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5.2 Biological Resources

This section describes biological resources in and near the MREC, and the potential effects that the project may have on these resources. Section 5.2.1 discusses the affected environment, including an overview of the region, habitat and vegetation communities, and special-status species. Section 5.2.1.4 presents the results of biological surveys in and near the MREC site. Section 5.2.2 presents an environmental analysis of the MREC, including standards of significance, potential impacts of construction and operation of the MREC, and impacts to special-status species. Section 5.2.3 evaluates any potential cumulative effects to biological resources in the project vicinity, and Section 5.2.4 addresses proposed mitigation measures that will avoid, minimize, or compensate for adverse impacts. Section 5.2.5 describes the LORS that apply to the MREC. Section 5.2.6 presents permit requirements. Section 5.2.7 presents the regulatory agency contacts, and Section 5.2.8 contains the references used to prepare this section.

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 and special-status plants and animals. In addition, the methods and results of biological surveys for the proposed project are included in Section 5.2.2.4. For the purposes of this document, the MREC site includes the project site, laydown area, a 6.6 mile, 230-kV generator tie-line, a 2.4-mile natural gas pipeline, and a 1.7 mile process water supply pipeline, all of which are aligned to the south and west from the main MREC facility. The regional overview of the project area includes, but is not limited to, the area within 10 miles of the MREC site.

The MREC site is approximately 181-186 feet above mean sea level. The MREC site, laydown area, natural gas pipeline, and process water supply can be found on the USGS Saticoy and Santa Paula, California 7.5-minute series topographic quadrangles within Township 14 North, Range 21 West (San Bernardino Meridian). The generator tie-line is within Township 14 North, Range 21 West and Township 14 North, Range 22 West (San Bernardino Meridian). The MREC site will be located 0.8 mile east of SR-126 and intersects the south end of Mission Rock Road. Land use in the surrounding area includes commercial, industrial, agricultural, and open space.

A description of regional biogeography and habitat types was obtained from reference sources including *Ecological Subregions of California* (USDA, 1997), *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland, 1986), *A Manual of California Vegetation* (Sawyer and Keeler-Wolf, 1995), and the California Department of Fish and Wildlife (CDFW) *Biological Information and Observation System* (BIOS, 2015). The USFWS National Wetlands Inventory (NWI) was also queried to determine the location of reported wetlands in proximity to the site (USFWS, 2015a). These sources, as well as aerial photographs and USGS topographical maps, were consulted to determine the terrestrial and aquatic biological resources with potential to occur within 10 miles of the MREC site.

A list of sensitive biological resources for the region including natural communities and special-status plant and wildlife species was compiled for the project using the CDFW California Natural Diversity Database (CNDDB) RareFind5 database (CDFW, 2015a) as well as other publically available studies, information and resources. The information in the reference sources listed above is based on known occurrences, historical records, or the presence of suitable habitat for any given life stage of a particular species. A list of potentially occurring sensitive biological resources was generated for the region based on the combined results of these reference sources. Appendix 5.2A includes tables listing regional special-status plant and wildlife species.

5.2.1.1 Regional Overview

Ecoregions are ecosystems of regional extent that share common climatic and vegetation characteristics. Ecoregions are hierarchically organized into domains, divisions, provinces, and sections. The majority of the proposed project, including the project site, laydown area, natural gas pipeline, process water supply line, and portion of the generator tie-line (Towers 1-25, and 37-40), lies within the Oxnard Plain-Santa Paula Valley subsection of the Southern California Coast Ecological Section (USDA, 1997). The remaining portion of the generator tie-line (Towers 26-36) are located within the Santa Ynez-Sulphur Mountains subsection of the Southern California Coast Ecological Section (USDA, 1997).

The Oxnard Plain-Santa Paula Valley subsection occurs on valleys of the Santa Clara River and Calleguas Creek (an extension of Arroyo Simi), and a plain at the mouths of these streams (McGinley, 2009). According to McGinley (2009), the predominant natural vegetation communities in this subsection include California sagebrush (*Artemisia californica*) series, purple sage (*Salvia leucophylla*) series, and some small areas of pickleweed (*Salicornia* spp.) series.

The climate within the Oxnard Plain-Santa Paula Valley subsection is characterized by hot temperatures, subhumid conditions, and mean annual precipitation 12 to 18 inches with frequent summer fog (McGinley, 2009a). According to McGinley (2009a), the mean annual temperature ranges from 56°F to 60°F. The mean freeze-free period is about 300 to 350 days (McGinley, 2009a).

The Santa Ynez-Sulphur Mountains subsection consists of the Santa Ynez Mountains, an east-west trending range with steep mountains are narrow ridges, and the Sulphur Mountains trend west-southwest (McGinley, 2009b). The predominant natural vegetation communities are Coast live oak (*Quercus agrifolia*) series, bigcone Douglas fir (*Pseudotsuga macrocarpa*) - canyon live oak (*Quercus chrysolepis*) series, chamise (*Adenostoma fasciculatum*) series, and mixed chaparral shrublands (McGinley, 2009b).

The climate within the Santa Ynez-Sulphur Mountains subsection is characterized by hot temperatures, subhumid conditions, and mean annual precipitation 18 to 30 inches (McGinley, 2009b). According to McGinley (2009b), the mean annual temperature ranges from 45°F to 60°F compared to the Oxnard Plain-Santa Paula Valley subsection. The mean freeze-free period is about 250 to 350 days (McGinley, 2009b).

Current land use within the region is mixed, primarily dominated by agriculture in the central region of the Santa Paula River Valley and adjacent hillsides. Commercial and industrial uses dominate the southern end of the valley, adjacent to the agricultural region, and residential and urban development are primarily centralized on the coastal plain. Developed urban areas nearby include Saticoy (2.5 miles southwest of the MREC site) and Santa Paula (2.4 miles to the northeast). SR 126 is approximately 0.5 mile northwest of the MREC site and connects the region to Santa Clarita to the north and the coastal areas of Oxnard/Ventura top the south. The MREC site is approximately 0.3 mile northwest of the Santa Clara River, within the Santa Clara Hydrologic Unit of the Ventura-San Gabriel Coastal Hydrologic Region (BIOS, 2009).

5.2.1.2 Significant Regional Wetlands and Protected Areas

Important ecological reserves, designated open spaces, and the Santa Clara River Estuary occur in the region. These protected areas provide important habitat for migratory birds along the pacific flyway as well as habitat for several special-status plants and animals. Figure 5.2-1a and Figure 5.2-1b show the locations of these protected areas in relation to MREC, the laydown area, and linear features. Figure 5.2-2 (pages 1-20) provides the USFWS's NWI data at a scale of 1:2,400, including any potential jurisdictional and non-jurisdictional wetlands delineated out to 250 feet from the edge of disturbance. Significant wetlands and conservation areas within a 10-mile radius from the MREC are briefly described below. **All of the figures for this section are provided at the end of the section as some of them are multi-page figures.**

The Nature Conservancy

The Nature Conservancy (TNC) currently owns approximately 3,000 acres of land along 13 miles of the Santa Clara River (TNC, 2008) and has proposed restoration projects in association with the California Coastal Conservancy and other public entities for the riparian areas along the river. According to TNC (2008), the majority of the land along the Santa Clara River is privately owned. Natural vegetation within the vicinity of the Santa Clara River include chaparral, coastal sage scrub, grasslands, oak woodlands, and riparian habitat. The TNC land parcel nearest to the MREC, called the Santa Clara River West or Hanson property, encompasses portions of the Santa Clara River floodplain as well as adjacent hills and is located south and east of the MREC, beyond the Mission Rock industrial area. TNC has been working with farmers in the Santa Clara, to assist them in developing and implementing ecologically compatible farming techniques that safeguard riparian habitat.

Arroyo Verde Park

The Arroyo Verde Park consists of 132 acres of relatively undeveloped land at the base of the foothills (Dickson, 2015). Although 14 acres of the park have been converted to recreational grassland, the park still offers habitat for wildlife species. Arroyo Verde Park is located approximately 2.5 miles southwest of the proposed generator tie-line and 6.9 miles west southwest of the MREC site.

Steckel Park

Steckel Park is another recreational park that provides habitat for local wildlife species. In addition, the Santa Paula Creek flows through the park and is a popular bird watching location (County of Ventura, 2015a). Steckel Park is located approximately 7 miles northeast of the MREC site.

Toland Park

Toland Park consists of 213 acres of natural open space, including coastal sage scrub habitat (County of Ventura, 2015b). Toland Park is located approximately 7.8 miles northeast of the MREC site.

San Buenaventura State Beach

San Buenaventura State Beach is primarily a recreational beach that provides some habitat for wildlife species. This site is located approximately 5.6 miles southwest of the generator tie-line and 9.9 miles southwest of the MREC site.

Los Padres National Forest

The Los Padres National Forest is located approximately 7 miles north of the proposed generator tie-line. Los Padres National Forest encompasses approximately 1.75 million acres and has 10 congressionally designated wildernesses, which include the Ventana, Silver Peak, Santa Lucia, Machesna, Garcia, San Rafael, Dick Smith, Sespe, Matilija and Chumash wildernesses, which comprise about 875,000 acres (USDA, 2015). The national forest provides habitat for several special-status species, including 23 threatened and endangered animals, 20 animals that are considered sensitive, three threatened and endangered plant species, and an additional 71 sensitive plant species (USDA, 2015). According to the USDA (2015), the Los Padres National Forest is a member of the California Condor Recovery Program and there are 70 condors (*Gymnogyps californianus*) in the wild population (USDA, 2015). The Sespe Condor Sanctuary is also located within the Los Padres National Forest.

