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Document Title:	Section 5_2_Biological_Resources_Pecho Energy Storage Center
Description:	This section discusses the biological resources and regulatory setting as well as, includes an analysis of potential impacts associated with the Applicant's (Pecho LD Energy Storage, LLC) proposed Advanced Compressed Air Energy Storage (A-CAES) facility in unincorporated San Luis Obispo County, California (CA).
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5.2 Biological Resources

This section discusses the biological resources and regulatory setting as well as, includes an analysis of potential impacts associated with the Applicant's (Pecho LD Energy Storage, LLC) proposed Advanced Compressed Air Energy Storage (A-CAES) facility in unincorporated San Luis Obispo County, California (CA). The approximately 80-acre Pecho Energy Storage Center (PESC) will occur on a approximately 300-acre site located just over one mile east of the City of Morro Bay, CA. Herein, references to PESC equate to the location of the proposed A-CAES facility.

The PESC will include a 400-megawatt (MW) x 8-hour energy storage facility that will provide electricity via a 3.8-mile transmission line (Preferred Route) to an existing substation located at the Pacific Gas & Electric (PG&E) Morro Bay Power Plant. Alternate 1 is a minor alignment modification that takes a slightly more easterly path just west of the PESC site before intersecting with the Preferred Route prior to the PG&E substation. Alternate 2 is a 4.1-mile interconnection transmission line that parallels an existing PG&E corridor slightly further to the north than Preferred Route. This evaluation of biological resources includes the following elements:

- Section 5.2.1 discusses the affected environment, including an overview of the region, habitat and vegetation communities, and special-status species.
  - Section 5.2.1.5 presents the results of biological surveys in and near the PESC site,
- Section 5.2.2 presents an environmental analysis of the PESC, including standards of significance, potential impacts of construction and operation of the PESC, and impacts to special-status species,
- Section 5.2.3 evaluates any potential cumulative effects to biological resources in the project vicinity,
- Section 5.2.4 addresses proposed mitigation measures that will avoid, minimize, or compensate for adverse impacts,
- Section 5.2.5 describes the laws, ordinances, regulations, and standards (LORS) that apply to PESC,
- Section 5.2.6 presents permit requirements,
- Section 5.2.7 presents the regulatory agency contacts,
- Section 5.2.8 contains the references used to prepare this section,
- Appendix 5.2A presents a list of all potential special status species within the study area,
- Appendix 5.2B presents the jurisdictional wetland forms and California Red-legged frog (CRLF) habitat assessment forms, and
- Appendix 5.2C provides the resumes of the Applicant's biologists.

The Applicant contracted Rincon Consultants, Inc. (Rincon) of San Luis Obispo, CA to perform the biological resources evaluation for the PESC California Energy Commission (CEC) Application for Certification (AFC). Rincon's findings were presented to Hyrdostor, Inc. in the *Pecho Advanced Compressed Air Energy Storage Facility Project Biological Existing Condition Report* dated August 2021 (Rincon 2021).

5.2.1 Affected Environment

This section provides an overview of the region including discussions of significant wetlands and other protected natural areas, sensitive habitats, designated critical habitat (DCH), and special-status plant and wildlife species. Per the California Energy Commission (CEC) siting regulations Title 20, Division 2, Chapter 5, Article 6, Appendix B (g) (13) (A), (B), (C), and (D), this evaluation of the affected environment includes the following:

- A review of sensitive biological resources within 10 miles of the PESC site.
- A list of species that biologists observed onsite and those with a potential to occur within one mile of the PESC site.
- A list of species that have the potential to occur 1,000 feet from the outer edge of linear facility corridors.
- Land cover and vegetation types identified within 250-feet of the PESC project area.
- The methods and results of biological surveys for the study area.

Please note that references to "study area" herein are inclusive of the project region, 10-mile buffer requirement, one mile buffer requirement, and 1,000-foot buffer requirement. References to the "PESC project area" include the limits of disturbance necessary to construct and operate the project's components. Similarly, references to the "PESC site" are limited to the approximately 80-acre location where the A-CAES facility will be located.

The PESC site consists of approximately 80-acres within a parcel currently zoned for agriculture (Assessor's Parcel Number 073-121-009) and is surrounded by other agricultural lands. The approximate center of the PESC site is latitude 35.352727 °N and longitude 120.798764 °W. Chorro Creek runs along the northern boundary of the PESC site before continuing westward to its outlet at the Morro Bay estuary. The PESC site lies within the Morro Bay South, California, United States Geological Survey (USGS) 7.5-minute topographic quadrangle and is within Township 29 South, Range 11 East, Sections 32, 33, and 34, and Township 30 South, Range 11 East, Section 4.

The majority of the PESC site consists of farmland within a relatively flat alluvial plain in the western portion of Chorro Valley, with a coastal ridge to the south. Morro Bay State Park lies approximately 0.25 miles southwest of the site and California State Route 1 (SR-1) runs approximately 0.18 miles to the north. The generation-tie (gen-tie) line route will run from the northwestern corner of the PESC site west through riparian habitat, wetland habitat, annual grassland, and developed areas within the City of Morro Bay.

The main access to PESC will be from the intersection of SR-1 and San Bernardo Creek Road in Morro Bay, CA. Secondary access will be from Adobe Road and San Luisito Creek Road. From these two entry points, two separate bridges will cross Chorro Creek providing access to the PESC site. One of the two bridges currently exists. The Applicant will pave a portion of the approximately 80-acre site so there can be internal access to all facilities and onsite buildings. Additional areas around PESC will remain unpaved with gravel surfacing.

This evaluation presents a description of the study area's regional biogeography and habitat types based on information from the following sources:

- Ecological Subregions of California prepared by the United States Department of Agriculture (USDA) Forest Service in 1997 and updated by the USGS in 2016 (USDA 1997; Griffith 2016).

- Preliminary Descriptions of the Terrestrial Natural Communities of California prepared by the California Department of Fish and Game and Dr. Robert Holland in 1986 (Holland 1986).
- A Manual of California Vegetation prepared by the California Native Plant Society (CNPS 2021) and John Sawyer and Todd Keeler-Wolf in 2009 (Sawyer et al. 2009).
- The California Department of Fish and Wildlife (CDFW) Biogeographic Information and Observation System.
- The CDFW California Natural Diversity Database (CNDDB) RareFind5 database (CDFW 2021a).
- Other publicly available studies, information, and resources.

5.2.1.1 Regional Overview

The San Luis Obispo County geographic region is located on the Pacific coast, approximately halfway between the metropolitan areas of Los Angeles and San Francisco. San Luis Obispo County covers approximately 3,300 square miles and borders Monterey County to the north, Kern County to the east, Santa Barbara County to the south, and 100 miles of Pacific coastline to the west.

The parcel is currently zoned Agriculture per Title 23 of the San Luis Obispo County Code and is supporting *Brassica* production (County of San Luis Obispo 2019; County of San Luis Obispo 2021). The PESC site is located within the Morro Bay-Frontal Estero Bay - Central California Coastal Hydrologic Region and Chorro Creek Hydrologic Unit. The hydrologic unit code (HUC) for the study area is *HUC 12-180600060502* (University of California Davis 2021).

The study area falls within the Central California Foothills and Coastal Mountains Ecoregion. Ecoregions are ecosystems of regional extent that share common climatic and vegetation characteristics. The USDA Forest Service organized ecoregions into domains, divisions, provinces, and sections. The project, including the PESC site and gen-tie line, lie within the Southern Santa Lucia Range subsection of the Central California Foothills and Coastal Mountains Ecological Section (Griffith 2016).

The Southern Santa Lucia Range subsection includes northwest-trending mountains and hills with rounded ridges, steep sides, and narrow canyons. Along the coast are narrow benches on marine terraces and small areas of sand dunes. Mesozoic-age metamorphic rocks of the Franciscan Complex occur with Miocene sandstone to the south. Within the Southern Santa Lucia Range subsection, elevations range from sea level to 3,408 feet above sea level. Vegetation includes coast live oak woodlands, chaparral shrublands, and annual grasslands (Griffith 2016).

The climate of San Luis Obispo County is directly related to its geographic characteristics. The coastal lowlands and plains are bounded on the east by the Santa Lucia Mountains and experience a maritime climate. Distance from the ocean, elevation, and the San Luis Mountain range modify climatic conditions throughout the remainder of the County. Average annual precipitation in the region is approximately 19 inches and the average temperature is 59 °Fahrenheit. Most of the annual precipitation occurs from November through April.

5.2.1.2 Significant Regional Wetlands and Protected Areas

5.2.1.2.1 Morro Bay Estuary

The Morro Bay estuary is a 2,300-acre semi-enclosed body of water where freshwater flowing from the land mixes with saltwater from the ocean. Morro Bay hosts one of the most significant and least disturbed wetland systems on the central and southern California coast. The estuary environment includes the lower reaches of Chorro and Los Osos creeks, a wide range of wetlands, salt and freshwater marshes, intertidal mud flats, eelgrass beds, and other subtidal habitats. Morro Bay estuary serves as a vital stopover and wintering ground for migratory birds and is home to a diverse assembly of habitats and plant and wildlife species (Morro Bay National Estuary Program 2012).

5.2.1.2.2 Morro Bay State Park

Morro Bay State Park looks out over Morro Bay to wind-sculpted sand dunes. Morro Bay State Park includes the Morro Bay State Park Museum of Natural History, Morro Rock Natural Preserve, the Heron Rookery Natural Preserve, and the Morro Bay State Park Golf Course. Amenities include a marina, restaurant, campground, and picnic areas. A butterfly grove sometimes hosts overwintering monarchs from November into February. The diverse vegetation in the 2,700-acre Morro Bay State Park includes grasslands, freshwater riparian, saltmarsh, and coastal sage scrub habitats (California State Parks 2017).

5.2.1.2.3 El Chorro Regional Park Campground

Once used extensively by local ranchers for dairy production and cattle grazing, this land was acquired by the federal government in the 1940s to establish Camp San Luis Obispo. The camp was used for training purposes by the U.S. Army during WWII and the Korean Conflict. In 1972, the land was deeded to the County, during President Nixon's "Legacy of Parks" program, to be managed as a natural park and recreational area for the citizens and visitors of San Luis Obispo County. El Chorro Regional Park and Campground is located between San Luis Obispo and Morro Bay (San Luis Obispo County Parks 2021).

5.2.1.2.4 Los Padres National Forest (Santa Lucia Wilderness)

The USDA Forest Service manages the Santa Lucia Wilderness as part of the Los Padres National Forest. The Wilderness area is 18,679 acres and was established in 1978 by the Endangered American Wilderness Act. The Santa Lucia Wilderness is located inland from Arroyo Grande and San Luis Obispo. The land is extremely rugged with chaparral-covered peaks and stream fed valleys of oaks and lush riparian vegetation. Morro Rock and the Seven Sisters hills of San Luis Obispo are visible from the wilderness's hill tops. This wilderness includes waterfalls, streams, trails for hiking, and hunting (USDA Forest Service 2021).

5.2.1.3 Sensitive Habitat Types and Critical Habitat

The following subsections provide descriptions of sensitive habitat types and critical habitat within the study area.

5.2.1.3.1 Sensitive Habitat Types

CDFW considers plant communities to be sensitive biological resources if they have limited distributions, have high wildlife value, include sensitive species, or are particularly susceptible to disturbance. CDFW ranks sensitive communities as "threatened" or "very threatened" and keeps records of their occurrences in the CNDDB. Currently, CDFW publishes the California Sensitive Natural Communities List online (CDFW 2021b). Vegetation rarity ranking is based on a rank calculator developed by NatureServe (2021). CDFW's Vegetation Program considers vegetation alliances with state ranks of S1-S3 as sensitive vegetative habitats. CDFW considers species or natural communities with one of the following NatureServe rankings as sensitive:

- Global(G)/State(S) X= Presumed Extinct,
- G/S H= Possibly Extinct
- G/S 1= Critically Imperiled
- G/S 2= Imperiled
- G/S 3= Vulnerable

The Applicant's biologist identified coast live oak (*Quercus agrifolia)* and California bay (*Umbellularia californica)* woodland as the lone CDFW sensitive habitat type within the study area.

Coast Live Oak Forest and Woodland Alliance with California Bay Woodland Association

This sensitive habitat is described as a woodland community where coast live oak is dominant or co-dominant in the upland tree canopy with California Bay (Sawyer et al. 2009). This community occurs from sea level to 1,200 meters above sea level within canyon bottoms, slopes, and flats with deep, sandy, or loamy soils (Sawyer et al. 2009). CDFW considers this habitat as a Sensitive Natural Community as its rarity rank is G3/S3 (CDFW 2021b).

Within the study area, this community is present along the southern boundary of the PESC site. It is also present along gen-tie line Preferred Alternative, just west of the PESC. This vegetation type consists of a relatively dense canopy of coast live oak and scattered bay trees. The understory consists of a dense mosaic of poison oak (*Toxicodendron diversilobum*), purple fiesta flower (*Pholistoma auritum*), and other shrubby and herbaceous species. **Figures 5.2-1 through 5.2-5** illustrate the land cover and vegetative community mapping for the study area. **Figure 5.2-4** and **Figure 5.2-5** illustrate the extent of coast live oak and California bay woodland habitat within the study area. *Please note that the figures referenced in this section are provided at the end of Section 5.2.*

5.2.1.3.2 Critical Habitat

Figures 5.2-6 depict critical habitats within ten miles of the PESC project area, respectively. Designated critical habitat (DCH) is the specific areas within the geographic area, occupied by the species at the time the government listed it. Additionally, it contains the physical or biological features that are essential to the conservation of endangered and threatened species. In designating critical habitat, the United States Fish and Wildlife Service (FWS) and National Oceanic Atmospheric Administration (NOAA) Fisheries consider the following requirements of the species:

> *"Space for individual and population growth, and for normal behavior; nutritional or physiological requirements; cover or shelter; sites for breeding, reproduction, or rearing offspring; and, generally, and habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of this species (FWS 2017)."*

The following lists the species that have DCH within the study area as well as, describes the location of the DCH in reference to the PESC project area:

- **California red-legged frog (CRLF)** (*Rana draytonii)*: Much of the study area falls within federally designated CRLF critical habitat.
- **Steelhead** (*Oncorhynchus mykiss*): Critical habitat for steelhead occurs within Chorro Creek and San Bernardo Creek.
- **Morro shoulderband snail** (*Helminthoglypta walkeriana)*: Critical habitat for the Morro shoulderband snail exists approximately 1.4 miles southwest of the Project area.
- **Western snowy plover** *(Charadrius alexandrinus nivosus)*: Critical habitat for the western snowy plover lies approximately 2.8 miles west of the Project area.
- **Morro Bay kangaroo rat** *(Dipodomys heermanni morroensis)*: Critical habitat for the Morro Bay kangaroo rat lies approximately 4.2 miles southwest of the Project area.
- **Tidewater goby** (*Eucyclogobius newberryi*): Critical habitat for the tidewater goby exists approximately 1.4 miles southwest of the Project area, within the Morro Bay estuary and along Turri Road and Los Osos Creek.

5.2.1.4 Regional Sensitive or Special-status Species

Appendix 5.2A provides a summary of all special-status species that occur within the study area. The Applicant's biologist compiled the table from information obtained from the list sources provided below.

- Regional species listed as threatened or endangered that have special requirements under the federal Endangered Species Act (ESA) (USFWS 1973).
- Regional species listed as threatened or endangered that have special requirements under the California Endangered Species Act (CESA) (Fish and Game Code, Section 2050 et seq.).
- Other non-listed sensitive and special-status species, including CNPS List 1-4 species, CDFW Species of Special Concern (SSC), CDFW Fully Protected (FP) Species, and other CDFW Special Animals.

In addition to species names, **Appendix 5.2A** includes the following details regarding each plant or animal:

- A status designation for each species
- Habitat types that may support these species in the regional vicinity
- A determination of potential for these species to occur within the PESC project area
- A rationale for the occurrence determination

Species that the Applicant's biologist observed during the biological reconnaissance and rare plant surveys are discussed in subsequent subsections. **Figure 5.2-7** illustrates the known locations of special-status species identified in the CNDDB within a 10-mile range of the PESC.

5.2.1.5 Biological Surveys

The Applicant's biologist performed plant community and wildlife habitat assessments within the study area to determine whether sensitive habitats occur within or near the PESC site and potential gen-tie line routes. The Applicant's biologist surveyed within a 1-mile radius of the PESC site and within 1,000 feet of the gen-tie line routes. During Spring 2021, the Applicant's biologist performed an initial reconnaissance level field survey, two (2) protocol-level botanical surveys, a steelhead presence/absence survey, a tidewater goby habitat suitability survey, and a CRLF habitat assessment.

Table 5.2-1 presents the survey dates, personnel, and type of assessments performed for this biological resource evaluation. For areas that biologists could not access, they used binoculars from publicly accessible vantage points and/or aerial imagery. The methods and results of each of these surveys are described below.

Table 5.2- 1: Survey Dates and Personnel for the PESC Project

Date	Field Personnel	Survey Type
4/21/21	K. Weichert; M. Boudreau	Initial field reconnaissance survey
4/21/21	K. Weichert; M. Boudreau	Floristic-level botanical survey 1
4/21/21	K. Weichert; M. Boudreau	California red-legged frog habitat suitability survey
5/5/21	K. Weichert; K. Fisher	Floristic-level botanical survey 2
5/25/21	S. Howard; H. Price Curran	Steelhead presence/absence survey
7/26/21	S. Howard; H. Price Curran	Tidewater goby habitat suitability survey

Source: Rincon 2021.

Initial Reconnaissance-Level Field Survey

The Applicant's biologist performed an initial reconnaissance-level field survey on April 21, 2021. The survey area consisted of the PESC site and potential gen-tie line routes, plus a 250-foot buffer, as accessible. The Applicant's biologist performed a meandering transect pedestrian survey throughout the entire PESC site and surrounding buffer zone. Biologists used 10 X 42 binoculars to achieve maximum visual coverage of the study area and to aid in species identification. The initial reconnaissance-level survey focused on the following:

- Field-verifying and refining desktop mapping of land cover types and vegetation communities within the study area.
- Evaluating the condition of habitats present on site.
- Assessing the study area for the potential to support special-status species and other sensitive biological resources.
- Making direct observations of any evidence of occupation by special-status species.

The Applicant's biologist documented trees and man-made structures of sufficient size to support raptor nests within ½ mile of the study area. Additionally, biologists evaluated habitat features and suitability for the western bumblebee (*Bombus occidentalis*), Morro shoulderband snail, CRLF, and roosting bats.

Botanical Surveys

The Applicant's biologist performed protocol level botanical surveys for the study area, as accessible, on April 21, 2021, and June 16, 2021. The Applicant's biologist conducted additional mapping and characterization of a portion of the study area on May 5, 2021. Based on the presence of suitable habitat, 18 special-status plant species have the potential to occur within the study area. The botanical surveys identified 105 species of vascular plants.

Of the 105 species identified within the study area, biologists observed only one special-status plant species during both botanical surveys, Cambria morning-glory (*Calystegia subacaulis ssp. Episcopalis*). The observed population consisted of over 100,000 individuals in three distinct patches. **Figure 5.2-8** illustrates the location of this sensitive species.

Biologists observed special-status plant species Monterey cypress (*Hesperocyparis macrocarpa*) and Monterey pine (*Pinus radiata*) near the Morro Bay power plant; however, they were not present in the context of a native woodland. As such, CDFW does not consider them special status.

Steelhead Presence/Absence Survey

The Applicant's fisheries biologists performed a steelhead presence/absence survey within Chorro Creek on May 25, 2021. Steelhead are the anadromous form of rainbow trout. This means that they are ocean-going. Steelhead can travel from freshwater streams to the ocean to feed before returning to freshwater streams to spawn. The federal ESA lists the South-Central California Coast distinct population segment (DPS) as threatened. The South-Central Coast DPS of steelhead refers to runs of steelhead in coastal basins from the Pajaro River south to, but not including the Santa Maria River.

