

DOCKETED

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Appendix 3.2A

Special-Status Species Potential to Occur Tables

Special-Status Plants

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Amsinckia lunaris</i>	bent-flowered fiddleneck	None/None/1B.2	Cismontane woodland, coastal bluff scrub, valley and foothill grassland/annual herb/Mar-June/10-1,640.	Not expected to occur: Project Study Area (PSA) lacks valley and foothill grassland, woodland, and coastal bluff scrub habitat required for this species and there are no CNDDDB records within 10 miles of the PSA.
<i>Arctostaphylos andersonii</i> *	Anderson's manzanita	None/None/1B.2	Broadleaved upland forest, chaparral, north coast coniferous forest; edges, openings/perennial evergreen shrub/Nov-May/195-2,495.	Not expected to occur: PSA is outside of known elevational range of this species.
<i>Arctostaphylos hookeri</i> ssp. <i>hookeri</i> *	Hooker's manzanita	None/None/1B.2	Chaparral, cismontane woodland, closed-cone coniferous forest, coastal scrub; sandy/perennial evergreen shrub/Jan-June/150-1,760.	Not expected to occur: PSA is outside of known elevational range of this species.
<i>Arctostaphylos pajaroensis</i> *	Pajaro manzanita	None/None/1B.1	Chaparral (sandy)/perennial evergreen shrub/Dec-Mar/100-2,495.	Not expected to occur: PSA lacks chaparral habitat required for this species.
<i>Arctostaphylos silvicola</i>	Bonny Doon manzanita	None/None/1B.2	Chaparral, closed-cone coniferous forest, lower montane coniferous forest/perennial evergreen shrub/Jan-Mar/395-1,970.	Not expected to occur: PSA is outside of known elevational range of this species.
<i>Calyptridium parryi</i> var. <i>hesseae</i>	Santa Cruz Mountains pussypaws	None/None/1B.1	Chaparral, cismontane woodland; gravelly (sometimes), openings, sandy (sometimes)/annual herb/May-Aug/1,000-5,020.	Not expected to occur: PSA is outside of known elevational range of this species.
<i>Carex comosa</i> *	bristly sedge	None/None/2B.1	Coastal prairie, marshes and swamps (lake margins), valley and foothill	Not expected to occur: PSA lacks marshes, swamps, or persistently saturated wetland habitats required by bristly sedge. Limited riparian and shrub aquatic features within,

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			grassland/perennial rhizomatous herb/May-Sep/0-2,050.	and immediately adjacent to the PSA, do not provide suitable hydrologic conditions required to support the species.
<i>Ceanothus ferrisiae</i> *	Coyote ceanothus	FE/None/1B.1	Chaparral, coastal scrub, valley and foothill grassland; serpentinite/perennial evergreen shrub/Jan-May/395-1,510.	Not expected to occur: PSA is outside of known elevational range of this species.
<i>Centromadia parryi</i> ssp. <i>congdonii</i> *	Congdon's tarplant	None/None/1B.1	Valley and foothill grassland (alkaline)/annual herb/May-Oct(Nov)/0-755.	Low potential to occur: PSA represents generally poor habitat quality for Congdon's tarplant due to extensive disturbance, dominance of non-native species, and past agricultural activities. The overall site lacks the primary habitat type typically associated with this species. However, within the gen-tie area, patches of potentially wetland and riparian vegetation may be present, and this species has an equal likelihood of occurring in both wetland and non-wetland settings within the region. If present at all, the greatest likelihood of occurrence would be along grassland edges, areas with reduced vegetation cover, and more exposed or disturbed microsites. The nearest documented occurrence is located less than 0.5 miles from the PSA (CNDDDB Occurrence Number 15; CDFW 2026).
<i>Chorizanthe pungens</i> var. <i>hartwegiana</i>	Ben Lomond spineflower	FE/None/1B.1	Lower montane coniferous forest (maritime ponderosa pine sandhills)/annual herb/Apr-July/295-2,000.	Not expected to occur: PSA is outside of known elevational range of this species.
<i>Chorizanthe pungens</i> var. <i>pungens</i> *	Monterey spineflower	FT/None/1B.2	Chaparral (maritime), cismontane woodland, coastal dunes, coastal scrub, valley and foothill grassland;	Not expected to occur: PSA lacks sandy soils and associated cismontane woodland, coastal dune and scrub habitat

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			sandy/annual herb/Apr–June(July–Aug)/10–1,475.	required for this species. While annual grassland is present, it occurs in small, fragmented patches along disturbed edges and does not meet the definition of valley and foothill grassland required by this species
<i>Chorizanthe robusta</i> var. <i>hartwegii</i>	Scotts Valley spineflower	FE/None/1B.1	Meadows and seeps (sandy), valley and foothill grassland (mudstone, purisima outcrops)/annual herb/Apr–July/755–805.	Not expected to occur: PSA is outside of known elevational range of this species.
<i>Chorizanthe robusta</i> var. <i>robusta</i> *	robust spineflower	FE/None/1B.1	Chaparral (maritime), cismontane woodland (openings), coastal dunes, coastal scrub; gravelly (sometimes), sandy (sometimes)/annual herb/Apr–Sep/10–985.	Not expected to occur: PSA lacks sandy or gravelly soils and associated maritime chaparral or coastal habitats required for this species.
<i>Cirsium fontinale</i> var. <i>campylon</i> *	Mt. Hamilton thistle	None/None/1B.2	Chaparral, cismontane woodland, valley and foothill grassland; seeps, serpentinite/perennial herb/(Feb)Apr–Oct/330–2,920.	Not expected to occur: PSA is outside of known elevational range of this species.
<i>Cordylanthus rigidus</i> ssp. <i>littoralis</i> *	seaside bird's-beak	None/SE/1B.1	Chaparral (maritime), cismontane woodland, closed-cone coniferous forest, coastal dunes, coastal scrub; disturbed areas (often), sandy/annual herb (hemiparasitic)/Apr–Oct/0–1,690.	Not expected to occur: PSA lacks sandy soils and associated chaparral, woodland, coniferous forest, or scrub habitat required for this species.
<i>Dudleya abramsii</i> ssp. <i>setchellii</i> *	Santa Clara Valley dudleya	FE/None/1B.1	Cismontane woodland, valley and foothill grassland; rocky, serpentinite/perennial herb/Apr–Oct/195–1,755.	Not expected to occur: PSA is outside of known elevational range of this species.
<i>Ericameria fasciculata</i> *	Eastwood's goldenbush	None/None/1B.1	Chaparral (maritime), closed-cone coniferous forest, coastal dunes, coastal scrub; openings, sandy/perennial evergreen shrub/July–Oct/100–900.	Not expected to occur: PSA lacks sandy soils and associated maritime chaparral, coastal scrub, coniferous forest or coastal dune habitats required for this species.

APPENDIX 3.2A SPECIAL-STATUS SPECIES POTENTIAL TO OCCUR

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Eriogonum nudum</i> var. <i>decurrens</i>	Ben Lomond buckwheat	None/None/1B.1	Chaparral, cismontane woodland, lower montane coniferous forest (maritime ponderosa pine sandhills); sandy/perennial herb/June–Oct/165–2,625.	Not expected to occur: PSA is outside of known elevational range of this species.
<i>Eryngium aristulatum</i> var. <i>hooveri</i> *	Hoover's button-celery	None/None/1B.1	Vernal pools/annual/perennial herb/(June)July(Aug)/10–150.	Not expected to occur: PSA lacks suitable vernal pool habitat required for this species.
<i>Erysimum ammophilum</i> *	sand-loving wallflower	None/None/1B.2	Chaparral (maritime), coastal dunes, coastal scrub; openings, sandy/perennial herb/Feb–June(July–Aug)/0–195.	Not expected to occur: PSA lacks sandy soils and associated maritime chaparral or coastal dune habitat required for this species.
<i>Erysimum teretifolium</i>	Santa Cruz wallflower	FE/SE/1B.1	Chaparral, lower montane coniferous forest/perennial herb/Mar–July/395–2,000.	Not expected to occur: PSA is outside of known elevational range of this species.
<i>Fritillaria liliacea</i> *	fragrant fritillary	None/None/1B.2	Cismontane woodland, coastal prairie, coastal scrub, valley and foothill grassland; serpentinite (often)/perennial bulbiferous herb/Feb–Apr/10–1,345.	Not expected to occur: PSA lacks woodland, coastal prairie, or valley and foothill grassland habitat required for this species. While annual grassland is present, it occurs in small, fragmented patches along disturbed edges and does not meet the definition of valley and foothill grassland required by this species.
<i>Gilia tenuiflora</i> ssp. <i>arenaria</i> *	Monterey gilia	FE/ST/1B.2	Chaparral (maritime), cismontane woodland, coastal dunes, coastal scrub; openings, Sandy/annual herb/Apr–June/0–150.	Not expected to occur: PSA lacks sandy soils and associated maritime chaparral, cismontane woodland, coastal dune or coastal scrub habitat required for this species.
<i>Hoita strobilina</i> *	Loma Prieta hoita	None/None/1B.1	Chaparral, cismontane woodland, riparian woodland; mesic, serpentinite (usually)/perennial herb/May–July(Aug–Oct)/100–2,820.	Not expected to occur: PSA lacks mesic and serpentine soil and associated chaparral or cismontane woodland habitat required for this species.

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<i>Holocarpha macradenia</i> *	Santa Cruz tarplant	FT/SE/1B.1	Coastal prairie, coastal scrub, valley and foothill grassland; clay (often), sandy/annual herb/June–Oct/35–720.	Low potential to occur: PSA represents poor habitat quality for Santa Cruz tarplant due to high levels of disturbance, competition from non-native species, and historical agricultural use. Although numerous occurrences have been documented in the immediate area, the PSA overall lacks the intact coastal prairie or suitable valley and foothill grassland habitat typically associated with this species, and existing grassland habitat is limited, fragmented, and marginal. If present at all, Santa Cruz tarplant would most likely occur opportunistically along grassland–orchard margins, disturbed grass edges, areas with reduced vegetation cover, and other exposed or transitional microsites where competitive pressure from dense non-native vegetation is lower. The nearest documented CNDDDB occurrence is located approximately 2 miles from the PSA (CNDDDB Occurrence Number 49; CDFW 2026).
<i>Horkelia cuneata</i> var. <i>sericea</i> *	Kellogg's horkelia	None/None/1B.1	Chaparral (maritime), closed-cone coniferous forest, coastal dunes, coastal scrub; gravelly (sometimes), openings, sandy (sometimes)/perennial herb/Apr–Sep/35–655.	Not expected to occur: PSA lacks sandy soils and associated chaparral, coniferous forest, dune, or scrub habitat required for this species.
<i>Lasthenia californica</i> ssp. <i>macrantha</i> *	perennial goldfields	None/None/1B.2	Coastal bluff scrub, coastal dunes, coastal scrub/perennial herb/Jan–Nov/15–1,705.	Not expected to occur: PSA lacks dune and coastal bluff scrub habitat required for this species.

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<i>Lessingia micradenia</i> var. <i>glabrata</i> *	smooth lessingia	None/None/1B.2	Chaparral, cismontane woodland, valley and foothill grassland; roadsides (often), serpentinite/annual herb/(Apr-June) July-Nov/395-1,380.	Not expected to occur: PSA is outside of known elevational range of this species.
<i>Malacothamnus arcuatus</i> *	arcuate bush-mallow	None/None/1B.2	Chaparral, cismontane woodland/perennial deciduous shrub/Apr-Sep/50-1,165.	Not expected to occur: PSA lacks chaparral and suitable cismontane woodland habitat required for this species.
<i>Malacothamnus hallii</i>	Hall's bush-mallow	None/None/1B.2	Chaparral, coastal scrub/perennial deciduous shrub/(Apr)May-Sep(Oct)/35-2,495.	Not expected to occur: PSA lacks chaparral and coastal scrub habitat required for this species.
<i>Monardella sinuata</i> ssp. <i>nigrescens</i>	northern curly-leaved monardella	None/None/1B.2	Chaparral (SCR Co.), coastal dunes, coastal scrub, lower montane coniferous forest (SCR Co.), ponderosa pine sandhills); sandy/annual herb/(Apr)May-July(Aug-Sep)/0-985.	Not expected to occur: PSA lacks sandy soil and associated chaparral, coastal dune, coastal scrub, and coniferous forest habitat required for this species.
<i>Monolopia gracilens</i> *	woodland woollythreads	None/None/1B.2	Broadleaved upland forest (openings), chaparral (openings), cismontane woodland, north coast coniferous forest (openings), valley and foothill grassland; serpentinite/annual herb/(Feb)Mar-July/330-3,935.	Not expected to occur: PSA is outside of known elevational range of this species.
<i>Pedicularis dudleyi</i> *	Dudley's lousewort	None/SR/1B.2	Chaparral (maritime), cismontane woodland, north coast coniferous forest, valley and foothill grassland/perennial herb/Apr-June/195-2,955.	Not expected to occur: PSA is outside of known elevational range of this species.
<i>Penstemon rattanii</i> var. <i>kleei</i> *	Santa Cruz Mountains beardtongue	None/None/1B.2	Chaparral, lower montane coniferous forest, north coast coniferous forest/perennial herb/(Mar)May-June/1310-3,610.	Not expected to occur: PSA is outside of known elevational range of this species.

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<i>Pentachaeta bellidiflora</i>	white-rayed pentachaeta	FE/SE/1B.1	Cismontane woodland, valley and foothill grassland (often serpentinite)/annual herb/Mar–May/115–2,035.	Not expected to occur: PSA lacks suitable cismontane woodland and valley and foothill grassland habitat required for this species. While annual grassland is present, it occurs in small, fragmented patches within disturbed edges and does not meet the definition of valley and foothill grassland required by this species.
<i>Piperia yadonii</i> *	Yadon's rein orchid	FE/None/1B.1	Chaparral (maritime), closed-cone coniferous forest, coastal bluff scrub; sandy/perennial herb/(Feb)May–Aug/35–1,675.	Not expected to occur: PSA lacks sandy soils and associated maritime chaparral, coastal bluff scrub, or coniferous forest habitat required for this species.
<i>Plagiobothrys chorisianus</i> var. <i>chorisianus</i> *	Choris' popcornflower	None/None/1B.2	Chaparral, coastal prairie, coastal scrub; mesic/annual herb/Mar–June/10–525.	Not expected to occur: PSA lacks chaparral, coastal prairie, and coastal scrub habitat required for this species.
<i>Plagiobothrys diffuses</i> *	San Francisco popcornflower	None/SE/1B.1	Coastal prairie, valley and foothill grassland/annual herb/Mar–June/195–1,180.	Not expected to occur: PSA is outside of known elevational range of this species.
<i>Polygonum hickmanii</i>	Scotts Valley polygonum	FE/SE/1B.1	Valley and foothill grassland (mudstone, sandstone)/annual herb/May–Aug/690–820.	Not expected to occur: PSA is outside of known elevational range of this species.
<i>Rosa pinetorum</i>	pine rose	None/None/1B.2	Cismontane woodland, closed-cone coniferous forest/perennial shrub/May–July/5–3,100.	Not expected to occur: PSA lacks suitable cismontane woodland and coniferous forest habitat required for this species.
<i>Streptanthus albidus</i> ssp. <i>peramoenus</i> *	most beautiful jewelflower	None/None/1B.2	Chaparral, cismontane woodland, valley and foothill grassland; serpentinite/annual herb/(Mar)Apr–Sep(Oct)/310–3,280.	Not expected to occur: PSA is outside of known elevational range of this species.

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<i>Trifolium buckwestiorum</i> *	Santa Cruz clover	None/None/1B.1	Broadleaved upland forest, cismontane woodland, coastal prairie; gravelly/annual herb/Apr–Oct/115–2,000.	Not expected to occur: PSA lacks suitable upland forest, woodland, and coastal prairie habitat required for this species.
<i>Trifolium hydrophilum</i> *	saline clover	None/None/1B.2	Marshes and swamps, valley and foothill grassland (mesic, alkaline), vernal pools/annual herb/Apr–June/0–985.	Not expected to occur: PSA lacks suitable marsh and swamp or vernal pool habitat required by this species.
<i>Trifolium polyodon</i>	Pacific Grove clover	None/SR/1B.1	Closed-cone coniferous forest, coastal prairie, meadows and seeps, valley and foothill grassland; granitic (sometimes), mesic/annual herb/Apr–June(July)/15–1,395.	Not expected to occur: PSA lacks coniferous forest, coastal prairie, meadows, seeps, valley and foothill grassland habitat required by this species. While annual grassland is present, it occurs in small, fragmented patches within disturbed edges and does not meet the definition of valley and foothill grassland required by this species.

Source: CNPS 2026; CDFW 2026

Notes:

* CNDDDB occurrence record(s) within 10 miles of PSA.

Status Legend

None: No Status

Federal

FE: Federally listed as endangered

FT: Federally listed as threatened

State

SE: State listed as endangered

SR: State rare

ST: State threatened

California Rare Plant Rank (CRPR)

1B: Plants rare, threatened, or endangered in California and elsewhere

2B: Plants rare, threatened, or endangered in California but more common elsewhere

Threat Rank

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

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

Special-Status Wildlife

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Invertebrates				
<i>Bombus crotchii</i> *	Crotch's bumble bee	None/SCE	Open grassland and scrub communities supporting suitable floral resources.	Not expected to occur: PSA lacks continuous open grassland and floral resources to support this species.
<i>Bombus occidentalis</i> *	western bumble bee	None/SCE	Once common and widespread, species has declined precipitously from central California to southern British Columbia, perhaps from disease.	Not expected to occur: PSA lacks continuous open grassland and floral resources to support this species.
<i>Cicindela ohlone</i>	Ohlone tiger beetle	FE/None	Remnant native grasslands with California oatgrass (<i>Danthonia californica</i>) and purple needlegrass (<i>Stipa pulchra</i>) in Santa Cruz County.	Not expected to occur: PSA lacks suitable native grassland habitat to support this species.
<i>Danaus plexippus plexippus</i> pop. 1*	monarch - California overwintering population	FPT/None	Wind-protected tree groves with nectar sources and nearby water sources within 1.5 miles of the Pacific Ocean.	Not expected to occur: PSA is outside of the known overwintering range for this species, and lacks large tree groves required for this species.
<i>Euphilotes enoptes smithi</i>	Smith's blue butterfly	FE/None	Sand dunes, scrub, chaparral, grassland, and their ecotones.	Not expected to occur: PSA lacks sand dune, scrub, and chaparral habitat to support this species. Grassland is present but in small fragmented disturbed areas along project edges.
<i>Euphydryas editha bayensis</i> *	Bay checkerspot butterfly	FT/None	Serpentine or serpentine-like grasslands.	Not expected to occur: PSA lacks serpentine soils and serpentine grassland to support this species.
<i>Trimerotropis infantilis</i>	Zayante band-winged grasshopper	FE/None	Isolated sandstone deposits in the Santa Cruz Mountains (the Zayante Sand Hills ecosystem).	Not expected to occur: PSA lacks sandstone deposits to support this species and is outside of the known range of this species.

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Fish				
<i>Eucyclogobius newberryi</i> *	tidewater goby	FE/SSC	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County, to the mouth of the Smith River.	Not expected to occur: PSA lacks suitable aquatic habitat to support this species.
<i>Hesperoleucus venustus subditus</i>	southern coastal roach	None/SSC	Found in the drainages of Tomales Bay and northern San Francisco Bay in the north, and drainages of Monterey Bay in the south.	Not expected to occur: PSA lacks suitable aquatic habitat to support this species.
<i>Lavinia exilicauda harengus</i> *	Pajaro/Salinas hitch	None/SSC	Found in Pajaro and Salinas River systems, both tributary to Monterey Bay.	Not expected to occur: PSA lacks suitable aquatic habitat to support this species.
<i>Oncorhynchus kisutch</i> pop. 4	coho salmon - central California coast ESU	FE/SE	Streams and small freshwater tributaries during first half of life cycle and estuarine and marine waters of the Pacific Ocean during the second half of life cycle. Spawns in small streams with stable gravel substrates.	Not expected to occur: PSA lacks suitable aquatic habitat to support this species.
<i>Oncorhynchus mykiss irideus</i> pop. 8*	steelhead - central California coast DPS	FT/SSC	Coastal basins from Redwood Creek south to the Gualala River, inclusive; does not include summer-run steelhead.	Not expected to occur: PSA lacks suitable aquatic habitat to support this species.
<i>Oncorhynchus mykiss irideus</i> pop. 9*	steelhead - south-central California coast DPS	FT/SSC	Coastal basins from Redwood Creek south to the Gualala River, inclusive; does not include summer-run steelhead.	Not expected to occur: PSA lacks suitable aquatic habitat to support this species.

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<i>Spirinchus thaleichthys</i> *	longfin smelt	None/ST	Estuaries	Not expected to occur: PSA lacks suitable aquatic habitat to support this species.
<i>Thaleichthys pacificus</i> *	eulachon	FT/SSC	Found in Klamath River, Mad River, and Redwood Creek and in small numbers in Smith River and Humboldt Bay tributaries.	Not expected to occur: PSA lacks suitable aquatic habitat to support this species.
Amphibians				
<i>Ambystoma californiense</i> pop. 1*	California tiger salamander - central California DPS	FT/ST, WL	Annual grassland, valley-foothill hardwood, and valley-foothill riparian habitats; vernal pools, other ephemeral pools, and (uncommonly) along stream courses and man-made pools if predatory fishes are absent.	Low potential to occur: Although limited annual grassland and seasonal aquatic features are present within the PSA, the site lacks suitable breeding habitat with a hydroperiod sufficient to support larval development of California tiger salamander. In addition, aquatic features are limited in extent and configuration, and do not function as vernal pools or other suitable breeding sites. As a result, habitat conditions necessary to support the species are absent from the PSA. The nearest documented CNDDDB occurrence is located approximately 3.9 miles from the PSA (CNDDDB Occurrence Number 457; CDFW 2026).
<i>Ambystoma macrodactylum croceum</i> *	Santa Cruz long-toed salamander	FE/FP, SE	Dense riparian vegetation, thick coastal scrub, and oak woodland.	Not expected to occur: Although the PSA contains a small amount of marginal riparian habitat, intermittent channels and shallow swales do not function as suitable breeding habitat for this species.

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				Additionally, riparian habitat within the PSA is fragmented and disturbed.
<i>Aneides flavipunctatus niger</i> *	Santa Cruz black salamander	None/SSC	Restricted to mesic forests in the fog belt of the outer Coast Range of San Mateo, Santa Cruz, and Santa Clara counties; mixed deciduous and coniferous woodlands and coastal grasslands; occurs in moist streamside microhabitats and is found under rocks, talus, and damp woody debris.	Low potential to occur: PSA contains marginal streamside habitat for this species. Habitat within the PSA is fragmented and does not contain water during the summer months. Streamside upland refugia is limited. The nearest documented CNDDDB occurrence is located approximately 2.7 miles from the PSA (CNDDDB Occurrence Number 74; CDFW 2026).
<i>Dicamptodon ensatus</i> *	California giant salamander	None/SSC	Known from wet coastal forests and chaparral near streams and seeps from Mendocino County south to Monterey County and east to Napa County; aquatic larvae found in cold, clear streams, occasionally in lakes and ponds; adults known from wet forests under rocks and logs near streams and lakes.	Low potential to occur: PSA contains marginal streamside habitat for this species. Habitat within the PSA is fragmented and does not contain water during the summer months. Streamside upland refugia is limited. The nearest documented CNDDDB occurrence is located approximately 4.5 miles from the PSA (CNDDDB Occurrence Number 112; CDFW 2026).
<i>Rana boylei</i> pop. 4*	foothill yellow-legged frog - central coast DPS	FT/SE	Rocky streams and rivers with open banks in forest, chaparral, and woodland.	Low potential to occur: The intermittent stream within the PSA introduces limited aquatic habitat that could be used on a transient or seasonal basis by the species. However, the species typically requires perennial or near-perennial streams with rocky substrates for breeding resulting in a low potential to occur. Additionally, this species has been recorded within 3.5 miles of the PSA, a historic observation from 1970 (CNDDDB Occurrence Number 123; CDFW 2026).

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
<i>Rana draytonii</i> *	California red-legged frog	FT/SSC	Lowland streams, wetlands, riparian woodlands, livestock ponds; dense, shrubby or emergent vegetation associated with deep, still or slow-moving water; uses adjacent uplands.	Low potential to occur: PSA includes an intermittent stream feature, a freshwater shrub wetland, upland swales, and adjacent annual grassland that could provide marginal breeding, dispersal, and upland refuge habitat for this species. Although breeding habitat suitability is uncertain due to seasonal hydrology, the presence of aquatic and upland habitat components supports a low potential for the species to occur. Additionally, this species has been recorded within 3.5 miles of the PSA (CNDDDB Occurrence Number 1281; CDFW 2026).
Reptiles				
<i>Actinemys marmorata</i> *	northwestern pond turtle	FPT/SSC	Slow-moving permanent or intermittent streams, ponds, small lakes, and reservoirs with emergent basking sites; adjacent uplands used for nesting and during winter.	Moderate potential to occur: The PSA includes freshwater shrub wetland, an intermittent stream, and adjacent upland habitat that could provide limited foraging, dispersal, or basking opportunities for northwestern pond turtle. While aquatic features within the PSA are marginal and seasonally limited, suitable permanent aquatic habitat is present at adjacent College Lake, which supports turtle use in the surrounding landscape. The proximity of College Lake increases the potential for individuals to disperse into or utilize nearby aquatic and upland features within the PSA. Additionally, northwestern pond turtle has been documented multiple times within a 5-mile radius of the PSA, including a recorded occurrence located

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
				less than 0.5 miles from the PSA (CNDDDB Occurrence Number 491; CDFW 2026).
<i>Anniella pulchra</i> *	northern California legless lizard	None/SSC	Coastal dunes, stabilized dunes, beaches, dry washes, valley-foothill, chaparral, and scrubs; pine, oak, and riparian woodlands; associated with sparse vegetation and sandy or loose, loamy soils.	Not expected to occur: PSA lacks sandy soils and associated habitat to support this species.
<i>Phrynosoma blainvillii</i>	Coast horned lizard	None/SSC	Open areas of sandy soil in valleys, foothills, and semi-arid mountains including coastal scrub, chaparral, valley-foothill hardwood, conifer, riparian, pine-cypress, juniper, and annual grassland habitats,	Not expected to occur: PSA lacks sandy soils and habitat types required for this species. Although small areas of riparian and annual grassland are present, these habitats are limited in extent, occur as fragmented patches and do not provide the loose soil structure or open basking areas necessary to support the species.
Birds				
<i>Agelaius tricolor</i> (nesting colony)*	tricolored blackbird	BCC/SSC, ST	Nests near freshwater, emergent wetland with cattails or tules, but also in Himalayan blackberry; forages in grasslands, woodland, and agriculture.	Low potential to occur: Freshwater shrub wetland and riparian habitats within the PSA could provide nesting substrate, while surrounding annual grassland may offer suitable foraging habitat. Although breeding colonies are not documented and habitat suitability may be limited in extent, the presence of compatible habitat types results in a low potential for tricolored blackbird to occur, particularly during the breeding season. Additionally, the species has been recorded within 5 miles of the PSA (CNDDDB Occurrence Number 164; CDFW 2026).

APPENDIX 3.2A SPECIAL-STATUS SPECIES POTENTIAL TO OCCUR

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
<i>Aquila chrysaetos</i> (nesting & wintering)	golden eagle	None/FP, WL	Nests in wooded areas adjacent to large bodies of water with significant topographic relief.	Not expected to occur: PSA lacks suitable wooded habitats to support nesting for this species.
<i>Asio flammeus</i> (nesting)*	short-eared owl	BCC/SSC	Grassland, prairies, dunes, meadows, irrigated lands, and saline and freshwater emergent wetlands.	Not expected to occur: PSA lacks suitable natural vegetation types to support this species.
<i>Athene cunicularia</i> (burrow sites & some wintering sites)*	burrowing owl	BCC/SSC, SC	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows.	Not expected to occur: PSA lacks open grasslands or suitable agricultural landcover to support this species. The orchard onsite within the PSA lacks continuous open areas with abundance of mammal burrows preferred by this species.
<i>Charadrius nivosus nivosus</i> (nesting)*	western snowy plover	FT/SSC	On coasts nests on sandy marine and estuarine shores; in the interior nests on sandy, barren or sparsely vegetated flats near saline or alkaline lakes, reservoirs, and ponds.	Not expected to occur: PSA lacks sandy, sparsely vegetated marine or estuarine shores near saline or alkaline aquatic features required for foraging and nesting by this species.
<i>Coturnicops noveboracensis</i>	yellow rail	BCC/SSC	Nesting requires wet marsh/sedge meadows or coastal marshes with wet soil and shallow, standing water.	Not expected to occur: PSA lacks marsh/sedge meadows and coastal marsh habitat types to support this species.
<i>Elanus leucurus</i> (nesting)*	white-tailed kite	None/FP	Nests in woodland, riparian, and individual trees near open lands; forages opportunistically in grassland, meadows, scrubs, agriculture, emergent wetland, savanna, and disturbed lands.	Low potential to occur: Annual grassland within the PSA provides suitable foraging habitat, and riparian vegetation may offer potential nesting substrate for this species. Although the site is not known to support active nesting, the combination of foraging and nesting habitat components results in a low potential for white-tailed kite to occur. The nearest documented CNDDDB occurrence is

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
				located approximately 8.9 miles from the PSA (CNDDDB Occurrence Number 63; CDFW 2026).
<i>Falco peregrinus anatum</i> (nesting)*	American peregrine falcon	D/D	Nests on cliffs, buildings, and bridges; forages in wetlands, riparian, meadows, croplands, especially where waterfowl are present.	Not expected to occur: PSA lacks suitable nesting habitat to support this species.
<i>Haliaeetus leucocephalus</i> (nesting & wintering)	bald eagle	D/FP, SE	Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water.	Not expected to occur. PSA lacks suitable nesting habitat for this species, as no large, mature trees or cliffs capable of supporting nests are present. Orchard trees and limited riparian vegetation do not provide appropriate nesting substrate, and foraging habitat within the PSA is limited.
<i>Rallus obsoletus obsoletus</i> *	California Ridgway's rail	FE/FP, SE	Coastal salt or brackish marshes.	Not expected to occur: PSA lacks coastal salt or brackish marsh habitat to support this species.
<i>Riparia riparia</i> (nesting)*	bank swallow	None/ST	Nests in riparian, lacustrine, and coastal areas with vertical banks, bluffs, and cliffs with sandy soils; open country and water during migration.	Not expected to occur: PSA lacks vertical banks, bluffs, or sandy soils adjacent to aquatic features to support this species. Although lacustrine habitat may be present adjacent to the PSA, the absence of suitable nesting features precludes the likelihood of the species nesting within the PSA.
Mammals				
<i>Antrozous pallidus</i> *	pallid bat	None/SSC	Grasslands, shrublands, woodlands, forests; most common in open, dry habitats with rocky outcrops for roosting, but also roosts in man-made structures and trees.	Low potential to occur: Built structures associated with active orchards may provide roosting opportunities for pallid bat, and a small riparian corridor with freshwater shrub wetland and adjacent

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
				scrub and grassland in the gen-tie area could support limited foraging. However, the PSA lacks high-quality natural roost features and extensive suitable habitat, resulting in a low potential for the species to occur. The nearest documented CNDDDB occurrence is located approximately 9.5 miles from the PSA, a historic observation from 1949 (CNDDDB Occurrence Number 246; CDFW 2026).
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	None/SSC	Mesic habitats characterized by coniferous and deciduous forests and riparian habitat, but also xeric areas; roosts in limestone caves and lava tubes, man-made structures, and tunnels.	Not expected to occur: PSA lacks caves, mines, tunnels, or other suitable roosting features required by Townsend's big-eared bat. While limited riparian and adjacent scrub and grassland habitat occurs in the gen-tie area, these features do not provide suitable roosting conditions and occur within a disturbed agricultural landscape, precluding regular use by the species.
<i>Sorex ornatus salarius*</i>	Monterey shrew	None/SSC	Saltmarsh, riparian, wetlands, uplands of Salinas River Delta.	Not expected to occur: While riparian and wetland habitat occurs within the PSA, the site lacks the coastal saltmarsh and deltaic wetland habitat required by Monterey shrew.
<i>Taxidea taxus*</i>	American badger	None/SSC	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils.	Not expected to occur: PSA lacks extensive, contiguous open landscapes required to support American badger. Although limited annual grassland is present, the extent and configuration of this habitat are insufficient to provide suitable foraging or denning habitat for the species.

Source: USFWS 2026d; CDFW 2026

Notes:

* CNDDDB occurrence record(s) within 10 miles of PSA.

Status Legend

None: No Status

Federal

BCC: USFWS – Birds of conservation concern

D: Delisted

FC: Candidate for federal listing as threatened or endangered

FE: Federally listed as endangered

FP: Federally listed as protected

FPT: Federally proposed for listing as threatened

FT: Federally listed as threatened

State

D: Delisted

FP: CDFW – Fully protected

SC: State candidate for listing as endangered or threatened

SCE: State candidate for listing as endangered

SE: State listed as endangered

SSC: CDFW – Species of special concern

ST: State listed as threatened

WL: CDFW – Watch list

Appendix 3.2B

Species Record Searches



Selected Elements by Common Name
California Department of Fish and Wildlife
California Natural Diversity Database



Query Criteria: Quad (Watsonville East (3612186) OR Watsonville West (3612187) OR Loma Prieta (3712117) OR Mt. Madonna (3712116) OR Soquel (3612188) OR Prunedale (3612176) OR Moss Landing (3612177) OR Laurel (3712118))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
American badger <i>Taxidea taxus</i>	AMAJF04010	None	None	G5	S3	SSC
American bumble bee <i>Bombus pensylvanicus</i>	IIHYM24260	None	None	G3G4	S2	
American peregrine falcon <i>Falco peregrinus anatum</i>	ABNKD06071	Delisted	Delisted	G4T4	S3S4	
Anderson's manzanita <i>Arctostaphylos andersonii</i>	PDERI04030	None	None	G2	S2	1B.2
arcuate bushmallow <i>Malacothamnus arcuatus var. arcuatus</i>	PDMAL0Q0E0	None	None	GNRT2	S2	1B.2
bank swallow <i>Riparia riparia</i>	ABPAU08010	None	Threatened	G5	S3	
Bay checkerspot butterfly <i>Euphydryas editha bayensis</i>	IILEPK4055	Threatened	None	G4G5T1	S3	
Behrens' snail-eating beetle <i>Scaphinotus behrensi</i>	IICOL4L070	None	None	G2G4	S2S4	
Ben Lomond buckwheat <i>Eriogonum nudum var. decurrens</i>	PDPGN08492	None	None	G5T1	S1	1B.1
Ben Lomond spineflower <i>Chorizanthe pungens var. hartwegiana</i>	PDPGN040M1	Endangered	None	G2T1	S1	1B.1
bent-flowered fiddleneck <i>Amsinckia lunaris</i>	PDBOR01070	None	None	G3	S3	1B.2
Bonny Doon manzanita <i>Arctostaphylos silvicola</i>	PDERI041F0	None	None	G1	S1	1B.2
bristly sedge <i>Carex comosa</i>	PMCYP032Y0	None	None	G5	S2	2B.1
burrowing owl <i>Athene cunicularia</i>	ABNSB10010	None	Candidate Endangered	G4	S2	SSC
California giant salamander <i>Dicamptodon ensatus</i>	AAAAH01020	None	None	G3	S2S3	SSC
California linderiella <i>Linderiella occidentalis</i>	ICBRA06010	None	None	G2G3	S2S3	
California red-legged frog <i>Rana draytonii</i>	AAABH01022	Threatened	None	G2G3	S2S3	SSC
California Ridgway's rail <i>Rallus obsoletus obsoletus</i>	ABNME05011	Endangered	Endangered	G3T1	S2	FP
California tiger salamander - central California DPS <i>Ambystoma californiense pop. 1</i>	AAAAA01181	Threatened	Threatened	G3T3	S3	WL



Selected Elements by Common Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Central Dune Scrub <i>Central Dune Scrub</i>	CTT21320CA	None	None	G2	S2.2	
Central Maritime Chaparral <i>Central Maritime Chaparral</i>	CTT37C20CA	None	None	G2	S2.2	
Choris' popcornflower <i>Plagiobothrys chorisianus var. chorisianus</i>	PDBOR0V061	None	None	G3T1Q	S1	1B.2
coast horned lizard <i>Phrynosoma blainvillii</i>	ARACF12100	None	None	G4	S4	SSC
Coastal and Valley Freshwater Marsh <i>Coastal and Valley Freshwater Marsh</i>	CTT52410CA	None	None	G3	S2.1	
Coastal Brackish Marsh <i>Coastal Brackish Marsh</i>	CTT52200CA	None	None	G2	S2.1	
coho salmon - central California coast ESU <i>Oncorhynchus kisutch pop. 4</i>	AFCHA02034	Endangered	Endangered	G5T2Q	S2	
Congdon's tarplant <i>Centromadia parryi ssp. congdonii</i>	PDAST4R0P1	None	None	G3T2	S2	1B.1
Cooper's hawk <i>Astur cooperii</i>	ABNKC12040	None	None	G5	S4	WL
Coyote ceanothus <i>Ceanothus ferrisiae</i>	PDRHA041N0	Endangered	None	G1	S1	1B.1
Crotch's bumble bee <i>Bombus crotchii</i>	IIHYM24480	None	Candidate Endangered	G2	S2	
Dudley's lousewort <i>Pedicularis dudleyi</i>	PDSCR1K180	None	Rare	G2	S2	1B.2
Eastwood's goldenbush <i>Ericameria fasciculata</i>	PDAST3L080	None	None	G2	S2	1B.1
eulachon <i>Thaleichthys pacificus</i>	AFCHB04010	Threatened	None	G4	S1	SSC
foothill yellow-legged frog - central coast DPS <i>Rana boylei pop. 4</i>	AAABH01054	Threatened	Endangered	G3T2	S2	
fragrant fritillary <i>Fritillaria liliacea</i>	PMLIL0V0C0	None	None	G2	S2	1B.2
globose dune beetle <i>Coelus globosus</i>	IICOL4A010	None	None	G1G2	S1S2	
golden eagle <i>Aquila chrysaetos</i>	ABNKC22010	None	None	G5	S3	FP
Hall's bushmallow <i>Malacothamnus hallii</i>	PDMAL0Q0F0	None	None	G2	S2	1B.2
Hooker's manzanita <i>Arctostaphylos hookeri ssp. hookeri</i>	PDERI040J1	None	None	G3T2	S2	1B.2
Hoover's button-celery <i>Eryngium aristulatum var. hooveri</i>	PDAP10Z043	None	None	G5T1	S1	1B.1



Selected Elements by Common Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Kellogg's horkelia <i>Horkelia cuneata</i> var. <i>sericea</i>	PDROS0W043	None	None	G4T1?	S1?	1B.1
Loma Prieta hoita <i>Hoita strobilina</i>	PDFAB5Z030	None	None	G2?	S2?	1B.1
longfin smelt <i>Spirinchus thaleichthys</i>	AFCHB03010	None	Threatened	G5	S1	
mimic tryonia (=California brackishwater snail) <i>Tryonia imitator</i>	IMGASJ7040	None	None	G2	S2	
minute pocket moss <i>Fissidens pauperculus</i>	NBMUS2W0U0	None	None	G3?	S2	1B.2
monarch - California overwintering population <i>Danaus plexippus plexippus</i> pop. 1	IILEPP2012	Proposed Threatened	None	G4T1T2Q	S2	
Monterey gilia <i>Gilia tenuiflora</i> ssp. <i>arenaria</i>	PDPLM041P2	Endangered	Threatened	G3G4T2	S2	1B.2
Monterey hitch <i>Lavinia exilicauda harengus</i>	AFCJB19013	None	None	G4T3	S3	SSC
Monterey shrew <i>Sorex ornatus salarius</i>	AMABA01105	None	None	G5T1T2	S1S2	SSC
Monterey spineflower <i>Chorizanthe pungens</i> var. <i>pungens</i>	PDPGN040M2	Threatened	None	G2T2	S2	1B.2
Monterey vagrant shrew <i>Sorex vagrans paludivagus</i>	AMABA01072	None	None	G5T1	S2	
Monterey vole <i>Microtus californicus halophilus</i>	AMAFF11036	None	None	G5T1	S2	
most beautiful jewelflower <i>Streptanthus albidus</i> ssp. <i>peramoenus</i>	PDBRA2G012	None	None	G2T2	S2	1B.2
Mt. Hamilton thistle <i>Cirsium fontinale</i> var. <i>campylon</i>	PDAST2E163	None	None	G2T2	S2	1B.2
North Central Coast Drainage Sacramento Sucker/Roach River <i>North Central Coast Drainage Sacramento Sucker/Roach River</i>	CARA2623CA	None	None	GNR	SNR	
Northern California legless lizard <i>Anniella pulchra</i>	ARACC01020	None	None	G3	S2S3	SSC
Northern Coastal Salt Marsh <i>Northern Coastal Salt Marsh</i>	CTT52110CA	None	None	G3	S3.2	
northern curly-leaved monardella <i>Monardella sinuata</i> ssp. <i>nigrescens</i>	PDLAM18162	None	None	G3T2	S2	1B.2
Northern Maritime Chaparral <i>Northern Maritime Chaparral</i>	CTT37C10CA	None	None	G1	S1.2	
northwestern pond turtle <i>Actinemys marmorata</i>	ARAAD02031	Proposed Threatened	None	G2	SNR	SSC
obscure bumble bee <i>Bombus caliginosus</i>	IIHYM24380	None	None	G2G3	S1S2	



Selected Elements by Common Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Ohlone tiger beetle <i>Cicindela ohlone</i>	IICOL026L0	Endangered	None	G1	S1	
Opler's longhorn moth <i>Adela oplerella</i>	IILEE0G040	None	None	G2	S2	
osprey <i>Pandion haliaetus</i>	ABNKC01010	None	None	G5	S4	WL
Pacific Grove clover <i>Trifolium polyodon</i>	PDFAB402H0	None	Rare	G1	S1	1B.1
Pajaro manzanita <i>Arctostaphylos pajaroensis</i>	PDERI04100	None	None	G1	S1	1B.1
pallid bat <i>Antrozous pallidus</i>	AMACC10010	None	None	G4	S3	SSC
perennial goldfields <i>Lasthenia californica ssp. macrantha</i>	PDAST5L0C5	None	None	G3T2	S2	1B.2
pine rose <i>Rosa pinetorum</i>	PDROS1J0W0	None	None	G1Q	S1	1B.2
robust spineflower <i>Chorizanthe robusta var. robusta</i>	PDPGN040Q2	Endangered	None	G2T1	S1	1B.1
Salinas harvest mouse <i>Reithrodontomys megalotis distichlis</i>	AMAFF02032	None	None	G5T1	S2	
saline clover <i>Trifolium hydrophilum</i>	PDFAB400R5	None	None	G2	S2	1B.2
San Francisco dusky-footed woodrat <i>Neotoma fuscipes annectens</i>	AMAFF08082	None	None	G5T2T3	S2S3	
San Francisco popcornflower <i>Plagiobothrys diffusus</i>	PDBOR0V080	None	Endangered	G1Q	S1	1B.1
sand-loving wallflower <i>Erysimum ammophilum</i>	PDBRA16010	None	None	G2	S2	1B.2
Santa Clara red ribbons <i>Clarkia concinna ssp. automixa</i>	PDONA050A1	None	None	G5?T3	S3	4.3
Santa Clara Valley dudleya <i>Dudleya abramsii ssp. setchellii</i>	PDCRA040Z0	Endangered	None	G4T2	S2	1B.1
Santa Cruz black salamander <i>Aneides niger</i>	AAAAD01070	None	None	G2G3	S3	SSC
Santa Cruz clover <i>Trifolium buckwestiorum</i>	PDFAB402W0	None	None	G2	S2	1B.1
Santa Cruz kangaroo rat <i>Dipodomys venustus venustus</i>	AMAFD03042	None	None	G2T1	S1	
Santa Cruz long-toed salamander <i>Ambystoma macrodactylum croceum</i>	AAAAA01082	Endangered	Endangered	G5T1T2	S2	FP
Santa Cruz Mountains beardtongue <i>Penstemon rattanii var. kleei</i>	PDSCR1L5B1	None	None	G4T2	S2	1B.2