McGrath State Beach

McGrath State Beach is located 6.6 miles from the western terminus of the proposed generator tie-line line and a little over 10 miles from the MREC site. McGrath State Beach is approximately 295 acres, and is located on the south bank of the mouth of Santa Clara River in the city of Oxnard (California State Parks, 2008). According to California State Parks (2008, 2015), McGrath State Beach is one of the best bird-watching areas in California and over 245 bird species has been observed. There are nine separate ecosystems within the state park, which include freshwater marsh, brackish marsh, coastal dune, ocean,

sandy beach, estuary, coastal freshwater back dune lake, and riparian woodland (California State Parks, 2008). According to California State Parks (2008), the mouth of the Santa Clara River has been designated as the Santa Clara Estuary Natural Preserve, which is the highest level of protection within the State Park system. In addition, there is a current restoration project for the Santa Clara Estuary Natural Preserve, which includes removing the existing campground in the floodplain, exotic plant species removal, native re-planting and monitoring, and protection of habitat with a fence installation and interpretive signage (SCWRP, 2015).

5.2.1.3 Sensitive Habitat Types Identified in the CNDDB and Critical Habitat

Sensitive habitats within 10 miles of the MREC include significant natural communities identified by the CNDDB, including California walnut woodland, southern coastal salt marsh, southern coast live oak riparian forest, southern riparian scrub, southern sycamore alder riparian woodland, and southern willow scrub. Critical habitat for the California condor and least Bell's vireo (*Vireo bellii pusillus*) is also present in the regional vicinity of the MREC. Sensitive habitat types and critical habitat areas within 10 miles of the MREC site, laydown area, and linear features are shown on Figures 5.2-3. Descriptions of these areas are provided below.

Sensitive Habitat Types

California Walnut Woodland. California walnut woodland is characterized by an open tree canopy dominated by southern California walnut (*Juglans californica*). The understory of this alliance is typically dominated by non-native winter-active grasses in relatively moist, fine-textured soils (Holland, 1986). According to Holland (1986), California walnut woodland intergrades with coast live oak woodland or coast live oak forest on more mesic sites. Characteristic species for this alliance are coast live oak*,* Engelmann oak (*Q. engelmannii*)*,* sugar bush (*Rhus ovata*)*,* red brome (*Bromus madritensis* ssp. *rubens*), and common horehound (*Marrubium vulgare*) (Holland, 1986). This sensitive vegetation community is located approximately 6.7 miles north of the MREC site.

Southern Coastal Salt Marsh. Southern salt marsh is a highly productive alliance dominated by salt-tolerant species and has a long growing season compared to norther coastal salt marshes (Holland, 1986). According to Holland (1986), this alliance typically occurs along sheltered inland margins of bays, lagoons, and estuaries that are routinely inundated by tidal salt water for at least some part of each year. Species commonly found in southern salt marshes include Watson's saltbush (*Atriplex watsonii*)*,* saltwort (*Batis maritima*)*,* California boxthorn (*Lycium californicum*)*,* shore grass (*Distichlis littoralis*)*,* California seablite (*Suaeda californica*)*, and* Parish's glasswort (*Salicornia subterminalis*) (Holland 1986)*.* This sensitive vegetation community is located approximately 9.9 miles southwest of the MREC site.

Southern Coast Live Oak Riparian Forest. Southern coast live oak riparian forest is characterized by open to locally dense, evergreen sclerophyllous riparian woodland dominated by coast live oak (Holland, 1986). According to Holland (1986), poor understory shrub structure and more abundant herbaceous vegetation set this alliance apart from other riparian communities. Characteristic species within the alliance include big leaf maple (*Acer macrophyllum*)*,* California mugwort (*Artemisia douglasiana*)*,* spotted hideseed (*Eucrypta chrysanthemifolia*)*,* toyon (*Heteromeles arbutifolia*)*,* climbing penestemon (*Keckiella cordifolia*)*,* California blackberry (*Rubus ursinus*)*,* chilicothe (*Marah macrocarpus*)*,* blue elderberry (*Sambucus nigra* ssp. *caerulea*)*,* poison oak (*Toxicodendron diversilobum*)*,* and California bay (*Umbellularia californica*) (Holland, 1986). The nearest documented occurrence of this sensitive vegetation community is located approximately 8.5 miles northwest of the MREC site.

Southern Riparian Scrub. This sensitive vegetation community is characterized as a tall, herbaceous riparian scrub dominated by mulefat (*Baccharis salicifolia*). According to Holland (1986), mulefat scrub is an early seral community, maintained by frequent flooding, and occurs in intermittent stream channels with course substrate and moderately deep water table. Species commonly found in this alliance include valley sedge (*Carex barbarae*)*,* sandbar willow (*Salix exigua* var. *hindsiana),* arroyo willow (*S. lasiolepis*)*,*

and stinging nettle (*Urtica dioica L. ssp. holosericea*). The nearest documented occurrence of this sensitive vegetation community is located approximately 4.7 miles southwest of the MREC site.

Southern Sycamore Alder Riparian Woodland. Southern sycamore and alder riparian woodland is characterized by tall, broadleafed, winter-deciduous riparian species (Holland, 1986). According to Holland (1986), California sycamore (*Platanus racemosa*) and white alder (*Alnus rhombifolia*) are the dominant tree species in this alliance, which often exist as a scattered, open canopy above shrubby sclerophyllous and deciduous species. This alliance tends to occur along rocky streambeds prone to seasonally high-intensity flooding (Holland, 1986). Other species commonly found in this alliance include big leaf maple, California mugwort, elk's clover (*Aralia californica*), scouringrush horsetail (*Equisetum hyemale*), coast live oak, California blackberry, black elderberry (*Sambucus nigra*), poison oak, California bay, and hoary nettle (*Urtica holosericea*) (Holland, 1986). This sensitive vegetation community is located approximately 9.2 miles northeast of the MREC site.

Southern Willow Scrub. This sensitive vegetation community occurs within loose, sandy or fine-gravelly alluvium that has been deposited near stream channels during flood flows (Holland, 1986). According to Holland (1986), southern willow scrub consists of dense, broadleafed, winter-decidous riparian thickets of willows (*Salix* ssp.), with scatted California sycamore and Fremont cottonwood (*Populus fremontii*) and canopy cover is often too dense for understory development. Other species commonly found in this alliance include arrowweed (*Pluchea sericea*), Gooding's black willow (*S. gooddingii*), narrowleaf willow (*S. exigua*), red willow (*S. laevigata*), Pacific willow (*S. lasiandra*), and arroyo willow (Holland, 1986). This sensitive vegetation community is located approximately 7.4 miles northeast of the MREC site.

Critical Habitat

California Condor. Critical habitat for the California condor (Federally Endangered [FE], State Endangered [SE], CDFW Fully Protected [FP]) is located within 10 miles of MREC (CDFW, 2015a; USFWS, 2015b). The Sespe Condor Sanctuary area, which is part of the Sespe-Piru Corridor Area, is approximately 9 miles northeast of the project site. The Sespe-Piru Corridor is located within Ventura and Los Angeles Counties. The Sespe Condor Sanctuary was established in 1947 and by 1951, the sanctuary consisted of 53,000 acres (USFWS, 2013).

Steelhead. Critical habitat for the steelhead - southern California (*Oncorhynchus mykiss irideus*; FE, CDFW Species of Special Concern [SSC]) has been designated within the Santa Clara River and is located approximately 0.45 miles south the MREC site (CDFW, 2015a; USFWS, 2015b).

Southwestern Willow Flycatcher. Critical habitat for the southwestern willow flycatcher (*Empidonax traillii extimus*; FE, SE) is located within 10 miles of MREC. The Santa Clara River has been designated as critical habitat and is located approximately 0.45 miles south the MREC site (CDFW, 2015a; USFWS, 2015b).

5.2.1.4 Regional Sensitive or Special-status Species

Special-status species information was compiled from a variety of sources and is summarized in a table provided in Appendix 5.2A. The table lists all special-status species historically found or with the potential to occur within the project region including regional species listed as threatened or endangered that have special requirements under the federal Endangered Species Act (ESA) (USFWS, 1970) and the California Endangered Species Act (CESA) (Fish and Game Code, Sections 2050 et seq). Other non-listed sensitive and special-status species including California Native Plant Society (CNPS) List 1-4 species, CDFW SSC, CDFW FP Species, and other CDFW Special Animals and bird species are also tabulated in Appendix 5.2A. This appendix includes the status designation for each species, habitat types that may support these species in the project region, a determination of potential for these species to occur within the MREC project area, and a rationale for the occurrence determination. Species that were observed during the site visit are discussed in subsequent subsections and listed in Appendix 5.2B photographs of the MREC are found in Appendix 5.2C. A copy of biological resources staff resumes is

provided in Appendix 5.3D. The known locations of special-status species identified in the CNDDB records within a 10-mile range of the MREC are shown on Figure 5.2-4. In addition, special-status species that have been documented within one mile of the MREC are provided in Figures 5.2-5.

Plants were considered to be sensitive or special-status if one or more of the following criteria were met:

- Federally or state-listed, proposed, or a candidate for listing as rare, threatened or endangered (USFWS, 2015c; CDFW, 2015a)
- State Special Plant as defined by the CNDDB (CDFW, 2015a)
- Designated by the CNPS in its *Inventory of Rare and Endangered Plants of California* (CNPS, 2015)

Animals were considered to be sensitive or special-status if one or more of the following criteria were met:

- Federally- or state-listed, proposed, or a candidate for listing as threatened or endangered (USFWS, 2015c; CDFW, 2015c)
- California State Species of Concern as defined by the CNDDB (CDFW, 2015a)
- California State Fully Protected Species (CDFW, 2015b)
- State Special Animal as defined by the CNDDB (CDFW, 2015a)

Sensitive and special-status species from the regional lists with habitat(s) and/or known distribution within the 1-mile survey area for MREC were evaluated for potential impacts from construction and operation, and the results of the evaluation are discussed below. Special-status species from the regional lists with habitats or known distribution that do not occur within the project area were not evaluated beyond the tables in Appendix 5.2A.

5.2.1.5 Biological Surveys

Biological resources evaluated for MREC impacts included plant communities, wildlife habitat, wetlands, and special-status species within the temporary and permanent MREC site impact locations. Information obtained during the literature review and field reconnaissance surveys were used to determine which special-status species might have the potential to occur within the MREC site. Information on species status, habitat preferences, geographic distribution, elevation range, and known locations near the MREC site was reviewed prior to the field surveys.

