>eastwoodiae</i> / Eastwood's larkspur	None/None G4T2/S2 1B.2	Occurs in coastal serpentinite substrates within openings in chaparral and valley and foothill grassland. This species blooms between February and March, and typically occurs at elevations ranging from 75-500 meters.	Moderate Potential	Moderate Potential	Suitable habitat for the species exists within the study area in grassland habitat with serpentinite soils north of SR-1 along gen-tie routes 1 and 1-A, as well as south of the Project site.

Scientific Name / Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur within the Project Area	Potential to Occur within the Study Area	Rationale
<i>Delphinium umbracolorum</i> / umbrella larkspur	None/None G3/S3 1B.3	Occurs in Cismontane woodland and chaparral in mesic sites. Occurs at elevations of 215-2075 meters. Blooms from April through June.	Not Expected	Not Expected	The Project area is lower than the known elevation range of the species and the study area is outside of the known species range.
<i>Dithyrea maritima</i> / beach spectaclepod	None/STG1/S1 1B.1	Occurs in coastal dunes and sandy substrates within coastal scrub sand dunes and other sandy soils near the seashore. This species blooms between March and May, and typically occurs at elevations ranging from 3-50 meters.	Not Expected	Not Expected	Suitable coastal dune habitat and sandy soils are not present within the study area.
<i>Dudleya abramsii</i> ssp. <i>Bettinae</i> / Betty's dudleya	None/None G4T2/S2 1B.2	Occurs in serpentinite and rocky substrates within chaparral, coastal scrub, and valley and foothill grassland. This species blooms between May and July, and typically occurs at elevations ranging from 20-200 meters.	Moderate Potential	Moderate Potential	Suitable habitat for the species exists within the study area in grassland habitat with serpentinite soils north of SR-1 along gen-tie routes 1 and 1-A, as well as south of the Project site. One historical occurrence (1977) is documented within the southern portion of the study area (Calflora 2021).
<i>Dudleya abramsii</i> ssp. <i>Murina</i> / mouse-gray dudleya	None/None G4T2/S2 1B.3	Occurs in chaparral, cismontane woodland, valley and foothill grassland, and serpentine outcrops. Occurs at elevations of 25-535 meters. Blooms in May and June.	Moderate Potential	Moderate Potential	Suitable habitat for the species exists within the study area in grassland habitat within serpentinite soils north of SR-1 along gen-tie routes 1 and 1-A, as well as south of the Project site.

Scientific Name / Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur within the Project Area	Potential to Occur within the Study Area	Rationale
<i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i> / Blochman's dudleya	None/None G3T2/S2 1B.1	Occurs in rocky, often clay or serpentinite substrates within coastal bluff scrub, chaparral, coastal scrub, and valley and foothill grassland. This species blooms between April and June, and typically occurs at elevations ranging from 5-450 meters.	Moderate Potential	Moderate Potential	Some rocky soils may be present in the study area, including the portions of the study area north of SR-1 along gen-tie routes 1 and 1A, as well as south of the Project site. Multiple occurrences of the species are documented within one mile of the Project area (Calflora 2021).
<i>Eriastrum luteum</i> / yellow-flowered eriastrum	None/None G2/S2 1B.2	Broadleafed upland forest, cismontane woodland, chaparral. On bare sandy decomposed granite slopes. Occurs at elevations ranging from 240-580 meters. Blooms in May and June.	Not Expected	Not Expected	Suitable decomposed granite slopes are not present, and the study area is outside of the known species range.
<i>Erigeron blochmaniae</i> / Blochman's leafy daisy	None/None G2/S2 1B.2	Coastal dunes, coastal scrub. Sand dunes and hills. Occurs at elevations ranging from 0-185 meters. Blooms June through August.	Not Expected	Not Expected	Suitable sandy coastal habitat is not present within the study area.
<i>Erigeron sanctarum</i> / saints' daisy	None/None G3/S3 4.2	Chaparral, cismontane woodland, coastal scrub. Occurs at elevations of 160-300 meters. Blooms from March through July.	Not Expected	Low Potential	The Project area is outside of the elevation range of this species. Some potentially suitable habitat occurs within the southern portion of the study area.
<i>Eriodictyon altissimum</i> / Indian Knob mountainbalm	FE/SE G1/S1 1B.1	Chaparral (maritime), cismontane woodland, coastal scrub. Ridges in open, disturbed areas within chaparral on Pismo sandstone. Occurs at elevations of 95-245 meters. Blooms from March through June.	Not Expected	Low Potential	Suitable chaparral habitat and Pismo sandstone soils are not present within the Project area. Some potentially suitable habitat occurs within the southern portion of the study area.
<i>Eriogonum elegans</i> / elegant wild buckwheat	None/None G4G5/S4S5 4.3	Cismontane woodland,	Not Expected	Low Potential	The Project area is outside of the elevation range of this species. Some potentially

Scientific Name / Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur within the Project Area	Potential to Occur within the Study Area	Rationale
		valley and foothill grassland. Usually in sandy or gravelly substrates; often in washes, sometimes roadsides. Occurs at elevations of 200-1525 meters. Blooms from March through November.			suitable habitat occurs within the southern portion of the study area, but there are no documented occurrences within five miles of the study area.
<i>Eryngium aristulatum</i> var. <i>hooveri</i> / Hoover's button-celery	None/None G5T1/S1 1B.1	Vernal pools. Alkaline depressions, vernal pools, roadside ditches and other wet places near the coast. Occurs at elevations of 1-50 meters. Blooms in July.	Not Expected	Low Potential	Marginally suitable habitat could be present throughout the study area in roadside ditches. The species was not detected during botanical surveys conducted within suitable habitat in the Project area.
<i>Erysimum capitatum</i> var. <i>lompocense</i> / San Luis Obispo wallflower	None/None G5T3/S3 4.2	Chaparral, coastal scrub. Sandy hillsides and mesas. Occurs at elevations of 60-500 meters. Blooms from February through May.	Not Expected	Not Expected	Suitable sandy hillsides and mesas are not present within the study area.
<i>Erysimum suffrutescens</i> / suffrutescents wallflower	None/None G3/S3 4.2	Coastal dunes, coastal scrub, coastal bluff scrub, chaparral. Coastal dunes and bluffs. Occurs at elevations of 0-150 meters. Blooms January through July.	Low Potential	Low Potential	There is low potential for the species to exist within coastal scrub and chaparral habitats in the study area.
<i>Eschscholzia hypocoides</i> / San Benito poppy	None/None G4/S4 4.3	Valley and foothill grassland, chaparral, cismontane woodland. Serpentine clay. Occurs at elevations of 200-1500 meters. Blooms March through June.	Not Expected	Not Expected	The study area is outside of the known species range.
<i>Extriplex joaquinana</i> / San Joaquin sparscale	None/None G2/S2 1B.2	Annual herb. Blooms April through October. Chenopod scrub, alkali meadow, playas, valley and foothill grassland. In seasonal alkali wetlands or alkali sink	Not Expected	Not Expected	No suitable alkali wetlands or sink scrub occur within the study area.

Scientific Name / Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur within the Project Area	Potential to Occur within the Study Area	Rationale
		scrub with <i>Distichlis spicata</i> , <i>Frankenia</i> , etc. Occurs at elevations of 1-835 meters.			
<i>Fritillaria agrestis</i> / stinkbells	None/None G3/S3 4.2	Cismontane woodland, chaparral, valley and foothill grassland, pinyon and juniper woodland. Sometimes on serpentine; mostly found in nonnative grassland or in grassy openings in clay soil. Occurs at elevations of 10-1555 meters. Blooms March through June.	Low Potential	Low Potential	Suitable habitat for the species exists within annual grasslands in the study area, north of SR-1 along gen- tie routes 1 and 1-A. Some potentially suitable habitat also exists within the southern portion of the study area, south of the Project site.
<i>Fritillaria ojaiensis</i> / Ojai fritillary	None/None G3/S3 1B.2	Broadleafed upland forest (mesic), chaparral, lower montane coniferous forest, cismontane woodland. Rocky sites. Sometimes on serpentine; sometimes along roadsides. Occurs at elevations of 95-1140 meters. Blooms February through May.	Not Expected	Low Potential	Suitable habitat for the species is not present within the Project area. Some potentially suitable habitat exists within the southern portion of the study area, south of the Project site.
<i>Fritillaria viridea</i> / San Benito fritillary	None/None G2/S2 1B.2	Chaparral, cismontane woodland. Serpentine slopes. Sometimes on rocky streambanks. Occurs at elevations of 365-1360 meters. Blooms March through May.	Not Expected	Not Expected	The study area is outside of the known range of the species.
<i>Galium cliftonsmithii</i> / Santa Barbara bedstraw	None/None G4/S4 4.3	Cismontane woodland, chaparral. Light shade, coastal canyons, dry banks. Occurs at elevations of	Not Expected	Not Expected	The study area is outside of the known range of the species.

Scientific Name / Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur within the Project Area	Potential to Occur within the Study Area	Rationale
		200-1220 meters. Blooms May through July.			
<i>Grindelia hirsutula</i> var. <i>maritima</i> / San Francisco gumplant	None/None G5T1Q/S1 3.2	Coastal scrub, coastal bluff scrub, valley and foothill grassland. Sandy or serpentine slopes, sea bluffs. Occurs at elevations of 15-305 meters. Blooms June through September.	Not Expected	Not Expected	The study area is outside of the known range of the species.
<i>Hordeum intercedens</i> / vernal barley	None/None G3G4/S3S43.2	Valley and foothill grassland, vernal pools, coastal dunes, coastal scrub. Vernal pools, dry, saline streambeds, alkaline flats. Occurs at elevations of 5-1000 meters. Blooms March through June.	Not Expected	Not Expected	Some coastal scrub habitat exists within the study area, but vernal pool or saline habitat is not present. The study area is outside of the known range of the species.
<i>Horkelia cuneata</i> var. <i>puberula</i> / mesa horkelia	None/None G4T1/S1 1B.1	Perennial herb. Blooms February to September. Chaparral, cismontane woodland, coastal scrub. Sandy or gravelly sites. Occurs at elevations of 70-810 meters.	Not Expected	Low Potential	Some coastal scrub habitat exists within the Project area but is not suitable for this variety. Some potentially suitable habitat occurs within the southern portion of the study area.
<i>Horkelia cuneata</i> var. <i>sericea</i> / Kellogg's horkelia	None/None G4T1?/S1? 1B.1	Closed-cone coniferous forest, coastal scrub, coastal dunes, chaparral. Old dunes, coastal sandhills; openings. Sandy or gravelly soils. Occurs at elevations of 5-430 meters. Blooms February through July.	Not Expected	Low Potential	Some coastal scrub habitat exists within the Project area but is not suitable for this variety. Some potentially suitable habitat occurs within the southern portion of the study area. One historic occurrence (1989) of the species is documented in the very southwestern portion of the study area (Calflora 2021).
<i>Juncus acutus</i> ssp. <i>leopoldii</i> / southwestern spiny rush	None/None G5T5/S4 4.2	Salt marshes, alkaline seeps, coastal dunes (mesic sites). Moist saline places. Occurs at elevations of 3-900 meters. Blooms in May and June.	Not Expected	Not Expected	Suitable salt marsh, alkaline seep, and coastal dune habitats are not present within the study area.

Scientific Name / Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur within the Project Area	Potential to Occur within the Study Area	Rationale
<i>Lasthenia californica</i> ssp. <i>macrantha</i> / perennial goldfields	None/None G3T2/S2 1B.2	Coastal bluff scrub, coastal dunes, coastal scrub. Occurs at elevations of 5-185 meters. Blooms January through November.	Not Expected	Low Potential	Some coastal scrub habitat exists within the study area but is not suitable for this subspecies. Some potentially suitable habitat occurs within the southern portion of the study area. One historic occurrence (1989) of the species is documented in the <i>Morro Bay South</i> USGS quad (California 2021).
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i> / Coulter's goldfields	None/None G4T2/S2 1B.1	Annual herb. Blooms February to June. Coastal salt marshes, playas, valley and foothill grassland, vernal pools. Usually found on alkaline soils in playas, sinks, and grasslands. Occurs at elevations of 1-1400 meters.	Not Expected	Not Expected	Some grassland habitat exists within the study area, but suitable playa or vernal pool habitat is not present.
<i>Lasthenia leptalea</i> / Salinas Valley goldfields	None/None G3/S3 4.3	Cismontane woodland, valley and foothill grassland. Occurs at elevations of 60-1065 meters. Blooms February through April.	Not Expected	Low Potential	Suitable habitat is not present within the Project area for this species. Some potentially suitable habitat occurs within the southern portion of the study area. Two occurrences of the species are documented in the <i>Morro Bay South</i> USGS quad (California 2021).
<i>Layia jonesii</i> / Jones' layia	None/None G2/S2 1B.2	Chaparral, valley and foothill grassland. Clay soils and serpentine outcrops. Occurs at elevations of 5-245 meters. Blooms March through May.	High Potential	High Potential	There is a high potential for the species to occur within the study area in grassland habitat north of SR-1 along gen-tie routes 1 and 1-A, as well as within chaparral habitat south of the Project site.
<i>Leptosiphon grandiflorus</i> / large-flowered leptosiphon	None/None G3G4/S3S44.2	Coastal bluff scrub, closed-cone coniferous forest, cismontane woodland, coastal dunes, coastal prairie, coastal scrub, valley and foothill grassland. Open, grassy flats, generally sandy soil. Occurs at elevations of 5-	Not Expected	Not Expected	Some potentially suitable habitat exists within the study area, but the species was not observed during the botanical surveys conducted within the Project area. The study area is outside the primary range of the species.

Scientific Name / Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur within the Project Area	Potential to Occur within the Study Area	Rationale
		1200 meters. Blooms April through August.			
<i>Lomatium parvifolium</i> / small-leaved lomatium	None/None G3/S3 4.2	Closed-cone coniferous forest, chaparral, coastal scrub, riparian woodland. On serpentine. Occurs at elevations of 20-700 meters. Blooms January through June.	Not Expected	Not Expected	Some potentially suitable habitat exists within the study area, but the species was not observed during the botanical surveys conducted within the Project area. The study area is outside the primary range of the species.
<i>Lupinus ludovicianus</i> / San Luis Obispo County lupine	None/None G1/S1 1B.2	Chaparral, cismontane woodland. Open areas in sandy soil, Santa Margarita formation. Occurs at elevations of 85-525 meters. Blooms April through July.	Not Expected	Not Expected	Suitable soils are not present within the study area. The study area is outside the known range of the species.
<i>Malacothamnus jonesii</i> / Jones' bush-mallow	None/None G4/S4 / 4.3	Chaparral, cismontane woodland. Occurs at elevations of 160-825 meters. Blooms May through July.	Not Expected	Not Expected	The study area is outside of the known range of the species.
<i>Malacothamnus palmeri</i> var. <i>palmeri</i> / Santa Lucia bush- mallow	None/None G3T2Q/S2 1B.2	Chaparral. Dry rocky slopes, mostly near summits, but occasionally extending down canyons to the sea. Occurs at elevations of 3-670 meters. Blooms May through July.	Not Expected	Low Potential	Suitable dry, rocky slope habitat is not present within the Project area. Some potentially suitable habitat is present in the southern portion of the study area around Hollister Peak.
<i>Monardella palmeri</i> / Palmer's monardella	None/None G2/S2 1B.2	Cismontane woodland, chaparral. On serpentine, often found associated with Sargent cypress forests. Occurs at elevations of 90-945 meters. Blooms June through August.	Not Expected	Low Potential	Suitable habitat for the species is not present within the Project area. Some potentially suitable habitat is present within the southern portion of the study area.

Scientific Name / Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur within the Project Area	Potential to Occur within the Study Area	Rationale
<i>Monardella sinuata</i> ssp. <i>Sinuata</i> / southern curly-leaved monardella	None/None G3T2/S2 1B.2	Coastal dunes, coastal scrub, chaparral, cismontane woodland. Sandy soils. Occurs at elevations of 20-305 meters. Blooms April through September.	Not Expected	Not Expected	Suitable sandy soils required by the species are not present within the study area.
<i>Monolopia gracilens</i> / woodland woollythreads	None/None G3/S3 1B.2	Chaparral, valley and foothill grassland, cismontane woodland, broadleafed upland forest, North Coast coniferous forest. Grassy sites, in openings; sandy to rocky soils. Often seen on serpentine after burns but may have only weak affinity to serpentine. Occurs at elevations of 120-975 meters. Blooms March through July.	Not Expected	Not Expected	The study area is outside of the known range of the species.
<i>Mucronea californica</i> / California spineflower	None/None G3/S3 4.2	Chaparral, cismontane woodland, coastal dunes, coastal scrub, valley and foothill grassland. Sandy soil. Occurs at elevations of 0-1400 meters. Blooms March through July.	Not Expected	Not Expected	Suitable sandy soils required by the species are not present within the study area.
<i>Muhlenbergia utilis</i> / aparejo grass	None/None G4/S2S3 2B.2	Meadows and seeps, marshes and swamps, chaparral, coastal scrub, cismontane woodland. Sometimes alkaline, sometimes serpentine. Occurs at elevations of 25-2325 meters. Blooms October through March.	Not Expected	Not Expected	The study area is outside of the known range of the species.

Scientific Name / Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur within the Project Area	Potential to Occur within the Study Area	Rationale
<i>Navarretia fossalis</i> / spreading navarretia	FT/NoneG2/S2 1B.1	Occurs in vernal pools, chenopod scrub, marshes, swamps, and playas. Also occurs in San Diego hardpan and San Diego claypan vernal pools, and in swales & vernal pools that are often surrounded by other habitat types. Occurs at elevations of 15-850 meters. Blooms April through June.	Not Expected	Not Expected	Suitable habitat for the species is not present within the study area and the study area is outside of the known range of the species.
<i>Nemacaulis denudata</i> var. <i>denudata</i> / coast woolly-heads	None/None G3G4T2/S21B.2	Occurs in coastal dunes at elevations of 0-5 meters. Blooms April through September.	Not Expected	Not Expected	Suitable dune habitat is not present within the study area.
<i>Perideridia pringlei</i> / adobe yampah	None/None G4/S4 4.3	Chaparral, cismontane woodland, pinyon and juniper woodland, coastal scrub. Serpentine, clay soils. Grassland hillsides; seasonally wet sites. Occurs at elevations of 300- 1800 meters. Blooms April through June.	Not Expected	Not Expected	The study area is outside of the known range of the species.
<i>Piperia michaelii</i> / Michael's rein orchid	None/None G3/S3 4.2	Coastal bluff scrub, coastal scrub, cismontane woodland, chaparral, closed-cone coniferous forest, lower montane coniferous forest. Mudstone and humus, generally dry sites. Occurs at elevations of 3-915 meters. Blooms April through August.	Not Expected	Low Potential	Limited coastal scrub habitat exists within the Project area, but the species was not observed during the botanical surveys. Some potentially suitable habitat occurs within the southern portion of the study area, south of the Project site.

Scientific Name / Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur within the Project Area	Potential to Occur within the Study Area	Rationale
<i>Plagiobothrysuncinatus</i> / hooked popcornflower	None/None G2/S2 1B.2	Chaparral, cismontane woodland, valley and foothill grassland. Sandstone outcrops and canyon sides; often in burned or disturbed areas. Occurs at elevations of 210- 855 meters. Blooms in April and May.	Not Expected	Not Expected	The study area is outside of the known range of the species.
<i>Poa diaboli</i> / Diablo Canyon bluegrass	None/None G2/S2 1B.2	Chaparral (mesic sites), cismontane woodland, coastal scrub, closed-cone coniferous forest. Shale, sometimes burned areas. Occurs at elevations of 115- 400 meters. Blooms in March and April.	Not Expected	Low Potential	Suitable habitat is not present within the Project area. Some potentially suitable habitat occurs within the southern portion of the study area, south of the Project site.
<i>Prunus fasciculata var. punctata</i> / sand almond	None/None G5T4/S4 4.3	Chaparral, coastal scrub, cismontane woodland, coastal dunes. Sandy flats. Occurs at elevations of 15- 200 meters. Blooms in March and April.	Not Expected	Low Potential	Some coastal scrub habitat exists within the Project area but is not suitable for this species. Some potentially suitable habitat occurs within the southern portion of the study area, south of the Project site.
<i>Ribes sericeum</i> / Santa Lucia gooseberry	None/None G4/S4 4.3	North coast coniferous forest, coastal bluff scrub, cismontane woodland, broadleafed upland forest. Along streams in redwood forests and on the coastal slopes of the Santa Lucia Mtns. Occurs at elevations of 305- 1220 meters. Blooms December through April.	Not Expected	Not Expected	No suitable forest, woodland, or coastal bluff scrub habitat exists within the Project area. The study area is outside of the known range of the species.

Scientific Name / Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur within the Project Area	Potential to Occur within the Study Area	Rationale
<i>Romneya coulteri</i> / Coulter's matilijapoppy	None/None G4/S4 4.2	Coastal scrub, chaparral. In washes and on slopes; also, after burns. Occurs at elevations of 20-1200 meters. Blooms March through July.	Not Expected	Not Expected	Some coastal scrub and chaparral habitat exists within the study area but is not suitable for this species. The study area is outside of the known range of the species.
<i>Sanicula hoffmannii</i> / Hoffmann's sanicle	None/None G3/S3 4.3	Broadleaved upland forest, coastal scrub, coastal bluff scrub, chaparral, cismontane woodland, lower montane coniferous forest. Cool slopes in deep soil, often in moist shaded serpentine soils, or in clay soils. Occurs at elevations of 30-300 meters. Blooms March through May.	Low Potential	Low Potential	There is a low potential for the species to occur within coastal scrub, chaparral, and oak woodland habitats within the study area.
<i>Sanicula maritima</i> / adobe sanicle	None/SRG2/S2 1B.1	Meadows and seeps, valley and foothill grassland, chaparral, coastal prairie. Moist clay or ultramafic soils. Occurs at elevations of 15-215 meters. Blooms from February through May.	Low Potential	Low Potential	Suitable habitat for the species exists within grassland habitat within the study area, north of SR-1 along gen-tie routes 1 and 1-A. Potentially suitable habitat for the species also occurs within the southern portion of the study area, south of the Project site.
<i>Scrophularia atrata</i> / black-flowered figwort	None/None G2?/S2? 1B.2	Closed-cone coniferous forest, chaparral, coastal dunes, coastal scrub, riparian scrub. Sand, diatomaceous shales, and soils derived from other parent material; around swales and in sand dunes. Occurs at elevations of 10-445 meters. Blooms March through July.	Not Expected	Not Expected	Suitable soils for the species do not exist within the study area. The study area is outside of the known range of the species.