Resident rainbow trout and steelhead are genetically identical. All species of *Oncorhynchus mykiss* within streams in the south-central California coast region with connections to the ocean fall under the protection of the National Marine Fisheries Service (NMFS). Migration from the ocean to regional creeks typically occurs following rainy season storm events. Research suggests that if steelhead occur in regional streams, downstream migrant young salmon will be present during the spring months (Spina et al. 2005). The Applicant's biologist observed two *Oncorhynchus mykiss* within Chorro Creek during the presence/absence survey.

The Applicant's fisheries biologist determined that stream habitat for steelhead within the surveyed reach was generally good. Within the study area, fisheries biologists observed suitable spawning, rearing, and feeding habitat for steelhead species. The stream habitat includes a dense riparian canopy dominated by arroyo willow (*Salix lasiolepis*) with minimal invasive species.

The Applicant's fisheries biologist documented general habitat characteristics and mapped one representative habitat unit. Mesohabitat diversity throughout the surveyed reach was generally low. Additionally, fisheries biologists noted that the habitat unit was mostly flatwater and at 175 feet, to be very long. The area upstream of this deep pool was not accessible due to the presence of fallen trees and woody debris. However, the Applicant's fisheries biologist determined that the presence of additional deep pools within the un-surveyed reach is likely.

Observed anthropogenic impacts to instream habitat included a layer of fine sand and silt sediment mixed in with gravel and cobble substrate, likely due to erosion from nearby agricultural activities. Additionally, the Applicant's fisheries biologist noted the presence of various agricultural materials within the creek. These materials included old culverts, pipes, and irrigation tubing. Although not surveyed, literature indicates that steelhead are likely to occur within the portions of San Bernardo Creek that fall within the study area's boundaries.

Tidewater Goby Habitat Suitability Survey

On July 26, 2021, the Applicant's fisheries biologists performed a habitat suitability survey for tidewater goby in Chorro Creek, within and downstream of the PESC site. The Applicant's fisheries biologist surveyed all accessible portions of Chorro Creek within the study area. During the May 25, 2021, instream steelhead presence/absence survey, fisheries biologist observed no tidewater goby individuals or suitable habitat for tidewater goby.

A 1984 research study documented the presence of tidewater gobies within the Morro Bay watershed (CDFW 2021a). The FWS species recovery plan describes available tidewater goby habitat in Chorro Creek as encompassing approximately 100 hectares. The recovery plan states that tidewater gobies have not been seen in Chorro Creek since 1981. According to the recovery plan, FWS last surveyed Chorro Creek for tidewater gobies in 1990-1991 and they observed no tidewater gobies. As such, the species may no longer exist within Chorro Creek. If this species does exist within Chorro Creek, it most likely would be present within the lower reaches of the creek, but not within the study area. This is due to the lack of suitable spawning habitat, increased gradient, and the presence of turbulent riffle habitats downstream of the study area. The turbulent riffles would preclude tidewater gobies from being able to disperse upstream (Sims 2010; USFWS 2005a; and CDFW 2021a). As such, the Applicant's fisheries biologist has concluded that the species is not likely to occur within the study area.

California Red-Legged Frog Habitat Assessment

The Applicant has not yet performed a protocol level survey of the project area for the CRLF. However, the Applicant's biologist did perform a CRLF habitat assessment on April 21, 2021. The biologist performed the habitat assessment in accordance with the Revised Guidance on Site Assessment and Field Surveys for California Red-legged Frog (FWS 2005b). **Appendix 5.2B** includes the biologist's CRLF Habitat Assessment Data Sheet.

The Applicant's biologist assessed upland and aquatic habitat for CRLF within the study area. The only directly accessible aquatic habitat during the April 21, 2021, assessment was within Chorro Creek at the access bridge north and adjacent to the PESC site. In addition to Chorro Creek, the biologist's jurisdictional delineation, discussed in Section 5.2.2.2.7, identified an additional ten wetland and/or unnamed drainage features within the study area that may contain suitable CRLF habitat.

Habitat within the accessible portion of Chorro Creek contains perennial moving water of varying depths. Depths ranged between six inches and two feet at the time of the assessment. The substrate consists of cobbly and silty constituents and included undercut banks in some places. Vegetation strata consisted of a combination of emergent vegetation and layered and moderately dense overhanging understory. The understory was dominated by California blackberry (*Rubus ursinus*) and other riparian understory herbs. Above the waterbody is a dense canopy dominated by arroyo willow.

Due to the presence of slow, moderately deep waters, and backwaters, the reaches of Chorro Creek near the PESC site provide suitable breeding habitat. These areas also provide suitable areas for larval development and larval/adult foraging. Chorro Creek also provides a high-quality aquatic movement corridor in which CRLF can

move from one stream reach to another. However, biologists observed no individuals during the habitat assessments and surveys. The proposed gen-tie line routes also traverse potential CRLF aquatic habitat at Chorro Creek (Preferred Route, Alternate 1, and Alternate 2), San Bernardo Creek (Preferred Route, Alternate 1, and Alternate 2), and unnamed drainages (Preferred Route, Alternate 1, and Alternate 2).

Manmade ponds that occur in the vicinity of the PESC site may support CRLF breeding. Four ponds are located just north of the Project site. Little Morro Creek is also located approximately 0.2 miles from the western end of gen-tie line Preferred Alternative. Other stream reaches of Chorro Creek and San Bernardo Creek contain suitable breeding and foraging areas. Upland habitat quality within the Project area is largely high because of the presence of undeveloped habitats located immediately adjacent to suitable CRLF aquatic habitat. These high-quality upland areas largely correspond to the locations of potential gen-tie line routes. The Applicant's biologist determined that CRLF could easily utilize the annual grasslands and riparian corridors as refuge during seasons of high flows as well as during dispersal.

The riparian habitat that potential gen-tie line routes traverse also provide a high-quality regional movement and foraging corridor based on its proximity to a perennial water source. Upland quality surrounding the PESC site is low due to current agricultural practices. Due to PESC's proximity to Chorro Creek, CRLF may disperse across the agricultural fields during or following weather conditions favorable to movement (e.g., rain, fog, etc.). Based on this assessment, CRLF should be considered present within the reaches of Chorro Creek and San Bernardo Creek that flow through the Project area, as well as any drainages containing suitable habitat that intersects potential gen-tie line routes.

5.2.1.6 Land Cover Types and Vegetative Communities

As discussed previously, the Applicant's biologist performed habitat and plant community surveys within the PESC study area. **Figure 5.2-1** through **5.2-5** illustrate the land cover and vegetation types identified within 250-feet of the PESC project. **Table 5.2-2** presents the land cover types and vegetative communities and their corresponding acreages. This subsection includes a discussion of each identified land cover type and vegetative community.

Table 5.2- 2: Land Cover Types and Vegetative Communities

Vegetation Community/Land Cover Type	Rarity Rank	Total Acres within Study Area
Arroyo Willow Thickets (*Salix lasiolepis* Shrubland Alliance)	S4/G4	36.58
Coyote Brush Scrub (*Baccharis pilularis* Shrubland Alliance	S5/G5	33.82
Coast Live Oak Woodland (*Quercus agrifolia* Forest and Woodland Alliance with an *Umbellularia californica* Association)	S3/G3	24.49
Cattail Marsh (*Typha angustifolia, domingensis, latifolia* Herbaceous Alliance)	S5/G5	1.73
Pale Spike Rush Marsh (*Eleocharis macrostachya* Herbaceous Alliance)	G4/S4	1.21
Wild Oats and Annual Brome Grassland (*Avena* spp. - *Bromus* spp. Herbaceous Semi-Natural Alliance)	N/A	260.81
Mixed Evergreen Woodland	N/A	1.76

Vegetation Community/Land Cover Type	Rarity Rank	Total Acres within Study Area
Successional Wetland	N/A	7.27
Active Agricultural	N/A	127.22
Fallow Agricultural	N/A	6.92
Ruderal	N/A	16.38
Developed	N/A	34.73

Source: Rincon 2021.
G1 or S1= Critically Imperiled Globally or State level
G2 or S2=Imperiled Globally or state level
G3 or S3= Vulnerable to extirpation or extinction Globally or State Level
G4/5 or S4/5=Apparently secure, common abundant

Arroyo Willow Thickets (*Salix lasiolepis* Shrubland Alliance)

Arroyo willow thickets are described as riparian communities where arroyo willow is dominant, or codominant with other shrub or tree species, including coyote brush (*Baccharis pilularis)*, California sycamore (*Platanus racemose)*, black cottonwood (*Populus trichocarpa)*, and blue elderberry (*Sambucus nigra)*. This community occurs along stream banks, slope seeps, and drainages from sea level to 2,170 meters above sea level (Sawyer et al. 2009). **Figures 5.2-4 and 5.2-5** illustrate the location of this habitat type within the study area.

Coyote Brush Scrub (*Baccharis pilularis* Shrubland Alliance)

Coyote brush scrub is described as a scrub community where coyote brush is dominant or codominant with other shrub species, including California sagebrush (*Artemisia californica)*, blueblossom ceanothus (*Ceanothus thyrsiflorus)*, California blackberry, California buckwheat (*Eriogonum fasciculatum)*, and white sage (*Salvia apiana)*. This community occurs from sea level to 1,500 meters above sea level in many habitats, including stream sides, coastal bluffs, open slopes, and ridges (Sawyer et al. 2009). **Figures 5.2-1** through **5.2-5** illustrate the location of this habitat type within the study area.

Coast Live Oak and California Bay Woodland (*Quercus agrifolia* Forest and Woodland Alliance with an *Umbellularia californica* Association)

Coast Live Oak and California Bay Woodland is described as a woodland community where coast live oak is dominant or co-dominant in the upland tree canopy with California Bay (Sawyer et al. 2009). This community occurs from sea level to 1,200 meters above sea level within canyon bottoms, slopes, and flats with deep, sandy, or loamy soils (Sawyer et al. 2009). CDFW considers this habitat as a Sensitive Natural Community as its rarity rank is G3/S3 (CDFW 2021b). **Figure 5.2-1** and **Figure 5.2-2** illustrate the extent of Coast Live Oak and California Bay Woodland within the study area.

Cattail Marsh (Typha angustifolia, domingensis, latifolia Herbaceous Alliance)

Cattail marshes are described as marshes where cattails are dominant or co-dominant in the herbaceous layer with other species, including spike rush (*Eleocharis macrostachya)*, rush (*Juncus* spp.), sedge (*Cyperus* spp.), and pepperweed (*Leipidium latifolium)*. This community occurs from sea level to 350 meters above sea level in

semi-permanently flooded freshwater or brackish marshes (Sawyer et al. 2009). **Figures 5.2-3** and **5.2-4** illustrate the location of this habitat type within the study area.

Pale Spike Rush Marsh (Eleocharis macrostachya Herbaceous Alliance)

Pale spike rush marsh is described as a marsh community where pale spike rush is dominant or co-dominant in the herbaceous layer with other herbs, including creeping bentgrass (*Agrostis stolonifera)*, sedge (*Carex* spp.), Sierra rush (*Juncus nevadensis)*, and smartweed (*Polygonum* spp.). This community occurs along streambeds, pastures, ditches, swales, lakeshores, and artificial ponds from sea level to 2,500 meters above sea level (Sawyer et al. 2009). **Figure 5.2-1** and **Figure 5.2-3** illustrate the location of this habitat type within the study area.

Wild Oats and Annual Brome Grassland (Avena spp. - Bromus spp. Herbaceous Semi-Natural Alliance)

Wild Oats and Annual Brome Grassland is described as a semi-natural grassland community dominated by non-native grass species, including wild oats, brome, purple false brome (*Brachypodium distachyon)*, big quaking grass (*Briza maxima)*, Australian saltbush (*Atriplex semibaccata)*, and little barely (*Hordeum spp*.). This community occurs in foothills, waste areas, rangelands, and openings in woodlands from sea level to 2,200 meters above sea level (Sawyer et al. 2009). Within this community, the Applicant's biologist observed a population of Cambria morning glory near the northern boundary of the study area. California morning glory is a CNPS California Rare Plant Rank (CRPR) 4.2 ranked sensitive species. **Figures 5.2-1** through **5.2-4** illustrate the location of this habitat type within the study area.

Active Agricultural

Active agricultural land within the study area includes the entire PESC site, which consists of fields currently planted with *Brassica*. **Figure 5.2-4** and **Figure 5.2-5** illustrate the location of this land use. Neither the Holland nor Sawyer classification systems describe this land cover as naturally occurring. Additionally, CDFW does not list this vegetation type on their Sensitive Natural Communities List (CDFW 2021b).

Fallow Agricultural

Parcels with fallow agriculture are present in areas surrounding Chorro Creek Road and Quintana Road. **Figure 5.2-4** illustrates the location of the fallow agricultural fields within the study area. Vegetation within these areas consists primarily of tall overgrown fields of ruderal species such as fennel, filaree (*Erodium cicutarium*), and perennial mustard (*Hirschfeldia incana*). Neither the Holland nor Sawyer classification systems describe this land cover as naturally occurring. Additionally, this vegetation type is not listed on the CDFW Sensitive Natural Communities List (CDFW 2021b).

Mixed Evergreen Woodland

Mixed evergreen woodland is not naturally occurring and is not described in either the Holland or Sawyer classification systems. This vegetation type consists of a mixture of various ornamental and native trees species such as Monterey cypress (*Hesperocyparis macrocarpa*), Monterey pine (*Pinus radiata*), and blue-gum eucalyptus (*Eucalyptus globulus*). When they are present in the context of a native woodland, the cypress and pine trees are special-status species (CRPR 1B.2 and CRPR 1B.1, respectively). However, the observed trees appear to have been part of an ornamental planting. **Figure 5.2-1** illustrates the location of this habitat type within the study area.

Successional Wetland

Successional wetland is uncommon and is not described in either the Holland or Sawyer classification systems. The vegetation consists of a somewhat uniform distribution of herbaceous wetland plants dominated by bristly oxtongue (*Heminthotheca echioidea*) with scattered spike rush, low bulrush (*Scirpus cernuus*), and young shrubby arroyo willows. Based on the shallowly furrowed topography of the soil, high volume of thatch, uniformity of vegetation, and constituents, this area appears to have been previously disked. The immediate surrounding area was in active agriculture at the time of the botanical site visits. This vegetation type is likely in a state of transition from active agriculture to pale spike rush marsh habitat. **Figure 5.2-3 and Figure 5.2-4** illustrate the location of this habitat type within the study area.

Ruderal

Ruderal areas consist of vegetation that has been heavily disturbed or altered such that natural vegetation has largely been removed and non-native plant species are dominant. These sites do not correspond well with either the Holland or Sawyer classification systems. Vegetation within ruderal portions of the study area consists primarily of introduced species, including coastal heron's bill (*Erodium cicutarium*), cheeseweed (*Malva parviflora*), Bermuda grass (*Cynodon dactylon*), mustard (*Brassica rapa*), and foxtail barley (*Hordeum murinum*). **Figures 5.2-1**, **5.2-3**, and **5.2-4** illustrate the location of this community within the study area.

Developed

Developed land within the study area exists southeast of the PESC site and within gen-tie line Preferred Route, Alternate 1, and Alternate 2. Developed areas consist of residential homes southeast of the PESC site, SR-1, Quintana Road, Little Morro Creek Road, Main Street, several unpaved roads, a residential home located off Chorro Creek Road, and infrastructure associated with the existing Morro Bay Power Plant. **Figure 5.2-1** illustrates the developed lands within the study area. Neither the Holland nor Sawyer classification systems describe this land cover as naturally occurring. Additionally, this vegetation type is not listed on the CDFW Sensitive Natural Communities List (CDFW 2021b).

5.2.1.7 Generator Tie-Line

Transmission line construction will occur concurrently with construction activities at the PESC site. The PESC project will construct a 3.8-mile transmission line, Preferred Route, Alternate 1, and Alternate 2, to an existing PG&E substation located in the City of Morro Bay. Alternate 2, is a 4.1-mile interconnection transmission line that parallels an existing PG&E corridor slightly further to the north than Preferred Alternative. The Applicant's preference is to access the off-site transmission line and support structures via the existing utility maintenance roadways.

5.2.1.8 Sensitive and Special-status Plant Species

The Applicant's biologist evaluated 110 special-status plant species for their potential to occur within the PESC project area and broader study area. The Applicant's biologist performed seasonally timed botanical surveys within accessible portions of the study area. The Applicant's biologist evaluated the list of regional special-status plant species provided in **Appendix 5.2A** against observed conditions as well as, the results of the rare plant survey. The list of special-status plant species presented in **Appendix 5.2A** includes regulatory status, habitat requirements, occurrence determination, and a rationale for the occurrence determination. The Applicant's biologist evaluated the potential for each special-status species to occur according to the following criteria:

- **Not Expected**: Habitat on and adjacent to the site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime), and species would have been identifiable on-site if present (e.g., oak trees). Protocol surveys (if conducted) did not detect species.
- **Low Potential**: Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site. Protocol surveys (if conducted) did not detect species.
- **Moderate Potential**: Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
- **High Potential**: All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- **Present**: Species is observed on the site or has been recorded (e.g., CNDDB, other reports) on the site recently (within the last five years).

Nineteen special-status plant species have some potential to occur along the potential gen-tie line routes. The remaining 91 special status plant species do not have potential to occur on-site based on the absence of suitable habitats and lack of suitable soils as well as the disturbed nature of the land.

Table 5.2-3 provides a summary of the special-status plant species with a potential to occur within the Project area. This subsection includes a description of the special-status plant species that have a moderate or higher potential to occur.