Habitat and plant community assessments were conducted within a 1-mile radius of the MREC and within 1,000 feet of the proposed generator tie-line tower footings and proposed pipeline routes where access was permitted. In this section, these areas are referred to collectively as the MREC survey area. Plant community and wildlife habitat assessments were conducted within the survey area to determine if sensitive habitats occur within or near the MREC site, generator tie-line towers, or pipeline routes.

The MREC survey area was accessed from existing roads by vehicle and/or on foot. Habitat conditions within the MREC survey area were assessed, and a preliminary classification of the vegetation and land cover types was developed. All field surveys were aided by aerial images. Photographs were also taken to document biological resources within the MREC survey area.

The regional special-status species lists described in Appendix 5.2A were evaluated against conditions within the MREC survey area to determine the likelihood of special-status species occurrence in the area. The potential for special-status species to occur within the MREC survey area was assessed by researching special-status species with potential to be found within the MREC region, compiling information on their conservation status, distribution, habitat characteristics, and known presence in the project region, including nearest known locations. A species was determined to have potential to

occur within the MREC survey area if its known or expected geographic range includes the MREC vicinity and if suitable habitat for the species was observed or had potential to occur within the MREC survey area.

5.2.1.6 Land Cover Types and Vegetation Communities

Land cover types and vegetation communities identified within a 1-mile radius of the MREC are shown in Figure 5.2-6. As discussed previously, habitat and plant community surveys were conducted within the MREC survey area, including the MREC site. The following sections discuss land cover types and vegetation communities within the MREC survey area.

Urban

Land developed for urban and suburban uses, including residential, commercial and industrial uses, collectively represents the smallest land use category in the survey area. Although the MREC is located in close proximity to a correctional facility, and in a small commercial and industrial area, the majority of urban land use is located several miles southwest and northeast of the MREC site. These developed areas around the facility may provide habitat for birds protected under the Migratory Bird Treaty Act (MBTA), such as house finch (*Haemorhous mexicanus*), mourning dove (*Zenaida macroura*), and northern mockingbird (*Mimus polyglottos*), among other avian and terrestrial species.

Agriculture

The primary land use in the vicinity of the MREC is agriculture. The majority of land crossed by the 230-kV generator tieline, the natural gas pipeline, and the recycled process water pipeline all route through, or are adjacent to, agricultural land in the form of vegetable crops and citrus orchards. These areas may provide nesting habitat for birds protected under the MBTA, such as burrowing owl (*Athene cunicularia*; USFWS Birds of Conservation Concern, CDFW SSC), horned lark (*Eremophila alpestris*), killdeer (*Charadrius vociferus*), red-tailed hawk (*Buteo jamaicensis*), and white-tailed kite (*Elanus leucurus*; CDFW FP), among other avian species. Of the five special-status species listed in the CNDDB query, a dead American badger (*Taxidea taxus*; CDFW SSC) was observed within 1 mile of the MREC site, on SR-126 in 2009 (Figure 5.2-5) (CDFW, 2015a).

Open Space

A large portion of the western end of the generator tie-line is routed through open space. These areas are vegetated primarily with Coastal sage scrub and have the potential to support terrestrial species and avian species. Four of the five special-status species that have been documented within 1 mile of the MREC are not expected to occur within this land cover type/vegetation community. Unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*; FE, SE, CDFW FP), steelhead, and south coast garter snake (*Thamnophis sirtalis* ssp.; CDFW SSC) are strongly associated with perennial water and riparian habitat; therefore, these species are not expected to occur within the Coastal sage scrub. A transient occurrence of Least Bell's vireo (*Vireo bellii pusillus*) is not expected because this species occurs in riparian habitats (CDFW, 2015a). There is the potential for American badger (*Taxidea taxus*) to occur within the land cover type/vegetation community (CDFW, 2015a).

Riparian

There are several drainages and riparian corridors within the survey area and the Santa Clara River is located approximately 0.45 miles south the MREC site. As previously noted, the Santa Clara River is designated critical habitat for the southwestern willow flycatcher and steelhead. In addition, Least Bell's vireo has been documented within 1 mile of MREC. Some of the riparian habitats within the survey area have been modified by agricultural practices, while other drainages have relatively undisturbed riparian habitat. These areas may provide nesting habitat for birds protected under the MBTA and have the potential to support special-status species.

MREC Facility and Temporary Construction Laydown Area

The MREC area, including the MREC facility and laydown area, is located at 1025 Mission Rock Road in unincorporated Ventura County, west of the city of Santa Paula, California. The proposed location of the MREC facility is presently used by Minn-Cal Enterprises for recreational vehicle and boat storage yard on a 9.79-acre site. The entire site has been paved and there is no natural habitat within the MREC facility, only landscaping vegetation. The northern and eastern boundaries of the MREC facility are bordered by commercial and agricultural land uses. There are a row of mature eucalyptus (*Eucalyptus* ssp.) trees adjacent to the western side of the MREC facility. Adjacent to the southern boundary of the MREC facility, is a NWI designated freshwater forested/shrub wetland (PSSC) and freshwater pond (PUBHh) (Figure 5.2-2) (USFWS, 2015a). According to NWI (USFWS, 2015a), the freshwater forested/shrub wetland is coded as PSSC, which is a palustrine system, dominated by wood vegetation (> 20 feet tall) that is seasonally flooded. The NWI database has also mapped a portion of the wetland as freshwater pond as PUBHh, which corresponds to a palustrine system, with an unconsolidated bottom, permanently flooded, and has been diked/impounded (USFWS. 2015a). According to the NWI (USFWS, 2015), wetlands that have been assigned a special modifier code (h in PUBHh) have been created or modified by a man-made barrier or dam which obstructs the inflow or outflow of water.

The proposed laydown area is located north of the MREC, and is also located in a previously developed lot lacking in any vegetation, and the site is surrounded by commercial and agricultural land uses.

5.2.1.7 Generator Tie-Line

MREC will be interconnected with the regional electrical grid by a new, approximately 6.6-mile-long, single-circuit, three-phase, 230-kV generator tie-line. The proposed 230-kV line runs west from the MREC site through agricultural areas, turning northwest, crossing the Santa Clara River Valley and entering low hills to the north, and will terminate at the SCE Santa Clara Substation. The interconnecting 230-kV transmission circuit will consist of a single-circuit configuration, supported by 38 new towers (steel monopole structures), ranging in height from 75 feet (H-frame) to 200 feet. Footings for Towers 1-2, 4-12, 17, and 19-24 will be located within agricultural fields and/or citrus orchards (there are no towers numbered 13, 14, and 15).

Towers 3, 16, and 18 will be located within or immediately adjacent to riparian habitat (Figure 5.2-2, pages 2, 12, and 13). Tower 3 will be located adjacent to a riparian corridor. According to Figure 5.2-2 (page 12 of 13), Tower 16 will be located within a NWI freshwater forested/shrub wetland (PFOA), which corresponds to a forested, palustrine system that is temporarily flooded (USFWS, 2015a). NWI data is prepared at a nominal scale of 1:24,000 and is not particularly a small scale map that defines precise boundaries. Although Tower 16 appears to be located in a drainage feature, it actually will be located within an upland adjacent to the drainage channel. In addition, Tower 18 is also mapped as within or very near to an NWI riverine system (R4USC), which corresponds to an intermittent, riverine system that is seasonally flooded (USFWS, 2015a). As previously mentioned, NWI data is not accurate at a fine scale and Tower 18 will be located to avoid the riparian area.

Towers 26-39 will be located within coastal sage scrub habitat, which has the potential to support special-status species including American badger, burrowing owl, coast horned lizard, coastal California gnatcatcher, silvery legless lizard, and white-tailed kite.

Tower 40 will be located within the Santa Clara Substation and is not expected to support special-status species.

5.2.1.8 Natural Gas Pipeline

MREC will also require construction of an offsite natural gas pipeline. Either Mission Rock or SoCalGas will construct, own, and operate this new pipeline. The proposed 16-inch-diameter, natural gas supply pipeline for MREC will tap into the existing SoCalGas Lines 404 and 406 via a 2.4-mile-long pipeline. The

pipeline route will run southwest from the project site along Shell Road and the Southern Pacific Railroad right-of-way to the interconnection point. Construction will be open trench within a corridor of 10 feet or less. The natural gas pipeline is not expected to support special-status species.

5.2.1.9 Sensitive and Special-status Plant Species

As discussed previously, the regional special-status plant species list (Appendix 5.2A) was evaluated against observed conditions and the results of reconnaissance surveys to develop a list of plant species with potential to occur within the MREC survey area. This list includes regulatory status, habitat requirements, occurrence determination, and a rationale for the occurrence determination. Figure 5.2-4 shows the previously documented locations of special-status plant species within 10- and 1-mile radiuses, respectively, of the MREC site. Twelve special-states plants species have been documented within the regional vicinity of the MREC (CDFW, 2015a). No special-status plant species have been documented within 1 mile of the MREC.

All habitats within the MREC site and laydown area have been previously altered, and there are no natural plant communities within areas of ground disturbance for the MREC facility, laydown area, and natural gas pipeline. The process water supply pipeline alignment is located predominately within agricultural areas; however, one section (near Tower 3 of the generator tie-line) is located adjacent to a riparian corridor.

A portion of the generator tie-line line (Towers 1-12 and 16-21) is located within or adjacent to agricultural fields. The remaining towers (Towers 26-40) are located within Coastal sage scrub. Reconnaissance surveys were not conducted in this area during the appropriate floristic period in 2015. Rare plant surveys were conducted on behalf of the project in June, 2014 at 14 proposed tower sites within native vegetation in the Coastal sage scrub zone (proposed Towers 22, and 254-37). One rare plant species, narrow pod locoweed (*Astragalus filipes*), was observed near Tower 35. This species is not ranked by CNPS, but listed by Magney (2011, rev. 2013) as uncommon (6-10 extant populations known). A formal report of this survey was not prepared.