Scientific Name / Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur within the Project Area	Potential to Occur within the Study Area	Rationale
<i>Senecio aphanactis</i> / chaparral ragwort	None/None G3/S2 2B.2	Chaparral, cismontane woodland, coastal scrub. Drying alkaline flats. Occurs at elevations of 20-1020 meters. Blooms January through April.	Not Expected	Low Potential	Drying alkali flat habitat does not occur within the study area. However, occurrences of the species are documented within the <i>Morro Bay South</i> USGS quad and some potentially suitable habitat for the species occurs on hillsides within the northern and southern portions of the study area.
<i>Senecio astephanus</i> / San Gabriel ragwort	None/None G3/S3 4.3	Chaparral, coastal bluff scrub. Rocky slopes. Occurs at elevations of 400- 1500 meters. Blooms from May through July.	Not Expected	Not Expected	The study area is outside of the elevation range for the species.
<i>Senecio blochmaniae</i> / Blochman's ragwort	None/None G3/S3 4.2	Coastal dunes. Occurs at elevations of 0-100 meters. Blooms from March through October.	Not Expected	Not Expected	Suitable coastal dune habitat does not occur within the study area.
<i>Sidalcea hickmanii</i> ssp. <i>Anomala</i> / Cuesta Pass checkerbloom	None/SR G3T1/S1 1B.2	Closed-cone coniferous forest, chaparral. Rocky serpentine soil; associated with Sargent cypress forest. Occurs at elevations of 600- 800 meters. Blooms in May and June.	Not Expected	Not Expected	The study area is outside of the elevation range for the species.
<i>Solidago guiradonis</i> / Guirado's goldenrod	None/None G3/S3 4.3	Cismontane woodland, valley and foothill grassland. Near serpentine streams or seeps in asbestos-laden soils; serpentine. Occurs at elevations of 600-1370 meters. Blooms in September and October.	Not Expected	Not Expected	The study area is outside of the elevation range for the species.
<i>Streptanthus albidus</i> ssp. / <i>peramoenus</i> most beautiful jewelflower	None/None G2T2/S2 1B.2	Chaparral, valley and foothill grassland, cismontane woodland. Serpentine outcrops, on ridges and slopes. Occurs at elevations of 90- 1040 meters. Blooms April through September.	Low Potential	Low Potential	Suitable habitat exists within grasslands in the study area, north of SR-1 along gen-tie routes 1 and 1-A and within woodlands south of the Project site.

Scientific Name / Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur within the Project Area	Potential to Occur within the Study Area	Rationale
<i>Suaeda californica</i> / California seablite	FE/NoneG1/S1 1B.1	Marshes and swamps. Margins of coastal salt marshes. Occurs at elevations of 0-5 meters. Blooms June through October.	Not Expected	Not Expected	Some marsh habitat occurs within the study area, but the species was not detected during the botanical surveys conducted within suitable habitat. No salt marsh habitat occurs within the study area.
<i>Sulcaria isidiifera</i> / splitting yarn lichen	None/None G1/S1 1B.1	Coastal scrub. On branches of oaks and shrubs in old growth coastal scrub. Occurs at elevations of 20-55 meters.	Not Expected	Low Potential	The species was not observed within coastal scrub or oak woodland habitats during the botanical surveys conducted within the Project area. Potentially suitable habitat for the species occurs within the southern portion of the study area, south of the Project site.
<i>Trifolium hydrophilum</i> / saline clover	None/None G2/S2 1B.2	Marshes and swamps, valley and foothill grassland, vernal pools. Mesic, alkaline sites. Occurs at elevations of 1-335 meters. Blooms April through June.	Not Expected	Not Expected	The study area is outside of the known range of the species.

Source: Rincon 2021.

Regional Vicinity refers to within a 10-mile search radius of the Project Area. Project Area refers to the Project site and gen-tie alternative routes. Study Area refers to the Project site plus a one-mile buffer and the gen-tie routes plus a 1,000-foot buffer.

Status (Federal/State) CRPR (CNPS California Rare Plant Rank)

FE = Federal Endangered 1A = Presumed extirpated in California, and rare or extinct elsewhere FT = Federal Threatened 1B = Rare, Threatened, or Endangered in California and elsewhere

SE = State Endangered 2A = Presumed extirpated in California, but common elsewhere

ST = State Threatened 2B = Rare, Threatened, or Endangered in California, but more common elsewhere SR = State Rare

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 Statuses

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

GH or SH Possibly Extirpated – missing; known from only historical occurrences but still some hope of rediscovery

Additional notations may be provided as follows

T – Intraspecific Taxon (subspecies, varieties, and other designations below the level of species) Q – Questionable taxonomy that may reduce conservation priority

? – Inexact numeric rank

Appendix 5.2A: Special-Status Wildlife Species

Scientific Name / Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur within the Project Area	Potential to Occur within the Study Area	Rationale
Invertebrates					
<i>Atractelmis wawona</i> Wawona riffle beetle	None/None G3/S1S2	Aquatic, found in riffles of rapid, small to medium clear mountain streams at elevations of 609 to 1524 meters. The species has a strong preference for inhabiting submerged aquatic mosses.	Not Expected	Not Expected	Suitable rapid stream habitat is not present, and the study area is outside of the elevation range of the species.
<i>Bombus caliginosus</i> obscure bumble bee	None/None G4/S1S2	Coastal areas from Santa Barbara County to north to Washington state. Food plant genera include <i>Baccharis</i> , <i>Cirsium</i> , <i>Lupinus</i> , <i>Lotus</i> , <i>Grindelia</i> and <i>Phacelia</i> .	Low Potential	Low Potential	Some suitable plant food genera are present within the study area. Two occurrences of the species are documented in the CNDDDB within five miles of the Project area, but both are historical (1974 and 1987) and located within local state parks (CDFW 2021a).
<i>Bombus crotchii</i> / Crotch bumble bee	None/SCE G3G4/S1S2	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include <i>Antirrhinum</i> , <i>Phacelia</i> , <i>Clarkia</i> , <i>Dendromecon</i> , <i>Eschscholzia</i> , and <i>Eriogonum</i> .	Not Expected	Not Expected	The study area is outside of the known range of the species (IUCN 2021). There are no occurrences of the species documented in the CNDDDB within five miles of the Project area (CDFW 2021a).
<i>Bombus occidentalis</i> / western bumble bee	None/SCE G2G3/S1	Once common & widespread, species has declined precipitously from central CA to southern B.C., perhaps from disease. Occurs at elevations of 0 to 2,000 meters. Require suitable nesting sites, overwintering sites for the queens, and nectar and pollen resources throughout the spring, summer, and fall.	Low Potential	Low Potential	The study area is within the known range of the species, though no occurrences are documented in the CNDDDB within five miles of the Project area (CDFW 2021a).
<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-	Not Expected	Not Expected	The study area is outside of the known range of the species. There are no occurrences of the species documented in the CNDDDB

Scientific Name / Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur within the Project Area	Potential to Occur within the Study Area	Rationale
		water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.			within five miles of the Project area (CDFW 2021a).
<i>Cicindela hirticollis/ grandidens</i> sandy beach tiger beetle	None/None G5T2/S2	Inhabits areas adjacent to non-brackish water along the coast of California from San Francisco Bay to northern Mexico. Clean, dry, light-colored sand in the upper zone. Subterranean larvae prefer moist sand not affected by wave action.	Not Expected	Not Expected	The study area does not occur in close enough proximity to the ocean or bay to have suitable habitat for the species. Two occurrences of the species are documented in the CNDDDB within five miles of the Project area, but both are historical (1962 and 1985) and located within local state parks (CDFW 2021a).
<i>Coelus globosus</i> / globose dune beetle	None/None G1G2/S1S2	Inhabitant of coastal sand dune habitat; erratically distributed from Ten Mile Creek in Mendocino County south to Ensenada, Mexico. Inhabits foredunes and sand hummocks, typically within 50 meters of the high tide line. The beetle burrows beneath the sand surface and is most common beneath dune vegetation.	Not Expected	Not Expected	The study area does not have suitable dune or sand hummock habitat and is located more than 50 meters from the high tide line.
<i>Danaus plexippus</i> pop. 1 / monarch – California overwintering population	FC/None G4T2T3/S2S3	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.	Not Expected	Not Expected	Individuals may occur within the study area during dispersal, but no roosting habitat is present. Thirteen occurrences of overwintering populations are documented in the CNDDDB within five miles of the Project area (CDFW 2021a).
<i>Helminthoglypta walkeri</i> / Morro shoulderbandsnail	FE/None G1/S1S2	Restricted to the coastal strand in the immediate vicinity of Morro Bay. Occurs within coastal dune scrub, coastal scrub, and maritime chaparral habitat.	Moderate Potential	Moderate Potential	The study area lies north and east of all known occurrences of the species (CDFW 2021a, Sims 2010). However, the species has some potential to occur beneath shrubs within the southern portion of the

Scientific Name / Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur within the Project Area	Potential to Occur within the Study Area	Rationale
		Typically found beneath native shrubs that provide thick leaf litter and canopy shelter.			study area and along the genetic routes. Twelve occurrences of the species are documented in the CNDDDB within five miles of the Project area (CDFW 2021a).
<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	Not Expected	No suitable unplowed grassland habitat or alkaline pools occur within the study area.
<i>Plebejus icarioides moroensis</i> / Morro Bay blue butterfly	None/None G5T2/S2	Inhabits stabilized dunes and adjacent areas of coastal San Luis Obispo and NW Santa Barbara counties. Larval foodplant thought to be <i>Lupinus chamissonis</i> .	Not Expected	Not Expected	Suitable dune habitat does not exist within the study area, and no <i>Lupinus chamissonis</i> was observed during botanical surveys. Seven occurrences of the species are documented in the CNDDDB within five miles of the Project area (CDFW 2021a).
<i>Polyphylla nubila</i> Atascadero June beetle	None/None G1/S1	Known only from inland sand dunes in San Luis Obispo County.	Not Expected	Not Expected	No suitable inland sand dune habitat occurs within the study area.
<i>Pyrgulopsis taylori</i> / San Luis Obispo pyrg	None/None G1/S1	Freshwater habitats in San Luis Obispo County.	Not Expected	Not Expected	The study area is outside of the known range of the species, which is thought to be endemic to the San Luis Obispo Creek drainage (NatureServe 2021).
<i>Tryonia imitator</i> California / brackish water snail	None/None G2/S2	Inhabits coastal lagoons, estuaries and salt marshes, from Sonoma County south to San Diego County. Found only in permanently submerged areas in a variety of sediment types; able to withstand a wide range of salinities.	Not Expected	Not Expected	No lagoon, estuary, or salt marsh habitat occurs within the study area.

Scientific Name / Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur within the Project Area	Potential to Occur within the Study Area	Rationale
Fish					
<i>Eucyclogobius newberryi</i> / tidewater goby	FE/NoneG3/S3	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels.	Not Expected	Not Expected	The species is present within the Morro Bay Estuary, but the portion of Chorro Creek that runs through the study area is upstream of the saltwater interface and does not have suitable substrate or habitat for the species. Impediments to tidewater goby downstream of the study area, including riffles, are present and the species was not observed during instream surveys.
<i>Oncorhynchus mykiss</i> irideus pop. 9 / steelhead - south-central California coast DPS	FT/None G5T2Q/S2	Occurs in freshwater systems and requires adequate water conditions suitable for migration (i.e., flow, dissolved oxygen levels within the surface water, water temperature) and suitable substrate (i.e., gravels) for spawning. Juvenile <i>O. mykiss</i> require suitable cover, flow, foraging conditions, and cool temperatures for rearing. Juvenile emigration (i.e., outmigration to the ocean) requires water conditions suitable for migration. Federal listing refers to runs in coastal basins from the Pajaro River south to, but not including the Santa Maria River.	Present	Present	This species was observed during the instream snorkel survey on May 25, 2021 and is known to occur in Chorro Creek (CDFW 2021a, Sims 2010, Stillwater 2017, TRPA 2001, etc.). Chorro Creek and San Bernardo Creek are designated as critical habitat for the species.
Amphibians					
<i>Batrachoseps minor</i> lesser / slender salamander	None/None G1/S1 SSC	South Santa Lucia Mountains in tanbark oak, coast live oak, blue oak, sycamore & laurel. Shaded slopes with abundant leaf litter.	Not Expected	Not Expected	There is limited suitable habitat within oak woodlands in the southern portion of the study area. However, the species is only known to occur inland of the study area (Nafis 2021) and there are no

Scientific Name / Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur within the Project Area	Potential to Occur within the Study Area	Rationale
					occurrences of the species documented in the CNDDDB within five miles of the Project area (CDFW 2021a).
<i>Rana boylei</i> / foothill yellow-leggedfrog	None/SEG3/S3 SSC	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 prefers sunny areas for basking. Needs at least 15 weeks to attain metamorphosis.	Low Potential	Low Potential	This species has a low potential to occur within rocky stream habitat in the study area, within Chorro Creek or other creeks or drainages. There are no occurrences of the species documented in the CNDDDB within five miles of the Project area (CDFW 2021a). The study area does not provide the sunny banks or basking sites alongside stream habitat which are preferred by the species.
<i>Rana draytonii</i> / California red-leggedfrog	FT/None G2G3/S2S3SSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	Present	Present	Excellent habitat for the species exists within the study area in Chorro Creek, as well as San Bernardo and San Luisito Creeks. There are twelve occurrences of the species documented in the CNDDDB within five miles of the Project area, the most recent of which was in 2016 (CDFW 2021a), and the species is known to occur in Chorro Creek (California Army National Guard 2016).
<i>Spea hammondi</i> / western spadefoot	None/None G2G3/S3 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	Not Expected	This species occurs in San Luis Obispo County, but the study area lies west of its known range (Nafis 2021). There are no occurrences of the species documented in the CNDDDB within five miles of the Project area (CDFW 2021a).

Scientific Name / Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur within the Project Area	Potential to Occur within the Study Area	Rationale
<i>Taricha torosa</i> / Coast Range newt	None/None G4/S4 SSC	Coastal drainages from Mendocino County to San Diego County. Lives in terrestrial habitats & will migrate over one km to breed in ponds, reservoirs & slow-moving streams.	Moderate Potential	Moderate Potential	There is moderate potential for the species to occur within the study area in creeks, drainages, ponds, or nearby areas following periods of rain. There are no occurrences of the species documented in the CNDDDB within five miles of the Project area (CDFW 2021a), but the study area lies within the known range of the species (Nafis 2021) and habitat for the species is present.
Reptiles					
<i>Actinemys pallida</i> / Southwestern pondturtle	None/None G3G4/S3 SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation. Needs basking sites and suitable (sandybanks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	High Potential	High Potential	There is a high potential for the species to be present within the study area in Chorro Creek. There are six occurrences of the species documented in the CNDDDB within five miles of the Project area, the most recent of which was in 2005 (CDFW 2021a). The species is considered a year-round resident of Chorro Creek, according to State Park staff (Sims 2010).
<i>Anniella pulchra</i> / Northern California legless lizard	None/None G3/S3 SSC	Sandy or loose loamy soils under sparse vegetation of beaches, coastal scrub, chaparral, oak woodland, desert scrub, and riparian habitats. Requires soils with a high moisture content.	Low Potential	Moderate Potential	Habitat for the species occurs along margins of the Project site and within scrub, chaparral, and oak woodland habitats throughout the study area. There are six occurrences of the species documented in the CNDDDB within five miles of the study area, the most recent of which was in 2015 (CDFW 2021a). The species is locally common in Los Osos, and recent sightings occurred

Scientific Name / Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur within the Project Area	Potential to Occur within the Study Area	Rationale
					south of the study area and east of Morro Bay (Sims 2010).
<i>Phrynosoma blainvillii</i> / coast horned lizard	None/None G3G4/S3S4SSC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	Low Potential	Low Potential	There is low potential for the species to occur within chaparral, scrub, or oak woodland habitat within the study area. There are two occurrences of the species documented in the CNDDDB within five miles of the Project area, from 2001 and 2004 (CDFW 2021a). The species has been documented in sandy areas in Los Osos and Morro Strand State Beach, but not within habitats that occur within the study area.
Birds					
<i>Accipiter cooperii</i> / Cooper's hawk	None/None G5/S4 WL	Woodland, chiefly of open, interrupted or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.	High Potential	Present	Nesting and foraging habitat for the species is present within the study area. Multiple occurrences of the species are documented within one mile of the Project area in eBird (Cornell Lab of Ornithology 2021a).
<i>Agelaius tricolor</i> / tricolored blackbird	None/ST G1G2/S1S2 SSC USFWS BCC	Highly colonial species, most numerous in Central Valley & vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony.	Low Potential	Low Potential	Limited suitable foraging habitat for the species occurs within the study area, as well as a small amount of suitable nesting habitat within <i>Typha</i> stands. Several occurrences of the species have been documented in eBird within 5 miles of the Project area (Cornell Lab of Ornithology 2021a).
<i>Aquila chrysaetos</i> / golden eagle	None/None G5/S3	Rolling foothills, mountain areas, sage- juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most	Low Potential (non-breeding)	Moderate Potential	There is moderate potential for the species to fly over or forage within the study area. No suitable nesting habitat for

Scientific Name / Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur within the Project Area	Potential to Occur within the Study Area	Rationale
	FP, WL USFWS BCC	parts of range; also, large trees in open areas.			the species exists within the Project area, though some suitable nesting habitat for species exists within the study near Hollister Peak. Multiple occurrences of the species are documented within one mile of the Project area in eBird (Cornell Lab of Ornithology 2021a).
<i>Athene cunicularia</i> / burrowing owl	None/None G4/S3 SSC USFWS BCC	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.	Moderate Potential	Moderate Potential	Some suitable habitat for the species exists within the study area, especially along and around gen-tie routes 1 and 1A. Multiple occurrences of the species are documented within five miles of the Project area in eBird (Cornell Lab of Ornithology 2021a).
<i>Buteo regalis</i> / ferruginous hawk	None/None G4/S3S4 WL USFWS BCC	Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats. Eats mostly lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles.	Moderate Potential (non-breeding)	Moderate Potential (non-breeding)	There is a moderate potential for the species to fly over or forage within open fields within the study area. The species typically breeds northeast of California and is unlikely to nest within the vicinity of the study area. Multiple occurrences of the species are documented within 5 miles of the Project area in eBird (Cornell Lab of Ornithology 2021a).
<i>Charadrius nivosus</i> western / snowy plover	FT/None G3T3/S2 SSC USFWS BCC	Sandy beaches, salt pond levees & shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting.	Not Expected	Not Expected	The species is present on beaches, sand dunes, and estuarine habitat in Morro Bay, but no habitat for the species is present within the study area. Three occurrences of the species (all in 2016) are documented in the CNDDB on sandy beach habitat within 5 miles of

Scientific Name / Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur within the Project Area	Potential to Occur within the Study Area	Rationale
					the Project area. Multiple occurrences of the species are documented in eBird (in beach and estuarine habitat) within five miles of the Project area (Cornell Lab of Ornithology 2021a).
<i>Circus hudsonius</i> / northern harrier	None/None G5/S3 SSC	Coastal salt & freshwater marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain cienagas. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.	Moderate Potential	Present	The species is known to occur in the region and has a moderate potential to fly over or forage within the study area. Marginal nesting habitat for the species is present within the study area within riparian and marsh habitat. Multiple occurrences of the species are documented within one mile of the study area in eBird (Cornell Lab of Ornithology 2021a).
<i>Coccyzus americanus occidentalis</i> / western yellow-billed cuckoo	FT/SE G5T2T3/S1 USFWS BCC	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.	Low Potential	Low Potential	Riparian habitat dominated by willows is present within Chorro Creek, San Bernardo Creek, and San Luisito Creek. There are three occurrences (in 1989, 2017, and 2019) of the species documented within 5 miles of the Project area in ebird (Cornell Lab of Ornithology 2021a).
<i>Elanus leucurus</i> / white-tailed kite	None/None G5/S3S4 FP	Rolling foothills and valley margins with scattered oaks & 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.	High Potential	High Potential	This species has a high potential to forage in fields within the study area. The species has a low potential to nest within the study area, in trees associated with the Chorro Creek channel or oak woodland habitat. Multiple occurrences of the species are documented within one mile of the Project area in

Scientific Name / Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur within the Project Area	Potential to Occur within the Study Area	Rationale
					eBird (Cornell Lab of Ornithology 2021a).
<i>Eremophila alpestrisactia</i> / California horned lark	None/None G5T4Q/S4 WL	Coastal regions, chiefly from Sonoma County to San Diego County. Also, mainpart of San Joaquin Valley and east to foothills. Short-grass prairie, bald hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats.	Moderate Potential	Moderate Potential	The species has moderate potential to forage and low potential to nest in fields within the study area. Multiple occurrences of the species are documented within 5 miles of the Project area in eBird (Cornell Lab of Ornithology 2021a).
<i>Falco columbarius</i> / merlin	None/None G5/S3S4 WL	Grasslands, open forests and coastal areas. Lay eggs in abandoned crow orhawk nests in conifers or deciduous trees of semi-open habitat. Occasionally nest in tree cavities, on cliffs, or on the ground. Feeds primarily on birds.	Low Potential (non-breeding)	Low Potential (wintering)	There is low potential for the merlin to fly over or forage within the study area, though the site is outside of the breeding range of the species. Multiple occurrences of the species are documented within five miles of the Project area in eBird (Cornell Lab of Ornithology 2021a). The species is considered an uncommon migrant and visitor to the Morro Bay region from late September through mid-April (Sims 2010).
<i>Falco mexicanus</i> / prairie falcon	None/None G5/S4 WL	Inhabits dry, open terrain, either level or hilly. Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores.	Low Potential (non-breeding)	Low Potential (foraging only)	Multiple occurrences of the species are documented within five miles of the Project area in eBird (Cornell Lab of Ornithology 2021a). The species is a rare fall migrant and winter visitor throughout the Morro Bay area (Sims 2010).
<i>Falco peregrinusanatum</i> / American peregrine falcon	FD/SD G4T4/S3S4FP	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures. Nest consists	Moderate Potential (non-breeding)	Moderate Potential	Multiple occurrences of the species are documented within five miles of the study area in eBird (Cornell Lab of Ornithology 2021a).