Selected Elements by Common Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Santa Cruz Mountains pussypaws <i>Calyptidium parryi</i> var. <i>hesseae</i>	PDPOR09052	None	None	G3G4T2	S2	1B.1
Santa Cruz tarplant <i>Holocarpha macradenia</i>	PDAST4X020	Threatened	Endangered	G1	S1	1B.1
Santa Cruz wallflower <i>Erysimum teretifolium</i>	PDBRA160N0	Endangered	Endangered	G1	S1	1B.1
Scotts Valley polygonum <i>Polygonum hickmanii</i>	PDPGN0L310	Endangered	Endangered	G1	S1	1B.1
Scotts Valley spineflower <i>Chorizanthe robusta</i> var. <i>hartwegii</i>	PDPGN040Q1	Endangered	None	G2T1	S1	1B.1
seaside bird's-beak <i>Cordylanthus rigidus</i> ssp. <i>littoralis</i>	PDSCR0J0P2	None	Endangered	G5T2	S2	1B.1
short-eared owl <i>Asio flammeus</i>	ABNSB13040	None	None	G5	S2	SSC
Smith's blue butterfly <i>Euphilotes enoptes smithi</i>	IILEPG2026	Endangered	None	G5T2	S2	
smooth lessingia <i>Lessingia micradenia</i> var. <i>glabrata</i>	PDAST5S062	None	None	G2T2	S2	1B.2
southern coastal roach <i>Hesperoleucus venustus subditus</i>	AFCJB19032	None	None	GNRT2	S2	SSC
steelhead - central California coast DPS <i>Oncorhynchus mykiss irideus</i> pop. 8	AFCHA0209G	Threatened	None	G5T3Q	S3	SSC
steelhead - south-central California coast DPS <i>Oncorhynchus mykiss irideus</i> pop. 9	AFCHA0209H	Threatened	None	G5T2Q	S2	SSC
tidewater goby <i>Eucyclogobius newberryi</i>	AFCQN04010	Endangered	None	G3	S3	SSC
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	AMACC08010	None	None	G4	S2	SSC
tricolored blackbird <i>Agelaius tricolor</i>	ABPBXB0020	None	Threatened	G3	S2	SSC
western bumble bee <i>Bombus occidentalis</i>	IIHYM24252	None	Candidate Endangered	G3	S1	
western ridged mussel <i>Gonidea angulata</i>	IMBIV19010	None	None	G3	S2	
western snowy plover <i>Anarhynchus nivosus nivosus</i>	ABNNB03031	Threatened	None	G3T3	S3	SSC
white-rayed pentachaeta <i>Pentachaeta bellidiflora</i>	PDAST6X030	Endangered	Endangered	G1	S1	1B.1
white-tailed kite <i>Elanus leucurus</i>	ABNKC06010	None	None	G5	S3S4	FP
woodland woollythreads <i>Monolopia gracilens</i>	PDAST6G010	None	None	G3	S3	1B.2



Selected Elements by Common Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Yadon's rein orchid <i>Piperia yadonii</i>	PMORC1X070	Endangered	None	G1	S1	1B.1
yellow rail <i>Coturnicops noveboracensis</i>	ABNME01010	None	None	G4	S2	SSC
Zayante band-winged grasshopper <i>Trimerotropis infantilis</i>	IIORT36030	Endangered	None	G1	S1	

Record Count: 106









CNPS Rare Plant Inventory









Search Results





45 matches found. Click on scientific name for details



Search Criteria: , CRPR is one of [1B:2B] , Quad is one of [3612186:3612187:3712117:3712116:3612188:3612176:3612177:3712118]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	CA ENDEMIC	DATE ADDED	PHOTO
<i>Amsinckia lunaris</i>	bent-flowered fiddleneck	Boraginaceae	annual herb	Mar-Jun	None	None	G3	S3	1B.2	Yes	1974-01-01	 © 2011 Neal Kramer
<i>Arctostaphylos andersonii</i>	Anderson's manzanita	Ericaceae	perennial evergreen shrub	Nov-May	None	None	G2	S2	1B.2	Yes	1974-01-01	 © 2018 Jason Matthias Mills
<i>Arctostaphylos hookeri</i> ssp. <i>hookeri</i>	Hooker's manzanita	Ericaceae	perennial evergreen shrub	Jan-Jun	None	None	G3T2	S2	1B.2	Yes	1984-01-01	 © 2011 Chris Winchell
<i>Arctostaphylos pajaroensis</i>	Pajaro manzanita	Ericaceae	perennial evergreen shrub	Dec-Mar	None	None	G1	S1	1B.1	Yes	1974-01-01	 Lynn Overtree
<i>Arctostaphylos silvicola</i>	Bonny Doon manzanita	Ericaceae	perennial evergreen shrub	Jan-Mar	None	None	G1	S1	1B.2	Yes	1974-01-01	 © 2023 Dylan Neubauer

<i>Calyptidium parryi</i> var. <i>hesseae</i>	Santa Cruz Mountains pussypaws	Montiaceae	annual herb	May-Aug	None	None	G3G4T2	S2	1B.1	Yes	1984-01-01	No Photo Available
<i>Carex comosa</i>	bristly sedge	Cyperaceae	perennial rhizomatous herb	May-Sep	None	None	G5	S2	2B.1		1994-01-01	 Dean Wm. Taylor 1997
<i>Ceanothus ferrisiae</i>	Coyote ceanothus	Rhamnaceae	perennial evergreen shrub	Jan-May	FE	None	G1	S1	1B.1	Yes	1974-01-01	No Photo Available
<i>Centromadia parryi</i> ssp. <i>congdonii</i>	Congdon's tarplant	Asteraceae	annual herb	(Apr)May-Oct(Nov)	None	None	G3T2	S2	1B.1	Yes	1994-01-01	No Photo Available
<i>Chorizanthe pungens</i> var. <i>hartwegiana</i>	Ben Lomond spineflower	Polygonaceae	annual herb	Apr-Jul	FE	None	G2T1	S1	1B.1	Yes	1994-01-01	No Photo Available
<i>Chorizanthe pungens</i> var. <i>pungens</i>	Monterey spineflower	Polygonaceae	annual herb	Apr-Jun(Jul-Aug)	FT	None	G2T2	S2	1B.2	Yes	1980-01-01	No Photo Available
<i>Chorizanthe robusta</i> var. <i>hartwegii</i>	Scotts Valley spineflower	Polygonaceae	annual herb	Apr-Jul	FE	None	G2T1	S1	1B.1	Yes	1994-01-01	No Photo Available
<i>Chorizanthe robusta</i> var. <i>robusta</i>	robust spineflower	Polygonaceae	annual herb	Apr-Sep	FE	None	G2T1	S1	1B.1	Yes	1980-01-01	No Photo Available
<i>Cirsium fontinale</i> var. <i>campylon</i>	Mt. Hamilton thistle	Asteraceae	perennial herb	(Feb)Apr-Oct	None	None	G2T2	S2	1B.2	Yes	1974-01-01	No Photo Available
<i>Cordylanthus rigidus</i> ssp. <i>littoralis</i>	seaside bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Apr-Oct	None	CE	G5T2	S2	1B.1	Yes	1980-01-01	No Photo Available
<i>Dudleya abramsii</i> ssp. <i>setchellii</i>	Santa Clara Valley dudleya	Crassulaceae	perennial herb	Apr-Oct	FE	None	G4T2	S2	1B.1	Yes	1988-01-01	No Photo Available
<i>Ericameria fasciculata</i>	Eastwood's goldenbush	Asteraceae	perennial evergreen shrub	Jul-Oct	None	None	G2	S2	1B.1	Yes	1974-01-01	No Photo Available
<i>Eriogonum nudum</i> var. <i>decurrens</i>	Ben Lomond buckwheat	Polygonaceae	perennial herb	Jun-Oct	None	None	G5T1	S1	1B.1	Yes	1994-01-01	No Photo Available
<i>Eryngium aristulatum</i> var. <i>hooveri</i>	Hoover's button-celery	Apiaceae	annual/perennial herb	(Jun)Jul(Aug)	None	None	G5T1	S1	1B.1	Yes	1984-01-01	No Photo Available
<i>Erysimum ammophilum</i>	sand-loving wallflower	Brassicaceae	perennial herb	Feb-Jun(Jul-Aug)	None	None	G2	S2	1B.2	Yes	1974-01-01	No Photo Available

<i>Erysimum teretifolium</i>	Santa Cruz wallflower	Brassicaceae	perennial herb	Mar-Jul	FE	CE	G1	S1	1B.1	Yes	1974-01-01	No Photo Available
<i>Fissidens pauperculus</i>	minute pocket moss	Fissidentaceae	moss		None	None	G3?	S2	1B.2		2001-01-01	 ©2021 Scot Loring
<i>Fritillaria liliacea</i>	fragrant fritillary	Liliaceae	perennial bulbiferous herb	Feb-Apr	None	None	G2	S2	1B.2	Yes	1974-01-01	 © 2004 Carol W. Witham
<i>Gilia tenuiflora</i> ssp. <i>arenaria</i>	Monterey gilia	Polemoniaceae	annual herb	Apr-Jun	FE	CT	G3G4T2	S2	1B.2	Yes	1980-01-01	 © 2021 Neal Kramer
<i>Hoita strobilina</i>	Loma Prieta hoita	Fabaceae	perennial herb	May-Jul(Aug-Oct)	None	None	G2?	S2?	1B.1	Yes	2001-01-01	 © 2004 Janell Hillman
<i>Holocarpha macradenia</i>	Santa Cruz tarplant	Asteraceae	annual herb	Jun-Oct	FT	CE	G1	S1	1B.1	Yes	1974-01-01	 © 2011 Dylan Neubauer
<i>Horkelia cuneata</i> var. <i>sericea</i>	Kellogg's horkelia	Rosaceae	perennial herb	Apr-Sep	None	None	G4T1?	S1?	1B.1	Yes	1988-01-01	 © 2018 Neal Kramer
<i>Lasthenia californica</i> ssp. <i>macrantha</i>	perennial goldfields	Asteraceae	perennial herb	Jan-Nov	None	None	G3T2	S2	1B.2	Yes	2001-01-01	 © 2013 John Doyen
<i>Lessingia micradenia</i> var. <i>glabrata</i>	smooth lessingia	Asteraceae	annual herb	(Apr-Jun)Jul-Nov	None	None	G2T2	S2	1B.2	Yes	1994-01-01	 © 2015 Aaron Schusteff

<i>Malacothamnus arcuatus</i> var. <i>arcuatus</i>	bushmallow	Malvaceae	perennial deciduous shrub	Apr-Sep	None	None	GNRT2	S2	1B.2	Yes	1974-01-01	 © 2017 Keir Morse
<i>Malacothamnus hallii</i>	Hall's bushmallow	Malvaceae	perennial deciduous shrub	(Apr)May-Sep(Oct)	None	None	G2	S2	1B.2	Yes	1974-01-01	 © 2017 Keir Morse
<i>Monardella sinuata</i> ssp. <i>nigrescens</i>	northern curly-leaved monardella	Lamiaceae	annual herb	(Apr)May-Jul(Aug-Sep)	None	None	G3T2	S2	1B.2	Yes	2013-12-31	 © 2014 John Doyen
<i>Monolopia gracilens</i>	woodland woollythreads	Asteraceae	annual herb	(Feb)Mar-Jul	None	None	G3	S3	1B.2	Yes	2010-04-06	 © 2016 Richard Spellenberg
<i>Pedicularis dudleyi</i>	Dudley's lousewort	Orobanchaceae	perennial herb	Apr-Jun	None	CR	G2	S2	1B.2	Yes	1974-01-01	No Photo Available
<i>Penstemon rattanii</i> var. <i>kleei</i>	Santa Cruz Mountains beardtongue	Plantaginaceae	perennial herb	(Mar)May-Jun	None	None	G4T2	S2	1B.2	Yes	1984-01-01	No Photo Available
<i>Pentachaeta bellidiflora</i>	white-rayed pentachaeta	Asteraceae	annual herb	Mar-May	FE	CE	G1	S1	1B.1	Yes	1974-01-01	No Photo Available
<i>Piperia yadonii</i>	Yadon's rein orchid	Orchidaceae	perennial herb	(Feb)May-Aug	FE	None	G1	S1	1B.1	Yes	1994-01-01	No Photo Available
<i>Plagiobothrys chorisianus</i> var. <i>chorisianus</i>	Choris' popcornflower	Boraginaceae	annual herb	Mar-Jun	None	None	G3T1Q	S1	1B.2	Yes	1984-01-01	No Photo Available
<i>Plagiobothrys diffusus</i>	San Francisco popcornflower	Boraginaceae	annual herb	Mar-Jun	None	CE	G1Q	S1	1B.1	Yes	1974-01-01	No Photo Available
<i>Polygonum hickmanii</i>	Scotts Valley polygonum	Polygonaceae	annual herb	May-Aug	FE	CE	G1	S1	1B.1	Yes	2001-01-01	No Photo Available
<i>Rosa pinetorum</i>	pine rose	Rosaceae	perennial shrub	May-Jul	None	None	G1Q	S1	1B.2	Yes	2001-01-01	No Photo Available

<i>Streptanthus albidus</i> ssp. <i>peramoenus</i>	most beautiful jewelflower	Brassicaceae	annual herb	(Mar)Apr- Sep(Oct)	None	None	G2T2	S2	1B.2	Yes	1988- 01-01	 © 1994 Robert E. Preston, Ph.D.
<i>Trifolium buckwestiorum</i>	Santa Cruz clover	Fabaceae	annual herb	Apr-Oct	None	None	G2	S2	1B.1	Yes	1994- 01-01	No Photo Available
<i>Trifolium hydrophilum</i>	saline clover	Fabaceae	annual herb	Apr-Jun	None	None	G2	S2	1B.2	Yes	2001- 01-01	 © 2005 Dean Wm Taylor
<i>Trifolium polyodon</i>	Pacific Grove clover	Fabaceae	annual herb	Apr-Jun(Jul)	None	CR	G1	S1	1B.1	Yes	1974- 01-01	No Photo Available

Showing 1 to 45 of 45 entries

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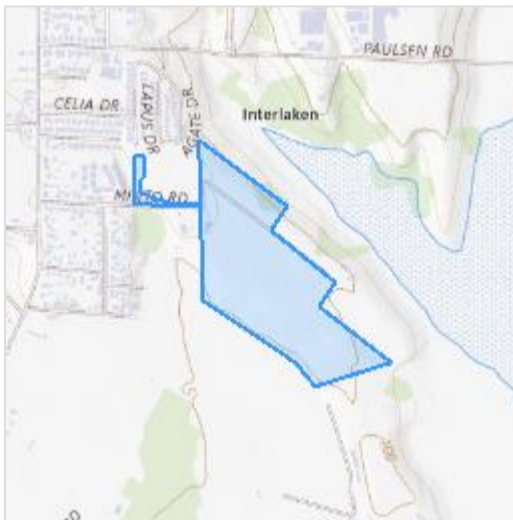
IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Santa Cruz County, California



Local office

Ventura Fish And Wildlife Office

☎ (805) 644-1766

📠 (805) 644-3958

✉ FW8VenturaSection7@FWS.Gov

2493 Portola Road, Suite B
Ventura, CA 93003-7726

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
San Joaquin Kit Fox <i>Vulpes macrotis mutica</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2873	Endangered

Birds

NAME	STATUS
California Condor <i>Gymnogyps californianus</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/8193	Endangered
California Least Tern <i>Sternula antillarum browni</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8104	Endangered
Least Bell's Vireo <i>Vireo bellii pusillus</i> Wherever found There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/5945	Endangered

Western Snowy Plover *Charadrius nivosus nivosus* Threatened
There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
<https://ecos.fws.gov/ecp/species/8035>

Yellow-billed Cuckoo *Coccyzus americanus* Threatened
There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
<https://ecos.fws.gov/ecp/species/3911>

Reptiles

NAME	STATUS
Northwestern Pond Turtle <i>Actinemys marmorata</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1111	Proposed Threatened
San Francisco Garter Snake <i>Thamnophis sirtalis tetrataenia</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/5956	Endangered

Amphibians

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i> Wherever found There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander <i>Ambystoma californiense</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/2076	Threatened
Foothill Yellow-legged Frog <i>Rana boylei</i> There is proposed critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/5133	Threatened

Fishes

NAME	STATUS
Tidewater Goby <i>Eucyclogobius newberryi</i> Wherever found There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/57	Endangered

Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> Wherever found There is proposed critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

Flowering Plants

NAME	STATUS
Monterey Spineflower <i>Chorizanthe pungens</i> var. <i>pungens</i> Wherever found There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/396	Threatened

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

<https://ecos.fws.gov/ecp/species/6832>

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

Bald & Golden Eagles

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act ² and the Migratory Bird Treaty Act (MBTA) ¹. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide avoidance and minimization measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

There are Bald Eagles and/or Golden Eagles in your [project](#) area.

Measures for Proactively Minimizing Eagle Impacts

For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the [National Bald Eagle Management Guidelines](#). You may employ the timing and activity-specific distance recommendations in this document when designing your project/activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to [Bald Eagle Nesting and Sensitivity to Human Activity](#).

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional [Migratory Bird Office](#) or [Ecological Services Field Office](#).

If disturbance or take of eagles cannot be avoided, an [incidental take permit](#) may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the [Do I Need A Permit Tool](#). For assistance making this determination for golden eagles, please consult with the appropriate Regional [Migratory Bird Office](#) or [Ecological Services Field Office](#).

Ensure Your Eagle List is Accurate and Complete

If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the [Supplemental Information on Migratory Birds and Eagles](#), to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

Review the FAQs

The FAQs below provide important additional information and resources.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
Golden Eagle <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read ["Supplemental Information on Migratory Birds and Eagles"](#), specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

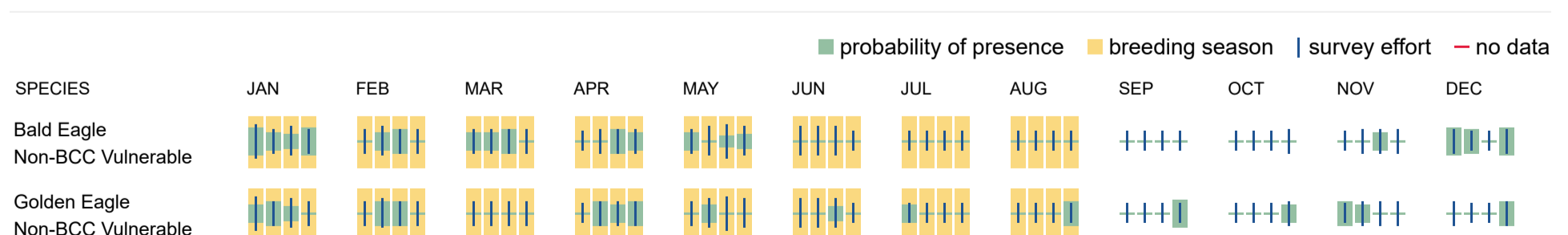
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (-)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Bald & Golden Eagles FAQs

What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are an eagle ([Bald and Golden Eagle Protection Act](#) requirements may apply).

Proper interpretation and use of your eagle report

On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort line or no data line (red horizontal) means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide you in knowing when to implement avoidance and minimization measures to eliminate or reduce potential impacts from your project activities or get the appropriate permits should presence be confirmed.

How do I know if eagles are breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the [RAIL Tool](#) and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If an eagle on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your "IPaC PROBABILITY OF PRESENCE SUMMARY" at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

Interpreting the Probability of Presence Graphs

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:

The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data ()

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Migratory birds

The Migratory Bird Treaty Act (MBTA) ¹ prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

Measures for Proactively Minimizing Migratory Bird Impacts

Your IPaC Migratory Bird list showcases [birds of concern](#), including [Birds of Conservation Concern \(BCC\)](#), in your project location. This is not a comprehensive list of all birds found in your project area. However, you can help proactively minimize significant impacts to all birds at your project location by implementing the measures in the [Nationwide avoidance and minimization measures for birds](#)

document, and any other project-specific avoidance and minimization measures suggested at the link [Measures for avoiding and minimizing impacts to birds](#) for the birds of concern on your list below.

Ensure Your Migratory Bird List is Accurate and Complete

If your project area is in a poorly surveyed area, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the [Supplemental Information on Migratory Birds and Eagles document](#), to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

Review the FAQs

The FAQs below provide important additional information and resources.

NAME	BREEDING SEASON
Allen's Hummingbird <i>Selasphorus sasin</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637	Breeds Feb 1 to Jul 15
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
Belding's Savannah Sparrow <i>Passerculus sandwichensis beldingi</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8	Breeds Apr 1 to Aug 15
Black Swift <i>Cypseloides niger</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8878	Breeds Jun 15 to Sep 10
Bullock's Oriole <i>Icterus bullockii</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Mar 21 to Jul 25
California Gull <i>Larus californicus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 1 to Jul 31
California Thrasher <i>Toxostoma redivivum</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jan 1 to Jul 31
Clark's Grebe <i>Aechmophorus clarkii</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jun 1 to Aug 31
Common Yellowthroat <i>Geothlypis trichas sinuosa</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/2084	Breeds May 20 to Jul 31
Golden Eagle <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31

<p>Lawrence's Goldfinch <i>Spinus lawrencei</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9464</p>	Breeds Mar 20 to Sep 20
<p>Long-eared Owl <i>asio otus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3631</p>	Breeds Mar 1 to Jul 15
<p>Marbled Godwit <i>Limosa fedoa</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9481</p>	Breeds elsewhere
<p>Northern Harrier <i>Circus hudsonius</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8350</p>	Breeds Apr 1 to Sep 15
<p>Nuttall's Woodpecker <i>Dryobates nuttallii</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9410</p>	Breeds Apr 1 to Jul 20
<p>Oak Titmouse <i>Baeolophus inornatus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9656</p>	Breeds Mar 15 to Jul 15
<p>Olive-sided Flycatcher <i>Contopus cooperi</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914</p>	Breeds May 20 to Aug 31
<p>Red Knot <i>Calidris canutus roselaari</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8880</p>	Breeds elsewhere
<p>Santa Barbara Song Sparrow <i>Melospiza melodia graminea</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/5513</p>	Breeds Mar 1 to Sep 5
<p>Short-billed Dowitcher <i>Limnodromus griseus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9480</p>	Breeds elsewhere
<p>Tricolored Blackbird <i>Agelaius tricolor</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3910</p>	Breeds Mar 15 to Aug 10
<p>Western Grebe <i>Aechmophorus occidentalis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/6743</p>	Breeds Jun 1 to Aug 31
<p>Western Gull <i>Larus occidentalis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Apr 21 to Aug 25

Belding's Savannah Sparrow BCC - BCR												
Black Swift BCC Rangewide (CON)												
Bullock's Oriole BCC - BCR												
California Gull BCC Rangewide (CON)												
California Thrasher BCC Rangewide (CON)												
Clark's Grebe BCC Rangewide (CON)												
Common Yellowthroat BCC - BCR												
Golden Eagle Non-BCC Vulnerable												
Lawrence's Goldfinch BCC Rangewide (CON)												
Long-eared Owl BCC Rangewide (CON)												
SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Marbled Godwit BCC Rangewide (CON)												
Northern Harrier BCC - BCR												
Nuttall's Woodpecker BCC - BCR												
Oak Titmouse BCC Rangewide (CON)												
Olive-sided Flycatcher BCC Rangewide (CON)												
Red Knot BCC Rangewide (CON)												
Santa Barbara Song Sparrow BCC - BCR												
Short-billed Dowitcher BCC Rangewide (CON)												
Tricolored Blackbird BCC Rangewide (CON)												
Western Grebe BCC Rangewide (CON)												
Western Gull BCC Rangewide (CON)												
Western Screech-owl BCC - BCR												
SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Willet BCC Rangewide (CON)												
Wrentit BCC Rangewide (CON)												
Yellow-billed Magpie BCC Rangewide (CON)												

Migratory Bird FAQs

Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Avoidance & Minimization Measures for Birds](#) describes measures that can help avoid and minimize impacts to all birds at any location year-round. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is one of the most effective ways to minimize impacts. To see when birds are most likely to occur and breed in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location, such as those listed under the Endangered Species Act or the [Bald and Golden Eagle Protection Act](#) and those species marked as "Vulnerable". See the FAQ "What are the levels of concern for migratory birds?" for more information on the levels of concern covered in the IPaC migratory bird species list.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) with which your project intersects. These species have been identified as warranting special attention because they are BCC species in that area, an eagle ([Bald and Golden Eagle Protection Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, and to verify survey effort when no results present, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

Why are subspecies showing up on my list?

Subspecies profiles are included on the list of species present in your project area because observations in the AKN for **the species** are being detected. If the species are present, that means that the subspecies may also be present. If a subspecies shows up on your list, you may need to rely on other resources to determine if that subspecies may be present (e.g. your local FWS field office, state surveys, your own surveys).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the [RAIL Tool](#) and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your "IPaC PROBABILITY OF PRESENCE SUMMARY" at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Bald and Golden Eagle Protection Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially BCC species. For more information on avoidance and minimization measures you can implement to help avoid and minimize migratory bird impacts, please see the FAQ "Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Proper interpretation and use of your migratory bird report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list does not represent all birds present in your project area. It is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide implementation of avoidance and minimization measures to eliminate or reduce potential impacts from your project activities, should presence be confirmed. To learn more about avoidance and minimization measures, visit the FAQ "Tell me about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

Interpreting the Probability of Presence Graphs

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:

The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data ()

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

RIVERINE
[R4SBC](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION

Appendix 3.2C

Observed Plant and Wildlife Species Compendium

Plant Species

Vascular Species

Eudicots

ANACARDIACEAE—SUMAC OR CASHEW FAMILY

Toxicodendron diversilobum—poison oak

FACU

APIACEAE—CARROT FAMILY

* *Conium maculatum*—poison hemlock

FACW

ASTERACEAE—SUNFLOWER FAMILY

* *Acorus calamus*—calamus

OBL

Baccharis pilularis—coyote brush

Not Listed

* *Cirsium vulgare*—bull thistle

FACU

* *Helminthotheca echioides*—bristly oxtongue

FAC

BRASSICACEAE—MUSTARD FAMILY

* *Brassica nigra*—black mustard

Not Listed

* *Brassica rapa*—field mustard

FACU

Nasturtium officinale—watercress

OBL

* *Raphanus sativus*—cultivated radish

Not Listed

CONVOLVULACEAE—MORNING-GLORY FAMILY

* *Convolvulus arvensis*—field bindweed

Not Listed

FABACEAE—LEGUME FAMILY

* *Medicago polymorpha*—burclover

FACU

GERANIACEAE—GERANIUM FAMILY

- * *Geranium molle*—dovefoot geranium
Not Listed

ONAGRACEAE—EVENING PRIMROSE FAMILY

- Epilobium brachycarpum*—tall annual willowherb
FAC
- * *Ludwigia peploides*—floating primrose-willow
OBL

POLYGONACEAE—BUCKWHEAT FAMILY

- Persicaria punctata*—dotted smartweed
OBL

ROSACEAE—ROSE FAMILY

- * *Malus pumila*—paradise apple
Not Listed
- * *Rubus armeniacus*—Himalayan blackberry
FAC
- Rubus ursinus*—California blackberry
FAC

SALICACEAE—WILLOW FAMILY

- Salix lasiolepis*—arroyo willow
FACW

Gymnosperms and Gnetophytes**CUPRESSACEAE—CYPRESS FAMILY**

- Callitropsis nootkatensis*—Alaska cedar
FAC
- Sequoia sempervirens*—redwood
Not Listed

Monocots**CYPERACEAE—SEDGE FAMILY**

- Cyperus eragrostis*—tall flatsedge
FACW

JUNCACEAE—RUSH FAMILY

- Juncus patens*—western rush
FACW

POACEAE—GRASS FAMILY

- * *Avena barbata*—slender oat
Not Listed
- * *Avena sativa*—common oat
UPL
- * *Bromus catharticus*—rescuegrass
Not Listed
- * *Bromus diandrus*—ripgut brome
Not Listed
- * *Cynodon dactylon*—Bermudagrass
FACU
- * *Festuca perennis*—perennial rye grass
FAC
- * *Festuca trachyphylla*—hard fescue
UPL
- * *Hordeum murinum*—mouse barley
FACU
- * *Phalaris aquatica*—Harding grass
FACU

Wildlife Species

Amphibians

Frogs

RANIDAE—TRUE FROGS

- * *Lithobates catesbeianus*—North American bullfrog

Toads

BUFONIDAE—TRUE TOADS

- Anaxyrus boreas*—western toad

Birds

ACCIPITRIDAE— HAWKS, KITES, EAGLES, AND ALLIES

- Buteo jamaicensis*— red-tailed hawk

AEGITHALIDAE—LONG-TAILED TITS AND BUSHTITS

- Psaltriparus minimus*— bushtit

ANATIDAE— DUCKS, GEESE, AND SWANS

Anas platyrhynchos— mallard

Branta canadensis— Canada goose

ARDEIDAE—HERONS, BITTERNs, AND ALLIES

Ardea herodias—great blue heron

CARDINALIDAE—CARDINALS AND ALLIES

Pheucticus melanocephalus—black-headed grosbeak

CATHARTIDAE—NEW WORLD VULTURES

Cathartes aura—turkey vulture

CHARADRIIDAE— LAPWINGS AND PLOVERS

Charadrius vociferus— killdeer

COLUMBIDAE— PIGEONS AND DOVES

Zenaida macroura— mourning dove

* *Streptopelia decaocto*— Eurasian collared-dove

CORVIDAE— CROWS AND JAYS

Aphelocoma californica— California scrub-jay

Corvus brachyrhynchos— American crow

FRINGILLIDAE— FRINGILLINE, CARDUELINE FINCHES AND ALLIES

Haemorhous mexicanus— house finch

Spinus psaltria— lesser goldfinch

ICTERIDAE—BLACKBIRDS

Euphagus cyanocephalus— Brewer's blackbird

HIRUNDINIDAE— SWALLOWS

Tachycineta bicolor— tree swallow

PANDIONIDAE—OSPREYS

Pandion haliaetus—osprey

PARIDAE— CHICKADEES AND TITMICE

Baeolophus inornatus— oak titmouse

Poecile rufescens— chestnut-backed chickadee

PARULIDAE— WOOD-WARBLEDERS

Leiothlypis celata— orange-crowned warbler

Geothlypis trichas—common yellowthroat

PASSERELLIDAE— NEW WORLD SPARROWS

Junco hyemalis— dark-eyed junco

Melospiza melodia— song sparrow

Melospiza crissalis— California towhee

Pipilo maculatus— spotted towhee

PODICIPEDIDAE—GREBES

Podilymbus podiceps—pied-billed grebe

RALLIDAE—RAILS, GALLINULES, AND COOTS

Fulica americana—American coot

REGULIDAE—KINGLETS

Corthylio calendula— ruby-crowned kinglet

STERNIDAE— STARLINGS

* *Sturnus vulgaris*— European starling

TROCHILIDAE— HUMMINGBIRDS

Calypte anna— Anna's hummingbird

TROGLODYTIDAE—WRENS

Cistothorus palustris—marsh wren

Thryomanes bewickii— Bewick's wren

TURDIDAE— THRUSHES

Sialia mexicana— western bluebird

TYRANNIDAE— TYRANT FLYCATCHERS

Sayornis nigricans— black phoebe

Empidonax difficilis—western flycatcher

VIREONIDAE—VIREOS

Vireo swainsoni—western warbling-vireo

Invertebrates

NYMPHALIDAE— BRUSH-FOOTED BUTTERFLIES

Danaus plexippus— monarch

Fishes

Other Bony Fishes

POECILIIDAE—POECILIIDS

- * *Gambusia affinis*—mosquitofish

Minnnows and Carps

CYPRINIDAE—MINNOWS AND CARPS

- * *Cyprinus carpio*—common carp

Mammals

Squirrels

SCIURIDAE— SQUIRRELS

- Otospermophilus beecheyi*— California ground squirrel

Canids

CANIDAE—WOLVES AND FOXES

- Canis latrans*—coyote

- * Signifies Non-native Species

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Appendix 3.2D
Lake and Streambed
Alteration Agreement Application

DUDEK

MAIN OFFICE

687 S. COAST HIGHWAY 101, SUITE 110

ENCINITAS, CALIFORNIA 92024

T 760.942.5147 F 760.632.0164

May 26, 2026

14713.51

California Department of Fish and Wildlife
Region 3 – Lake and Streambed Alteration Program
2825 Cordelia Road, Suite 100
Fairfield, CA 94534

Subject: Application for a Lake and Streambed Alteration Agreement for the Seahawk Battery Energy Storage System Project, Santa Cruz County, California

Region 3 – Lake and Streambed Alteration Program:

On behalf of Sequoia Energy Storage 1, LLC (Applicant), Dudek submits the enclosed application for a Lake and Streambed Alteration Agreement (LSAA) for the Seahawk Battery Energy Storage System (BESS) Project (Project) located in Santa Cruz County, California.

List of Attachments

The following attachments are provided in this application:

- Attachment A: Application Form
- Attachment B: Figures
- Attachment C: Project Description AB 205 Section (Overall; provided under separate cover as part of the project's California Energy Commission (CEC) Opt-In Application – see specifically Section 2.0)
 - Attachment C.1: Targeted Project Description for the Streambed Alteration Application Package
- Attachment D: Aquatic Resources Delineation Report
- Attachment E: Civil Plans (Provided under separate cover as part of the project's CEC Opt-In Application – see specifically Appendix 2C)
- Attachment F: Biological Resources AB 205 Section (Provided under separate cover as part of the project's CEC Opt-In Application – see specifically Section 3.2)

Please let me know if you have any questions or comments. I can be reached at kpedersen@dudek.com or 619.985.1673.

Sincerely,



Katelin Pedersen
Environmental Compliance Specialist

cc: Morgan Kennedy & Erin Phillips, Dudek

Attachment A

Application Form

Attribute	Answer
General Information	
Applicant	William Peregoy, Civil Project Engineer
Additional Contacts	n/a
Project Name	Seahawk Battery Energy Storage System Project
Organization	Sequoia Energy Storage 1, LLC
Designated Representative	Katelin Pedersen - Dudek
Project Location and Category	
Project Location	
Project Name	Seahawk Battery Energy Storage System Project
Does the Project site have a physical address? (select one)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 90 Minto Road, Watsonville, CA 95076
GPS Coordinates	36.949701, -121.757566 - BESS portion of the Project
County	Santa Cruz
Property APN	051-101-77, 051-101-78, and 051-091-03 See Attachment B for figures showing the Project location.
Project Category	
Project Category (select one)	<input checked="" type="checkbox"/> New Construction <input type="checkbox"/> Replace/Remove Existing Structure <input type="checkbox"/> Repair/Maintain/Operate Existing Structure
Work Type (select one)	<input checked="" type="checkbox"/> Bank stabilization – bioengineering/recontouring <input type="checkbox"/> Bank stabilization – rip-rap/retaining wall/gabion <input type="checkbox"/> Boat dock/pier <input type="checkbox"/> Boat ramp <input checked="" type="checkbox"/> Bridge <input checked="" type="checkbox"/> Channel clearing/vegetation management <input checked="" type="checkbox"/> Culvert <input type="checkbox"/> Dam <input type="checkbox"/> Debris basin <input type="checkbox"/> Diversion structure: weir or pump intake (obsolete) <input checked="" type="checkbox"/> Filling of wetland, river, stream, or lake <input type="checkbox"/> Geotechnical survey <input checked="" type="checkbox"/> Grading <input type="checkbox"/> Habitat enhancement – revegetation/mitigation <input type="checkbox"/> Levee <input type="checkbox"/> Low water crossing <input checked="" type="checkbox"/> Road/trail <input type="checkbox"/> Sand & gravel operations <input type="checkbox"/> Sediment removal – pond, stream, or marina <input type="checkbox"/> Sediment removal: flood control <input type="checkbox"/> Storm drain outfall structure <input checked="" type="checkbox"/> Temporary stream crossing <input type="checkbox"/> Utility crossing: horizontal directional drilling <input type="checkbox"/> Utility crossing: jack/bore <input type="checkbox"/> Utility crossing: open trench <input type="checkbox"/> Water diversion with facility <input checked="" type="checkbox"/> Water diversion without facility <input checked="" type="checkbox"/> Other (Describe other work type) Trenching
Does this Project address any of the following: hazardous fuels reduction, fuel breaks, wildfire prevention, vegetation treatment or vegetation management for fire management? (select one)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Attribute	Answer
Affected Body of Water	
River, Stream, or Lake Affected	Unnamed ephemeral drainage feature
Waterbody tributary	Pajaro River
Will water be present during the proposed work period in the river, stream, or lake: (select one)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
If "Yes", will the proposed Project require work in the wetted portion of the channel?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If "Yes", attach a plan to divert water around the Project site and dewater the work site that specifies the method, volume rate, and timing of the diversion on the Documents and Maps form.
Wild and Scenic Rivers Act (WSRA)	
Is the river or stream segment affected by the Project listed in the state or federal Wild and Scenic Rivers Acts?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
Project Description, Term, and Impacts	
Project Description and Details	
Is the 'Property Owner' the same person as the 'Applicant Proposing Project'?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If "No", outline the following contact information for the 'Property Owner': Name Business Agency Mailing Address Phone Number Email	N/A
Describe the Project in Detail	The project proposes to construct, operate, and eventually repower or decommission the up to 200-megawatt Seahawk Battery Energy Storage System (BESS) Project (project) located on up to 16 acres of an approximately 47-acre project site in unincorporated Santa Cruz County. The primary components of the project include a containerized BESS facility utilizing lithium-iron phosphate cells, or similar technology, operations and maintenance building, an on-site project substation, a 115-kilovolt generation interconnection transmission line, and

Attribute	Answer
	<p>interconnection facilities within the existing Pacific Gas and Electric (PG&E)-owned and operated Green Valley Substation.</p> <p>See Attachment C, Project Description, for full Project objectives. A Project description specific to the portion of the overall Project that intersecting aquatic features is included as Attachment C.1.</p>
Describe Equipment and Machinery	Tractors, loaders, backhoes, excavator, rubber-tired dozer, generators, air compressors, skid steers, dump trucks, water trucks, graders, rollers, concrete trucks, cranes, paving equipment, generators, and hand tools.
Will part or all of this Project be funded with one of the following CDFW-managed grants? (select one)	<input type="checkbox"/> Fish Restoration Grant Program (FRGP) <input type="checkbox"/> Cannabis Restoration Grant Program <input type="checkbox"/> Prop 1 Grant <input type="checkbox"/> Prop 68 Grant <input type="checkbox"/> Greenhouse Gas Grant (GHG) <input type="checkbox"/> Wildlife Conservation Board (WCB) Grant <input checked="" type="checkbox"/> N/A
Water Rights(s), Water Diversion(s) & Reservoir(s)	
Does the Project have an associated water right(s)? (select one) <ul style="list-style-type: none"> ▪ If “Yes”, how many Project water rights are included in the Project? 	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Does the Project include any water diversion(s)? (select one) <ul style="list-style-type: none"> ▪ If “Yes”, how many water diversions will be included in the Project? 	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No The project is considering three potential secondary access road options at the affected feature: (1) a bridge crossing over the feature, (2) a road through the feature with a culvert, or (3) an Arizona crossing. Final design remains pending.
Does the Project include a reservoir(s)? (select one) <ul style="list-style-type: none"> ▪ If “Yes”, how many reservoir(s) will be included in the Project? 	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Commercial Cannabis Cultivation	
Does any part of the Project include remediation at a cannabis cultivation site? (select one)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are you seeking documentation to submit to the Department of	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Attribute	Answer
Cannabis Control (DCC) for the purpose of commercial cannabis cultivation licensing? (select one)	
Agreement Term	
Agreement Term Requested	<input checked="" type="checkbox"/> Regular Term (5 years or less) <input type="checkbox"/> Long Term (Greater than 5 years)
Project Term	
Specify both the year the Project activities will begin and the year the Project activities will end. Be advised CDFW may restrict work within a stream or lake to the dry season of the year. Consequently, you may want to include more than one season of possible operation in your Project proposal.	<p>Beginning Year: 2027 Ending Year: 2032</p> <p>The construction schedule presented herein is preliminary. Actual start time of construction may occur later than the representative start date based on final design, permitting, and other factors.</p> <p>The project will be in O&M (operations and maintenance) through 2064. No additional impacts to waters regulated under California FGC are anticipated to be impacted after the initial construction activities to conclude in 2032, as noted above.</p>
Seasonal Work Period	
Specify the time period you intend to work on the Project (e.g., August 1 to October 15). If the work period will exceed one year, specify the work period for each year of the Project (e.g., Work Period 1, February 10 to March 31; Work Period 2, August 1 to October 15; Work Period 3, February 10 to March 31; etc.). CDFW may restrict Project work to certain periods depending on rainfall, fish migration, wildlife breeding or nesting season, or other resource concerns. Specify the estimated number of days of actual work days for each seasonal work period.	<p>Work Period 1 Estimated Dates: June 1, 2027, to December 31, 2027 Work Period 1 Estimated Days of Work: up to 144 days</p> <p>Work Period 2: January 1, 2028, to December 31, 2028 Work Period 2 Estimated Days of Work: up to 248 days</p> <p>Work Period 3 Estimated Dates: January 1, 2029, to June 1, 2029 Work Period 3 Estimated Days of Work: up to 106 days</p> <p>The above estimations exclude weekends, and federal and state public holidays. These estimations do not include construction pauses due to inclement weather or other factors.</p>

Attribute	Answer
<p>Impacts to River, Stream, or Lake</p>	
<p>Describe Impacts</p>	<ul style="list-style-type: none"> ▪ Permanent Direct Impacts: Because the final ditch crossing design has not been selected, impacts are conservatively evaluated for the three potential secondary access road options currently under consideration: (1) a bridge spanning the ditch, (2) a road through the feature using fill and culvert or similar structural components, or (3) an Arizona crossing. The project would result in up to 0.006 acre (20 linear feet) of permanent direct impact to OW-03, which represents the largest impact envelope among the crossing options currently being considered. The bridge option would generally have the least direct effect on the ditch bed and banks, the road-through-the-feature option would result in the greatest direct impact, and the Arizona crossing would likely result in an intermediate level of direct impact. No direct permanent impacts to riparian habitat are proposed. ▪ Indirect Impacts: Potential indirect effects associated with construction of any of the three crossing options include fugitive dust generation, erosion and sediment transport, accidental release of fuels or other pollutants, introduction of invasive plant species on disturbed soils, noise and vibration from heavy equipment. These effects would be greatest during grading, excavation, material placement, and equipment movement near the ditch. Long-term indirect effects could vary by crossing type, with the bridge option expected to have the least effect on ditch function, the road-through-the-feature option expected to have the greatest potential to alter localized drainage, flow velocities, and debris accumulation, and the Arizona crossing expected to result in an intermediate level of effect. These effects are expected to remain localized and would be minimized through implementation of the project SWPPP, construction BMPs, defined work limits, and environmentally sensitive area fencing. No indirect impacts to riparian habitat are proposed. ▪ Temporary Impacts: No temporary direct impacts to OW-03 or riparian habitat are currently anticipated. Temporary construction-related effects in the vicinity of the ditch would be limited to short-term disturbance associated with equipment mobilization, localized grading, placement of structural or fill materials, and stabilization of disturbed areas within the approved work area. <p>See Attachment B Figure 3 for Project impacts on waters of the state.</p>

Attribute	Answer
Impacts to Special-Status Species	
Will there be any foreseeable impacts to any special status animal or plant species, or habitat that could support such species, known to be present on or near the Project site? (select one)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
If "Yes", list each species and describe the habitat	
Source(s) Identify the source(s) of information (e.g., biological surveys, environmental documents, etc.) that support a "Yes" or "No" answer for the previous question.	The Biological Resources section of the Project's CEC "Opt-In" application contains the results of the biological studies conducted for the Project. See also Attachment D, Aquatic Resources Delineation Report.
Impacts to Trees and Vegetation	
Will the Project affect any trees or vegetation?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Describe Identify the type(s) of tree(s) or vegetation that will be affected by the Project.	Orchard vegetation, non-native grasses, shrubs, and vines (e.g., <i>Malus</i> spp.; <i>Baccharis pilularis</i> ; <i>Toxicodendron diversilobum</i> ; etc.)
Environmental Review	
California Environmental Quality Act	
Has a CEQA lead agency been determined? (select one)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
CEQA Lead Agency	California Energy Commission (CEC)
Agency Contact Person	Eric Veerkamp
Phone Number	916-591-9931
Email	Eric.Veerkamp@energy.ca.gov
Has a draft or final document been prepared for the Project pursuant to CEQA? (select one)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No The Project is filing through the CEC "Opt-In" certification process (Assembly Bill 205).