There are no recorded special-status plant species occurrences within 1 mile of the MREC. Surveys of suitable habitat areas will be performed during the appropriate floristic periods in 2016 to confirm special-status plant species absence.

5.2.1.10 Sensitive or Special-Status Wildlife Species

During field surveys, the regional special-status wildlife species list was evaluated against observed conditions to determine which species could occur or have the potential to occur in the MREC survey area. Appendix 5.2A lists sensitive and special-status wildlife species that have the potential to occur within the region (CDFW, 2015a; Figure 5.2-4; Appendix 5.2A). Appendix 5.2A lists species, their regulatory status, habitat requirements, occurrence potential determination, and a rationale for the occurrence determination within the respective area.

Special-status species within the regional vicinity that have been assessed with moderate occurrence potential and those that have been documented within 1 mile of the MREC are discussed below. Five special-status wildlife species have been documented within 1 mile of the MREC, which include American badger, least Bell's vireo, unarmored threespine stickleback, steelhead (southern California Distinct Population Segment), and south coast garter snake (CDFW, 2015a).

Migratory Bird Treaty Act

Several avian species protected under the MBTA have the potential to occur within one mile of MREC, including burrowing owl, California horned lark, coastal California gnatcatcher, least Bell's vireo, southwestern willow flycatcher, and white-tailed kite. The MBTA protects all migratory birds, including nests and eggs.

Bald and Golden Eagle Protection Act

No species protected under the Bald and Golden Eagle Protection Act have been documented within one mile or the regional vicinity of MREC.

Federal Endangered Species Act

Four species protected under the federal ESA have the potential to occur within one mile of MREC.

Coastal California Gnatcatcher. The coastal California gnatcatcher is listed as FE under the federal ESA and as a California SSC by CDFW (CDFW, 2015a). This species is localized and occurs in arid and coastal regions of southern California. The California gnatcatcher occurs in or near sage scrub habitat with characteristic species of California sagebrush, various species of sage, California buckwheat, lemonade berry (*Rhus integrifolia*), and prickly pear (*Optunia* spp.). Gnatcatchers generally tend to prefer open stands of sage scrub, occurring in higher numbers in scrub habitat with an open canopy, and in low numbers or absent in dense, tall scrub with a closed overstory canopy. However, gnatcatchers have also been detected utilizing non-sage scrub habitats for foraging during drought (USFWS, 2007). The nesting season is generally late February to August. This species has the potential to occur within the vicinity of the northwestern portion of the generator tie-line corridor.

Least Bell's Vireo. The least Bell's vireo is a federally and state-listed endangered species (CDFW, 2015a). The least Bell's vireo nests and forages almost exclusively in lowland riparian woodland habitats (Garrett and Dunn, 1981; Franzreb, 1989). It is typically associated with willow, cottonwood, mule fat, or other riparian plant species, and often in areas with high structural diversity, including overstory trees and understory saplings and shrubs. Because willow (Salix spp.) and mule fat are typically the most abundant species in vireo habitat, these species appear to be most commonly selected for nesting (Franzreb, 1989). The nesting season for least Bell's vireo is generally between April 10 to July 31, and the entire breeding season lasts up to August 31 (USFWS, 1986, 1992). The vireo is now a rare and local summer resident of southern California's lowland riparian woodlands. This species has the potential to occur within the riparian habitats in the vicinity of MREC.

Southwestern Willow Flycatcher. The southwestern willow flycatcher is listed as an FE and SE species (CDFW, 2015a). This species breeds in relatively dense riparian tree and shrub communities associated with rivers, swamps, and other wetlands, including lakes (e.g., reservoirs) (USFWS, 2002). The species generally requires extensive stands of willow scrub, with some riparian overstory present. This species arrives on breeding grounds in May and June and departs in August to mid-September (USFWS, 2002. It historically bred in lowland riparian habitat throughout Southern California, but it has been extirpated from most regions. This species has the potential to occur within the riparian habitats in the vicinity of MREC.

Southern Steelhead Trout. The southern steelhead trout is listed as a federally endangered species under the federal ESA and a California SSC by CDFW (CDFW, 2015a). The historical range of this species in North America includes Pacific Coast streams from Alaska, south to northern Baja California (Bernstein and Montgomery, 2008). This species would not occur at the MREC site due to lack of aquatic habitat, but does occur in the Santa Clara River (CDFW, 2015a).

Unarmored Threespine Stickleback. The unarmored threespine stickleback is listed as federally and state endangered and is FP by CDFW (CDFW, 2015a). This species once occurred throughout the Los Angeles, San Gabriel, and Santa Ana River systems (Culver and Hubbs, 1917). The unarmored threespine stickleback is a small, scaleless, freshwater fish that requires slow-moving and clean, clear waters of streams and rivers. This species forages on small aquatic organisms, primarily insects, crustaceans, and algae (USFWS, 2009). According to USFWS (2009), this species reproduces throughout the year with less breeding activity during October through January. The male builds a nest with fine plant debris and algal strands (USFWS, 2009). This species would not occur at MREC due to lack of aquatic habitat.

California Endangered Species Act

Two bird and one fish species protected under the CESA have the potential to occur in the project region; no state-listed plants are expected to occur at MREC. Least Bell's vireo, southwestern willow flycatcher, and the unarmored threespine stickleback are each listed by the State of California as endangered. These species are listed as endangered under the federal ESA and are discussed above.

State Fully Protected Species

Two wildlife species with potential to occur in the region are designated as FP under the California Fish and Game Code Sections 3511, 4700, 5050 and 5515, which include white-tailed kite and unarmored threespine stickleback. White-tailed kite has the potential to occur within the vicinity of MREC. The unarmored threespine stickleback is listed as endangered under the federal ESA and was previously discussed.

White-tailed kite. The white-tailed kite is a state FP species. Additionally, it is protected under the MBTA and several California Department of Fish and Game (CDFG) codes including 3503, 3503.5, and 3513. This species is a common to uncommon, apparently non-migratory, year-long resident in coastal and valley lowlands. It is rarely found away from agricultural areas, inhabiting herbaceous and open areas throughout cismontane California (CDFW, 2015a). White-tailed kites have extended their range and increased in number in recent decades (Polite, 2005).

The nearest white-tailed kite occurrence reported in the CNDDB was in 2001 near the Santa Clara River, approximately 0.7 mile northwest of mouth of Loftus Canyon (CDFW, 2015a). Although white-tailed kit was not observed during field surveys, the MREC site contains suitable white-tailed kite nesting and foraging habitat.

State Species of Special Concern

Seven state SSC have potential to occur in the regional vicinity, and two SSC have been documented within 1 mile of the MREC (CDFW, 2015a). There are two avian SSC that are also protected by the MBTA, these species are burrowing owl and coastal California gnatcatcher. One amphibian species (western spadefoot [*Spea hammondii*; CDFW SSC]), one fish (southern steelhead trout), four reptiles (coast horned lizard [*Phrynosoma blainvillii*; CDFW SSC], coastal whiptail [*Aspidoscelis tigris stejnegeri*; CDFW SSC], and silvery legless lizard [*Anniella pulchra*; CDFW SSC], and south coast garter snake [*Thamnophis sirtalis* ssp.; CDFW SSC]), and one mammals (American badger [*Taxidea taxus*; CDFW SSC]) have potential to occur at the MREC site. American badger, burrowing owl, coast horned lizard, coastal whiptail, silvery legless lizard, south coast garter snake, and western spadefoot are discussed below.

American Badger

The American badger is recognized as a state SSC. This species is an uncommon, permanent resident throughout the majority of the state and occurs in drier, open stages of shrub, forest, and herbaceous habitats (Ahlborn, 1990). Suitable habitat for this species also contains friable soils for burrowing and will reuse old burrows. This species was documented on SR-126 at Edwards Ranch Road in 2009, which is within one mile of MREC (CDFW, 2015a). Some habitat for this species occurs within the vicinity of MREC, and it is considered to have low to moderate occurrence potential.

Burrowing Owl

The western burrowing owl is a state SSC. Additionally, it is protected under the MBTA and several CDFG codes including 3503, 3503.5, and 3513. This species is widespread throughout the western United States, but has declined because of habitat modification, rodenticide control of prey, and introduced nest predators. This species is known to establish nests within abandoned burrows from ground squirrels and other wildlife. This species is diurnal, usually non-migratory in this portion of its range. It excavates nests in the ground, often enlarging burrows of ground squirrels. It is found in low densities in

desert habitats, but can occur in much higher densities near agricultural lands, where rodent and insect prey is more abundant.

The nearest CNDDB documented occurrence was in 2007 in the vicinity of Fillmore (CDFW, 2015a). No burrowing owls or burrows were observed during field surveys conducted in the MREC project; however, the site provides suitable foraging habitat.

Coast Horned Lizard

The coast horned lizard is recognized as a state SSC. This species is restricted to southwest California and northwest Baja California, where it occupies coastal sage scrub and chaparral and other open habitats, including sandy washes burrowing (Hollingsworth and Beanman). The San Diego horned lizard can be found in a variety of habitats from sage scrub to coniferous and broadleaf woodlands; however, it prefers areas with friable, rocky, or shallow sandy soils with open scrub for sunning and burrowing (Hollingsworth and Beanman). Its preferred food is harvester ants. This species has been documented within the vicinity of Fillmore in 2009 (CDFW, 2015a). Some habitat for this species occurs within the vicinity of MREC, and it is considered to have low to moderate occurrence potential.

Coastal Whiptail

The coastal whiptail is recognized as a state SSC. This species occurs in coastal southern California from Ventura County and south into Baja California (California Herps, 2015). It is commonly found utilizing open rocky areas in a variety of habitat types such as coastal sage scrub and grasslands (California Herps, 2015a). Prey items of the western whiptail include termites, scorpions, solfugids, cockroaches, ant lion larvae, and various insect eggs, larvae, and pupae (Anderson, 1993). This species has been documented within Sexton Canyon in 2008 (CDFW, 2015a). Some habitat for this species occurs within the vicinity of MREC, and it is considered to have low to moderate occurrence potential.