Scientific Name / Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur within the Project Area	Potential to Occur within the Study Area	Rationale
		of a scrape or a depression or ledge in an open site.			Known nesting sites occur within one mile of the study area, on Morro Rock. Potentially suitable nesting habitat exists within the southern portion of the study area around Hollister Peak. No suitable nesting habitat for the species occurs within the Project area.
<i>Lanius ludovicianus</i> / loggerhead shrike	None/None G4/S4 SSC USFWS BCC	Broken woodlands, savannah, pinyon- juniper, Joshua tree, and riparian woodlands, desert oases, scrub & washes. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	Moderate Potential	Moderate Potential	The species has moderate potential to forage and low potential to nest within the study area. Multiple occurrences of the species are documented within five miles of the Project area in eBird (Cornell Lab of Ornithology 2021a).
<i>Laterallus jamaicensis coturniculus</i> / California black rail	None/ST G3G4T1/S1 FP USFWS BCC	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	Not expected	Habitat for the species exists within Morro Bay, but sufficient, non-fluctuating water depths within marshes do not occur within the study area. There are four occurrences of the species documented in the CNDDDB within five miles of the Project area, the most recent in 2009 (CDFW 2021a). Cornell Lab of Ornithology 2021a).
<i>Progne subis</i> / purple martin	None/None G5/S3 SSC	Inhabits woodlands, low elevation coniferous forest of Douglas-fir, ponderosa pine, and Monterey pine. Nests in old woodpecker cavities mostly; also in human-made structures. Nest often located in tall, isolated tree/snag.	Not Expected	Not Expected	No suitable foraging habitat or coniferous forest nesting habitat is present within the study area.
<i>Rallus obsoletus</i> / California Ridgway's rail	FE/SE G3T1/S1 FP	Salt water and brackish marshes traversed by tidal sloughs in the vicinity of San	Not Expected	Not Expected	Saltwater and brackish marsh habitat does not exist within the study area. One

Scientific Name / Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur within the Project Area	Potential to Occur within the Study Area	Rationale
		Francisco Bay. Associated with abundant growths of pickleweed, but feeds away from cover on invertebrates from mud-bottomed sloughs.			occurrence of the species (in 1939) is documented in the CNNDDB within five miles of the Project area (CDFW 2021a).
<i>Setophaga petechia</i> / yellow warbler	None/None G5/S3S4 SSC	Inhabits riparian areas in close proximity to water. Frequently found nesting and foraging in willow shrubs and thickets, and in other riparian plants including cottonwoods, sycamores, ash, and alders.	Present	Present	The species was observed within willows in the Chorro Creek corridor during the survey on May 25, 2021. Suitable riparian foraging and nesting habitat is present within the San Bernardo Creek and Chorro Creek corridors. There are multiple occurrences of the species documented within one mile of the Project area in eBird (Cornell Lab of Ornithology 2021b).
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.	Moderate Potential	Moderate Potential	There is a small amount of potentially suitable roosting habitat for the species within oak woodlands in the southern portion of the study area and on bridges within the study area. Current roosting sites within the Morro Bay area are not known (Sims 2010). One occurrence of the species (from 2000) is documented in the CNNDDB within 5 miles of the Project area (CDFW 2021a).
<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	Low Potential	Moderate Potential	Some suitable habitat for the species exists in oak woodlands in the southern portion of the study area and on bridges within the study area. One occurrence of the species (in 2012) is

Scientific Name / Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur within the Project Area	Potential to Occur within the Study Area	Rationale
		buildings. This species is extremely sensitive to human disturbance.			documented in the CNDDDB within 5 miles of the study area in the Chorro Creek Ecological Reserve (CDFW 2021a).
<i>Dipodomys heermanni morroensis</i> / Morro Bay kangaroo rat	FE/SE G4TH/SH FP	Coastal sage scrub on the south side of Morro Bay. Needs sandy soil, but not active dunes, prefers early seral stages.	Not Expected	Not Expected	A small amount of coastal sage scrub habitat exists within the study area, but no early seral stages of coastal dune scrub on sandy soil exist within the study area. The last sighting of the species was in 1987 (Sims2010). The species may be extinct, though there is some evidence that a small population could still exist in Los Osos (Kofron and Villablanca 2016). The last occurrence documented in the CNDDDB was in 1985 (CDFW 2021a).
<i>Eumetopias jubatus</i> / Steller sea-lion	FD/NoneG3/S2	Breeds on Ano Nuevo, San Miguel and Farallon islands, Point St. George, & Sugarloaf. Hauls-out on islands & rocks. Needs haul-out and breeding sites with unrestricted access to water, near aquatic food supply and with no human disturbance.	Not Expected	Not Expected	Necessary marine habitat for the species does not occur within the study area.
<i>Eumops perotis californicus</i> / western mastiff bat	None/None G4G5T4/S3S4 SSC	Occurs in open, semi-arid to arid habitats, including coniferous and deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices in cliff faces and caves, and buildings. Roosts typically occur high above ground.	Not Expected	Low Potential	Rocky outcrops occur southwest of the Project site below Park Ridge, as well as southeast of the Project around Hollister Peak. No suitable roosting habitat exists within the Project area. There are no occurrences of the species documented in the CNDDDB within 5 miles of the study area (CDFW 2021a).

Scientific Name / Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur within the Project Area	Potential to Occur within the Study Area	Rationale
<i>Neotoma lepida intermedia</i> San Diego desertwoodrat	None/None G5T3T4/ S3S4 SSC	Occurs in scrub habitats of southern California from San Luis Obispo County to San Diego County.	Not Expected	Not Expected	There is some suitable scrub habitat for the species north of the Project site within and around the gen-tie alternative corridors. However, there are no occurrences of the species documented in the CNDDDB within 5 miles of the study area (CDFW 2021a) and the species is only known to occur in southern portions of San Luis Obispo County.
<i>Nyctinomops macrotis</i> / big free-tailed bat	None/None G5/S3 SSC	Low-lying arid areas in Southern California. Need high cliffs or rocky outcrops for roosting sites. Feeds principally on large moths.	Not Expected	Low Potential	Rocky outcrops occur southwest of the Project site below Park Ridge, as well as southeast of the Project around Hollister Peak. No suitable roosting habitat exists within the Project area. One occurrence of the species (in 1981) is documented in the CNDDDB within 5 miles of the Project area (CDFW 2021a).
<i>Eumetopias jubatus</i> / Steller sea-lion	FD/None G3/S2	Breeds on Ano Nuevo, San Miguel and Farallon islands, Point St. George, & Sugarloaf. Hauls-out on islands & rocks. Needs haul-out and breeding sites with unrestricted access to water, near aquatic food supply and with no human disturbance.	Not Expected	Not Expected	Necessary marine habitat for the species does not occur within the study area.
<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.	Moderate Potential	Moderate Potential	Suitable habitat for the species occurs within grassland habitat north of SR-1, along gen-tie routes 1 and 1-A and the ruderal margins of the Project site. There are no occurrences of the species documented in the CNDDDB within 5 miles of the study area (CDFW 2021a). The species is

Scientific Name / Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur within the Project Area	Potential to Occur within the Study Area	Rationale
					uncommon within coastal portions of California, but friable soils and an adequate ground squirrel prey base are present within the study area.

Source: Rincon 2021

Regional Vicinity refers to within a 10-mile search radius of the Project Area. Project Area refers to the Project site and gen-tie alternative routes.

Study Area refers to the Project site plus a one-mile buffer and the gen-tie routes plus a 1,000-foot buffer.

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

SR = State Rare

SD = State Delisted

SSC = CDFW Species of Special Concern

FP = State Fully Protected

WL = CDFW Watch List

BCC = Bird of Conservation Concern

Other Statuses

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 abundant

Additional Notations

T= Intraspecific Taxon (subspecies, varieties, and other designations below Potential the level of species) Q= Questionable taxonomy that may reduce conservation priority

? = Inexact numeric rank

APPENDIX 5.2B

Forms
(Jurisdictional Determination, CRLF
Habitat Assessment, and CNDDDB)

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project/Site: Hydrastar Pecho City/County: San Luis Obispo Date: 5/18/12 Time: 1000
 Applicant/Owner: Hydrastar State: CA Data Point: 1
 Investigator(s): C. Biggs, C. Rade NWI Classification: R2UBH
 Photo File Numbers: 1-4 Projection Coordinates: 35.211694 N, 120.44751620 W Datum: WGS 84
 Stream: Chorro Creek

Are climatic/hydrologic conditions on the site typical for this time of year? Y (If no, explain in remarks.)
 Do normal conditions exist on the site? Y Is the site significantly disturbed? N

Potential anthropogenic influences on the channel system

Agricultural fields, cattle grazing

Brief Site Description

Chorro creek forms on N. side of the project side. Receives flow from San Luisito creek + San Bernardo Creek. Chorro Creek flows year-round.

USACE Jurisdiction

Tributary to waters (Y/N) Y Stream Order 1

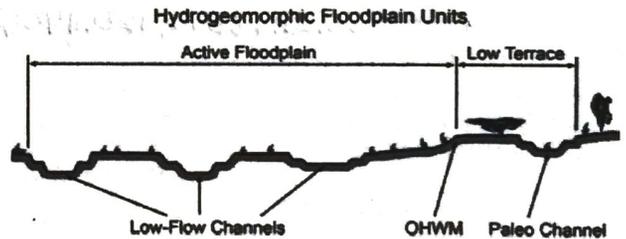
Checklist of Resources (if available)

- | | |
|---|--|
| <input checked="" type="checkbox"/> Aerial photography
Dates: _____
<input type="checkbox"/> Topographic maps
Scale: _____
<input type="checkbox"/> Geologic maps
<input type="checkbox"/> Vegetation maps
<input checked="" type="checkbox"/> Soils maps
<input type="checkbox"/> Rainfall/precipitation maps
<input type="checkbox"/> Existing delineations(s) for the site
<input type="checkbox"/> Global positioning system (GPS)
<input type="checkbox"/> Other studies | <input type="checkbox"/> Stream gage data
Gage number: _____
Period of record: _____
<input type="checkbox"/> Clinometer/level
<input type="checkbox"/> History of recent effective discharges
<input type="checkbox"/> Results of flood frequency analysis
<input type="checkbox"/> Most recent shift-adjusted rating
<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event |
|---|--|

Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

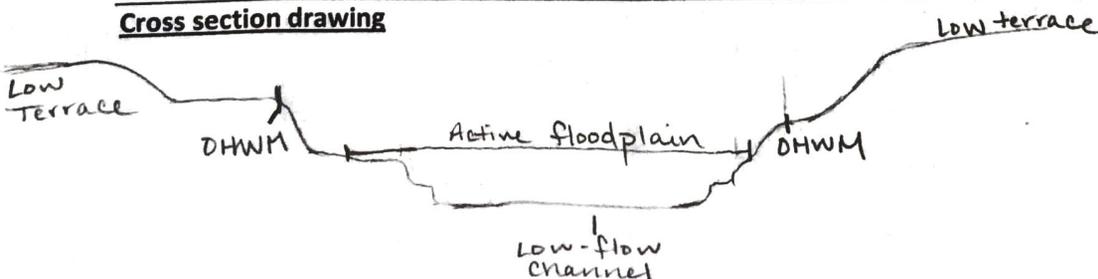
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
 - a. Record the floodplain unit and GPS position.
 - b. Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
 - c. Identify any indicators present at the location
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:

- Mapping on aerial photograph GPS
 Digitized on computer Other:



Millimeters (mm)	Inches (in)	Wentworth size class		
10.00	--- 256	Boulder	Gravel	
2.50	--- 64	Cobble		
0.157	--- 4	Pebble		
		Granule		
0.079	--- 2.00	Very coarse sand	Sand	
0.050	--- 1.00	Coarse sand		
0.020	--- 0.50	Medium sand		
1/2	0.008	Fine sand		
1/4	0.005	0.125	Very fine sand	
1/8	0.0025	0.0025	Coarse silt	Silt
1/16	0.0012	0.001	Medium silt	
1/32	0.00081	0.0156	Fine silt	
1/64	0.00081	0.0078	Very fine silt	
1/128	0.00015	0.0008	Clay	Mud

Cross section drawing



Arid West Ephemeral and Intermittent Streams OHWM Datasheet

OHWM

GPS Point: 35.211701 N 120.445648 W

Indicators:

- Change in average sediment texture
- Change in vegetation species
- Change in vegetation Cover

Break in bank slope

Other: _____
Other: _____

Comments:

<p>Floodplain Unit <input checked="" type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace</p> <p>GPS point: <u>35.21180 N, 120.445650 W</u></p> <p>Characteristics of the floodplain unit: Average sediment texture: <u>sediment dominant</u> Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____% Community successional stage: <input checked="" type="checkbox"/> NA <input type="checkbox"/> Mid (herbaceous, shrubs, saplings) <input type="checkbox"/> Early (herbaceous & seedlings) <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)</p> <p>Indicators: <input type="checkbox"/> Mudcracks <input checked="" type="checkbox"/> Benches <input checked="" type="checkbox"/> Other: <u>water</u> <input type="checkbox"/> Ripples <input type="checkbox"/> Soil Development <input type="checkbox"/> Other: _____ <input checked="" type="checkbox"/> Drift and/or debris <input type="checkbox"/> Surface relief <input type="checkbox"/> Other: _____ <input checked="" type="checkbox"/> Presence of bed and bank</p>	<p>Comments:</p> <p>minor gravel and cobble substrate</p>
---	--

<p>Floodplain Unit <input type="checkbox"/> Low-Flow Channel <input checked="" type="checkbox"/> Active Floodplain <input type="checkbox"/> Low Terrace</p> <p>GPS point: <u>35.211680 N, 120.445653 W</u></p> <p>Characteristics of the floodplain unit: Average sediment texture: _____ Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____% Community successional stage: <input type="checkbox"/> NA <input type="checkbox"/> Mid (herbaceous, shrubs, saplings) <input checked="" type="checkbox"/> Early (herbaceous & seedlings) <input type="checkbox"/> Late (herbaceous, shrubs, mature trees)</p> <p>Indicators: <input type="checkbox"/> Mudcracks <input checked="" type="checkbox"/> Benches <input type="checkbox"/> Other: _____ <input type="checkbox"/> Ripples <input type="checkbox"/> Soil Development <input type="checkbox"/> Other: _____ <input checked="" type="checkbox"/> Drift and/or debris <input type="checkbox"/> Surface relief <input type="checkbox"/> Other: _____ <input checked="" type="checkbox"/> Presence of bed and bank</p>	<p>Comments:</p> <p>Urtica dioica Equisetum arvense Scirpus maritimus Mimulus guttatus</p>
---	---

<p>Floodplain Unit <input type="checkbox"/> Low-Flow Channel <input type="checkbox"/> Active Floodplain <input checked="" type="checkbox"/> Low Terrace</p> <p>GPS point: <u>35.21169 N, 120.445654</u></p> <p>Characteristics of the floodplain unit: Average sediment texture: _____ Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____% Community successional stage: <input type="checkbox"/> NA <input checked="" type="checkbox"/> Mid (herbaceous, shrubs, saplings) <input type="checkbox"/> Early (herbaceous & seedlings) <input checked="" type="checkbox"/> Late (herbaceous, shrubs, mature trees)</p> <p>Indicators: <input type="checkbox"/> Mudcracks <input type="checkbox"/> Benches <input type="checkbox"/> Other: _____ <input type="checkbox"/> Ripples <input type="checkbox"/> Soil Development <input type="checkbox"/> Other: _____ <input checked="" type="checkbox"/> Drift and/or debris <input type="checkbox"/> Surface relief <input type="checkbox"/> Other: _____ <input checked="" type="checkbox"/> Presence of bed and bank</p>	<p>Comments:</p> <p>Salix lasiolepis S. lasiolepis Delenia arata Conium maculatum</p>
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WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Hydrostor Techo City/County: SLD Sampling Date: 5/18/21
 Applicant/Owner: Hydrostor State: CA Sampling Point: 2
 Investigator(s): C. Boggs, C. Poole Section, Township, Range: T29S 11E
 Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): CONCAVE Slope (%): _____
 Subregion (LRR): C-Mediterranean CA Lat: 35.214248 N Long: 120.491274 W Datum: WGS 84
 Soil Map Unit Name: Salinas silty clay loam NWI classification: PEM1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____ Remarks: _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
--	--

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
= Total Cover				
Sapling/Shrub Stratum (Plot size: <u>10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>Salix lasiolepis</u>	<u>5</u>	<u>Y</u>	<u>FACW</u>	Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>15</u> x 2 = <u>30</u> FAC species <u>90</u> x 3 = <u>270</u> FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: <u>105</u> (A) <u>300</u> (B) Prevalence Index = B/A = <u>2.9</u>
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				
Herb Stratum (Plot size: <u>10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>Pteris echioides</u>	<u>80</u>	<u>Y</u>	<u>FAC</u>	<input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Polygonum mansuetianum</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
3. <u>Lolium perenne</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
= Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?
1. _____	_____	_____	_____	Yes <input checked="" type="checkbox"/> No _____
2. _____	_____	_____	_____	
= Total Cover				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				
Remarks: _____				

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18"	Gley 1 ^{3/4} ax	95	7.5YR4/6	5	C	PLM	5.14y c1s loam	Thin sandy layer 2+ 18"

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input checked="" type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes No Depth (inches): _____

Water Table Present? Yes No Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes No Depth (inches): 16"

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Habitat Type: UPLAND

Wetland Type: _____

Project/Site: Hydrostor Pecho City/County: SLD Sampling Date: 5/18/21

Applicant/Owner: Hydrostor State: CA Sampling Point: 3

Investigator(s): C. Briggs, C. Pade Section, Township, Range: T29S11E

Landform (hillslope, terrace, etc.): valley Local relief (concave, convex, none): concave Slope (%): _____

Subregion (LRR): C - Mediterranean California Lat: 35.24959 Long: 120.490223 Datum: WGS 84

Soil Map Unit Name: Salinas silty clay loam NWI classification: PEM1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)

Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No

Are Vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation? Yes No Hydric Soil? Yes No Wetland Hydrology? Yes No

Is the Sampled Area within a Wetland? Yes No

USACE JURISDICTION

Abutting Waters Adjacent to Waters Tributary to Waters Isolated (with interstate commerce) Isolated (non-jurisdictional)

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> % (A/B)
4. _____				
50%= _____ 20%= _____ Total Cover: _____ %				
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. _____				Total % Cover of: _____ Multiply by: _____
2. _____				OBL species <u>0</u> x 1 = <u>0</u>
3. _____				FACW species <u>0</u> x 2 = <u>0</u>
4. _____				FAC species <u>95</u> x 3 = <u>285</u>
5. _____				FACU species <u>0</u> x 4 = <u>0</u>
6. _____				UPL species <u>0</u> x 5 = <u>0</u>
50%= _____ 20%= _____ Total Cover: _____ %				Column Totals: <u>105</u> (A) <u>0</u> (B)
				Prevalence Index = B/A = <u>2.9</u>
Herb Stratum (Plot size: <u>10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>Pennis setacea</u>	<u>80</u>	<u>Y</u>	<u>FAC</u>	<input checked="" type="checkbox"/> Dominance Test is >50%
2. <u>Anagallis arvensis</u>	<u>15</u>	<u>N</u>		<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹
3. <u>Polygonum monspeliense</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. _____				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
5. _____				
6. _____				
7. _____				
8. _____				
50%= <u>40</u> 20%= <u>16</u> Total Cover: <u>105</u> %				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?
1. _____				Yes <input checked="" type="radio"/> No <input type="radio"/>
2. _____				
50%= _____ 20%= _____ Total Cover: _____ %				
% Bare Ground in Herb Stratum <u>0</u> % % Cover of Biotic Crust <u>0</u> %				

Remarks:

SOIL *upland*

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
D-18	10YR 3/2	150					<i>silty clay band</i>	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS²Covered or Coated Sand Grains. Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	Indicators for Problematic Hydric Soils:³
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

1 cm Muck (A9) (LRR C)
 2 cm Muck (A10) (LRR B)
 Reduced Vertic (F18)
 Red Parent Material (TF2)
 Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes No Depth (inches): _____

Water Table Present? Yes No Depth (inches): _____

Saturation Present? Yes No Depth (inches): _____

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Habitat Type: _____

Wetland Type: _____

Project/Site: Hydrostor Pechos City/County: Morro Bay, SLD Sampling Date: 5/15/21

Applicant/Owner: Hydrostor State: CA Sampling Point: 4

Investigator(s): C. Boggs, C. Rode Section, Township, Range: T29S 11E

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): CONCAVE Slope (%): _____

Subregion (LRR): C - Mediterranean California Lat: 35.2232.07 Long: 120.503909 Datum: NAD 84

Soil Map Unit Name: Diablo + Cipo clay NWI classification: PEM1B

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)

Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No

Are Vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation? Yes No Hydric Soil? Yes No Wetland Hydrology? Yes No

Is the Sampled Area within a Wetland? Yes No

USACE JURISDICTION

Abutting Waters Adjacent to Waters Tributary to Waters Isolated (with interstate commerce) Isolated (non-jurisdictional)