Attribute	Answer
If "Yes", outline the type of environmental document. Include a copy of the CEQA document and all notices in the Documents and Map section.	<input type="checkbox"/> Notice of Exemption (NOE) <input type="checkbox"/> Negative Declaration (ND) <input type="checkbox"/> Mitigated Negative Declaration (MND) <input checked="" type="checkbox"/> Environmental Impact Report (EIR) <input type="checkbox"/> Timber Harvest Plan (THP)/Non-Industrial Timber Management Plan (NTMP)
State Clearinghouse Number (if applicable)	Pending. The Project is filing through the CEC "Opt-In" certification process (Assembly Bill 205). Once the application is deemed complete, the CEQA process will commence.
Has a CEQA Notice of Determination (NOD) been completed for the Project? (select one) If "Yes", attach the NOD in the Documents and Map section. If "No", explain why the NOD has not been completed.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No The Project is filing through the CEC "Opt-In" certification process (Assembly Bill 205). Once the application is deemed complete, the CEQA process will commence.
Has a CEQA Mitigation, Monitoring, Reporting Plan (MMRP) been completed for the Project? (select one) If "Yes", attach the MMRP in the Documents and Map section. If "No", explain why the MMRP has not been completed.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No The Project is filing through the CEC "Opt-In" certification process (Assembly Bill 205). Once the application is deemed complete, the CEQA process will commence.
Has a CEQA filing fee been paid pursuant to Fish and Game Code section 711.4? (select one) If "Yes", attach a copy of the CEQA filing fee receipt in the Documents and Map section. If "No", explain why the CEQA filing fee hasn't been paid.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No The Project is filing through the CEC "Opt-In" certification process (Assembly Bill 205). Once the application is deemed complete, the CEQA process will commence.
If the Project described in this notification is not the "whole Project", or action pursuant to CEQA, briefly describe the entire Project. If the Project described in	The Project described in the notification is the entire Project.

Attribute	Answer
the notification is the entire Project, insert the following statement in this box: “The Project described in the notification is the entire Project.”	
National Environmental Policy Act (NEPA)	
Has a draft or final document been prepared for the Project pursuant to the National Environmental Policy Act (NEPA)? (select one)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
If “Yes”, outline the type of environmental document. Include a copy of the document in the Documents and Map section.	<input type="checkbox"/> Categorical Exclusion <input type="checkbox"/> Environmental Assessment (EA) <input type="checkbox"/> Finding of No Significant Impact (FONSI) <input type="checkbox"/> Environmental Impact Statement (EIS)
Measures to Protect Fish, Wildlife, and Plant Resources	
Sediment/Erosion Control	The project’s grading plans will include details on the location and type of best management practices (BMPs) necessary to reduce the potential for project-related erosion and scour; including temporary BMPs to be implemented during construction (per the statewide Construction General Permit [CPG]). Permanent BMPs shall be installed and maintained (per the County BMP Design Manual). The exact location and type of temporary BMPs to be installed during construction depend on site-specific conditions, construction schedule, and proposed activities, all of which are outlined in the construction Storm Water Pollution Prevention Plan (SWPPP) that will be prepared for the Project. Typical temporary BMPs used for similar Projects include energy dissipaters, silt fences, fiber rolls, gravel/sandbags, construction road stabilization, and stabilized construction entrances. As the Project-specific SWPPP is prepared, the location, type, and number of specific BMPs may be refined based on the final designs to most effectively achieve the objective of reducing turbidity and other pollutant loads in stormwater runoff. The provisions of the CGP ensure that site-specific conditions are taken into consideration when developing construction SWPPPs, that personnel developing and implementing construction SWPPPs are qualified, and that BMPs are adequately monitored and maintained.
Avoidance/Minimization Measures	<u>Prior to Construction:</u> <ul style="list-style-type: none"> ▪ Retain a qualified biologist and/or biological monitor to implement applicable biological resource protection measures and coordinate with construction personnel regarding compliance (MM-BIO-3). ▪ If vegetation removal or other construction activities must occur during the nesting season (generally February 1 through August 31), a qualified biologist shall conduct pre-construction nesting bird surveys within

Attribute	Answer
	<p>three days prior to work in or near suitable nesting habitat, including appropriate survey buffers for passerines and raptors (MM-BIO-1).</p> <ul style="list-style-type: none"> ▪ If active nests are identified, species-appropriate no-disturbance buffers shall be established and maintained until a qualified biologist determines the nest is no longer active (MM-BIO-1). ▪ Temporary wildlife exclusion fencing shall be installed, as appropriate, around aquatic features, drainage ditches, freshwater shrub wetland areas, and adjacent suitable dispersal habitat to reduce the potential for special-status amphibians and reptiles to enter active work areas (MM-BIO-2). ▪ A qualified biologist shall conduct pre-construction clearance surveys within suitable environmental conditions for special-status wildlife, including northwestern pond turtle where appropriate, prior to initiation of ground-disturbing activities (MM-BIO-2). ▪ The limits of jurisdictional aquatic resources, approved impact areas, and environmentally sensitive areas shall be clearly marked in the field with flagging or environmentally sensitive fencing before construction begins (MM-BIO-7). ▪ All construction personnel shall receive environmental awareness training regarding sensitive biological resources, applicable legal protections, avoidance procedures, and required reporting protocols (MM-BIO-4). <p><u>During Construction:</u></p> <ul style="list-style-type: none"> ▪ A qualified biological monitor shall be present during initial clearing, grading, excavation, and other ground-disturbing activities in or adjacent to suitable habitat for special-status wildlife or nesting birds and shall have authority to stop work if needed to protect biological resources (MM-BIO-3). ▪ Construction activities, personnel, vehicles, equipment, and materials shall remain within the approved project footprint and designated work areas. No unauthorized encroachment into aquatic resources, riparian areas, or other sensitive habitat shall occur (MM-BIO-5, MM-BIO-7). ▪ Erosion, sediment, and water quality control BMPs shall be implemented and maintained in accordance with the project SWPPP and applicable permits, including sediment control devices, soil stabilization, and proper materials management to prevent sediment or pollutants from entering waters of the state (MM-BIO-8). ▪ Equipment fueling, maintenance, and staging shall occur only in designated upland areas away from waters and sensitive resources. Spill prevention and housekeeping measures shall be implemented throughout construction (MM-BIO-5, MM-BIO-8).

Attribute	Answer
	<ul style="list-style-type: none"> ▪ Food waste and trash shall be properly contained and removed regularly to avoid attracting predators of wildlife species, and pets shall not be allowed on the project site (MM-BIO-5). ▪ If sensitive wildlife is encountered during construction, work in the immediate area shall be halted and the qualified biologist shall determine the appropriate avoidance action before work resumes (MM-BIO-3). ▪ Vegetation removal and disturbance shall be minimized to the extent feasible, and temporary disturbance near aquatic and riparian resources shall be limited to the minimum area necessary to complete the work (MM-BIO-5, MM-BIO-7). <p><u>Post-Construction:</u></p> <ul style="list-style-type: none"> ▪ All temporarily disturbed areas, including temporary access routes and laydown areas outside permanent facility footprints, shall be restored to pre-construction conditions or to a condition consistent with surrounding land use (MM-BIO-9). ▪ Restoration shall include removal of temporary facilities and materials, regrading as necessary, and stabilization of disturbed soils to prevent erosion and sediment transport (MM-BIO-9). ▪ Any required compensatory mitigation for permanent impacts to regulated aquatic resources shall be completed in accordance with agency permit conditions and applicable mitigation requirements (MM-BIO-6). ▪ Permanent stormwater features shall be operated and maintained to reduce runoff-related effects and to protect downstream aquatic resources following construction (MM-BIO-8).
<p>Mitigation/Compensation Measures</p>	<p>Prior to initiation of ground disturbing activities that would impact CDFW regulated resources, the project Applicant shall obtain all required authorizations from the appropriate regulatory agencies. For permanent impacts to approximately 0.006 acre (20 linear feet; OW-03) aquatic resources extending to the top of bank associated with construction of an access road crossing a drainage ditch (OW-03), required approvals shall include, as applicable:</p> <ul style="list-style-type: none"> ▪ Clean Water Act (CWA) Section 401 Central Coast RWQCB 401 WQC/WDR. ▪ California FGC Section 1602- Lake and Streambed Alteration Agreement. <p>Compensatory mitigation for permanent impacts to resources regulated under California FGC shall be implemented at a minimum 1:1 ratio, or at a higher ratio if required by the permitting agencies. Mitigation may be achieved through the purchase of approved mitigation bank credits or through an agency approved turnkey or permittee responsible</p>

Attribute	Answer
	mitigation Project. Final mitigation requirements shall be determined through agency consultation during the permitting process.
Prior Notifications, Orders, and Permits	
Prior Notifications and/or Agreements	
<p>Identify any notification previously submitted to, or Lake or Streambed Alteration Agreement previously issued by, CDFW for the Project described in this notification. Include a copy of the previously submitted notification and/or agreement in the Documents and Maps form.</p> <p>If applicable, list the following: Name of Applicant: Notification Number: Date:</p>	Not Applicable
Prior Orders, Notice, and/or Violations	
<p>If this notification is being submitted in response to a court or administrative order or notice, or a notice of violation issued by CDFW, complete this section for each order, notice, or violation. Include a copy of each order, notice, or violation in the Document and Maps form.</p> <p>If applicable, list the following: Person who Directed you to Submit: Agency that Directed you to Submit: Describe Circumstances:</p>	Not Applicable

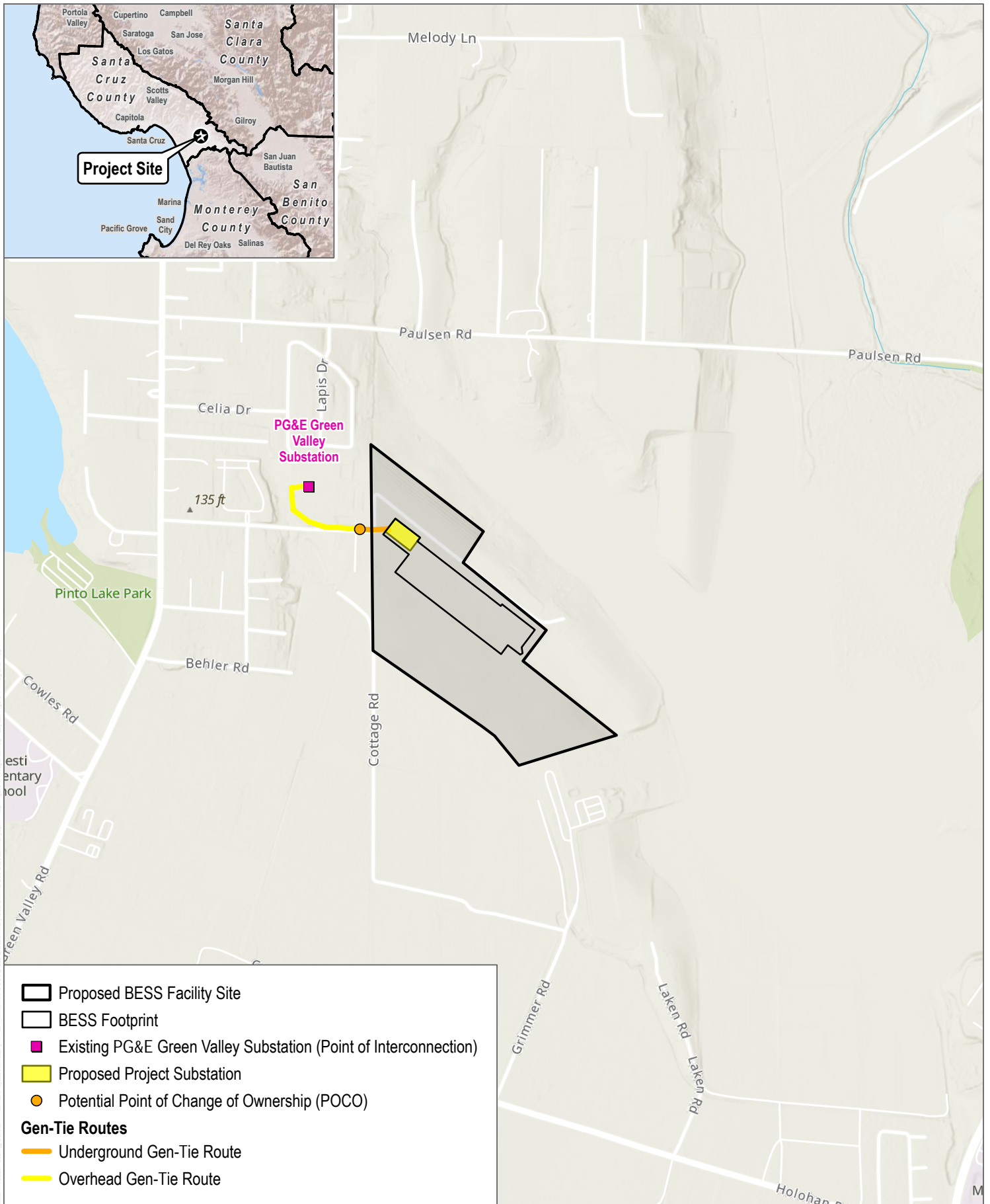
Attribute	Answer
Local, State, and/or Federal Permits	
<p>List any local, state, and/or federal permits required for the Project and mark whether applied or issued. Include a copy of each permit that has been issued in the Documents and Maps form. You are responsible for obtaining all necessary permits and authorizations from CDFW and other agencies before beginning any Project described in the notification.</p> <p>If applicable, list the following: Permit Name: Permit Type: If the permit was applied for or issued: Date issued/applied:</p>	<p>1) Permit Name: Regional Water Quality Control Board (RWQCB) Water Quality Certification (WQC) / Waste Discharge Requirement (WDR). Permit Type: Clean Water Act Section 401 WDR or WQC (WDR or WQC is dependent on coordination with the U.S. Army Corps of Engineers) Date Issued/Applied: Pending</p> <p>2) Permit Name: National Pollutant Discharge Elimination System (NPDES) Construction General Permit Permit Type: State Water Resources Control Board Construction Stormwater Permit for land disturbance of 1 acre or more (Order No. 2009-0009-DWQ; NPDES No. CAS000002), or most current version Date Issued/Applied: Pending</p> <p>3) Permit Name: Lake and Streambed Alteration Agreement Permit Type: California Fish and Game Code Section 1602 Date Issued/Applied: Pending The contractor will be responsible for securing applicable grading and encroachment permits prior to construction.</p>
Documents and Maps	
Maps/Photos	
Project Site Map	See Attachment B, Figure 1
Project Aerial View Map	See Attachment B, Figure 2
Project Site Photo(s)	See Attachment D, Appendix B
Studies and Mapping	
<p>Has a biological study been completed for the Project site? (select one) If "Yes", include a copy of the document in the Documents and Map section.</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>The Biological Resources section of the Project's CEC "Opt-In" application contains the results of the biological studies conducted for the Project. See also Attachment D, Aquatic Resources Delineation Report.</p>
<p>Has one or more technical studies (e.g., engineering, hydrologic, geologic, or geomorphological)</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>

Attribute	Answer
been completed for the Project for Project site? (select one) If "Yes", include a copy of the documents in the Documents and Map section.	The appendices of the Project's CEC "Opt-In" application contains the engineering, hydrologic, geologic, or geomorphological studies for the Project. Provided under separate cover as part of the CEC Opt-In application (see specifically Appendices 3.15A through 3.15C)
Have fish or wildlife resources or waters of the state been mapped or delineated on the Project site? (select one) If "Yes", include a copy of the document in the Documents and Map section.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No See Attachment D, Aquatic Resources Delineation Report
Additional Documents and Maps	
Upload Attachments, Documents, Maps, etc.	See Attachments B through F: Figures (B), Project Description AB 205 Section (C), Targeted Project Description (C.1), Aquatic Resources Delineation Report (D), Civil Plans (E), and Biological Resources AB 205 Section (F). Attachments C, E, and F are provided under separate cover as part of the CEC Opt-In application.
Fees Schedule	
Notification Fees	
Project Name	Seahawk Battery Energy Storage System Project
Project Cost Range	Regular Term: <input type="checkbox"/> < \$5,000 <input type="checkbox"/> \$5,000 to less than \$10,000 <input type="checkbox"/> \$10,000 to less than \$25,000 <input checked="" type="checkbox"/> \$25,000 to less than \$100,000 <input type="checkbox"/> \$100,000 to less than \$200,000 <input type="checkbox"/> \$200,000 to less than \$350,000 <input type="checkbox"/> \$350,000 or more Long Term: <input type="checkbox"/> Base Fee <input type="checkbox"/> < \$5,000 <input type="checkbox"/> \$5,000 to less than \$10,000 <input type="checkbox"/> \$10,000 to less than \$25,000 <input type="checkbox"/> \$25,000 to less than \$100,000 <input type="checkbox"/> \$100,000 to less than \$200,000 <input type="checkbox"/> \$200,000 to less than \$350,000 <input type="checkbox"/> \$350,000 to less than \$500,000 <input type="checkbox"/> \$500,000 or more
Actual Project Cost	TBD
Payment Information	
Payment Method	<input type="checkbox"/> Check/Money Order <input type="checkbox"/> Credit Card If check/money order, outline the following information: Name of the Bank/Institution: Check/Money Order #: If credit card, CDFW's online internet sales system will provide a document number after completing the transaction. Outline the document number:

Attribute	Answer
Acknowledgment and Signature	
Site Inspection	
First Contact this Person to Schedule Site Visit Outline method of contact, contact name and information	William Peregoy, Director
Electronic Signature	
Application to be electronically signed by the Applicant or Designated Representative.	

Attachment B

Figures



SOURCE: Esri 2025; World Topographic Map

FIGURE 1
Regional Map

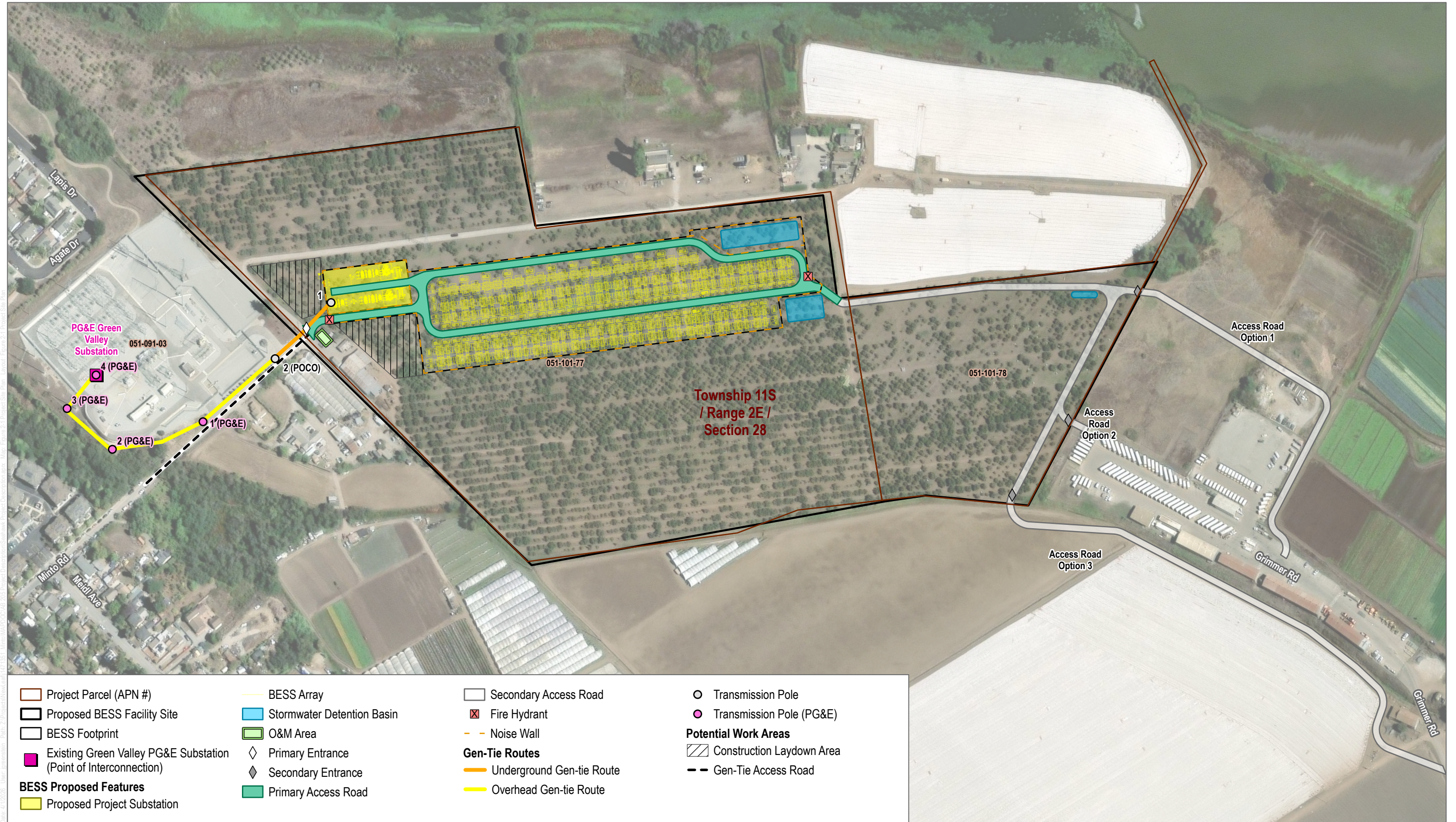
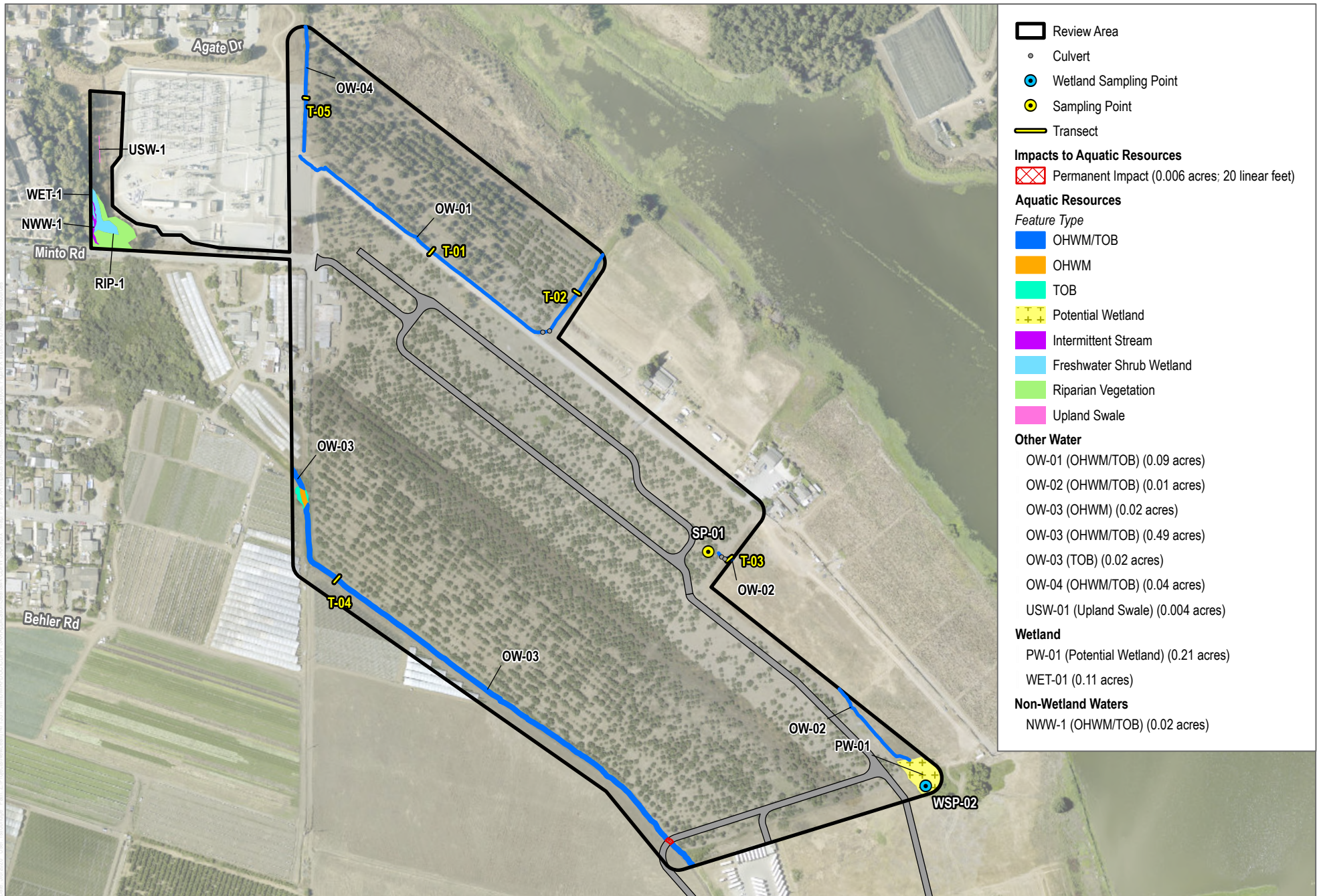


FIGURE 2
Project Site Plan



SOURCE: Maxar 2024; Open Street Map 2023

FIGURE 3

Impacts to Aquatic Resources

Seahawk Battery Energy Storage System Project

Attachment C

Project Description AB 205 Section (Overall; See
Section 2.0 of the CEC Opt-In Application)

Attachment C.1

Targeted Project Description for the Streambed
Alteration Application Package

Seahawk Battery Energy Storage System Project: Project Description for the Streambed Alteration Application Package

Sequoia Energy Storage 1, LLC (Applicant), a subsidiary of New Leaf Energy, Inc., proposes to construct, operate, and maintain a 200-megawatt (MW) Battery Energy Storage System (BESS) facility and associated interconnection facilities (collector substation and transmission line). The proposed Seahawk BESS Project (Project) is located on an approximately 16-acre site on a 47.4-acre property in unincorporated Santa Cruz County. The primary components of the Project include a BESS facility utilizing lithium-iron phosphate batteries, or similar technology, inverters and transformers, an on-site collector substation (Project substation), a generation interconnect (gen-tie) line, an operations and maintenance (O&M) building, a fire protection system, access improvements, stormwater management, a noise wall, Supervisory Control and Data Acquisition (SCADA) system, and temporary construction laydown areas. The Project would interconnect from the Project substation to the adjacent Pacific Gas and Electric Company (PG&E) Green Valley Substation via a 115-kilovolt (kV) gen-tie transmission line.

An Aquatic Resources Delineation was completed for the Project which identified two (2) wetland features, one (1) stream feature, one (1) swale, and four (4) other waters features within the Review Area as shown in Figure 3, Impacts to Aquatic Resources of Attachment B and described in Table 1 below. The Review Area encompasses all areas of Project site control. Additional details are available in the Project's Aquatic Resources Delineation Report (Attachment D to the Application for Streambed Alteration Agreement). As summarized in Table 2 below, permanent impacts will occur to one (1) other waters feature as a result of Project construction, which entails the construction of a secondary (i.e., emergency only) access road from the BESS area. Figure 3 within Attachment B depicts jurisdictional waters impacts by Project component.

Construction Activities and Equipment

Representative construction equipment anticipated to be used for the Project may include excavators, bulldozers, backhoes, front-end loaders, skid steers, dump trucks, water trucks, graders, rollers, concrete trucks, cranes, paving equipment, generators, and hand tools. Construction activities would generally include site preparation, grading, excavation, placement of fill or structural materials, installation of drainage and roadway improvements, compaction, paving, and site stabilization. Construction personnel would confine work activities, vehicle travel, equipment staging, and materials storage to designated work areas, access routes, and staging locations. Avoidance and minimization measures, including stormwater and erosion control best management practices (BMPs), would be implemented during construction to reduce the potential for sedimentation, pollutant discharge, and inadvertent disturbance outside the limits of work.

To provide secondary site access, the Project is considering three potential design options for crossing the ditch within the site: (1) construction of a bridge spanning the ditch, (2) construction of a road through the feature using fill and culvert or similar structural components, or (3) installation of an Arizona crossing. Final engineering and design plans for the crossing are still pending. Work in the vicinity of the ditch would likely include mobilization of equipment to the crossing location, localized grading, placement of structural or fill materials, and stabilization of disturbed areas. Depending on the selected option, construction could entail abutment installation and bank protection for a bridge, excavation and culvert installation with fill placement for a road crossing, or

construction of a hardened low-water crossing designed to allow stormwater to pass over the crossing surface during flow events.

Impact Quantities and Classification

Direct Impacts

Because the final ditch crossing design has not been selected, direct effects on the ditch are evaluated conservatively for the three potential scenarios currently under consideration. The Project will entail direct permanent impacts to 0.006 acre (20 linear feet), which represents the largest impact envelope among the crossing options currently being considered (see Table 2 below). The bridge option would be expected to have the least direct impact to the ditch bed and banks because the crossing would generally span the feature and avoid extensive placement of fill within the channel, although localized permanent impacts could still occur at abutments, foundations, bank protection areas, or tie-in improvements at the crossing approaches. The road-through-the-feature option would be expected to result in the greatest direct impact because it would require placement of fill and/or culvert infrastructure within the ditch, resulting in permanent alteration of the ditch bed, banks, and cross-sectional configuration across the width of the access crossing. The Arizona crossing option would likely result in an intermediate level of direct impact because it would involve grading and armoring or otherwise hardening the channel bottom and side slopes at the crossing location, thereby permanently modifying a portion of the ditch while generally maintaining surface flow across the feature during runoff events.

Indirect Effects

Potential short-term indirect effects associated with construction of any of the three ditch crossing options include fugitive dust generation, erosion and sediment transport, accidental release of fuels or other pollutants, introduction of invasive plant species on disturbed soils, noise and vibration from heavy equipment, and inadvertent encroachment outside the defined work area. These effects would be greatest during grading, excavation, material placement, and equipment movement near the ditch. The bridge option would generally have the lowest potential for indirect hydrologic effects because it would tend to preserve the existing ditch geometry and conveyance capacity to a greater extent than the other options, although short-term effects could still occur during installation of abutments or protective improvements. The road-through-the-feature option would have the highest potential for short-term indirect effects because excavation and fill placement within the ditch could increase sediment mobilization, temporarily alter localized drainage patterns during construction, and create a greater risk of turbidity or debris accumulation if a precipitation event occurs before stabilization is complete. The Arizona crossing option would also result in short-term indirect effects from grading and armoring of the channel, but these effects would generally be more localized than the road-through-the-feature option because the crossing is intended to accommodate overtopping flows rather than fully replacing the ditch with a filled roadway prism.

Construction activities for the proposed project are required to follow the requirements of the current National Pollutant Discharge Elimination System (NPDES) Construction General Permit. Adherence to the Construction General Permit requires preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) with construction best management practices (BMPs), such as installation perimeter controls (e.g., silt fence, fiber rolls), stabilization of stockpiles, and proper equipment fueling and staging, and would include erosion control and water quality protection measures for all construction activities at the project site. Construction personnel will be restricted to defined work areas, and environmentally sensitive area (ESA) fencing will be installed along the ditch where appropriate to prevent inadvertent equipment encroachment.

Long-term indirect effects would also differ by crossing type. Under the bridge scenario, long-term indirect effects on ditch function would likely be minimal because flows would generally continue beneath the structure with comparatively little interference to the existing bed and bank profile. Under the road-through-the-feature scenario, long-term indirect effects could include a greater change in localized hydrology, reduced infiltration within the modified segment, increased potential for debris accumulation at culvert inlets or outlets, and altered flow velocities. Under the Arizona crossing scenario, long-term indirect effects would likely be less substantial than the road-through-the-feature option but greater than the bridge option because the ditch would remain as a surface flow path, but could still alter local flow energy and sediment transport. For all three scenarios, operational effects could also include minor pollutant loading from vehicle use, establishment of invasive vegetation along disturbed shoulders, and intermittent disturbance to common wildlife from maintenance access; however, these effects are expected to remain localized and minor with routine inspection, debris removal, vegetation management, and maintenance of permanent drainage and stormwater control measures.

Overall, the bridge option is anticipated to have the least direct and indirect effect on the ditch, the road-through-the-feature option is anticipated to have the greatest effect, and the Arizona crossing option is anticipated to result in an intermediate level of effect. For purposes of this application, the Project is conservatively evaluated using the largest impact envelope, which would result in 0.006 acre (20 linear feet) of permanent direct impacts to the ditch. Although final design plans are still pending, the impact assessment presented herein provides a conservative basis for evaluating potential effects associated with the three crossing scenarios. Once the preferred crossing alternative is selected and final engineering is completed, the construction description and impact analysis can be refined to reflect the final design, while remaining within the evaluated impact envelope or being reduced from it.

Table 1. Summary of Aquatic Resource in the Review Area

Feature ID	Feature Name	Cowardin Code	Total Acreage	Total Linear Feet
Wetlands				
PW-01	Potential Wetland	PEM	0.21	—
WET-1	Freshwater Shrub Wetland	R4	0.11	—
Wetlands Total			0.32	—
Non-Wetland Waters				
NWW-1	Intermittent Stream	R4	0.02	181.31
NWWs Total			0.02	181.31
Other Waters				
OW-01	Other Water	N/A	0.09	1,274.02
OW-02	Other Water	N/A	0.01	373.38
OW-03	Other water	N/A	0.53	1,946.32
OW-04	Other Water	N/A	0.04	389.19
USW-1	Upland Swale	U	0.004	84.01
Other Waters Total			0.674	4,066.92
Grand Total			1.23	4,248.23

Resource: Cowardin 1979

Notes: NWW= Non-Wetland Water; OW= Other Water; PEM = palustrine, emergent; R4 = riverine, intermittent; U = Upland; N/A = not applicable.

Table 2. Impacts to CDFW Jurisdictional Aquatic Resources Within the Review Area

Feature ID	Temporary Impacts		Permanent Impacts	
	Acres	Linear Feet	Acres	Linear Feet
OW-03	0	0	0.006	20
Total	0	0	0.006	20

Notes: CDFW = California Department of Fish and Wildlife; OW = Other Water.

Attachment D

Aquatic Resources Delineation Report

Aquatic Resources Delineation Report

Seahawk Battery Energy Storage System Project

Santa Cruz County, California

APRIL 2026

Prepared for:

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
°F	degrees Fahrenheit
APC	antecedent precipitation condition
APT	Antecedent Precipitation Tool
ARDR	Aquatic Resources Delineation Report
BESS	Battery Energy Storage System
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CWA	Clean Water Act
DIT	drainage ditch
FAC	facultative
FACU	facultative upland
FACW	facultative wetland
FGC	Fish and Game Code
HUC	Hydrologic Unit Code
NHD	National Hydrography Dataset
NWI	National Wetlands Inventory
NWW	non-wetland water
OBL	obligate
OHWM	ordinary high-water mark
OW	other water
PDSI	Palmer Drought Severity Index
Porter-Cologne	Porter Cologne Water Quality Control Act
project	Seahawk Energy Storage Project
PW	potential wetland
RRS	Regulatory Request System
RWQCB	Regional Water Quality Control Board
SP	sampling point
TOB	top of bank
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USW	Upland swale
WET	wetland

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1 Executive Summary

This Aquatic Resources Delineation Report (ARDR) for the Seahawk Battery Energy Storage System (BESS) Project (project) was conducted in accordance with the U.S. Army Corps of Engineers (USACE) Wetlands Delineation Manual (USACE 1987); Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0 (USACE 2008a); A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (USACE 2008b); and the Recommended Minimum Standards for Aquatic Resource Delineations Report (USACE 2025). Dudek conducted an aquatic resources delineation on August 16, 2024, and February 25, 2026, to identify aquatic resources potentially subject to the jurisdiction of USACE under Clean Water Act (CWA) Section 404. This ARDR includes potential resources that may fall under the jurisdiction of the State of California under CWA Section 401, California Fish and Game Code (FGC) Section 1600 et. seq., and the Porter Cologne Water Quality Control Act (Porter-Cologne). This information is ancillary and provided in the conclusion of this ARDR.

This delineation found approximately 1.23 acre (4,248.23 linear feet) of aquatic resources that may be subject to review and jurisdictional determination by the USACE as water of the U.S.. Table 1 summarizes the findings of the aquatic resource delineation. These results are preliminary until verified by the federal and state regulatory agencies.

Table 1. Summary of Aquatic Resource in the Review Area

Feature ID	Feature Name	Cowardin Code	Total Acreage	Total Linear Feet
Wetlands				
PW-01	Potential Wetland	PEM	0.21	—
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Resource: Cowardin 1979

Notes: NWW= Non-Wetland Water; OW= Other Water; PEM = palustrine, emergent; R4 = riverine, intermittent; U = Upland; N/A = not applicable.

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2 Introduction

This ARDR presents the results of the jurisdictional aquatic resource delineation conducted by Dudek for the proposed project in Santa Cruz County, California. The review area expanded larger than the initial area planned for development and therefore the review area included in this ARDR captures additional adjacent resources and accounts for proposed design updates.

The delineation was conducted to identify and map existing aquatic resources potentially subject to the regulatory jurisdiction of USACE pursuant to CWA Section 404 (i.e., proposed waters of the U.S.); the Regional Water Quality Control Board (RWQCB) pursuant to CWA Section 401 and Porter-Cologne (i.e., proposed waters of the state); and stream and riparian habitats potentially subject to the jurisdiction by the California Department of Fish and Wildlife (CDFW) pursuant to Section 1602 of the California FGC (i.e., all collectively defined as jurisdictional aquatic resources). The results of these aquatic resources delineation are preliminary until verified by the USACE San Francisco District, CDFW, and RWQCB.

2.1 Disclaimer Statement

This ARDR presents Dudek’s best effort to quantify the extent of aquatic resources potentially regulated by USACE, RWQCB, and CDFW (i.e., regulatory agencies) within the identified review area using the current regulations, written policies, and guidance from these regulatory agencies. The potential jurisdictional boundaries described in this ARDR are subject to verification by the regulatory agencies. Only the regulatory agencies can make a final determination on whether the features present are subject to USACE, RWQCB, and/or CDFW regulation.

2.2 Contact Information

Contact information for the project applicant and agent are provided in Table 2. Access to the review area is not restricted, but if a site visit is requested, the project applicant or agent will accompany regulatory staff to the review area. New Leaf Energy is the project applicant and landowner.

Table 2. Contact Information

Project Applicant	New Leaf Energy	Agent	Dudek
Contact Name	William Peregoy	Contact Name	Katelin Pederson
Address	55 Technology Drive, Suite 102 Lowel, Massachusetts 01851	Address	725 Front Street, #400 Santa Cruz, Ca 95060
Phone	978.995.3054	Phone	760.479.4201
Email	wpergoy@newleafenergy.com	Email	kpederson@dudek.com

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3 Review Area Description and Landscape Setting

The approximately 57.6-acre review area for the project is within Santa Cruz County, California. It is located 0.70 miles northeast of the City of Watsonville and 2.36 miles north of California State Route 129, at 36.948815°N and -121.756772°W. The review area consists of four parcels: Assessor’s Parcel Numbers 05110177, 05110178, 05109103, and 05151135 (Figure 1, Project Location; Figure 2, Review Area). The review area occurs on Section 28, Township 11 South, Range 2 East and Section 21, Township 11 South, Range 2 East, along the eastern border of the Watsonville West U.S. Geological Survey 7.5-minute quadrangle.

Regional access to the review area is provided via California State Route 129 West, then to the traffic circle and the first exit onto Lake View Road. Continue on Lake View Road for 1.1 miles, then turn left to head east on College Road. In 2.2 miles turn right to head north on Green Valley Road. In 0.8 miles turn right to head east on Minto Road. Continue on Minto Road for 0.3 miles to arrive at the western border of the review area.

3.1 Soils and Topography

According to the U.S. Department of Agriculture’s (USDA) Natural Resources Conservation Service Web Soil Survey (USDA 2024), seven (7) soil types occur within the review area (Figure 3, Soils, and Table 3). Elevations range from approximately 79 to 127 feet above mean sea level. Only one (1) soil type within the review area, Watsonville loam-2% to 15% slopes, is classified as a hydric soil.

Table 3. Summary of Soil Units in the Review Area

Soil Map Unit Name	Landform	Drainage Class	Acres	Hydric ¹
Conejo loam, 0% to 2% slopes	Alluvial fans and stream terraces	Well drained	0.35	No
Diablo clay, 5% to 25% slopes, MLRA 15	Mountain slopes, hillslopes	Well drained	0.41	No
Elder sandy loam, 0% to 2% slopes, MLRA 14	Floodplains and alluvial fans	Well drained	0.37	No
Pinto loam, 0% to 2% slopes	Terraces	Moderately well drained	1.69	No
Pinto loam, 2% to 9% slopes	Alluvial fans and terraces	Moderately well drained	22.12	No
Pinto loam, 9% to 15% slopes	Alluvial fans and terraces	Moderately well drained	1.99	No
Watsonville loam, 2% to 15% slopes	Marine terraces	Somewhat poorly drained	30.68	Yes

Source: USDA 2024.

¹ Hydric soil as defined by the USDA as formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part, if hydric conditions are present within the soil unit.

3.2 Vegetation and Land Cover Types

A total of 33 species of native or naturalized plants, eleven native (33%) and 22 non-native (67%), were recorded in the review area. A list of plant species identified during the field delineation, including the assigned wetland indicator status for each species, is provided in Appendix A.

The review area is dominated by agricultural land that is a maintained orchard of apple trees (*Malus* sp.). The review area also contains associated structures pertaining to orchard cultivation. Photos of the review area are found in Appendix B.