Silvery Legless Lizard

The silvery legless lizard is recognized as a state SSC. This species commonly occurs in moist, sandy, and loose loamy soils under sparse vegetation of beaches, chaparral, pine-oak woodland, sycamores, cottonwoods, or oaks that grow on stream terraces, including dry washes (Morey, 2000a). They are known to prey upon insect larvae, small adult insects, and spiders (Morey, 2000a and references therein). This species has been documented within McGrath State Park in 2004 (CDFW, 2015a). Some habitat for this species occurs within the vicinity of MREC, and it is considered to have low to moderate occurrence potential.

South Coast Garter Snake

The south coast garter snake is recognized as a state SSC. This species has the largest distribution compared to other garter snakes, ranging from the east coast to west coast and north into Canada (California Herps, 2015b). According to California Herps (2015b), south coast garter snakes occurs in forests, mixed woodlands, grasslands, chaparral, farmlands, ponds, marshes, and streams. This species was documented at the Santa Clara River in 2008 (CDFW, 2015a). Some habitat for this species occurs within the vicinity of MREC, and it is considered to have low to moderate occurrence potential.

Western Spadefoot

The western spadefoot is recognized as a state SSC. The western spadefoot range within the coastal region is Point Conception, Santa Barbara County to the Mexican border (Morey, 2000b). According to Morey (2000b), this species occurs in grasslands, valley-foothill hardwood woodlands, orchards, and vineyard habitats; however, grasslands with shallow temporary pools are the preferred habitat. This species has been documented in Happy Camp Canyon Regional Park in 2004 (CDFW, 2105a). Some habitat for this species occurs within the vicinity of the MREC, and it is considered to have low to moderate occurrence potential.

State Special Animals

State special species are considered to be sensitive but do not have regulatory protection. No special animals are expected to occur within the vicinity of the MREC.

5.2.2 Environmental Analysis

Potential direct and indirect impacts to biological resources were evaluated to determine the permanent and temporary effects of construction and operation of the proposed MREC project. Results from the field surveys, habitat evaluations, and aerial imagery interpretation were evaluated to address the potential for presence of sensitive biological resources in the MREC project area. There are no property or project features that would support special-status plants; however, the site currently provides potentially suitable habitat for 13 special-status wildlife species. Potential minor and less-than-significant impacts are limited to temporary noise disturbance during construction and possible avian collisions with the stacks and other structures.

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. These impact categories are defined below and are applied as part of the environmental analysis.

- **Direct:** The CEQA defines direct impacts as those impacts 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. The permanent and temporary impacts discussed below are examples of direct impacts associated with the MREC.
- **Indirect:** CEQA defines indirect impacts as those caused by the project but that occur later in time or are farther removed in distance, though 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 permanent road on an area containing biological resources. Construction of the MREC facility will result in a permanent loss of vineyard and grassland habitat.
- **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. The temporary construction laydown area, area of vegetation disturbance around the generator tie-line tower footings, and noise from construction activities represent temporary impacts associated with the MREC project.

Potential direct and indirect impacts to biological resources were evaluated to determine the permanent and temporary effects of project construction, operation, maintenance, and decommissioning of the project and supporting facilities.

5.2.2.1 Significance Criteria

The MREC would result in a significant impact on the environment if it would:

- 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 CWA 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 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

Construction of the MREC is expected to begin in November 2018, beginning with site preparation, and will conclude in August 2020, for a total duration of approximately 18 months. Initial clearing of the construction laydown (2.89 acres) and MREC site (9.79 acres) will take place during the first week of construction. Approximately 2.89 acres associated with the paved and/or graveled portion of the temporary construction laydown area will be temporarily disturbed (Table 5.2-3).

Table 5.2-3 Summary of Unpaved MREC Permanent and Temporary Disturbance Areas (in acres)

Project Feature	Habitat Type	Permanent	Temporary	Total
MREC site	Urban/developed	9.79	0	9.79
Construction laydown area	Urban/developed	0	2.89	2.89
230-kV generator tie-line	Agriculture	0.040	0.035	0.393
	Coastal sage scrub	0.022	0.199	0.220
	Riparian	0.005	0.211	0.216
	Urban/developed	0.004	0.032	0.036
Natural gas pipeline	Agriculture	0	11.3	11.3
	Riparian	0	0.280	0.280
	Urban/developed	0	0.012	0.012
Process water supply line	Agriculture	0	8.05	8.05
	Riparian	0	0.111	0.111
	Urban/developed	0	0.129	0.129
Total		**9.86**	**23.2**	**33.4**

MREC Facility

Activities related to the construction of the MREC facility will require site preparation, including clearing of landscaping vegetation and grading of that portion of the 9.79-acre parcel. The MREC site is an entirely paved, commercial and recreational vehicle storage facility does not provide habitat for sensitive and special-status species listed in Appendix 5.2A.There is a portion of the southwestern corner of the site that has standing water primarily from precipitation and vehicle washing within the storage facility; initial site grading will implement an approved site drainage design to manage onsite surface flow. Construction of the MREC facility may also result in temporary noise impacts to wildlife species within the vicinity. However, no noise sensitive species have been identified within the MREC facility and so these impacts are not expected to be significant.

Construction Laydown Area

Construction of the MREC will require a temporary construction laydown (2.89 acres) area immediately adjacent to the MREC site for equipment staging, material storage, worker parking, and temporary administrative buildings. The laydown area has been developed and does not support special-status species. Use of the laydown area may also result in temporary noise impacts to wildlife species within the vicinity. However, no noise sensitive species have been identified within the laydown area and these impacts are not expected to be significant.

230-kV Generator Tie-Line

Activities related to the construction of the 230-kV generator tie-line will require site preparation. Each tower will require boring to provide subsurface support for the transmission conductor support towers and installation concrete foundations at tower locations. Constructing the transmission line will also involve staging conductor pulling and tensioning equipment at each end of the line. The pull and tensioning trucks will be staged inside of areas adjacent to already disturbed utility right-of-way.

Thirteen of the 37 230-kV transmission towers are located in areas of coastal sage scrub that have the potential to provide suitable nesting and/or foraging habitat for the special-status species listed in Appendix 5.2A. Site preparation and construction of the 230-kV generator tie-line, therefore, will result in less than 0.357-acre of temporary impacts to sensitive and special-status listed in Appendix 5.2A. An additional three towers are located within and/or adjacent to riparian habitat (0.211 acre). Site preparation and construction of the 230-kV generator tie-line, therefore, will result in less than 1 acre of temporary impacts to sensitive and special-status listed in Appendix 5.2A.

To avoid permanent impacts to less than 1 acre of special-status species habitat, the 230-kV generator tie-line temporary impact area will be recontoured and restored to existing conditions following project construction to provide suitable nesting and foraging habitat for sensitive and special-status species.

With the implementation of the mitigation measures detailed in Section 5.2.4, any potentially significant impacts to biological resources resulting from construction of the 230-kV generator tie-line will be reduced to less-than-significant levels.

Construction Impacts to Special-status Plant Species

Sensitive or special-status plants are not expected to occur within the MREC site or along the linear features; therefore, the project is not expected to result in significant impacts to sensitive or special-status plant species.

Construction Impacts to Special-status Wildlife Species

Temporary and permanent impacts to special-status wildlife could occur from vegetation removal or crushing (resulting in a loss of nesting and foraging habitat), trenching, entombment of animals in dens or burrows, collisions with vehicles, disturbance from noise, and further fragmentation of habitat. These impacts have the potential to be significant in the absence of mitigation.

To avoid significant impacts the following measures will be implemented: worker environmental awareness program (WEAP), pre-construction and clearance surveys, avoidance and minimization measures proposed by Mission Rock, and other measures discussed in Section 5.2.4. No significant, unmitigated impacts to special-status wildlife are expected to result from the construction and operation of the MREC. Effects on species from construction and operation of the MREC are discussed in the following sections.

Foraging Habitat for Raptors and Bats. The MREC site provides potential suitable foraging habitat for sensitive and special-status species. Foraging birds are protected under various federal and state codes, including the MBTA and CDFG codes 3503, 3503.5, and 3513. Burrowing owl is a CDFW SSC and white-tailed kite is a CDFW FP species that have the potential to occur within the vicinity of MREC. Any potential impact to foraging habitat for these species resulting from the proposed project must be mitigated to reduce those impacts to less-than-significant levels, as applicable.

The MREC will not result in the permanent loss of foraging habitat of foraging habitat for western burrowing owl, raptors and bats. It is expected that 20.5 acres of foraging habitat for western burrowing owl, raptors and bats will be temporarily disturbed. Potential impacts from construction activities on western burrowing owl and foraging raptors and bats could primarily occur from site clearance and grading. Additional construction-related impacts may occur due to noise and collisions with vehicles and equipment. Impacts of the aforementioned actions and the potential for loss of special-status species would be significant in the absence of mitigation. With the implementation of mitigation measures detailed in Section 5.2.4, any potentially significant impacts to western burrowing owl, and foraging raptors and bats will be reduced to less-than-significant levels.

Nesting Birds. The MREC site provides potential nesting habitat for several bird species. Agricultural fields may provide nesting habitat for species such as burrowing owl and killdeer. Riparian habitats within/or adjacent to Towers 3, 16, and 18 may provide suitable habitat for least Bell's vireo, southwestern willow flycatcher, white-tailed kite, and other avian species. The coastal sage scrub habitat that occur within the northwestern portion of the generator tie-line may provide suitable nesting habitat for coastal California gnatcatcher and other avian species.

Nearly all birds with potential to nest in the MREC survey area are protected under the MBTA and CDFG codes. Additionally, species designated as state SSC, including burrowing owl are protected under CCR, Title 14, Sections 670.2 and 670.5. Impacts to burrowing owl nesting habitat could occur if western burrowing owls move into the MREC site during the nesting season (February 1 through September 30), prior to the start of construction, or during construction. Any potential impact to nesting or roosting habitat for these species resulting from the proposed project must be mitigated to reduce those impacts to less-than-significant levels.