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> % (A/B)
4. _____				
50%= _____ 20%= _____ Total Cover: _____ %				
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet:
1. _____				Total % Cover of: _____ Multiply by: _____
2. _____				OBL species <u>100</u> x 1 = <u>100</u>
3. _____				FACW species <u>0</u> x 2 = <u>0</u>
4. _____				FAC species <u>0</u> x 3 = <u>0</u>
5. _____				FACU species <u>0</u> x 4 = <u>0</u>
50%= _____ 20%= _____ Total Cover: _____ %				UPL species <u>0</u> x 5 = <u>0</u>
Herb Stratum (Plot size: <u>105ft</u>)				Column Totals: _____ (A) _____ (B)
1. <u>Rumex crispus</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	Prevalence Index = B/A = <u>100/100</u>
2. <u>Potentilla anserina</u>	<u>30</u>	<u>N</u>	<u>OBL</u>	
3. <u>Lolium perenne</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
4. <u>Polypogon monspeliensis</u>	<u>15</u>	<u>N</u>	<u>FACW</u>	
5. <u>Muhlenbergia</u>				
6. <u>Peripha nasturtium-ag</u>	<u>80</u>	<u>Y</u>	<u>OBL</u>	
7. <u>Eleocharis macrostachya</u>	<u>25</u>	<u>N</u>	<u>OBL</u>	
8. _____				
50%= <u>177.5</u> 20%= <u>31</u> Total Cover: <u>155</u> %				
Woody Vine Stratum (Plot size: _____)				
1. _____				
2. _____				
50%= _____ 20%= _____ Total Cover: _____ %				
% Bare Ground in Herb Stratum <u>3</u> % % Cover of Biotic Crust <u>0</u> %				
Remarks:				

SOIL

Sampling Point: 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3"	Gley 1 ³ /N	100	—	—	—	—	Silty clay	—

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Vernal Pools (F9)

Indicators for Problematic Hydric Soils³

- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Drift Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

- Salt Crust (B11)
- Biotic Crust (B12)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Plowed Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water Marks (B1) (Riverine)
- Sediment Deposits (B2) (Riverine)
- Drift Deposits (B3) (Riverine)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes No Depth (inches): ± 0-2"
 Water Table Present? Yes No Depth (inches): 0
 Saturation Present? (includes capillary fringe) Yes No Depth (inches): 0

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Habitat Type: UPLAND

Wetland Type: _____

Project/Site: Hydrostor Pecho City/County: SLD Sampling Date: 5/18/21

Applicant/Owner: Hydrostor State: CA Sampling Point: 5

Investigator(s): C. Briggs, C. Pade Section, Township, Range: T29S 11E

Landform (hillslope, terrace, etc.): hilllope Local relief (concave, convex, none): concave Slope (%): _____

Subregion (LRR): C - Mediterranean California Lat: 35.223200 W Long: 120.503897 W Datum: WGS 84

Soil Map Unit Name: Diablo & Cibo clays NWI classification: PEM1B

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)

Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No

Are Vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation? Yes No Hydric Soil? Yes No Wetland Hydrology? Yes No

Is the Sampled Area within a Wetland? Yes No

USACE JURISDICTION

Abutting Waters Adjacent to Waters Tributary to Waters Isolated (with interstate commerce) Isolated (non-jurisdictional)

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>5</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> % (A/B)
4. _____				
50%= _____ 20%= _____ Total Cover: _____ %				
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet:
1. _____				Total % Cover of: Multiply by:
2. _____				OBL species <input checked="" type="checkbox"/> x 1 = _____
3. _____				FACW species <input type="checkbox"/> x 2 = _____
4. _____				FAC species <input type="checkbox"/> x 3 = _____
5. _____				FACU species <input type="checkbox"/> x 4 = _____
50%= _____ 20%= _____ Total Cover: _____ %				UPL species <input type="checkbox"/> x 5 = _____
Herb Stratum (Plot size: <u>10'</u>)				Column Totals: _____ (A) _____ (B)
1. <u>Lolium perenne</u>	<u>30</u>	<u>Y</u>	<u>FAC</u>	Prevalence Index = B/A = _____
2. <u>Rhynchospora setacea</u>	<u>10</u>	<u>Y</u>	<u>JPL</u>	
3. <u>Carduus</u>	<u>20</u>	<u>Y</u>	<u>JPL</u>	
4. <u>Plantago lanceolata</u>	<u>20</u>	<u>Y</u>	<u>JPL</u>	
5. <u>Bromus diandrus</u>	<u>10</u>	<u>Y</u>	<u>JPL</u>	
6. <u>Nyssa pubescens</u>	<u>5</u>	<u>N</u>	<u>JPL</u>	
7. _____				
8. _____				
50%= <u>15</u> 20%= <u>6</u> Total Cover: _____ %				
Woody Vine Stratum (Plot size: _____)				
1. _____				
2. _____				
50%= _____ 20%= _____ Total Cover: _____ %				
% Bare Ground in Herb Stratum <u>10</u> %				
% Cover of Biotic Crust <u>0</u> %				
Remarks:				Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input checked="" type="radio"/>

SOIL

Sampling Point: 5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12"	10YR 3/2	100	—	—	—	—	clay loam	—

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS²Covered or Coated Sand Grains. Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	Indicators for Problematic Hydric Soils:³
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

1 cm Muck (A9) (LRR C)
 2 cm Muck (A10) (LRR B)
 Reduced Vertic (F18)
 Red Parent Material (TF2)
 Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present unless disturbed or problematic.

Restrictive Layer (if present):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	Secondary Indicators (2 or more required)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:

Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____	Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input checked="" type="radio"/>
Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____	
Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

California Red-legged Frog Habitat Site Assessment Data Sheet

Site Assessment reviewed by _____
(FWS Field Office) (date) (biologist)

Date of Site Assessment: 04/21/2021
(mm/dd/yyyy)

Site Assessment Biologists: Weichert Kyle Boudreau Michelle
(Last name) (first name) (Last name) (first name)

Site Location: San Luis Obispo Co, Chorro Creek, 35.35466°N, -120.79899°W
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S).

****ATTACH A MAP** (include habitat types, important features, and species locations)**

Proposed project name: Recho Advanced Compressed Air Energy Storage Facility
 Brief description of proposed action:
 Project is a proposed 500-megawatt energy storage facility. The facility plans to discharge electricity to existing substation at Morro Bay Power Plant.

- 1) Is this site within the current or historic range of the CRF (circle one)? **YES** NO
- 2) Are there known records of CRF within 1.6 km (1 mi) of the site (circle one)? **YES** NO
 If yes, attach a list of all known CRF records with a map showing all locations.

GENERAL AQUATIC HABITAT CHARACTERIZATION

(if multiple ponds or streams are within the proposed action area, fill out one data sheet for each)

POND:

Size: _____ Maximum depth: _____

Vegetation: emergent, overhanging, dominant species: _____

Substrate: _____

Perennial or Ephemeral (circle one). If ephemeral, date it goes dry: _____

- NA -

California Red-legged Frog Habitat Site Assessment Data Sheet

STREAM:

Bank full width: ~ 18 ft - 24 ft
Depth at bank full: 6 ft - 8 ft
Stream gradient: 2 ft / 100 ft

Are there pools (circle one)? **YES** NO

If yes,

Size of stream pools: 10 x 12 ft

Maximum depth of stream pools: 6 ft

Characterize non-pool habitat: run, riffle, glide, other: combination of run and riffle. Riffle make up approximately 60% of visible non-pool habitat

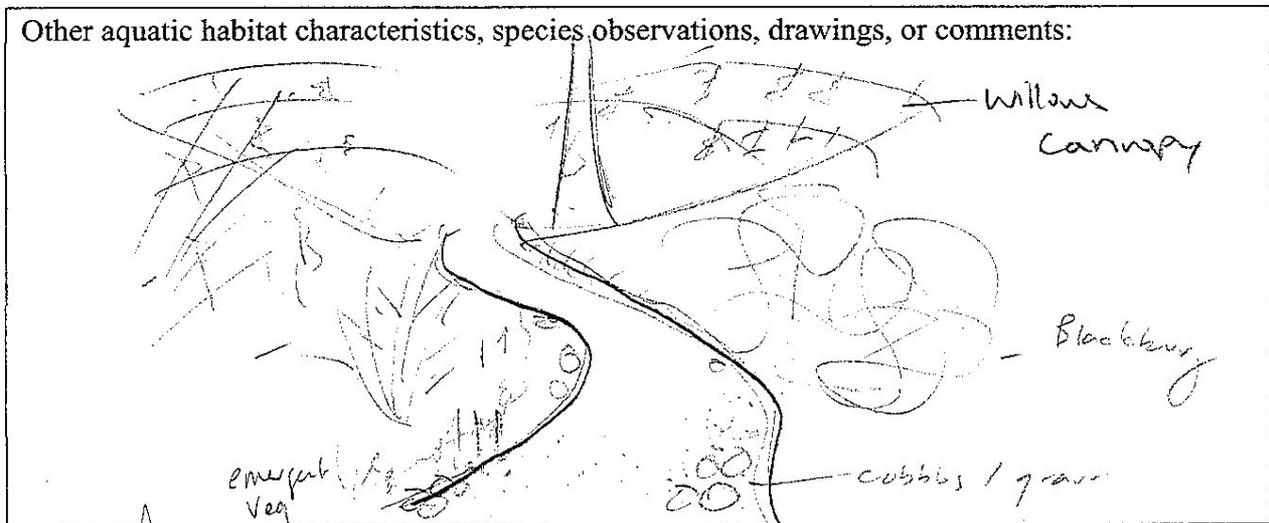
Vegetation: emergent, overhanging, dominant species: Combination of emergent and overhanging veg. Patches of emergent into sedge & Drosera in blackberry brambles

Substrate: Primarily gravel with sections of cobble and silt.

Bank description: moderately steep banks almost entirely vegetated. Undercut banks present in most areas

Perennial or Ephemeral (circle one). If ephemeral, date it goes dry: perennial

Other aquatic habitat characteristics, species observations, drawings, or comments:



Necessary Attachments:

1. All field notes and other supporting documents
2. Site photographs
3. Maps with important habitat features and species location

CNDDDB Online Field Survey Form Report



California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/



Source code HOW21F0001
Quad code 3512037
Occ. no. _____
EO index no. _____
Map index no. _____

This data has been reported to the CNDDDB, but may not have been evaluated by the CNDDDB staff

Scientific name: *Oncorhynchus mykiss irideus pop. 9*

Common name: steelhead - south-central California coast DPS

Date of field work (mm-dd-yyyy): 05-25-2021

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Steve Howard

Affiliation: Rincon Consultants, Inc.

Address: 2456 Lexington Drive

Email: Moiby1@aol.com

Phone: (805) 320-5472

Other observers: Heather Curran

DETERMINATION

Keyed in: Coloration, body form, swimming behavior, parr marks

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation: Parr marks and coloration a key identification factor.

Identification confidence: Very confident

Species found: Yes If not found, why not?

Level of survey effort: Snorkel survey, observed *O. mykiss* among Sacramento sucker, pikeminnow, and threespine stickleback.

Total number of individuals: 1

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

1

adults

juveniles

larvae

egg mass

unknown

Age class comment: Based on size this was most likely a 1+ age fish.

Site use description: [Primarily Agricultural](#)

What was the observed behavior? [Holding and then darted for cover.](#)

Describe any evidence of reproduction: [None. This fish had no signs of anadromy, which wouldn't be expected in May for a fish of this age.](#)

SITE INFORMATION

Habitat description: [Observed in a lateral scour pool. The pool was dominated by large Sacramento sucker and pikeminnow. The pool had minimal instream cover except for agricultural debris.](#)

Slope: [~1%](#)

Land owner/manager: [Private, agricultural](#)

Aspect:

Site condition + population viability: [Good](#)

Immediate & surrounding land use: [Primarily agricultural](#)

Visible disturbances: [Evidence of sedimentation and debris \(pipe, concrete\) from agriculture](#)

Threats: [Non-native fishes, fine sediments.](#)

General comments: [Habitat is generally good at this site due to dense riparian. This reach of creek can go dry during extreme dry conditions.](#)

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Luis Obispo	Morro Bay South	42	35.35474	-120.79905	699986	3914608	10
1	Public Land Survey	Feature Comment						
	M T29S R11E 33	35.354707°N, 120.798991°W						

The mapped feature is accurate within: [5 m](#)

Source of mapped feature: [Internet map application](#)

Mapping notes: [This fish was observed close to the Luisito Creek Road Bridge](#)

Location/directions comments: [located at approximately latitude 35.354707°N, longitude 120.798991°W](#)

Attachment(s):

APPENDIX 5.2C

Resumes of the Applicant's Biologists



Colby J. Boggs

Principal/Senior Ecologist

Mr. Boggs is a Principal and Senior Ecologist with Rincon Consultants. He has professional experience as a botanist, ecologist, wetlands specialist, and biological sciences educator and researcher. His duties at Rincon include biological field surveys for special status species, habitat and plant community mapping, wetlands assessments, biological resources analyses, construction and mitigation monitoring, conservation planning, regulatory compliance, and the preparation of biological reports, environmental documents and permit applications in support of CEQA, NEPA, Porter-Cologne Water Quality Control Act, Fish and Game Code 1600 et seq., Clean Water Act, and state and federal Endangered Species Acts.

EDUCATION

MS, Botany, California State University, Chico

BS, Ecology and Evolution, University of California, Santa Barbara

CERTIFICATIONS/ REGISTRATIONS

Certified Ecologist – Ecological Society of America, 2017

California Rapid Assessment Method – CRAM.org, no exp. date

Wetland Delineation Training – Richard Chinn Env., no exp. date

PERMITS

Rare, Threatened, and Endangered Plant Voucher Collecting Permit No. 2081(a)-16-022-V – CDFW, 2018

YEARS OF EXPERIENCE

22

EXPERIENCE

Rincon Consultants, Inc.
(2008 to present)

North State Resources, Inc.
(2000 to 2008)

California State University,
Chico
(1999 to 2001)

SELECT PROJECT EXPERIENCE

Principal-in-Charge, Pacifica Land Trust/Fall Creek Engineering, Robyn Cooper, Senior Engineer – Pedro Point Headlands Restoration Project, San Mateo County, CA

Mr. Boggs served as Principal-in-Charge for this project and provided biological studies and regulatory permitting for this project. Rincon Consultants assisted Fall Creek Engineering and Pacifica Land Trust, as well as landowners and stakeholders that include the City of Pacifica, Coastal Conservancy, and San Mateo County, with the biological, archaeological, CEQA, and regulatory permitting components of the Pedro Point Headlands Restoration and Trail Improvement Project. This project involves the restoration of highly eroded trails at Pedro Point Headlands, a scenic and natural treasure of the San Mateo County coastline and California coastline in general. Rincon prepared baseline biological and archaeological studies to inform the project design, and also prepared an Initial Study – Mitigated Negative Declaration for CEQA and two Coastal Development Permit applications – one for the County of San Mateo and one for the City of Pacifica.

Principal-in-Charge, Moffat & Nichol Engineers, Dilip Trivedi, Vice President/Coastal Engineer – Romeo Pier Biological Resources Assessment, Princeton-by-the-Sea, San Mateo County, CA

Colby Boggs served as Principal-in-Charge for this project. He also provided biological studies, regulatory permitting, and project oversight. Rincon conducted a biological resource survey and impact analysis assessing the potential effects of the Colby Boggs served as Principal-in-Charge for this project. He also provided biological studies regulatory permitting, and project oversight. Rincon conducted a biological resource survey and impact analysis assessing the potential effects of the project on special-status species and coastal resources, including ESHAs, green sturgeon, Chinook salmon, steelhead trout, Coho salmon, snowy plover, and least tern. Rincon conducted a site reconnaissance survey to document plants, animals, habitats, ESHAs, nesting birds, and any other biological resources observed onsite and in the vicinity of the site. The biological resource report included a map of special status species, habitats, ESHAs, and nesting birds that are observed in the vicinity of Romeo Pier, site access, or any equipment or material staging areas. Rincon conducted a bio-acoustic study to determine the potential noise impacts to special status fish caused by the vibratory hammer that will be used to remove piles. The biological resources assessment report included an impact analysis and addressed all special status species and coastal resources in the vicinity of the project.



Principal-in-Charge, California Department of Transportation (Subconsultant to ICF International) – Pismo Creek Scour Repair Project Environmental Compliance Support Services, San Luis Obispo County, CA

Mr. Boggs served as Principal-in-Charge for this project. Rincon is currently teaming with ICF International to provide the California Department of Transportation with environmental compliance support services. The project involves the rehabilitation of the southbound State Route 101 on-ramp bridge (Bridge No. 49-0015K) from Price Street spanning Pismo Creek at post mile 16.4 in San Luis Obispo County, California. Rincon was tasked with completing all the pre-construction surveys and reporting, installation of block nets to capture and relocate special-status species, completion of Worker Environmental Awareness Program trainings, and on-going compliance site checks and reporting. The scope of work was based on the biological mitigation measures described in the various permits and approvals, including the U.S. Army Corps of Engineers Nationwide Permit 13 and 14 (SPL-2017-00739-TS), Regional Water Quality Control Board Water Quality Certification (34017WQ40), and California Department of Fish and Wildlife Streambed Alteration Agreement (1600-2017-0271-R4), as well as Biological Opinions from the National Marine Fisheries Service Biological Opinion (WCR-2016-4475) and the U.S. Fish and Wildlife Service Biological Opinion (08EVEN00-2016-F-0209) and Programmatic Biological Opinion (PBO), 8-8-10-F-58).

Biological Resources Technical Advisor/Principal, South San Luis Obispo County Sanitation District – Wastewater Treatment Plan Redundancy Project CEQA Technical Studies, Oceano, CA

Mr. Boggs served as Biological Resources Technical Advisor/Principal for this project. The South San Luis Obispo County Sanitation District Redundancy Project involves the construction and operation of backup infrastructure at the District's wastewater treatment facility in Oceano. In support of Clean Water State Revolving Fund and United States Department of Agriculture funding pursuits for the project, Rincon prepared technical studies compliant with CEQA-Plus and NEPA requirements. Technical studies include an Environmental Report for Categorical Exclusion, a Federal Clean Air Act Conformity Analysis, a Cultural Resources Assessment, and a Biological Evaluation. Rincon is also coordinating with U.S. Department of Agriculture staff to facilitate the environmental review process and receive a Biological Opinion from United States Fish and Wildlife Service for impacts to California red-legged frog.

Principal-in-Charge, City of Arroyo Grande (Subconsultant to Filippin Engineering) – Bridge Street Bridge Biological Monitoring Services, Arroyo Grande, CA

Mr. Boggs served as Principal-in-Charge for this project. Prior to construction, Rincon's permitted biologists conducted pre-construction surveys for nesting birds, the federally threatened California red-legged frog, and Central California Coast steelhead. Rincon's biologists deployed blocknets upstream and downstream of the project area and captured and relocated 549 fish, of which 55 were steelhead, under challenging conditions. Nesting birds were observed during the project and Rincon's biological monitor and project manager worked with the contractor to develop realistic buffers to protect nesting birds while minimizing construction delays. Rincon's biological monitor worked with the Filippin Engineering construction manager, the City of Arroyo Grande, and the contractor throughout the project to ensure all project permit requirements were followed. Rincon drafted and submitted the required compliance monitoring reports to the state and federal permitting agencies.

Principal-in-Charge, San Luis Obispo County –Principal Environmental Specialist, Bridges Maintenance Project, San Luis Obispo County, CA

Mr. Boggs managed environmental consulting services in support of five bridges proposed for re-painting and funded through the Federal Highway Administration Bridge Maintenance Program. Services have included preparation of natural environment studies, biological assessments, an initial study-mitigated negative declaration, categorical exclusions, and processing a stream bed alteration agreement with the California Department of Fish and Wildlife. Technical studies have included a jurisdictional delineation of waters of the U.S. and State of California and initial site assessment for hazardous materials.

Project Manager, California Department of Transportation – Union Valley Parkway Extension Project Environmental Impact Report/Environmental Assessment, Santa Maria, CA

As the biological project manager, Mr. Boggs provided environmental compliance services in the form of clearance surveys for sensitive species including the California tiger salamander, California red-legged frog, western spadefoot, legless lizard, and American badger. This project required close coordination with California Department of



Transportation, California Department of Fish and Wildlife, U.S. Fish and Wildlife Service and contractor's staff, including compliance reports pursuant to the U.S. Fish and Wildlife Service Biological Opinion issued for the project.

Principal-in-Charge, Fall Creek Engineering/California State Parks, Robyn Cooper, Senior Engineer – Marsh Creek Restoration Project, Contra Costa County, CA

Colby Boggs served as Principal-in-Charge for this project. He also provided biological studies, regulatory permitting, and project oversight. Rincon Consultants assisted Fall Creek Engineering and California State Parks with the biological, archaeological, CEQA, and regulatory permitting components of this project which involves removal of a portion of a dam and riparian and stream restoration within the Marsh Creek State Historic Park. The baseline biological and archaeological studies informed the CEQA environmental review and regulatory permitting processes, the latter of which included formal Section 7 consultation with the U.S. Fish and Wildlife Service for the California red-legged frog, California tiger salamander, and San Joaquin kit fox pursuant to the federal Endangered Species Act, review/approval of a Section 2081 Incidental Take Permit from the California Department of Fish and Wildlife for California tiger salamander, and review/approval of permits from the U.S. Army Corps of Engineers, Regional Water Quality Control Board, and California Department of Fish and Wildlife for stream impacts.

Principal-in-Charge, County of Santa Cruz, Timothy Bailey, Senior Engineer – Larkspur Street at San Lorenzo River Bridge Replacement, Santa Cruz County, CA

Colby Boggs served as Principal-in-Charge for this project. In addition to project oversight, Mr. Boggs served as QA/QC for the project. Rincon assisted the County of Santa Cruz Department of Public Works with environmental consulting services for this bridge replacement project. The scope of work involved conducting a reconnaissance-level biological survey, jurisdictional delineation of waters of the U.S. and State of California, botanical survey, bio-acoustic evaluation to determine potential impacts of pile driving activities on steelhead and coho, initial site assessment for hazardous materials, and visual impact assessment. The result of these technical investigations was incorporated and analyzed in a Natural Environment Study, biological assessment, and an IS-MND.