Table 5.2- 3: Special-status Plant Species with Potential to Occur within the Project Area

Scientific Name	Common Name	Status CRPR, Federal/State	Potential to Occur
Agrotis hooveri	Hoover's bent grass	1B.2	Low Potential
Astragalus didymocarpus var. *milesianus*	Miles' milk vetch	1B.2	Low Potential
Calandrinia breweri	Brewer's calandrinia	4.2	Low Potential
Cirsium fontinale var. *obispoense*	Chorro Creek bog thistle	1B.2, FE/SE	Low Potential
Erysimum suffrutescens	suffrutescent wallflower	4.2	Low Potential
Fritillaria agrestis	stinkbells	4.2	Low Potential
Sanicula hoffmannii	Hoffmann's sanicle	4.3	Low Potential
Sanicula maritima	adobe sanicle	1B.1	Low Potential
Streptanthus albidus ssp. *Peramoenus*	most beautiful jewelflower	1B.2	Low Potential
Calochortus clavatus var. *clavatus*	club-haired mariposa-lily	4.3	Moderate Potential
Calochortus obispoensis	San Luis mariposa-lily	1B.2	Moderate Potential
Castilleja densiflora var. *obispoensis*	San Luis Obispo owl's-clover	1B.2	Moderate Potential

Scientific Name	Common Name	Status CRPR, Federal/State	Potential to Occur
Chorizanthe palmeri	Palmer's spineflower	4.2	Moderate Potential
Delphinium parryi ssp. *Eastwoodiae*	Eastwood's larkspur	1B.2	Moderate Potential
Dudleya abramsii ssp. *Bettinae*	Betty's dudleya	1B.2	Moderate Potential
Dudleya abramsii ssp. *Murina*	mouse-gray dudleya	1B.3	Moderate Potential
Dudleya blochmaniae ssp. *blochmaniae*	Blochman's dudleya	1B.1	Moderate Potential
Layia jonesii	Jone's layia	1B.2	High Potential
Calystegia subacaulis ssp. *Episcopalis*	Cambria morning glory	4.2	Present

Source: Rincon 2021.
FE = Federally Endangered SE = State Endangered
CRPR (CNPS California Rare Plant Rank)
1A =Presumed extirpated in California, and rare or extinct elsewhere
1B =Rare, Threatened, or Endangered in California and elsewhere
2A =Presumed extirpated in California, but common elsewhere
2B=Rare, Threatened, or Endangered in California, but more common elsewhere
CRPR Threat Code Extension
.1 =Seriously endangered in California (>80% of occurrences threatened/high degree and immediacy of threat)
.2 =Moderately threatened in California (20-80% of occurrences threatened/moderate degree and immediacy of threat)
.3 =Not very endangered in California (<20% of occurrences threatened/low degree and immediacy of threat)

- **Chorro Creek Bog Thistle**: This plant is listed as federally and state endangered and maintains a CRPR 1B.2 variety. The thistle occurs in chaparral, cismontane woodland, coastal scrub, valley and foothill grassland, and serpentine seeps. This variety is found at elevations between 5 and 385 meters and blooms from February through July. Within the Project area, suitable habitat for the Chorro Creek bog thistle occurs within coast live oak woodland habitat along the southern perimeter of the PESC site and gen-tie line Preferred Alternative. Suitable habitat also occurs within coyote brush scrub along the southern perimeter of the PESC site and within coyote brush scrub and annual grassland habitats along each potential gen-tie line route. One occurrence of the variety is documented in the CNDDB within five miles of the Project area, along a tributary of San Luisito Creek (CDFW 2021a). Calflora documents two occurrences of the variety within five miles of the Project area (Calflora 2021). There is a low potential for Chorro Creek bog thistle to occur within portions of the Project area not directly surveyed along gen-tie line Preferred Alternative, Alternate 1, and Alternate 2.
- **Club-haired Mariposa Lily**: This plant is a CRPR 4.3 variety that occurs in chapparal, cismontane woodland, valley and foothill grassland, and coastal scrub habitats. The lily is often found on serpentine clay in rocky soils, occurs at elevations ranging from 75 to 1300 meters, and blooms in May and June. Within the Project area, suitable habitat for the variety occurs within coast live oak woodland habitat along the southern perimeter of the PESC site and gen-tie line Preferred Alternative. Suitable habitat also exists within coyote brush scrub along the southern perimeter of the Project site and within coyote brush scrub and annual grassland habitats along each potential gen-tie line route. The club-haired mariposa lily has a moderate potential to occur within the Project area. There are no occurrences of the variety documented in the CNDDB within five miles of the Project area (CDFW 2021a). However, there are five occurrences of the variety documented within five miles of the Project area in Calflora (Calflora 2021). There is a moderate

potential for club-haired mariposa lily to occur within portions of the Project area not directly surveyed along gen-tie line Preferred Alternative and Alternate 2.

- **San Luis Obispo Mariposa Lily**: This plant is a CRPR 1B.2 species that is endemic to San Luis Obispo and Monterey Counties. The species occurs in chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland habitats, and is frequently found in grassland with serpentine soils. San Luis Obispo mariposa lily occurs at elevations ranging from 15 to 550 meters and blooms from May through July. Within the Project area, suitable habitat for the species occurs within coast live oak woodland habitat along the southern perimeter of the PESC site and gen-tie line Preferred Route. Suitable habitat also exists within coyote brush scrub along the southern perimeter of the PESC site and within coyote brush scrub and annual grassland habitats along the potential gen-tie line routes. Particularly, the species has potential to occur within annual grassland not directly surveyed in serpentine outcrops north of SR-1. There are no occurrences of the species documented in the CNDDB within five miles of the Project area (CDFW 2021a). However, there is one occurrence of the species documented within five miles of the Project area in Calflora (Calflora 2021).
- **San Luis Obispo Owl's Clover**: This plant is a CRPR 1B.2 variety that occurs in valley and foothill grassland, meadows, and seeps; and can be found on serpentine soils. The variety occurs at elevations ranging from 9 to 485 meters and blooms from March through May. The Project area contains suitable grassland habitat north of SR-1 along gen-tie line Preferred Alternative and Alternate 2. There is also the potential for serpentine seeps to occur within the Project area north of SR-1. There are four occurrences of the variety documented in the CNDDB within five miles of the Project area. Calflora documents nine occurrences of the variety within five miles of the Project area (Calflora 2021). There is a moderate potential for San Luis Obispo owl's clover to occur within portions annual grassland not directly surveyed within gen-tie line Preferred Alternative and Alternate 2.
- **Palmer's spineflower**: This plant is a CRPR 4.2 species that occurs in chaparral, cismontane woodland, and valley and foothill grassland habitats, often on dry, rocky hillsides in serpentine substrates. The species occurs at elevations of 60 to 945 meters and blooms from April through August. Within the Project area, suitable habitat for the species occurs within coast live oak woodland habitat along the southern perimeter of the PESC site and gen-tie line Preferred Alternative. Suitable habitat also exists within coyote brush scrub along the southern perimeter of the Project site and within coyote brush scrub and annual grassland habitats along the potential gen-tie line routes. This species has potential to occur within un-surveyed annual grassland in serpentine outcrops north of SR-1. There are no occurrences of the species documented in the CNDDB within five miles of the Project area (CDFW 2021a). However, there are fourteen occurrences of the species documented within five miles of the Project area in Calflora (Calflora 2021). Palmer's spineflower has a moderate potential to occur within portions of the Project area not directly surveyed.
- **Eastwood's Larkspur**: This plant is a CRPR 1B.2 species that occurs in coastal serpentinite substrates within openings in chaparral and valley and foothill grassland. This species blooms between February and March, and typically occurs at elevations ranging from 75 to 500 meters. Within the Project area, suitable habitat exists within un-surveyed annual grasslands north of SR-1 along gen-tie line Preferred Alternative and Alternate 2. There is one historic occurrence of the species documented in the CNDDB within five miles of the Project area (CDFW 2021a). Calflora documents five occurrences of the species within five miles of the Project area (Calflora 2021). Eastwood's larkspur has a moderate potential to occur within portions of the Project area not directly surveyed.

- **Betty's Dudleya**: This plant is a CRPR 1B.2 subspecies that occurs in serpentinite and rocky substrates within chaparral, coastal scrub, and valley and foothill grassland. This subspecies blooms between May and July, and typically occurs at elevations ranging from 20 to 200 meters. Suitable habitat within the Project area exists in coyote brush scrub along the southern perimeter of the PESC site and within un-surveyed coyote brush scrub and annual grassland habitats along each potential gen-tie line routes. There are nine occurrences of Betty's dudleya documented in the CNDDB within five miles of the Project area (CDFW 2021a). Calflora also documents nine occurrences of the subspecies within five miles of the Project area (Calflora 2021a). Betty's Dudleya has a moderate potential to occur within portions of the Project area not directly surveyed.
- **Mouse-gray Dudleya**: This plant is a CRPR 1B.3 subspecies that occurs in chaparral, cismontane woodland, valley and foothill grassland, and serpentine outcrops. The subspecies occurs at elevations of 25 to 535 meters and blooms in May and June. Within the Project area, suitable habitat for the species occurs within coast live oak woodlands along the southern perimeter of the PESC site and gen-tie line Preferred Alternative. Suitable habitat also exists within un-surveyed annual grassland habitat north of SR-1 along gen-tie line Preferred Alternative and Alternate 2. There are no occurrences of mouse-gray dudleya documented in the CNDDB within five miles of the Project area (CDFW 2021a). However, Calflora documents two occurrences of the subspecies within five miles of the Project area (Calflora 2021a). Mouse-gray dudleya has a moderate potential to occur within portions of the Project area not directly surveyed.
- **Blochman's Dudleya**: This plant is a CRPR 1B.1 subspecies that occurs in rocky, often clay or serpentinite substrates within coastal bluff scrub, chaparral, coastal scrub, and valley and foothill grassland. This subspecies blooms between April and June, and typically occurs at elevations ranging from 5 to 450 meters. Within the Project area, suitable habitat occurs within coyote brush scrub along the southern perimeter of the PESC site and within un-surveyed coyote brush scrub and annual grassland habitats along all three gen-tie alternative routes. There are twelve occurrences of Blochman's dudleya documented in the CNDDB within five miles of the Project area (CDFW 2021a). Calflora also documents twelve occurrences of the subspecies within five miles of the Project area (Calflora 2021a). Blochman's dudleya has a moderate potential to occur within portions of the Project area not directly surveyed.
- **Jone's Layia**: This plant is a CRPR 1B.2 species that occurs in chaparral and valley and foothill grassland on clay soils and serpentine outcrops. The species occurs at elevations of 5 to 245 meters and blooms from March through May. Within the Project area, suitable habitat occurs north of SR-1 in un-surveyed annual grassland habitat along potential gen-tie Preferred Alternative and Alternate 2. There are ten occurrences of Jone's layia documented in the CNDDB within five miles of the Project area (CDFW 2021a). Calflora documents dozens of occurrences of the species within five miles of the Project area (Calflora 2021a). Jone's layia has a high potential to occur within portions of the Project area not directly surveyed.
- **Cambria Morning Glory**: This plant is a CRPR 4.2 subspecies that typically occurs in clay substrates within chaparral, cismontane woodland, coastal prairie, and valley and foothill grassland. This subspecies blooms between March and July and occurs at elevations ranging from 5 to 500 meters. The Applicant's biologist observed Cambria morning glory within the Project area during both botanical surveys conducted in Spring 2021. A population of the subspecies was observed in three patches on hillsides within annual grassland habitat north of SR-1. There are two occurrences of Cambria morning glory documented in the CNDDB within five miles of the Project area (CDFW 2021a). Calflora documents fifteen occurrences of the subspecies within five miles of the Project area (Calflora 2021a). Additional populations of Cambria morning

glory have a high potential to occur within the annual grassland habitat not directly surveyed north of SR-1 within gen-tie line Preferred Alternative, and Alternate 2.

5.2.1.9 Sensitive or Special-status Wildlife Species

The Applicant's biologist evaluated 50 special-status wildlife species for their potential to occur within the study area. **Appendix 5A** includes a list of all 50 special-status wildlife species that occur within the region. **Table 5.2-4** provides a summary of special-status wildlife species with a potential to occur within the Project area. This subsection includes a discussion of the special-status wildlife species with a moderate or high potential to occur within the Project area.

Table 5.2- 4: Special-status Wildlife Species with Potential to Occur within the Project Area

Class	Scientific Name	Common Name	Status	Potential to Occur
Invertebrates	*Bombus caliginosus*	obscure bumble bee	G4?/S1S2	Low Potential
Invertebrates	*Bombus occidentalis*	western bumble bee	SCE*	Low Potential
Invertebrates	*Helminthoglypta walkeriana*	Morro shoulderband snail	FE	Moderate Potential
Fish	*Oncorhynchus mykiss irideus*	South Central California Coast DPS Steelhead	FT	Present
Amphibians	*Rana boylii*	foothill yellow-legged frog	SE	Low Potential
Amphibians	*Rana draytonii*	California red-legged frog	FT/SSC	Present
Amphibians	*Taricha torosa*	coast range newt	SSC	Moderate Potential
Reptiles	*Phrynosoma blainvillii*	coast horned lizard	SSC	Low Potential
Reptiles	*Actinemys pallida*	southwestern pond turtle	SSC	High Potential
Reptiles	*Anniella pulchra*	northern California legless lizard	SSC	Low Potential
Birds	*Accipter cooperii*	Cooper's hawk	WL	High Potential
Birds	*Agelaius tricolor*	tricolored blackbird	ST, SSC	Low Potential
Birds	*Aquila chrysaetos*	golden eagle	FP, WL, BGEPA	Low Potential (non-breeding)
Birds	*Athene cunicularia*	burrowing owl	SSC	Moderate Potential
Birds	*Buteo regalis*	ferruginous hawk	WL	Moderate Potential (non-breeding)
Birds	*Circus hudsonius*	northern harrier	SSC	Moderate Potential
Birds	*Coccyzus americanus occidentalis*	western yellow-billed cuckoo	FT/SE	Low Potential
Birds	*Elanus leucurus*	white-tailed kite	FP	High Potential

Class	Scientific Name	Common Name	Status	Potential to Occur
Birds	*Eremophila alpestris actia*	California horned lark	WL	Moderate Potential
Birds	*Falco columbarius*	merlin	WL	Low Potential (non-breeding)
Birds	*Falco mexicanus*	prairie falcon	WL	Low Potential (non-breeding)
Birds	*Falco peregrinus anatum*	American peregrine falcon	FP, FD	Moderate Potential (non-breeding)
Birds	*Lanius ludovicianus*	loggerhead shrike	SSC	Moderate Potential
Birds	*Setophaga petechia*	yellow warbler	SSC	Present
Mammals	*Antrozous pallidus*	pallid bat	SSC	Moderate Potential
Mammals	*Corynorhinus townsendii*	Townsend's big-eared bat	SSC	Low Potential
Mammals	*Taxidea taxus*	American badger	SSC	Moderate Potential

Source: Rincon 2021.
FE = Federal Endangered FT = Federal Threatened
SE = State Endangered ST = State Threatened
SCE = State Candidate Endangered
SSC = CDFW Species of Special Concern
FP = State Fully Protected
WL = CDFW Watch List
G2 or S2= Imperiled Globally or Subnationally (state)
G4/5 or S4/5= Apparently secure, common, and abundant
? = Inexact numeric rank
* The western bumble bee (Bombus occidentalis) was designated as SCE in 2019.

- **Morro Shoulderband Snail**: This invertebrate is a federally endangered species that is restricted to coastal areas in the immediate vicinity of Morro Bay. The range of this species extends from Morro Strand State Beach south to Montana de Oro State Park, and inland as far as Los Oso Creek. The species occurs within coastal dune scrub, coastal scrub, and maritime chaparral habitat dominated by woody shrubs. The snail is typically found beneath native shrubs that provide thick leaf litter and canopy shelter, including California goldenbush (*Ericameria ericoides)*, sea cliff buckwheat (*Eriogonum parvifolium)*, shrubby eriastrum (*Eriastrum densifolium*), chamisso bush lupine, (*Lupinus chamissonis)*, California sagebrush (*Artemisia californica)*, and black sage (*Saliva melifera)* (Shanks 2005). Most growth, copulation, and egg-laying likely occur during the rainy season, and the species is more common on north-facing slopes with more dense vegetation (Roth 1985). The species has a moderate potential to occur within leaf litter beneath scrub habitat within the Project area at the western-most terminus of gen-tie line Preferred Alternative. Twelve occurrences of the species are documented in the CNDDB within five miles of the Project area (CDFW 2021a). There is a moderate potential for the Morro Bay shoulderband snail to occur within the Project area.
- **Steelhead**: South-Central California Coast DPS of steelhead are listed as federally threated under the ESA. Steelhead populations along the West Coast of North America have experienced substantial declines because of human activities, including water development, flood control programs, forestry practices, agricultural activities, mining, and urbanization that have degraded, or fragmented aquatic and riparian habitats (National Marine Fisheries Service 2013). Chorro Creek and San Bernardo Creek are both

designated as critical habitat for steelhead and *O. mykiss* individuals may occur in either of these two streams whenever water is present and are therefore present within the Project area.

- **California Red-legged Frog**: This amphibian is a federally threatened species that occurs in lowlands and foothills in or near permanent sources of deep water with dense, shrubby, or emergent riparian vegetation. It typically inhabits quiet pools of streams, marshes, and ponds. All life history stages are most likely to be encountered in and around breeding sites, which include coastal lagoons, marshes, springs, permanent and semi-permanent natural ponds, and ponded and backwater portions of streams, as well as artificial impoundments such as stock ponds, irrigation ponds, and siltation ponds. CRLFs typically deposit eggs in permanent pools, attached to emergent vegetation. This species typically requires 11 to 20 weeks of permanent water for larval development and must have access to estivation habitat. Suitable upland habitat must provide sufficient moisture to prevent desiccation and sufficient cover to provide protection from predators. Typical upland habitat consists of densely vegetated areas, downed woody vegetation, leaf litter, small mammal burrows, and human-made structures such as culverts, livestock troughs, spring-boxes, abandoned sheds (USFWS 2002).

  The PESC site is located within the current range of CRLF (USFWS 2002). The species is known to occur within Chorro Creek with documented occurrences on Camp San Luis Obispo east of the Project area (California Army National Guard 2016, Sims 2010), and there are twelve occurrences of the CRLF documented in the CNDDB within five miles of the Project area, the most recent of which are from 2019 (CDFW 2021b).

  Coast Range Newt: Endemic to California, coast range newts are found along the coast and Coast Range Mountains from Mendocino County south to San Diego County. Adults are toxic and not commonly preyed upon. Predators such as crayfish, mosquito fish, and bullfrog prey on the non-poisonous larvae and egg masses (Nafis 2021). The coast range newt is a CDFW SSC that occupies a variety of terrestrial habitats during nonbreeding months, including wet forests, oak forests, chaparral, rolling grasslands and abandoned animal burrows.

  Newts may be found underneath areas of woody debris, moist leaf litter, or rock crevices. Adults enter water for reproduction. Breeding sites include ponds, reservoirs, or slow-moving pools within creeks and streams with suitable water quality. Newts have been documented as far as two miles away from suitable breeding habitat and have been noted as being instinctual by returning to the same breeding pools year after year. Breeding typically occurs from December to February but may extend past February during years of late or extended annual rainfall. Females lay egg masses just below the surface of the water under the protection of submerged rocks, vegetation, and branches. Incubation lasts anywhere from 14 to 52 days with the larval development extending into the summer or fall. Sub-adults leave the water and return to terrestrial environments, where they feed on worms, snails, slugs, and insects.

  The coast range newt has a moderate potential to occur within the Project area in Chorro Creek or other creek channels or drainages. The species may also be found within oak woodland habitat that exists along the southern perimeter of the PESC site and potential gen-tie line Preferred Alternative. Following rain events, the species may also occur within grassland habitat in the northern portion of the Project area. There are no occurrences of the species documented in the CNDDB within five miles of the Project area (CDFW 2021a), but the Project area lies within the known range of the species.

- **Southwestern Pond Turtle**: The southwestern pond turtle is a CDFW SSC that occurs in ponds, marshes, rivers, streams, and irrigation ditches with aquatic and riparian vegetation. Logs, rocks, cattail mats and/or exposed banks are required for basking. Adults do not reproduce until approximately eight to ten years of age, and mating occurs in April and May. Southwestern pond turtles typically dig nests along stream or pond margins in areas with full sunlight. Their diet includes aquatic plants, invertebrates, worms, frog and salamander eggs and larvae, and occasionally adult fish and frogs.

  There is a high potential for the species to be present within the Project area adjacent to Chorro Creek, San Bernardo Creek, or within cattail marsh habitat along potential gen-tie line Preferred Alternative. There are six occurrences of the species documented in the CNDDB within five miles of the Project area, the most recent of which was in 2005 (CDFW 2021a). Morro Bay State Park staff have indicated the southwestern pond turtle is a year-round resident of Chorro Creek (Sims 2010). The Applicant's biologist did not observe any southwestern pond turtles during the biological surveys of Chorro Creek within the project area.

- **Cooper's Hawk:** The Cooper's hawk is a CDFW WL species that typically inhabits woodlands and forest edges but can also be found in urban parks and neighborhoods where trees are present. Nests are constructed 25 to 50 feet high in a variety of tree species, including pines, oaks, beeches, and spruces. Nests are made of sticks and are often lined with bark flakes and green twigs. Cooper's hawks are aerial predators that feed primarily on medium-sized birds, such as mourning dove (*Zenaida macroura*), American robin (*Turdus migratorius*), California quail (*Callipepla californica*), and European starling (*Sturnus vulgaris*). In addition to preying on adult birds, Cooper's hawks will also occasionally rob nests and hunt rabbits, rodents, and bats (Cornell Lab of Ornithology 2021a).