The proposed gen-tie alignment portion of the review area supports a more diverse assemblage of vegetation communities compared to the orchard areas and includes riparian, wetland, and upland vegetation types associated with drainage features along the southwestern portion of the site. Vegetation within and adjacent to intermittent stream NWW-1, and freshwater shrub wetland WET-1 is dominated by hydrophytic and riparian species, including Arroyo willow (*Salix lasiolepis*; FACW), California blackberry (*Rubus ursinus*; FAC), dotted smartweed (*Persicaria punctata*; OBL), tall flatsedge (*Cyperus eragrostis*; FACW), and spreading rush (*Juncus patens*; FACW). These species form a patchy shrub canopy and herbaceous understory typical of seasonally inundated freshwater shrub wetlands and riparian corridors.

Adjacent upland areas within the gen-tie alignment transition from hydrophytic vegetation (i.e., riparian zone) to upland scrub and ruderal communities, characterized by species such as coyote brush (*Baccharis pilularis*), poison oak (*Toxicodendron diversilobum*), slender oat (*Avena barbata*), and other facultative-upland or upland species. These transitional zones were used to define the lateral extent of wetlands and stream features during delineation. The riparian area observed in the gen-tie portion of the review area comprises a total of 0.22 acre (215.10 linear feet). Photos of the proposed gen-tie alignment portion of the review area are found in Appendix B.

3.3 Hydrology and Watershed

The review area occurs within the southern portion of the Salsipuedes Creek Subwatershed (Hydrologic Unit Code [HUC] 12-180600020803) of the Pajaro River Watershed (HUC 10-1806000208) (Figure 4, Hydrologic Setting) (USGS 2024a). It is surrounded on the northwest by the Santa Cruz Mountains, and on the north to east by the Southern Coast Mountain Range and Madonna Mountain. The northern portion of the Pajaro River Watershed drains from the Southern Coast Mountain Range then flows to the Salsipuedes Creek Subwatershed farther south. The Salsipuedes Creek Subwatershed flows into Pinto Lake and College Lake, both within one (1) mile of the review area.

Based on a review of the National Hydrology Dataset (NHD) (USGS 2026b) and the National Wetlands Inventory (NWI) (USFWS 2026), a riverine feature was mapped along the western and southern border of the review area (Figure 4). The Federal Emergency Management Agency's online National Flood Hazard Layer Viewer was used to evaluate flood risk. The review area was not found to be within a 100-year flood zone (FEMA 2026).

3.4 Review Area Alterations, Current, and Past Land Use

Based on review of aerial imagery (Google Earth 2026), most of the review area has been continuously used for the cultivation of orchards since 1993 and is currently planted in orchard crops, specifically apple trees (see Appendix

B). The portion of the review area associated with the proposed gen-tie alignment includes a riparian area containing an intermittent stream feature that is located along and near the southwestern corner of the review area. In addition, the gen-tie portion of the review area contains and has historically contained, existing utility infrastructure, including power lines and poles, which is consistent with and associated with the adjacent substation.

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4 Precipitation Data and Analysis

4.1 Regional

The USACE-developed Antecedent Precipitation Tool (APT) was used to assess whether the delineation date occurred in a drier, average, or wetter than normal period (USACE 2026). USACE developed the APT to determine what constitutes a “typical year.” The information generated from the APT can help to determine whether normal hydrologic and/or climatic conditions were present during the site visit and to assist with completing the Wetland Determination Data Form.

The APT provides three (3) climatological parameters: Palmer Drought Severity Index (PDSI), season, and antecedent precipitation condition (APC). The PDSI is a standardized index calculated monthly with PDSI value outputs ranging from -4 (extreme drought) to +4 (very wet) (NOAA 2026) to assess drought conditions (i.e., PDSI Class). The APT determines wet versus dry season based on related procedures provided in the applicable regional supplement for the review area (in this case, the Arid West Supplement). If the APC score is less than 10, conditions are classified as drier than normal; normal conditions are present with an APC score of 10 to 14; conditions are wetter than normal when an APC score is greater than 14 (USACE 2026).

Table 4 summarizes the key data extrapolated from the APT output: estimated drought conditions (PDSI Class), wet or dry season determination, APC score, and APC. Based on the APT output provided in Appendix C and summarized in Table 4, the precipitation and climatic conditions for the review area were normal during the time of the delineation. The APT is less likely to consider extreme precipitation events that are highly localized when incorporating data from weather stations located outside of the drainage area (refer to Section 4.2 for local precipitation data).

Table 4. Antecedent Precipitation Tool Data for the Review Area

Main Field Survey Date	PDSI Class	Season	APC Score	APC
8/16/24	Mild wetness	Dry	11	Normal
2/25/26	Incipient wetness	Wet	11	Normal
2/27/26	Incipient wetness	Wet	11	Normal

Notes: PDSI = Palmer Drought Severity Index; APC = antecedent precipitation condition

4.2 Local

The review area is in a warm, temperate region where annual average temperatures range from 30°F to 99°F (Beck et al. 2023; USDA 2022). Data taken from the Watsonville Waterworks weather station, 1.25 miles northeast of the review area, shows that the area receives an average of 21.54 inches of precipitation annually, with the highest average rainfall recorded in February (3.67 inches) and December (5.35 inches) (USDA 2022).

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5 Investigation of Methods

The jurisdictional delineation was conducted by Dudek biologists Natalie Yorba on August 16, 2024, and Gwyn Fritz and Kelsey Higney on February 25 and 27, 2026 (Table 5). Prior to conducting the jurisdictional delineation, NWI data (USFWS 2026) and NHD data (USGS 2026b) were reviewed to determine if the review area contained any mapped features. Site-specific topographical data was reviewed in conjunction with aerials, both current and historical, to determine the potential presence of wetlands and non-wetland waters. Jurisdictional boundaries were mapped in the field using ©ESRI Field Maps on a mobile device. Remote sensing was not used for delineation.

Table 5. Schedule of the Aquatic Resources Delineation

Date	Hours	Personnel	Conditions (temp, wind, cloud cover)
08/16/2024	0815-1700	Natalie Yorba	65°F-97.3°F; mean wind speed 2 mph; 10%-90% cloud cover
02/25/2026	0845-1400	Gwyn Fritz, Kelsey Higney	59°F-68°F; mean wind speed 2 mph; 30%-100% cloud cover
02/27/2026	0830-1100	Gwyn Fritz, Kelsey Higney	63°F-73°F; mean wind speed 2.5 mph; 20%-50% cloud cover

Note: mph=miles per hour; °F= degrees Fahrenheit; %= percent.

5.1 U.S. Army Corps of Engineers

The wetland delineation was conducted in accordance with the Corps of Engineers Wetlands Delineation Manual (USACE 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0 (USACE 2008a). A Field Guide to the Identification of the OHWM in the Arid West Region of the Western United States: A Delineation Manual (USACE 2008b) was used to determine the limits of aquatic resources. The widths of each aquatic resource were determined in the field according to the OHWM manual. In addition, Dudek completed the Regional Streamflow Duration Assessment Methods (SDAM) for the Arid West, Western Mountains, and Great Plains (EPA 2026) to assess streamflow duration class (e.g., ephemeral, intermittent, etc.) to aid in stream classification. Dudek also used the Recommended Minimum Standard for Aquatic Resource Delineation Reports (USACE 2025) to aid in providing the accurate information and context of resources for this ARDR.

Wetland Determination Forms were taken at certain points within aquatic resources or vegetation communities to assess hydrology, vegetation, and soils to determine whether USACE three-parameter wetlands were present. USACE OHWM Forms were completed at representative cross-sections of the aquatic resources to capture their characteristics and width. Aquatic resources were delineated on topographical maps in conjunction with Field Maps on a mobile device. All data forms can be found in Appendix D.

5.2 Waters of the State

5.2.1 Regional Water Quality Control Board

Waters of the state regulated by the RWQCB under CWA Section 401 and or Porter–Cologne were mapped in accordance with the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (SWRCB 2021). As described in these procedures, waters of the state are mapped based on the procedures in Corps of Engineers Wetlands Delineation Manual (USACE 1987) and its Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (USACE 2008a). Aquatic resources are mapped at the OHWM based on the procedures defined in A Field Guide to Ordinary High-Water Mark (OHWM) in the Arid West Region of the Western United States (USACE 2008b). Also, waters of the state take a broader definition for wetlands that uses a “one-parameter” definition if a wetland feature has, under normal circumstances, continuous/recurrent saturation (hydrology), hydric soils (substrate), and either hydrophytic vegetation or, if vegetation is absent, indicators of both hydrology and soils. NWWs of the state are often characterized by a defined bed and bank, and include features such ephemeral systems, etc. NWWs of the state are delineation based on regional guidance (SWRCB 2026) and often include to the limits of the top of bank (TOB) if signs of flow or “one parameter”.

5.2.2 California Department of Fish and Wildlife

In Title 14 of the California Code of Regulations (CCR), Section 1.56, CDFW’s definition of “lake” includes “natural lakes or [hu]man-made reservoirs.” Diversion, obstruction, or change to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or other aquatic wildlife requires authorization from CDFW by entering into an agreement pursuant to California FGC Section 1602. In Title 14 of the CCR, Section 1.72, CDFW defines a “stream” as “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation.”

The delineation defined areas under the jurisdiction of CDFW pursuant to California FGC Sections 1600–1603. CDFW asserts jurisdiction over rivers, streams, and lakes to the extent of the top of bank. The term “bank” is interpreted to encompass the physical bank of the stream that rises vertically above and horizontally away from it (Vyverberg 2010). The TOB was mapped as the physical break in slope between the aquatic resource and surrounding upland. Aquatic resources under the jurisdiction of CDFW were delineated using the Cowardin method of waters classification, which defines waters boundaries by a single parameter (i.e., hydric soils, hydrophytic vegetation, or hydrology) (Cowardin et al. 1979).

Riparian status was determined by the USACE National Wetland Plant List indicator of the dominant species in a community being classified as obligate (OBL), facultative wetland (FACW), facultative upland (FACU), or facultative (FAC) (USACE 2023). In general, the change in species cover and/or composition from the surrounding upland to predominantly hydrophytic vegetation was used to determine CDFW regulated riparian areas associated with the aquatic features.

6 Aquatic Resources

6.1 Aquatic Resource Delineation Results

During the field delineation, areas potentially supporting aquatic resources identified during the desktop analysis were investigated for the presence of wetland or OHWM indicators. The types of aquatic resources found, a summary of sampling points (SP) collected in the field (see Table 6, Sample Point Summary), transect data (see Table 7, Ordinary High Water Mark Transect Data Summary), and a summary of all aquatic resources (Table 8, Summary of Aquatic Resources in the Review Area) are included below in Section 6.1.1 Aquatic Resources Data Summary. All datasheets can be found in Appendix D, with Figure 5A-5B, Preliminary Aquatic Resources Delineation, showing the location of the resources and where data was collected.

6.1.1 Aquatic Resources Data Summary

6.1.1.1 Waters of the United States (USACE)

Results from seven (7) sampling points and seven transects document the wetlands, non-wetland waters, and other waters within the review area based on observable field indicators (Figure 5, Table 6, Table 7, and Table 8). The data collected at each data point and transect are provided in Appendix D. Representative photos can be found in Appendix B. Findings regarding federal jurisdiction are preliminary until verified by the USACE San Francisco District.

Table 6. Sample Point Summary

Sample Point	Wetland Determination Field Indicators			Location (decimal degrees)		Determination
	Vegetation	Soils	Hydrology	Latitude	Longitude	
SP-01	No	Yes	Yes	36.948759	-121.754920	UPL
WSP-02	Yes	Yes	Yes	36.946672	-121.752213	Wetland
SP-1	Yes	Yes	Yes	36.95156	-121.76145	Wetland
SP-2	Yes	Yes	Yes	36.95159	-121.76140	Wetland
SP-3	No	No	No	36.95150	-121.76133	UPL
SP-4	Yes	No	No	36.95129	-121.76140	UPL
SP-5	Yes	No	No	36.95134	-121.76145	UPL

Notes: SP = sample point; WSP = wetland sampling point; UPL= upland.

Table 7. Ordinary High Water Mark Transect Data Summary

Transect	Ordinary High-Water Mark Field Indicators	Location (Latitude/Longitude)	Determination
T-01	Drainage ditch. Natural line impressed on the bank; changes in the character of soil; presence of litter and debris; vegetation matted down, bent, or absent; bed and banks; and change in plant community	36.951242, -121.757877	OW

Table 7. Ordinary High Water Mark Transect Data Summary

Transect	Ordinary High-Water Mark Field Indicators	Location (Latitude/Longitude)	Determination
	and/or cover. Feature was not present in the National Hydrography Dataset (NHD).		
T-02	Drainage ditch. Natural line impressed on the bank; changes in the character of soil; vegetation matted down, bent, or absent; bed and banks; and change in plant community and/or cover. Features were not present in the NHD.	36.951020, -121.756353	OW
T-03	Drainage ditch. Changes in the character of soil; destruction of terrestrial vegetation; vegetation matted down, bent, or absent; and bed and banks. Features were not present in the NHD.	36.948227, -121.754173	OW
T-04	Drainage ditch. Natural line impressed on the bank, changes in the character of soil bed and banks, changes in vegetation and cover, and standing water. Features were present in the NHD.	36.948521, -121.758789	OW
T-05	Drainage ditch. Natural line impressed on the bank; changes in the character of soil; vegetation matted down, bent, or absent; bed and banks; and change in plant community and/or cover. Features were not present in the NHD.	36.952586, -121.759217	OW
T-1	Intermittent stream. Break in slope; shelving; channel bar; instream bedforms and other bedload transport evidence; changes in particle-sized distribution; change in vegetation type; change in density of vegetation; vegetation matted down and/or bent; sediment deposited on vegetation or structures; leaf litter disturbed or washed away; and water staining.	36.951320, -121.76146	NWW
T-2	Intermittent stream. Break in slope; channel bar; bedforms; change in vegetation type; and change in density of vegetation.	36.951530, -121.76147	NWW

Notes: T = Transect; OW = Other Waters; NWW = Non-Wetland Waters

Table 8. Preliminary USACE Aquatic Resource Summary for the Review Area

Feature ID	Feature Name	Cowardin Code	Total Acreage	Total Linear Feet
Wetlands				
PW-01	Potential Wetland	PEM	0.21	—
WET-1	Freshwater Shrub Wetland	R4	0.11	—
Wetland Waters Total			0.32	—
Non-Wetland Waters				
NWW-1	Intermittent Stream	R4	0.02	181.31
NWWs Total			0.02	181.31
Other Waters				
OW-01	Other Water	N/A	0.09	1,274.02
OW-02	Other Water	N/A	0.01	373.38
OW-03	Other water	N/A	0.53	1,946.32
OW-04	Other Water	N/A	0.04	389.19
USW-1	Upland Swale	U	0.004	84.01
Other Waters Total			0.674	4,066.92
Grand Total			1.014	4,248.23

Notes: PEM = palustrine, emergent; R4 = riverine, intermittent; U = Upland; N/A = not applicable

6.1.1.1.1 Wetlands

The aquatic resources delineation identified one (1) potential wetland (PW-01) comprising of 0.21 acre and one (1) freshwater shrub wetland (WET-1) comprising 0.11 acre were recorded within the review area. PW-01 is located within the eastern corner of the review area and was not previously recorded in NWI or NHD databases. In general, these wetlands occur in landscape depressions and are inundated only seasonally. WET-1 is in the southwestern area of the gen-tie portion of the review area and is adjacent to an intermittent stream channel (NWW-1).

Potential Wetland 01 (PW-01)

PW-01 is within a depressional area where it appears upland runoff settles. A representative sampling point (WSP-02 in Appendix D) was recorded at PW-01 to delineate the extent of the resource (Appendix D). PW-01 was delineated by the mild change in slope and change in vegetation type and cover. Dominant vegetation at WSP-02 included watercress (*Nasturtium officinale*; OBL), Arroyo willow (*Salix lasiolepis*; FACW), and Italian rye grass (*Festuca perennis*; UPL). Surface water, a wetland hydrology primary indicator, was observed at WSP-02 with the SP also located within Watsonville loam, 2% to 15% slopes, which is classified as a hydric soil by USDA (Appendix D, Data Forms; Appendix B, Review Area Photos).

Freshwater Shrub Wetland (WET-1)

Freshwater shrub wetland (WET-1) is located within the southwestern portion of the gen-tie review area, where it occurs adjacent to and hydrologically associated with intermittent stream NWW-1. The wetland occupies a low-lying, concave depressional area that receives surface and subsurface runoff from surrounding uplands and appears to function as a seasonally inundated transitional zone between uplands and the adjacent stream channel. WET-1 is characterized by a freshwater shrub wetland community dominated by hydrophytic woody and herbaceous species.

Dominant vegetation documented at sampling points SP-1 and SP-2, which are representative of interior wetland conditions, included arroyo willow forming a patchy to moderately dense shrub/tree canopy cover, California blackberry (*Rubus ursinus*; FAC) in the shrub stratum, Dotted smartweed (*Persicaria punctata*; OBL) and tall flatsedge (*Cyperus eragrostis*; FACW) in the herbaceous layer, and spreading rush (*Juncus patens*; FAC) occurring intermittently. Hydrophytic vegetation criteria were met at SP-1 and SP-2, with all dominant species classified as OBL, FACW, or FAC. Hydric soils were identified at SP-1 and SP-2 and are characterized by low-chroma matrices, redox features, and thin surface muck layers, indicating prolonged seasonal saturation. Wetland hydrology indicators, including surface saturation and a shallow water table, were also present at these sampling points (Appendix D). In contrast, sampling points SP-3, SP-4, and SP-5 did not meet wetland criteria and represent transitional or upland areas used to define the lateral extent of the wetland boundary (Appendix D). Based on the presence of hydrophytic vegetation, hydric soils, and wetland hydrology, WET-1 qualifies as a three-parameter freshwater shrub wetland under the USACE Wetlands Delineation Manual and the Arid West Regional Supplement and is hydrologically connected to downstream waters via non wetland water (NWW)-1.

6.1.1.1.2 Non-Wetland Waters

Intermittent Stream (NWW-1)

The aquatic resources delineation identified one (1) intermittent stream (NWW-1) located within the southwestern portion of the gen-tie review area and hydrologically connected to the freshwater shrub wetland WET-1 (Figure 5). NWW-1 comprises a total of 0.02 acre (181.31 linear feet), and is a natural drainage feature that conveys seasonal surface flow through the site before exiting the review area via a culvert beneath Minto Road (Appendix B). The channel ultimately connects downstream to Salsipuedes Creek, the Pajaro River, and the Pacific Ocean through a network of tributaries.

NWW-1 consists of a multi-threaded, braided channel system with a clearly defined primary channel and several secondary channels that occur within a shrub scrub wetland matrix. Field observations documented a mean bankfull channel width of approximately 3.5 meters; with bed materials consisting of sand, gravel, and localized boulders. Evidence of riffle-pool sequences, channel bars, and bedforms was observed, although these features were moderately developed (Appendix D).

An OHWM was identified along NWW-1 based on multiple geomorphic, sedimentary, and vegetation indicators, including breaks in slope, shelving, changes in soil and particle size distribution, sediment deposition, water staining, and pronounced transitions in vegetation type and density. Vegetation below the OHWM is dominated by OBL and FACW species such as watercress (*Nasturtium officinale*; OBL), dotted smartweed (*Persicaria punctata*; FACW), spreading rush (*Juncus patens*; FACW), and Arroyo willow (*Salix lasiolepis*; FACW); while areas above the OHWM transition abruptly to FACU and upland scrub species, including coyote brush (*Baccharis pilularis*; FACU) and poison oak (*Toxicodendron diversilobum*; FACU).

Results of the Arid West Streamflow Duration Assessment Method (SDAM) indicate that NWW-1 supports continuous surface flow during the wet season, with 100 percent of the assessed reach exhibiting surface flow at the time of sampling (Appendix D). Hydrophytic vegetation was abundant throughout the channel and banks, rooted upland plants were largely absent from the streambed, and algal cover was present, particularly within secondary channels. Based on SDAM indicators and field observations, NWW-1 was classified as an intermittent stream.

6.1.1.1.3 Other Waters

The aquatic resources delineation identified four (4) other waters (OW) and one (1) upland swale (USW-1) (Figure 5). OW-01, OW-02, OW-03, and OW-04 are (hu)man-made earthen features intended for conveying runoff from stormwater or irrigation for the surrounding agricultural operations. The highest elevation within the review area appears to be centrally located, with surface runoff flowing downslope in all directions. Evidence of an OHWM was observed within the other waters, including but not limited to natural line impressed on the bank; changes in the character of soil; presence of litter and debris; destruction of terrestrial vegetation; vegetation matted down, bent, or absent; bed and banks; standing water; and change in plant community and/or cover (Table 7; T-01, T-02, T-03, T-04, and T-05 in Appendix D).

Other Waters 01 (OW-01)

OW-01 is within the northern section of the review area and comprises 0.09 acre (1,274.02 linear feet). It appears this feature obtains water from the adjacent uplands from the south and west in the form of upland run off. This feature continues west until it reaches a culvert and is diverted northeast on downhill gradient. Plant species identified within OW-01 include annual willowherb (*Epilobium brachycarpum*; FAC), slender oat (*Avena barbata*; UPL), bermudagrass (*Cynodon dactylon*; FACU), bull thistle (*Cirsium vulgare*; FACU), Himalayan blackberry (*Rubus armeniacus*; FAC), black mustard (*Brassica nigra*; UPL), and poison hemlock (*Conium maculatum*; FACW) (T-01 and T-02 in Appendix D).

Other Waters 02 (OW-02)

OW-02 is within the eastern section of the review area and comprises 0.01 acre (373.38 linear feet). It appears this feature obtains water from the adjacent uplands from the northwest in the form of upland runoff from agricultural irrigation and precipitation events. The feature flows northeast to southeast out of the review area then back into the review area towards the potential wetland. Plant species identified within OW-02 include tall bristly oxtongue (*Helminthotheca echioides*; FAC), tall flatsedge (*Cyperus eragrostis*; FACW), bermudagrass (FACU), Italian rye grass (UPL), and burclover (*Medicago polymorpha*; FACU) (T-03 in Appendix D).

Other Waters 03 (OW-03)

OW-03 is located on the southern boundary of the review area and comprises 0.53 acre (1,946.32 linear feet). It appears this feature obtains water from upland runoff from the northwest. This feature continues along the western border of the review area where riparian vegetation was observed briefly and was denoted as top of bank (Figure 5). Plants within the top bank included Himalayan blackberry (*Rubus armeniacus*; FAC), Arroyo willow (*Salix lasiolepis*; FACW), and floating primrose willow (*Ludwigia peploides*; OBL). Additional plant species identified within OW-03 include slender oat (*Avena barbata*; UPL), tall flatsedge (*Cyperus eragrostis*; FACW), rescuegrass (*Bromus catharticus*; UPL), cultivated radish (*Raphanus sativus*; UPL), and calamus (*Acorus calamus*; OBL) (T-04 in Appendix D). During the field delineation, OW-03 had standing water. Additionally, OW-3 was mapped in NHD and NWI and appears to be connected to the Pacific Ocean through tributaries such as the Slasipuedes Creek and Pajaro River.

Other Waters 04 (OW-04)

OW-04 is within the northern section of the review area and comprised 0.04 acre (389.19 linear feet). It appears this feature obtains water from the adjacent uplands from the south in the form of upland run off. This feature continues to flow north on a downhill gradient. Plant species identified within OW-04 include Himalayan blackberry

(*Rubus armeniacus*; FAC), slender oat (*Avena barbata*; UPL), Bermuda grass (*Cynodon dactylon*; FACU), and coyote brush (*Baccharis pilularis*; UPL) (T-05 in Appendix D).

Upland Swale 1 (USW-1)

In addition to the other waters described above, the aquatic resources delineation identified one (1) upland swale (USW-1) within the review area (Figure 5), which comprises 0.004 acre (84.01 linear feet) (Appendix B). USW-1 is a shallow, linear landscape feature that conveys diffuse surface runoff from adjacent uplands during precipitation events. Unlike the other waters mapped within the review area, USW-1 does not exhibit a defined bed and bank or an OHWM. Field observations indicated that the swale functions as an upland drainage feature, with flow occurring only during or immediately following storm events. Vegetation within USW-1 is dominated by upland and facultative upland species, and soils lacked hydric indicators such as low-chroma matrices, redox features, or surface muck. No indicators of sustained or seasonal saturation were observed.

6.1.1.2 Waters of the State (RWQCB & CDFW)

The Dudek biologists delineated aquatic resources potentially subject to RWQCB and CDFW jurisdiction pursuant to the CWA Section 401, Porter-Cologne, and California FGC Section 1600, respectfully. An additional 0.22 acres of riparian vegetation was delineated that may be subject to CDFW jurisdiction pursuant to California FGC Section 1600. Aquatic resources potentially subject to RWQCB and CDFW jurisdiction are summarized in Table 10 and Table 11 and discussed in detail per feature above. Findings regarding state jurisdiction are preliminary until verified by the appropriate agencies.

Riparian Vegetation (RIP-1)

Riparian vegetation was identified and delineated within the southwestern portion of the gen-tie alignment review area comprising a total of 0.22 acre; where it is associated with the intermittent stream feature (NWW-1) and adjacent freshwater shrub wetland (WET-1) (Figure 5). The riparian area was mapped based on observable shifts in vegetation composition, structure, and density relative to surrounding upland plant communities, consistent with CDFW guidance and FGC Section 1600 et seq.

The riparian vegetation community occurs primarily along the banks and adjacent flood-prone areas of NWW-1 and within portions of the adjacent drainage corridor where hydrophytic and facultative species dominate. This area supports a distinct assemblage of woody and herbaceous vegetation adapted to periodic inundation and elevated soil moisture conditions. Dominant riparian species include Arroyo willow (*Salix lasiolepis*; FACW), California blackberry (*Rubus ursinus*; FAC), and Himalayan blackberry (*Rubus armeniacus*; FAC), with an understory of hydrophytic and facultative species such as dotted smartweed (*Persicaria punctata*; OBL), tall flatsedge (*Cyperus eragrostis*; FACW), spreading rush (*Juncus patens*; FAC), and watercress (*Nasturtium officinale*; OBL). These species form a patchy to moderately dense riparian corridor that contrasts with adjacent upland scrub vegetation dominated by facultative-upland and upland species.

The extent of riparian vegetation was delineated in the field using changes in dominant species composition, canopy cover, and groundcover density, as well as observed transitions from hydrophytic and facultative species to upland vegetation types. Areas dominated by upland species such as coyote brush (*Baccharis pilularis*), poison oak (*Toxicodendron diversilobum*), slender oat (*Avena barbata*), and other FACU or upland indicators were excluded from the riparian boundary. The riparian boundary generally coincides with, but extends beyond, the ordinary

high-water mark of NWW-1 in select locations where riparian vegetation persists on adjacent banks and floodplain surfaces.

Riparian vegetation was mapped as a separate resource and is not combined with wetland, NWW, or OW acreages. While riparian areas do not constitute waters of the U.S. under the CWA, it may be considered a sensitive biological and or aquatic resource and may be subject to CDFW jurisdiction pursuant to FGC Section 1602 when associated with streams, rivers, or lakes.

Table 10. Preliminary RWQCB Aquatic Resource Summary for the Review Area

Feature ID	Feature Type	RWQCB Jurisdiction (OHWM + TOB)	
		Acres	Linear Feet
Wetlands			
PW-01	Potential Wetland	0.21	—
WET-1	Freshwater Shrub Wetland	0.11	—
Wetlands Total		0.32	—
Non-Wetland Waters			
NWW-1	NWWs	0.02	181.31
NWWs Total		0.02	181.31
Other Waters			
OW-01	Other Water	0.09	1,274.02
OW-02	Other Water	0.01	373.38
OW-03	Other Water	0.53	1,946.32
OW-04	Other Water	0.04	389.19
USW-1	Upland Swale	0.004	84.01
Other Waters Total		0.674	4,066.92
Grand Total		0.994	4,248.23

Notes: RWQCB = Regional Water Quality Control Board; NWW= non-wetland water; TOB= top of bank; OHWM= ordinary high water mark.

Table 11. Preliminary CDFW Aquatic Resource Summary for the Review Area

Feature ID	Feature Type	CDFW Jurisdiction (OHWM + TOB)	
		Acres	Linear Feet
Wetlands			
PW-01	Potential Wetland	0.21	—
WET-1	Freshwater Shrub Wetland	0.11	—
Wetlands Total		0.32	—
Non-Wetland Waters			
NWW-1	NWWs	0.02	181.31
NWWs Total		0.02	181.32
Other Waters			
OW-01	Other Water	0.09	1,274.02
OW-02	Other Water	0.01	373.38

Table 11. Preliminary CDFW Aquatic Resource Summary for the Review Area

Feature ID	Feature Type	CDFW Jurisdiction (OHWM + TOB)	
		Acres	Linear Feet
OW-03	Other Water	0.53	1,946.32
OW-04	Other Water	0.04	389.19
USW-1	Upland Swale	0.004	84.01
Other Waters Total		0.674	4,066.92
Riparian Vegetation			
RIP-1	Riparian Vegetation	0.22	—
Riparian Total		0.22	—
Grand Total		1.234	4,248.24

Notes: CDFW = California Department of Fish and Wildlife; NWW= non-wetland water; TOB= top of bank; OHWM= ordinary high water mark; RIP= riparian.

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7 Conclusion

Based on desktop review, field investigations conducted in August 2024 and February 2026, and supporting data forms, the jurisdictional delineation identified approximately 1.014 acre (4,248.23 linear feet) of aquatic resources, encompassing wetlands, non-wetland waters, and other waters, including an upland swale feature within the approximately 57.6-acre review area that may be subject to the jurisdiction of the USACE under CEW Section 404. An Approved Jurisdictional Determination (AJD) has been prepared for the USACE San Francisco District and submitted through the Regulatory Request System (RRS) portal for review and verification in April 2026.

The delineation also identified approximately 0.994 (4,248.23 linear feet) of aquatic resources that may be subject to jurisdiction of the RWQCB under CWA 401 and or Porter-Cologne. Lastly, the delineation identified aquatic and vegetative resource (i.e., riparian habitat) comprising approximately 1.234 acre (4,248.24 linear feet) that may be subject to jurisdiction under Californian FGC 1600. Consultations and or verifications during the permitting processes for CDFW and RWQCB are to be determined for the review area.

All delineated aquatic resources are considered preliminary and are subject to verification and final jurisdictional determination by the USACE San Francisco District, RWQCB, and CDFW.

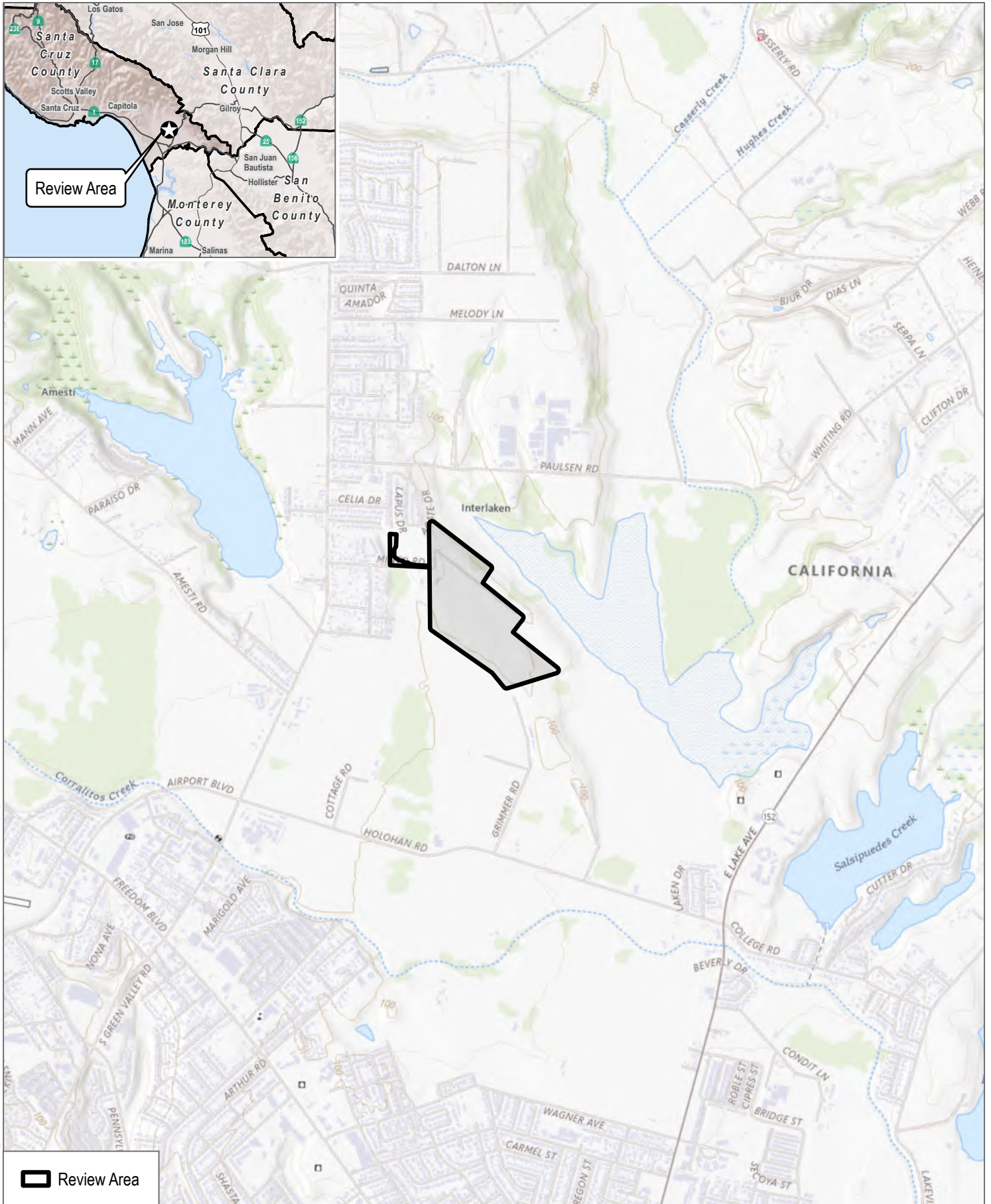
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SOURCE: USGS Topographic

FIGURE 1
Project Location

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SOURCE: ESRI Imagery Accessed 2024

DUDEK



0 200 400 Feet

FIGURE 2
Review Area

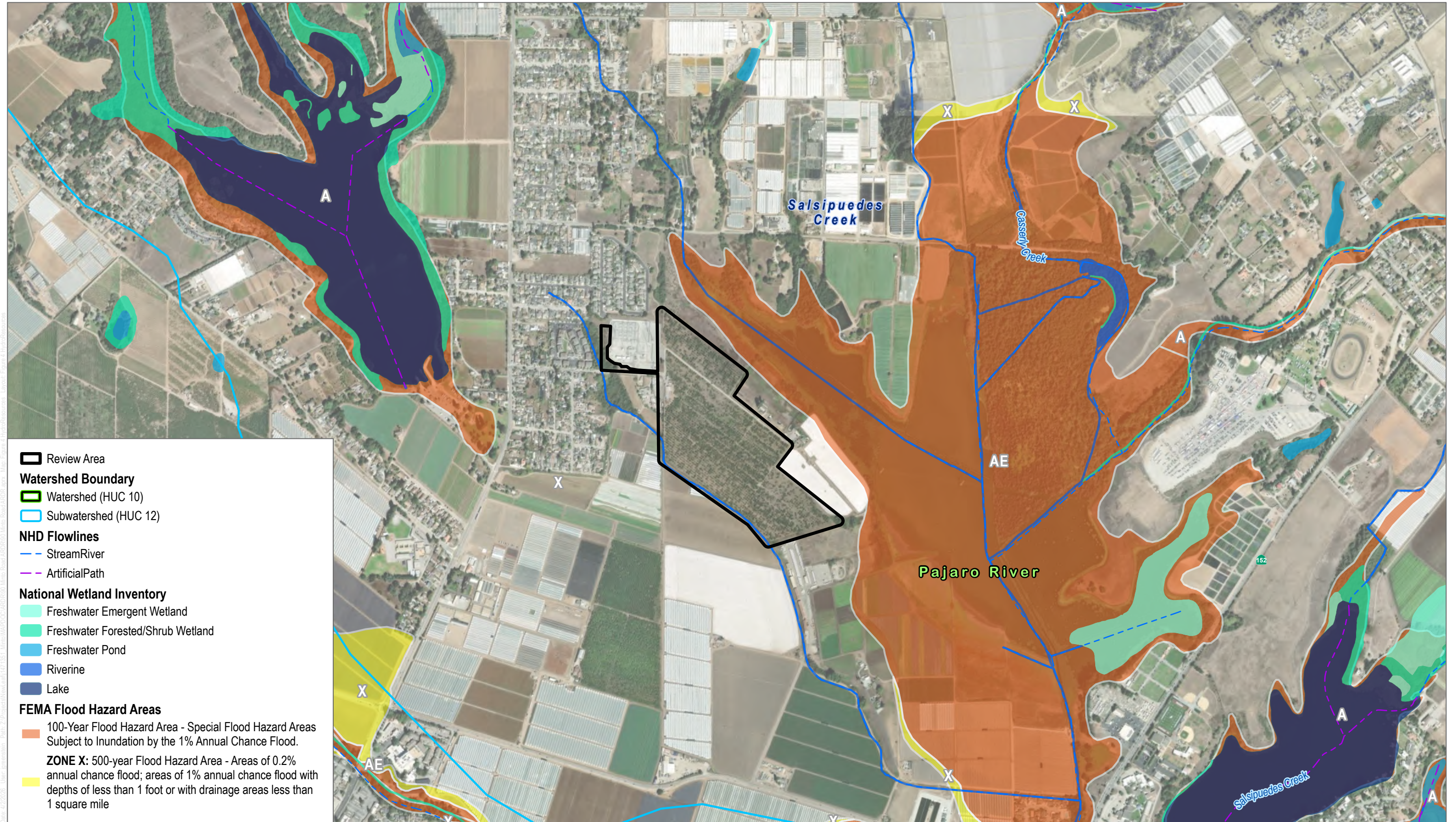
Seahawk Energy Storage Project

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FIGURE 3
Soils

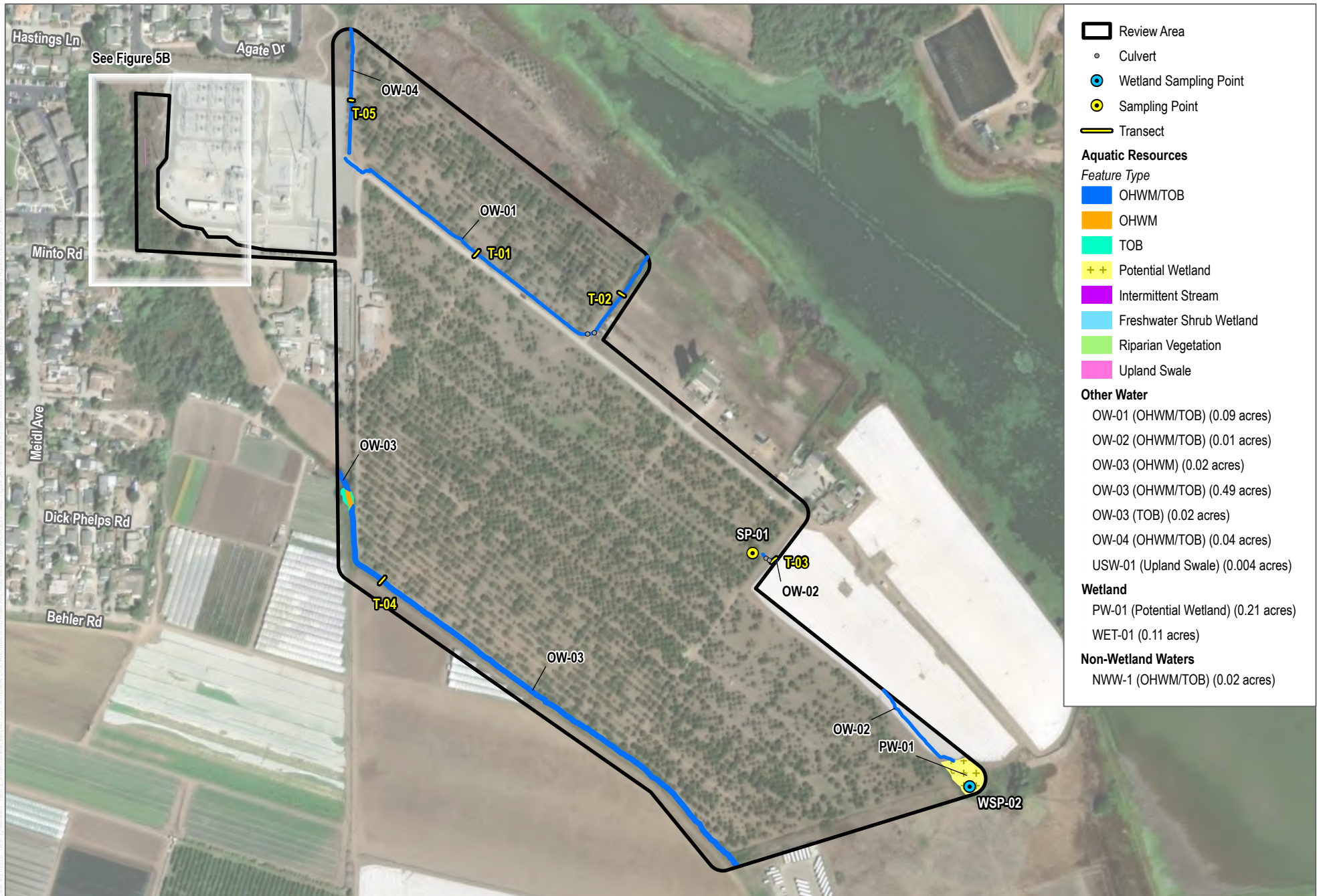
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SOURCE: ESRI Imagery Accessed 2024; FEMA 2024; USFWS NWI 2024; USGS 2024

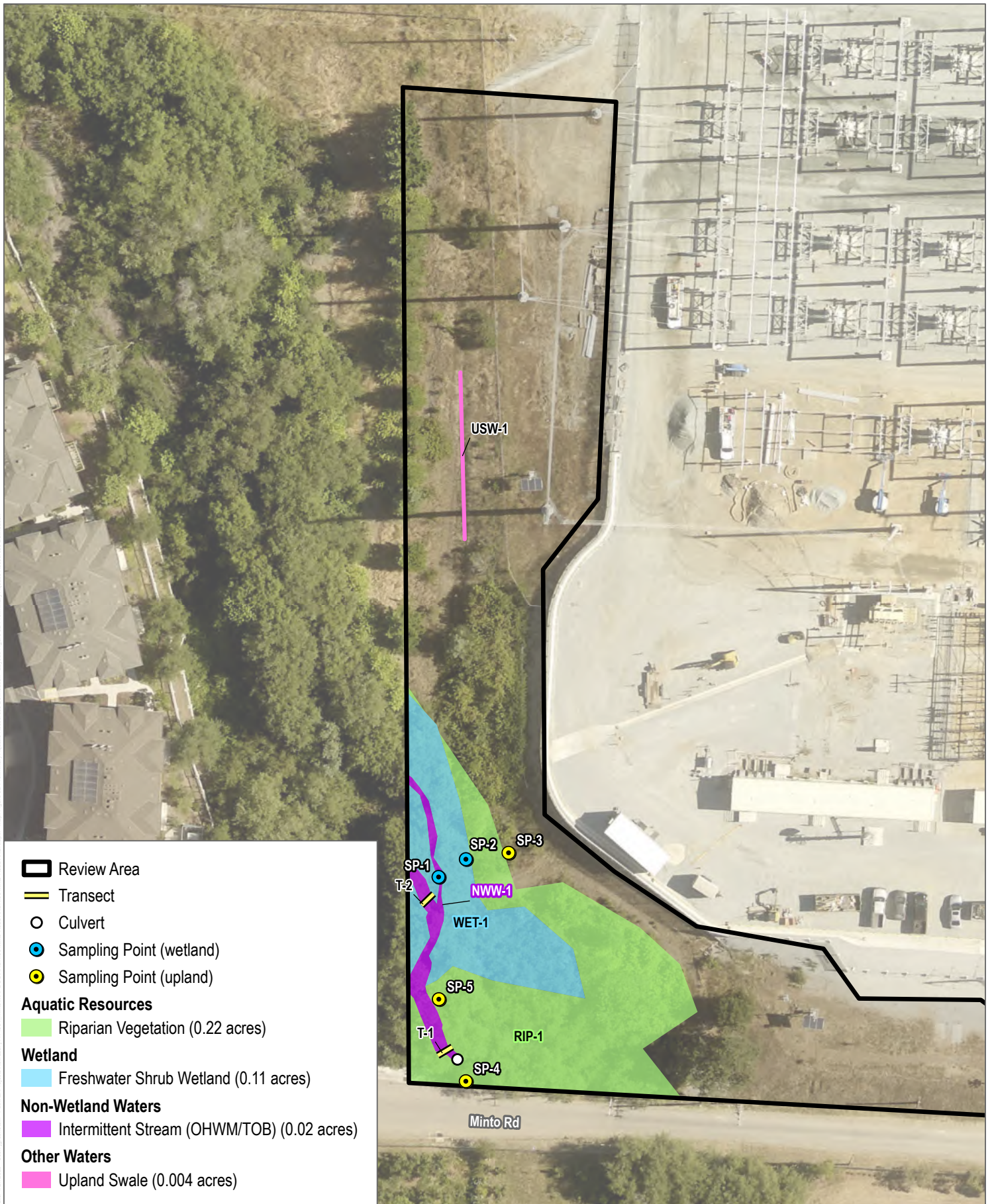
FIGURE 4
Hydrologic Setting
Seahawk Energy Storage Project

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SOURCE: Maxar 2024; Open Street Map 2023

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SOURCE: ESRI Imagery Accessed 2026



FIGURE 5B
Preliminary Aquatic Resources Delineation
 Seahawk Battery Energy Storage System Project

Appendix A

Observed Plant Species Compendium

Plants

Eudicots

ANACARDIACEAE—SUMAC OR CASHEW FAMILY

Toxicodendron diversilobum—poison oak

FACU

APIACEAE—CARROT FAMILY

* *Conium maculatum*—poison hemlock

FACW

ASTERACEAE—SUNFLOWER FAMILY

* *Acorus calamus*—calamus

OBL

Baccharis pilularis—coyote brush

Not Listed

* *Cirsium vulgare*—bull thistle

FACU

* *Helminthotheca echioides*—bristly oxtongue

FAC

BRASSICACEAE—MUSTARD FAMILY

* *Brassica nigra*—black mustard

Not Listed

* *Brassica rapa*—field mustard

FACU

Nasturtium officinale—watercress

OBL

* *Raphanus sativus*—cultivated radish

Not Listed

CONVOLVULACEAE—MORNING-GLORY FAMILY

* *Convolvulus arvensis*—field bindweed

Not Listed

FABACEAE—LEGUME FAMILY

* *Medicago polymorpha*—burclover

FACU

GERANIACEAE—GERANIUM FAMILY

- * *Geranium molle*—dovefoot geranium
Not Listed

ONAGRACEAE—EVENING PRIMROSE FAMILY

- Epilobium brachycarpum*—tall annual willowherb
FAC
- * *Ludwigia peploides*—floating primrose-willow
OBL

POLYGONACEAE—BUCKWHEAT FAMILY

- Persicaria punctata*—dotted smartweed
OBL

ROSACEAE—ROSE FAMILY

- * *Malus pumila*—paradise apple
Not Listed
- * *Rubus armeniacus*—Himalayan blackberry
FAC
Rubus ursinus—California blackberry
FAC

SALICACEAE—WILLOW FAMILY

- Salix lasiolepis*—arroyo willow
FACW

Gymnosperms and Gnetophytes

CUPRESSACEAE—CYTPRESS FAMILY

- Callitropsis nootkatensis*—Alaska cedar
FAC
- Sequoia sempervirens*—redwood
Not Listed

Monocots

CYPERACEAE—SEDGE FAMILY

- Cyperus eragrostis*—tall flatsedge
FACW

JUNACEAE—RUSH FAMILY

Juncus patens—western rush

FACW

POACEAE—GRASS FAMILY

- * *Avena barbata*—slender oat
Not Listed
- * *Avena sativa*—common oat
UPL
- * *Bromus catharticus*—rescuegrass
Not Listed
- * *Bromus diandrus*—ripgut brome
Not Listed
- * *Cynodon dactylon*—Bermudagrass
FACU
- * *Festuca perennis*—perennial rye grass
FAC
- * *Festuca trachyphylla*—hard fescue
UPL
- * *Hordeum murinum*—mouse barley
FACU
- * *Phalaris aquatica*—Harding grass
FACU

* signifies introduced (non-native) species

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Appendix B

Review Area Photos



Photo 1. Photo of apple orchards in the northern section of the review area.