Principal-in-Charge, Fall Creek Engineering, Carina Chen, Senior Engineer – Memorial Park Water Treatment Plant Upgrades Project San Mateo County, CA

Mr. Boggs prepared the Biological Constraints Analysis and CE for the project in San Mateo County. The project includes conducting infrastructure maintenance and upgrades to provide improved domestic water treatment capacity and decrease maintenance at Memorial Park. As part of the constraints analysis, Mr. Boggs conducted a preliminary jurisdictional delineation of waters of the U.S. and state of California, including wetlands, at the site using the most current guidance provided by the regulatory/resource agencies. Special emphasis was placed on jurisdictional features subject to U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and California Department of Fish and Wildlife (CDFW) jurisdictions. Rincon also analyzed the potential for federally and state listed and other special status species to occur on or in the vicinity of the project site and assisted the design team to develop a project that would avoid impacts to such species and their habitat.

Principal-in-Charge, City of Marina – California State University Monterey Bay Student Housing Project, City of Marina, CA

Mr. Boggs was the Principal in Charge of a Biological Resources Assessment for the City of Marina to support the CSUMB Student Housing Project. The 8.54-acre proposed project was located on the former U.S. Army Fort Ord and included constructing approximately 160 to 200 new student apartments and related facilities.

Principal-in-Charge, San Luis Obispo County – Katie Drexhage Principal Environmental Specialist, Five Bridges Maintenance Project, San Luis Obispo County, CA

Mr. Boggs managed environmental consulting services in support of five bridges proposed for re-painting and funded through the Federal Highway Administration Bridge Maintenance Program. Services have included preparation of natural environment studies, biological assessments, an initial study-mitigated negative declaration, categorical exclusions, and processing a stream bed alteration agreement with the California Department of Fish and Wildlife. Technical studies have included a jurisdictional delineation of waters of the U.S. and State of California and initial site assessment for hazardous materials.



Transportation

Principal-in-Charge, HDR/Caltrans – Caltrans Statewide On-Call Biological Services, CA (2014-Present)

Mr. Boggs serves as the Principal-in-Charge of Rincon's team as part of the HDR Engineering team under contract with Caltrans to provide statewide biological services required for Headquarters, on an "as-needed" basis to support Caltrans. Rincon Senior Hydrogeologists and Senior Biologists provided support for the Caltrans Advanced Wetland Delineation Courses. They collaborated on preparation of hydric soils training materials to support the soils module of this course. Topics covered include a review of soil science basics, a thorough discussion of hydric soil formation and morphology, and relevant examples of geographic distribution of hydric soil features in California. This effort included development of maps showing typical locations for unique hydric soils, such as those features found in fens and bogs, dune wetlands, and coastal environments.

Principal-in-Charge, HDR/Caltrans – HDR/Caltrans District 6 and 10 On-Call Contract, Fresno, Kern, Kings and Stockton Counties, CA

Mr. Boggs serves as the Principal-in-Charge of Rincon's team as part of the HDR Engineering team under contract with Caltrans to perform professional and technical services required for Environmental Generalist Services, on an "as-needed" basis to support Caltrans District 6 and District 10 in the development and construction of proposed transportation facilities. Project task orders will be spread throughout the counties of Amador, Alpine, Calaveras, San Joaquin, Stanislaus, Tuolumne, Mariposa, Merced, Madera, Fresno, Kings, Tulare and Kern. Rincon is specifically tasked with providing biological studies and regulatory permitting for individual task orders. Biological Studies/Biological Technical Studies under this contract include assessment, survey, and monitoring of existing sensitive, candidate, threatened, and endangered species as needed prior to, during, and after construction phases.

Biologist/Technical Advisor, California High Speed Rail Authority – (CHSRA) Bakersfield to Palmdale Corridor Environmental/Engineering Work, Bakersfield to Palmdale, Various Counties/Cities, CA

Rincon is providing environmental technical studies in support of preparation of the CEQA documentation for the California High Speed Train project's Bakersfield to Palmdale Corridor. Key issue areas that Rincon staff are analyzing include biological resources, botanical resources, greenhouse gases, and hazardous materials. Rincon also assisted with regulatory permitting for this section of the High Speed Train project. Mr. Boggs conducted botanical surveys and jurisdictional delineation, developed (and is developing) regulatory permitting strategies, coordinated with CHSRA staff, and provides QA/QC for this project.

Lead Biologist/Technical QA/QC, County of Santa Barbara, Hollister Avenue – State Street Improvements Environmental Services and EIR/EA Project, City of Santa Barbara, CA

Mr. Boggs is currently providing oversight for the preparation of biological technical studies required for the Hollister Avenue – State Street Improvement Project Environmental Impact Report/Environmental Assessment (EIR/EA). The project involves roadway and intersection improvements for a 1.25-mile segment of the Hollister Avenue – State Street corridor. Mr. Boggs oversaw preparation of the required Caltrans Natural Environment Study. The studies will satisfy NEPA requirements and is also being analyzed in the CEQA document.

Principal-in-Charge, Santa Cruz County Public Works Department – Environmental Services for Bridge and Roadway Projects, Santa Cruz County, CA

Mr. Boggs serves as the Principal-in-Charge of Rincon's on-call environmental services contract with the Santa Cruz County Department of Public Works. In this capacity, he provides technical and regulatory guidance and overall QA-QC for several federally funded bridge and other roadway improvement projects with Caltrans oversight. Caltrans-specific technical reports included but were not limited to NESs, NES-MIs, and BA's.

Project Manager, Caltrans – Salinas Road/Highway 1 Interchange, City of Monterey, CA

Mr. Boggs provided environmental compliance services, which included clearance surveys and relocations of sensitive species; primarily the California red-legged frog, of which several thousand have been successfully relocated. The project has required close coordination with Caltrans and contractor's staff, including monthly compliance reports pursuant to the U.S. Fish and Wildlife Service Biological Opinion and California Department of Fish and Wildlife Incidental Take Permit issued.



Lead Biologist/Technical QA/QC, TY Lin – Cabrillo Blvd Rail Bridge Replacement Project, City of Santa Barbara, CA

The Cabrillo Rail Bridge Project involves pedestrian and bicycle Improvements on Cabrillo Boulevard, between US-101 and the intersection of Cabrillo Boulevard and Los Patos Way. The project will include the replacement of the UP Railroad Overhead bridge over Cabrillo Boulevard and retirement of the existing UP Overhead Bridge along with construction of a round-a-bout at Cabrillo Boulevard and Los Patos Way. The bicycle improvements will consist of a new Class 1 bike path under the new UP Overhead Bridge, connecting the existing bike path to the beachway bike path. Rincon is providing environmental (CEQA/NEPA) and Caltrans coordination assistance on this project, including Section 106 compliance.

Lead Biologist, MNS Engineers, Inc. – Ortega Bridge Replacement Project, Santa Barbara County, CA

The Ortega Bridge Replacement project involves demolition and construction of the structurally unsound Ortega Bridge, located above Mission Creek in Santa Barbara, California. The project is a Caltrans Local Assistance Project funded in part by the Federal Highways Administration. Rincon's main tasks for the project included agency coordination, preparation and submittal of Final Mitigation Work Plan per agency requirements (to include construction components such as placement of boulder clusters, creation of ledgers, and rocky side baffles), and environmental regulatory compliance oversight before, during, and post-construction (MMRP completion). Mr. Boggs helped complete a California Rapid Assessment Method (CRAM) for wetlands for a habitat restoration site in Mission Creek, below the Ortega Bridge. The CRAM method was used to assess wetland condition based on a number of attributes, including buffer and landscape context, hydrology, physical structure, and biological structure.

Principal-in-Charge, City of Marina – Imjin Parkway Bike Lane Project, City of Marina, CA

Mr. Boggs served as the Principal in Charge of the Imjin Parkway Bike Lane Project involving construction of paved bike lanes along Imjin Parkway to create a more defined and safer bike route through the Imjin Parkway corridor in conformance with the City's Bicycle and Pedestrian Master Plan. Specific tasks included botanical surveys and species collection, pre-construction biological clearance surveys, worker environmental awareness program trainings and construction monitoring.

Lead Biologist/Technical QA/QC, City of Marina – Veterans Transition Center IS-MND, City of Marina, CA

Mr. Boggs is providing biological resources services for an IS-MND for the Veterans Transition Center Project in the City of Marina. The project site is located within the former Fort Ord, and is currently developed with four vacant duplex structures, previously used as army barracks.

General Biological Assessments

- Principal-in-Charge, San Luis Obispo County Department of Public Works – Natural Environment Study, Biological Assessment, Jurisdictional Delineation, and Permitting for the Cypress Mountain Drive at Klau Creek Bridge Replacement Project, San Luis Obispo County, CA
- Principal-in-Charge, Hay Chris and Kelly – 1444 Paseo de Caballo Biological Resources Assessment, San Luis Obispo County, CA
- Lead Biologist/Technical Quality Assurance/Quality Control, City of Morro Bay Public Works Department – Biological Studies, Biological Assessment, Natural Environment Study, and Initial Study-Mitigated Negative Declaration for the Morro Creek Pedestrian Bridge Project, San Luis Obispo County, CA
- Lead Biologist/Technical Quality Assurance/Quality Control, City of Morro Bay Harbor Department – Marine and Terrestrial Biological Studies and Initial Study-Mitigated Negative Declaration for the Morro Bay Boatyard Project, San Luis Obispo County, CA
- Lead Biologist/Technical QA/QC, Ventura County Watershed Protection District – Santa Clara River Estuary Sub-Watershed Study and Tidewater Goby Surveys, Ventura County, CA
- Principal-in-Charge, City of Santa Barbara – Biological Assessment, Technical Studies, and Regulatory Permitting for the Goleta Slough Mouth Management Project, Santa Barbara County, CA
- Lead Biologist/Technical QA/QC, County of Santa Barbara – Biological Surveys, Construction Monitoring and Reporting, and Restoration Plan Development and Monitoring for the Lower Mission Creek Flood Control Project, Santa Barbara County, CA



- Lead Biologist/Technical QA/QC, County of Santa Barbara (subconsultant to MNS Engineers)—Ortega Street at Mission Creek Bridge Replacement Habitat Mitigation and Monitoring Plan, including Implementation of California Rapid Assessment Method (CRAM), Santa Barbara County, CA
- Lead Biologist/Technical QA/QC, City of Goleta – Biological Resources Analysis for the Ellwood Mesa Community Wildlife Protection Plan and Monarch Butterfly Habitat Management Plan EIR, Santa Barbara County, CA
- Principal-in-Charge, City of Goleta – Biological Resources Assessment for a Proposed Development (APN 077-160-035), Santa Barbara County, CA
- Principal-in-Charge, City of Goleta – Biological Resources, Assessment, Botanical Survey, Certified Arborist Survey, and Riparian Restoration/Enhancement Plan for the Hollister/Kellogg Park and Creekside Trail, Santa Barbara County, CA
- Principal-in-Charge, City of Santa Maria – Open Space Management Plan, Biological Studies, Regulatory Permitting, and Wetland Mitigation and Monitoring Plan (including CRAM) for the Los Flores Integrated Solid Waste Facility, Santa Barbara County, CA
- Principal-in-Charge, City of Pacific Grove (subcontract through Fall Creek Engineering) – Biological Studies, IS-MND, Regulatory Permitting, and Wetland Mitigation and Monitoring Plan (including CRAM) for the Greenwood Park Stormwater Treatment System Project, Monterey County, CA
- Lead Biologist/Technical QA/QC, City of Pacific Grove – Biological Studies, IS-MND, Regulatory Permitting, and Landscape Restoration Plan for the Urban Runoff Diversion Phase 3 and Sewer Upgrades Project, Monterey County, CA
- Lead Biologist/Technical QA/QC, Monterey County Resource Management Agency – Biological Data Review and Permitting for the San Clemente Dam Removal Project, Monterey County, CA
- Lead Biologist/Technical QA/QC, Monterey Peninsula Unified School District – Jurisdictional Delineation, Biological Studies, IS-MND, and Regulatory Permitting for the Walter Colton School Storm Drain Improvement Project, Monterey County, CA
- Principal-in-Charge, Santa Cruz County Department of Public Works – Natural Environment Study, Biological Assessment, Bio-acoustic Evaluation, Jurisdictional Delineation, and Permitting for the Forest Hill Drive at Bear Creek Bridge Replacement Project, Santa Cruz County, CA
- Principal-in-Charge, Santa Cruz County Department of Public Works – Natural Environment Study, Biological Assessment, Bio-acoustic Evaluation, Jurisdictional Delineation, and Permitting for the Rancho Rio Avenue at Newell Creek Bridge Replacement Project, Santa Cruz County, CA
- Principal-in-Charge, Santa Cruz County Department of Public Works – Natural Environment Study, Biological Assessment, Bio-acoustic Evaluation, Jurisdictional Delineation, and Permitting for the Green Valley Road at Green Valley Creek Bridge Replacement Project, Santa Cruz County, CA
- Project Manager/Lead Biologist, RJR Engineering Group/City of Pacifica – Biological Impact Analysis for the Land’s End Associates Pacifica Bluff Stabilization Project, San Mateo County, CA
- Project Manager/Lead Biologist, Wood Bros., Inc. (U.S. Army Corps of Engineers, Los Angeles District) – Environmental Protection Plan, Pre-construction Surveys, and Regulatory Support for the Santa Maria River Levee Reach 3 Project, Santa Barbara County, CA
- Lead Biologist/Technical QA/QC, Hoopa Valley Indian Reservation – Biological Studies and Jurisdictional Delineation for the Coon Creek Bridge Replacement Project, Humboldt County, CA
- Lead Biologist/Technical QA/QC, Biological Studies, Jurisdictional Delineation, Regulatory Permitting and Wetland Mitigation and Monitoring Plan for the Hyampom Road Project – Federal Highway Administration, Trinity County, CA
- Lead Biologist/Technical QA/QC, Siskiyou County Department of Public Works – Natural Environment Study, Biological Studies, and Jurisdictional Delineation for the Jenny Creek Bridge Replacement Project, Siskiyou County, CA



- Lead Biologist/Technical QA/QC, City of Campbell – Campbell Biological Resources Analysis Report, Santa Clara County, CA
- Lead Biologist/Technical QA/QC, Jeffrey Mahaney Architect – 145 Silver Hills Residential Development Biological Site Assessment, Marin County, CA
- Lead Biologist/Technical QA/QC, RSC Engineering – 8151 Industrial Ave Bio Resources Assessment, Sacramento County, CA
- Lead Biologist/Technical QA/QC, Chen Timothy – APN 595-06-002 Bio Resources Assessment, Santa Clara County, CA
- Lead Biologist/Technical QA/QC, Habitat for Humanity East Bay/Silicon Valley – Habitat for Humanity 1250 Las Juntas BRA, Contra Costa County, CA
- Lead Biologist/Technical QA/QC, KLC Consulting Engineers and Architects – 15690 Rica Vista Way Abatement, Santa Clara County, CA
- Lead Biologist/Technical QA/QC, Salem Engineering Group – American Canyon BRA, Napa County, CA
- Lead Biologist/Technical QA/QC, KLC Consulting Engineers and Architects – 3555 Dryden Ave Grading Abatement Regulatory Permitting, Santa Clara County, CA
- Lead Biologist/Technical QA/QC, Frank Thompson Housing Consultants – New Cuyama Housing Dev Bio Constraints, Santa Barbara County, CA
- Principal-in-Charge, Capitol Consulting & Government Relations – Canna Rios Cannabis BRA, Santa Barbara County, CA
- Principal-in-Charge, Capitol Consulting & Government Relations – Clear Source Cannabis BRA, Santa Barbara County, CA
- Principal-in-Charge, JARK Quality Cultivation Inc. – 150 Vaquero Road Biological and Cultural Resources Report Transfer, San Luis Obispo County, CA
- Principal-in-Charge, CRSA Architecture – Grover Beach Biological Resources Assessment, San Luis Obispo County, CA
- Principal-in-Charge, Terra Firma California LLC – Bio Constraints for APNs 099-210-074 and 099-210-075, Santa Barbara County, CA
- Principal-in-Charge, Auerbach Engineering Corporation – 3200 Beachcomber Drive Biological Resources Assessment, San Luis Obispo County, CA
- Principal-in-Charge, Panattoni Development Company Inc. – ATC Mountain House Breeam Checklist, Sacramento County, CA
- Principal-in-Charge, Grace Daniel – Dark Heart Nursery Project BRA, Yolo County, CA
- Principal-in-Charge, Padilla Coreen – Harvest Road Cannabis Project Bio Resources Assessment, Santa Barbara County, CA
- Principal-in-Charge, Brandt Mark – 1446 Ewing Project Bio Resources Assessment, San Luis Obispo County, CA
- Principal-in-Charge, Lachaine & Associates Inc – Cat Canyon Cannabis Project Bio Resources Assessment, Santa Barbara County, CA
- Principal-in-Charge, Plantel Nurseries – Plantel Nurseries Eastside Expansions Project, Santa Barbara County, CA
- Principal-in-Charge, Tang Nancy – 1 Ohlson Ln Biological Resources Constraints Analysis, Contra Costa County, CA
- Principal-in-Charge, Sameer Mission – Camino Tassajara Sherburne Hills BRA, Contra Costa County, CA
- Principal-in-Charge, MK Building and Development Inc. – Santa Rosa Self-Storage BRA, Sonoma County, CA
- Principal-in-Charge, Hibser Yamauchi Architects Inc. – Big Sur Health Center BRA, Monterey County, CA
- Principal-in-Charge, Santa Lucia Conservancy – Small Mammal Inventory Survey, Monterey County, CA
- Principal-in-Charge, Circlepoint – Crittenden Ln Trailhead Improvements BRA, Contra Costa County, CA



- Principal-in-Charge, City of San Luis Obispo – Laguna Lake Permitting Bio Resources Assessment, San Luis Obispo County, CA
- Principal-in-Charge, County of Santa Barbara – Los Prietos Boys Camp SUP Renewal Bio Resources Assessment, Santa Barbara County, CA
- Principal-in-Charge, City of San Luis Obispo Housing Authority – Nest Bird Survey HASLO 736 Orcutt Rd, San Luis Obispo County, CA
- Principal-in-Charge, City of Visalia – Ponding Basin Clearance Survey, Tulare County, CA

Botanical Surveys

- Lead Biologist/Technical QA/QC, ATC Associates (U.S. Bureau of Land Management, Barstow Field Region) – Botany Survey for the Pisgah Crater Communications Project, San Bernardino County, CA
- Lead Biologist/Technical QA/QC, ATC Associates (U.S. Army, Fort Irwin) – Biological Survey for the Granite Mountain Communications, San Bernardino County, CA
- Principal-in-Charge, Plains All American Pipeline, L.P. (U.S. Forest Service, Angeles National Forest) – Botany Surveys and Vegetation Mapping for the Pipeline Anomaly Repair Project – Fort Tejon to LA Refinery Line 63, Los Angeles County, CA
- Lead Biologist/Technical QA/QC, ICF International (U.S. Forest Service, Angeles National Forest) – Botany Surveys and Vegetation Mapping for the Tehachapi Renewable Transmission Project, Kern and Los Angeles Counties, CA
- Project Manager/Lead Biologist, U.S. Forest Service, Angeles National Forest and San Bernardino National Forest – Habitat Suitability Assessments and BA/BEs for the Special Use Permit Program, Los Angeles and San Bernardino Counties, CA
- Project Manager/Lead Biologist, U.S. Forest Service, Angeles National Forest – Botany Surveys and BA/BEs for the Fuels and Vegetation Management Project (>15,000 acres), Los Angeles County, CA
- Project Manager/Lead Biologist, U.S. Forest Service, Los Padres National Forest – Wetland Delineation for the Chuchupate Ranger Station Expansion Project, Ventura County, CA
- Project Manager/Lead Biologist, Southern California Gas Company (U.S. Forest Service, Los Padres National Forest) – Habitat Suitability Assessment and BA/BE for the Line 8109 Maintenance Project, Ventura County, CA
- Project Manager/Lead Biologist, AT&T (U.S. Forest Service, Los Padres National Forest) – Botany Survey, Habitat Suitability Assessment, and BA/BE for the Pine Mountain Learning Center Project, Kern County, CA
- Project Manager/Lead Biologist, U.S. Forest Service, Los Padres National Forest – Habitat Suitability Assessments and BA/BEs for the Special Use Permit Program, Ventura and Santa Barbara Counties, CA
- Project Manager/Lead Biologist, Private Landowner (U.S. Forest Service, Los Padres National Forest) – Botany Surveys and BA/BE for the Special Use Permit Renewal Project, Santa Barbara County, CA
- Lead Biologist/Technical QA/QC, Confidential Client – Botany Surveys for Potential Solar Projects (>2,600 acres), Kern, Los Angeles and San Bernardino Counties, CA
- Project Manager/Lead Biologist, Live Oak Associates – Botanical and Wildlife Surveys for the Panoche Valley Solar Farm Project, San Benito County, CA
- Lead Biologist/Technical QA/QC, Confidential Client – Biological Surveys for Potential Solar Projects, Fresno and Kings Counties, CA
- Project Manager/Lead Biologist, U.S. Marine Corps – Thread-leaved Brodiaea Inventory and GIS Database Update, San Diego County, CA
- Project Manager/Lead Biologist, U.S. Bureau of Reclamation, Camp Pendleton – Vegetation Analysis for the Santa Margarita River Feasibility Study, San Diego County, CA
- Project Manager/Lead Biologist, U.S. Marine Corps – Thread-leaved Brodiaea Survey and Wetland Delineation for the Santa Margarita River Conjunctive Use Project, San Diego County, CA



- Lead Biologist/Technical QA/QC, Coastal Christian School – Biological Resources Assessment, Botanical Survey, and Wetland Delineation for the Coastal Christian School Project, San Luis Obispo County, CA
- Project Manager/Lead Biologist, U.S. Forest Service – Jurisdictional Delineation for the Chuchupate Ranger Station Expansion Project, Los Padres National Forest, Ventura County, CA