  Suitable foraging habitat for the species is present throughout the Project area, and suitable nesting habitat for the species exists within riparian woodland and oak woodland habitat. There are no occurrences of the species documented in the CNDDB within 5 miles of the Project area (CDFW 2021b). However, multiple occurrences of the species are documented within one mile of the Project area in eBird (Cornell Lab of Ornithology 2021b). The Cooper's hawk has a high potential to forage and nest within the Project area.

- **Burrowing Owl**: The burrowing owl (*Athene cunicularia*) is a CDFW SSC that occupies open, treeless areas within grassland, low density scrub, and desert biomes. This species generally inhabits gently sloping areas, characterized by low, sparse vegetation, and is often associated with high densities of burrowing mammals (Cornell Lab of Ornithology 2021a). In additional to natural breeding habitats, burrowing owls often use relatively disturbed areas such as agricultural fields, golf courses, cemeteries, and vacant urban lots. Nests are most often in fossorial animal burrows, such as California ground squirrel (*Tospermophilus beecheyi* and *Otospermophilus douglasii*) or American badger, but burrowing owls may also use atypical nests such as culverts or rubble piles. Burrowing owls typically select nest sites in areas with a high density of burrows (Cornell Lab of Ornithology 2021a).

  The Applicant's biologist suggested that suitable habitat for burrowing owls may exist within the margins of the PESC site, though most mammal burrows within the agricultural areas have been disturbed. Suitable burrow habitat may also exist within grassland and disturbed areas north of SR-1. There are no occurrences of the species documented in the CNNDB within five miles of the Project area (CDFW 2021a). However, multiple occurrences of the species are documented within five miles of the Project area in eBird (Cornell Lab of Ornithology 2021b). There is a moderate potential for the burrowing owl to forage or nest within the Project area, especially in the grassland within gen-tie line Preferred Alternative and Alternate 2.

- **Ferruginous Hawk**: This bird is a CDFW WL species that occurs in open country within grasslands, sagebrush, saltbush-greasewood shrublands, and edges of pinyon-juniper forests at low to moderate elevations. The breeding range for the species is in northern North America, northeast of California, and breeding habitat includes cliffs, outcrops, and tree groves. Wintering habitat within California includes grasslands or deserts with abundant rabbits, pocket gophers, or prairie dogs. Diet includes rabbits, hares, ground squirrels, prairie dogs, and pocket gophers. West of the Rockies, their diet consists primarily of jackrabbits and cottontail rabbits (Cornell Lab of Ornithology 2021a).

  There is a moderate potential for the species to fly over or forage within open fields within the Project area. The species typically breeds northeast of California and is unlikely to nest within the vicinity of the Project area. There are no occurrences of the species documented in the CNNDB within five miles of the Project area (CDFW 2021a). However, multiple occurrences of the species are documented within five miles of the Project area in eBird (Cornell Lab of Ornithology 2021b). There is a moderate potential for the ferruginous hawk to fly over or forage within the Project area.

- **Northern Harrier**: This bird is a CDFW SSC that inhabits a range of habitats with low vegetation, including deserts, grasslands, dry plains, estuaries, and agricultural fields. Diet consists primarily of voles during the winter months but also includes other small rodents, rabbits, songbirds, and small reptiles and amphibians. Breeding typically occurs in the northern US and Canada in a variety of habitats, such as freshwater and brackish marshes, dry upland prairies, or riverside woodlands. Northern harriers construct nests on the ground in dense vegetation, including willows, sedges, cattails, or grasses (Cornell Lab of Ornithology 2021a).

  The species is known to occur in the region and has a moderate potential to fly over or forage within the Project area. Potential nesting habitat for the species is marginal within creek channels and marsh habitat within the Project area. There are no occurrences of the species documented in the CNNDB within five miles of the Project area (CDFW 2021a). However, multiple occurrences of the species are documented within one mile of the Project area in eBird (Cornell Lab of Ornithology 2021b). There is a moderate potential for the northern harrier to forage within the Project area; however, nesting habitat is marginally suitable and limited within the Project area.

- **White-tailed Kite**: This bird is a state FP species that occurs in open grasslands, meadows, open woodlands, marshes, and cultivated areas. White-tailed kites build nests are near the top of dense topped trees. Their diet consists primarily of small mammals, and the species hunts by facing into the wind and hovering above the ground while scanning the ground for movement (Cornell Lab of Ornithology 2021a). This species has a high potential to forage in fields within the Project area. The species has a low potential to nest in trees associated with the Chorro Creek channel or oak woodland habitat that occur within the project area. Multiple occurrences of the species are documented within one mile of the Project area in eBird (Cornell Lab of Ornithology 2021b). The Applicant's biologist has determined that there is a high potential for the white-tailed kite to occur within the Project area.

- **California Horned Lark**: This bird is a CDFW WL species that favors areas of short, sparse vegetation found in a variety of habitat, including prairies, deserts, heavily grazed pastures, and plowed fields. Their diet consists primarily of seeds and insects, which are gleaned from the ground or directly from plants. The species breeds in Canada and the northern U.S. California horned lark nests are typically found on bare ground and consist of baskets woven from fine grass or other plant materials (Cornell Lab of Ornithology

2021a). The species has moderate potential to forage and low potential to nest in fields within the Project area. There are no occurrences of the species documented in the CNNDB within five miles of the Project area (CDFW 2021a). However, multiple occurrences of the species are documented within five miles of the Project area in eBird (Cornell Lab of Ornithology 2021b).

- **American Peregrine Falcon**: This bird is a federal and state delisted species and a state FP species that occurs in urban areas and open habitats, including coastlines, mudflats, lake edges, and mountain sides (Cornell Lab of Ornithology 2021b). Prey includes a wide variety of bird species; nest sites are typically in rocky cliffs faces, but can also be located on transmission towers, skyscrapers, bridges, or other human-made structures (Cornell Lab of Ornithology 2021a).

  Known peregrine falcon nest sites exist on Morro Rock, approximately 0.7 mile west of the northern portion of the Project area, and the species has a high potential to fly over or forage within the Project area, though there is no suitable nesting habitat for the species within the Project area. There are no occurrences of the species documented in the CNNDB within five miles of the Project area (CDFW 2021a). However, multiple occurrences of the species are documented within five miles of the Project area in eBird (Cornell Lab of Ornithology 2021b).

- **Loggerhead Shrike**: This bird is a CDFW SSC that inhabits open country with short vegetation and well-spaced shrubs or low trees, particularly those with spines or thorns. The species can be found in agricultural fields, pastures, old orchards, riparian areas, desert scrublands, savannas, and prairies, and is frequently seen along mowed roadsides with access to fence lines and utility poles (Cornell Lab or Ornithology 2021a). Diet includes insects and other arthropods, amphibians, reptiles, small mammals, and birds. Loggerhead shrikes often build their nests in thorny vegetation, including in brush piles or tumbleweeds. Loggerhead shrikes lay their eggs from March to May in California, and young become independent in July or August (Cornell Lab or Ornithology 2021a).

  The species has a moderate potential to forage along roadsides, agricultural fields, and fence lines throughout the Project area. Typically, loggerhead shrike nesting occurs further inland in California, but there is a low potential for the species to nest within shrubs throughout the Project area. There are no occurrences of the species documented in the CNNDB within five miles of the Project area (CDFW 2021a). However, multiple occurrences of the species are documented within five miles of the Project area in eBird (Cornell Lab of Ornithology 2021b). There is moderate potential for the loggerhead shrike to occur within the Project area.

- **Yellow Warbler**: This bird is a CDFW SSC that inhabits riparian plant communities and is typically found in close proximity to water. The species frequently nests and forages in willow shrubs and thickets, and can also be found in other riparian trees, including cottonwoods, sycamores, ash, and alders. The yellow warbler also nests in montane shrubbery in open conifer forests in the Cascades and Sierra Nevada range. Their diet consists primarily of insects picked from foliage or captured mid-air and can include midges, caterpillars, beetles, and wasps. Yellow warblers build their nests from grasses, bark, and broad leaves and are usually found in vertical forks of bushes and small trees about ten feet above ground. Their clutch size is typically one to seven eggs, which are incubated for 10 to 13 days prior to a 9 to 12 day nestling period. Yellow warblers are still numerous, but their populations decreased by approximately 25% between 1966 and 2014, likely due to habitat loss (Cornell Lab of Ornithology 2021a).

Multiple yellow warblers were observed within the Chorro Creek riparian corridor during the biological survey on May 25, 2021. There are also dozens of occurrences of the species documented in eBird within five miles of the Project area (Cornell Lab of Ornithology 2021b). The Applicant's biologist has indicated that the yellow warbler is present in the riparian vegetation within the Project area.

- **Pallid Bat**: This mammal is a CDFW SSC that occurs at low elevations in a variety of habitats, including deserts, grasslands, shrublands, woodlands, and forests. The species is most common in open, dry habitats and roosts in the shady crevices of rock outcrops, caves, mine tunnels, buildings, and bridges, and in the hollows of live and dead trees. The pallid bat is a yearlong resident in most of its range. Its diet includes a wide variety of insects and arachnids and the species forages over open ground, using echolocation for obstacle avoidance and possibly for prey location. The species is relatively slow-flying and often picks prey off of foliage or the ground surface. Maternity colonies form in early April and may have 12 to 100 individuals. Mating occurs from late October to February, and young are first observed flying in July and August.

  There is a small amount of potentially suitable roosting habitat for the species within oak woodlands in the very southern portion of the Project area, and beneath the bridge that crosses Chorro Creek at the entrance to the PESC site. The species also has the potential to forage in grassland habitat within the Project area. One occurrence of the species is documented in the CNNDB within five miles of the Project area (CDFW 2021a). There is a moderate potential for the pallid bat to occur within the Project area.

- **American Badger**: This mammal is a CDFW SSC found throughout most of California in dry, open stages of shrub, forest, grassland, or other herbaceous habitats with friable soils. The species digs burrows in friable soil that are used for cover and reproduction. The American badger is carnivorous and feeds primarily on burrow mammals such as ground squirrels and pocket gophers (CDFW 2021a). Suitable habitat for the species exists within annual grasslands north of SR-1, along gen-tie line Preferred Alternative and Alternate 2. There are no occurrences of the species documented in the CNDDB within five miles of the Project area, but suitable grassland habitat and a ground squirrel prey base for the species is present (CDFW 2021a). There is a moderate potential for the American badger to occur within the Project area.

5.2.1.9.1 Migratory Bird Treaty Act

The PESC will have an approximately 500-acre-foot surface water reservoir with a floating cover. The cover should reduce the likelihood that onsite water storage will attract migratory birds. Additionally, PESC's 125-foot-high stack is low in profile and is not likely to result in significant bird strikes due its distance from the Morro Bay Estuary. Stacks that emit regulated pollutants are typically at least 213 feet from ground surface (United States Environmental Protection Agency (USEPA) 2021). The 230-kV transmission line is inherently raptor safe against electrocution and collisions and will parallel existing aboveground electrical infrastructure. The Applicant will protect any active migratory bird nests identified during preconstruction surveys against take.

5.2.1.9.2 Bald and Golden Eagle Protection Act

The golden eagle is a state FP species and a CDFW WL species that is also protected by the federal Bald and Golden Eagle Protection Act. There are no occurrences of the species documented in the CNDDB within one mile of the Project area (CDFW 2021a). Birds that may forage near the site may attract eagles. Stacks will be low in profile and are not likely to result in significant golden eagle strikes. The transmission line is raptor safe and will parallel existing electrical infrastructure. The Applicant's biologist determined that the potential for golden eagles to occur within the project area is low.

5.2.1.9.3 Federal Endangered Species Act

Applicants for projects that could result in adverse impacts on any federally listed species are required to consult with and mitigate potential impacts in consultation with FWS or NMFS. The PESC site supports suitable habitat for federally listed species. The Applicant's biologist has identified that CRLF and Steelhead are likely to occur within the project area. The federally listed Chorro Creek bog thistle, morro shoulderband snail, and western, yellow-billed cuckoo have a low to moderate potential to occur. PESC will avoid significant impacts to federally listed species and their habitat by consulting under Section 7 of the ESA.

5.2.1.9.4 California Endangered Species Act

Species listed under the CESA cannot be taken or harmed, except under specific permit. State listed species that have the potential to occur within the study area include the Chorro Creek bog thistle, foothill yellow-legged frog, tricolored blackbird, and western yellow-billed cuckoo. As a result of certain state-listed species also being federally protected, a formal consultation with the FWS will entail a letter of concurrence from CDFW for the shared species. PESC will avoid significant impacts to state listed species and their habitat by consulting with CDFW.

5.2.1.9.5 State Fully Protected Species

The PESC site was analyzed and likely does not provide habitat for fully protected mammal, amphibian, or reptile species; however, the potential exists for FP birds such as, the golden eagle, white-tailed kite, and American peregrine falcon to occur. Fully Protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research, relocation of the bird species for the protection of livestock, or if they are a covered species whose conservation and management is provided for in a Natural Community Conservation Plan. PESC will avoid impacts to FP species by consulting with CDFW.

5.2.1.9.6 State Species of Special Concern

An SSC is a protective legal designation assigned by CDFW to wildlife species that are at risk. An SSC is a species, subspecies, or distinct population of an animal native to California that currently satisfies one or more of the following criteria:

- Is extirpated from the California or, in the case of birds, is extirpated in its primary season or breeding role
- Is listed as federally-, but not California-, threatened or endangered
- Meets the California definition of threatened or endangered but has not formally been listed
- Is experiencing, or formerly experienced, serious population declines or range retractions that, if continued or resumed, could qualify it for California threatened or endangered status
- Has naturally small populations exhibiting high susceptibility to risk from any factor(s), that if realized, could lead to declines that would qualify it for State threatened or endangered status (CDFW 2021)

The following SSC have been documented within the vicinity of the PESC project area:

- **Amphibians**: CRLF, coast range newt
- **Reptiles**: coast horned lizard, southwestern pond turtle, northern California legless lizard

- **Birds**: tricolored blackbird, burrowing owl, northern harrier, loggerhead shrike, yellow warbler
- **Mammals**: pallid bat, Townsend's big eared bat, and American badger

Of the SSC that have the potential to occur within the project area, the Applicant's biologist only identified the CRLF and southwestern pond turtle as either being present or having a high potential to occur. PESC will avoid impacts to SSC by consulting with CDFW and FWS.

5.2.1.9.7 State Special Species

State special species are considered to be sensitive but do not have regulatory protection. Of the special species listed in **Tables 5.2-3** and **5.2-4**, 18 special species plants and one special species animal have the potential to occur within the project area. Of the 18 special species plants, Cambria morning glory was the only one observed within the Project area during both botanical surveys conducted in Spring 2021. The only state special wildlife species within the study area, the obscure bumble bee, has a low potential of occurring.

5.2.2 Environmental Analysis

This section identifies biological resources that may be affected either directly or indirectly by the project. Direct and indirect impacts may be either permanent or temporary. Potential direct and indirect impacts to biological resources were evaluated to determine the permanent and temporary effects of construction and operation of the PESC project. These impact categories are defined as follows and are applied as part of the environmental analysis:

- **Direct**: The California Environmental Quality Act (CEQA) defines direct impacts as those that result from the project and occur at the same time and place. Any alteration, disturbance, or destruction of biological resources that would result from project-related activities is considered a direct impact. Examples include loss of habitat resulting from clearing vegetation, encroaching into wetlands, diverting natural surface water flows, and the loss of individual species.
- **Indirect**: CEQA defines indirect impacts as those caused by the project but that occur later in time or are farther removed in distance, although they are reasonably foreseeable and are related to the project. As a result of project-related activities, biological resources may also be affected in a manner that is not direct. Examples include elevated noise and dust levels, increased human activity, decreased water quality, and the introduction of invasive plants and wildlife.
- **Permanent**: All impacts that result in the irreversible removal of biological resources are considered permanent. Examples include constructing a building or a permanent road on an area containing biological resources.
- **Temporary**: Any impacts considered to have reversible effects on biological resources can be viewed as temporary. Examples include increased vehicle movement and noise from temporary construction activities.

5.2.2.1 Significance Criteria

Factors typically used to evaluate the significance of project-related impacts are set forth in Appendix G of the California Environmental Quality Act (CEQA). Appendix G is a screening tool, not a method for setting thresholds of significance. Appendix G is typically used in the Initial Study phase of the CEQA process, asking a series of questions. The purpose of these questions is to determine whether a project requires an Environmental Impact Report, a Mitigated Negative Declaration, or a Negative Declaration.

As the Governor's Office of Planning and Research stated, "Appendix G of the Guidelines lists a variety of potentially significant effects but does not provide a means of judging whether they are indeed significant in a given set of circumstances." The answers to the Appendix G questions are not determinative of whether an impact is significant or less than significant. Nevertheless, the questions presented in CEQA Appendix G are instructive. The PESC would result in a significant impact on the environment if it would do the following:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as endangered, threatened, candidate, sensitive, or special status in local or regional plans, policies, or regulations, or by CDFW or USFWS.
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by CDFW or USFWS.
- Have a substantial adverse effect on federal or state protected waters of the United States (including wetlands) as defined by Sections 404 and 401 of the 1972 Amendments to the Federal Water Pollution Control Act, commonly known as the Clean Water Act, or the Porter-Cologne Act, either through direct removal, filling, hydrological alteration, or other means.
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory native wildlife corridors or impede the use of wildlife nursery sites.
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.
- Threaten to eliminate a plant or animal community.

CEQA Section 15380 provides that a plant or animal species may be treated as "rare or endangered" even if the species is not on one of the official lists if, for example, it is likely to become endangered in the foreseeable future.

5.2.2.2 Potential Impacts of Construction

5.2.2.2.1 PESC Facility

The generating facility site will require approximately an 80-acre footprint. The landowner is actively farming the entire 80-acre site. The facility's general arrangement includes associated support equipment and an administration building. Based on the facility's footprint, direct impacts to biological resources from PESC's construction will be less than significant with the application of conservation measures, worker training programs, and consultation with the applicable regulatory agencies. Any special-status species found immediately adjacent to the project site during preconstruction surveys will be protected by implementation of the measures listed in Section 5.2.3.

Construction of the PESC facility may result in less than significant indirect temporary impacts to biological resources from construction activities. For instance, noise and construction activities could temporarily displace wildlife from foraging and nesting in the project area and vicinity. The Applicant's implementation of conservation measures and worker training programs will assist in limiting adverse indirect impacts to biological resources. Typically, conservation practices include slowly ramping up construction to allow mobile species time to move out

of the construction area. Mobile wildlife species will likely move back into neighboring habitats post construction limiting the long-term adverse impact of PESC's construction on biological resources.

5.2.2.2.2 Construction Laydown Area

Temporary construction facilities will include approximately 123 acres of land to the north of the PESC site and south of SR-1. This area is currently under agricultural production. This will include areas for construction laydown, worker parking (32 acres), as well as temporary topsoil storage (91 acres). **Figure 2-1 of Section 2.0, Project Description** illustrates the location of the construction laydown area.

Installation of laydown areas may result in indirect impacts to previously disturbed vegetative communities. Adverse impacts may be associated with noise and stormwater runoff originating from the laydown area. Such activities may indirectly impact wildlife species within PESC's vicinity. The Applicant's selection of a location that is currently being farmed will assist in limiting temporary and permanent direct impacts to biological resources from the construction laydown area.