Photo 2. Photo of other water (OW-03) and apple orchards along the southern border of the review area.



Photo 3. Photo of review area along western border.



Photo 4. Photo of structures associated with orchard cultivation



Photo 5. Photo of sampling point (WSP-02).



Photo 6. Photo of potential wetland in the eastern corner of the review area.



Photo 7. Photo of sampling point (SP-01) showing dug soil pit.



Photo 8. Photo of saturated soil from active irrigation near SP-01



Photo 9. Photo of other water (OW-01).



Photo 10. Photo of other water (OW-02).



Photo 11. Photo of other water (OW-03).



Photo 12. Photo of other water (OW-04).



Photo 13. Photo of transect (T-01)



Photo 14. Photo of transect (T-02)



Photo 15. Photo of transect (T-03)



Photo 16. Photo of transect (T-04)



Photo 17. Photo of transect (T-05)



Photo 18. Photo of culvert at other water (OW-02).



Photo 19. Photo of culvert at other water (OW-01).



Photo 20. Photo of riparian habitat within OW-03 top of bank along the western border of the review area.



Photo 21. Overview of Sampling Point (SP-1) at intermittent wetland area.



Photo 22. Closeup of Sampling Point (SP-1) at intermittent wetland area.



Photo 23. Overview of Sampling Point (SP-2) in scrubland wetland area.



Photo 24. Closeup of Sampling Point (SP-2) in scrubland wetland area.



Photo 25. Northern section of onsite intermittent wetland with flowing water.



Photo 26. Southern section of onsite intermittent wetland with flowing water near culvert.



Photo 27. Photo of onsite culvert.



Photo 28. Closeup of Sampling Point (SP-3) at upland area.



Photo 29. Overview of Sampling Point (SP-3) in upland area.



Photo 30. Closeup of Sampling Point (SP-4) in upland area.



Photo 31. Overview of Sampling Point (SP-4) in upland area.

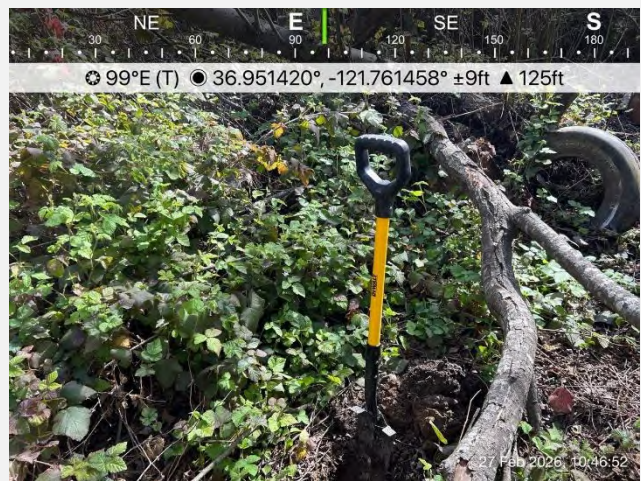


Photo 32. Closeup of Sampling Point (SP-5) in upland area.



Photo 32. Photo of upland swale (USW-1).

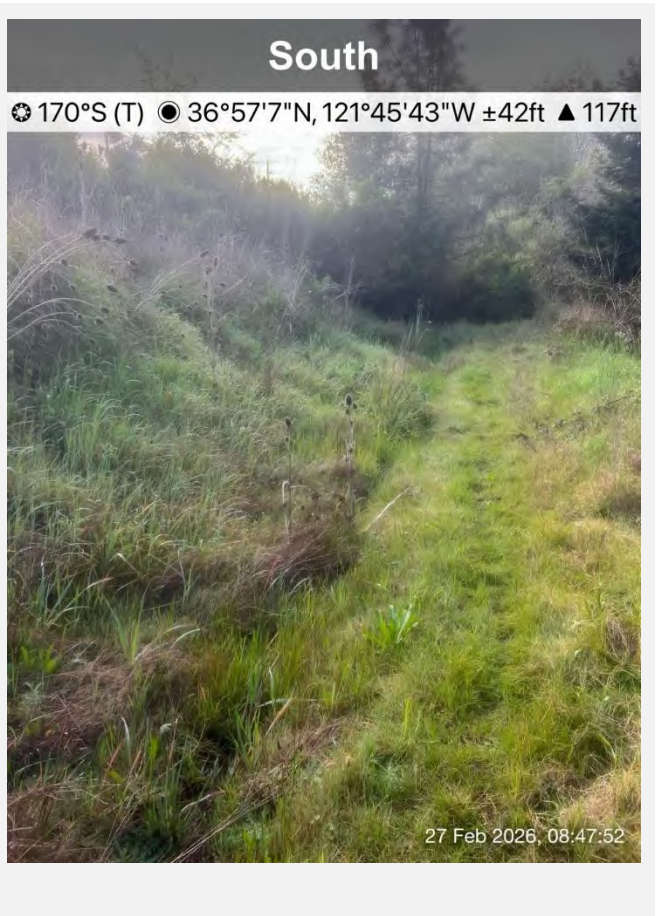


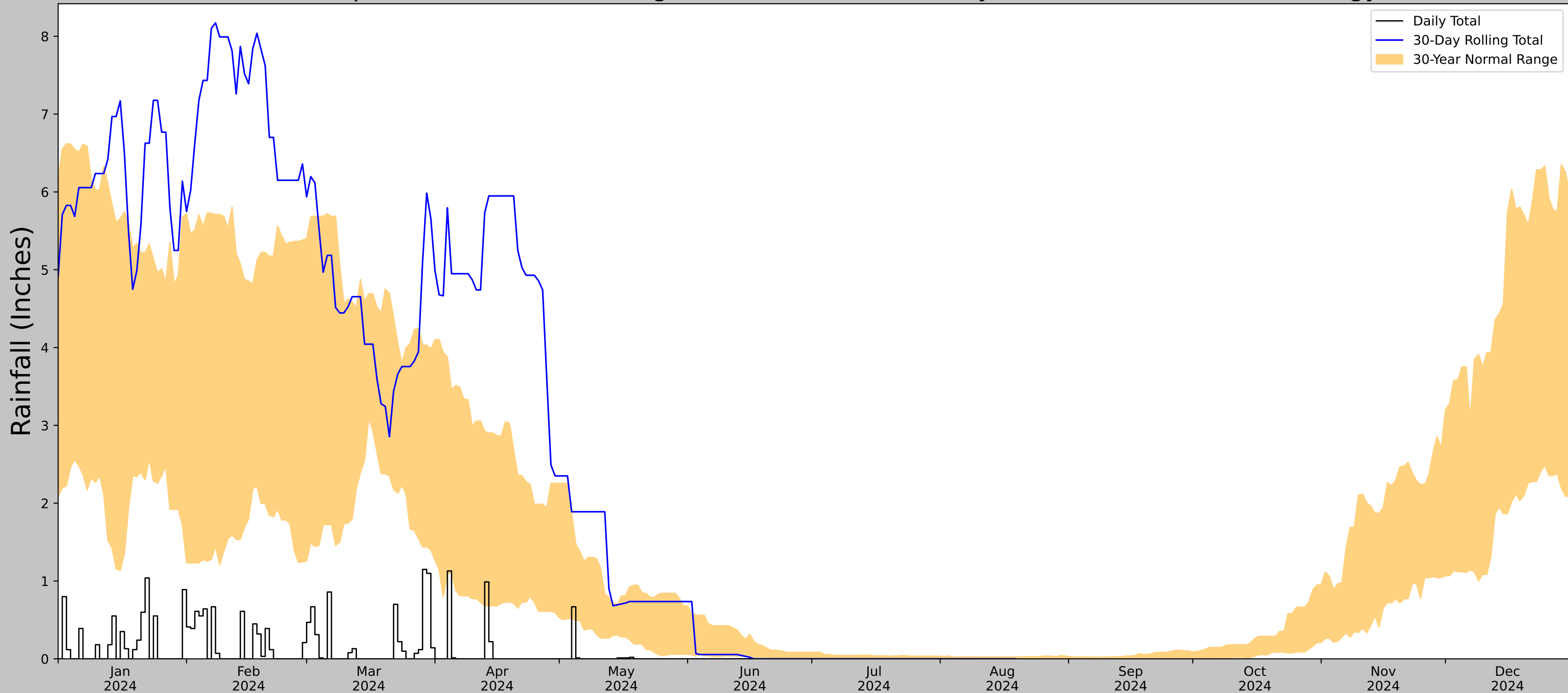
Photo 32. Photo of upland swale (USW-1).

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Appendix C


Antecedent Precipitation Tool Output

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network




Coordinates	36.948815, -121.756772
Observation Date	2024-08-16
Elevation (ft)	115.799
Drought Index (PDSI)	Mild wetness (2024-07)
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-08-16	0.0	0.023622	0.0	Normal	2	3	6
2024-07-17	0.0	0.037795	0.0	Normal	2	2	4
2024-06-17	0.019685	0.221654	0.0	Dry	1	1	1
Result							Normal Conditions - 11



Figures and tables made by the
Antecedent Precipitation Tool
Version 2.0

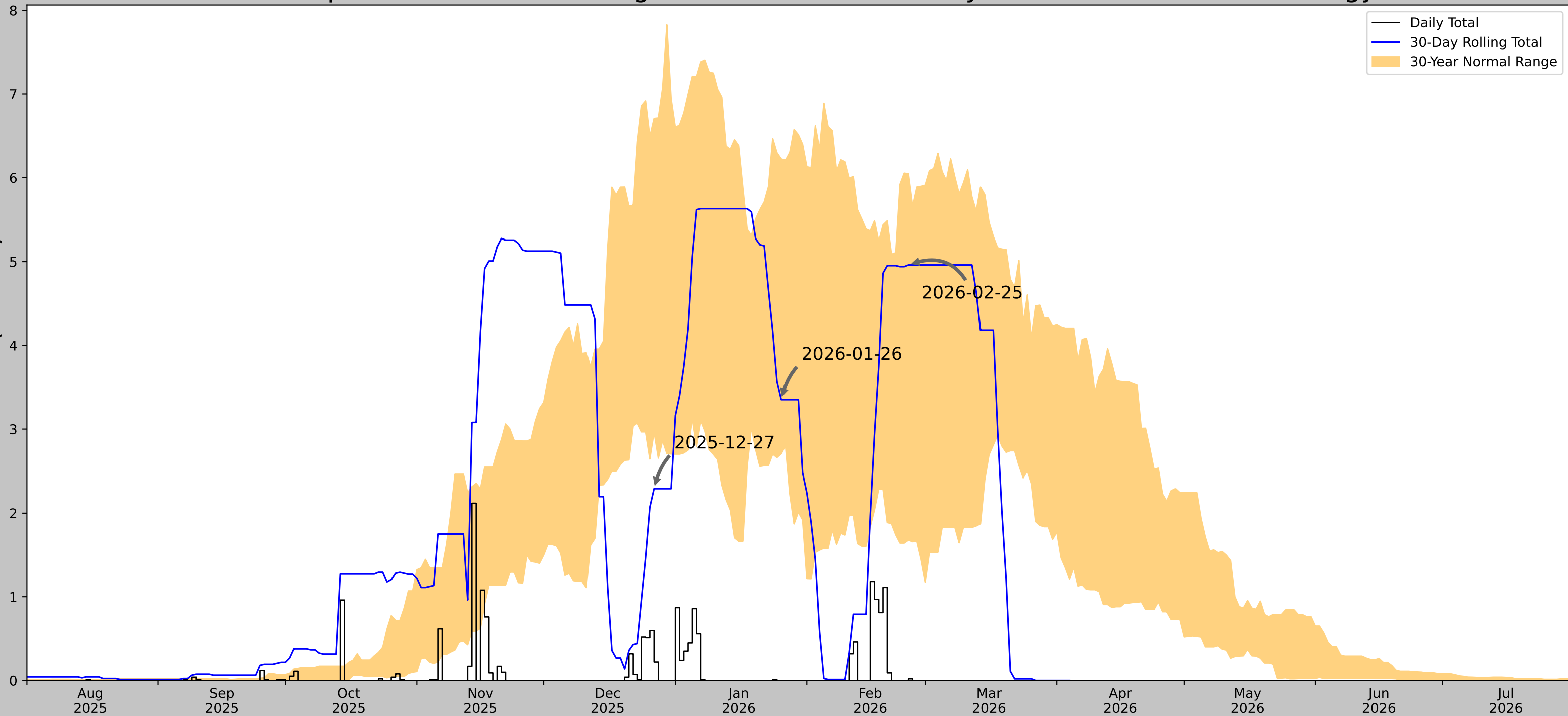
Developed by:
U.S. Army Corps of Engineers and
U.S. Army Engineer Research and
Development Center



Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
WATSONVILLE MUNI AP	36.9394, -121.79	162.073	1.947	46.274	0.966	9155	89
WATSONVILLE WTR WKS	36.9308, -121.7692	95.144	1.293	66.929	0.668	2196	0
WATSONVILLE 3.9 NW	36.9557, -121.8217	329.068	2.081	166.995	1.284	0	1
APTOS 2.6 E	36.9961, -121.8536	382.874	5.261	220.801	3.529	1	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network

Rainfall (Inches)



Coordinates	36.95129, -121.7614
Observation Date	2026-02-25
Elevation (ft)	105.692
Drought Index (PDSI)	Incipient wetness
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2026-02-25	1.67874	6.046063	4.96063	Normal	2	3	6
2026-01-26	2.706299	6.223229	3.350394	Normal	2	2	4
2025-12-27	2.966536	6.707481	2.291339	Dry	1	1	1
Result							Normal Conditions - 11

Figures and tables made by the Antecedent Precipitation Tool Version 3.0

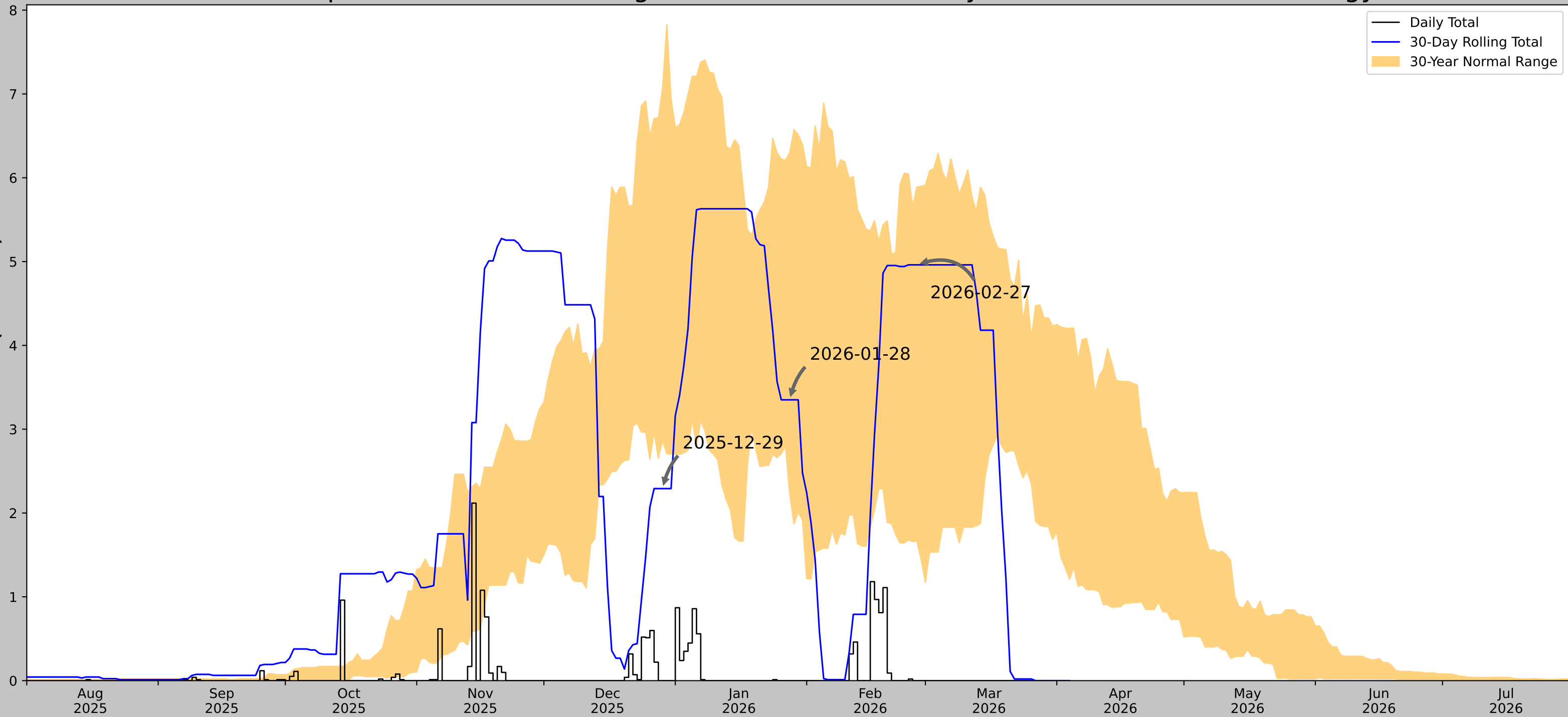


Developed by:
U.S. Army Corps of Engineers and
U.S. Army Engineer Research and
Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
WATSONVILLE WTR WKS	36.9308, -121.7692	95.144	1.48	10.548	0.682	11005	90
WATSONVILLE MUNI AP	36.9394, -121.79	162.073	1.293	66.929	0.668	347	0
APTOS 2.6 E	36.9961, -121.8536	382.874	6.486	287.73	4.785	1	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network

Rainfall (Inches)



Coordinates	36.95129, -121.7614
Observation Date	2026-02-27
Elevation (ft)	105.692
Drought Index (PDSI)	Incipient wetness
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2026-02-27	1.664961	5.888583	4.96063	Normal	2	3	6
2026-01-28	2.225984	6.301969	3.350394	Normal	2	2	4
2025-12-29	2.864567	7.071654	2.291339	Dry	1	1	1
Result							Normal Conditions - 11

Figures and tables made by the Antecedent Precipitation Tool Version 3.0



Developed by:
U.S. Army Corps of Engineers and
U.S. Army Engineer Research and
Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
WATSONVILLE WTR WKS	36.9308, -121.7692	95.144	1.48	10.548	0.682	11005	90
WATSONVILLE MUNI AP	36.9394, -121.79	162.073	1.293	66.929	0.668	347	0
APTOS 2.6 E	36.9961, -121.8536	382.874	6.486	287.73	4.785	1	0

Appendix D

Data Forms

OHWM DATA SHEET

Project: Seahawk Energy Storage

Date: 8/16/2024

Feature ID: DIT - 01

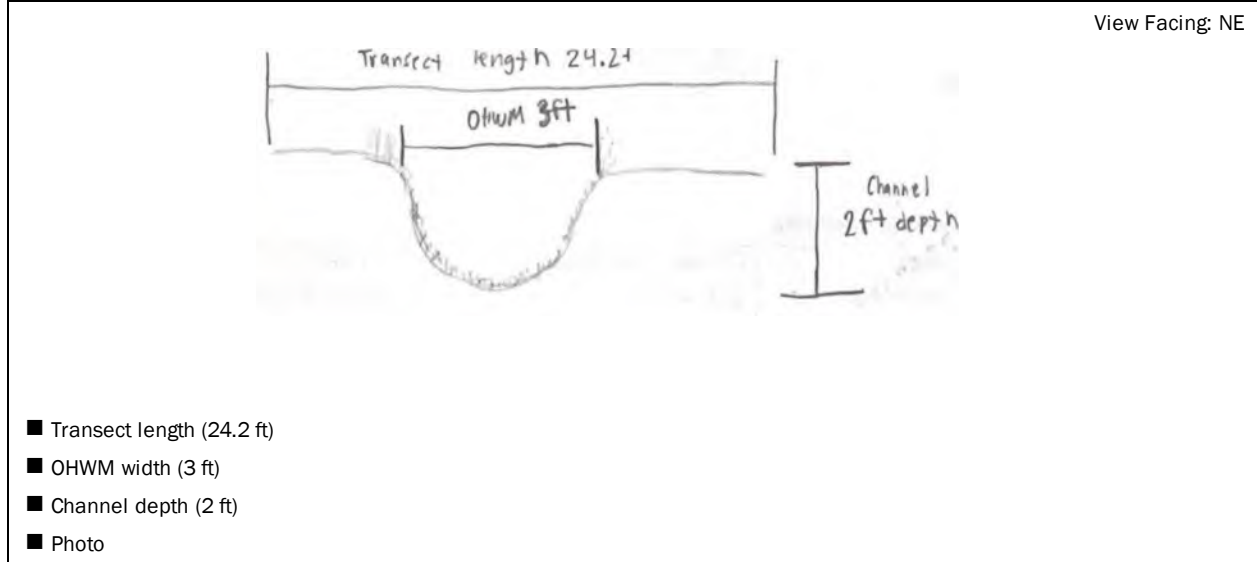
Investigator(s): NY

Transect ID: T - 01

Site Location: Santa Cruz, CA

Feature Type: Ephemeral Intermittent Perennial Other

Transect (cross-section) drawing(s):



Break in Slope at OHWM: Sharp (>60°) Moderate (30-60°) Gentle (<30°)

<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Natural line impressed on the bank <input type="checkbox"/> Shelving <input checked="" type="checkbox"/> Changes in the character of soil <input type="checkbox"/> Destruction of terrestrial vegetation <input checked="" type="checkbox"/> Presence of litter and debris <input type="checkbox"/> Wracking <input checked="" type="checkbox"/> Vegetation matted down, bent, or absent 	<ul style="list-style-type: none"> <input type="checkbox"/> Sediment sorting <input type="checkbox"/> Leaf litter disturbed or washed away <input type="checkbox"/> Scour <input type="checkbox"/> Deposition <input checked="" type="checkbox"/> Bed and banks <input type="checkbox"/> Water staining <input checked="" type="checkbox"/> Change in plant community and/or cover
--	---

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM		40%	20%		
Below OHWM	60%	20%	20%		

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	0	0	80	20
Below OHWM	0	0	2	98

Stage: Early (herbs & seedlings) Mid (herbs, shrubs, saplings) Late (herbs, shrubs, mature trees)

<p>Upland Species: <i>Epilobium brachycarpum</i> <i>Avena barbata</i> <i>Cynodon dactylon</i></p>	<p>Bank Species: <i>Cynodon dactylon</i> <i>Avena barbata</i></p>	<p>Emergent Species: <i>Cynodon dactylon</i></p>
---	--	--

OHWM DATA SHEET

Condition/Disturbances (e.g., erosion, grazing, culverts, etc.):

Culverts connected to drainage ditch. Contoured bed and banks. Created for agricultural purposes.

Hydrology:

Flowing water

Avg. depth: 2 ft

Min. depth: 1.5 ft

Standing water

Temp:

Max. depth: 2 ft

Saturated

Dry

Checklist of resources (if available):

<input checked="" type="checkbox"/> Aerial photography	<input type="checkbox"/> Vegetation maps	<input type="checkbox"/> GPS unit
<input type="checkbox"/> Remotely-sensed images	<input checked="" type="checkbox"/> Soil maps	<input type="checkbox"/> Stream gage data
<input checked="" type="checkbox"/> Topographic maps	<input checked="" type="checkbox"/> Rainfall/precipitation data	<input type="checkbox"/> Other studies:
<input type="checkbox"/> Geologic maps	<input type="checkbox"/> Existing delineation(s) for site	

Other drawings (plan view), notes:

Other forms related to this feature: Yes No

Terrace, fringe, or floodplain wetland (wetland datasheet)

Low flow channel or other representative section (OHWM datasheet)

OHWM DATA SHEET

Project: Seahawk Energy Storage

Date: 8/16/2024

Feature ID: DIT - 01

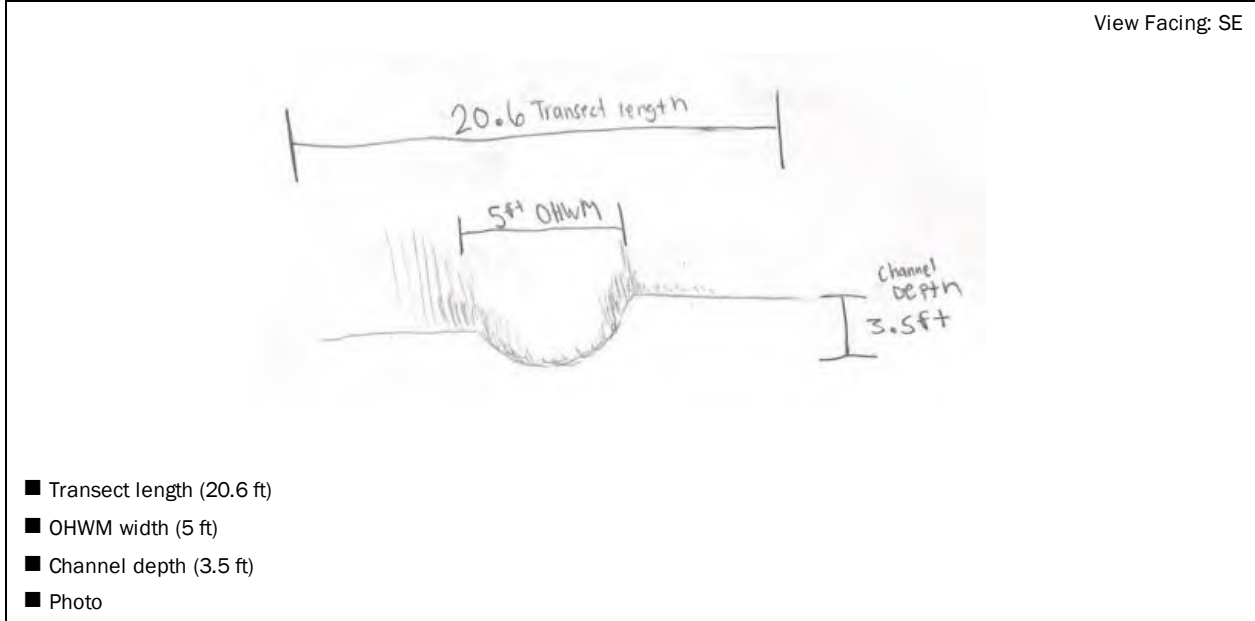
Investigator(s): NY

Transect ID: T - 02

Site Location: Santa Cruz, CA

Feature Type: Ephemeral Intermittent Perennial Other

Transect (cross-section) drawing(s):



Break in Slope at OHWM: Sharp (>60°) Moderate (30-60°) Gentle (<30°)

<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Natural line impressed on the bank <input type="checkbox"/> Shelving <input checked="" type="checkbox"/> Changes in the character of soil <input type="checkbox"/> Destruction of terrestrial vegetation <input type="checkbox"/> Presence of litter and debris <input type="checkbox"/> Wracking <input checked="" type="checkbox"/> Vegetation matted down, bent, or absent 	<ul style="list-style-type: none"> <input type="checkbox"/> Sediment sorting <input type="checkbox"/> Leaf litter disturbed or washed away <input type="checkbox"/> Scour <input type="checkbox"/> Deposition <input checked="" type="checkbox"/> Bed and banks <input type="checkbox"/> Water staining <input checked="" type="checkbox"/> Change in plant community and/or cover
---	---

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM		40%	20%		
Below OHWM	60%	20%	20%		

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	0	0	70	30
Below OHWM	0	0	60	40

Stage: Early (herbs & seedlings) Mid (herbs, shrubs, saplings) Late (herbs, shrubs, mature trees)

Upland Species:	Bank Species:	Emergent Species:
<i>Cirsium vulgare</i>	<i>Cirsium vulgare</i>	<i>Cirsium vulgare</i>
<i>Rubus armeniacus</i>	<i>Rubus armeniacus</i>	<i>Rubus armeniacus</i>
<i>Avena barbata</i>		<i>Conium maculatum</i>
<i>Brassica nigra</i>		

OHWM DATA SHEET

Condition/Disturbances (e.g., erosion, grazing, culverts, etc.):

Culverts connected to drainage ditch. Contoured bed and banks.

Hydrology:

Flowing water

Avg. depth: 3.5 ft

Min. depth: 2 ft

Standing water

Temp:

Max. depth: 4 ft

Saturated

Dry

Checklist of resources (if available):

<input checked="" type="checkbox"/> Aerial photography	<input type="checkbox"/> Vegetation maps	<input type="checkbox"/> GPS unit
<input type="checkbox"/> Remotely-sensed images	<input checked="" type="checkbox"/> Soil maps	<input type="checkbox"/> Stream gage data
<input checked="" type="checkbox"/> Topographic maps	<input checked="" type="checkbox"/> Rainfall/precipitation data	<input type="checkbox"/> Other studies:
<input type="checkbox"/> Geologic maps	<input type="checkbox"/> Existing delineation(s) for site	

Other drawings (plan view), notes:

Other forms related to this feature: Yes No

Terrace, fringe, or floodplain wetland (wetland datasheet)

Low flow channel or other representative section (OHWM datasheet)

OHWM DATA SHEET

Project: Seahawk Energy Storage

Date: 8/16/2024

Feature ID: DIT - 02

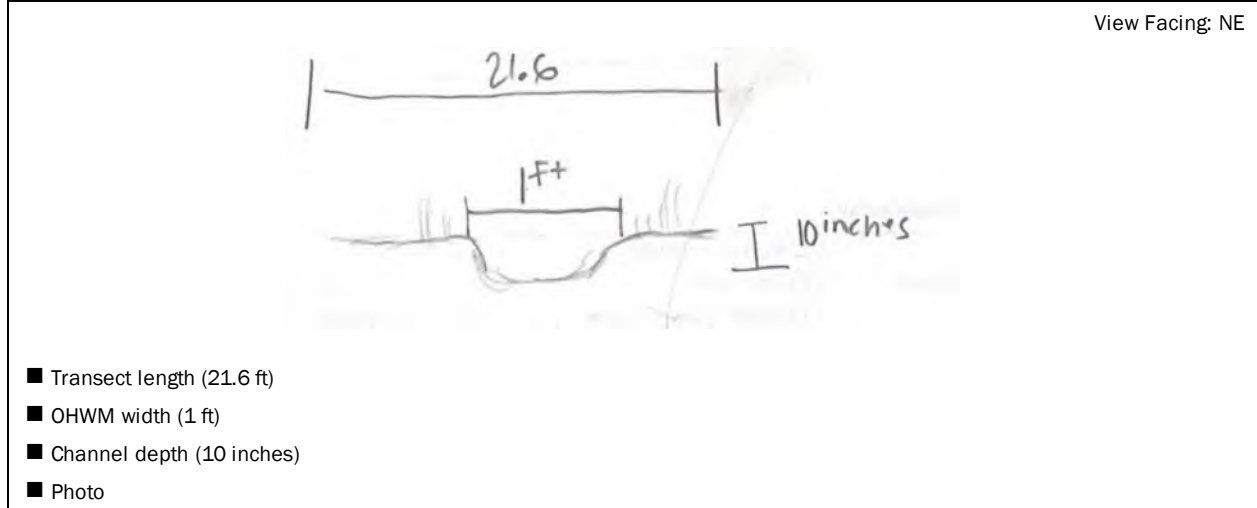
Investigator(s): NY

Transect ID: T - 03

Site Location: Santa Cruz, CA

Feature Type: Ephemeral Intermittent Perennial Other

Transect (cross-section) drawing(s):



Break in Slope at OHWM: Sharp (>60°) Moderate (30-60°) Gentle (<30°)

<input type="checkbox"/> Natural line impressed on the bank <input type="checkbox"/> Shelving <input checked="" type="checkbox"/> Changes in the character of soil <input checked="" type="checkbox"/> Destruction of terrestrial vegetation <input type="checkbox"/> Presence of litter and debris <input type="checkbox"/> Wracking <input checked="" type="checkbox"/> Vegetation matted down, bent, or absent	<input type="checkbox"/> Sediment sorting <input type="checkbox"/> Leaf litter disturbed or washed away <input type="checkbox"/> Scour <input type="checkbox"/> Deposition <input checked="" type="checkbox"/> Bed and banks <input type="checkbox"/> Water staining <input type="checkbox"/> Change in plant community and/or cover
---	--

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM	60%	10%	30%		
Below OHWM	60%	10%	30%		

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	0	0	60	40
Below OHWM	0	0	0	100

Stage: Early (herbs & seedlings) Mid (herbs, shrubs, saplings) Late (herbs, shrubs, mature trees)

<p>Upland Species:</p> <p><i>Helminthotheca echioides</i> <i>Cyperus eragrostis</i> <i>Cynodon dactylon</i> <i>Festuca perennis</i> <i>Medicago polymorpha</i></p>	<p>Bank Species:</p> <p><i>Festuca perennis</i> <i>Medicago polymorpha</i></p>	<p>Emergent Species:</p> <p>N/A</p>
---	--	--

OHWM DATA SHEET

Condition/Disturbances (e.g., erosion, grazing, culverts, etc.):

Culvert connected to drainage ditch. Culverts appears to be used for agricultural purposes. Contoured bed and banks.

Hydrology:

- Flowing water
- Standing water
- Saturated
- Dry

Avg. depth: 6 inches

Min. depth: 4 inches

Temp:

Max. depth: 10 inches

Checklist of resources (if available):

<input checked="" type="checkbox"/> Aerial photography	<input type="checkbox"/> Vegetation maps	<input type="checkbox"/> GPS unit
<input type="checkbox"/> Remotely-sensed images	<input checked="" type="checkbox"/> Soil maps	<input type="checkbox"/> Stream gage data
<input checked="" type="checkbox"/> Topographic maps	<input checked="" type="checkbox"/> Rainfall/precipitation data	<input type="checkbox"/> Other studies:
<input type="checkbox"/> Geologic maps	<input type="checkbox"/> Existing delineation(s) for site	

Other drawings (plan view), notes:

Other forms related to this feature: Yes No

- Terrace, fringe, or floodplain wetland (wetland datasheet)
- Low flow channel or other representative section (OHWM datasheet)

OHWM DATA SHEET

Project: Seahawk Energy Storage

Date: 8/16/2024

Feature ID: DIT - 03

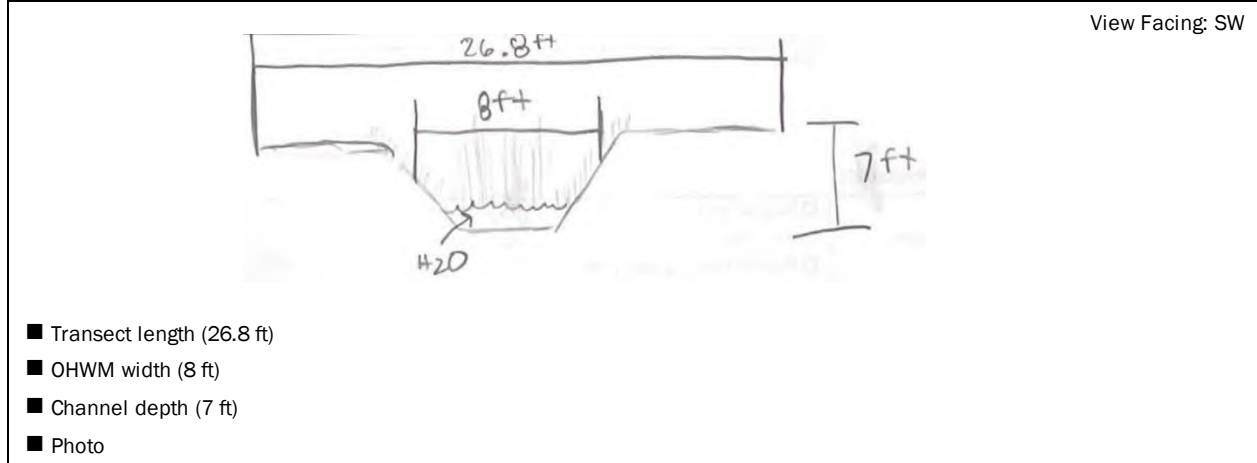
Investigator(s): NY

Transect ID: T - 04

Site Location: Santa Cruz, CA

Feature Type: Ephemeral Intermittent Perennial Other

Transect (cross-section) drawing(s):



Break in Slope at OHWM: Sharp (>60°) Moderate (30-60°) Gentle (<30°)

<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Natural line impressed on the bank <input type="checkbox"/> Shelving <input checked="" type="checkbox"/> Changes in the character of soil <input type="checkbox"/> Destruction of terrestrial vegetation <input type="checkbox"/> Presence of litter and debris <input type="checkbox"/> Wracking <input type="checkbox"/> Vegetation matted down, bent, or absent 	<ul style="list-style-type: none"> <input type="checkbox"/> Sediment sorting <input type="checkbox"/> Leaf litter disturbed or washed away <input type="checkbox"/> Scour <input type="checkbox"/> Deposition <input checked="" type="checkbox"/> Bed and banks <input type="checkbox"/> Water staining <input checked="" type="checkbox"/> Change in plant community and/or cover
--	---

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM	40%	60%			
Below OHWM	80%	20%			

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	0	0	40	60
Below OHWM	0	0	60	40

Stage: Early (herbs & seedlings) Mid (herbs, shrubs, saplings) Late (herbs, shrubs, mature trees)

<p>Upland Species: <i>Rubus armeniacus</i> <i>Avena barbata</i></p>	<p>Bank Species: <i>Ludwigia peploides</i> <i>Cyperus eragrostis</i> <i>Rubus armeniacus</i> <i>Bromus catharticus</i> <i>Raphanus sativus</i> <i>acorus calamus</i></p>	<p>Emergent Species: <i>Ludwigia peploides</i> <i>acorus calamus</i></p>
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OHWM DATA SHEET

Condition/Disturbances (e.g., erosion, grazing, culverts, etc.):

Drainage ditch that appears to be anthropogenic and used for agricultural purposes. Contoured bed and banks.