Utilities and Renewable Energy

- Project Manager/Lead Biologist, Southern California Gas Company – Biological Pre-construction Surveys and Construction Monitoring for the Lines 2000 & 4000 Pipeline Repair Project at Chino Hills State Park, Orange, Riverside and San Bernardino Counties, CA
- Project Manager/Lead Biologist, Southern California Gas Company – Biological Studies, Jurisdictional Delineation, and Regulatory Permitting for the Line 44-1008 Maintenance Project, San Luis Obispo County, CA
- Project Manager/Lead Biologist, Ecosphere Environmental – Clean Water Act Section 404(b)(1) Alternatives Analysis for the Solar Two Project, Imperial County, CA
- Project Manager/Lead Biologist, URS – Biological Investigations for the California Valley Solar Ranch Project, San Luis Obispo County, CA
- Lead Biologist/Technical QA/QC, Sempra Energy Utilities – Annual Plants, Invertebrates, Fishes, Amphibians, and Reptiles Impacts Analyses for the GAP HCP, San Luis Obispo, Santa Barbara, Ventura, Los Angeles, Orange, San Bernardino and Riverside Counties, CA
- Lead Biologist/Technical QA/QC, CH2M Hill – Vegetation and Noxious Weed Management Plan for PG&E's Pit 3,4,5 Hydroelectric Relicensing Project, Shasta County, CA
- Project Manager/Lead Biologist, Southern California Gas Company – Habitat Suitability Assessment and BA/BE for the Line 8109 Maintenance Project, Ventura County, CA
- Principal-in-Charge, AT&T – Habitat Suitability Assessment and BA/BE for the Pine Mtn Learning Center Telecommunications Cable Project, including analysis of potential impacts to the California condor, Kern County, CA
- Principal-in-Charge, Pacific Gas and Electric – Various Projects, Various Counties/Cities, California, CA
 - Willow Creek Watercourse Crossing BRA, San Luis Obispo County
 - Morro Bay Mesa Bridge Installation BRA, San Luis Obispo County
 - Los Padres National Forest Resource Reviews, San Luis Obispo County
 - Surf Tap 115 kV WRO Relocation Project Construction Monitoring, Santa Barbara County
 - Tassajara Creek Rd Culvert Repl BRA, San Luis Obispo County
 - Irish Hills Rd Maint Bio Monitoring, San Luis Obispo County
 - Red Hill Access Rd Maint Bio Monitoring, San Luis Obispo County
 - Mesa LZ Site Stream Restoration BRA, San Luis Obispo County
 - E Cuesta Santa Lucia (Temblor-SLO La Panza) Access Rd Maint Bio Monitoring, San Luis Obispo County
 - PGE Villa Creek Ford, San Luis Obispo County
 - PGE Arborist Enhanced Vegetation Management, Regional
 - Metcalf-Moss Landing Uvas Road Crossings Replacement, Monterey County
 - PGE Divide Vandenberg Access Road Maintenance, Santa Barbara County
 - PGE Cabrillo Santa Ynez Access Road Maintenance, San Luis Obispo County
 - PGE Morro Bay Distribution Substation Flood Mitigation, San Luis Obispo County
 - PGE Morro Creek Tributary Restoration Project, San Luis Obispo County
 - 2020 LPNF Road Work Bio Resources Assessment, San Luis Obispo County
 - Monta Vista Coyote Access Road Maintenance (Fee Strip), Santa Cruz County
 - Burns Lone Start 1 and 2 Access Road Maintenance Work, Santa Cruz County



- Los Banos Pacheco Access Road Maintenance BRA, Merced County
- LPNF Road Work 8187934, San Luis Obispo County
- Principal-in-Charge, Tesla – EBMUD PV Bio Monitoring, Contra Costa County, CA
- Principal-in-Charge, Salem Engineering Group – Dimension Henrietta Solar, Kings County, CA
- Principal-in-Charge, Salem Engineering Group – Dimension Jacobs Solar, Kings County, CA
- Principal-in-Charge, Salem Engineering Group – Dimension Visalia Solar, Fresno County, CA
- Principal-in-Charge, County of Fresno – FS Little Bear Solar 3rd Party Monitor, Fresno County, CA
- Principal-in-Charge, Clearway Energy – Clearway Energy CVSR 2020 Ops Bio Support, San Luis Obispo County, CA
- Principal-in-Charge, HT Harvey and Associates – California Valley Solar Ranch Paleontological Monitoring, San Luis Obispo County, CA

Transportation

- Lead Biologist/Technical QA/QC, Mendocino County Department of Transportation – Natural Environment Study, Biological Studies and Jurisdictional Delineation for the Eastside Potter Valley Road Improvements Road, Mendocino County, CA
- Lead Biologist/Technical QA/QC, Federal Highway Administration – Biological Studies, Jurisdictional Delineation, Regulatory Permitting and Wetland Mitigation and Monitoring Plan for the Hyampom Road Project, Trinity County, CA
- Lead Biologist/Technical QA/QC, U.S. Bureau of Reclamation – Biological Assessment, Biological Studies, Jurisdictional Delineations, and Regulatory Permitting for the Trinity River Four Bridges Project, Trinity County, CA
- Lead Biologist/Technical QA/QC, Siskiyou County Department of Public Works – Natural Environment Study, Biological Studies, and Jurisdictional Delineation for the Jenny Creek Bridge Replacement Project, Siskiyou County, CA
- Lead Biologist/Technical QA/QC, Modoc County Department of Public Works – Natural Environment Study, Biological Studies, Jurisdictional Delineation, and Regulatory Permitting for the County Road 85 Bridge Replacement Project, Modoc County, CA
- Lead Biologist/Technical QA/QC, Modoc County Department of Public Works – Natural Environment Study, Biological Studies, and Jurisdictional Delineation for the County Road 69 Bridge Replacement Project, Modoc County, CA
- Lead Biologist/Technical QA/QC, Caltrans District 2 – Biological Studies and Jurisdictional Delineation for the Buckhorn Grade (State Route 299) Improvements Project, Shasta County, CA
- Lead Biologist/Technical QA/QC, Shasta County Department of Public Works – Natural Environment Study, Biological Studies, Jurisdictional Delineation, and Regulatory Permitting for the Lone Tree Road at Anderson Creek Bridge Replacement Project, Shasta County, CA
- Lead Biologist/Technical QA/QC, Shasta County Public Works Department – Natural Environment Study, Biological Studies, and Jurisdictional Delineation for the Blue Jay Lane at Anderson Creek Bridge Replacement Project, Shasta County, CA
- Lead Biologist/Technical QA/QC, Shasta County Public Works Department – Biological Studies and Jurisdictional Delineation for the Zogg Mine Road at Zogg Creek Bridge Replacement Project, Shasta County, CA
- Lead Biologist/Technical QA/QC, Shasta County Public Works Department – Natural Environment Study, Biological Studies, and Jurisdictional Delineation for the East Fork Road at Clear Creek Bridge Replacement Project, Shasta County, CA
- Lead Biologist/Technical QA/QC, Tehama County Department of Public Works – Natural Environment Study, Biological Studies, and Jurisdictional Delineation for the Evergreen Road at South Fork Cottonwood Creek Bridge Replacement Project, Tehama County, CA



- Lead Biologist/Technical QA/QC, Tehama County Department of Transportation – Biological Studies and Jurisdictional Delineation for the McCoy Road at Central & South Fork Dibble Creek Bridge Project, Tehama County, CA
- Lead Biologist/Technical QA/QC, Tehama County Department of Transportation – Biological Studies, Jurisdictional Delineation, and Regulatory Permitting for the Bowman Road at South Fork Cottonwood Creek Bridge Replacement Project, Tehama County, CA
- Lead Biologist/Technical QA/QC, Caltrans District 3 – Biological Studies and Jurisdictional Delineation for the Proposed Alberti Parcel Mitigation Bank, Butte County, CA
- Lead Biologist/Technical QA/QC, Baldwin Contracting Company – Biological Studies, Jurisdictional Delineation, Regulatory Permitting, and Wetland Mitigation and Monitoring Plan (including CRAM) for the Orland Pit Gravel Plant Site, Glenn County, CA
- Project Manager/Lead Biologist, Yuba County Department of Public Works – Natural Environment Study, Biological Studies, Jurisdictional Delineation, Regulatory Permitting, and Wetland Mitigation and Monitoring Plan for the La Porte Road Bridge Replacement Project, Yuba County, CA
- Lead Biologist/Technical QA/QC, Caltrans District 3 – Natural Environment Study, Biological Studies, and Jurisdictional Delineation for the State Route 16 Improvements Project, Yolo County, CA
- Principal-in-Charge, Joseph J Albanese Inc. – Caribbean Dr. Parking and Trail Enhancement Project, Santa Clara County, CA
- Principal-in-Charge, Circlepoint – Bike Bridge on Stevens Creek Initial Study, Santa Clara County, CA
- Principal-in-Charge, Kitchell – RTA Bus Maintenance Facility, San Luis Obispo County, CA
- Principal-in-Charge, HDR Engineering Inc. – Caltrans Statewide On-Call Biological Services, Various Counties/Cities, California, CA
- Principal-in-Charge, Joseph J Albanese Inc. – Sierra Rd. Landslide Repair Project Biological Monitoring, Santa Clara County, CA
- Principal-in-Charge, ICF International – Task Order 05 La Gloria Road Biological Monitoring, San Benito County, CA
- Principal-in-Charge, ICF International – Task Order 08 Limekiln Black Abalone Survey, Monterey County, CA
- Principal-in-Charge, Blair Church and Flynn Consulting Engineers – Herndon Ave Widening Temperance to DeWolf Biological Services, Fresno County, CA
- Principal-in-Charge, City of Turlock – State Route 99/Fulkerth Rd Intchnng Improvement Project Construction Monitoring, Stanislaus County, CA
- Principal-in-Charge, Pacific Gas & Electric – Divide-Cabrillo (Burton-Mesa ER) Access Road Maintenance, Santa Barbara County, CA
- Principal-in-Charge, OHL North America – Highway 101 Seismic Retrofit Bridge Widening Environmental Consultation, Monterey County, CA

Education

- Principal-in-Charge, University of California Santa Cruz – UCSC Kresge College Renewal and Expansion Project Biological Services, Santa Cruz County, CA
- Principal-in-Charge, University of California Santa Cruz – UCSC Emergency West Sewer Main Replacement and Meter Relocation Project, Santa Cruz County, CA
- Principal-in-Charge, University of California Santa Cruz – Long Marine Lab Permitting Support Services, Santa Cruz County, CA
- Principal-in-Charge, Capstone Development Partners LLC – UCSC FSH Fencing Precon Monitoring, Santa Cruz County, CA
- Principal-in-Charge, California Polytechnic State University San Luis Obispo – Fermentation Science Building Bio Monitoring, San Luis Obispo County, CA



- Principal-in-Charge, California Polytechnic State University San Luis Obispo – Cal Poly SATRC Biological Monitoring Services, San Luis Obispo County, CA
- Principal-in-Charge, Pajaro Valley Unified School District – PVHS Athletic Fields Pre-Con Monitoring, Santa Cruz County, CA

Water

- Principal-in-Charge, San Lorenzo Valley Water District – San Lorenzo Valley Water District Lyon Tank Access Road Rehabilitation, Santa Cruz County, CA
- Principal-in-Charge, City of Santa Cruz Water Department – Santa Cruz Water Department Coast Pump Station Bio Resources Support, Santa Cruz County, CA
- Principal-in-Charge, Santa Clara Valley Water District – Santa Clara Valley Water District On-Call Biological Services, Santa Clara County, CA
- Principal-in-Charge, MNS Engineers – Nipomo CSD Waterline Intertie Construction Monitoring, San Luis Obispo County, CA
- Principal-in-Charge, Blair Church & Flynn Consulting Engineers – Pasajero Recharge Project Bio and Cultural Resources, Riverside County, CA

Surveys

- Principal-in-Charge, City of Los Altos – Los Altos Community Center Preconstruction Biological Surveys, Santa Clara County, CA
- Principal-in-Charge, KG Investment Properties – Alvarado Commerce Center NBS, Alameda County, CA
- Principal-in-Charge, Salem Engineering Group – Cochrane Road Commercial Development Pre-Construction Surveys, Santa Clara County, CA
- Principal-in-Charge, LHB & Associates – Rotten Robbie #67 Nesting Bird Survey, Santa Clara County, CA
- Principal-in-Charge, Cushman & Wakefield – 2019 Leghorn Street NBS, Santa Clara County, CA
- Principal-in-Charge, AMG & Associates LLC – Virginia Studios Project Nesting Bird Survey, Santa Clara County, CA
- Principal-in-Charge, JCO Engineering – Monterey Presidio Building 620 Retrofit Channel/Infiltration Swale Support, Monterey County, CA
- Principal-in-Charge, Avila Valley Partners LLC – Ontario Road Subdivision Tree Protection Plan Project, San Luis Obispo County, CA
- Principal-in-Charge, City of Santa Cruz – Santa Cruz Urban Tree Inventory, Santa Cruz County, CA
- Principal-in-Charge, MNS Engineers – Nipomo Community Services District Arborist Report, San Luis Obispo County, CA

Permitting

- Principal-in-Charge, PGA Design – Vallejo Waterfront History Art Park Permitting Support, Solano County, CA
- Principal-in-Charge, Wallace Group – Estelle Vineyard Permitting Support Services, San Luis Obispo County, CA
- Principal-in-Charge, Rasuli Matthew – 637 Honey Lane Development HCP Permitting, Contra Costa County, CA
- Principal-in-Charge, City of Visalia – Packwood Creek Trail Permitting Support, Tulare County, CA
- Principal-in-Charge, University of California Santa Cruz – Long Marine Lab Permitting Support Services, Santa Cruz County, CA
- Principal-in-Charge, City of Hercules – Willow Ave Culvert Replacement, Contra Costa County, CA
- Principal-in-Charge, County of Santa Barbara Department of Public Works – Tajiguas Landfill HCP, Santa Barbara County, CA



ADDITIONAL TRAINING

- Certified Ecologist – Ecological Society of America, 2017
- California Rapid Assessment Method for Depressional Wetlands – CRAM.org, 2013
- Blunt-nosed Leopard Lizard Identification Workshop – The Wildlife Society, 2013
- Introduction to the Ecology and Biology of the Fairy Shrimp and Tadpole Shrimp of California and Oregon – Dr. Christopher Rogers, 2012
- Erosion and Sediment Control Short Course – Upper Salinas-Las Tablas Resource Conservation District, 2012
- A Manual of California Vegetation, 2nd Edition – Santa Barbara Botanic Garden, 2011
- California Rapid Assessment Method – U.C. Davis Extension and Moss Landing Marine Laboratories, 2010
- California Rapid Assessment Method – U.S. Environmental Protection Agency, San Francisco Estuary Institute and Moss Landing Marine Laboratories, 2007
- Habitat Assessment and Modeling Training – U.S. Geological Survey, 2007
- Hydric Soil Indicators – Wetland Training Institute, 2007
- Introduction to Botanical Biological Evaluations, Botany Reports, and Noxious Weed Risk Assessments – Friends of the Biological Sciences Herbarium, CSU, Chico, 2005
- Wetlands Delineation and Management – Richard Chinn Environmental Training, 2003
- Introduction to CEQA/NEPA for Botanists – Friends of the Biological Sciences Herbarium, CSU, Chico, 2002

REFERENCES

- Marlene Finley, Parks Director, San Mateo County Parks and Recreation Department, 2001 Pacific Blvd. San Mateo, California, 94403, 650-363-4000
- Timothy Bailey, Senior Engineer, County of Santa Cruz, Department of Public Works, 701 Ocean St #410, Santa Cruz, California 95060, 831-454-2391
- Robyn Cooper, Senior Engineer, Fall Creek Engineering, 1525 Seabright Ave, Santa Cruz, California 95062, 831-426-9054

AWARDS

- Jim Jakerst Field Botany Award, 2001 – CSU, Chico

PUBLICATIONS/PRESENTATIONS

- Boggs, C. 2002. Reproductive biology of *Dudleya cymosa* subsp. *cymosa* (Crassulaceae). California Native Plant Society, Mount Lassen Chapter newsletter.
- Boggs, C. 2001. Reproductive biology of *Dudleya cymosa* subsp. *cymosa* (Crassulaceae), a native Californian succulent. MS thesis. CSU, Chico.
- Carlquist, S., and C. Boggs. 1996. Wood anatomy of Plumbaginaceae. Bulletin of the Torrey Botanical Club. 123(2): 135-147.
- Ohlson, D., Paulus, J., Kramer, N., and C. Boggs. 2011. Botanical Resources of Valadeo Ranch: Fitting Data Collection Goals to Project Needs. Northern California Botanists Annual Symposium. Chico, California
- Kirk, P., and J. Hunt (C. Boggs [Acknowledgements]). 2010. Monitoring Habitat Restoration on the Trinity River Using Fine-scale Vegetation Mapping. Northern California Botanists Annual Symposium. Chico, California.
- Boggs, C. 2001. Reproductive biology of *Dudleya cymosa* subsp. *cymosa* (Crassulaceae). Friends of the Biological Sciences Herbarium Annual Meeting. Chico, California.





Steve Howard

Senior Fisheries Biologist, Project Manager

Mr. Howard is a certified fisheries professional with 23 year of experience and expertise in ESA consultations, aquatic studies including fishery and amphibian habitat assessment and population surveys, fish and amphibian species identification, fish passage assessment, instream flow studies, fish and aquatic invertebrate population analysis, water quality assessment, and wildlife population surveys. Mr. Howard has performed numerous projects in aquatic habitats ranging from high elevation lakes and streams to coastal estuaries. Mr. Howard has also conducted projects including subsurface soil and groundwater investigations, environmental impact studies, environmental monitoring, and site closure and remediation. Mr. Howard has been involved in permitting large power projects and smaller instream projects throughout California.

Mr. Howard has conducted numerous fish population studies throughout many of the western states including Chinook salmon, steelhead and bull trout studies in northern California and Oregon, steelhead studies in central and southern California, various trout species studies in California, Oregon and Idaho, and native non-game fish studies in Oregon and southern California. Mr. Howard has also conducted fish population surveys in southern and central California estuaries for the endangered tidewater goby and has conducted surveys for unarmored threespine stickleback in the Santa Clara River and Santa Ana sucker surveys in various southern California drainages. Mr. Howard has performed California red-legged frog and arroyo toad surveys in southern and Central California. Mr. Howard has supported numerous Section 7 and Section 10 endangered Species Act consultations in California.

EDUCATION

BS, Freshwater Fisheries,
Humboldt State University

CERTIFICATIONS/ REGISTRATIONS

American Fisheries Society
Desert Fishes Council

American Institute of Fisheries
Research Biologists

Certified Fisheries Professional,
American Fisheries Society

PERMITS

Federal 10(a)(1)(A) permit for
Tidewater Goby, Unarmored
Threespine Stickleback, Santa
Ana Sucker, and California Red-
legged Frog

EXPERIENCE

Rincon Consultants, Inc. (2018
–present)

R2 Resource Consultants
(2016– 2018)

United Water Conservation
District (2007 – 2015)

ENTRIX Environmental
Consulting (2000 – 2007)

Oregon Department of Fish and
Wildlife (1998-1999)

SELECT PROJECT EXPERIENCE

Fisheries Biologist, United Water Conservation District – Freeman Diversion Fish Passage Monitoring, Ventura County

Mr. Howard upgraded and managed the Freeman Diversion Fish Passage Monitoring program on the Santa Clara River. A downstream migrant fish trap and upstream migrant video and sonar monitoring scheme was utilized to quantify the number of upstream and downstream migrant steelhead and Pacific lamprey passing the diversion facility. Another goal was to assess the migratory periodicity of these species in the Santa Clara River. Sonar using a Dual Frequency Identification Sonar (DIDSON) was used to understand the behavior of upstream migrant steelhead and Pacific lamprey as they arrive at the entrance to a fish ladder. Challenges to this system were numerous including large hydrologic fluctuations, high sediment and bed loading, turbulence, and fouling from algae and debris. These challenges were addressed by adding water level transducers in areas that affected monitoring operations by regulating gates to manage water level fluctuations, adding a silt box to the DIDSON, placing the DIDSON in minimally turbulent water, and modifying operations to flush sediment and debris.



Federally Permitted Biologist, California-American Water Company – San Clemente Dam Retrofit Drawdown Project, Monterey County

Mr. Howard was part of a team that conducted annual fish and amphibian rescues upstream of San Clemente Dam and fish trapping and relocation activities to appropriate habitats downstream of San Clemente Dam. Hundreds of steelhead and California red-legged frogs were captured and relocated during drawdown activities over a four-year period. Water quality monitoring was also an important part of this project during the drawdown activities. Dissolved oxygen (DO) can drop dramatically during these types of projects. To address DO issues, aerators were installed throughout the reservoir to maintain adequate DO levels during the project. Mr. Howard conducted fish rescues and relocations, California red-legged frog relocations, and water quality monitoring.

Fisheries Biologist, Granite Construction – Tidewater Goby Relocations, Santa Barbara County

Mr. Howard conducted pre-construction tidewater goby surveys and capture and relocation activities in the Arroyo Paredon Lagoon in Carpinteria, California. Caltrans and the County of Santa Barbara removed sediment from under the highway 101 bridge to address flow capacity issues that arose following the Thomas Fire in 2017 and early 2018. Mr. Howard was the federal permitted biologist on this project and with the assistance of Rincon biologists captured and relocated over 300 tidewater gobies and other lagoon fishes from the project site.

Water Quality Study Manager, Southern California Edison – FERC Relicensing, Fresno County

Mr. Howard was the water quality/chemistry field study manager during an Alternative Licensing Process (ALP) for multiple dams and diversions in the San Joaquin River watershed. Mr. Howard developed and managed a basin-wide water quality and chemistry study that required periodic sampling of several reservoirs, rivers and streams. The logistics related to water sampling and delivery from remote areas to various labs within a short holding time was the biggest challenge with this project. To address the challenge, Mr. Howard hired local residents, many students, to be couriers for deliveries to labs throughout the day. This allowed for an increased sampling rate that resulted in a project that was completed within a timeframe that many believed could not be accomplished.