The MREC will result in the permanent and temporary loss of nesting habitat for some migratory and resident birds. Potential impacts from construction activities on nesting birds could primarily occur from site clearance and grading. These impacts would be significant in the absence of mitigation. Initial clearance and grading of the construction laydown and MREC facility should be conducted prior to the February 1 start of the nesting season, and be preceded by surveys to locate potential active nests. Every attempt will be made to remove nesting substrate (tall grasses and shrubs) from the construction sites before the nesting season begins. If construction begins during the nesting season, surveys by a qualified biologist will be required to locate, protect, and monitor active nests until nestlings fledge. Mitigation measures designed to minimize potential impacts to less-than-significant levels are detailed in Section 5.2.4.

Noise and activity associated with MREC construction could disturb nesting birds, causing them to avoid the construction area. Sensitive bird species could abandon nesting attempts if disturbed during the breeding season during construction. This could be a significant impact, without mitigation. Monitoring of nesting activities during construction activity may be necessary to determine if nests could be

significantly disturbed. With the implementation of the mitigation measures detailed in Section 5.2.4, any potentially significant impacts to nesting birds will be reduced to less-than-significant levels.

Impacts to Wildlife Corridors

The MREC is within the Pacific Flyway, a common route of bird migration that extends along the west coast of North America that spans an area from the pelagic regions of the Eastern Pacific to the Great Basin. While individual migrating birds may be adversely impacted by the MREC, the MREC will not significantly impede migration along the flyway.

Terrestrial wildlife habitat in the MREC area has been fragmented by previous development to the west, south, and east of the MREC site; therefore, no terrestrial wildlife corridors are currently present in the project area. The Santa Clara River south of the MREC site represents an aquatic wildlife corridor that will not be impacted by the MREC. Significant impacts to wildlife corridors are not expected to occur.

Wetlands and Waters of the United States

An NWI-designated wetland is located immediately adjacent to the MREC site; however, no direct impacts are expected. MREC construction will not cause loss or fill of any wetlands. MREC implementation has the potential to indirectly affect the NWI-designated wetland because water will be applied to the MREC site and laydown area for dust control during construction, and erosion and sediment washed into surface waters could potentially impact this feature. The MREC stormwater design will be governed by best stormwater management practices; therefore, no significant adverse effects are anticipated.

As discussed further in Section 5.15, Water Resources, the Applicant will prepare an erosion and sediment control plan that specifies best management practices (BMPs) to be implemented during all project activities to avoid sediment runoff and erosion that would cause degradation to waters of the United States. With the implementation of these mitigation measures and BMPs, impacts to wetlands and waters of the United States will be less than significant.

5.2.2.3 Potential Impacts of Operation

During operation, the MREC will produce combustion turbine emissions, water discharge, noise, and light. In addition, the air-cooled condenser and 230-kV transmission line could pose a collision and electrical hazard to birds. The potential for each of these products of MREC operation to adversely impact sensitive biological resources at the MREC site is discussed in the following sections.

Combustion Turbine Emissions

Air emissions from the combustion turbine exhaust stacks include NO_x and PM10. A deposition analysis was performed for nitrogen and particulates based on the Tier 1 modeling procedures contained in the guidance document *"Near Field Nitrogen Deposition Modeling Guidance,"* November 2013, USDA Forest Service, USFWS, and National Park Service. Rather than convert the annual concentrations for the MREC operational impacts presented elsewhere, AERMOD was re-executed for the annual average case with deposition velocities of 0.05 and 0.02 meters/second (m/s) for nitrogen and particulates, respectively. All other model options and other settings were identical to those used for the refined analysis of annual impacts. The regular receptor grids were modeled to determine the regional maximum deposition rate, while the annual impacts were averaged for all the regular receptor grids to obtain a regional average deposition rate. This average regional deposition rate for the rectangular area within 10 kilometers (km) of the project site is extremely conservative in that receptor spacing is much smaller near the facility, resulting in more receptors in this area where MREC impacts are greater.

The McGrath State Beach/Park, which is located outside the boundaries of the regular receptor grids, additional coarse grid receptors with 500-meter spacing were modeled for this area with receptor elevations and hill slope factors of 20 feet. Deposition rates were averaged across all 5 years of

meteorological data modeled. Turbine NO_2 and ammonia annual emissions (11251.1 and 8985.4 lbs/year/turbine, respectively) were converted to nitrogen based on the molecular weight ratios (14/46 and 14/17, respectively) and added together for the modeled nitrogen emission rate (0.156 g/s/turbine). Similarly, firepump NO_2 emissions of 1.016E-3 g/s were converted by the molecular weight ratio to get nitrogen emissions of 3.091E-4 g/s. The particulate emissions of 0.072 g/s/turbine for the turbines and 5.441E-5 g/s for the firepump, from the facility refined modeling analyses, were modeled for the deposition analysis.

NO_x gases (NO, NO_2) convert to NHO_3 and ultimately nitrate particulates in a form that is suitable for uptake by most plants. The effect of this nitrogen could be to promote plant growth that could potentially encourage nonnative plant species at the expense of native species. There are no sensitive habitats that may harbor sensitive plant species susceptible to the effects of nitrogen deposition area within the regional vicinity of the MREC site. The MREC's maximum nitrogen deposition rate would be 2.836 kilograms per hectare per year (kg/ha/yr) at the maximum impacted receptor. The average depositional rate would be less than 0.124 kg/ha/yr across the entire modeling domain, which is the rectangular area within 10 km of the project. The maximum level of nitrogen deposition from the MREC in the McGrath State Beach/Park area are estimated at 0.008 kg/ha/yr, which is far below levels necessary to cause adverse effects.

A threshold at which harmful effects from nitrogen deposition on plant communities has not been firmly established. However, a value of 5 kg/ha/yr is often used for comparing nitrogen deposition among plant communities. Research conducted in the South San Francisco Bay Area indicates that intensified annual grass invasions can occur in areas with nitrogen deposition levels of 11-20 kg/ha/yr, with limited invasions at levels of 4–5 kg/ha/yr (Weiss 2006a; Weiss 2007, as cited in CEC 2007). As shown above, the maximum nitrogen deposition rate is less than the threshold value of 5 kg/ha/yr, while average MREC values in the immediate local project vicinity are less than 2.5 percent of the 5 kg/ha/yr threshold value. Furthermore, the level of nitrogen deposition from the MREC on plant-available nitrogen will actually be less than the calculated amount because the deposition will be distributed in small amounts during the year and not all of the nitrogen added to the soil during each deposition event is available for plant use because of losses associated with soil processes. Therefore, it is unlikely that there would be significant impacts to biological resources from nitrogen deposition.

Particulate emissions will be controlled by inlet air filtration and use of natural gas. The deposition of airborne particulates (PM10) can affect vegetation through either physical or chemical mechanisms. Physical mechanisms include the blocking of stomata so that normal gas exchange is impaired, as well as potential effects on leaf adsorption and reflectance of solar radiation. Information on physical effects is scarce, presumably in part because such effects are slight or not obvious except under extreme situations (Lodge et al., 1981). Studies performed by Lerman and Darley (1975) found that particulate deposition rates of 365 grams per square meter per year ($g/m^2/yr$) caused damage to fir trees, but rates of 274 $g/m^2/yr$ and 400 to 600 $g/m^2/yr$ did not damage vegetation at other sites.

The maximum annual PM10 deposition rate for the MREC would be 0.058 $g/m^2/yr$, averaging 0.002 $g/m^2/yr$ for the area within 10 km of the MREC. At the McGrath State Beach/Park, the maximum annual deposition rate would be 0.0003 $g/m^2/yr$. All of these impacts are several orders of magnitude below that which is expected to result in injury to vegetation (i.e., 365 $g/m^2/year$). The addition of the maximum predicted annual particulate deposition rate for the MREC to the maximum background concentration of 24.3 $\mu g/m^3$, measured at the El Rio monitoring station, yields a total estimated particulate deposition rate of 15.4 $g/m^2/yr$. This total is still more than one order of magnitude less than levels expected to result in plant injury.

Stormwater and Process Water Discharge

The primary wastewater collection system will collect stormwater runoff from all of the plant equipment areas and route it to sumps and the onsite oil/water separator before discharging. Mission Rock will

prepare an SWPP that specifies BMPs to be implemented during all project activities to avoid stormwater discharges that would cause water quality degradation. Any stormwater that is discharged into surface waters would be potentially harmful to water quality downstream.

The secondary wastewater collection system will collect sanitary wastewater from sinks, toilets, showers, and other sanitary facilities, and route it to an onsite septic tank for either discharge through an onsite leach field or removal by a licensed waste hauler such as SCWW for offsite treatment. Since MREC will draw process water from a water supply system and then discharge a small amount of wastewater into the sanitary sewer system, there will be no mechanism for entrapment of aquatic species or discharging water to affect aquatic resources during operations. Therefore, significant adverse effects are not anticipated.

Noise and Light from Plant Operations

The MREC site is designated in the General Industrial (M3) zoning district, and is adjacent to industrial and commercial land uses, agricultural field and orchards, active transportation corridors, and open space. These existing conditions result in several sources of lighting and noise emissions. Operation of the MREC will produce some noise, as described in Section 5.7, Noise.

Noise from site preparation, construction, operations, and maintenance activities could temporarily discourage wildlife from foraging and nesting immediately adjacent to the project area. However, there is no suitable habitat for special-status species within the MREC and laydown area. Many bird species rely on vocalization during the breeding season to attract a mate within their territory, and noise levels from certain construction, operations, and demolition activities could reduce the reproductive success of nesting birds. Construction and operation activity noise levels are provided in Section 5.7.