Hydrology:

- Flowing water
- Standing water
- Saturated
- Dry

Avg. depth: 7ft

Min. depth: 6ft

Temp:

Max. depth: 8.5ft

Checklist of resources (if available):

<input checked="" type="checkbox"/> Aerial photography	<input type="checkbox"/> Vegetation maps	<input type="checkbox"/> GPS unit
<input type="checkbox"/> Remotely-sensed images	<input checked="" type="checkbox"/> Soil maps	<input type="checkbox"/> Stream gage data
<input checked="" type="checkbox"/> Topographic maps	<input checked="" type="checkbox"/> Rainfall/precipitation data	<input type="checkbox"/> Other studies:
<input type="checkbox"/> Geologic maps	<input type="checkbox"/> Existing delineation(s) for site	

Other drawings (plan view), notes:

Other forms related to this feature: Yes No

- Terrace, fringe, or floodplain wetland (wetland datasheet)
- Low flow channel or other representative section (OHWM datasheet)

OHWM DATA SHEET

Project: Seahawk Energy Storage

Date: 8/16/2024

Feature ID: DIT - 04

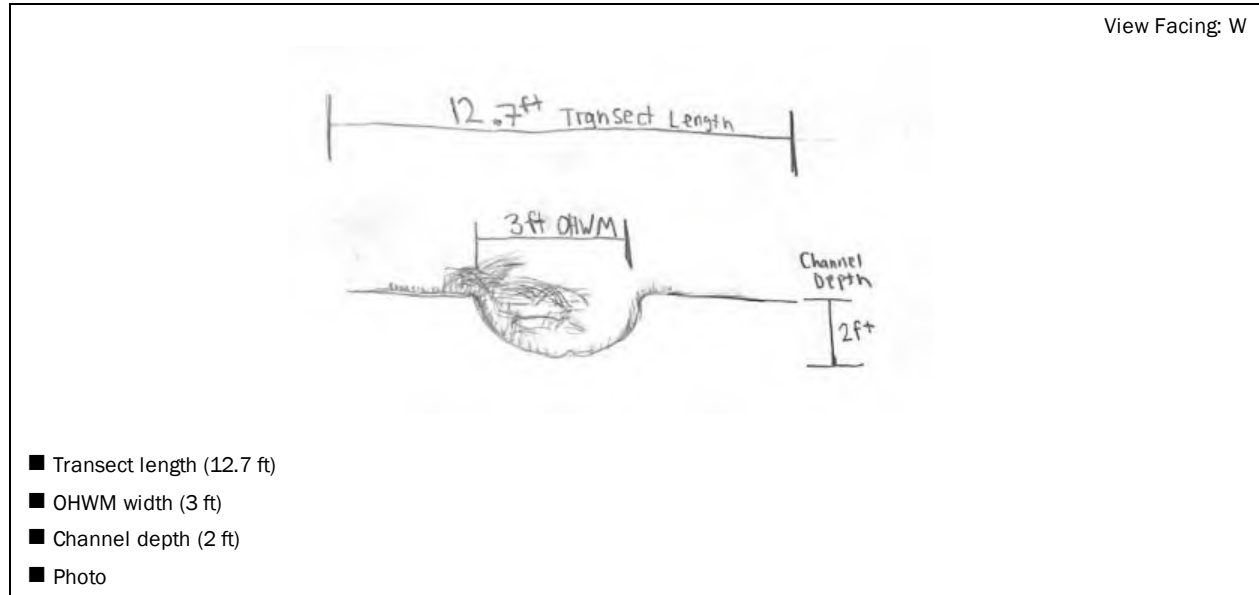
Investigator(s): NY

Transect ID: T - 05

Site Location: Santa Cruz, CA

Feature Type: Ephemeral Intermittent Perennial Other

Transect (cross-section) drawing(s):



Break in Slope at OHWM: Sharp (>60°) Moderate (30-60°) Gentle (<30°)

<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Natural line impressed on the bank <input type="checkbox"/> Shelving <input checked="" type="checkbox"/> Changes in the character of soil <input type="checkbox"/> Destruction of terrestrial vegetation <input type="checkbox"/> Presence of litter and debris <input type="checkbox"/> Wracking <input checked="" type="checkbox"/> Vegetation matted down, bent, or absent 	<ul style="list-style-type: none"> <input type="checkbox"/> Sediment sorting <input type="checkbox"/> Leaf litter disturbed or washed away <input type="checkbox"/> Scour <input type="checkbox"/> Deposition <input checked="" type="checkbox"/> Bed and banks <input type="checkbox"/> Water staining <input checked="" type="checkbox"/> Change in plant community and/or cover
---	---

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM	40%	60%			
Below OHWM	80%	20%			

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	0	0	70	30
Below OHWM	0	0	60	40

Stage: Early (herbs & seedlings) Mid (herbs, shrubs, saplings) Late (herbs, shrubs, mature trees)

<p>Upland Species:</p> <p><i>Rubus armeniacus</i> <i>Avena barbata</i> <i>Cynodon dactylon</i></p>	<p>Bank Species:</p> <p><i>Rubus armeniacus</i> <i>Avena barbata</i> <i>Cynodon dactylon</i> <i>Baccharis pilularis</i></p>	<p>Emergent Species:</p> <p><i>Baccharis pilularis</i> <i>Rubus armeniacus</i></p>
---	---	--

OHWM DATA SHEET

Condition/Disturbances (e.g., erosion, grazing, culverts, etc.):

Drainage ditch that appears to be anthropogenic and used for agricultural purposes. Contoured bed and banks.

Hydrology:

Flowing water

Avg. depth: 2 ft

Min. depth: 1.5 ft

Standing water

Temp:

Max. depth: 3 ft

Saturated

Dry

Checklist of resources (if available):

<input checked="" type="checkbox"/> Aerial photography	<input type="checkbox"/> Vegetation maps	<input type="checkbox"/> GPS unit
<input type="checkbox"/> Remotely-sensed images	<input checked="" type="checkbox"/> Soil maps	<input type="checkbox"/> Stream gage data
<input checked="" type="checkbox"/> Topographic maps	<input checked="" type="checkbox"/> Rainfall/precipitation data	<input type="checkbox"/> Other studies:
<input type="checkbox"/> Geologic maps	<input type="checkbox"/> Existing delineation(s) for site	

Other drawings (plan view), notes:

Other forms related to this feature: Yes No

Terrace, fringe, or floodplain wetland (wetland datasheet)

Low flow channel or other representative section (OHWM datasheet)

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Seahawk Energy Storage City/County: Santa Cruz Sampling Date: 8/16/24
 Applicant/Owner: Confidential State: CA Sampling Point: SP-01
 Investigator(s): NY Section, Township, Range: Section 21 and 28, Township 11 S, Range 2 E
 Landform (hillslope, terrace, etc.): Upland Local relief (concave, convex, none): none Slope (%): 0-10%
 Subregion (LRR): C Lat: 36.948775 Long: -120.754866 Datum: WGS - 84
 Soil Map Unit Name: Watsonville loam, 2 to 15 percent slopes NWI classification: N/A

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 <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: representative upland sampling point	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
0 = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>52</u> x 4 = <u>208</u> UPL species <u>6</u> x 5 = <u>30</u> Column Totals: <u>58</u> (A) <u>238</u> (B) Prevalence Index = B/A = <u>4.10</u>
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
0 = Total Cover				
Herb Stratum (Plot size: <u>1m²</u>)				
1. <u>Convolvulus arvensis</u>	<u>5%</u>	<u>No</u>	<u>UPL</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Cynodon dactylon</u>	<u>50%</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Brassica rapa</u>	<u>2%</u>	<u>No</u>	<u>FACU</u>	
4. <u>Bromus diandrus</u>	<u>1%</u>	<u>No</u>	<u>UPL</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
58% = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>42</u> % Cover of Biotic Crust <u>0</u>				
Remarks:				

SOIL

Sampling Point: SP-01

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	7.5YR 2.5/1	100						

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 Soils ³ :
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR C) <input type="checkbox"/> 1 cm Muck (A9) (LRR D) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)
	<input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>
--	---

Remarks:
 According to the U.S. Department of Agriculture's Natural Resources Conservation Service Web Soil Survey (USDA 2024), SP-01 was located within soil classified as hydric. However, the soil has been significantly disturbed from orchard maintenance resulting in a lack of hydric soil indicators observed in the field.

HYDROLOGY

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

Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2 inches</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
---	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
 Reviewed historical imagery from photos.
 Remarks:
 Landscape was saturated with water due to active irrigation observed during the delineation.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Seahawk Energy Storage City/County: Santa Cruz Sampling Date: 8/16/24
 Applicant/Owner: Confidential State: CA Sampling Point: SP-01
 Investigator(s): NY Section, Township, Range: Section 21 and 28, Township 11 S, Range 2 E
 Landform (hillslope, terrace, etc.): Upland Local relief (concave, convex, none): none Slope (%): 0-10%
 Subregion (LRR): C Lat: 36.948775 Long: -120.754866 Datum: WGS - 84
 Soil Map Unit Name: Watsonville loam, 2 to 15 percent slopes NWI classification: N/A

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 type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: representative upland sampling point	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>52</u> x 4 = <u>208</u> UPL species <u>6</u> x 5 = <u>30</u> Column Totals: <u>58</u> (A) <u>238</u> (B) Prevalence Index = B/A = <u>4.10</u>
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>1m²</u>)				
1. <u>Convolvulus arvensis</u>	<u>5%</u>	<u>No</u>	<u>UPL</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Cynodon dactylon</u>	<u>50%</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Brassica rapa</u>	<u>2%</u>	<u>No</u>	<u>FACU</u>	
4. <u>Bromus diandrus</u>	<u>1%</u>	<u>No</u>	<u>UPL</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
<u>58%</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>42</u> % Cover of Biotic Crust <u>0</u>				
Remarks:				

SOIL

Sampling Point: SP-01

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	7.5YR 2.5/1	100						

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.)

- 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:

According to the U.S. Department of Agriculture's Natural Resources Conservation Service Web Soil Survey (USDA 2024), SP-01 was located within soil classified as hydric. However, the soil has been significantly disturbed from orchard maintenance resulting in a lack of hydric soil indicators observed in the field.

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 Tilled 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): _____
 Water Table Present? Yes No Depth (inches): _____
 Saturation Present? Yes No Depth (inches): 2 inches
 (includes capillary fringe)

Wetland Hydrology Present? Yes No

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

Reviewed historical imagery from photos.

Remarks:

Landscape was saturated with water due to active irrigation observed during the delineation.

NWW-1

T-1

U.S. Army Corps of Engineers (USACE)
RAPID ORDINARY HIGH WATER MARK
(OHWM) FIELD IDENTIFICATION DATA SHEET
 The proponent agency is Headquarters USACE CECW-COR.

Form Approved -
OMB No. 0710-0024
Expires: 2027-09-30

The Agency Disclosure Notice (ADN)

The Public reporting burden for this collection of information, 0710-0024, is estimated to average 30 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

Project ID #: 14713.51 P15 Site Name: Seahawke BESS Gentle Date and Time: 2/25/20 11 am

Location (lat/long): 36.95132, -121.76143 Investigator(s): GF, KH

Step 1 Site overview from remote and online resources.
 Check boxes for online resources used to evaluate site:

<input type="checkbox"/> gage data	<input type="checkbox"/> LiDAR	<input type="checkbox"/> geologic maps
<input type="checkbox"/> climatic data	<input type="checkbox"/> satellite imagery	<input type="checkbox"/> land use maps
<input checked="" type="checkbox"/> aerial photos	<input type="checkbox"/> topographic maps	<input type="checkbox"/> Other: _____

Describe land use and flow conditions from online resources.
 Were there any recent extreme events (floods or drought)?

- Potential agricultural runoff
- Heavy rain last week
- Rain overnight

Step 2 Site conditions during field assessment. First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or human-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls, etc.

sand, gravel, boulders
culvert under adjacent road

Step 3 Mark the boxes next to the indicators used to help identify the location of the OHWM.
 OHWM is at a transition point, therefore some indicators used to identify the location of the OHWM may be just below or above the OHWM. Make a slash in boxes next to indicators that are helpful in identifying the OHWM. After the initial assessment, those indicators identified at the OHWM elevation should be changed from slashes to x's. Note, it is not necessary to mark indicators that are present but do not help inform identification of the OHWM.
 Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and attach a photo log.

Geomorphic indicators

<input checked="" type="checkbox"/> Break in slope	<input checked="" type="checkbox"/> Channel bar
<input checked="" type="checkbox"/> on the bank	<input type="checkbox"/> shelving (berms) on bar
<input type="checkbox"/> undercut bank	<input type="checkbox"/> unvegetated
<input type="checkbox"/> valley bottom	<input checked="" type="checkbox"/> vegetation transition (go to veg. indicators)
<input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> sediment transition (go to sed. indicators)
<input checked="" type="checkbox"/> Shelving	<input type="checkbox"/> upper limit of deposition on bar
<input checked="" type="checkbox"/> shelf at top of bank	<input checked="" type="checkbox"/> Instream bedforms and other bedload transport evidence
<input type="checkbox"/> natural levee	<input type="checkbox"/> deposition bedload indicators (e.g., imbricated clasts, gravel sheets, etc.)
<input type="checkbox"/> human-made berms or levees	<input checked="" type="checkbox"/> bedforms (e.g., pools, riffles, steps, etc.)
<input type="checkbox"/> other berms: _____	<input type="checkbox"/> Weathered clasts or bedrock
<input type="checkbox"/> Secondary channels	<input type="checkbox"/> erosional bedload indicators (e.g., obstacle marks, scour, smoothing, etc.)

Sediment indicators

<input type="checkbox"/> Soil development
<input type="checkbox"/> Changes in character of soil
<input type="checkbox"/> Mudcracks
<input checked="" type="checkbox"/> Changes in particle-sized distribution
<input type="checkbox"/> transition from _____ to _____
<input checked="" type="checkbox"/> upper limit of sand-sized particles
<input checked="" type="checkbox"/> silt deposits

Vegetation indicators (Consider the vegetation transition looking from the middle of the channel, up the banks, and into the floodplain)

<input checked="" type="checkbox"/> Change in vegetation type from <u>Rubus &</u> to <u>NASOFF / RUMCKR</u>	<input checked="" type="checkbox"/> Vegetation matted down and/or bent
<input checked="" type="checkbox"/> Change in density of vegetation <u>upland grass</u>	
<input type="checkbox"/> Exposed roots below intact soil layer	
<input type="checkbox"/> Other vegetation observations	

Other physical indicators

<input checked="" type="checkbox"/> Sediment deposited on vegetation or structures
<input type="checkbox"/> Wracking/presence of organic litter
<input type="checkbox"/> Presence of large wood
<input checked="" type="checkbox"/> Leaf litter disturbed or washed away
<input checked="" type="checkbox"/> Water staining

Other observed indicators? Describe:
Veg changes from OBL/FAC/FACU plants below to FAC/FACU/UPL plants above OHWM

NWW-1 T-2

**U.S. Army Corps of Engineers (USACE)
RAPID ORDINARY HIGH WATER MARK
(OHWM) FIELD IDENTIFICATION DATA SHEET**
The proponent agency is Headquarters USACE CECW-COR.

Form Approved -
OMB No. 0710-0024
Expires: 2027-09-30

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The Public reporting burden for this collection of information, 0710-0024, is estimated to average 30 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

Project ID #: 14713.51 P15 Site Name: Seahawk BESS Gen-tie Date and Time: 2/25/26 12:00

Location (lat/long): 36.951530, -121.76147 Investigator(s): GF + KH

<p>Step 1 Site overview from remote and online resources. Check boxes for online resources used to evaluate site:</p> <p><input type="checkbox"/> gage data <input type="checkbox"/> LIDAR <input type="checkbox"/> geologic maps <input type="checkbox"/> climatic data <input type="checkbox"/> satellite imagery <input type="checkbox"/> land use maps <input checked="" type="checkbox"/> aerial photos <input type="checkbox"/> topographic maps <input type="checkbox"/> Other: _____</p>	<p>Describe land use and flow conditions from online resources. Were there any recent extreme events (floods or drought)?</p> <p>- Agriculture - Recent Rain</p>
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Step 2 Site conditions during field assessment. First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or human-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls, etc.

• Sedimentation in stream, changes in plants
• Density of veg changes

Step 3 Mark the boxes next to the indicators used to help identify the location of the OHWM.
OHWM is at a transition point, therefore some indicators used to identify the location of the OHWM may be just below or above the OHWM. Make a slash in boxes next to indicators that are helpful in identifying the OHWM. After the initial assessment, those indicators identified at the OHWM elevation should be changed from slashes to x's. Note, it is not necessary to mark indicators that are present but do not help inform identification of the OHWM.
Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and attach a photo log.

<p>Geomorphic indicators</p> <p><input checked="" type="checkbox"/> Break in slope <input checked="" type="checkbox"/> on the bank <input type="checkbox"/> undercut bank <input type="checkbox"/> valley bottom <input type="checkbox"/> Other: _____</p> <p><input type="checkbox"/> Shelving <input type="checkbox"/> shelf at top of bank <input type="checkbox"/> natural levee <input type="checkbox"/> human-made berms or levees <input type="checkbox"/> other berms: _____</p> <p><input type="checkbox"/> Secondary channels</p>	<p><input checked="" type="checkbox"/> Channel bar <input type="checkbox"/> shelving (berms) on bar <input type="checkbox"/> unvegetated <input checked="" type="checkbox"/> vegetation transition (go to veg. indicators) <input type="checkbox"/> sediment transition (go to sed. indicators) <input type="checkbox"/> upper limit of deposition on bar</p> <p><input type="checkbox"/> Instream bedforms and other bedload transport evidence <input type="checkbox"/> deposition bedload indicators (e.g., imbricated clasts, gravel sheets, etc.) <input checked="" type="checkbox"/> bedforms (e.g., pools, riffles, steps, etc.) <input type="checkbox"/> Weathered clasts or bedrock <input type="checkbox"/> erosional bedload indicators (e.g., obstacle marks, scour, smoothing, etc.)</p>	<p>Sediment indicators</p> <p><input type="checkbox"/> Soil development <input type="checkbox"/> Changes in character of soil <input type="checkbox"/> Mudcracks <input type="checkbox"/> Changes in particle-sized distribution <input type="checkbox"/> transition from _____ to _____ <input type="checkbox"/> upper limit of sand-sized particles <input type="checkbox"/> silt deposits</p>
--	--	---

<p>Vegetation indicators (Consider the vegetation transition looking from the middle of the channel, up the banks, and into the floodplain)</p> <p><input checked="" type="checkbox"/> Change in vegetation type from <u>barren/carex</u> to <u>OBL plants</u> <input checked="" type="checkbox"/> Change in density of vegetation → <u>more dense in streambed</u> <input type="checkbox"/> Exposed roots below intact soil layer <input type="checkbox"/> Vegetation matted down and/or bent <input type="checkbox"/> Other vegetation observations</p>	<p>Other physical indicators</p> <p><input type="checkbox"/> Sediment deposited on vegetation or structures <input type="checkbox"/> Wracking/presence of organic litter <input type="checkbox"/> Presence of large wood <input type="checkbox"/> Leaf litter disturbed or washed away <input type="checkbox"/> Water staining</p>
--	---

Other observed indicators? Describe:
Nasturtium officinale & Persicaria punctata lining wetted portions of the stream.

Arid West Streamflow Duration Assessment Method

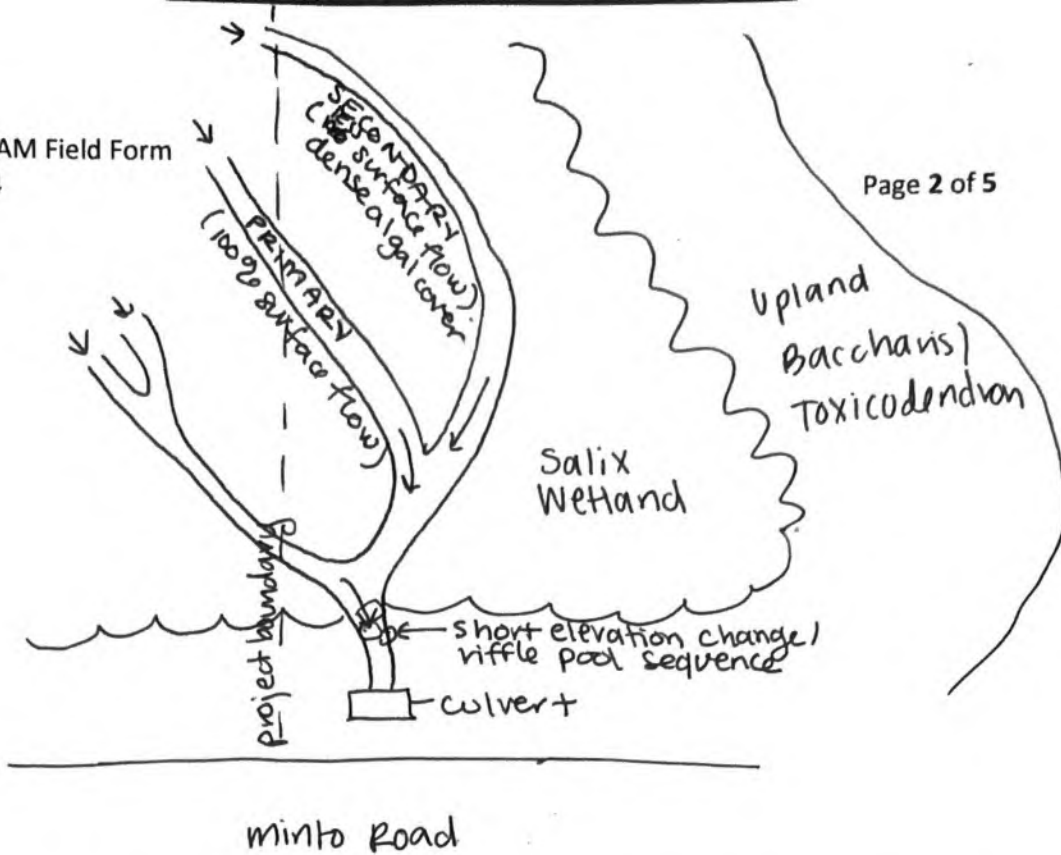
General site information

Project name or number: Seahawk Bess Centie area		
Site code or identifier: 14713.51 P15	Assessor(s): GF + KH	
Waterway name: NWN-1	Visit date: 2/25/26	
Current weather conditions (check one): <input type="checkbox"/> Storm/heavy rain <input type="checkbox"/> Steady rain <input type="checkbox"/> Intermittent rain <input type="checkbox"/> Snowing <input checked="" type="checkbox"/> Cloudy (80% cover) <input type="checkbox"/> Clear/sunny	Notes on current or recent weather conditions (e.g., precipitation in prior week): Coordinates at downstream end (decimal degrees): Lat (N): 36.95131 Long (E): -121.76141 Datum:	
Surrounding land-use within 100 m (check one or two): <input type="checkbox"/> Urban/industrial/residential <input checked="" type="checkbox"/> Agricultural (farmland, crops, vineyards, pasture) <input type="checkbox"/> Developed open-space (e.g., golf course) <input type="checkbox"/> Forested <input type="checkbox"/> Other natural <input checked="" type="checkbox"/> Other: <u>Road</u>	Describe reach boundaries: Upstream: comes from the north, beyond site limits Downstream: exits site through culvert under Minto Rd.	
Mean bankfull channel width (m): 3.5m 3.5m (Indicator 1) <u>2m</u> <u>3m</u> <u>5.5m</u>	Reach length (m): 40x width min 40 m max 200 m <i>over 200m, goes well beyond site</i>	Site photographs: Enter photo ID or check if completed. Top down: <input checked="" type="checkbox"/> Mid down: <input checked="" type="checkbox"/> Mid up: <input checked="" type="checkbox"/> Bottom up: <input checked="" type="checkbox"/>
Disturbed or difficult conditions (check all that apply): <input type="checkbox"/> Recent flood or debris flow <input type="checkbox"/> Stream modifications (e.g., channelization) <input type="checkbox"/> Diversions <input type="checkbox"/> Discharges <input type="checkbox"/> Drought <input type="checkbox"/> Vegetation removal/limitations <input type="checkbox"/> Other (explain in notes) <input checked="" type="checkbox"/> None Notes on disturbances or difficult site conditions:		
Observed hydrology: <u>100</u> % of reach with surface flow <u>100</u> % of reach with sub-surface or surface flow <u>0</u> # of isolated pools	Comments on observed hydrology: Continuous moving water, Braided channel with a clear primary channel within a shrub/scrub wetland.	

** bankfull
 based on
 measurements
 to include
 all channels
 present in
 project area,
 as a
 multi-
 threaded
 channel*

calculated bankfull based on measurements to include all channels present in project area, as a multi-threaded channel

Site sketch:



1. Mean bankfull channel width (m) (nearest 0.1 m, copy from first page of field form)

~~3.5~~ 3.5

Notes about mean bankfull channel width:

2. Aquatic macroinvertebrates: Abundance of perennial indicator taxa

Collect aquatic macroinvertebrates from at least 6 locations in the assessment reach, searching all suitable habitats on the streambed (including dry habitats, if present). Determine total abundance of individuals in perennial indicator families listed below, such that no one family counts for more than 11 individuals in the total.

Ephemeroptera	Plecoptera	Trichoptera	Coleoptera
Ephemerellidae (spiny crawler mayflies)	Chloroperlidae (green stoneflies)	Brachycentridae (humpless casemakers)	Elmidae (riffle beetles)
Heptageniidae (flathead mayflies)	Perlidae (common stoneflies)	Glossosomatidae (saddle casemakers)	
Leptohyphidae (little stout crawler mayflies)		Hydropsychidae (common net-spinners)	
Leptophlebiidae (prong-gilled mayflies)		Rhyacophilidae (free-living caddisflies)	

Mark the appropriate box for the number of perennial indicator individuals observed.

- No perennial indicator taxa detected
- 1 to 4 perennial indicator individuals
- 5 to 9 perennial indicator individuals
- 10 to 19 perennial indicator individuals
- 20 or more perennial indicator individuals

Check if applicable: No aquatic macroinvertebrates in assessment area

Notes on perennial indicator taxa:

3. Slope

Using a clinometer or other device, record the slope as a percent, up to the nearest half-percent.

60% W, 30% E

Notes about slope:

still steep slope to OHWM/TOB w/ wetland, but wetland itself very flat.

4. Number of hydrophytic plant species

Record up to 6 hydrophytic plant species (FACW or OBL in the appropriate regional wetland plant list, depending on location) within the assessment area: **within the channel or up to one half-channel width outside the channel**. Explain in notes if species has an odd distribution (e.g., one individual or small patch, long-lived species solely represented by seedlings, or long-lived species solely represented by specimens in decline), or if there is uncertainty about the identification. Enter photo ID or check if photos are taken.

4 Number of hydrophytic plant species identified from the assessment reach without odd distribution. Enter zero if none were found.

Check if applicable: No vegetation in assessment area

Species	Odd distribution?	Notes	Photo ID
Nasturtium officinale	N		
Salix lasiolepis	N		
Priscaria punctata	N		
Juncus patens	N		

Notes on hydrophytic vegetation:

No/very little upland plants at all w/ wetland area.

5. Prevalence of rooted upland plants in the streambed

<p><u>2.5</u> (0-3)</p> <p>Half-scores (0.5, 1.5, and 2.5) are allowed.</p>	<p>Evaluate the prevalence of rooted upland plants (i.e., plants rated as FAC, FACU, UPL, NI, or not listed in the regionally appropriate National Wetland Plant List) in the streambed.</p> <p>0 (Poor) Rooted upland plants are <i>prevalent</i> within the streambed/thalweg. 1 (Weak) Rooted upland plants are <i>consistently dispersed</i> throughout the streambed/thalweg. 2 (Moderate) There are <i>a few</i> rooted upland plants present within the streambed/thalweg. 3 (Strong) Rooted upland plants are <i>absent</i> from the streambed/thalweg.</p>												
<table border="1"> <thead> <tr> <th>Upland Species</th> <th></th> <th>Notes</th> <th>Photo ID</th> </tr> </thead> <tbody> <tr> <td>Rumex crispus</td> <td>FAC</td> <td></td> <td></td> </tr> <tr> <td>Hordeum murinum</td> <td>FACU</td> <td></td> <td></td> </tr> </tbody> </table>	Upland Species		Notes	Photo ID	Rumex crispus	FAC			Hordeum murinum	FACU			
Upland Species		Notes	Photo ID										
Rumex crispus	FAC												
Hordeum murinum	FACU												
<p>Notes on rooted upland plants:</p> <p>only present w/ odd distribution in ^{smaller} area outside of wetland. (only odd distribution)</p>													

6. Algal cover

Mark the appropriate box for the percent of the streambed covered by live or dead algae on the streambed.

- Not detected 10 to 40% cover
 ≤2% cover >40% cover
 2 to 10% cover Check here if algae *exclusively* appears to have been deposited from an upstream source, and *no* local growth is evident.

Notes on algal cover on the streambed:

Secondary channel (smaller) has close to 100% cover,
 ~30% overall in NWN-1

7. Differences in vegetation

<p style="text-align: center;"><u>3</u> (0-3)</p> <p>Half-scores (0.5, 1.5, 2.5) are allowed.</p>	<p>Compare the composition and density of plants growing on the banks and riparian areas to plants in the adjacent uplands. For this indicator, an upland species is not defined by its wetland indicator status, but rather by its location relative to the channel.</p> <p>0 (Poor) No compositional or density differences in vegetation are present between the banks and the adjacent uplands.</p> <p>1 (Weak) Vegetation growing along the reach may occur in greater densities or grow more vigorously than vegetation in the adjacent uplands, but there are no dramatic compositional differences between the two.</p> <p>2 (Moderate) A distinct riparian corridor exists along part of the reach. Riparian vegetation is interspersed with upland vegetation along the length of the reach.</p> <p>③ (Strong) Dramatic compositional differences in vegetation are present between the banks and the adjacent uplands. A distinct riparian vegetation corridor exists along the entire reach. Riparian, aquatic, or wetland species dominate the length of the reach.</p>
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Notes on differences in vegetation:

When 'bank' considered the edge of low wetland, there is a strong veg. difference. w/ wetland, there is an herbaceous understory that is greatly bare with patches of FACW/OBL species and Arroyo willow. There's a distinct change to upland *Baccharis* / *Toxicodendron* scrub.

8. Riffle-pool sequence

<p style="text-align: center;"><u>1</u> (0-3)</p> <p>Half-scores (0.5, 1.5, 2.5) are allowed.</p>	<p>Evaluate the prevalence of riffles, pools, and other microhabitats in the streambed.</p> <p>0 (Poor) No riffle-pool sequences observed.</p> <p>① (Weak) Mostly has areas of pools or riffles.</p> <p>2 (Moderate) Represented by a less frequent number of riffles and pools. Distinguishing the transition between riffles and pools is difficult to observe.</p> <p>3 (Strong) Demonstrated by a frequent number of structural transitions (e.g., riffles followed by pools) along the entire reach. There is an obvious transition between riffles and pools.</p>
<p>Notes about riffle-pool sequence:</p> <p style="font-family: cursive;">few riffle-pool sequences along streamfall over boulders, ~10ft from the culvert.</p>	

Photo log

Indicate if any other photographs taken during the assessment: *See Photo Log*

Photo ID	Description

Additional notes about the assessment:

Model classification:

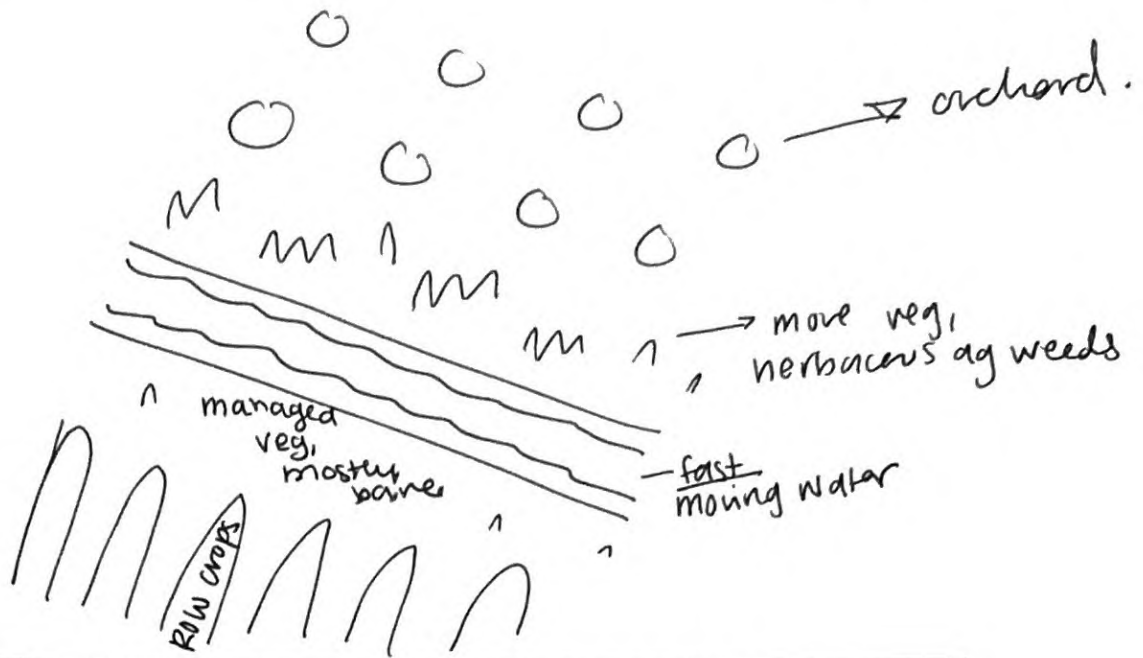
- | | |
|---|--|
| <p><input type="checkbox"/> Ephemeral</p> <p><input type="checkbox"/> At least intermittent</p> <p><input checked="" type="checkbox"/> Intermittent</p> | <p><input type="checkbox"/> Less than perennial</p> <p><input type="checkbox"/> Perennial</p> <p><input type="checkbox"/> Needs more information</p> |
|---|--|

Arid West Streamflow Duration Assessment Method

General site information

Project name or number: <i>Seahawk BESS</i>		
Site code or identifier: <i>14713.51 P15</i>	Assessor(s): <i>GF + KH</i>	
Waterway name: <i>OTH-3 / DT-3</i>	Visit date: <i>2127126</i>	
Current weather conditions (check one): <input type="checkbox"/> Storm/heavy rain <input type="checkbox"/> Steady rain <input type="checkbox"/> Intermittent rain <input type="checkbox"/> Snowing <input checked="" type="checkbox"/> Cloudy (<i>30</i> % cover) <input type="checkbox"/> Clear/sunny	Notes on current or recent weather conditions (e.g., precipitation in prior week):	Coordinates at downstream end (decimal degrees): Lat (N): <i>36.94617</i> Long (E): <i>-121.75510</i> Datum:
Surrounding land-use within 100 m (check one or two): <input type="checkbox"/> Urban/industrial/residential <input checked="" type="checkbox"/> Agricultural (farmland, crops, vineyards, pasture) <input type="checkbox"/> Developed open-space (e.g., golf course) <input type="checkbox"/> Forested <input type="checkbox"/> Other natural <input type="checkbox"/> Other: _____	Describe reach boundaries: <i>Upstream / Downstream within agricultural fields - water is clear excavated irrigation ditch.</i>	
Mean bankfull channel width (m): <i>3m</i> (Indicator 1)	Reach length (m): 40x width <i>200m</i> min 40 m max 200 m	Site photographs: Enter photo ID or check if completed. Top down: <input checked="" type="checkbox"/> Mid down: <input checked="" type="checkbox"/> Mid up: <input checked="" type="checkbox"/> Bottom up: <input checked="" type="checkbox"/>
Disturbed or difficult conditions (check all that apply): <input type="checkbox"/> Recent flood or debris flow <input type="checkbox"/> Stream modifications (e.g., channelization) <input type="checkbox"/> Diversions <input type="checkbox"/> Discharges <input checked="" type="checkbox"/> Drought <input checked="" type="checkbox"/> Vegetation removal/limitations - <i>veg managed on south side of water.</i> <input type="checkbox"/> Other (explain in notes) <input type="checkbox"/> None		
Notes on disturbances or difficult site conditions: <i>Agricultural disturbance likely excavated ditch</i>		
Observed hydrology: <i>100</i> % of reach with surface flow <i>100</i> % of reach with sub-surface or surface flow <i>0</i> # of isolated pools		
Comments on observed hydrology:		

Site sketch:



1. Mean bankfull channel width (m) (nearest 0.1 m, copy from first page of field form)

3

Notes about mean bankfull channel width:

2. Aquatic macroinvertebrates: Abundance of perennial indicator taxa

Collect aquatic macroinvertebrates from at least 6 locations in the assessment reach, searching all suitable habitats on the streambed (including dry habitats, if present). Determine total abundance of individuals in perennial indicator families listed below, such that no one family counts for more than 11 individuals in the total.

Ephemeroptera	Plecoptera	Trichoptera	Coleoptera
Ephemerellidae (spiny crawler mayflies)	Chloroperlidae (green stoneflies)	Brachycentridae (humpless casemakers)	Elmidae (riffle beetles)
Heptageniidae (flathead mayflies)	Perlidae (common stoneflies)	Glossosomatidae (saddle casemakers)	
Leptohyphidae (little stout crawler mayflies)		Hydropsychidae (common net-spinners)	
Leptophlebiidae (prong-gilled mayflies)		Rhyacophilidae (free-living caddisflies)	

Mark the appropriate box for the number of perennial indicator individuals observed.

- No perennial indicator taxa detected
- 1 to 4 perennial indicator individuals
- 5 to 9 perennial indicator individuals
- 10 to 19 perennial indicator individuals
- 20 or more perennial indicator individuals

Check if applicable: No aquatic macroinvertebrates in assessment area

Notes on perennial indicator taxa:

3. Slope

Using a clinometer or other device, record the slope as a percent, up to the nearest half-percent.

60%

Notes about slope:

4. Number of hydrophytic plant species

Record up to 6 hydrophytic plant species (FACW or OBL in the appropriate regional wetland plant list, depending on location) within the assessment area: **within the channel or up to one half-channel width outside the channel**. Explain in notes if species has an odd distribution (e.g., one individual or small patch, long-lived species solely represented by seedlings, or long-lived species solely represented by specimens in decline), or if there is uncertainty about the identification. Enter photo ID or check if photos are taken.

2 Number of hydrophytic plant species identified from the assessment reach without odd distribution. Enter zero if none were found.

Check if applicable: No vegetation in assessment area

Species	Odd distribution?	Notes	Photo ID
<i>Cyperus eragrostis</i>	N		
<i>Persicaria punctata</i>	N		

Notes on hydrophytic vegetation:

5. Prevalence of rooted upland plants in the streambed

<p><u>0.5</u> (0-3)</p> <p>Half-scores (0.5, 1.5, and 2.5) are allowed.</p>	<p>Evaluate the prevalence of rooted upland plants (i.e., plants rated as FAC, FACU, UPL, NI, or not listed in the regionally appropriate National Wetland Plant List) in the streambed.</p> <p>0 (Poor) Rooted upland plants are <i>prevalent</i> within the streambed/thalweg. 1 (Weak) Rooted upland plants are <i>consistently dispersed</i> throughout the streambed/thalweg. 2 (Moderate) There are <i>a few</i> rooted upland plants present within the streambed/thalweg. 3 (Strong) Rooted upland plants are <i>absent</i> from the streambed/thalweg.</p>	
<p>Upland Species</p> <p><i>Geranium dissectum</i></p> <p><i>Bromus diandrus</i></p> <p><i>Rumex crispus</i></p>	<p>Notes</p>	<p>Photo ID</p>
<p>Notes on rooted upland plants: <i>Anagallis arvensis</i>. many upland plants present, but still clearly much less lower in stream bed.</p>		

6. Algal cover

Mark the appropriate box for the percent of the streambed covered by live or dead algae on the streambed.

- Not detected 10 to 40% cover
 ≤2% cover >40% cover
 2 to 10% cover Check here if algae *exclusively* appears to have been deposited from an upstream source, and *no* local growth is evident.

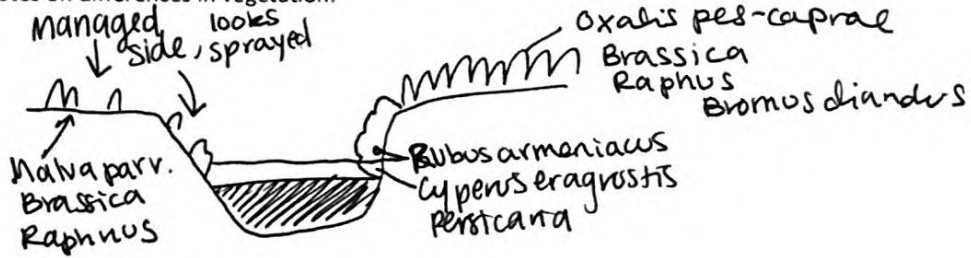
Notes on algal cover on the streambed:

some along edge of water

7. Differences in vegetation

<p style="font-size: 24pt; font-weight: bold;">2 (0-3)</p> <p>Half-scores (0.5, 1.5, 2.5) are allowed.</p>	<p>Compare the composition and density of plants growing on the banks and riparian areas to plants in the adjacent uplands. For this indicator, an upland species is not defined by its wetland indicator status, but rather by its location relative to the channel.</p> <p>0 (Poor) No compositional or density differences in vegetation are present between the banks and the adjacent uplands.</p> <p>1 (Weak) Vegetation growing along the reach may occur in greater densities or grow more vigorously than vegetation in the adjacent uplands, but there are no dramatic compositional differences between the two.</p> <p>② (Moderate) A distinct riparian corridor exists along part of the reach. Riparian vegetation is interspersed with upland vegetation along the length of the reach.</p> <p>3 (Strong) Dramatic compositional differences in vegetation are present between the banks and the adjacent uplands. A distinct riparian vegetation corridor exists along the entire reach. Riparian, aquatic, or wetland species dominate the length of the reach.</p>
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Notes on differences in vegetation:



8. Riffle-pool sequence

<p style="text-align: center;"><u>0</u> (0-3)</p> <p>Half-scores (0.5, 1.5, 2.5) are allowed.</p>	<p>Evaluate the prevalence of riffles, pools, and other microhabitats in the streambed.</p> <p>0 (Poor) No riffle-pool sequences observed.</p> <p>1 (Weak) Mostly has areas of pools or riffles.</p> <p>2 (Moderate) Represented by a less frequent number of riffles and pools. Distinguishing the transition between riffles and pools is difficult to observe.</p> <p>3 (Strong) Demonstrated by a frequent number of structural transitions (e.g., riffles followed by pools) along the entire reach. There is an obvious transition between riffles and pools.</p>
<p>Notes about riffle-pool sequence:</p> <p style="font-size: 1.2em; margin-left: 40px;">Only fast-flowing water, no pools</p>	

Photo log

Indicate if any other photographs taken during the assessment: *see photolog*

Photo ID	Description

Additional notes about the assessment:

Model classification:

- | | |
|---|--|
| <p><input checked="" type="checkbox"/> Ephemeral</p> <p><input type="checkbox"/> At least intermittent</p> <p><input type="checkbox"/> Intermittent</p> | <p><input type="checkbox"/> Less than perennial</p> <p><input type="checkbox"/> Perennial</p> <p><input type="checkbox"/> Needs more information</p> |
|---|--|

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Seahawk BESS City/County: Santa Cruz County Sampling Date: 2/25/26
 Applicant/Owner: _____ State: CA Sampling Point: ~~SP-1~~ SP-1
 Investigator(s): GF, KH Section, Township, Range: S28, T11S, R2E
 Landform (hillslope, terrace, etc.): Flat depression Local relief (concave, convex, none): Concave Slope (%): 1
 Subregion (LRR): C Lat: 36.95156 Long: -121.76145 Datum: _____
 Soil Map Unit Name: Pinto loam, 2-9% slopes NWI classification: None
 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 _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Salix lasiolepis</u>	<u>35</u>	<u>D</u>	<u>FACW</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____	_____	_____	
<u>35</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species _____ x 1 = _____
3. _____	_____	_____	_____	FACW species _____ x 2 = _____
4. _____	_____	_____	_____	FAC species _____ x 3 = _____
5. _____	_____	_____	_____	FACU species _____ x 4 = _____
_____ = Total Cover				UPL species _____ x 5 = _____
				Column Totals: _____ (A) _____ (B)
				Prevalence Index = B/A = _____
Herb Stratum (Plot size: <u>5 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>Rubus ursinus</u>	<u>10</u>	<u>D</u>	<u>FAC</u>	<input checked="" type="checkbox"/> Dominance Test is >50%
2. <u>Juncus patens</u>	<u>10</u>	<u>D</u>	<u>FACW</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹
3. <u>Panicum punctatum</u>	<u>2</u>	_____	<u>OBL</u>	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. <u>Cyperus eragrostis</u>	<u>4</u>	_____	<u>FACW</u>	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
<u>26</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Footnote:
1. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>74</u> % Cover of Biotic Crust _____		Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____		
Remarks:				

SOIL

Sampling Point: SP-1

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		
0-4	2.5YR 3/2	100						No redox
4-12	2.5YR 3/2	95	10YR 5/8	5	C	m	Sandy CL	

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 Soils ³ :
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR C) <input type="checkbox"/> 1 cm Muck (A9) (LRR D) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input checked="" type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)
	<input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> 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 checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water Marks (B1) (Riverine) <input type="checkbox"/> Sediment Deposits (B2) (Riverine) <input type="checkbox"/> Drift Deposits (B3) (Riverine) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

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

Water Table Present? Yes No Depth (inches): 8"

Saturation Present? 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

Project/Site: SEAHAWK BESS City/County: Santa Cruz County Sampling Date: 2/25/20
 Applicant/Owner: _____ State: CA Sampling Point: SP-2
 Investigator(s): GF, EH Section, Township, Range: S28, T11S, R2E
 Landform (hillslope, terrace, etc.): Flat, Depression Local relief (concave, convex, none): Flat, Depression Slope (%): 0
 Subregion (LRR): C Lat: 36.95159 Long: -121.76140 Datum: _____
 Soil Map Unit Name: pinto loam, 2-9% slopes NWI classification: None
 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 _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Salix lasiolepis</u>	<u>70</u>	<u>D</u>	<u>FACW</u>	Dominance Test worksheet: 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. _____	_____	_____	_____	
<u>70</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: <u>30 ft</u>)				
1. <u>Rubus ursinus</u>	<u>30</u>	<u>D</u>	<u>FAC</u>	
2. <u>Toxicodendron diversilobum</u>	<u>5</u>	_____	<u>FACW</u>	
3. _____	_____	_____	_____	
<u>35</u> = Total Cover				
Herb Stratum (Plot size: <u>5 ft</u>)				
1. <u>Persicaria punctata</u>	<u>2</u>	_____	<u>OBL</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
<u>2</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30 ft</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>90</u> % Cover of Biotic Crust _____		Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____		
Remarks:				

SOIL

Sampling Point: SP-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		
0-3	2.5YB/1	100					S&S Sandy CL	
3-12	2.5YB/1	80	2.5Y 4/6	20	C	M/PL	Sandy CL	

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:

- 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)

- 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:

1 cm layer muck @ surface
Lots of red redox.