Field Lead and Manager, City of Ventura – Santa Clara River Estuary Bioassessment, Ventura County

Mr. Howard designed and conducted this bioassessment study which involved stratified sampling of several estuarine habitats for benthic macroinvertebrates in the Santa Clara River estuary. The macroinvertebrate data were used to characterize assemblage diversity and to develop relationships between species abundance, density, richness and microhabitat preferences (grain size, salinity tolerances, etc.). The objective of this study was to support the City and LAWRQCB in the development of defensible wastewater discharge criteria to the estuary.

Federally Permitted Biologist, Granite Construction – San Lorenzo River Fish Relocation Project, Santa Cruz County

Mr. Howard was part of a permitted team that conducted salmon, steelhead and tidewater goby rescue and relocation activities during a bank stabilization project in the tidally influenced reach of the San Lorenzo River. A porta dam was constructed around the work area and water was pumped out the impoundment. During fish rescue operations, Mr. Howard discovered the first known tidewater goby in the San Lorenzo River, which prompted a temporary shutdown of the project and further consultation to complete the project. Mr. Howard assisted in expediting this consultation process with the USFWS and NOAA Fisheries (salmon and steelhead) by monitoring water quality and habitat conditions within the impoundment and the San Lorenzo River.

Fisheries Biologist, United Water Conservation District, Section 7 and Section 10 Consultations, Ventura County, California.

Mr. Howard, while working as an employee to United Water Conservation District and later as a consultant, was involved with federal section 7 and section 10 consultations with the National Marine Fisheries Service and the U.S. Fish and Wildlife Service. The section 7 consultations were related to operations and maintenance at the Freeman Diversion and Santa Felica Dam on Piru Creek. The section 10 consultation was related to operations and maintenance at the Freeman Diversion following the elimination of a federal nexus to the project.





Kyle R. Weichert, M.S.

SENIOR BIOLOGIST/BOTANIST

Kyle Weichert is a Senior Biologist and Certified Arborist with Rincon's biological resources group. Mr. Weichert has experience since 2007 conducting general and focused surveys for many plant species and vegetation types. Specifically, Mr. Weichert has experience conducting wide variety of vegetation surveys including rare plant surveys, botanical inventories, vegetation classification and mapping, and vegetation assessments. Mr. Weichert also has experience with implementing and monitoring habitat and vegetation restoration projects, and collecting and processing plant vouchers and specimens for submittal to herbaria.

A partial list of species from Mr. Weichert's most recent experience includes: Gaviota tarplant, California jewelflower, Kern mallow, San Joaquin woolly threads, striped adobe lily, San Joaquin adobe sunburst, Bakersfield cactus, adobe sanicle, Chorro creek bog thistle, San Luis Obispo Owl's clover, Lemmon's jewelflower, Temblor Range buckwheat, and Vandenberg monkeyflower.

EDUCATION

B.S. Biological Sciences,
California Polytechnic State
University, San Luis Obispo,
2007

M.S. Biological Sciences,
California Polytechnic State
University, San Luis Obispo,
2015

CERTIFICATIONS/ REGISTRATIONS

CDFW Rare Plant Voucher
Collecting Permit No. 2081(a)-
17-039-V

International Society of
Arboriculture (ISA) Certified
Arborist (WE -12113A)

EXPERIENCE

Rincon Consultants, Inc.
(2015 – present)

Althouse and Meade, Inc.
(2011 - 2015)

California Polytechnic State
University, San Luis Obispo
(2011 – 2012)

Santa Cruz Biotechnology, Inc.
(2008 - 2011)

Central Coast Vineyard Team
(2007 - 2008)

California Department of Fish
and Game, Research Associate
(2007)

SELECTED BOTANICAL EXPERIENCE

FORTAG Multiuse Trail Project, Monterey County (2018-2020)

Mr. Weichert led seasonally timed botanical surveys for 10+ miles of proposed multi-use pathway. The surveys identified and mapped numerous special status species, including several federally listed species.

Dana Preserve Project, San Luis Obispo County (2020)

Mr. Weichert conducted botanical and rare plant surveys on behalf of the County of San Luis Obispo for an approximately 250-acre proposed residential development. Mr. Weichert identified and quantified numerous special status species, including a federally listed species.

PG&E Burton Mesa Access Rd. Improvements Project, Santa Barbara County (2020)

Mr. Weichert conducted preconstruction rare plant surveys for access road improvements. He located, mapped, and marked numerous rare plant species.

Aitken Drive Botanical Surveys, City of Oakland (2019-2020)

Mr. Weichert conducted botanical surveys targeting pallid manzanita on behalf of the City of Oakland for an emergency road repair project. Mr. Weichert located the species at a nearby reference population.

PG&E Irish Hills Access Rd. Improvement Project, San Luis Obispo (2019)

Mr. Weichert conducted preconstruction rare plant surveys for access road improvements. He located, mapped, and marked numerous rare plant species over numerous miles of access road.

Key Site 30, Santa Barbara County (2015-2019)

Mr. Weichert oversaw the implementation and monitoring for the project Habitat Restoration and Rare Plant Mitigation Plan. This included monthly visits and annual visits to the site, quantitative evaluation of restoration and reference plots, implementation of seeding and planting plans, and overall assessment of success for 5 years.



SELECTED BOTANICAL EXPERIENCE, CONT'D

AT&T Frazier Park to Pine Mountain Telecommunications Cable Project (2016-2019)

Mr. Weichert is a project manager for tasks associated with biological resources. Mr. Weichert prepared and implemented the Habitat Restoration Plan for the Project. He is currently responsible for the annual restoration monitoring and reporting of the project area for the portion within Los Padres National Forest. This includes point-intercept evaluation of the restoration area and adjacent vegetation to determine if restoration goals are on track for success.

Line 103 ROW Maintenance Project, Southern California Gas Company (2016-present)

Mr. Weichert is a project manager and lead botanist for tasks regarding biological resources for a road maintenance project on the Coles Levee Ecosystem Preserve in Kern County. Tasks include a full botanical inventory with emphasis on detecting special status species Kern mallow, San Joaquin woollythreads, petroleum neststraw, Lost Hills crownscale, and California jewelflower.

Orcutt Area Specific Plan Project, City of San Luis Obispo (2015 – present)

Mr. Weichert is a project manager for a variety of tasks associated with the construction of a residential development in San Luis Obispo. Mr. Weichert has been working with the City of San Luis Obispo to collect seed from local populations of San Luis Obispo owl's clover (*Castilleja densiflora* ssp. *obispoensis*) for implementation of project mitigation activities.

California High-Speed Rail Project, (2016)

Mr. Weichert conducted botanical surveys for the California High-Speed Rail project within the Bakersfield to Palmdale alignment, including many surveys days within Tejon Ranch in Kern County. Mr. Weichert also conducted reference site visits for numerous species.

Santa Maria River Infiltration Enhancement Project, Santa Barbara County (2015)

Mr. Weichert was a project manager and conducted focused vegetation assessment surveys to determine the average cover, height class, and condition of the vegetation within proposed impact areas. Additionally, Mr. Weichert conducted biological and botanical surveys over the 14-mile stretch of the river including a botanical inventory and habitat map.

TRAININGS/WORKSHOPS

- San Luis Obispo County Flora. Presented by California Native Plant Society. Instructor: Dr. David Keil - 2017
- California Anostraca and Notostraca (California fairy shrimp, clam shrimp, and tadpole shrimp) Identification Class. Instructor: Mary Schug Belk - 2014
- CEQA Essentials: An Introduction and Intermediate-Level Training Workshop. Presented by the Association of Environmental Professionals. Instructors: Steve Rodriguez, Brian Smith, and Chris Bersbach. - 2014
- Vegetation Rapid Assessment/Relevé Workshop. Presented by the California Department of Fish and Wildlife and the California Native Plant Society. Instructors: Jennifer Buck-Diaz, Anne Klein, and Rachelle Boul. - 2014
- Acoustic Monitoring of Bats Workshop. Presented by the Western Section of the Wildlife Society. Instructor: Joe Szewczak, Ph.D. - 2014
- Biology and Management of the California Red-legged Frog (*Rana draytonii*). Presented by the Elkhorn Slough Coastal Training Program. Captured and handled 10 adult and juvenile California red-legged frogs under the supervision of the permitted instructors during training. Instructors: Trish and Greg Tatarian - 2014
- Revolutionary Advances in Genetics: Implications for Amphibian Conservation. Presented by The Wildlife Society, California North Coast Chapter. - 2013
- San Joaquin Kit Fox Workshop. Course covering biology, species recognition, habitat, conservation strategies, and field identification of San Joaquin kit fox. Presented by Brian Cypher and Christine Van Horn Job, Bakersfield, California. – 2012





Heather Price Curran, M.S.

BIOLOGIST

Heather Price Curran has been studying biology and conducting research on the Central Coast for over fourteen years. She has professional experience as a researcher, educator, and biological consultant. Ms. Curran has extensive field experience, and specializes in the marine realm, though she is also well acquainted with the freshwater and terrestrial flora and fauna of California. While working under the guidance of federally permitted biologists, Ms. Curran has captured and handled both the federally threatened California red-legged frog (*Rana draytonii*) and the federally endangered tidewater goby (*Eucyclogobius newberryi*). Ms. Curran has extensive technical writing experience and has worked on a wide range of projects as a biologist, environmental monitor, stormwater professional, and project manager.

EDUCATION

MS, Biological Sciences,
California Polytechnic State
University, San Luis Obispo

BS, Biological Sciences,
California Polytechnic State
University, San Luis Obispo

CERTIFICATIONS

SCUBA- Rescue Diver and
Advanced Open Water
Certified

CPR/First Aid Certified

California Red-legged Frog
Workshop Level I

EXPERIENCE

Rincon Consultants, Inc.
(2019 – present)

California Polytechnic State
University Biological Sciences
Department
(2015 – 2019)

Kern Environmental
Education Program (Camp
KEEP)
(2015 – 2019)

Cuesta College, San Luis
Obispo, California
(2016 – 2017)

CCFRP
(2010 – 2014)

Catalina Island Marine
Institute
(2011 – 2012)

Research Assistant, nearshore
ground fisheries observing,
CCMS
(August – December 2010)

SELECT PROJECT EXPERIENCE

Biologist/Environmental Monitor/Project Manager, Bridge Street Bridge Rehabilitation and Habitat Mitigation Project, City of Arroyo Grande, California (June 2020 to present) - Ms. Curran was the lead environmental monitor for this project and has now taken over the role of project manager for the habitat and mitigation monitoring period. Ms. Curran conducted Worker Environmental Awareness Program (WEAP) trainings for all new crew members working on-site, as well as daily and weekly compliance monitoring. Before and during the placement of a creek diversion, Ms. Curran assisted with relocation of rainbow trout/steelhead (*Oncorhynchus mykiss*) and other native California fish species found within Arroyo Grande creek. She also conducted nesting bird surveys within the riparian habitat and closely monitored multiple active nests within the project area. Ms. Curran works closely with the contractors, construction management team, and City of Arroyo Grande, to ensure that all aspects of the project remain in compliance with environmental permit conditions.

Environmental Scientist/Assistant Project Manager, Coastal Hazards Monitoring, South San Luis Obispo County Sanitation District, Oceano, California (November 2019 to present) – Ms. Curran has conducted coastal hazards monitoring and reporting for the project since 2019. She conducts monthly lagoon and beach berm monitoring visits, documenting changes in the Arroyo Grande lagoon footprint and surrounding beach berm topography over time using high precision GPS technology and photography. Ms. Curran has also conducted post-storm monitoring at the wastewater treatment facility and surrounding area following every qualifying rain event since 2019. Additionally, Ms. Curran has assisted with annual channel surveys, collecting elevation and thalweg data within Arroyo Grande Creek and Lagoon. Ms. Curran tracks regional climatic, oceanic, and stream conditions for the project, communicates and coordinates with District and State Parks staff, and writes annual reports for the California Coastal Commission.



PROJECT EXPERIENCE CONTINUED

Biologist/Project Manager, Orcutt Tank Farm Roundabout Project, City of San Luis Obispo, California (July 2021 to present) - As the Rincon project manager, Ms. Curran is responsible for coordination with the City of San Luis Obispo and the permitting agencies. Ms. Curran also tracks project compliance with the environmental permits, in addition to conducting biological surveys and environmental trainings on-site.

Biologist/Lead Author on Technical Appendices to the Groundwater Sustainability Plan (GSP), Upper Ventura River Groundwater Agency, Ventura, California (March 2021 to present) - Ms. Curran was the lead author on two technical appendices to the GSP and worked with other Rincon team members to identify, characterize, and assess potential impacts to Groundwater Dependent Ecosystems within the UVRGB. Ms. Curran also participated in public workshops to address stakeholder input and concerns. Ms. Curran continues to provide support to the Upper Ventura River Groundwater Agency as they begin the implementation and monitoring phase of their GSP.

Biologist, Mid-Higuera Bypass Project, San Luis Obispo County, San Luis Obispo, CA (March 2021 to present) – Ms. Curran conducted an in-stream survey within San Luis Obispo Creek, documenting existing conditions and steelhead habitat Primary Constituent Elements (PCEs) within the project area. Ms. Curran then wrote the draft Biological Assessment for the South-Central California Coast Steelhead DPS (*Oncorhynchus mykiss*) that the lead agency will submit to the National Marine Fisheries Service (NMFS) as part of the ESA Section 7 Consultation process.

Marine Mammal Monitor, Santa Barbara Desalination Plant Intake Repair Project, IDE Technologies, Santa Barbara, CA (February 2021 to present) – Ms. Curran has conducted marine mammal monitoring aboard a commercial barge while commercial divers work to repair the desalination plant intake pumps. Before, during, and after work occurs in the water, Ms. Curran documents all marine mammals observed, as well as their distance from the barge and their primary and secondary behaviors. Ms. Curran also conducts WEAP training for all crew members and communicates with the City of Santa Barbara and desalination plant staff.

Marine Biologist, Limekiln Bridge Replacement Black Abalone Surveys, CalTrans, Big Sur, California (2020) - Ms. Curran conducted intertidal surveys for federally endangered black abalone (*Haliotis cracherodii*) within the study area of the bridge replacement project. She helped identify a previously unknown population of black abalone at this location, as well as to characterize the habitat and identify other intertidal species within the study area. Following field surveys, Ms. Curran also assisted with data entry, reporting, and analysis.

Biologist/Environmental Monitor/Stormwater Professional, Pipeline Safety Enhancement Project (PSEP), So Cal Gas Supply Lines 36-9-09 and 36-1032, Santa Margarita and San Luis Obispo, California (2019 to present) – Ms. Curran has served as a biologist, environmental monitor, and stormwater professional for these pipeline replacement projects. Ms. Curran conducted preconstruction surveys for special-status species at SL 36-909 Sections 12 and 16. Ms. Curran also served as an environmental monitor, ensuring compliance with all PSEP environmental regulations and permit conditions. She surveyed for special status species in and around the work areas and conducted WEAP trainings for all new crew members who were working on-site. Ms. Curran also conducted pre, during, and post-storm monitoring for the alignments, making observations on site conditions and conducting water sampling when necessary. The projects included multiple HDD bores and Ms. Curran gained knowledge of the particular environmental challenges of HDD, as well as experience in communicating with a crew of over 70 workers from multiple companies. Ms. Curran continues to conduct biological surveys for SL-1032.

Environmental Monitor/Assistant Project Manager, Cold Canyon Landfill, San Luis Obispo County, California (2019 to present) – As a third-party compliance monitor, Ms. Curran conducts construction and post-storm monitoring, as well as regular operations inspections to ensure that the landfill abides by their permit conditions of approval. Ms. Curran also conducts reporting based on this monitoring, including the 2019 annual report.



RESEARCH EXPERIENCE

Arroyo Grande Lagoon and Meadow Creek Lagoon Fish Survey (July 1, 2021)- Ms. Curran had the opportunity to assist California State Parks staff biologists with a survey for fish species within each of these lagoons. The survey involved seining and dip-netting in shallow water and Ms. Curran gained 4 hours of experience capturing, identifying, and handling federally endangered tidewater gobies (*Eucyclogobius newberryi*) under a permitted biologist.

Morro Bay National Estuary Program, Morro Bay, California (2018-2019)

Conducting eelgrass monitoring within Morro Bay, California

Lubchenco-Menge Lab, Oregon State University (Fall 2016)

Conducted Intertidal monitoring and recruitment sampling

M.S. Thesis: Investigation of Larval Settlement Behavior in the Marine Bryozoan, *Bugula neritina*, California Polytechnic State University, San Luis Obispo, California (2012 – 2015)

Office of Naval Research, Cal Poly Center for Coastal Marine Sciences (CCMS) (2012 – 2015)

Conducted monitoring of biofouling-control coatings test site, Morro Bay, California

California Collaborative Fisheries Research Project (CCFRP), Morro Bay and Port San Luis, California (2010 – 2014)

Conducted Marine Protected Area monitoring. Caught and tagged fish species to determine effects on nearshore ground fish species. Species caught were rockfish and lingcod.

Diablo Canyon and Shell Beach, California, Cal Poly Marine Conservation and Policy class (Winter 2014 – 2015)

Intertidal sampling of marine plants, algae, and invertebrates, and monitoring of sea star wasting syndrome

CCMS, Morro Bay and Port San Luis, California (August – December 2010)

Observing aboard near-shore recreational fishing vessels,

Cal Poly Marine biology class (Winter 2010)

Intertidal sampling of algae and invertebrates, Hazard's reef Montaña de Oro State Park, California.

Cal Poly Marine biology class (Winter 2010)

Sampled mud-flat dwelling invertebrates and Chorro Creek water quality, Morro Bay, California.

CCMS, Cal Poly Pier, San Luis Bay, California (2009 – 2010)

Monitored sea urchin (*S. purpuratus* and *S. franciscanus*) settlement.

PUBLICATIONS

Price, H. L., Gohad, N. V., Mount, A. S. and Wendt, D. E. (2017). *Investigation of larval settlement pathways in the marine bryozoan, Bugula neritina.* Journal of Experimental Marine Biology and Ecology. 486, 69-76.

ADDITIONAL TRAINING

California Red-legged Frog Natural History and Identification Workshop- Level 1 (July 2021) – This workshop included 3.5 hours of lecture and 6 hours of field time with two permitted biologists. The workshop covered behavior, reproduction, habitat requirements, general natural history, amphibian species identification, and handling techniques. The field portion of the workshop was held at the Mitsui Ranch, Sonoma Mountain Ranch Preservation Foundation in Sonoma County, California and Ms. Curran had the opportunity to observe, capture, and handle sixteen individual California red-legged frogs under the supervision and guidance of the workshop leaders.





Charleen Rode

Biologist

Charleen Rode is Biologist III with Rincon's biological resources group. Ms. Rode has 8+ years of experience in conducting subtidal, intertidal and terrestrial based field studies and drafting technical reports. She has extensive experience in managing regulatory compliance projects for a variety of resources and coordinating with federal, state, and local regulatory agencies. Specifically, Ms. Rode has experience conducting a wide variety of field surveys including special status species surveys, rare plant surveys, wetland delineation and scientific diving surveys. She has extensive knowledge in California's marine, freshwater and terrestrial ecosystems including state and federally listed special status species. Her additional technical skills and knowledge encompasses stormwater and water quality compliance, restoration and monitoring for invertebrate, amphibian, and mammalian species and endangered species.

EDUCATION

BS, Biology and Zoology, Minor:
Scientific Diving, Humboldt
State University, Arcata,
California

CERTIFICATIONS/ REGISTRATIONS

AAUS DIVING INSTRUCTOR
NAUI SCUBA INSTRUCTOR

YEARS OF EXPERIENCE

8 years

EXPERIENCE

Rincon Consultants, Inc.
(2021 – present)
Althouse and Meade, Inc.
(2019-2021)
Western Environmental
Consulting, Inc.
(2017-2019)
MBC Aquatic Sciences, Inc.
(2016-2017)
Reef Check Foundation
(2015-2016)
PISCO Scientific Diver
(2014-2019)

SELECT PROJECT EXPERIENCE

BESS Battery Storage Project, Monterey and San Luis Obispo Counties (2021)

Ms. Rode conducted a variety of wildlife and botanical surveys for development of a battery storage unit at a solar farm facility. Ms. Rode performed daily nesting sweep surveys and wildlife den surveys. Ms. Rode trained construction crews and monitored construction work. Ms. Rode identified and quantified numerous special status species, including San Joaquin kit fox, Burrowing owl, American badger, Golden eagle, Bald eagle and California Tiger Salamander.

California Flats Solar Project, Monterey and San Luis Obispo Counties (2019-2021)

Ms. Rode conducted a variety of wildlife and botanical surveys for development and long-term monitoring of a large-scale solar facility. Ms. Rode conducted avian fatality surveys, avian point counts, wildlife den surveys, nesting surveys, invasive weed species surveys, and restoration surveys. Within the project footprint and mitigation lands, Ms. Rode identified and quantified numerous special status species, including San Joaquin kit fox, Burrowing owl, American badger, Golden eagle, Bald eagle, Pronghorn Antelope, California Red-legged frog and California Tiger Salamander.

Topaz Solar Project, San Luis Obispo County (2019-2021)

Ms. Rode conducted a variety of wildlife and botanical surveys for development and long-term monitoring of a large-scale solar facility. Ms. Rode conducted radio telemetry surveys throughout the site and the surrounding areas. Ms. Rode conducted wildlife den surveys, artificial den maintenance and restoration surveys. Ms. Rode performed night monitoring on San Joaquin kit fox as work was being conducted. Within the project footprint and mitigation lands, Ms. Rode identified and quantified numerous special status species, including San Joaquin kit fox, Burrowing owl, American badger, Giant Kangaroo rat.

Hearst Ranch Project, Monterey and San Luis Obispo Counties (2019-2021)

Ms. Rode conducted a variety of wildlife and botanical surveys for the mitigation of the development of a large-scale solar facility. Ms. Rode conducted wildlife den surveys, night surveys and rare plant surveys. Ms. Rode identified and quantified numerous special status species, including Burrowing owl, Golden eagle, California Red-legged frog, Vernal Fairy Shrimp and California Tiger Salamander.