The Applicant will coordinate with the applicable regulatory agencies on construction mitigation measures that will assist in minimizing adverse impacts to biological resources. The Applicant will prepare a mitigation plan and worker education program as well as, implement agency prescribed mitigation practices. For instance, conservation measures may include installing construction and silt fencing that will prevent worker access and sediment runoff into sensitive habitats. As such, temporary and permanent adverse impacts from the construction laydown area to biological resources will be less than significant.

5.2.2.2.3 Generator Tie-Line

PESC will interconnect to the PG&E electrical grid via a 230 kV overhead transmission line that will run from the PG&E Morro Bay substation to the PESC site (see Section 3, Electric Transmission). The 230kV line will terminate at a dead-end tower before the main power transformers step down the voltage to 69 kV, suitable for distribution within PESC. The grid connection shall be capable of power import and export, rated to suit all operating scenarios.

Installation of access roads may result in temporary direct and indirect impacts to previously disturbed vegetative communities. Construction will affect approximately 50 to 75 feet on either side of the gen-tie line. Generator tie line construction includes the installation of new transmission towers and associated access roads, if needed. In areas that require additional access roads, these roadways will be of similar design and construction to the existing access roadways within the PG&E corridor. The Applicant's selection of existing utility corridors will assist in minimizing adverse impacts from gen-tie line construction to biological resources.

Potential adverse impacts to biological resources from gen-tie line construction to biological resources include clearing and grubbing and noise. The Applicant will coordinate with regulatory agencies on the appropriate mitigation requirements for PESC's construction. Based on the results of agency consultations, the Applicant will prepare and implement a mitigation plan and work training program that will assist in minimizing adverse impacts to biological resources. Standard conservation practices that assist in limiting adverse impacts to special-status plant species include preconstruction surveys and installation of construction fencing around protected species. As such, gen-tie line construction will have a less than significant adverse temporary and permanent impact on biological resources.

5.2.2.2.4 Construction Impacts to Special-status Plant Species

Adverse impacts to special-status plant species could occur during the PESC project. As proposed, the Applicant's placement of PESC within actively farmed lands and existing utility corridors will substantially reduce the likelihood of impacts to special-status plant species from sensitive habitat disturbance.

Construction activities that may adversely impact special-status plant species include the removal of vegetation growing along the gen-tie line corridor. The Applicant will coordinate with regulatory agencies on the appropriate mitigation requirements for PESC's construction. Based on the results of agency consultations, the Applicant will prepare and implement a mitigation plan and work training program that will assist in minimizing adverse impacts to special-status plant species. Standard conservation practices that assist in limiting adverse impacts to special-status plant species include preconstruction surveys and installation of construction fencing around protected species. As such, the PESC project will have a less than significant adverse temporary and permanent impact on special-status plant species.

5.2.2.2.5 Construction Impacts to Special-status Wildlife Species

Adverse impacts on special-status wildlife species could occur during construction of the PESC project. Construction activities are likely to temporarily displace birds, small mammals, reptiles, and amphibians that forage in the agricultural and annual grassland areas. As proposed, the Applicant's placement of PESC within actively farmed lands and existing utility corridors will substantially reduce the likelihood of impacts to special-status wildlife species from habitat disturbance. For instance, the Applicant is siting the temporary laydown area on actively farmed land and the gen-tie line will be located within an existing PG&E corridor.

Activities that have the potential to adversely impact special-status wildlife species include the following:

- Removal of vegetation growing along the transmission line corridor.
- Any trenching through the intermittent and ephemeral drainages could potentially affect aquatic habitat and thus have an impact on the aquatic wildlife that likely occur there.
- Ground-dwelling animals could become trapped in uncovered trenches if left open overnight or if the contractor does not provide suitable egress for special-status wildlife species.
- Impacts on nesting birds could occur if construction activities take place adjacent to natural habitat during the nesting season.
    - Temporary adverse impacts could be associated with increased noise from construction or incidental incursions into nesting habitat.
    - CDFW has defined nesting season as February 1st through August 15th.

The Applicant will coordinate with regulatory agencies on any additional surveys and the appropriate mitigation requirements for PESC's construction. Based on the results of agency consultations, the Applicant will prepare and implement a mitigation plan and worker training program that will assist in minimizing adverse impacts to special-status wildlife species. As such, PESC construction is expected to have a less than significant temporary and permanent impact on special-status wildlife species.

5.2.2.2.6 Impacts to Wildlife Corridors

Wildlife movement corridors, or habitat linkages, are generally defined as connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal populations. Such linkages may serve a local purpose, such as providing a linkage between foraging and denning areas, or they may be regional in nature. Some habitat linkages may serve as migration corridors, wherein animals periodically move away from an area and then subsequently return. Others may be important as dispersal corridors for young animals. A group of habitat linkages in an area can form a wildlife corridor network. The California Essential Habitat Connectivity Project commissioned by the California Department of Transportation (Caltrans) and CDFW; identifies “Natural Landscape Blocks” which support native biodiversity and the “Essential Connectivity Areas” which link them (Rincon 2021; Spencer et al. 2010).

The Project site consists primarily of actively farmed land, which does not provide significant opportunities for wildlife movement. Potential wildlife corridors within the study area include the Chorro Creek channel, the San Bernardo Creek channel, coast live oak woodland habitat south of the PESC site, and grazed hills surrounding potential gen-tie line routes. A Natural Landscape Block occurs within Morro Bay State Park, approximately 0.2 miles west of the study area. Another Natural Landscape Block occurs approximately 3.95 miles southwest of the study area, south of Morro Bay. A third Natural Landscape Block occurs within Los Padres National Forest, approximately 5 miles northwest of the study area. The entire study area lies within an Essential Connectivity Area (Rincon 2021; Spencer et al. 2010).

Riparian corridors within the study area could serve as wildlife corridors for a wide variety of species, including steelhead, CRLF, yellow warbler, mule deer, bobcat, and coyote. Open grassland, located primarily north of SR-1, and fallow agricultural land within the study area provide opportunities for wildlife to move between coastal scrub, woodland, and chaparral habitats located north and south of the study area. The riparian corridors on-site are expected to remain relatively undisturbed during PESC construction, allowing for continued wildlife movement through the site (Rincon 2021). As such, PESC construction is expected to have a less than significant temporary and permanent adverse impact on wildlife corridors.

5.2.2.2.7 Impacts to Wetlands and Waters of the United States

Based upon the analysis of the jurisdictional delineation performed by the Applicant’s biologist, there are wetland and non-wetland waters of the U.S. (WOTUS) within the study area. **Table 5.2-5** summarizes the total area and length of each type of jurisdictional feature within the PESC site and gen-tie lines project areas plus a 250-foot buffer. **Figures 5.2-9** through **5.2-14** illustrate the WOTUS locations. **Figures 5.2-11** through **Figure 5.2-14** depict the location and boundaries of water features potentially subject to United States Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and CDFW jurisdictions. **Appendix 5.2B** present the wetland delineation forms. Note the final jurisdictional determinations for boundaries of wetlands, waters, and riparian habitat are made by each agency during the permit review process. A description of the wetland and non-wetland waters and riparian habitats within and/or adjacent to the PESC site and gen-tie routes is presented below.

Table 5.2- 5: USACE, RWQCB and CDFW Jurisdictional Waters

Wetland / Drainage Feature	USACE/RWQCB Jurisdiction Non-wetland Waters Acres (lin. ft.)	USACE/RWQCB Jurisdiction Wetland Waters Acres (lin. ft.)	CDFW/RWQCB jurisdiction Streambed/Riparian Habitat Acres (lin. ft.)	Potential USACE /CDFW/RWQCB Jurisdiction Non-wetland Waters/Streambed/Riparian Habitat Acres (lin.ft.)
Chorro Creek	3.84 (4,804)	--	0.32 (136)	19.61 (6,088)
San Luisito Creek	--	--	--	--
San Bernardo Creek	--	--	1.86 (667)	--
Unnamed Agricultural Pond	--	--	1.09 (556)	--
Wetland #1	0.33 (652)	--	--	--
Wetland #2	--	5.27 (723)	--	--
Drainage #4	--	--	0.33 (516)	--
Drainage #5	--	--		0.46 (826)
Drainage #6	--	--		0.93 (1565)
Drainage #7	--	--		0.63 (1016)
Drainage #8	--	--	0.44 (598)	--
Drainage #9	--	--	0.75 (1002)	--
Drainage #10	--	--	--	0.48 (506)
Drainage #11	--	--	0.17 (326)	--
Drainage #12	--	--	--	0.25 (435)

Source: Rincon 2021.
--= Feature not present

- **Chorro Creek**: This waterbody receives flow from San Luisito Creek and San Bernardo Creek, among other drainages in the Chorro Valley. Chorro Creek typically flows year-round whereas San Luisito Creek and San Bernardo Creek are seasonal streams/intermittent creeks. San Bernardo Creek confluences with Chorro Creek downstream of the PESC site which eventually conveys water into Morro Bay and the Pacific Ocean, approximately two river miles northwest of the PESC site. Upstream of the PESC site, the San Luisito Creek confluences with Chorro Creek.
- **Intermittent Creek**: In the southwest portion of the Project site, an unnamed intermittent creek was documented. This unnamed drainage receives flow in the form of runoff from the agricultural field to the northeast as well as sheetflow and likely groundwater discharge from the surrounding hillside. This unnamed drainage appears to flow into Chorro Creek.
- **Unnamed Agricultural Manmade Pond**: Just northeast of the Project site, within the 250-foot buffer, an unnamed agricultural manmade pond was documented. This unnamed agricultural pond is an isolated pond and does not appear to have connectivity with either Chorro Creek or San Luisito Creek.

- **Wetland #1**: At the northern extent of the gen-tie line routes and southeast of the Morro Bay substation, there is a seasonal wetland in the form of a swale, Wetland #1. This wetland exhibits indicators of long-duration ponding at the approximately 90-degree turn of Little Morro Creek Road and conveys water through a culvert to an oat field but does not convey flow into any waterways in the area.
- **Wetland #2**: North of the Project site and within the alignment for gen-tie line Preferred Alternative, there is a seasonal wetland, Wetland #2, that abuts a roadside drainage that conveys flow to Morro Bay (Rincon 2021).

Due to access restrictions, the Applicant's biologist analyzed the portions of gen-tie line Preferred Alternative and Alternate 2 through aerial imagery interpretation and database review. Based on the wetland biologist's jurisdictional determination, the drainages identified through the desktop analysis have the potential of being subject to USACE, RWQCB, and/or CDFW jurisdictions. The Applicant's biologist noted that additional inspection and access is required to make a more precise determination of these inaccessible areas. The following describes the geographical characteristics of the waterbody features identified through arial imagery review.

- **Jurisdictional drainage #5**: From aerial analyses, this jurisdictional drainage appears to flow south through a culvert under SR-1 and then under Quintana Road into Wetland #2 and the associated roadside drainage which eventually flows into Morro Bay and the Pacific Ocean.
- **Jurisdictional drainage #6**: From aerial analyses, this jurisdictional drainage appears to flow south through a culvert under SR-1 and then under Quintana Road into Wetland #2 and the associated roadside drainage which eventually flows into Morro Bay and the Pacific Ocean.
- **Jurisdictional drainage #9**: From aerial analyses, this jurisdictional drainage appears to flow south through a culvert under SR-1 and then under Quintana Road into Wetland #2 and the associated roadside drainage which eventually flows into Morro Bay and the Pacific Ocean.
- **Jurisdictional drainage #10**: From aerial analyses, this jurisdictional drainage appears to flow south through a culvert under SR-1 and then under Quintana Road into Wetland #2 and the associated roadside drainage which eventually flows into Morro Bay and the Pacific Ocean.
- **Jurisdictional drainage #12**: From aerial analyses, this jurisdictional drainage appears to flow south through a culvert under SR-1 and then under Quintana Road to the roadside drainage associated with Wetland #2 which eventually flows into Morro Bay and the Pacific Ocean.

As proposed, the Applicant's placement of PESC within actively farmed lands and existing utility corridors will substantially reduce the likelihood of adverse impacts to wetlands and WOTUS. Any impacts to wetlands or WOTUS will likely require permits and compensatory mitigation. The Applicant will work with the applicable regulatory agencies to address any adverse impacts to wetlands and WOTUS. Based on the project's location and permit requirements, PESC construction will have a less than significant adverse temporary and permanent impact on wetlands and WOTUS.

5.2.2.3 Potential Impacts of Operation

Hydrostor's energy storage technology provides long-duration, emission-free storage, providing multi-hundred megawatts of generation capacity and a suite of ancillary services. The system stores compressed air in purpose-built underground storage caverns. This energy storage system uses non-toxic materials and does not use fossil fuels during normal operation. During operation, the PESC will produce water discharge, noise, and light. The

potential for each of these biproducts to adversely impact sensitive biological resources is discussed in the following subsections.

5.2.2.3.1 Combustion Turbine Emissions

The A-CAES system does not involve the use of a combustion turbine. PESC will be an energy storage facility consisting of four 100 MW power blocks. Each power block will contain an electric motor-driven air compressor drivetrain, heat exchangers, and an air turbine generator and their ancillary equipment.

5.2.2.3.2 Stormwater and Process Water Discharge

The project site will be developed so that no industrial stormwater is discharged offsite. Industrial stormwater will be collected by perimeter culverts and directed to onsite retention ponds to be retained for future site use or evaporated. Non-industrial stormwater from the upland areas to the south of the project site will be diverted around the site where it will continue to flow to its current pre-construction locations. Industrial stormwater will be retained onsite for use as makeup water; and therefore, there will be no floodplain or stormwater runoff impacts from PESC operations. The retained industrial stormwater will be treated as necessary prior to re-use.

The Applicant will construct an approximately 500-acre-foot surface reservoir utilizing earthen berms. The surface reservoir will be equipped with an engineering liner and a floating cover to minimize evaporative water loss. PESC is expected to generate approximately 40 acre-feet per year of non-potable recharge quality water. The surplus water will either be stored in the surface compensation reservoir or will be used for beneficial uses by one of the following strategies: (i) supplemental irrigation water in adjacent agriculture fields, (ii) groundwater recharge by reinjecting into the aquifer, or (iii) piped to potential end users.. As a result of not discharging water off-site, PESC operations will not adversely impact water quality that supports sensitive habitats and species.

5.2.2.3.3 Noise and Light from Plant Operations

The PESC site is adjacent to agricultural and open space land uses. These existing conditions result in minimal sources of noise emissions. Operation of the PESC will produce some noise, as described in Section 5.7, Noise. As previously noted, the project consists of four, 100-MW power blocks. Each power block will contain a motor-driven air compressor drivetrain, heat exchangers, and an air turbine generator and their ancillary equipment. Such equipment is not known to cause off-site ground vibration nor airborne low-frequency noise during normal operations.

The PESC site is currently used for agricultural purposes. The setting includes very few sources of lighting. Existing sources of lighting are limited to exterior lighting from homesteads, industrial facilities, and ambient lighting from nearby communities. PESC's operations will introduce new light sources into the existing nighttime environment such as, facility lighting for safety and security purposes. PESC's outside lighting will include a combination of pole-mounted LED lighting and wall-mounted fixtures. The Applicant will apply best practices to minimize the effects of obtrusive exterior lighting. These practices include shielding light fixtures directed downward and scheduling controls.

Based on PESC's equipment and the limited application of outdoor lighting and best practices, noise, and light impacts from PESC's operations will likely have a less than significant impact on special status wildlife.

5.2.2.3.4 Potential for Collision and Electrocution Hazard to Wildlife

The new facility will include multiple structures that range in height from 40 to 125 feet tall. The tallest structure is the low-pressure exhaust stack at 125 feet above land surface. The structure as well as, a new 230-kV transmission line could potentially result in bird collisions. Most collisions involve nocturnal migrants flying at night

in inclement weather and low-visibility conditions. The collisions typically occur when migrating birds collide with tall, guyed television or radio transmission towers (CEC 1995; Kerlinger 2000). Migratory birds generally fly at an altitude that would avoid ground structures, except when crossing over topographic features or when inclement weather forces the birds closer to the ground. Based on PESC's design and location, the project's operations are likely to result in less than significant impacts from potential collisions.

The gen-tie line for PESC will occur primarily within annual grassland that supports foraging habitat for birds such as hawks, and suitable nesting habitat for the western burrowing owl. Bird collisions with electric conducting wires occur when birds are unable to see the lines, especially during fog or rain events. Factors that affect the risk of collision include weather conditions, behavior of the species of bird, and design and location of the line.

Electrocutions occur when a bird simultaneously contacts two conductors of different phases or contacts a conductor and a ground. This happens most frequently when a bird attempts to perch on a structure with insufficient clearance between these components. On a 230-kV transmission line, all clearances between conductors or between conductors and ground are sufficient to protect even the largest birds (Avian Power Line Interaction Committee 1996). As such, PESC's operations will not result in adverse impacts to wildlife from electrocution.

5.2.2.3.5 Effects of Operation on Special-status Species

Impacts to Special-status Plants

The A-CAES system does not involve the use of a combustion turbine. As such, the operation of PESC will not produce combustion emission that could adversely impact special-status species plants. Industrial stormwater water will be retained onsite for use as makeup water; and therefore, there will be no floodplain or stormwater runoff impacts from PESC operations that could adversely impact sensitive habitat types. Based on PESC's design, the facility's operations will have a less than significant impact on special-status plant species and their habitat.

Impacts to Sensitive and Special-status Wildlife Species

The A-CAES system does not involve the use of a combustion turbine. As such, the operation of PESC will not produce combustion emissions that could adversely impact special-status species wildlife. Industrial stormwater water will be retained onsite for use as makeup water. Therefore, there will be no floodplain or stormwater runoff impacts from PESC operations that could adversely impact surface waters supporting special-status wildlife species.

It is PESC's intention to anticipate the potential for low-frequency noise in the design and specification of the project equipment and to take necessary steps to prevent ground or airborne vibration impacts. Only a nominal amount of habitat outside of the PESC site will experience noise levels within in the 60 A-weighted-decibel (dBA) equivalent sound level (Leq) contour. The wildlife species observed in the Project vicinity occur in areas that are continuously being impacted by agriculture, agricultural machinery, and traffic. As such, they are expected to adapt to the new noise levels that are less than the typical noise effect threshold of 60 dBA Leq hourly. As such, ambient noise levels and ground vibration from the operation of PESC will be less than significant.

While lighting required during PESC operations will create prominent new sources of light for nearby wildlife, effects from light will not result in substantial light or glare. Based on the localized adverse affect of new mitigated

lighting sources, the long-term impact to special-status wildlife from PESC generated light will be less than significant.

Based on PESC's design and the continued existence of wildlife corridors, the facility's operations will have a less than significant impact on special-status wildlife species and their habitat.

5.2.2.3.6 Operation Phase Impacts to Wetlands and Waters of the United States

PESC will be located on a commercial agricultural field that is currently under brassica production. Industrial stormwater water will be retained onsite for use as makeup water; and therefore, there will be no floodplain or stormwater runoff impacts from PESC operations. Based on PESC's design, operations will have a less than significant impact on wetlands and WOTUS.

5.2.3 Cumulative Effects

Cumulative effects on biological resources because of past, present, and reasonably foreseeable future actions, in combination with the PESC project, will mainly result from loss of habitat and habitat disturbance and degradation. A cumulative impact refers to a proposed project's incremental effect together with other closely related past, present, and reasonably foreseeable future projects whose impacts may compound or increase the incremental effect of the PESC (Public Resources Code [PRC] Section 21083; 14 California Code of Regulations (CCR) 15064[h], 15065[c], 15130, and 15355). Cumulative impacts from PESC are expected to be less than significant.

5.2.4 Avoidance and Minimization Measures

The following section describes the proposed measures that are intended to avoid and minimize potential adverse effects of the project to biological resources. A Biological Resources Mitigation Implementation and Minimization Plan will be prepared prior to construction that outlines how the Applicant will implement the mitigation and protection measures developed specifically for the project through consultation.