Noise impacts to wildlife are difficult to measure; however, results of several studies summarized by Golden, et al. (1980) indicate no impacts from aircraft noise at 75 decibel A-weighted scale (dBA) for several wildlife species. Western burrowing owls, for example, have been noted to reside within 100 to 200 feet of an active railway with measured noise levels of approximately 90 dBA at a distance of 50 feet from the railway (Golden, 1980). Although a 60 dBA threshold is often used for avian species, this threshold does not take into account several things. Although birds primarily communicate with one another through vocalizations and auditory cues, some species will adjust their vocalizations to prevent masking by low frequency noise in an urban setting (Slabbekoorn and Peet, 2003). In addition, waterfowl behaviors are associated with shoreline development in urban habitats and interspecific variation exists in how species respond to urbanization (Donaldson et al., 2007 and references therein). Many species habituate to urban noise, while other species will move out of an area or prevent suitable nesting habitat from being used. High levels of background or intermittent noise may potentially interfere with reproduction, warning and distress calls, feeding behavior, protection of offspring, which can results in energy loss and physiological stress. However, there are differences among species with how they respond to different levels of ambient noise and noise disturbances.

A typical noise threshold of 60 dBA is broadly applied to many bird species in various environmental settings. This commonly used threshold was developed in a laboratory setting that specifically analyzed the effects of highway noise on vocal communications of avian species (see Dooling and Popper, 2007 for a critique). Dooling and Popper (2007) state that the 60 dBA threshold is outdated and higher levels may be readily acceptable in noisy urban areas where ambient noise levels can reach 70 dBA. Furthermore, the 60 dBA noise guideline does not consider strategies that a bird may use in its natural environment, such as scanning, changing their height or position in a landscape, increasing and/or adjusting the timing of vocalization. Utilizing any one of these strategies can enhance communication in urban environments by 10 to 15 decibels (dB), which equals over a hundred meters in transmission distance of the bird's song or call (Dooling and Popper, 2007). Furthermore Dooling and Popper (2007) explain that the 60 dBA threshold is "quite conservative since it is based on continuous noise in a controlled, artificial (i.e., laboratory) setting – a situation that is unlikely to occur in the real world" and

conclude that higher sound levels may be readily accommodated. In addition, birds do not hear as well as humans at low frequencies. This is an important aspect of avian hearing that needs to be understood. Since construction noise typically is dominant at low frequencies, the noise restrictions/guidelines for humans work well as thresholds for avian species. Therefore, any impacts from noise are expected to be less-than-significant.

Bright night lighting could disturb wildlife that occurs adjacent to the MREC site (e.g., nesting birds, foraging mammals, and flying insects). Night lighting is also suspected to attract migratory birds to areas and, if the lights are on tall towers or structures, collisions could occur. Additionally, certain lighting may attract insects which in turn may attract birds such as nighthawks and bats to forage. The MREC lighting will meet the requirements for security, O&M, and safety, and will be shielded and pointed downward and away from the habitat outside of the MREC area to minimize impacts to nesting birds and other nearby wildlife, and to reduce the potential for avian and bat attraction and collision. Also, night lighting will have switches to allow them to be turned off when not in use.

Potential for Collision and Electrocution Hazard to Wildlife

The MREC site provides suitable habitat for sensitive and special-status bird and potential bat species with potential for significant impacts from collision and electrocution hazards to white-tailed kite, and other species. The MREC will include the 80-foot-high stacks at the MREC facility and a 230-kV generator tie-line to the Santa Clara substation with conductor support towers of various heights. These structures could potentially result in bird and/or bat collisions.

Most bird collisions involve nocturnal migrants flying in inclement weather and low-visibility conditions, colliding with tall, guyed television or radio transmission towers (CEC, 1995; Kerlinger, 2000). Many birds generally migrate at night and at an altitude that would avoid ground structures, except when crossing over topographic features (e.g., ridgetops) or when inclement weather forces them down closer to the ground. Low-flying individual passerines can collide with wires during daylight operation. Raptor species expected to occur in the general area, such as the white-tailed kite, could potentially collide with the stacks and transmission lines during inclement weather, and there is potential for additional special-status species to collide with elevated structures associated with the MREC.

Large raptors can be electrocuted by transmission lines when a bird's wings simultaneously contact two conductors of different phases, or a conductor and a ground. This happens most frequently when a bird attempts to perch on a structure with insufficient clearance between these elements. The presence of distribution lines represents more of a danger to raptors than transmission lines, because the spacing between elements in distribution lines is much less than that of transmission lines. This increases the chance of phase-to-phase or phase-to-ground contact because the conductors are closer together than the wingspan of many raptor species, thus allowing the bird species to contact both elements at once causing electrocution (APLIC, 2005). The proposed generator tie-line will be 230-kV with conductor spans greater than 15 feet, and will, therefore, have a reduced chance of phase-to-phase or phase-to-ground contact than the existing 60-kV transmission lines.

While increasing the potential for electrocution associated with the installation of transmission lines in the MREC area is a potential significant direct impact to raptors, the line will incorporate design measures, such as the installation of approved bird flight diverters to greatly reduce the chance of collision. The installation of transmission lines and poles will be constructed according to the most recent "raptor-friendly" guidelines (APLIC, 2005), ensuring that conductor wires are appropriately spaced to minimize the potential of raptor electrocution.

Therefore, the construction of the 230-kV generator tie-line will not significantly increase avian electrocutions, and the "raptor-friendly" design will reduce potential impacts to less-than-significant. These mitigation measures are outlined in Section 5.2.4.

Effects of Operation on Special-status Species

Impacts to Special-status Plants. There are no sensitive or special-status plants located at the MREC site or along the linear features; therefore, the project is not expected to result in significant impacts to sensitive or special-status plant species.

Impacts to Sensitive and Special-status Wildlife Species. Potential impacts to sensitive and special-status wildlife such as white-tailed kite could occur from collisions with vehicles, collision with power line conductors or towers, and disturbance from noise. These impacts have the potential to be significant.

However, with the implementation of mitigation measures proposed in Section 5.2.4, required by natural resource agencies and summarized in the CEC Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP), the MREC is not expected to result in significant impacts to sensitive and special-status wildlife species. Species-specific impacts are discussed in the following sections.

Foraging Raptors and Bats. Potential impacts from operation activities on foraging raptors and bats could primarily occur through collision and electrocution hazards. The generator tie-line could result in collision and electrocution hazards to birds and bats. Additional operation-related impacts may occur due to collisions with vehicles and equipment. Mitigation measures to reduce potentially significant impacts to less-than-significant levels are discussed in Section 5.2.4.

Nesting Birds. The MREC site provides suitable nesting habitat, primarily the electrical transmission line and other linear features, for bird species including white-tailed kite and killdeer. Potential impacts from operation activities on nesting birds could primarily occur from operational noise. Noise and activity associated with MREC operation could disturb nesting birds. Sensitive bird species could abandon nesting attempts if disturbed during the breeding season during operation. Measures to minimize potential operation related impacts to nesting birds and roosting bats to less-than-significant levels are discussed in Section 5.2.4.

Operation Phase Impacts to Wetlands and Waters of the United States

An NWI-designated wetland is immediately adjacent to the MREC site, but there will be no direct or indirect effects to this wetland as a result of MREC operation. Therefore, no mitigation measures are being proposed.

5.2.3 Cumulative Effects

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 MREC (PRC Section 21083; 14 CCR 15064[h], 15065[c], 15130, and 15355). Proposed new projects in the nearby MREC area also involve very little habitat conversion. One exception to this is The Gateway residential project, proposed for a location along the eastern boundary of Santa Paula that will involve conversion of mostly agricultural areas to residential and commercial uses, resulting in an expansion of the City of Santa Paula. This project is located approximately 5 miles from the MREC. The MREC's potential impacts to biological resources are so minor both in terms of impacts to wildlife and conversion of habitat, however, that the potential for cumulative impacts to occur as a result of MREC's impacts combining with those of The Gateway or other projects is 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. Protection and impact minimization measures for burrowing owl, coastal California gnatcatcher, least Bell's vireo, southwestern willow flycatcher and white-tailed kite are included below. A BRMIMP 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.

A site-specific WEAP, intended to educate construction workers and operators on the sensitive biological resources in the area and the measures that will be undertaken to avoid or minimize impacts to these resources, will be administered by the Designated Biologist as part of the mitigation plan. 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 construction measures to be implemented within the MREC area will be developed as part of the WEAP and will include the following:

- Provide construction monitoring by a qualified biologist to ensure compliance with the protection measures.
- Demarcate access routes and construction areas to minimize impacts to habitat and special-status species during construction and operations, as applicable.
- Conduct preconstruction and clearance surveys for special-status species within impact areas.
- Prepare standardized construction monitoring and compliance reports that analyze the effectiveness of the measures.
- Restoration of temporary disturbance areas following construction, primarily related to the transmission towers, to pre-construction conditions as determined appropriate.

5.2.4.1 Minimization Measures for Site Restoration

Minimization Measure 1 - Temporary Disturbance Areas Site Restoration Plan

With the exception of temporarily disturbed areas (i.e., the construction laydown area and 230-kV generator tie-line towers), the expected MREC lifetime is 30 years or more. Construction will result in 20.5 acres of temporarily disturbed areas, including the vegetation clearance for the 230-kV generator tie-line tower footings. These disturbed areas will be restored and revegetated after construction as described in the Site Restoration Plan to be included in the BRMIMP. Elements of the restoration plan are described below.

The MREC Site 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 if the restoration is successful
- A monitoring and maintenance program, including details on remedial measures
- A noxious weed control plan
- A description of annual reporting
- A restoration implementation and monitoring timeline and schedule of planned activities

The scope of this plan will be proportionate to the magnitude of the expected impact. All practicable measures to avoid sensitive resources (e.g., mapped special-status plant species) will be taken during construction to reduce impacts to the maximum degree possible, as applicable.

Minimization Measure 2 - MREC Closure Plan

Over the long-term, once the MREC facilities are no longer needed, the structures will be removed and the MREC area will be restored to approximate preconstruction conditions. Since rehabilitation of the

site is not to occur for more than 30 years, a draft conceptual plan will be included as part of the BRMIMP. 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 MREC facility closure will be developed by project owner and submitted to the CEC Compliance Project Manager (CPM) at least one year prior to facility closure.

The MREC 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 if 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

5.2.4.2 Minimization and Avoidance Measures for Special-status Species

The following paragraphs describe mitigation and protection measures that will be implemented during preconstruction, construction, operation, and closure activities, and will be incorporated into the BRMIMP and WEAP. These measures are expected to concurrently compensate for impacts to other sensitive species that do not have specific regulatory protections.