PREVIOUS WORK EXPERIENCE

Althouse and Meade Inc.

Biologist II, Various Clients –Various Projects, Monterey and San Luis Obispo Counties, CA

Ms. Rode prepared biological reports and environmental assessments for specific projects. Ms. Rode conducted daily clearance, pre-activity, and pre-construction surveys. Ms. Rode conducted avian fatality surveys, avian point counts, wildlife den surveys, nesting surveys, invasive weed species surveys, and restoration surveys. Ms. Rode performed daily radio telemetry surveys on two project sites. Ms. Rode performed night monitoring on San Joaquin kit fox as work is being conducted. Ms. Rode performed restoration work in wetland mitigation locations. Removal of invasive weed species and planting of native species in the wetland areas. Ms. Rode coordinated the biological monitoring effort at a utility scale 280-megawatt, 2900-acre solar farm. Ms. Rode trained new biologists on important monitoring tasks and specialized skills.

Humboldt Redwood Company LLC

Biologist II, Various Clients –Various Projects, Humboldt County, CA

Ms. Rode conducted daily nesting bird surveys focusing on sensitive species including bald eagle, marbled murrelet, Northern spotted owl, Pacific fisher, snowy plover and peregrine falcon as well as other raptor species for over 209,300 acres of coast redwood and Douglas-fir timberlands. Ms. Rode performed weekly water collection and sediment analysis of pre-selected locations throughout the Eel River Watershed. Ms. Rode conducted water monitoring of temperature profiling and current reading. Ms. Rode conducted abundance surveys of Coho salmon, Steelhead trout and Lamprey eels as well as non-native species. Ms. Rode performed snorkel surveys of native and non-native fish species.

Western Environmental Consulting Inc.

Consulting Utility Biologist, Various Clients –Various Projects, Humboldt County, CA

Ms. Rode executed and coordinated several projects. Ms. Rode generated the biological evaluations, environmental impact statements and environmental assessments for specific projects. Ms. Rode was responsible for the vegetation management and environmental compliance of Public Resource Code 4292 and NERC Standards as well as providing background research, planning and GIS mapping on projects. Ms. Rode conducted tree surveys, raptor surveys, forest health and erosion surveys along the distribution power lines throughout Humboldt County for Pacific Gas and Electric. Ms. Rode performed riparian and migratory bird nest site surveys and reports. Ms. Rode coordinated and consulted with construction workers, local tribes, California Coastal Commission, local city administrators and agencies and local concerned customers.

MBC Applied Environmental Sciences

Biological Laboratory/ Field Technician, Various Clients –Various Projects, Orange County, CA

Ms. Rode is experienced in kelp bed restoration and eelgrass restoration in coastal lagoons and bays. Ms. Rode conducted studies to provide fishery resource assessments, protocol-level surveys and monitoring services, endangered species assessments, bio-assessments and fish migration. Ms. Rode conducted marine mammal and sea bird surveys and collected fish samples using pole spears, otter trawls and gill nets to the monitoring and studying of nearshore fish and assess environmental impacts. Ms. Rode performed several field surveys such as herpetofauna, botanical, marine benthic and subtidal invertebrates, plankton, storm water services, wetland delineations, water quality, marine and riverine fish surveys and pre- and post- biomonitoring assessments. Ms. Rode performed desert tortoise surveys, GIS mapping and jurisdictional wetland delineation for drainage systems in the Mojave Desert.



TRAINING AND WORKSHOPS

- CEQA Essentials: An Introduction and Intermediate-Level Training Workshop. Presented by the Association of Environmental Professionals. – 2019
- NOAA Caulerpa Surveyor Certification. Instructor: Bryant Chesney – 2017
- PISCO Dive Instructor Certification. Instructor: Franklin Moitoza – 2016
- Reef Check Dive Instructor Certification. Instructor: Colleen Wisniewski – 2015
- NAUI Dive Instructor Certification. Instructor: Rich Alvarez and Steve Monk – 2014
- AAUS Scientific Diver Certification and Member. Instructor: Rich Alvarez -2012
- PISCO Scientific Diver Certification and Member. Instructor: Rich Alvarez -2012
- Reef Check Scientific Diver Certification and Member. Instructor: Rich Alvarez -2012





Michelle Boudreau, BSc

Associate Biologist/Botanist

Ms. Boudreau works as an Associate Biologist/Botanist with Rincon Consultants. She has conducted construction monitoring, including biological monitoring and reporting, for environmental permit compliance both on behalf of lead agencies and on behalf of project applicants. She has experience conducting focused special status species surveys, rare plant and invasive weed surveys and mapping, small mammal trapping, as well as conducting Worker Environmental Education Awareness Program trainings. Michelle has experience analyzing suitability of habitat for sensitive species and preparing associated technical documents. Ms. Boudreau has conducted protocol level surveys for blunt nosed leopard lizard, San Joaquin antelope squirrel, and special status plant species and has performed pre-construction surveys for California red legged frog, coast horned lizards, American badger, California tiger salamander, western spadefoot toad, San Joaquin antelope squirrel, burrowing owl, and nesting birds. Her studies were completed at Humboldt State University in Arcata, California, where she received a Bachelor of Science degree in both Biology and Botany, with coursework in ecology and plant identification.

EDUCATION

BS, Botany, Humboldt State University

BS, Biology, Humboldt State University

YEARS OF EXPERIENCE

6

EXPERIENCE

Rincon Consultants, Inc.
(2015 to present)

SELECT PROJECT EXPERIENCE

Lead Monitor

Lead Monitor, County of San Luis Obispo – Cold Canyon Expansion Project, San Luis Obispo, San Luis Obispo County, CA (2016-Present)

Ms. Boudreau is the lead third party compliance monitor at the Cold Canyon Expansion Project inspecting the implementation of mitigation measures for species including roosting bats, American badger, California red-legged frog, and nesting birds and raptors on the behalf of San Luis Obispo County to ensure compliance during construction. Ms. Boudreau also inspects the implementation of mitigation measures related to grading and drainage plans, dust control plans, biological monitoring, and archaeological and paleontological monitoring.

Lead Monitor, California Flats Solar Project, Monterey County, CA

Ms. Boudreau is the lead monitor for the California Flats Solar Project. Ms. Boudreau is a third party monitor inspecting the implementation of mitigation measures for species including golden eagle, burrowing owl, California red-legged frog, and San Joaquin kit fox on behalf of Monterey County to ensure compliance during construction. Ms. Boudreau is also inspecting the implementation of the golden eagle incidental take permit conditions and monitoring requirements. Ms. Boudreau also inspects the implementation of mitigation measures related to grading and drainage plans, dust control plans, biological monitoring, and archaeological and paleontological monitoring.

General Biology

Biologist – Key Site 30, Santa Maria, Santa Barbara County, CA

Ms. Boudreau conducted preconstruction survey for Special Status Species including: Blainville's horned lizard, California legless lizard, California red legged frog, California tiger salamander, American badger, burrowing owl, and nesting birds. She also conducted construction monitoring and site spot checks to ensure environmental compliance during construction.



Biologist – Los Osos Valley Road/U.S. 101 Interchange Improvements Project, San Luis Obispo County, CA

Ms. Boudreau conducted construction monitoring to ensure environmental compliance with mitigation measures relating to species including California red-legged frogs, south central California coast steelhead, two-striped garter snake, southern western pond turtle, burrowing owl, pallid bat, and Townsend's big-eared bat. Ms. Boudreau also conducted the final compliance survey.

Biologist – Slack Street and Grand Avenue Apartments Project, San Luis Obispo, San Luis Obispo County, CA

Ms. Boudreau conducted habitat assessment and rare plant survey for Special Status Species including: American Badger, California Red-Legged Frog, Pallid bat, Miles milk-vetch, San Luis mariposa lily, San Luis Obispo sedge, San Luis Obispo owl's clover, Dwarf soap root, Brewer's spineflower, San Luis Obispo fountain, and Jones' Layia.

Biologist – SL 36-9-09 Span 94 Replacement Project, San Luis Obispo, San Luis Obispo County, CA

Ms. Boudreau conducted preconstruction surveys and jurisdictional waters and wetlands delineation for the Southern California Gas Company (SL 36-9-09 Span 94 Replacement Project, located between the cities of San Luis Obispo and Avila Beach in the County of San Luis Obispo, California). She also prepared the jurisdictional waters and wetlands delineation document for review.

Biologist – PGE Pole Replacement/Access Road Program, San Luis Obispo, San Luis Obispo County, CA

Ms. Boudreau conducted habitat assessment and rare plant survey for Special Status Species including Bishop manzanita, Santa Margarita manzanita, and San Luis Obispo sedge. Ms. Boudreau also conducted construction monitoring to ensure environmental compliance during construction.

Biologist – Plains All American Pipeline Line 903 Purge: Stopple 6 and Stopple 4, Nipomo, San Luis Obispo County, CA

Ms. Boudreau conducted botanical surveys for rare plants and monitored construction to ensure environmental compliance.

Lead Monitor, Nipomo Community Services District (NCSO) – Supplemental Water Project: Reservoir Phase, Nipomo, CA

Ms. Boudreau was the lead monitor on site during construction to ensure compliance with mitigation measures relating to species including California red-legged frog, Blainville's horned lizard, western spadefoot toad, American badger, white-tailed kite, and nesting birds. Ms. Boudreau also conducted general preconstruction surveys for special status wildlife including nesting birds, California red-legged frog, American badger, and spadefoot toad.

Biologist – Key Site 1, Santa Maria, Santa Barbara County, CA

Ms. Boudreau conducted preconstruction survey for special status wildlife and plant species including American badger, California red legged frog, California tiger salamander, silvery legless lizard, La Graciosa thistle, Lompoc Yerba Santa, Blochman's ragwort, and Gaviota tarplant. She conducted habitat mapping/assessment, as well as a Biological Resource Assessment.

Biologist – Dexter Canyon Bridge Replacement, Santa Clara County, CA

Ms. Boudreau prepared the Biological Resource Assessment report (first draft), including analysis of habitat onsite and potential for special status species.

Blunt Nose Leopard Lizard Surveys

Biologist – Southern California Gas Company – Line 103 ROW Maintenance Project, Kern County, CA

Ms. Boudreau conducted a full botanical survey with particular emphasis on detecting Special Status Plant Species such as: Kern mallow, San Joaquin woollythreads, and petroleum neststraw. Ms. Boudreau also conducted a three day protocol level surveys for Blunt-nosed Leopard Lizard as a Level 1 surveyor. BNLL were not found during the survey.

Biologist – Little Panoche Bridge Replacement Project, Panoche Valley, Fresno County, CA

Ms. Boudreau conducted protocol level surveys for Blunt-nosed Leopard Lizard as a Level 1 Surveyor (two survey days). BNLL were found during the course of this survey. Ms. Boudreau also conducted construction monitoring to ensure environmental compliance during construction, including full avoidance of all ground burrows and implementation of an avoidance buffer around an active Swainson's hawk nest.



Biologist – L103, MP 1.39 Pipeline Maintenance, Kern County, CA

Ms. Boudreau conducted protocol level surveys for Blunt-nosed Leopard Lizard as a Level 1 Surveyor (three survey days). Blunt-nosed leopard lizards were not found during the survey.

Avian Biology

Biologist – Southern California Gas Company – SL 36-1002 Section 11 and Section 13 Replacement Project, Santa Barbara, CA

Ms. Boudreau conducted a nesting bird survey for nests protected by the Migratory Bird Treaty Act and California Department of Fish and Wildlife (CDFW) code.

Biologist – Orcutt Area Specific Plan Project, San Luis Obispo, CA

Ms. Boudreau monitored the nest activity of a Bald Eagle pair to assure avoidance compliance during construction. Monitoring included observing and recording bald eagle activity during construction activities to assure individuals did not experience distress, and implementation of the avoidance buffer.

Biologist – Santa Barbara Jail Northern Branch (SBCJNB) Facility, Santa Barbara County, CA

Ms. Boudreau conducted nest monitoring of a red-tailed hawk nest site within the project boundary. Ms. Boudreau was trained in recognizing raptor behaviors that may indicate distress or avoidance of the nest. Monitoring included observing and recording red-tailed hawk activity during construction activities to assure individuals were not distressed or agitated. The nest successfully fledged young during monitoring year. Ms. Boudreau also conducted a baseline assessment of a barn swallow nest located on site, documenting bird behavior and signs of agitation or distress.

Biologist – Los Flores Integrated Waste Management Facility Site, Santa Barbara County, CA

Ms. Boudreau conducted a pre-activity nesting bird survey for nests protected by the Migratory Bird Treaty Act and California Department of Fish and Wildlife (CDFW) code.

Biologist, Southern California Gas Company – Pipeline Safety Enhancement Plan Taft Valve Bundle, Hageman & Renfro Project, Kern County, CA

Ms. Boudreau conducted multiple nesting bird survey for nests protected by the Migratory Bird Treaty Act and California Department of Fish and Wildlife (CDFW) code.

Botany

Botanist – Gaskell West Solar Project, Lancaster, Los Angeles County, CA

Ms. Boudreau conducted a protocol level botanical survey for Special Status Species including Lincoln rockcress, Clokey's cryptantha, beavertail cactus, Bakersfield cactus, horns milk-vetch, and alkali mariposa lily.

Botanist – Oak Hills Estate Project, Vandenberg Village, Santa Barbara County, CA

Ms. Boudreau conducted a botanical survey for Special Status Plant Species such as: La Purisima manzanita, Seaside bird's-beak, Mesa horkelia, California spineflower, and Blochman's ragwort, with particular emphasis on detecting Vandenberg monkeyflower. Reference sites were visited to confirm the bloom period of the Vandenberg monkeyflower.

Botanist, Plains All American Pipeline – Lines 63 and 2000 Project, Angeles National Forest, Los Angeles County, CA

Ms. Boudreau conducted a full botanical survey for Special Status Species including: club-haired mariposa lily, slender mariposa lily, fragrant pitcher sage, Ross' pitcher sage, Robbins' nemacladus, short-joint beavertail, and rigid fringedpod.



Restoration

Botanist – AT&T Frazier Park to Pine Mountain Club Telecommunications Cable Project, Los Padres National Forest, Kern County, CA

Ms. Boudreau conducted the reseeding effort and restoration monitoring of the “Big Hill” Restoration Area located in Frazier Park. The restoration area was assessed for vegetation germination and growth, percent vegetative cover, presence and extent of non-native species, and erosion issues. Percent cover was determined by the implementation of a point-intercept method adapted from the Monitoring Manual for Grassland, Shrubland, and Savanna Ecosystems was used (Herrick et al. 2005).

Biologist – Bradley Village (Key Site 30), Santa Barbara County, CA

Ms. Boudreau conducted the habitat restoration and rare plant mitigation monitoring for Central Dune Scrub habitat creation and invasive species control. Monitoring was conducted in accordance with a mitigation plan with aims to compensate for impacts to Central Dune Scrub habitat as well as three special status plant species associated with this habitat type, including: mesa horkelia (*Horkelia cuneata* var. *puberula*), curly-leaved dune mint (*Monardella sinuata* var. *sinuata*, formerly *M. undulata* s. l.), and dune ragwort (*Senecio blochmaniae*).

TECHNICAL EXPERIENCE

- Biological Resources Constraints Analysis, Four Proposed Water Tank Site Alternatives, Orcutt, Santa Barbara County, California
- Environmentally Sensitive Habitat Area Review and Current Condition Mapping, Morro Bay, San Luis Obispo County, California
- Biological Resources Assessment, East 18th Street & Vineyard Court Project, Antioch, Contra Costa County, California
- Biological Assessment, Romero Pier, Biological Resources Assessment, Half Moon Bay, San Mateo County, California
- Biological Assessment, Dexter Canyon Open Space Preserve, Fall Creek Engineering, Inc, Santa Clara County California
- Biological Resources Assessment, Key site 1 Project, Orcutt, Santa Barbara County, California
- Biological Resources Assessment, Slack Street and Grand Avenue Apartments Project, San Luis Obispo, San Luis Obispo County, California

WORKSHOPS

- San Luis Obispo County Flora: CNPS





Kim Fisher

Biologist

Ms. Fisher has over three years of experience providing biological survey and monitoring support on oil and gas development, linear, solar, utility, and urban development projects, and works on teams of biologists conducting general inventory and focused field surveys. She is a Level II Blunt-nosed Leopard Lizard Researcher. She works independently, leads crews, and is responsible for habitat assessments, construction monitoring, and accurate documentation of biological resources for projects in the southern San Joaquin Valley.

SELECT PROJECT EXPERIENCE

Biologist, PG&E – Gates-Tulare Access Road Maintenance Project, Kings County

Ms. Fisher led and participated in blunt-nosed leopard lizard surveys at 34 access road maintenance locations per the protocol described in PG&E's San Joaquin Valley Habitat Conservation Plan. Additionally, Ms. Fisher prepared Biological Constraints Review reports for both BLM and private parcels.

Biologist, PG&E – Metcalf-Moss Landing Uvas Road Crossings Replacement, Santa Clara County

Ms. Fisher assisted in preparing documents for the project such as the site safety plan, worker environmental awareness program training handout, and final construction compliance report.

Biologist, PG&E (subconsultant to ICF Jones & Stokes) – Wright Solar Project, Merced County

While under the supervision of the DB authorized under the ITP (CESA ITP No. 2081-2018-014-04), Ms. Fisher excavated 85 potential California tiger salamander burrows by hand, as well as aided in motion-detecting camera trapping for San Joaquin kit fox.

Biologist, Arcadis– Various Utilities Projects, Kern and San Luis Obispo Counties

Ms. Fisher led and participated in blunt-nosed leopard lizard surveys at various power pole locations per the protocol described in PG&E's San Joaquin Valley Habitat Conservation Plan. Ms. Fisher conducted pre-construction surveys focusing on sign of special-status species, such as San Joaquin kit fox, San Joaquin antelope squirrel, Swainson's hawk, and burrowing owl, as well as power pole inspections focusing on nesting birds. Ms. Fisher also assisted in presenting environmental tailboard trainings for utilities crews prior to work.

Biologist, Cardno Entrix– Various Utilities Projects, Kern and Fresno Counties

Ms. Fisher led and participated in blunt-nosed leopard lizard surveys at various power pole locations per the protocol described in PG&E's San Joaquin Valley Habitat Conservation Plan. Ms. Fisher conducted pre-construction surveys focusing on biological resources such as sign of special-status species including San Joaquin kit fox, San Joaquin antelope squirrel, Swainson's hawk, and burrowing owl, as well as power pole nesting bird surveys.

Biologist, SoCalEdison (subconsultant to ICF Jones & Stokes) – Springville-Rector Circuit Project, Tulare County

Ms. Fisher assisted the senior biologist in pre-construction survey and habitat assessment.

EDUCATION

MS, Biology, California State University, Long Beach

BS, Animal Behavior, Honors, Bucknell University, Pennsylvania



SELECT PROJECT EXPERIENCE CONTINUED

Biologist, Insignia Environmental – SoCalGas Line 85 Removal and Replacement, Kern County

Ms. Fisher led and participated in blunt-nosed leopard lizard surveys along 18 miles of gas line per the California Department of Fish and Wildlife Approved Survey Methodology. Ms. Fisher also assisted the permitted biologist under SCP No. SC-002824 in small mammal trapping efforts conducted for the project, targeting special status small mammals such as Tipton kangaroo rat. Trapping activities including setting up and baiting Sherman live traps, checking traps, processing captured individuals by recording sex, weight, and condition, and releasing temporarily captured individuals.

Biologist, SoCalGas – Multiple Pipeline Maintenance Projects, Kern, Santa Barbara, and Ventura Counties

Ms. Fisher led and participated in blunt-nosed leopard lizard surveys for multiple pipeline maintenance projects, following California Department of Fish and Wildlife Approved Survey Methodology. Ms. Fisher also assisted in preparing documents for various projects, such as a biological survey report, habitat assessment report, mitigation plan, health and safety site plans, and worker environmental awareness training programs. Additionally, Ms. Fisher aided in preparing applications for lake and streambed alteration agreement, waste discharge requirement notice of intent, and section 2081 incidental take permit.

Biologist, Flatiron-Sukut-Dragados – Lake Isabella Dam Safety Modifications Project, Kern County

Ms. Fisher conducted nesting bird surveys to identify potential nest sites on the project site. Wildlife, nesting behavior, and nest observations were confirmed by the qualified biologist. Ms. Fisher also prepared nesting bird survey reports and mapping following each survey.

Biologist, KP Environmental – CED Lost Hills Solar Project, Kern County

While under the direct supervision of a California Department of Fish and Wildlife Designated Biologist/U.S. Fish and Wildlife Service Qualified Biologist authorized for San Joaquin kit fox activities under the ITP and Habitat Conservation Plan (Lake and Streambed Alteration Agreement Notification No. 1600-2015-0100-R4; CESA ITP No. 2081-2015-054-04; Federal Fish and Wildlife Permit No. TE50775C-0), Ms. Fisher assisted in hand excavating trenches and installing two artificial San Joaquin kit fox dens for the project, as well as hand excavation two known San Joaquin kit fox dens. Ms. Fisher also conducted a burrow evaluation survey for burrow avoidance during project activities, and monitored blunt-nosed leopard lizard individuals to prevent take during project activities.

Biologist, Chevron USA – Multiple Oil and Gas Projects, Kern and Fresno Counties

Ms. Fisher conducted pre-construction surveys focusing on biological resources including sign of special-status species of the Southern San Joaquin Valley, focused rare plant and nesting bird surveys, and California Department of Fish and Wildlife Approved Survey Methodology for the blunt-nosed leopard lizard. She also monitored special-status species presence through tracking medium and remote detection cameras, and installed and monitored multiple one-way doors. Additionally, Ms. Fisher made avoidance recommendations and implemented biological resource avoidance measures prior to oil production activities, as well as fulfilled the duties of biological monitor on various projects. Ms. Fisher prepared environmental impact reports, oil and gas ordinance permitting reports, rare plant survey and blunt-nosed leopard lizard reports, and prepared habitat and survey maps for various projects.