HYDROLOGY

Wetland Hydrology Indicators:

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

Secondary Indicators (2 or more required)

- 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 Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

- 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): _____
Water Table Present? Yes No Depth (inches): 10"
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:

SOIL

Sampling Point: SP-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		
0-5	10YR 3/4	100					Sandy	

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

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

Restrictive Layer (if present): Type: <u>compact soil</u> Depth (inches): <u>5"</u>	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
--	--

Remarks:
Likely graded soil-
Herbaceous veg mowed.

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

<input type="checkbox"/> Water Marks (B1) (Riverine) <input type="checkbox"/> Sediment Deposits (B2) (Riverine) <input type="checkbox"/> Drift Deposits (B3) (Riverine) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Field Observations:

Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____

(includes capillary fringe)

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Seahawk BESS gen-tie City/County: Santa Cruz County Sampling Date: 2/27/20
 Applicant/Owner: _____ State CA Sampling Point: SP-4
 Investigator(s): KH, GF Section, Township, Range: S28, T11S, R2E
 Landform (hillslope, terrace, etc.): terrace (above culvert) Local relief (concave, convex, none): convex Slope (%): 0
 Subregion (LRR): C Lat: 36.95129 Long: -121.76140 Datum: _____
 Soil Map Unit Name: Pinto loam, 2-9% slopes NWI classification: None
 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 _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Salix lasiolepis</u>	<u>30</u>	<u>D</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66%</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>30</u> = Total Cover				Prevalence Index worksheet: Total % Cover of _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: <u>30 ft</u>)				
1. <u>Baccharis pilularis</u>	<u>15</u>	<u>D</u>	<u>NL</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>15</u> = Total Cover				
Herb Stratum (Plot size: <u>5 ft</u>)				
1. <u>Hordeum murinum</u>	<u>35</u>	<u>D</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Geranium molle</u>	<u>1</u>	_____	<u>NL</u>	
3. <u>Raphanus sativus</u>	<u>2</u>	_____	<u>NL</u>	
4. <u>Rubus ursinus</u>	<u>40</u>	<u>D</u>	<u>FAC</u>	
5. <u>Avena sativa</u>	<u>10</u>	_____	<u>UPL</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
<u>88</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30 ft</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>5</u> % Cover of Biotic Crust _____		Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____		
Remarks:				

SOIL

Sampling Point: SP-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	7.5YR2.5/2	100					Sandy Loam	some org matter / roots
3-5	10YR4/1	100					Sand	gravelly w/ rocks
5-9.5	10YR3/2	100					Sandy Clay	rocky

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.)

<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:

<u>Primary Indicators (minimum of one required; check all that apply)</u>		<u>Secondary Indicators (2 or more required)</u>
<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 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 <input checked="" type="checkbox"/>	Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Water Table Present? Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	
Saturation Present? Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	

(includes capillary fringe)

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

Remarks:

Higher than culvert, no hydro

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Seahawk BSS City/County: Santa Cruz County Sampling Date: 2/27/26
 Applicant/Owner: _____ State: CA Sampling Point: SP-5
 Investigator(s): GFIKH Section, Township, Range: S28, T11S, R2E
 Landform (hillslope, terrace, etc.): ridge Local relief (concave, convex, none): convex Slope (%): 0
 Subregion (LRR): C Lat: 36.95134 Long: -121.76145 Datum: _____
 Soil Map Unit Name: Pinto loam 2-9% slopes NWI classification: None
 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 _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Salix lasiolepis</u>	<u>50</u>	<u>D</u>	<u>FACW</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
<u>50</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>30 ft</u>)				
1. <u>Rubus ursinus</u>	<u>70</u>	<u>D</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	% Bare Ground in Herb Stratum <u>30</u> % Cover of Biotic Crust _____
8. _____	_____	_____	_____	
Herb Stratum (Plot size: <u>5 ft</u>)				
1. _____	_____	_____	_____	Remarks: <u>NO herbaceous FACW/OBL species w/ B area.</u>
2. _____	_____	_____	_____	
Woody Vine Stratum (Plot size: <u>30 ft</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	

Attachment E

Civil Plans (See Appendix 2C of the CEC Opt-In Application)

Attachment F

Biological Resources AB 205 Section (See Section 3.2
of the CEC Opt-In Application)

Appendix 3.2E

Resumes of Applicant's Biologists

Gwyn Fritz

BIOLOGIST

Gwyn Fritz (*GWEN FRITS; she/her*) is a biologist with 2 years' experience working in botany and natural resources, specializing in vegetation monitoring, special-status species surveys, and wetland delineations.

In addition, Gwyn has experience in both the private and public sectors conducting mitigation bank monitoring, botanical inventories, herbarium voucher collections, rare plant surveys, invasive species monitoring, wildlife surveys, California Environmental Quality Act document preparation, and construction monitoring. She is especially versed in California and Oregon species and regulations.

Project Experience

Arroyo Pasajero Project, Department of Water Resources, Fresno County, California. Served as a biologist to conduct a protocol-level survey for the tricolored blackbird (*Agelaius tricolor*) across approximately 19.5 linear miles of roadway. (2026)

Cantua Creek Project, Department of Water Resources, Fresno County, California. Served as a botanist and wetland scientist to conduct rare plant surveys, vegetation community mapping, and an aquatic jurisdictional determination across an approximately 185-acre site. (2026)

Confidential Solar Project, Confidential Client, Kern County, California. Served as a botanist to conduct rare plant surveys across approximately 2,500 acres of grassland habitat. (2026)

Interstate 280 Wildfire Mitigation Project, Los Altos Hills County Fire District, Santa Clara County, California. Served as a botanist to conduct rare plant surveys across 12 linear miles along Interstate 280 prior to fuel reduction treatment. (2026)

Confidential Development Project, Confidential Client, Sacramento County, California. Served as a botanist and wetland scientist to conduct an aquatic resource delineation across a 70-acre site to determine jurisdictional oversight of the project's wetlands and streams. (2026)

Jessie Street Marsh Wetland Enhancement Project, City of Santa Cruz, Santa Cruz County, California. Served as a botanist and wetland scientist to inform wetland restoration actions on a small public park. Tasks included an aquatic resources delineation, biological resources assessment, and report writing. (2025)

Confidential Single-Family Home Development Project, Confidential Client, Santa Cruz County. Served as a biologist to conduct a biological reconnaissance survey to determine the presence of sensitive species, natural communities, and aquatic resources. (2025)



Education

Willamette University
BA, Biology, 2023

Certifications

40-Hour Wetland
Delineation Training,
Wetland Training Institute
CDFW Plant Voucher
Collecting Permit
No. 2081(a)-25-206-V

Professional Affiliations

The California Native
Plant Society
The Jepson Herbarium

East Dunne Avenue Escape Route Project, Santa Clara County FireSafe Council, Santa Clara County, California. Contributed as a biologist to identify sensitive biological resources along approximately 3.0 miles of roadway designated for fuel reduction treatment. Tasks included a survey for San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*), roosting bat and nesting bird habitat, rare plants, and aquatic resources. (2025)

Oroville Pump Storage Project, California Department of Water Resources, Butte County, California. Served as a botanist and aquatic resource specialist to conduct an aquatic resource delineation across a site of more than 400 acres to determine jurisdictional oversight over the project site’s wetlands and streams. (2025)

Kittredge Mitigation Monitoring Project, San Jose Water Company, Los Gatos, California. Contributed as a botanist to on a long-term wetland mitigation monitoring project at Lake Kittredge. Tasks included plant count surveys and vegetation monitoring along transects. (2025)

Confidential Development Project, Confidential Client, Santa Cruz County, California. Contributed as a biologist to survey for special-status and roosting bats for a small development. Tasks included a daytime roost survey and camera scoping of structures and a nighttime emergence survey. (2025)

Morgan Territory Road Bridge Replacement Project, Contra Costa County Public Works, Livermore, Contra Costa County, California. Contributed as a biologist to assess habitat potential for roosting bats prior to tree and infrastructure removal. Tasks included a nighttime visual and acoustic survey. (2025)

Scarlet Solar Project, EDP Renewables, Fresno County, California. Contributed as a biologist to assess potential for burrowing owls (*Athene cunicularia*) on a large solar field construction site. Tasks included walking transects for burrows and burrowing owl sign, deployment of camera traps, and burrow excavation. (2025)

B.F. Sisk Dam Modification Project, California Department of Water Resources, Gustine, California. Contributed as a biologist to conduct monthly pond surveys of California red-legged frog (*Rana draytonii*) within the dam’s project area. Tasks included a nighttime protocol-level survey, in which three adults were positively identified. (2025)

Robleda–Burke Evacuation Route Project, Santa Clara County Firesafe Council, Los Altos Hills, California. Contributed as a biologist to identify biological resources along 3 miles of roadway designated for fuel reduction treatment. Tasks included a survey for San Francisco dusky-footed woodrats, other sensitive species, and aquatic resources. (2025)

Relevant Previous Experience

Assistant Staff Biologist, Sunset Ecological Solutions LLC, San Francisco, California. Served as a biologist and botanist to conduct biological resource assessments, wetland delineations, pre-treatment surveys, biological construction monitoring, restoration monitoring, and permitting for various small-scale development projects throughout San Mateo and Santa Clara Counties. (December 2024–September 2025)

Conservation Biology Intern, Midpeninsula Regional Open Space District, Los Altos, California. Served as an intern in the Department of Natural Resources to carry out projects relating to land management and plant ecology. Tasks included forest soil sample collection and laboratory preparation for the La Honda Forest Health Project, design and deployment of insect traps for polyphagous shot hole borer (*Euwallacea fornicatus*) monitoring, plant voucher collection for in-house herbarium establishment, dip-net larval surveys for California red-legged frog, rangeland monitoring, rare plant scouting, pre-treatment rare plant surveys, and botanical inventories. (April–November 2024)

Botany Assistant, City of Eugene Parks and Open Space, Eugene, Oregon. Served as a botany technician on the Ecological Services team to carry out plant conservation tasks relating to the West Eugene Wetlands project. Tasks included botanical monitoring across mitigation banks, rare plant surveys, seed collection and processing, and emerald ash borer (*Agrilus planipennis*) monitoring. (May–October 2023)

Specialized Training

- **Basic Wetland Delineation, Wetland Training Institute Inc.** Basic 40-hour course reviewing field and reporting techniques for wetland delineation following U.S. Army Corps of Engineers protocols. 2025.
- **Fifty Plant Families in the Field: Monterey Bay, The Jepson Herbarium.** Field-based 4-day workshop on Monterey County plant identification. 2025.
- **Rare Plant Survey Protocols Workshop, California Native Plant Society.** Lecture and field-based workshop on protocol-level rare plant surveys. 2025.

Kelsey Higney

BIOLOGIST

Kelsey Higney (*KEL-see HIG-nee; she/her*) is a biologist with 7 years' experience in field biology, conducting surveys for birds, herpetofauna, invertebrates, mammals, and plants, as well as habitat assessments and compliance monitoring. She has worked extensively on protocol-level and preconstruction surveys for a range of sensitive species including burrowing owl (*Athene cunicularia*), California tiger salamander (*Ambystoma californiense*), California red-legged frog (*Rana draytonii*), California spotted owl (*Strix occidentalis occidentalis*), Swainson's hawk (*Buteo swainsoni*), rare plants, and Migratory Bird Treaty Act nesting birds. Ms. Higney has extensive experience and leads crews in nesting bird surveys in Northern and Central California. She has a broad skill set in wildlife and botanical sampling techniques, invasive plant management, technical report writing, and data management.

Project Experience Development

Haas Rare Plant Surveys, Santa Cruz, California. Performed three rare plant surveys across blooming periods of potentially occurring sensitive plants to inform a biological constraints assessment for an upcoming residential/recreational project. (2025)

UCSC Hagar West Student Housing Biological Monitoring and Surveys, Santa Cruz, California. Performed preconstruction surveys for nesting birds and local grassland burrowing species. Performed WEAP training and provided construction monitoring during construction. (2024)

Main Street Ferry Terminal Marine Mammal Surveys and Monitoring, San Francisco Bay Area Water Emergency Transport Authority, Alameda, California. Performed preconstruction surveys for the presence of harbor seals (*Phoca vitulina*) and California sea lions (*Zalophus californianus*) within the Alameda ferry terminal impact zones. Provided construction monitoring for marine mammals during in-water construction. (2023)

El Salto Drive Project, City of Capitola, California. Performed a biological resources reconnaissance survey for sensitive biological resources including plants, wildlife, and potentially jurisdictional aquatic resources. Provided the client with the scope of work. Composed a biological resources technical memorandum. (2023)

Don Dahvee Trailhead Improvement Project, City of Monterey, California. Performed a biological resources reconnaissance survey for sensitive biological resources including plants, wildlife, and potentially jurisdictional aquatic resources. Target plant species in the area included Yadon's rein-orchid (*Piperia yadonii*), Monterey pine (*Pinus radiata*), and Hickman's onion (*Allium hickmanii*). Monterey pine was identified on the project site. Provided the client with the scope of work. Composed a biological resources technical memorandum. (2023)



Education

Antioch University New England
MS, Environmental Studies (Conservation Biology)

San Francisco State University
BS, Biology (Zoology)

Certifications

CDFW Plant Voucher Collecting Permit No. 2081(a)-23-098-V

Wetland Training Institute
Basic Wetland Delineation Course

Veterans Memorial Park Parking Lot Improvement Project, City of Monterey, California. Performed a biological resources reconnaissance survey for sensitive biological resources including plants, wildlife, and potentially jurisdictional aquatic resources. Target plant species in the area included Monterey pine, which was identified on the project site. Yadon's rein-orchid is known to occur in the project region. Provided the client with the scope of work. Composed a biological resources technical memorandum. (2023)

Pelican's Jaw Blunt-Nosed Leopard Lizard Surveys, Confidential Client, Kettleman City, California. Performed blunt-nosed leopard lizard (*Gambelia sila*) protocol transect survey of a potential solar energy site as a Level 1 surveyor, under the guidance of a Level 2 survey lead. (2023)

Coyote Creek Swainson's Hawk and Burrowing Owl Surveys, Confidential Client, Sloughhouse, California. Led nesting season surveys for burrowing owl and Swainson's hawk. Performed habitat mapping of potential nectar resources and nesting habitat for Crotch's bumble bee (*Bombus crotchii*). (2022–2023)

San Benito Campus Project Burrow Survey, Gavilan College, Hollister, California. Surveyed for burrows with potential to support sensitive wildlife including California tiger salamander, American badger (*Taxidea taxus*), burrowing owl, and San Joaquin kit fox (*Vulpes macrotis mutica*), and reviewed the draft of a biological resources technical memorandum. (2023)

Habitat Conservation Plan Vegetation Mapping, University of California, Santa Cruz, California. Assisted senior botanist with vegetation mapping on the University of California, Santa Cruz, campus. (2022)

Brio Studios Mixed-Use Building Site Nesting Bird Survey, Confidential Client, Fairfield, California. Performed a Migratory Bird Treaty Act nesting bird survey of the work site for active bird nests. (2022)

Mission Trail Preserve Reconnaissance Survey, Confidential Client, Carmel-by-the-Sea, California. Surveyed for sensitive wildlife and plant species to inform project constraints and drafted a technical memorandum. (2022)

Energy

Confidential Solar Project, Alameda County, California. Performed biological resources surveys including burrow mapping, floral resources mapping for Crotch's bumble bee, California red-legged frog habitat assessment, and a rare plant survey for an energy storage site. Identified big tarplant (*Blepharizonia plumosa*) within the survey area. (2023)

Gonzaga Ridge Wind Farm Repowering Project Rare Plant and Aquatic Delineation Surveys, Confidential Client, Los Banos, California. Performed rare plant surveys under supervision of a qualified botanist in the vicinity of San Luis Reservoir, California (field logistics lead). Target plant species were big-scale balsam root (*Balsamorhiza macrolepis*), Hall's bush-mallow (*Malacothamnus hallii*), lime-ridge navarretia (*Navarretia gowenii*), shining navarretia (*Navarretia nigelliformis* ssp. *radians*), and spiny-sealed button celery (*Eryngium spinosepalum*). Assisted with the jurisdictional delineation of aquatic resources, identifying multiple vernal pools, ephemeral drainages, seasonal wetlands, and seasonal wetland swales. Composed a rare plant survey memorandum, aquatic resources delineation report, and biological sections of the project's California Environmental Quality Act (CEQA) addendum. (2023)

Gonzaga Raptor Point-Count Surveys, Confidential Client, Los Banos, California. Performed point counts for all raptor species present on a wind energy site, with a focus on the age class and flight path of golden eagles (*Aquila chrysaetos*) and bald eagles (*Haliaeetus leucocephalus*). (2022–2023)

Sonrisa Solar Swainson's Hawk Surveys, Confidential Client, Mendota, California. Performed breeding-season surveys for Swainson's hawk to locate and monitor nests. Identified Swainson's hawk pairs and individuals and determined stages of active nests. (2022–2023)

Ponderosa Battery Energy Storage Biological Reconnaissance Survey, Confidential Client, Sacramento, California. Surveyed for potential habitat to support sensitive wildlife, plants, and aquatic resources to inform project constraints and drafted a biological resources assessment. (2022)

Confidential Solar Project, Confidential Client, Santa Rosa, California. Performed wildlife reconnaissance and assisted with rare plant reconnaissance and jurisdictional delineation. Composed a biological resource assessment technical report. (2022)

Berrenda Mesa Solar Project, Confidential Client, Lost Hills, California. Monitored the installation of utility poles for blunt-nosed leopard lizard and the safety of common wildlife. (2022)

Confidential Solar Project, Confidential Client, Newman, California. Participated in preconstruction surveys for San Joaquin kit fox (15 transect miles), burrowing owl (15 transect miles), and valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*; 1 hour), for a total of approximately 20 survey hours. (2021)

Confidential Solar Project, Confidential Client, Mojave, California. Participated in site clearance surveys for Mojave desert tortoise (60 transect miles) and preconstruction surveys for San Joaquin kit fox, burrowing owl, and American badger (30 transect miles). Performed four burrow/den excavations and compliance monitoring, including the relocation of non-listed small mammals and snakes, for a total of approximately 150 hours. (2021)

Fire/Fuels Mitigation

Altamont Road Evacuation Route Project, Santa Clara County FireSafe Council (SCCFSC), Los Altos, California. Project managed and performed preconstruction surveys for sensitive biological resources including nesting birds, San Francisco dusky-footed woodrat (*Neotoma fuscipes* ssp. *annectens*) middens, sensitive California Department of Fish and Wildlife sensitive vegetation communities, and aquatic resources to flag for avoidance prior to vegetation/fuels management. (2024)

La Paloma Drive Evacuation Route Project, Santa Clara County FireSafe Council (SCCFSC), Los Altos, California. Project managed and performed preconstruction surveys for sensitive biological resources including nesting birds, San Francisco dusky-footed woodrat middens, sensitive California Department of Fish and Wildlife sensitive vegetation communities, and aquatic resources to flag for avoidance prior to vegetation/fuels management. (2024)

Robleda-Burke Evacuation Route Project, Santa Clara County FireSafe Council (SCCFSC), Los Altos, California. Performed preconstruction surveys for sensitive biological resources including San Francisco dusky-footed woodrat middens, sensitive California Department of Fish and Wildlife sensitive vegetation communities, and aquatic resources to flag for avoidance prior to vegetation/fuels management. (2023)

Page Mill Road Evacuation Route Project, SCCFSC, Los Altos, California. Performed preconstruction surveys for sensitive biological resources including nesting birds prior to vegetation/fuels management. (2023)

Bear Creek Redwoods Preconstruction Surveys, Midpeninsula Open Space Trust, Los Gatos, California. Surveyed and flagged sensitive natural resources including San Francisco dusky-footed woodrat middens and aquatic resources for avoidance during vegetation treatments for fuels mitigation. (2022–2023)

Highways 35 and 84 Roadside Fuel Management Project, FIRE SAFE San Mateo County, California. Performed field reconnaissance for sensitive wildlife and plant resources along highway corridors. Performed vegetation mapping to California Department of Fish and Wildlife (CDFW) alliances. Composed a biological constraints analysis technical report. (2022)

Infrastructure

Arana Gulch Sewer Line Replacement Project, County of Santa Cruz, California. Relocated woodrat middens to new locations away from the project site to mitigate impacts of vegetation clearing. Provided construction monitoring during vegetation clearing and debris removal. Provided restoration monitoring after revegetation efforts alongside subcontractor. Delivered the project-specific Worker's Environmental Awareness Training (WEAT). (2023-2025)

Presidio of Monterey Preconstruction Surveys, City of Monterey, California. Performed preconstruction nesting bird surveys prior to tree work within the Presidio of Monterey. Composed a biological resources technical memorandum. (2023-2025)

Iris Canyon Sediment Removal Project, City of Monterey, California. Performed preconstruction surveys for sensitive biological resources including nesting birds and California red-legged frog and monitored vegetation clearing and sediment removal activities within Iris Canyon, Monterey, California. Performed revegetation monitoring of restoration plantings. (2023-2024)

East Cliff Sanitary Sewer Transmission Marine Mammal Surveys, Confidential Client, Santa Cruz, California. Performed site impact surveys for bridge alteration on marine mammals in the Santa Cruz Small Craft Harbor, collecting data on off-haul sites and the number of individuals. (2022)

Eureka Manchester Fiber Optic, Confidential Client, Eureka and Ukiah, California. Assisted with jurisdictional delineation and vegetation mapping along the project alignment. (2022)

Mitigation and Restoration Monitoring

Restoration Monitoring, Carmel Mission Nature Trail Preserve, Carmel, California. Monitored success of restoration plantings including *Carex*, *Salix*, and *Juncus* spp. for public trail improvement project as required by CDFW permits. (2024-2025).

Bonturi Ranch Kit Fox Surveys, Los Banos, California. Performed San Joaquin kit fox burrow survey transects and camera trap study support on a potential mitigation site within San Joaquin kit fox habitat. (2023)

Potrero Hills Landfill Mitigation Site California Tiger Salamander Survey, Confidential Client, North San Francisco Bay, California. Performed dip-net surveys for larval California tiger salamanders. Handled more than 400 larval individuals. (2022)

Permitting

San Joaquin Field Division Culvert Replacement Project, California Department of Water Resources (DWR), Bakersfield, California. Assisted with compiling permit applications for receipt by the U.S. Army Corps of Engineers (USACE), CDFW, and the Regional Water Quality Control Board (RWQCB) for a culvert replacement project. (2023)

Alpine Rancho Palo Verde Project, Confidential Client, Chula Vista, California. Assisted with compiling permit applications for receipt by USACE, CDFW, and the RWQCB for a residential development. (2023)

Nirvana Project, Confidential Client, Chula Vista, California. Assisted with compiling permit applications for receipt by USACE, CDFW, and the San Diego RWQCB for a commercial development in Chula Vista. (2021)

Transportation

Highway 128 Emergency Repairs Monitoring, California Department of Transportation, Sonoma County, California. Provided biological monitoring within foothill yellow-legged frog (*Rana boylei*) and red-bellied newt (*Taricha rivularis*) habitat during emergency highway repairs. (2023)

Water Resources/Stormwater

Delta Field Division Embedded Position, DWR, Byron, California. Worked as an embedded staff at the Delta Field Division to help manage the internal DWR environmental compliance for DWR Civil Maintenance projects. (2024-2025)

Delta Dams Rodent Burrow Remediation Project Compliance, DWR, Tracy, California. Managed scheduling and permit compliance tasks as part of Dudek's Delta Dams project team. Performed compliance monitoring at Dyer and Patterson Dams for rodent burrow remediation activities including weekly fence checks in known uplands for California tiger salamander and California red-legged frog. Performed vegetation monitoring of revegetated areas and tracked success criteria of restoration of temporary impact areas at Patterson Dam. Composed monthly and annual reports to the federal and state agencies. (2024-2025)

Jurisdictional Delineation for New CCF Southern Parcel Acquisition, DWR, Tracy, California. Assisted in conducting the jurisdictional delineation for the addition of land to the Delta Field Division region near Clifton Court. (2024).

Storm Drain Maintenance Program, City of Monterey, California. Performed biological pre-construction surveys for sensitive plants and wildlife including California red-legged frog in areas of impact associated with the City of Monterey's storm drain maintenance program. Delivered the project-specific WEAT and the city's annual WEAT training, covering all sensitive biological resources potentially occurring in the project region. (2023)

New Groundwater Well Project, Scotts Valley Water District, Scotts Valley, California. Surveyed for sensitive wildlife and plant species to inform project constraints at a water infrastructure site and drafted a technical memorandum. (2022)

Clifton Court Forebay Rodent Burrow Remediation Project Compliance, DWR, Tracy, California. Monitored rodent burrow remediation activities aimed at preventing damage to state water infrastructure along the slope of the forebay. Performed a preconstruction nesting bird survey identifying an active red-winged blackbird (*Agelaius phoeniceus*) nest. Acted as lead biologist on the Project, scheduling staff for preconstruction surveys. (2022–2025)

Sisk Dam Compliance and Biological Surveys, DWR, Los Banos, California. Performed fence checks and preconstruction burrow excavations of burrows with potential for California red-legged frog and California tiger salamander. Monitored construction activities in potential habitat for American badger, kit fox, California red-legged frog and California tiger salamander, and sensitive raptors. Conducted Swainson's hawk, bald eagle, and golden eagle surveys (lead). Performed rare plant surveys under supervision of a lead botanist. The primary target plant in the area was spiny-sepaled button-celery (2022–2024)

Saratoga Creek Hazard Tree and Restoration Project Stormwater Pollution Prevention Plan (SWPPP) Inspections, Confidential Client, Saratoga, California. Performed pre-storm, during-storm, and post-storm SWPPP inspections of the active restoration site including water pH and turbidity sampling. Recommended best management practices where necessary. (2022–2023)

Moss Landing SWPPP Inspections, Confidential Client, Moss Landing, California. Performed pre-storm, during-storm, and post-storm SWPPP inspections of the active battery energy storage system project site including water pH and turbidity sampling. Recommended best management practices where necessary. (2022–2023)

Intertie-1 Biological Reconnaissance Survey, Scotts Valley Water District, Scotts Valley/Santa Cruz, California. Surveyed for potential habitat to support sensitive wildlife, plants, and aquatic resources to inform project constraints and drafted a biological resources assessment in accordance with the City of Santa Cruz Water Rights Environmental Impact Report. Target rare plants in the project area included Anderson's manzanita (*Arctostaphylos andersonii*), Santa Cruz tarplant (*Holocarpha macradenia*), and Scott's Valley spineflower (*Chorizanthe robusta* var. *hartwegii*). Updated biological records searches and vegetation mapping to California Wildlife Habitat Relationships (CHWR) classifications for the client's new project alignment. (2023)

Buttonbush Solar Jurisdictional Delineation, Confidential Client, Bakersfield, California. Assisted experienced wetland delineators with a jurisdictional delineation of aquatic resources. Performed vegetation mapping of the survey area. (2023)

Mid-County Aquifer Storage and Recovery Project, City of Santa Cruz, California. Performed biological reconnaissance surveys at urban aquifer storage sites prior to infrastructure improvements. Composed a technical memorandum. (2022)

Graham Hill Water Treatment Plant Improvement Project Vegetation Mapping, City of Santa Cruz, California. Updated records searches for sensitive plants and wildlife for the addition of a new project area. Performed vegetation mapping to CDFW alliances. (2022)

Delta/San Joaquin Habitat Conservation Plans, DWR, Central Valley, California. Performed wildlife surveys for burrowing owl, desert kit fox (*Vulpes macrotis*), American badger, fairy shrimp (*Anostraca*), California red-legged frog, California tiger salamander, and western pond turtle (*Actinemys marmorata*) along the California aqueduct and easements. Set up bioacoustics monitoring equipment for the detection of bat species. Assisted botanists with rare plant surveys and vegetation mapping in the San Joaquin Valley. Composed species profile accounts for the final Delta Habitat Conservation Plan report. (2021–2022)

Water Tank #9 Burrowing Owl Survey, Confidential Client, Rohnert Park, California. Performed two burrowing owl surveys of the work area and its surrounding habitat. Composed a technical memorandum. (2022)

Relevant Previous Experience

Disaster Recovery

Pipeline P00457 Incident, Industrial Economics, Huntington Beach, California. Performed human-use spot count data collection on beaches after an oil spill, for a total of approximately 350 survey hours. (2021)

CZU Fire Debris Cleanup, CalRecycle, Santa Cruz and Santa Clara Counties, California. Conducted Migratory Bird Treaty Act nesting bird surveys, for a total of approximately 1050 survey hours. Conducted sensitive species site assessments for California red-legged frog, Foothill yellow-legged frog, California tiger salamander, California giant

salamander (*Dicamptodon ensatus*), Santa Cruz black salamander (*Aneides flavopunctatus niger*), San Francisco garter snake (*Thamnophis sirtalis tetrataenia*), Coho salmon (*Thamnophis sirtalis tetrataenia*), steelhead trout (*Oncorhynchus mykiss irideus*), and western pond turtle. Performed watercourse classifications and flagging to establish work buffer. Performed compliance monitoring for these target species of concern and water resources during hazard tree and fire debris removal, for a total of approximately 150 hours. (2021)

Federal

U.S. Forest Service Wildlife Site Occupancy Surveys, U.S. Forest Service, Groveland Ranger District, California. Served as lead technician. Surveyed and collected data on California spotted owl, great gray owl, and northern goshawk during callback surveys and nest searches following U.S. Forest Service (USFS) standardized protocols, for a total of approximately 500 survey hours. Performed Pacific fisher camera surveys following USFS Pacific Southwest Research Station survey protocol. Responsible for survey mapping using ArcMap and data entry using the USFS NRIS natural resources management database. (2021)

USFS Wildlife Site Occupancy Surveys, Great Basin Institute for USFS, Calaveras County, California. Surveyed and collected data on California spotted owl and Northern goshawk during callback surveys and nest searches following USFS standardized protocols, for a total of approximately 500 survey hours. Performed Pacific fisher camera surveys following USFS Pacific Southwest Research Station survey protocol. Responsible for survey mapping using ArcMap and data entry using the USFS NRIS natural resources management database. (2020)

Research

Grassland Breeding Bird Nesting Habitat and Predation Study, Centro de Ecología Aplicada del Litoral, Corrientes, Argentina. Assisted PhD candidate, Melanie Brown, in nest searching and nest monitoring for sensitive Ibera grassland avian species to determine predation rates and nest habitat quality at a variety of levels of cattle grazing. Target species were strange-tailed Tyrant (*Alectrurus risora*), black-and-white monjita (*Heteroxolmis dominicana*), Ibera seedeater (*Sporophila iberensis*), rufous-rumped seedeater (*Sporophila hypochroma*), and tawny-bellied Seedeater (*Sporophila hypoxantha*). Performed vegetation transects for grass, sedge, and forb frequency at nest sites. Banded strange-tailed tyrant chicks from nest. Misted netted target species for banding using playback. (2019)

Sierra Nevada Bioacoustics Monitoring for California Spotted Owl, University of Wisconsin, Madison, Plumas and Lassen National Forests, California. Responsible for deployment and retrieval of Cornell University's Swift automated recording devices for California spotted owl and barred owl (*Strix varia*) detections within the study grid, for a total of approximately 1000 field hours. Performed bioacoustics data analysis using Raven software, for a total of approximately 50 hours. (2019)

Cape Cod National Seashore Salt Marsh Restoration, Antioch University New England, Keene, New Hampshire. Served as research assistant in a benthic macroinvertebrate lab processing water samples for macroinvertebrate species' richness and abundance in a restoration study under Dr. Rachel Thiet. Separated organisms to finest level possible by eye, primarily by phylum, order, or sometimes family (including *Amphipoda*, *Arthropoda*, *Gastropoda*, *Nematoda*, *Annelida*), and sent to the U.S. National Park Service for speciation. (2019)

IPBio Bioacoustics Internship, Reserva Betary, Iporanga, Brazil. Assisted a non-governmental organization with analyzing one year of acoustic data for endemic frogs using Wildlife Acoustic's Kaleidoscope software. Assisted in chytridiomycosis lab monitoring progression of *Batrachochytrium dendrobatidis* in tadpoles. (2018)

Restoration

Restoration Project, American Conservation Experience for U.S. Fish and Wildlife Service, Kern and Pixley National Wildlife Refuges, California. Removed invasive salt cedar (*Tamarisk*) from upland habitat. Performed point count surveys for wintering Sandhill cranes (*Antigone canadensis*). (2021)

Specialized Training

- **Basic Wetland Delineation Course, Wetland Training Institute Inc.** Forty-hour course with field component completed in Sacramento, California. This course satisfies the requirements for basic wetland delineation training as specified by the U.S. Army Corps of Engineers and certification programs in many states. The course teaches technical guidelines for wetland delineations; field indicators of hydrophytic vegetation, hydric soils, and wetland hydrology; methods for making jurisdictional determinations; and methods to apply in difficult situations. 2026.
- **Rare Plant Survey Protocols, California Native Plant Society, Santa Cruz, California.** Attended a multi-day workshop in Santa Cruz, California focused on best practices in planning and conducting rare plant surveys. Material covered database queries, collection of herbarium specimens, and a field component at Marshall Field covering field sampling methodologies. 2025.
- **Jepson Herbarium 50 Plant Families of the Monterey Bay Area, Hastings Reserve, Carmel Valley, California.** Attended a weekend long workshop in the Carmel Valley of California focused on keying and identification of common plant families instructed by Linda H. Beidleman and using the Beidleman and Jepson floristic keys. The course included field components in oak woodland and coastal scrub vegetation communities. 2025
- **Foothill yellow-legged Frog Master Level Workshop, The Wildlife Project.** Attended four field trainings addressing all Foothill yellow-legged frog life stages with positive identification of the species throughout Central California including El Dorado, Sonoma, Santa Clara and San Benito Counties. 2024.
- **Introduction to California Plant Families, Jepson Herbarium.** Attended a weekend long training on identifying common plant families of California at the Jepson Herbarium in Berkeley, California.
- **Identifying and Appreciating the Native and Naturalized Grasses of California, California Native Grasslands Association.** Attended 1-day workshop at the University of California, Davis, Bodega Bay Marine Lab focused on keying and identifying California's grasses using the Jepson eFlora dichotomous key. Toured the coastal prairie and learned the identification of local coastal bluff species. Instructors: Andrea Williams, Emily Allen, Michele Hammond. May 2023.
- **California Red-legged Frog Level II Workshop, The Wildlife Project.** Attended five field trainings addressing all California red-legged frog life stages with positive identification of the species throughout Central California including El Dorado, Marin, Sonoma, Santa Clara and San Benito Counties. 2023.
- **Rare Pond Species Workshop, Laguna de Santa Rosa Foundation.** Attended a lecture, taught by Jeff Alvarez and Dave Cook, on the identification, habitat, life history, and conservation of California red-legged frog, California tiger salamander, and western pond turtle. Learned techniques for safe handling of the species. Performed eye-shine surveys for California red-legged frogs, including successful identification, catching, and handling of adult California red-legged frogs. 2022.
- **California Tiger Salamander Workshop, Laguna de Santa Rosa Foundation.** Attended a lecture, taught by Jeff Alvarez and Dave Cook, on the identification, habitat, life history, and conservation of California tiger salamander. Visited California tiger salamander tunnels in Sonoma County. Learned methods and assisted in the construction of drift fencing. Performed larval dip-net surveys and measured individual California tiger salamander larva at the Alton Lane mitigation site and study area. 2022.

Pedersen, Katelin

ENVIRONMENTAL COMPLIANCE SPECIALIST

Katelin Pedersen (*KATE-lin PEH-der-sen; she/her*) is an environmental compliance specialist with 4+ years' experience in California Environmental Quality Act (CEQA)/National Environmental Policy Act (NEPA) compliance, planning and permitting and in environmental impact analyses for public- and private-sector projects across Southern California. She has managed permit conditions and project requirements for diverse large- and small-scale developments.

Her expertise includes wildlife and nesting bird surveys, biological construction monitoring, permitting, and technical report preparation. Katelin is skilled in geographic information system (GIS) analysis and leveraging data from state and federal resources for project planning. She brings hands-on field experience conducting protocol-level surveys for special-status species, rare plant surveys, jurisdictional delineations, vegetation mapping, construction noise monitoring, and nesting bird assessments.