The Applicant will prepare a site-specific worker environmental awareness program (WEAP). The intent of the WEAP is to educate construction workers and operators on biological resources that staff may encounter within the project area as well as, the measures the contractor will implement to avoid or minimize impacts to these resources. A designated biologist will administer the portion of the WEAP that applies to the protection and conservation of biological resources. The WEAP will include an oral, video/PowerPoint, and/or written materials presentation that discusses the types of construction activities that may impact biological resources and the measures developed to avoid such impacts. The WEAP will also include appropriate contact information and procedures. The program will include information regarding encounters with wildlife and dealing with situations involving biological resources. General conservation measures that the Applicant's contractor will implement within the PESC area will include the following:

- Consult with state and federal agencies on mitigation and biological protection measures.
- Provide construction monitoring by a qualified biologist to ensure compliance with the protection measures.
- Conduct preconstruction and clearance surveys for avian species, as applicable.
- Prepare standardized construction monitoring and compliance reports that analyze the effectiveness of the measures.

5.2.4.1 Minimization Measure for Site Restoration

5.2.4.1.1 Minimization Measure 1–PESC Closure Plan

Over the long term, once the PESC facilities are no longer needed, the structures will be removed and the PESC area will be restored to approximate preconstruction conditions. Because rehabilitation of the site is not expected to occur for approximately 50 years, a draft conceptual plan may be included as part of the Biological Resources Mitigation Implementation and Minimization Plan. This draft plan can then be updated at a later date (but no later than 1 year prior to closure) to reflect the current technology and regulatory requirements at the time of facility closure. A formal rehabilitation plan for the PESC facility closure will be developed by the project owner and submitted to the CEC Compliance Project Manager at least 1 year prior to facility closure. The PESC facility closure restoration plan will include the following sections and details:

- Goals and objectives of the restoration
- A description of methods employed to achieve the restoration goals and objectives
- Success criteria used to determine whether the restoration is successful
- A monitoring and maintenance program, including details on remedial measures
- A description of annual reporting
- A restoration implementation and monitoring timeline and schedule of planned activities

5.2.4.1.2 Minimization Measure 2–Nesting Birds

Sites to be disturbed during the nesting season between February 1 and August 31 will be surveyed for nesting birds prior to construction. A qualified biologist will perform a preconstruction survey for nesting birds in the PESC area, including areas within 100 feet of all PESC facilities, utility corridors, and access roads. If an active nest of a species protected under the MBTA is found, construction activity will be limited within an appropriately sized buffer around the nest, which will be monitored by a qualified biologist to avoid impacts to the nest.

Nests may be relocated, or young birds may be rehabilitated and released under the guidance of CDFW, as necessary, to avoid project delays attributable to the presence of active bird nests. Frequent (every few days) disturbance of potential nesting habitat may be initiated in project areas just prior to the nesting season to remove nesting substrate and discourage nesting in construction areas.

5.2.5 Laws, Ordinances, Regulations, and Standards

The following sections describe the LORS that apply to potential impacts on biological resources in the PESC area and list the agencies responsible for enforcing the regulations. **Table 5.2-6** provides a summary of the LORS.

5.2.5.1 Federal LORS

5.2.5.1.1 Federal ESA (16 United States Code [USC] 153 et seq.)

The Endangered Species Act (ESA) of 1973 (16 USC §§ 1531-1543) provides policy and authority for the conservation of threatened and endangered plants and animals and their habitats. The lead federal agencies for implementing the ESA are the USFWS and the NMFS, known collectively as the Services. The law requires federal agencies to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued

existence of any listed species or result in the destruction or adverse modification of designated critical habitat of such species. The law also prohibits any action that causes a “taking” of any ESA listed species.

The ESA prohibits the taking of listed species unless specifically authorized by permit from the USFWS or the NMFS. “Take” is defined in 16 USC § 1532 (19) as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct.” The law’s definition of “Harm” includes significant habitat modification or degradation that results in death or injury to ESA listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering (50 CFR § 17.3).

Section 7(a)(2) of the ESA requires the lead federal agency to consult with either the USFWS or NMFS, depending which agency has jurisdiction over the ESA listed species in question, when a federally funded project either may have the potential to adversely affect an ESA listed species, or a federal action occurs within or may have the potential to impact DCH. Section 7 of the ESA requires that federal agencies must ensure that any activities they authorize, fund, or carry out are not likely to destroy or adversely modify an ESA listed species DCH.

Table 5.2- 6: Laws, Ordinances, Regulations, and Standards for Biological Resources

Jurisdiction	LORS	Administering Agency	Requirements/Applicability
Federal	Federal ESA (16 USC 1531 et seq.)	USFWS	Designates and protects federally threatened and endangered plants and animals and their critical habitat. Applicants for projects that could result in adverse impacts on any federally listed species are required to consult with and mitigate potential impacts in consultation with USFWS.
Federal	MBTA (16 USC 703 to 711)	USFWS	Protects all migratory birds, including nests and eggs.
Federal	Bald and Golden Eagle Protection Act (16 USC 668)	USFWS	Specifically protects bald and golden eagles from harm or trade in parts of these species.
Federal	5.2.5.1.4 Clean Water Act (33 USC 1251-1376; 30 CFR 330.5(a)(20)	USACE	Nationwide 404 permit from the USACE and CWA 401 water quality certification from the RWQCB for compliance with CWA.
State	CESA (Fish and Wildlife Code Section 2050 et seq.).	CEC	Species listed under this act cannot be “taken” or harmed, except under specific permit.
State	Fish and Wildlife Code Section 3511	CDFW	Describes bird species, primarily raptors that are FP. FP birds may not be taken or possessed, except under specific permit requirements.
State	Fish and Wildlife Code Section 3503	CDFW	States that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any

Jurisdiction	LORS	Administering Agency	Requirements/Applicability
			bird, except as otherwise provided by this code or any regulation made pursuant thereto.
State	Fish and Wildlife Code Section 3503.5	CDFW	Protects all birds of prey and their eggs and nests.
State	Fish and Wildlife Code Section 3513	CDFW	Makes it unlawful to take, possess, or destroy any birds of prey or to take, possess, or destroy the nest or eggs of any such bird.
State	Fish and Wildlife Code Sections 4700, 5050, and 5515	CDFW	Lists mammal, amphibian, and reptile species that are FP in California.
State	Fish and Wildlife Code Sections 1900 et seq.,	CDFW	The Native Plant Protection Act lists threatened, endangered, and rare plants listed by the State.
State	Title 14, CCR, Sections 670.2 and 670.5	CDFW	Lists plants and animals designated as threatened or endangered in California.
State	California Fish and Wildlife Code (Sections 1601 through 1607)	CDFW	Prohibits alteration of any stream, including intermittent and seasonal channels and many artificial channels, without a permit from CDFW.
State	CEQA (PRC Section 15380)	CEC	CEQA requires that the effects of a project on environmental resources must be analyzed and assessed using criteria determined by the lead agency.
State	Warren Alquist Act (PRC Section 25000, et seq.)	CEC	Warren-Alquist Act is a CEQA-equivalent process implemented by the CEC.

5.2.5.1.2 MBTA (16 USC 703 to 711)

The Migratory Bird Treaty Act (MBTA) of 1918 provides a program for the international conservation of migratory birds that fly through lands of the United States. The lead federal agency for implementing the MBTA is the FWS. The law makes it illegal to take, possess, import, export, transport, sell, purchase, barter, or offer for sale, purchase, or barter, any migratory bird, or the parts, nests, or eggs of such a bird except under the terms of a valid federal permit.

5.2.5.1.3 Bald and Golden Eagle Protection Act (16 USC 668)

The Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c), enacted in 1940, and amended several times since, prohibits anyone, without a permit issued by the Secretary of the Interior, from "taking" bald or golden eagles, including their parts*, nests, or eggs. The Act provides criminal penalties for persons who "take, possess,

sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part*, nest, or egg thereof." The Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb."

5.2.5.1.4 Clean Water Act (33 USC 1251-1376; 30 CFR 330.5(a)(20)

The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was significantly reorganized and expanded in 1972. "Clean Water Act" became the Act's common name with amendments in 1972.

Section 401 of the CWA requires state certification of all federal licenses and permits in which there is a “discharge of fill material into navigable waters.” The process of obtaining a Section 401 Water Quality Certification (WQC) establishes whether an activity, as described in the federal license or permit, will impact site-specific water quality standards. Prior to the issuance of a relevant federal license or permit, Section 401 of the CWA requires that the state or territory first issue a WQC for the project. The most common federal license or permit requiring a WQC is the United States Army Corps of Engineers (USACE) issued CWA Section 404(d) permit.

Section 10 of the Rivers and Harbors Act of 1899 (RHA) regulates structures or work in or affecting navigable waters. Section 10 of the RHA defines navigable waters as “those waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce” (33 CFR § 329.4) (USACE 1987). Through its administration of the RHA, the USACE implements a permit program that evaluates impacts to navigable waters and their navigable capacity.

5.2.5.2 State LORS

5.2.5.2.1 CESA

CESA (Fish and Wildlife Code Sections 2050-2116) created the categories of “threatened” and “endangered” species to align with federal regulations. It converted all “rare” animals into the Act as threatened species and requires mitigation for impacts to species and their habitat. CDFW requires a CESA Section 2081(a) permit for take of candidate or listed threatened and endangered animals for scientific, educational, or management purposes, as well as a CESA Section 2081(b) permit for incidental take of listed threatened and endangered animals from all activities.

Incidental Take Permits allow a permittee to take a CESA-listed species if such taking is incidental to, and not the purpose of, carrying out an otherwise lawful activity. These permits are most commonly issued for construction, utility, transportation, and other infrastructure-related projects. Permittees must implement species-specific minimization and avoidance measures, and fully mitigate the impacts of the project. (Fish & G. Code § 2081 (b); CCR., tit. 14, §§ 783.2-783.8)

5.2.5.2.2 Fish and Game Code Sections 3500, 3503.5, and 3800

All birds are provided protection under Sections 3500, 3503.5, and 3800 of the California Fish and Game Code. Section 3503.5 prohibits the take, possession, and needless destruction of any bird of prey or nests or eggs of any species on the MBTA list except as otherwise provided in the codes and regulations. Disturbance of any active bird nest during the breeding season is prohibited. When nesting birds are present on a specific property, take must be avoided, and project proponents are required to reduce or eliminate disturbances within the active nesting territories or during the nesting season.

5.2.5.2.3 Fish and Game Code Section 3511

This code identifies bird species, primarily raptors, that are fully protected (FP). FP birds may not be taken or possessed except under specific permit requirements.

5.2.5.2.4 Fish and Game Code Section 3513

This code makes it unlawful to take, possess, or destroy any birds of prey or to take, possess, or destroy the nest or eggs of any such bird.

5.2.5.2.5 Plants and Animals of California Declared to Be Endangered or Threatened (Title 14, CCR, Sections 670.2 and 670.5)

These codes list plants animals designated as threatened or endangered in California. State SSC is a category conferred by CDFW on those species that are indicators of regional habitat changes or are considered potential future protected species. These species do not have any special legal status but are intended by CDFW for use as a management tool to take these species into special consideration when decisions are made concerning the future of any land parcel.

5.2.5.2.6 CEQA (PRC Section 15380)

CEQA defines “rare” in a broader sense than the definitions of threatened, endangered, or species of special concern. Under this definition, CDFW can request additional consideration of species not otherwise protected. CEQA requires that the effects of a project on environmental resources must be analyzed and assessed using criteria determined by the lead agency.

5.2.5.2.7 Warren Alquist Act (PRC Section 25000, et seq.)

The AFC process is a certified regulatory process pursuant to the Warren-Alquist Act and, therefore, fulfills the requirements of CEQA. CEQA is codified in the California PRC, Section 21000-21178.1. Guidelines for implementation of CEQA are codified in the CCR, Sections 15000-15387.

5.2.6 Permits and Permit Schedule

5.2.7 Agency Contacts

Table 5.2-7 lists regulatory agency contacts for biological resources for this project.

Table 5.2- 7: Regulatory Agency Contacts for Biological Resources

Issue	Agency	Contact Information
State-listed species	CDFW, Central Region	(559) 243-4005; reg4sec@wildlife.ca.gov
Federally listed species	USFWS	2493 Portola Road Suite B Ventura, CA 93003 (805) 644-1766

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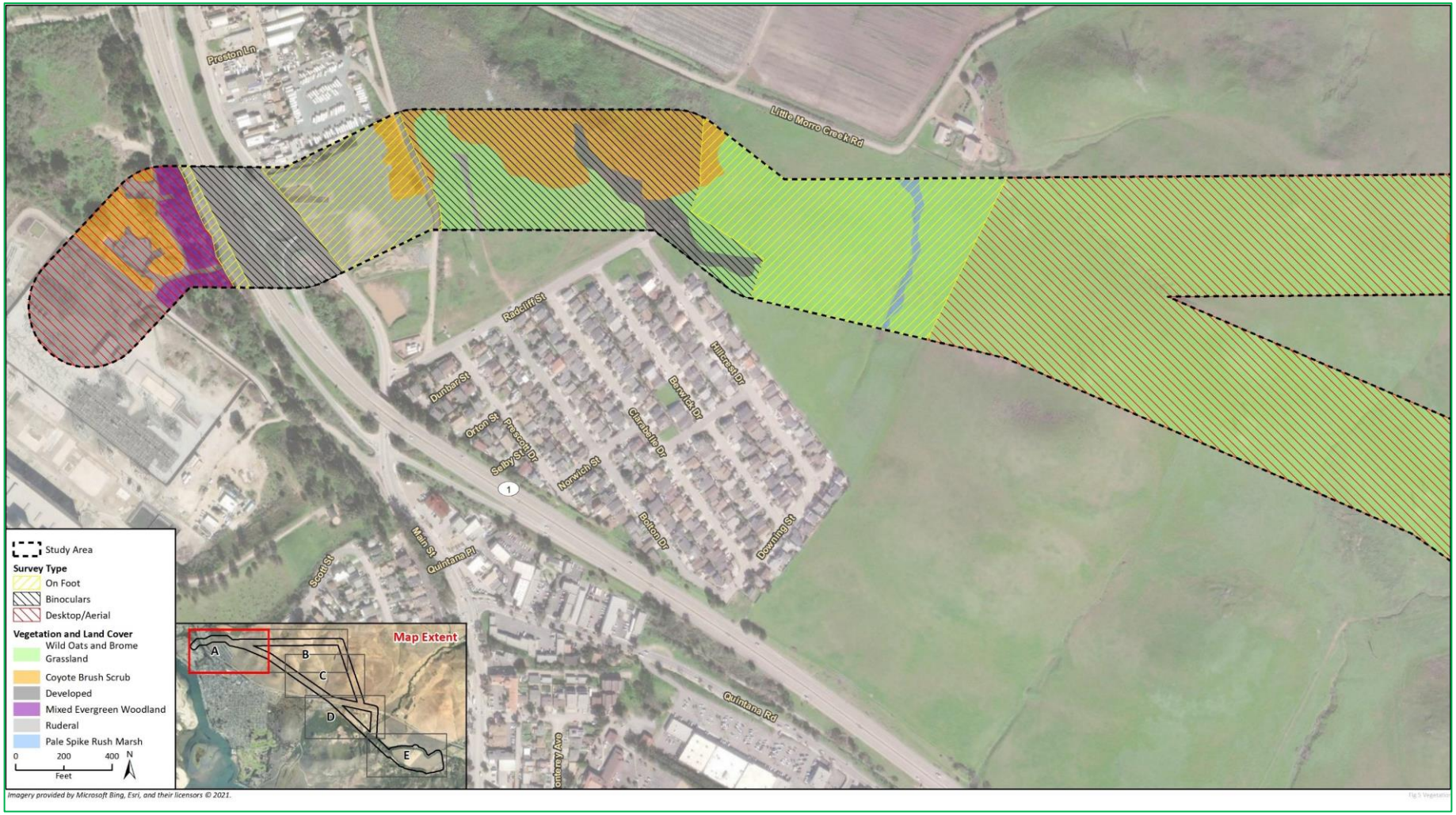

Source: Rincon 2021.

Figure 5.2-1: Vegetation Communities and Land Cover Types within the Study area

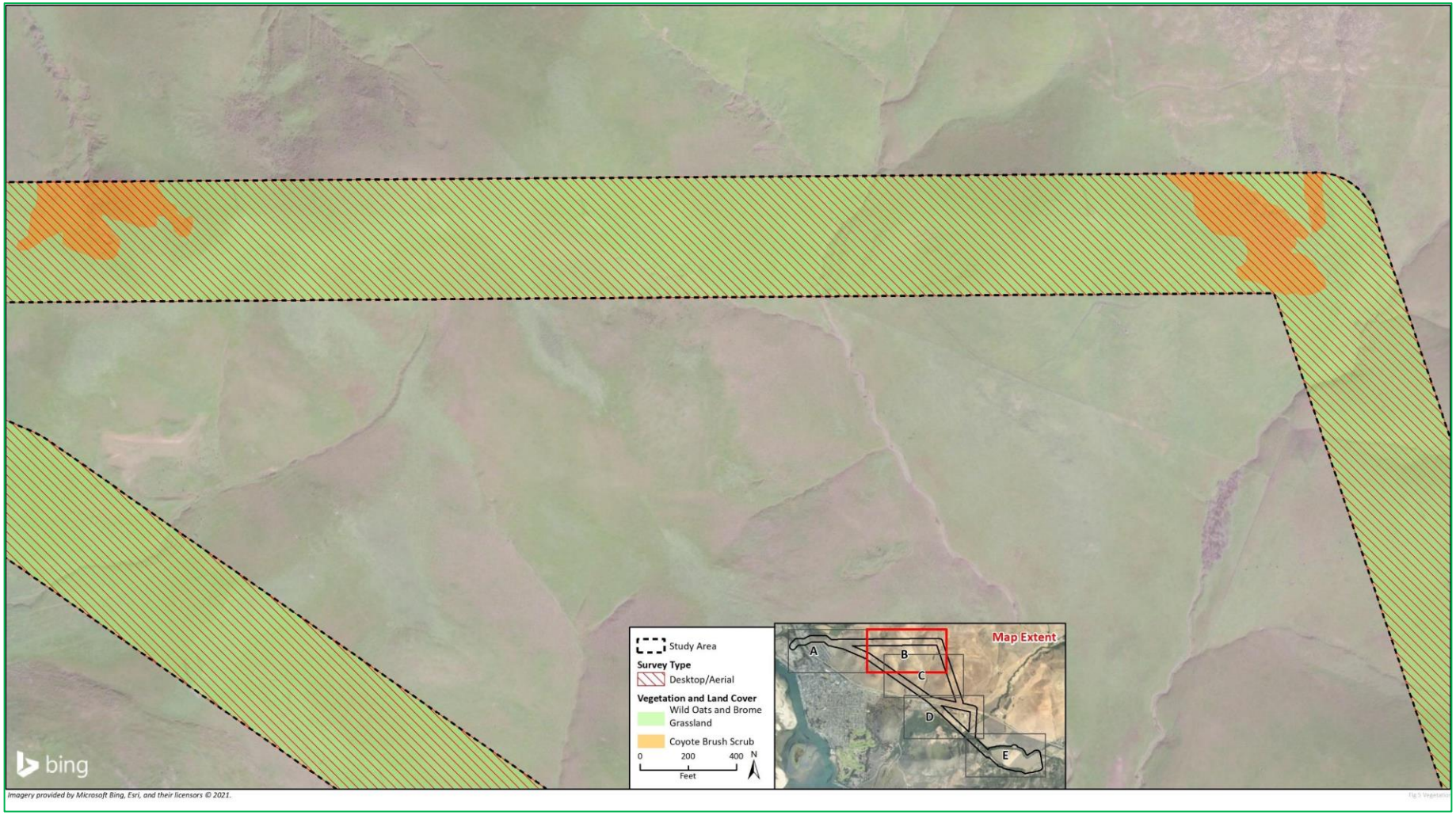

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Figure 5.2-2: Vegetation Communities and Land Cover Types within the Study area

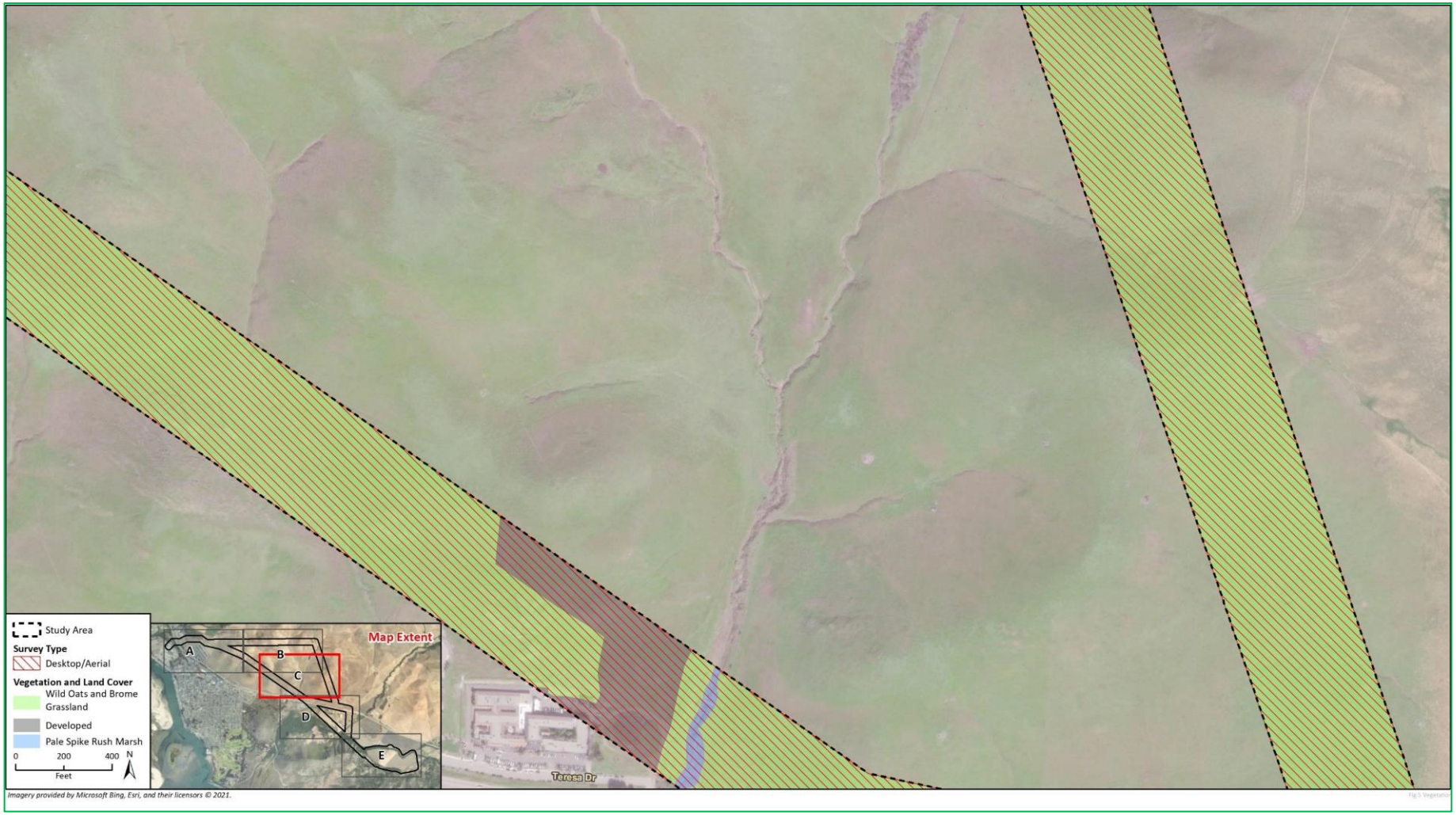

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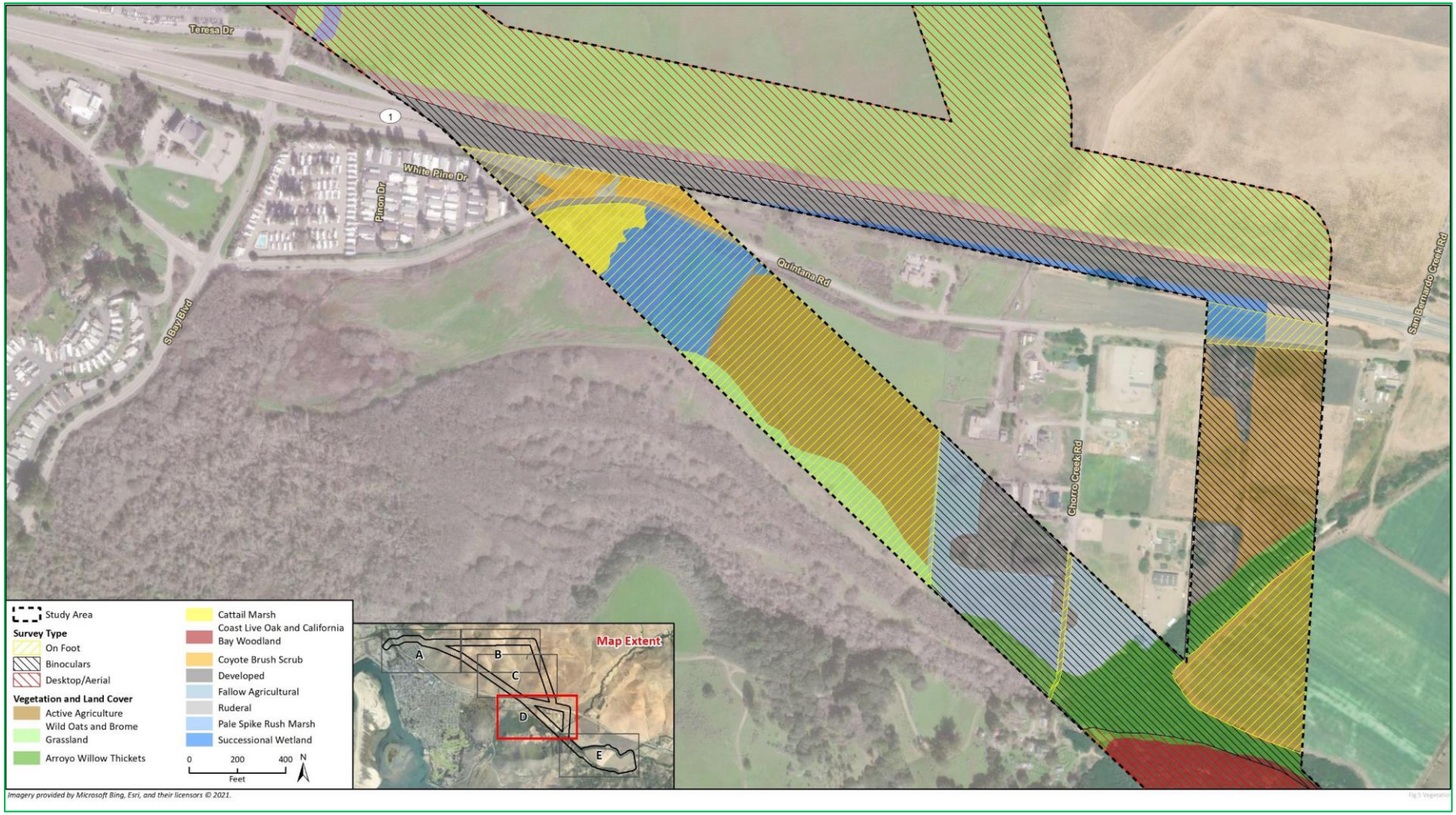
Figure 5.2-3: Vegetation Communities and Land Cover Types within the Study area



Source: Rincon 2021.

Figure 5.2-4: Vegetation Communities and Land Cover Types within the Study area

Source: Rincon 2021.

Figure 5.2-5: Vegetation Communities and Land Cover Types within the Study area

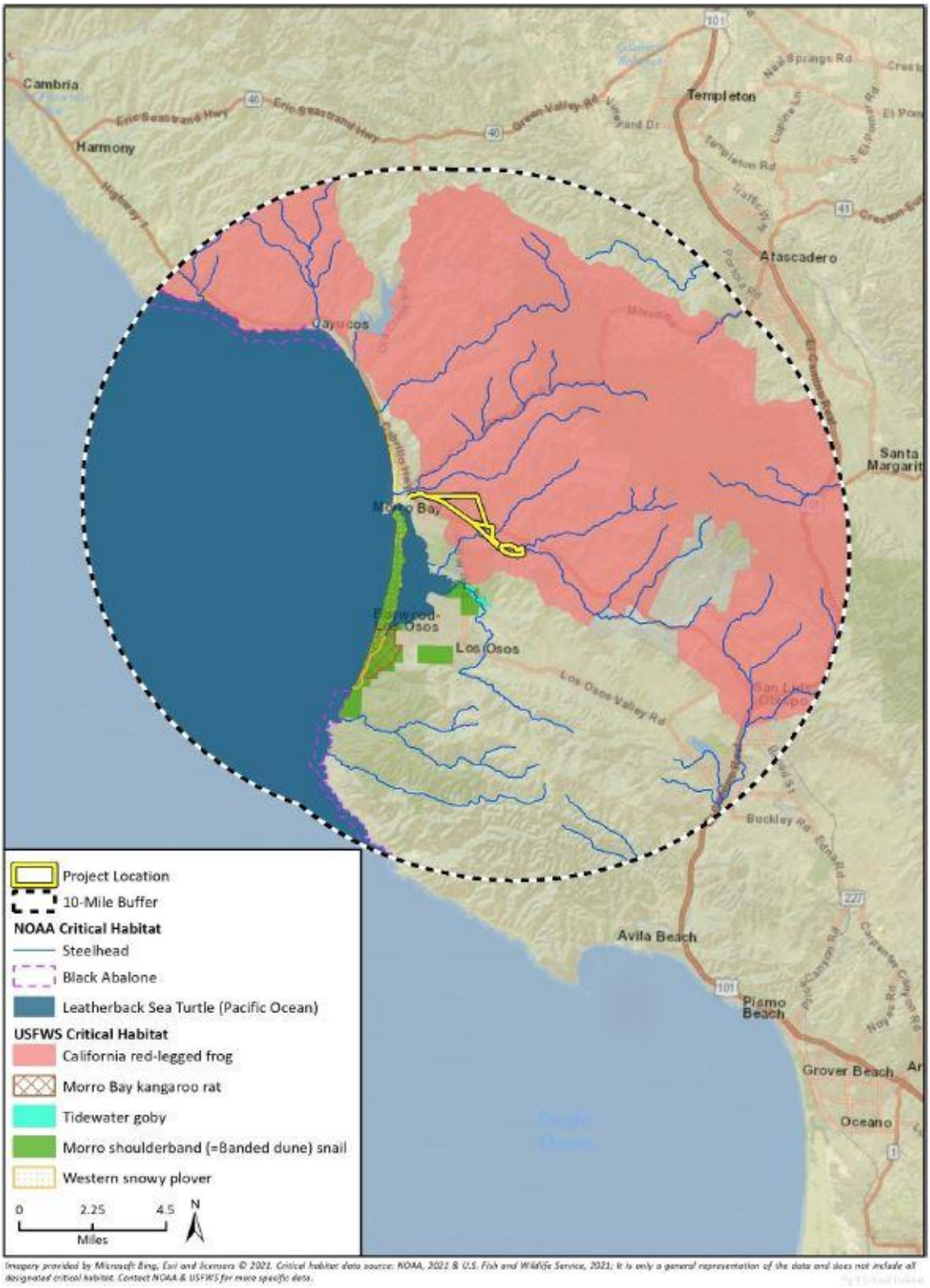


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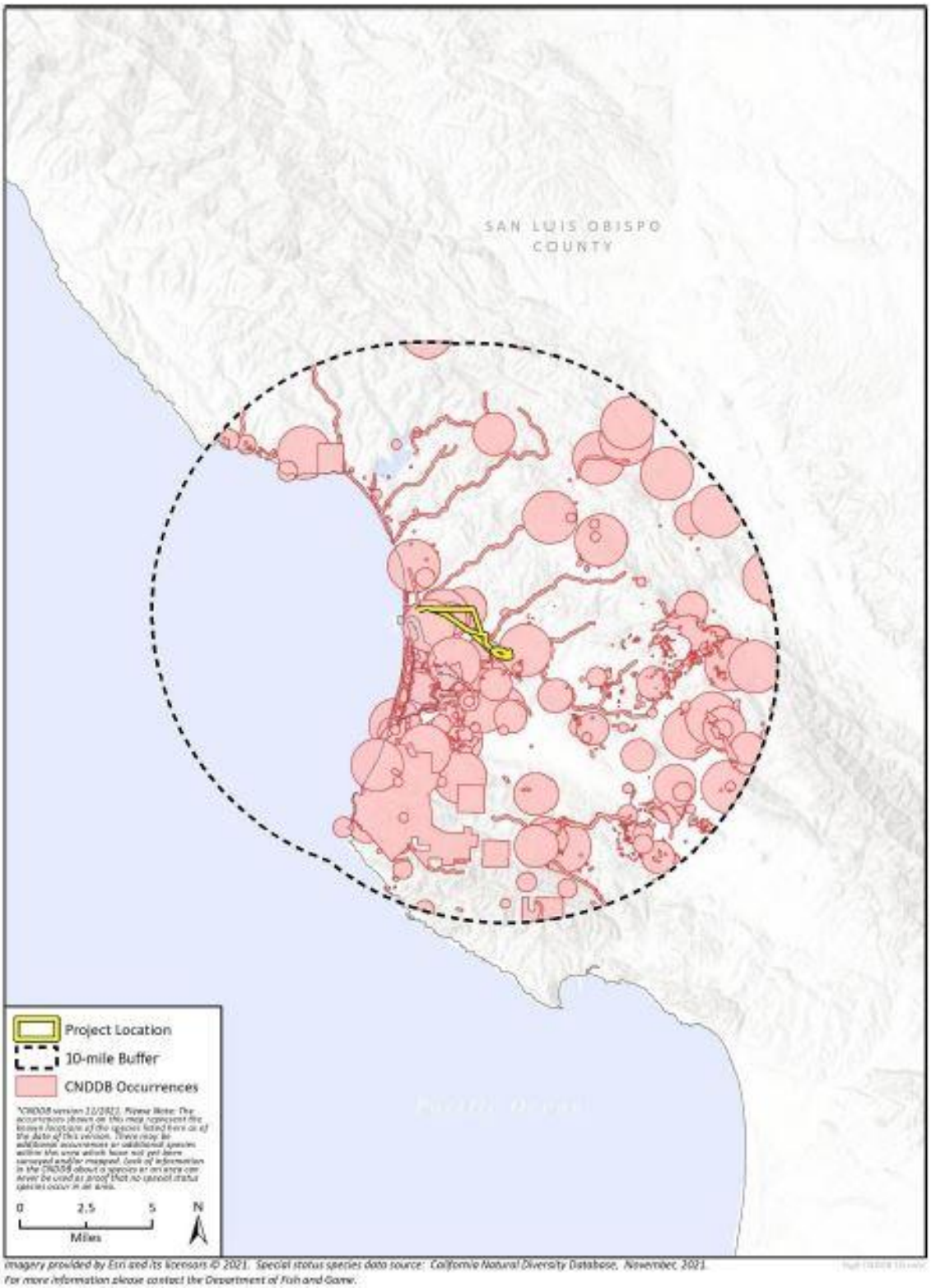
Figure 5.2-6: Critical Habitats within 10 Miles of the Project Area



Source: Rincon 2021.

Figure 5.2-7: CNDDB Occurrences within 10 Mile of the Project Area

Source: Rincon 2021.

Figure 5.2-8: Special Status Species Observed within the Project Area

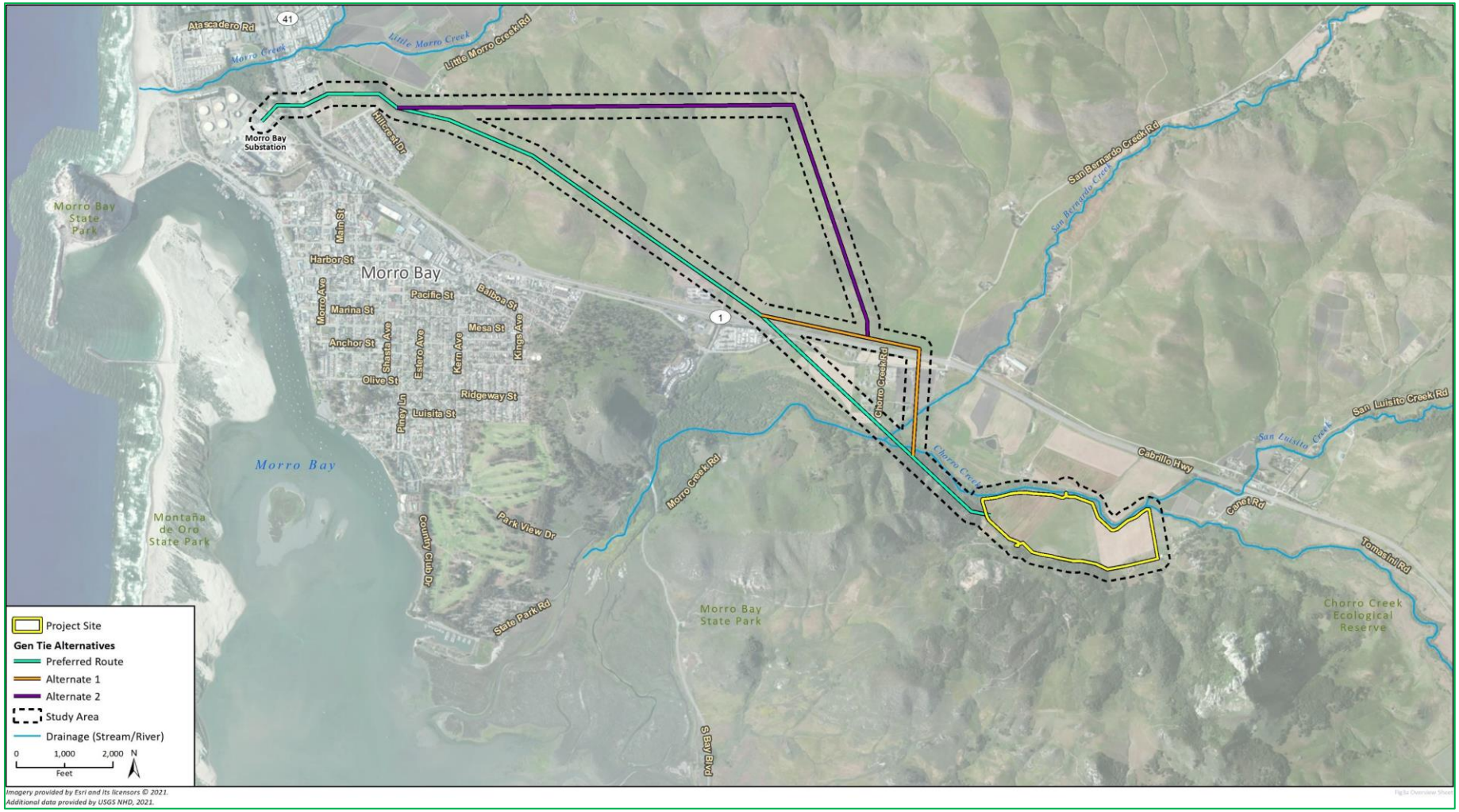


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Figure 5.2-9: Jurisdictional Waters within the Vicinity of the Study Area