Project Experience

Confidential Energy Project, Confidential Client, Santa Cruz County. Led aquatic resources permitting and documentation for a confidential energy project, including preparation of Aquatic Resources Delineation Reports (ARDRs) and technical support for an Approved Jurisdictional Determination (AJD) application with the U.S. Army Corps of Engineers. Authored the Biological Resources section of the AB 205 application, supporting state and federal permitting and CEQA compliance. (2026–Ongoing)

Jacumba Valley Ranch Energy Project, CSI Electrical, San Diego County. As Deputy Project Manager, supported pre-construction and construction-phase environmental compliance for a large-scale solar and battery energy storage project. Coordinated pre-construction biological surveys and clearance efforts; oversee biological and cultural resource monitoring during construction; track compliance with mitigation measures and permit conditions; and prepare agency coordination materials and monitoring reports to ensure adherence to CEQA and regulatory approvals. (2025–Ongoing)

Confidential Energy Project, Confidential Client, Riverside, California. As Deputy Project Manager, support entitlement and permitting of a battery energy storage project in California by preparing Conditional Use Permit (CUP) application materials, habitat assessments, jurisdictional delineation documentation, and supporting technical reports for CEQA analysis. Led preparation of aquatic resource impact analyses following an Approved Jurisdictional Determination (AJD) and support development of permit application materials for the CDFW and Regional Water Quality Control Board (RWQCB). Coordinate technical inputs, manage consultant deliverables, and support agency coordination to advance state and local regulatory approvals. (2025–Ongoing)

Valiano Project, Lennar San Diego County. As Deputy Project Manager, supported pre-construction and construction-phase environmental compliance for a large-scale residential project. Coordinated pre-construction



Education

University of California
San Diego
MS, Marine Biology, 2019
BS, Marine Biology, 2017

Certifications

40-hour Basic Wetland
Delineation
PADI Open Water,
Advanced Open Water,
and Rescue Diver
American Academy of
Underwater Sciences
(AAUS) Scientific Diver
California Boating License
DAN First Aid, CPR, AED

biological surveys and clearance efforts; oversee biological and cultural resource monitoring during construction; track compliance with mitigation measures and permit conditions; maintain compliance with Regional Water Quality Control Board (RWQCB) Section 401 Water Quality Certification and California Department of Fish and Wildlife (CDFW) Streambed Alteration Agreement (SAA) permit requirements; track mitigation measures and permit conditions; and prepare regulatory compliance documentation, agency coordination materials, and monitoring reports to ensure adherence to CEQA and regulatory approvals. (2025–Ongoing)

Bowtie Wetland Demonstration Project, The Nature Conservancy, Los Angeles, California. Lead bio-compliance oversight for a multi-stakeholder wetland restoration initiative, ensuring adherence to environmental regulations and permitting requirements. Coordinate biological monitoring, manage compliance documentation, and facilitate agency reviews to support habitat restoration goals while maintaining regulatory alignment. (2024–Ongoing)

Confidential Energy Project, Confidential Client, San Diego, California. As deputy project manager, support delivery of a large-scale energy storage initiative by overseeing biological compliance monitoring, coordinating restoration activities, and managing cultural resource monitoring. Collaborate with regulatory agencies and multidisciplinary teams to ensure compliance with permit requirements. (2024–Ongoing)

Confidential Solar Project, Los Angeles County, California. Serve as deputy project manager for CEQA documentation for a solar and battery energy storage system project. Responsible for coordinating with technical specialists, maintaining the project schedule, and invoicing. (2023–Ongoing)

Targeted Monitoring Program, County of San Diego, California. Performed vegetation and invasive species mapping and assessed overall habitat conditions across three San Diego County Open Space preserves to inform the County's Resource Management Plan directives. (2025)

Rincon AT&T New Fiber Construction, AT&T Technology Operations, Rincon Reservation, California. Conducted biological resources reconnaissance, vegetation mapping, and jurisdictional delineations within the study areas in support of construction of high-speed fiber optic communications facilities throughout the Rincon Reservation. Authored the Biological Resources Technical Report and Biological Resources section of the NEPA Environmental Assessment document. (2025)

Santee CalOES Fire Project, City of Santee, California. Mapped vegetation and performed general biological reconnaissance along the San Diego River to identify areas suitable for vegetation clearance for fire prevention. (2025)

1845 Oak Road, City Ventures, Simi Valley, California. Oversaw project management and secured regulatory compliance with nesting bird mitigation measures, enabling timely commencement for construction. (2025)

Confidential Solar Project, Confidential Client, Lost Hills, California. Conducted a formal wetland delineation and determination based on the regulations of the U.S. Army Corps of Engineers, Regional Water Quality Control Board, and California Department of Fish and Wildlife (CDFW). Conducted rare plant surveys and mapping of Kern mallow (*Eremalche kernensis*). (2025)

Newhall Ranch Spineflower Introduction, Santa Clarita, California. Mapped and monitored San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*) introduction sites to evaluate restoration success and support long-term habitat management goals. (2025)

Confidential Solar Project, Confidential Client, Imperial Valley, California. Performed a formal U.S. Army Corps of Engineers wetland delineation and assessment for areas potentially classified as farmed wetlands, considering non-normal circumstances. (2025)

Sycuan Central Wastewater Treatment Plant/Utility Corridor, Sycuan Band of the Kumeyaay Nation, Sycuan Reservation, California. Performed jurisdictional delineation and vegetation mapping; conducted compliance spot-checks during construction to verify adherence to environmental regulations. (2025)

Southern Region Emergency Operations Center Project, Department of General Services, Costa Mesa, California. Conducted a special-status species clearance survey and nesting bird survey at an approximately 6-acre site. (2025)

Syphon Reservoir Project, Irvine Ranch Water District, Irvine, California. Conducted a nesting bird and special-status clearance survey. Prepared a Workers Environmental Awareness Training presentation for the project's construction personnel on potential environmental resources that may be found on the project site and required measures to avoid impacts to resources. (2024–2025)

San Diego State University Evolve Housing Project, San Diego, California. Conducted a protocol-level presence/absence survey for California gnatcatcher (*Poliopitila californica*). (2025)

San Pasqual AT&T New Fiber Construction, AT&T Technology Operations, San Pasqual Reservation, California. Conducted biological resources reconnaissance, vegetation mapping, and jurisdictional delineations within the study areas in support of construction of high-speed fiber optic communications facilities throughout the San Pasqual Reservation. Authored the Biological Resources Technical Report and Biological Resources section of the NEPA Environmental Assessment document. (2024)

Confidential Solar Project, Confidential Client, Newberry Springs, California. As a biologist, conducted rare plant surveys and desert plants mapping of targeted species, California invasive plant species, and the Desert Renewable Energy Conservation Plan's Special Features. Conducted protocol-surveys for burrowing owl (*Athene cunicularia*). (2024)

San Diego State University—Mission Valley Campus Master Plan Project, California State University, San Diego, California. Conducted noise monitoring of construction activities within 500 feet of the San Diego River during the least Bell's vireo (*Vireo bellii pusillus*) breeding season work and monitored for nesting birds in construction area; established buffers around active nests and worked with crews to ensure that average hourly noise thresholds were not exceeded. Prepared the noise monitoring weekly letter reports to the U.S. Fish and Wildlife Service (USFWS) outlining the results and status of least Bell's vireo noise monitoring efforts at the project site. (2023–2024)

Pomerado 2 Channel Maintenance Project, County of San Diego, California. Monitored noise levels generated during dewatering, maintenance, and sediment removal/excavation activities in the municipal waterway to ensure compliance with the County's noise threshold. Inspected erosion control devices to ensure that no sediment-laden flows were discharging from the project and checked that the diversion pumps and berms upstream of the work area were intact. Submitted a monitoring summary with a summary of activities, noise monitoring levels, GPS coordinates, and representative photos of the work activities. (2023)

Macaw Lane Storm Drain Emergency Project, Burtech, San Diego, California. As a biologist, conducted nesting bird surveys throughout the biological reconnaissance study area prior to clear and grub activities and monitored removal of San Diego viguiera (*Bahiopsis laciniata*), a native plant species. (2023)

Trails at Carmel Mountain Ranch Project, Lennar, Carmel Valley, California. Surveyed the project site for the presence/absence of yellow warbler (*Setophaga petechia*), Cooper's Hawk (*Astur cooperii*), and least Bell's vireo, and conducted a nesting bird survey ahead of vegetation removal. (2023)

Rancho Mission Viejo Land Trust Initial Management Action Plan Grazing Monitoring Project, Rancho Mission Viejo Company, Mission Viejo, California. Collected residual dry matter samples of summer annuals, such as clustered tarweed (*Deinandra fasciculata*), yellow starthistle (*Centaurea solstitialis*), and turkey mullein (*Croton setigerus*), within the Rancho Mission Viejo Land Trust grassland monitoring locations. Samples were collected following University of California guidelines for residual dry matter surveys. (2023, 2025)

California High-Speed Rail; Dragados-Flatiron Joint Venture; Fresno, Kings, and Tulare Counties; California. Provided compliance management for California High-Speed Rail Construction Package 2-3, a 69-mile-long route located within Fresno, Kings, and Tulare Counties. Worked closely with Dragados-Flatiron Joint Venture management to ensure day-to-day monitoring requirements were met and construction activities were in compliance with the Incidental Take Permit, Master Streambed Alteration Agreement, and biological opinion. Reviewed all environmental compliance field reports submitted by construction monitoring staff and ensured documentation was in compliance with the existing permits. Assisted with the completion of monthly compliance reports for CDFW and USFWS. Maintained close communication with the Dragados-Flatiron Joint Venture, providing training and assisting during client internal transitions. (2023–2024)

San Marcos Creek District Specific Plan Project, City of San Marcos, California. Prepared construction compliance weekly letter reports to the City of San Marcos outlining the results and status of least Bell's vireo monitoring efforts at the project site. (2023–2024)

HomeFed V8 East, HomeFed, Chula Vista, California. Created a compliance tracker that incorporated project mitigation measures and conditions of approval from the CDFW Streambed Alteration Agreement and Regional Water Quality Control Board 401 permit. (2024)

Carlsbad Desalination Project, Poseidon Resources, Carlsbad, California. Provided environmental compliance support by performing quality assurance/quality control (QA/QC) field reports for marine mammal and green sea turtle (*Chelonia mydas*) monitoring and archaeological resources monitoring. (2023–2024)

Otay River Estuary Restoration Project, Poseidon Water, San Diego, California. Provided environmental compliance support by performing QA/QC of daily monitoring logs for biological, archaeological/paleontological, and marine resources. (2023–2025)

Confidential Solar and Energy Storage System Project, Confidential Client, Los Angeles, California. Prepared a proposal for environmental technical studies and Conditional Use Permit (CUP) application materials, including completing the environmental assessment information form, drafting findings for the CUP, and drafting a preliminary Decommissioning Plan and preliminary Dust Control Plan in compliance with the Antelope Valley Air Quality Management District. (2024)

Confidential Energy Project, Confidential Client, Westminster, California. Prepared development application materials for submittal to the City of Westminster Planning Division; materials prepared included a Development Review Application and a Statement of Justification for the battery energy storage system project. (2024)

Confidential Energy Projects, Confidential Client, Carson, California. Prepared the scope and cost for a critical issues analysis (CIA) report to the client, and executed the CIA report. The CIA report included a desktop-level

review and analysis of biological resources using datasets from the California Natural Diversity Data Base, CDFW, USFWS, and California Native Plant Society data; a general overview of archaeological resources; a review of hydrology and water quality data using publicly available data for the project site, including Federal Emergency Management Agency (FEMA) Flood Plain mapping; a review of local land use agency planning documents and applicable ordinances relevant to the proposed site for planning purposes; an overview of the process needed to complete the project and associated land use entitlement permits; an analysis of any existing hazardous materials sites within and surrounding the project site utilizing mapping datasets from GeoTracker and EnviroStor databases; and a general summary of findings in the CIA, associated risk exposure levels, and recommendations section with an outline of next steps, including cost estimates to perform the work.

Confidential Solar and Storage Project, Confidential Client, Imperial County, California. Prepared a Land Evaluation and Site Assessment Technical Report to assess the significance of the project's potential farmland conversion impact using the California Agricultural Land Evaluation and Site Assessment model developed by the California Department of Conservation (DOC). The analysis was completed using publicly available data from the U.S. Department of Agriculture and DOC, and GIS data. (2024)

Confidential Energy Storage System Project, Confidential Client, San Diego, California. Updated the project's climate action plan memorandum in support of the project's site development permit for consistency with the City of San Diego's strategies to reduce citywide greenhouse gas emissions and achieve reduction targets. (2023)

Confidential Solar Project, Confidential Client, Kern County, California. Prepared an Agricultural Conversion Technical Study Report in support of a CUP application; the study assessed the significance of the project's potential farmland conversion impact using the California Agricultural Land Evaluation and Site Assessment model developed by the California DOC. The analysis was completed using publicly available data from the U.S. Department of Agriculture, DOC, GIS data, information from Kern County records, and proponent-provided information. (2023)

Confidential Solar Project, Confidential Client, Merced, California. Prepared the CIA report that included a desktop-level review of the project site in context; an analysis of the existing level of disturbance and/or development and adjacent uses and facilities; an analysis of agricultural resources using data from the California Department of Conservation Farmland Mapping and Monitoring Program; a review of biological resources utilizing data from the California Natural Diversity Data Base, CDFW, USFWS, and California Native Plant Society; a general overview of cultural and paleontological resources in the region; a review of hydrology and water quality for the project site utilizing FEMA Flood Plain mapping and the National Wetlands Inventory mapping data; a review of local land use agency planning documents and applicable ordinances relevant to the proposed site for planning purposes; and a summary of recommendations on next steps along with a strategic permitting plan based on CIA findings and estimated cost to perform the work. (2023)

Relevant Previous Experience

Carlsbad Desalination Plant, Poseidon, Carlsbad, California. Responsible for collecting, processing and interpreting data using remote technique instruments (remote sensing, sampling, video imaging, and leak detection). Deployed and recovered surface-tethered remotely operated vehicles to conduct subsurface inspection surveys for leaks in underwater infrastructure. (2022–2023)

Coral Reef Seawater Carbonate Chemistry Variability, Bocas del Toro, Panama. As a graduate student, prepared a scientific report analyzing the seawater carbonate chemistry variability at two contrasting reef locations in Bocas del Toro Panama using a combination of in situ sensors and surface water samples across spatial and temporal scales. (2017–2019)

Seawater Carbonate Chemistry in the Southern California Bight, Scripps Institution of Oceanography, San Diego, California. As a graduate student and research technician, provided logistics support for fieldwork efforts. Assisted with the collection of physical water quality parameter data and discrete seawater samples. Transported the seawater samples back to the laboratory for chemical analysis. (2017–2019)

Invasion Potential of Non-Native *Sargassum horneri* in Kelp Forests, Scripps Institution of Oceanography, San Diego, California. As a graduate student, assisted with underwater surveys to measure the abundance and phenology of non-native *Sargassum horneri* in kelp forests in the San Diego region using swath surveys over a 2-year time span. Conducted seasonal sampling of specimens for laboratory experiments to better understand the conditions that may favor the invasive seaweed over giant kelp (*Macrocystis pyrifera*). (2017–2019)

Hubbs Hall Experimental Aquarium Collections, Scripps Institution of Oceanography, San Diego, California. As a staff volunteer, assisted the experimental aquarium manager in collecting marine fish, invertebrates, and algae specimens using a varied collection of equipment and techniques. Specimens were then transported to holding tanks and aquaria systems for laboratory experimentation. (2015–2017)

Experimental Assessment of the Impacts of Ocean Acidification on Benthic Kelp Forest Assemblages, Scripps Institution of Oceanography, San Diego, California. As a research technician, assisted with the deployment of settlement tiles to assess benthic assemblages of algae and invertebrates in kelp forests in the San Diego Bight. The settlement tiles accrued natural mixed assemblages for 1 year before being transported back to the lab for ocean acidification experiments. (2015–2016)

Distribution and Survivorship of Coral Juveniles to Substrate Composition, Scripps Institution of Oceanography, San Diego, California. As a research technician, conducted a long-term monitoring project to track benthic cover of corals and algae using wide-scaled digital mosaic imaging (2D/3D). The project compared the distribution and survivorship of coral recruits to substrate composition on the forereef of the Palmyra Atoll. (2014–2016)

Coral Reef Hierarchical Rules of Engagement, Scripps Institution of Oceanography, San Diego, California. As a research technician, applied detailed coral taxonomy and life history information in conjunction with wide-scaled digital mosaic imaging (2D) of benthic habitats to understand spatial and temporal reef ecology. Provided data support and managed large sets of imagery data. (2014–2015)

Hair Cell Development of Mutant KT28 Zebrafish, Center for Advanced Professional Studies, Overland Park, Kansas. Conducted research in collaboration with the Stowers Institute for Biomedical Research on a mutant strain of zebrafish (*Danio rerio*) to record the number of hair cells along the lateral line using fluorescent microscopy and better understand the molecular and cellular basis for their ability to regenerate sensory hair cells. Bred and raised the mutant zebrafish from embryo to adult fish. (2012–2013)

Specialized Training

- Basic Wetland Delineation, Wetland Training Institute. 2025.
- Motorboat Operator Training Course, Scripps Institution of Oceanography. 2017.
- Diving First Aid for Professional Divers (DFA Pro), Divers Alert Network. Basic life support training (CPR and first aid), emergency oxygen for scuba diving injuries (EO2), and training on neurological assessment and first aid for hazardous marine life injuries. 2023.

Publications

Pedersen, K., Cyronak, T., Goodrich, M. et al. 2024. Short-Term Spatiotemporal Variability in Seawater Carbonate Chemistry at Two Contrasting Reef Locations in Bocas del Toro, Panama. *Aquatic Geochemistry*. February 2024. <https://doi.org/10.1007/s10498-024-09421-y>

Emily Scricca

SENIOR BIOLOGIST

Emily Scricca is a wildlife biologist with 14-plus years' experience with natural resource-related projects throughout California, including conducting protocol-level surveys, assessments, and biological monitoring for numerous species, including burrowing owl (*Athene cunicularia*), bald eagle (*Haliaeetus leucocephalus*), golden eagle (*Aquila chrysaetos*), Swainson's hawk (*Buteo swainsonii*), tricolored blackbird (*Agelaius tricolor*), western snowy plover (*Anarhynchus nivosus*), white-tailed kite (*Elanus leucurus*), California tiger salamander (*Ambystoma californiense*), California red-legged frog (*Rana draytonii*), foothill yellow-legged frog (*Rana boylei*), California giant salamander (*Dicamptodon ensatus*), western pond turtle (*Actinemys marmorata*), Northern California legless lizard (*Anniella pulchra*), American badger (*Taxidea taxus*), San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*), San Joaquin kit fox (*Vulpes macrotis*), Townsend's big-eared bat (*Corynorhinus townsendii*), western red bat (*Lasiurus blossevillii*), valley elderberry longhorn beetle (*Desmocerus californicus*), vernal pool fairy shrimp (*Branchinecta lynchi*), and vernal pool tadpole shrimp (*Lepidurus packardii*). Emily has strong knowledge of California flora and fauna and is well versed in environmental survey and sampling techniques. She has extensive experience conducting nesting bird surveys and a demonstrated ability to identify birds by sight and sound. Emily has a strong background in endangered species permitting, biological impact assessment, and biological compliance implementation. Emily is a detail-oriented, effective communicator and has prepared numerous technical reports in support of the environmental review and permitting processes for dozens of projects. Emily has successfully implemented and managed large teams of biologists on a variety of environmental resources projects throughout California.

Project Experience

FCZ 1 Marsh Creek Storm Damage Repair Project, Contra Costa County Public Works, Contra Costa, California (2025 – present). Senior biologist and oversaw field and technical tasks associated with the aquatic resources delineation, biological resources assessments, and ECCCHCP Planning Survey Report submittal for the project.

Morgan Territory Road Slide Repair, Contra Costa County Public Works, Contra Costa County, California (2024 – present). Lead biologist on the as-needed contract. Conducted visual encounter surveys and habitat assessments for California red-legged frog (CRLF), western pond turtle (WPT), nesting birds and raptors, and other species of special-concern. Prepared materials for future ECCCHCP Planning Survey Report submittal.



Education

San Jose State University
MS, Environmental
Studies, 2017

University of Vermont
BS, Animal Sciences,
2010

Certifications

USFWS, Section
10(a)(1)(A) Native
Endangered and
Threatened Species
Recovery Permit,
No. TE45251C-1

- California tiger
salamander

CDFW, Memorandum of
Understanding, Scientific
Collecting Permit,
No. SC-013755

- California Tiger
Salamander

CDFW, Scientific
Collecting Permit, Special
Use Permit, No.
S-22039005-22040-002

East Contra Costa County
Habitat Conservancy

- CDFW/USFWS
approved biologist

Professional Affiliations

San Francisco Bay Bird
Observatory

The Wildlife Society

Delta Dams Rodent Burrow Remediation Project Permit Compliance, DWR, Alameda County, California (2024 – present). Served as agency-approved Designated Biologist for California tiger salamander (CTS) and CRLF. Conducted weekly wildlife exclusion fence inspections and cover board inspections, prepared compliance reports, conducted pre-construction biological surveys and compliance monitoring.

Delta Field Division Environmental Extension-of Staff, California Department of Water Resources (DWR), Contra Costa/Alameda Counties, California (2022 – 2025). Served the Regulatory Compliance Section of the Environmental Assessment Branch. Provided guidance on regulatory permitting strategies, resource agency coordination, project planning, biological species surveys and habitat assessments, mitigation options, and oversaw permit compliance during all Delta Field Division maintenance activities.

UC Berkeley Levine-Fricke Stadium Project, Alameda County, California (2022 – 2024). Lead biologist for the proposed Levine-Fricke Stadium Project within the Strawberry Canyon Recreational Area in Berkeley, CA. Conducted a field biological resources assessment and prepared the biological resources section of the Draft ADEIR CEQA document for the project.

Delta Field Division HCP Project, DWR, Contra Costa/Alameda Counties, California (2022 – 2024). Prepared formal notification requests to the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) to perform protocol-level aquatic larval sampling for CTS across 20 acres within aquatic features in Alameda, Contra Costa, Merced, Napa, Solano, and Stanislaus Counties. Lead field teams to conduct protocol-level aquatic larval sampling for CTS over 3 months and conduct protocol-level burrow habitat assessments for San Joaquin kit fox (SJKF) and breeding season surveys for burrowing owl (BUOW). Conducted visual encounter surveys and habitat assessments for CRLF and WPT within multiple counties.

Gavilan College San Benito Campus & Fairview Corners Residential Development, San Benito County, California (2023 – present). CDFW-approved Qualified Biologist for the project. Conducts pre-construction surveys and biological monitoring for CTS, and exclusion fence inspections.

Sanborn and Upper Stevens Creek Forest Health Plan, Santa Clara County Parks, Santa Clara County, CA (2022 – 2023). Lead biologist for the 1,367-acre 10-year forest health management project. Conducted biological reconnaissance-level field assessments in accordance with Cal Fire's California Vegetation Treatment Program Environmental Impact Report. Drafted a biological resources analysis report for the project, and the biological resources chapter of the Project-Specific Analysis for CEQA compliance. Coordinated directly with CDFW and USFWS for project implementation and mitigation measure development. Species analyzed for project impacts: CRLF, foothill yellow-legged frog (FYLF), special-status salamanders, marbled murrelet (*Brachyramphus marmoratus*), least bell's vireo (*Vireo bellii pusillus*), special-status plants, nesting birds, and bats.

As-Needed Wildfire Mitigation Services, Los Altos Hills County Fire District, Santa Clara County, CA (2022 – present). Lead biologist for the District's I-280 Wildfire Mitigation Project, Community Strategic Fuel Break Project, Community Wildfire Protection Plan, and as-needed wildfire mitigation projects. Conducts biological resources assessments and surveys, pre-construction surveys and biological monitoring, prepares environmental documents for CEQA/NEPA review, prepared environmental documentation for the I-280 Wildfire Mitigation Project for the Governor's Emergency Proclamation. Oversees field teams and task orders.

Lexington Reservoir Eucalyptus Management Project, Valley Water, Santa Clara County, California (2021 – 2023). The project consists of the herbicidal treatment of large stands of Eucalyptus along Lexington Reservoir in Los Gatos, California. Conducted biological resources assessments and special-status species habitat assessments within the project area and prepared a biological resource assessment to support CEQA documentation and CDFW Lake and Streambed Alteration Agreement (LSAA) permit application package on behalf of Valley Water.

Los Banos Grandes Mitigation Assessment, DWR, Los Banos Creek, Merced County, CA (2021 – 2022).

Conducted a site assessment and assisted in identification of habitat mitigation opportunities on an approximately 1600-acre site on Los Banos Creek. Opportunities focused on creation of seasonal and perennial wetlands, expanded floodplains, and oak and riparian woodlands along the creek. Prepared a biological assessment/existing conditions report.

123 Independence Drive Project, City of Menlo Park, California (2021 – 2022). Lead biologist for the proposed re-development project. Conducted reconnaissance-level biological field survey assessments and prepared the biological resources chapter of the EIR. Responded to comments and drafted edits of the chapter in response to comments.

County of Santa Clara Solar Panel Installation Project, County of Santa Clara, San Jose to Morgan Hill, California (2021 – 2022). The project consisted of the installation of photovoltaic solar panels at 14 County-owned sites between San Jose and Morgan Hill to further expand on the County’s renewable energy portfolio and reduce County emissions from operations. Assisted in the preparation of a biological resource assessment to support CEQA documentation and preparing Santa Clara Valley Habitat Plan Reporting Form Application for Public Projects on behalf of the County.

B.F. Sisk Safety of Dams Modification Project, DWR, Merced County, California (2020 – present). Biologist for the 1,800-acre project: conducts surveys for Swainson’s hawk (SWHA), golden eagle, bald eagle, and nesting raptors; burrow assessments for BUOW, SJKF, and American badger; tricolored blackbird habitat assessments; Crotch’s bumble bee (*Bombus crotchii*) habitat assessments; and rare plant surveys/population estimates. Conducts monthly visual encounter surveys for CRLF. Prepared a Biological Resources Existing Conditions Report following numerous assessments on the site, Biological Resources Section of a Supplemental Environmental Impact Report, 2081 Incidental Take Permit for CTS and SJKF for the project, mitigation opportunities and assessment reports, and CTS relocation plan and SJKF den replacement plan.

Pavon Creeks and Scow Canyon Mitigation Project, East Bay Municipal Utility District, Contra Costa County, California (2020 – 2022). Field biologist to complete the final year of a 10-year mitigation and monitoring project instituted to offset impacts from the San Pablo Dam Seismic Upgrade Project. Tasks included assisting with protocol-level aquatic resources delineations, wetland plant cover/diversity vegetation surveys, tree/shrub cover and survivorship assessments, data analysis, and final reporting.

Old Santa Cruz Highway Fuel Reduction, CAL Fire & Santa Clara County FireSafe Council, Santa Clara County, California (September – December 2020). Lead Biologist for the 5-mile shaded fuel break project along both sides of Old Santa Cruz Highway in the Santa Cruz Mountains. Work included biological surveys for various special-status species, delineation of aquatic resources, worker environmental awareness trainings, erosion control assessments, and mapping sensitive resources.

Beltran Solar Energy Center Project, Stanislaus County, California (March – October 2020). Conducted a formal habitat assessment for CTS and CRLF following USFWS guidelines and protocol across the proposed 1,720-acre solar development site. Habitats assessed included suitable aquatic habitats such as stock ponds, vernal pools, seasonal wetlands, drainages and associated upland grassland habitats. Conducted protocol-level burrow habitat assessment surveys for BUOW and SJKF.

Mitsui Ranch California Red-Legged Frog Visual Encounter Surveys, Sonoma Mountain Ranch Preservation Foundation, Sonoma, California (March 2020). Completed nighttime visual encounter surveys along a Copeland

Creek tributary in Sonoma County on the Mitsui Ranch property. During the night of visual encounter surveys, encountered 6 adult CRLF, captured 2 adult CRLF and took measurements, and pit-tagged 1 adult CRLF under supervision of Jeff Wilcox (CRLF 10(a)(1)(A) Permit No. TE-068745).

Potrero Hills Landfill Expansion Project, Waste Connections Inc., Solano County, California (2019 – 2022).

Assisted with mitigation monitoring for a 10-year monitoring program for rare plants, federally listed large branchiopod species, and CTS. Conducted annual listed large branchiopod wet season surveys. Performed pit-trap inspections of CTS outside of a stock pond within a former mitigation area of the site. Relocated six adult CTS to an approved breeding pond. Obtained measurements and weights on salamanders prior to relocation. Conducted annual egg, larval, and adult surveys for CTS in multiple mitigation stock ponds. Identified and handled numerous CTS larvae, vernal pool tadpole shrimp, and California linderiella (*Linderiella occidentalis*).

Wilfred Road Improvement Project, City of Rohnert Park, Sonoma County, California (2019 – present). Lead Biologist for the 0.85-mile-long California tiger salamander tunnel project between Langner Avenue and Stony Point Road. Work includes conducting annual inspections of the tunnels for tunnel functionality, pre-construction surveys for CTS, and biological monitoring during tunnel maintenance.

As-Needed Environmental Services, San Jose Water Company, Santa Clara County, CA (2019 – present). Lead Biologist/CDFW approved biologist under CDFW LSAA, for multiple projects with the Los Gatos Creek Watershed Maintenance Program. Conducts biological surveys, reporting, surveys for special status animals such as roosting bats, FYLF, CRLF, WPT, steelhead (*Oncorhynchus mykiss*), San Francisco dusky-footed woodrat (SFDFWR), compliance monitoring, implementation of best practices associated with Regional Water Quality Control Board, CDFW, and USFWS authorizations. Conducts pre-construction nesting bird surveys and focused surveys for special-status birds including bald eagle, long-eared owl (*Asio otus*), olive-sided flycatcher (*Contopus cooperi*), Vaux's swift (*Chaetura vauxi*), and yellow warbler (*Setophaga petechial*).

Rancho Seco II Solar Power Facility, City of Herald, County of Sacramento, California (2019 – present). Serves as Designated Biologist for the 554-acre solar power facility project. Work includes pre-construction surveys and monitoring for CTS and western spadefoot (*Spea hammondi*), and facilitating safe CTS relocations. The site is dominated by non-native grassland with vernal pools, swales, drainages, and other aquatic resources.

Advanced Meter Infrastructure, Alameda County Water District, Alameda County, California (2019 - present). Lead biologist for the Project. Conducted a federally-listed species biological assessment for submittal to the United States Bureau of Reclamation (USBR) prior to Project implementation. Assisted with the preparation of Proposed Action and Conservations measures to be implemented by USBR for Project compliance. Prepared worker environmental awareness training program, provided weekly in person and virtual trainings, and provided on-call compliance services to assist workers with identifying wildlife in the field, and measures to take when listed species were discovered. Conducts surveys, training, and biological monitoring for Alameda whipsnake and California tiger salamander. Coordinated directly with USBR and the Alameda County Water District for work-stoppage and work implementation.

State Route 17 Emergency Shaded Fuel Break, CAL Fire & Santa Clara County FireSafe Council, Santa Clara County, California (2019 – 2021). Lead Biologist for the 6.5 mile, 494-acre shaded fuel break project along both sides of Highway 17 from the Santa Clara/Santa Cruz County boundary to the Town of Los Gatos. Work included conducting biological surveys, reporting, pre-construction trainings, implementation of project-specific best management practices, agency coordination, mapping locations of sensitive resources, permit package preparation and implementation of avoidance measures. Conducted focused surveys and biological monitoring for nesting birds, bats, CRLF, FYLF, special-status amphibians and reptiles, WPT, SFDFWR, and general wildlife.

University of California Santa Cruz Emergency Response Center Bioswales Project, Santa Cruz County, California (April – September 2019). Federal hazard mitigation project involving the creation of five bioretention (bio-swale) facilities below the UCSC Emergency Response Center. Was an approved biologist for the project and conducted pre-construction surveys for CRFL and nesting birds in accordance with avoidance and minimization measures in the Federal Emergency Management Agency’s (FEMA) Record of Environmental Consideration (REC). Also performed daily biomonitoring of initial ground disturbance to ensure that CRLF were not harmed as a result of project activities, and provided biological trainings to crews on site.

Complete Wireless Consulting Development Project, Cotati, Sonoma County, California (March – June 2019). Conducted a reconnaissance-level biological resources assessment for a development property on Stony Glen Lane, in Cotati, Sonoma County. Assessed proposed development impacts in association with the Santa Rosa Plain Conservation Strategy and impacts to CTS and other sensitive biological resources.

Virginia Smith Trust, Campus Community North Phase 6, and 2020 Projects, University of California, Merced, Merced County, California (June 2017 – January 2019). The UC Merced Projects are the development of an 810-acre campus and associated 835-acre community neighborhood, combined with preservation of over 26,000 acres of mitigation lands in the project vicinity. Conducted pre-construction surveys for CTS, SJKF, BUOW, and succulent owl’s clover (*Castilleja campestris* ssp. *succulenta*) on the project site. Also conducted protocol-level surveys for SWHA and monitored active SWHA nests on site. Served as a designated biologist (CDFW) and an approved biologist (USFWS) for the construction of the campus, and monitored construction activities to ensure compliance with the project’s environmental documents and permits. In addition, provided daily environmental awareness trainings to construction personnel, and supervised the installation of one-way CTS exclusion fencing.

East Garrison Housing Development, Monterey, California (December 2016 – January 2019). The project is the development of single-family residences, parks, and other community areas that will be constructed in several phases over a 10-year period on an approximately 240-acre site within East Garrison, formerly Fort Ord. This project is regulated underneath a CDFW 2081 ITP, of which Ms. Scricca served as a Designated Biologist. Conducted on-site preconstruction surveys, construction monitoring, and training targeting the protection of CTS, nesting birds, and roosting bats. Provided project personnel environmental awareness trainings for all project staff, conducted on-site compliance monitoring, species entrapment inspections, CTS relocations, passive bat exclusions, nest buffer establishment, and agency reporting on an annual, quarterly, and species-observation basis.

Newby Island Landfill Bank Stabilization Project, San Jose, California (2018). Assisted in the preparation of a biological evaluation report for the Newby Island Bank Stabilization project site. Conducted field evaluations in which the biotic resources of the site were determined, and evaluated the potential for green sturgeon (*Acipenser medirostris*), central California coast steelhead, California Ridgeway’s rail (*Rallus obsoletus obsoletus*), and salt marsh harvest mouse (*Reithrodontomys raviventris*) to be impacted by planned project activities. The report also included an Essential Fish Habitat Assessment.

Frantoio Grove California Tiger Salamander and California Red-Legged Frog Habitat Assessment, San Martin, California (October 2017 – February 2018). Prepared a CTS and CRLF habitat assessment for the 95-acre Frantoio Grove property in San Martin, CA. Evaluated the existing conditions and habitats of the site, distribution of CTS and CRLF in the region, surrounding aquatic habitats, and likelihood of CTS and CRLF occurring on the site. The purpose of this assessment was to provide the USFWS with sufficient information so that the agency may conclude that CTS and CRLF are not present on the site.

Sargent Ranch Quarry, Gilroy, California (May 2017). Performed aquatic seine-net surveys for CTS and CRLF in multiple stock ponds of the mitigation areas of the Sargent Ranch site. Data collected was compiled and summarized in a written report for project client. Handled 85 CRLF larvae and 5 adults during this survey.

Alton Vernal Pool Preserve, Sonoma County Water Agency, Santa Rosa, Sonoma County, California (March – April 2017). Conducted aquatic dip-netting surveys and inspected pitfall traps for CTS. Handled, obtained measurements, and released numerous CTS larvae.

Specialized Training

- **Pond Turtle Nesting Workshop**, The Wildlife Project. (2024)
- **California Red-Legged Frog Level II Workshop**, The Wildlife Project. (2020)
- **Foothill Yellow-Legged Frog Workshop**, The Wildlife Project. (2019)
- **Fifty Plant Families in the Field: San Francisco Bay Area**, Jepson Herbarium. (2018)
- **Rare Pond Species Survey Techniques Workshop**, Laguna de Santa Rosa Foundation. (2017)
- **Amphibians of the San Francisco Bay Area Workshop**, Laguna de Santa Rosa Foundation. (2016)
- **CEQA Essentials Workshop**, Association of Environmental Professionals. (2016)
- **California Tiger Salamander Terrestrial Ecology Workshop**, Laguna de Santa Rosa Foundation. (2016)

Natalie Yorba

ENVIRONMENTAL COMPLIANCE SPECIALIST

Natalie Yorba is an environmental compliance specialist with 7 years' professional experience specializing in special-status species surveys, habitat assessments, wetland delineations, and California Environmental Quality Act (CEQA) document preparation. She has experience conducting waters and wetland delineation in accordance with methods listed in the 1987 U.S. Army Corps of Engineers Wetland Delineation Manual and the 2008 Regional Supplement to the U.S. Army Corps of Engineers Wetland Delineation Manual: Arid West Region. Her experience with special-status species includes excavating and flagging burrows for California tiger salamander (*Ambystoma californiense*), small mammal trapping and burrow excavation for Tipon kangaroo rat (*Dipodomys nitratooides nitratooides*), small mammal trapping for giant kangaroo rat (*Dipodomys ingens*), track plate and camera monitoring for San Joaquin kit fox (*Vulpes macrotis mutica*), camera monitoring for San Joaquin antelope squirrel (*Ammospermophilus nelsoni*), nesting bird surveys, and protocol surveys for blunt-nosed leopard lizard (*Gambelia sila*), Swainson's hawk (*Buteo swainsoni*), and burrowing owl (*Athene cunicularia*). She has also conducted pre-construction surveys and monitoring efforts for fisher (*Pekania pennanti*), American badger (*Taxidea taxus*), burrowing owl, San Joaquin antelope squirrel, Sierra Nevada yellow-legged frog (*Rana sierrae*), northwestern pond turtle (*Actinemys marmorata*), foothill yellow-legged (*Rana boylei*), Yosemite toad (*Anaxyrus canorus*), San Joaquin kit fox, and other listed and non-listed species that could be impacted.

In addition to conducting special-status species surveys, Natalie also has experience in ArcGIS Pro, which has aided her in creating maps for summary reports that require California Natural Diversity Database (CNDDDB) buffers, vegetation mapping, and hydrology layers.

Natalie serves as part of the compliance team, conducting environmental assessments, and preparing and reviewing documentation for permitting and navigating through the regulatory framework. Additionally, she has worked as a scientific aid for the California Department of Water Resources' (DWR's) South Central Regional Office. Natalie works with environmental scientists, aiding in pre-construction surveys, protocol-level surveys, monitoring, and mitigating environmental concerns for listed species.

Relevant Previous Experience

Eastside Bypass, DWR, Merced County, California. Served as a scientific aid for a 2-mile-long levee improvement and reinforcement project. The project improved fish migration and flow capacity. Tasks included flagging and excavating potential California tiger salamander burrows as well as rare plant surveys.



Education

California State University,
Fresno

MS, Biology, 2021

BS, Biology, 2019

Minor, Chemistry, 2019

Certifications

Desert Tortoise Training
Certificate 2024

Wetland Delineation
Certificate 2022

Environmental Planning
Certificate 2021

Professional Affiliations

The Western Section of
the Wildlife Society—San
Joaquin Valley Chapter

Arroyo Pasajero Channel Maintenance, DWR, Fresno County, California. Served as a scientific aid for an approximately 2-mile-long routine maintenance project. Tasks included conducting protocol-level Swainson hawk and blunt-nosed leopard lizard surveys.

Project Experience

Confidential Solar Project, Stanislaus County, California. Served as field lead for this project. Conducted jurisdictional waters and wetland delineation. (2025-ongoing)

Confidential Solar Project, Kern County, California. Served as a task phase manager for environmental compliance services. Responsible for managing and coordinating blunt-nosed leopard surveys, small mammal trapping for Tipton kangaroo rats, and wetland delineations. Conducted blunt-nosed leopard surveys as a Level 1 surveyor and performed an aquatic resource delineation in non-native grassland, bush seepweed scrub, and iodine bush scrub habitat in Kern County, California. Authored the jurisdictional waters delineation report. (2025-ongoing)

Confidential Solar Project, Tulare County, California. Served as field lead for this project. Conducted a habitat assessment and jurisdictional waters and wetland delineation. Authored the jurisdictional waters delineation report. (2025-ongoing)

Scarlet Solar Project, EDP Renewables, Fresno County, California. Conducted passive relocation efforts utilizing 1-way doors on 14 potentially active burrows. (2025)

Confidential Solar Project, EDP Renewables, Fresno County, California. Conducted winter burrowing owl surveys. (2025)

Confidential Solar Project, Kern County, California. Served as field lead for this project. Conducted a habitat assessment and jurisdictional waters and wetland delineation. (2025)

Confidential Solar Project, Kern County, California. Conducted a habitat assessment and jurisdictional waters and wetland delineation. Assisted in the jurisdictional waters delineation report. (2025)

Confidential Solar Project, Fresno County, California. Conducted protocol-level nesting surveys for Swainson's hawk and wetland delineation. Conducted species-specific burrow mapping via pedestrian transects with the goal of identifying and documenting any potential dens and burrows for San Joaquin kit fox, burrowing owl, American badger, kangaroo rats, and San Joaquin antelope squirrel. Tasks included identifying and documenting potential, inactive, and active den/burrows of listed targeted species. Conducted morning and evening protocol-level surveys for burrowing owl surveys. Alongside a senior biologist, conducted camera trapping via scent stations for San Joaquin kit fox. Under lead permitted biologist Russell Sweet, aided in data recording for nocturnal protocol trapping for giant kangaroo rat. (2024-ongoing)

Confidential Energy Storage Project, Riverside County, California. Conducted a jurisdictional waters and wetland delineation. Assisted in the jurisdictional waters delineation report. (2024)

Confidential Solar Project, Fresno County, California. Conducted a jurisdictional waters and wetland delineation. Assisted in the jurisdictional waters delineation report. (2024)

Confidential Solar Project, Merced County, California. Conducted a jurisdictional waters and wetland delineation. Assisted in the jurisdictional waters delineation report. (2024)

Appendix 3.2F

Biological Data Sheets

Appendix D.
California Red-legged Frog Habitat Site Assessment Data Sheet

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

Date of Site Assessment: 05/06/2026
(mm/dd/yyyy)

Site Assessment Biologists: Johnson-Kelly, Tara _____
(Last name) (first name) (Last name) (first name)

Davis, Jared _____
(Last name) (first name) (Last name) (first name)

Site Location: College Lake, Watsonville, Santa Cruz County
(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: Seahawk Bess
Brief description of proposed action:

- 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: 0.5 mi x 1.2 mi Maximum depth: unknown
Vegetation: emergent, overhanging, dominant species: Typha sp., Salix sp.
Substrate: muddy

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

Appendix D.
California Red-legged Frog Habitat Site Assessment Data Sheet

STREAM:

Bank full width: _____

Depth at bank full: _____

Stream gradient: _____

Are there pools (circle one)? YES NO

If yes,

Size of stream pools: _____

Maximum depth of stream pools: _____

Characterize non-pool habitat: run, riffle, glide, other: _____

Vegetation: emergent, overhanging, dominant species: _____

Substrate: _____

Bank description: _____

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

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

American bullfrog	osprey	Red willow
coyote	black-tailed deer	Xanthium strumarium
American coot		Ludwigia peploides
Canada goose		Mentha pulegium
common yellowthroat		Typha sp.
mallard		floating logs
pie-billed grebe		submerged willows
western toad		tall flatsedge
mosquito fish		duckweed
great blue heron		

- logs along banks for cover, floating + emergent veg

Necessary Attachments:

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

Appendix D.
California Red-legged Frog Habitat Site Assessment Data Sheet

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

Date of Site Assessment: 05/06/2026
(mm/dd/yyyy)

Site Assessment Biologists: Johnson-Kelly, Tara
(Last name) (first name) (Last name) (first name)

Davis, Jared
(Last name) (first name) (Last name) (first name)

Site Location: Corralitos Creek, Watsonville, Santa Cruz County
(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: Seahawk BESS
Brief description of proposed action:

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: _____

see reverse

Appendix D.
California Red-legged Frog Habitat Site Assessment Data Sheet

STREAM:

Bank full width: 10 ft

Depth at bank full: 1 ft

Stream gradient: low

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

If yes,

Size of stream pools: _____

Maximum depth of stream pools: _____

Characterize non-pool habitat: run, riffle, glide, other: low gradient with occasional riffles

Vegetation: emergent, overhanging, dominant species: overstory of cottonwood and willows interspersed with eucalyptus and acacia. Understory of bracken fern, blackberry, poison oak

Substrate: silt and pebbles

Bank description: overgrown with vegetation

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

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

- silt and cobble streambed
- low gradient stream

Populus fremontii

blue gum eucalyptus

bracken fern

~~B~~ himalayan blackberry

Acacia sp.

Salix sp.

black phoebe

poison oak

densly vegetated stream banks

homeless encampments

trash

dappled sunlight

Necessary Attachments:

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

Appendix D.
California Red-legged Frog Habitat Site Assessment Data Sheet

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

Date of Site Assessment: 05/06/2026
(mm/dd/yyyy)

Site Assessment Biologists: Johnson-Kelly, Tara _____
(Last name) (first name) (Last name) (first name)

Davis, Jared _____
(Last name) (first name) (Last name) (first name)

Site Location: Kelly Lake, Watsonville, Santa Cruz County
(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: Seahawk BESS
Brief description of proposed action:

- 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: 0.64 mi x 0.25 mi Maximum depth: unknown

Vegetation: emergent, overhanging, dominant species: Juncus sp. or Typha sp, willows, coast live oaks

Substrate: muddy

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

Appendix D.
California Red-legged Frog Habitat Site Assessment Data Sheet

STREAM:

Bank full width: _____

Depth at bank full: _____

Stream gradient: _____

Are there pools (circle one)? YES NO

If yes,

Size of stream pools: _____

Maximum depth of stream pools: _____

Characterize non-pool habitat: run, riffle, glide, other: _____

Vegetation: emergent, overhanging, dominant species: _____

Substrate: _____

Bank description: _____

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

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

Unable to visit due to lack of public access.
Likely similar to College Lake or Pinto Lake.

Necessary Attachments:

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

Appendix D.
California Red-legged Frog Habitat Site Assessment Data Sheet

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

Date of Site Assessment: 05/06/2026
(mm/dd/yyyy)

Site Assessment Biologists: Johnson-kelly, Tara _____
(Last name) (first name) (Last name) (first name)

Davis, Jared _____
(Last name) (first name) (Last name) (first name)

Site Location: Pinto Lake, Watsonville, Santa Cruz County
(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: Seahawk BESS
Brief description of proposed action:

- 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: 0.9 mi x 0.2 mi Maximum depth: unknown

Vegetation: emergent, overhanging, dominant species: Juncus sp., duckweed,
Salix sp., Quercus agrifolia

Substrate: muddy

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

Appendix D.
California Red-legged Frog Habitat Site Assessment Data Sheet

STREAM:

Bank full width: _____

Depth at bank full: _____

Stream gradient: _____

Are there pools (circle one)? YES NO

If yes,

Size of stream pools: _____

Maximum depth of stream pools: _____

Characterize non-pool habitat: run, riffle, glide, other: _____

Vegetation: emergent, overhanging, dominant species: _____

Substrate: _____

Bank description: _____

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

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

Juncus sp.
duckweed
-turtles, either red-eared sliders or western pond turtle
catfish
carp
red willow
coast live oak
-polluted water; water high in DDT according to posted signs; public warned not to consume fish from lake
black-headed grosbeak
bewick's wren
mallard
common yellowthroat
song sparrow
marsh wren
western flycatcher
warbling vireo
pied-billed grebe

Necessary Attachments:

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