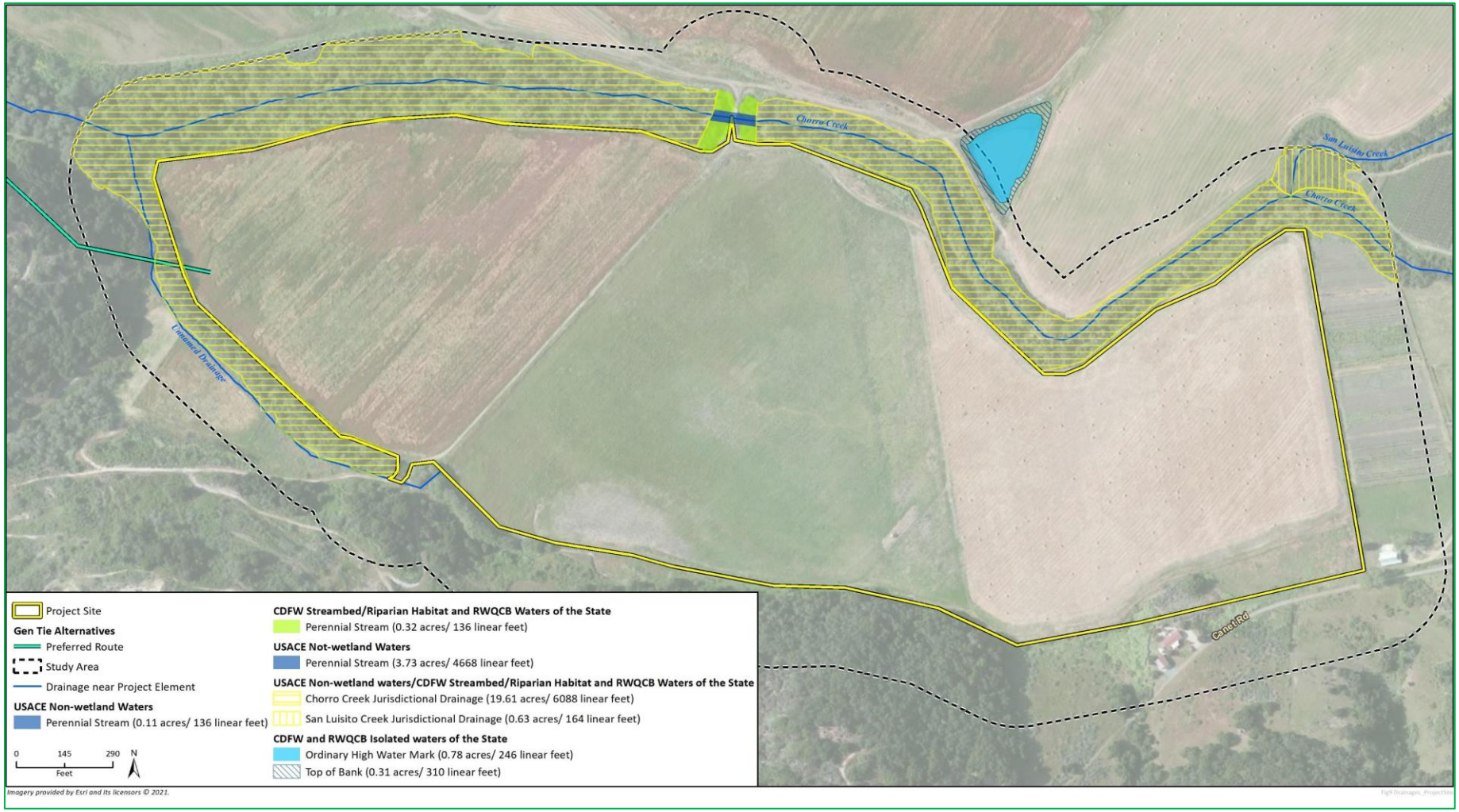

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Figure 5.2-10: Jurisdictional Waters within the Vicinity of the Study Area

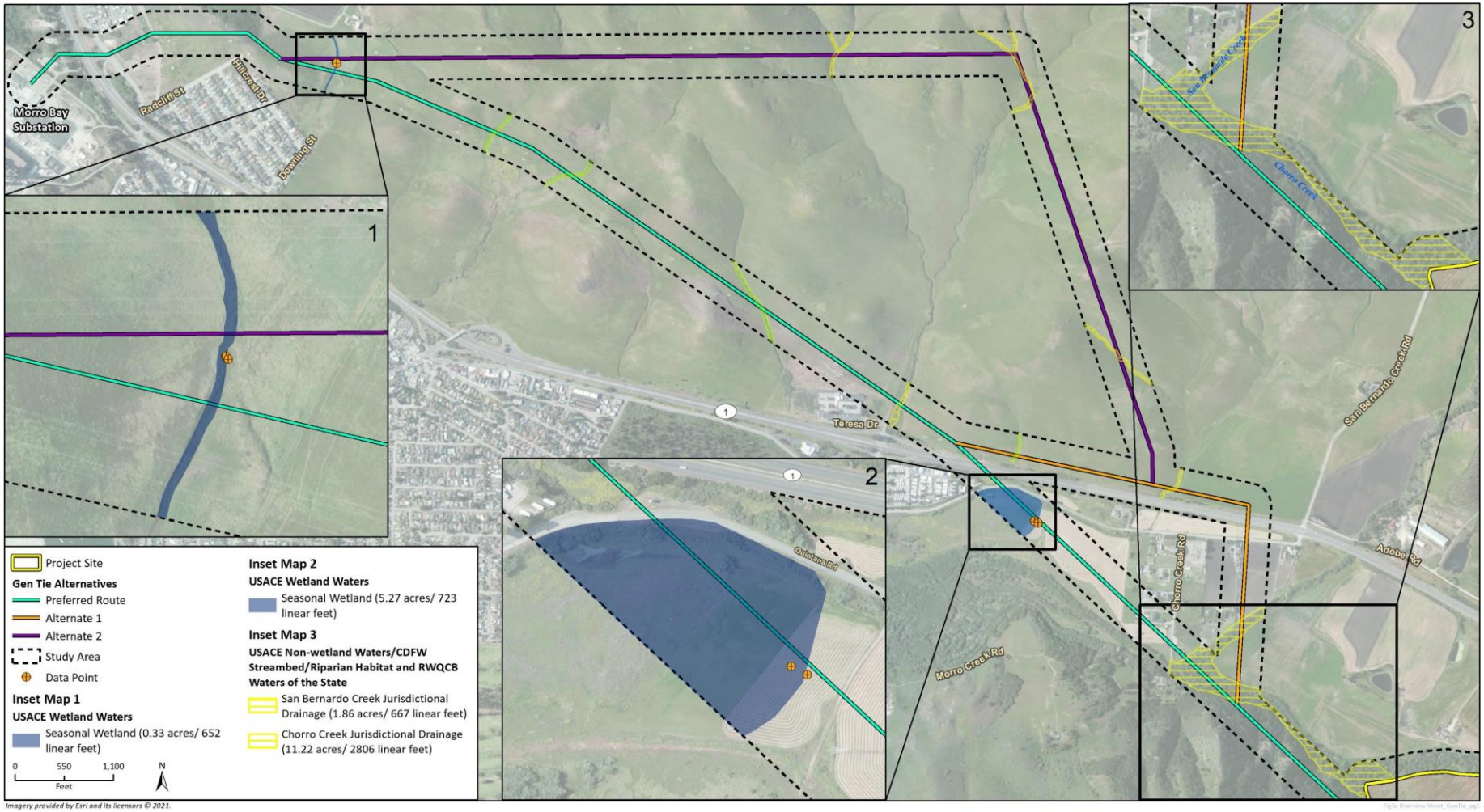

Figure 5.2-11: Jurisdictional Waters within the Vicinity of the Potential Gen-Tie Line Routes

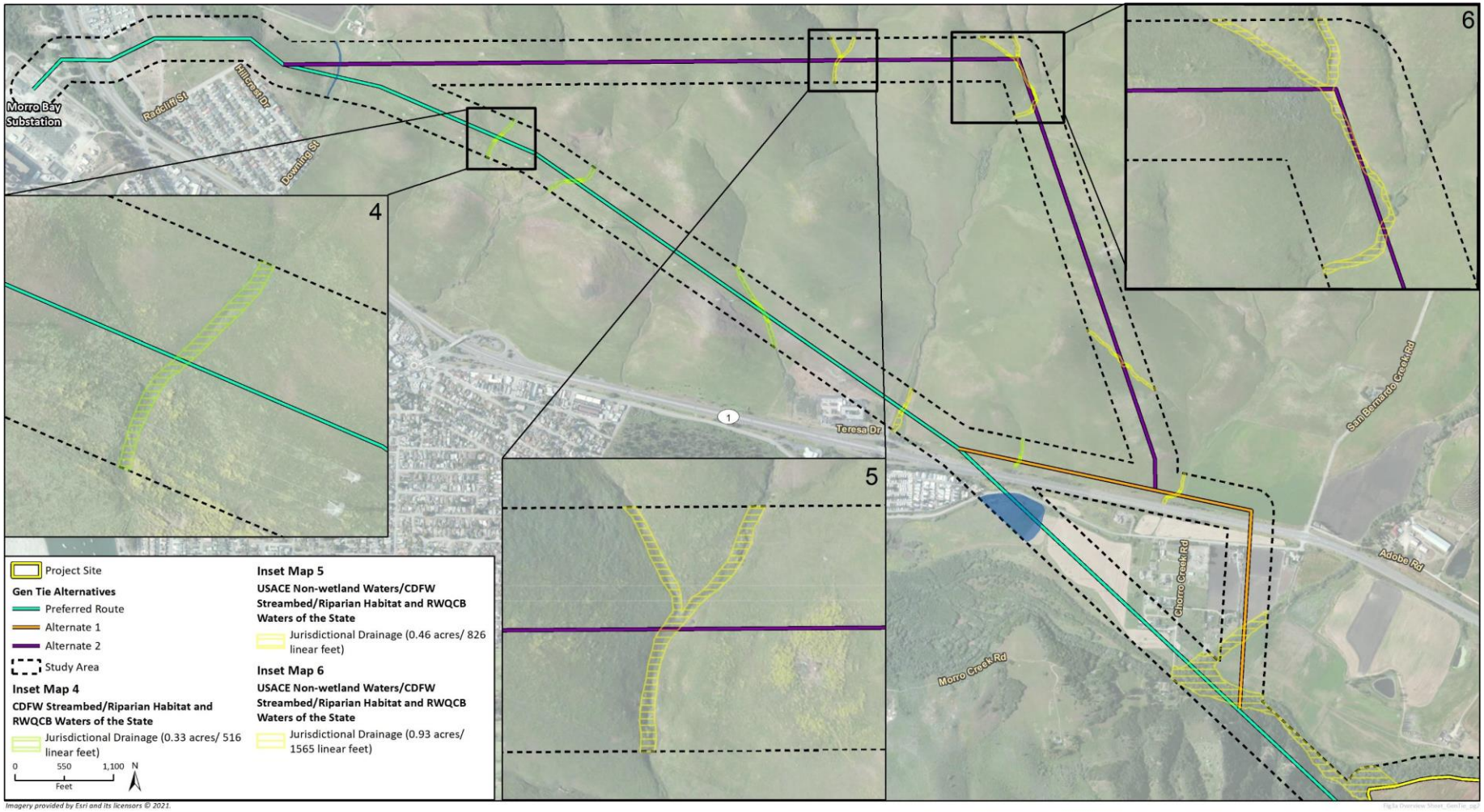

Figure 5.2-12: Jurisdictional Waters within the Vicinity of the Potential Gen-Tie Line Routes

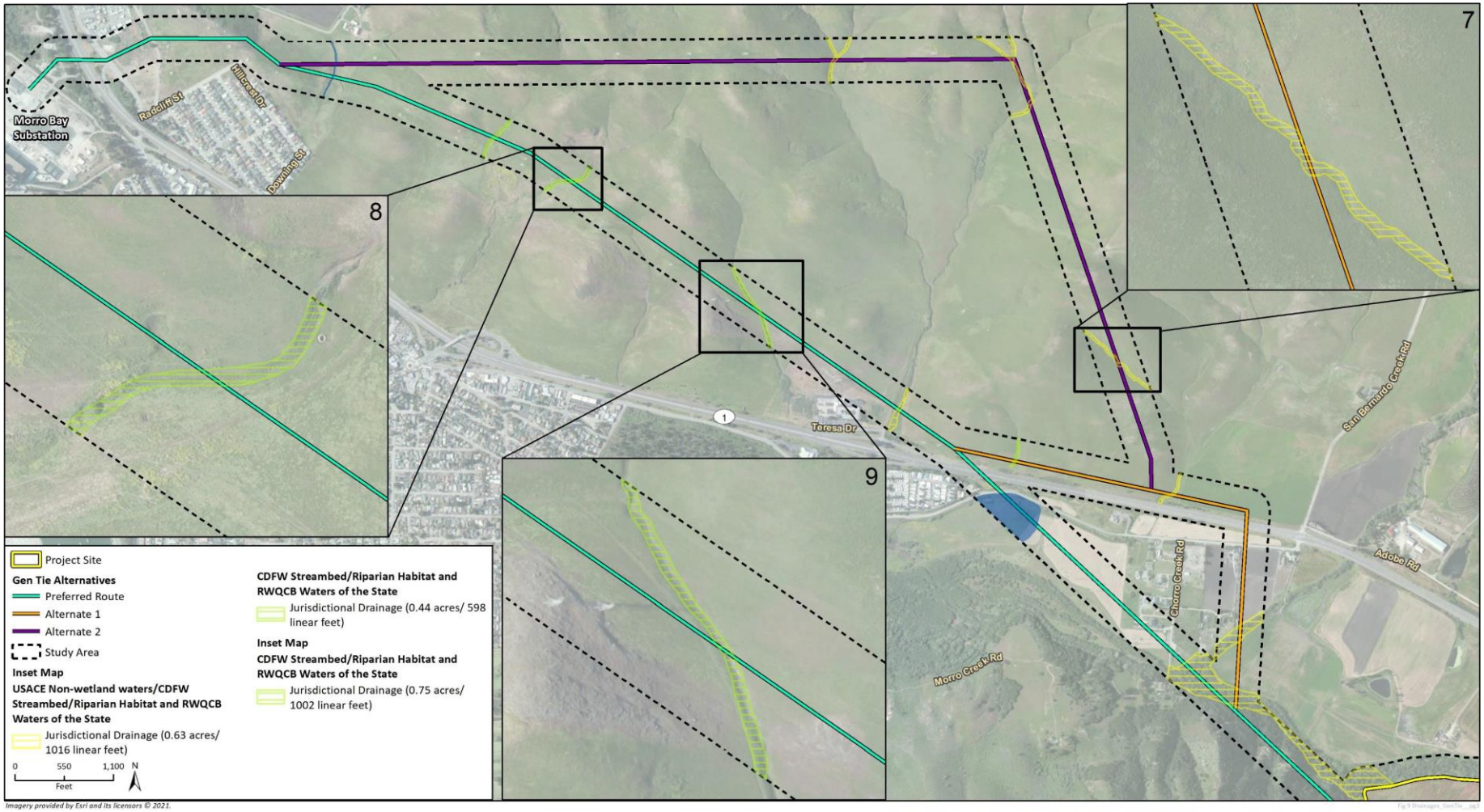

Figure 5.2-13: Jurisdictional Waters within the Vicinity of the Potential Gen-Tie Line Routes

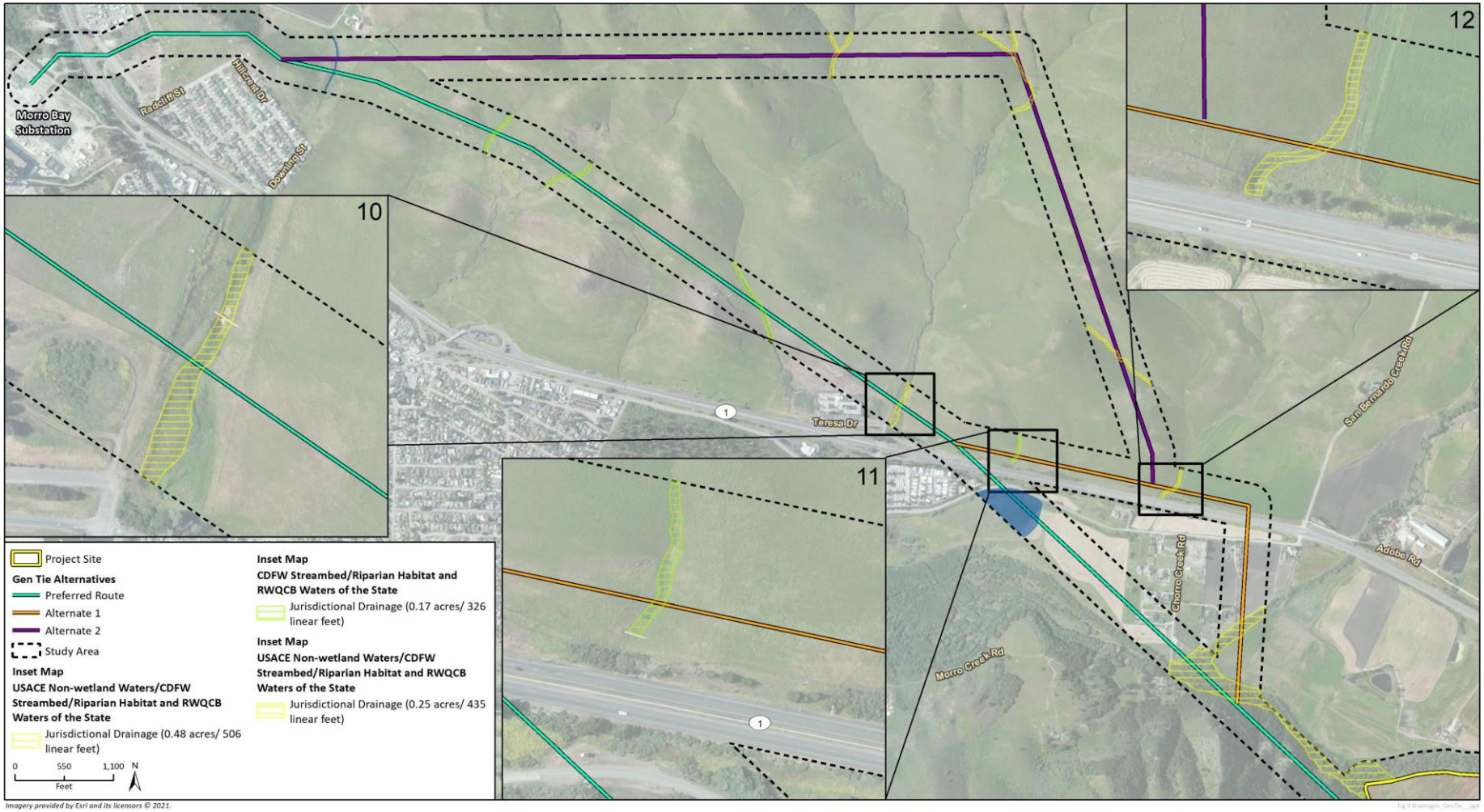

Figure 5.2-14: Jurisdictional Waters within the Vicinity of the Potential Gen-Tie Line Route