Minimization Measure 3 – Least Bell's Vireo and Southwestern Willow Flycatcher

The following measures are proposed for least Bell's vireo and the southwestern willow flycatcher. The objective of these measures is to avoid and minimize impacts to least Bell's vireo and southwestern willow flycatcher, and to preserve habitat that will support viable populations to the maximum extent feasible. These measures will concurrently mitigate impacts to other avian species that may possess foraging habitat at the MREC site:

- Preconstruction surveys for least Bell's vireo and southwestern willow flycatcher will be conducted prior to construction (if construction does not begin until April). Riparian vegetation within or adjacent to Towers 3, 16, and 18 will be removed to the minimal extent feasible.
- During both the construction and operation phases, a speed limit of 15 mph will be established and enforced on all onsite routes. The speed limit will reduce the potential for loss of bird species due to collisions with vehicles.

Minimization Measure 4 – Coastal California Gnatcatcher

The following measures are proposed for coastal California gnatcatcher. The objective of the measures is to avoid and minimize impacts to coastal California gnatcatcher, and to preserve habitat that will support viable populations to the maximum extent feasible. These measures will concurrently mitigate impacts to other avian species that may possess foraging habitat at the MREC site:

- Preconstruction surveys for least Bell's vireo and southwestern willow flycatcher will be conducted prior to construction (if construction does not begin until April). Coastal sage scrub vegetation will be removed to the minimal extent feasible.
- During both the construction and operation phases, a speed limit of 15 mph will be established and enforced on all onsite routes. The speed limit will reduce the potential for loss of bird species due to collisions with vehicles.

Minimization Measure 5 – White-tailed Kite

The following measures are proposed for white-tailed kite. The objective of the measures is to avoid and minimize impacts to white-tailed kite, and to preserve habitat that will support viable populations to the

maximum extent feasible. These measures will concurrently mitigate impacts to other raptors and bat species that may possess foraging habitat at the MREC site:

- Preconstruction surveys for white-tailed kite will be conducted no more than 14 days prior to the start of construction.
- To further minimize potential impacts to white-tailed kite, design features will include the following:
  - Overhead power lines appropriately spaced to minimize the potential of raptor electrocution using the latest APLIC (2005) recommended guidelines for line spacing.
  - Approved bird flight diverters installed on the new power lines. The diverters will be installed per manufacturer's specifications; replaced when damaged or deemed defective; and maintained for the full length of the transmission line for the life of the facility.
  - Shielded lighting consisting of sodium bulbs that are directed downward to reduce light pollution and potential for avian and bat attraction and collision.
- A threshold of significance for raptor/migratory bird (species protected under the MBTA and the Bald and Golden Eagle Protection Act mortality will be established. Post-mortality surveys for such species will be conducted by a qualified biologist during the first three years of MREC operation. If this threshold of significance is met or exceeded, adaptive management practices will be implemented to reduce such impact. Based on the results of these monthly post-mortality surveys, it will be determined if these surveys are to continue after the initial year.

Minimization Measure 6 – Nesting Birds and Roosting Bats

- Sites to be disturbed during the nesting season between February 1 and September 30 will be surveyed for nesting birds prior to construction. A qualified biologist will perform a preconstruction survey for nesting birds in the MREC area, including areas within 500 feet of all MREC 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 rehabilitated and released under the guidance of CDFW, as necessary, to avoid project delays due 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.

Minimization Measure 7 – Burrowing Owl

Although no western burrowing owls were observed during biological surveys, the following measures are proposed if they are found to have moved onto the site before construction begins. These measures are outlined in the CDFW Memorandum entitled *Staff Report on Burrowing Owl Mitigation* (CDFG, 1995). The objective of the measures is to avoid and minimize impacts to burrowing owls at the MREC site and preserve habitat that will support viable populations.

- A preconstruction survey of suitable habitat at the MREC site and a 150-meter (approximately 500-foot) buffer (where possible and appropriate based on habitat) will be surveyed within 30 days prior to construction to ensure no new burrowing owls have established territories. If ground-disturbing activities are delayed or suspended for more than 30 days after the preconstruction survey, the site will be resurveyed.
- Ground-disturbing actions should be carried out from September 1 to January 31 (prior to nesting season), as applicable. Since the timing of nesting activity may vary with latitude and climatic conditions, this timeframe should be adjusted accordingly.

- Occupied burrows will not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist verifies through non-invasive methods that either: the birds have not begun egg-laying and incubation; or that juveniles from the occupied burrows are foraging independently and are capable of independent survival.
- If owls must be moved away from the disturbance area, passive relocation techniques (as described below) will be used rather than trapping. Owls will be excluded from burrows in the immediate impact zone and within a 50-meter (approximately 160-foot) buffer zone by installing one-way doors in burrow entrances. One-way doors (e.g., modified dryer vents) will be left in place 48 hours to ensure owls have left the burrow before excavation. Whenever possible, burrows will be excavated using hand tools and refilled to prevent reoccupation. Sections of flexible plastic pipe will be inserted into the tunnels during excavation to maintain an escape route for any animals inside the burrow.

5.2.5 Laws, Ordinances, Regulations, and Standards

The following sections describe the LORS that apply to potential impacts on biological resources in the MREC area, and list the agencies responsible for enforcing the regulations. A summary of the LORS is provided in Table 5.2-4.

5.2.5.1 Federal LORS

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

The coastal California gnatcatcher (FT), least Bell's vireo (FE) and southwestern willow flycatcher (FE) are listed under the federal ESA. 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. Adverse impacts are defined as "take," which is prohibited except through authorization of a Section 7 or Section 10 consultation and Incidental Take Authorization. "Take" under federal definition includes "such act as may include significant habitat modification or degradation" (5 CFR §17.3). Species that are not listed are not protected by the federal ESA, even if they are candidates for listing. However, USFWS advises that a candidate species (as well as species of concern) could be elevated to listed status at any time, and therefore, applicants should regard these species with special consideration.

MBTA (16 USC 703 to 711)

This statute protects all migratory birds, including nests and eggs.

Bald and Golden Eagle Protection Act (16 USC 668)

This law specifically protects bald and golden eagles from harm or trade in parts of these species. Bald and golden eagles are not expected to occur within the vicinity of the MREC.

Table 5.2-4 Laws, Ordinances, Regulations, and Standards for Biological Resources

LORS	Requirements/Applicability	Administering Agency	AFC Section Explaining Conformance
Federal			
Federal ESA (16 USC 1531 et seq.)	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.	USFWS	The MREC is not likely to adversely affect the FE species. Informal discussions and coordination with USFWS will determine measures the MREC project will undertake to avoid any adverse effects to potential coastal California gnatcatcher, least Bell's vireo, and southwestern willow flycatcher habitat (Section 5.2.1.6).
MBTA (16 USC 703 to 711)	Protects all migratory birds, including nests and eggs.	USFWS	The MREC will include mitigation measures to reduce impacts to resident and migratory birds to a less-than-significant level. (Section 5.2.2.2).
Bald and Golden Eagle Protection Act (16 USC 668)	Specifically protects bald and golden eagles from harm or trade in parts of these species.	USFWS	The MREC is not expected to cause any adverse effects on bald and golden eagles. (Section 5.2.2.2).
State			
CESA (Fish and Game Code Section 2050 et seq.).	Species listed under this act cannot be "taken" or harmed, except under specific permit.	CEC	The MREC will include mitigation measures to reduce impacts to State listed species to a less-than-significant level. (Section 5.2.2.2).
Fish and Game Code Section 3511	Describes bird species, primarily raptors that are FP. FP birds may not be taken or possessed, except under specific permit requirements.	CDFW	The MREC will include mitigation measures to reduce impacts to FP species to a less-than-significant level. (Section 5.2.2.2).
Fish and Game Code Section 3503	States that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto.	CDFW	The MREC will include mitigation measures to reduce impacts to bird nests and eggs to a less-than-significant level. (Section 5.2.2.2).
Fish and Game Code Section 3503.5	Protects all birds of prey and their eggs and nests.	CDFW	The MREC will include mitigation measures to reduce impacts to bird nests and eggs to a less-than-significant level (Section 5.2.2.2).
Fish and Game Code Section 3513	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.	CDFW	The MREC project will include mitigation measures to reduce impacts to birds of prey to a less-than-significant level. (Section 5.2.2.2).
Fish and Game Code Sections 4700, 5050, and 5515	Lists mammal, amphibian, and reptile species that are FP in California.	CDFW	The MREC project will include mitigation measures to reduce impacts to FP mammal, amphibian, or reptile species to a less-than-significant level. (Section 5.2.2.2).

Table 5.2-4 Laws, Ordinances, Regulations, and Standards for Biological Resources

LORS	Requirements/Applicability	Administering Agency	AFC Section Explaining Conformance
Fish and Game Code Sections 1900 et seq.,	The Native Plant Protection Act lists threatened, endangered, and rare plants listed by the State.	CDFW	No state threatened, endangered or rare plants will be impacted by the MREC project. (Section 5.2.1.7).
Title 14, CCR, Sections 670.2 and 670.5	Lists animals designated as threatened or endangered in California.	CDFW	The MREC project will include mitigation measures to reduce impacts to threatened and endangered animals to a less-than-significant level. (Section 5.2.2.2).
California Fish and Game Code (Sections 1601 through 1607)	Prohibits alteration of any stream, including intermittent and seasonal channels and many artificial channels, without a permit from CDFG.	CDFW	No streams, including intermittent and seasonal channels will be impacted by the MREC project. (Section 5.2.2.2.5).
CEQA (PRC Section 15380)	CEQA requires that the effects of a project on environmental resources must be analyzed and assessed using criteria determined by the lead agency.	CEC	The AFC analysis and process is CEQA equivalent. All requirements under CEQA are met with the analysis in the MREC AFC. (Section 5.2).
Warren Alquist Act (PRC Section 25000, et seq.)	Warren-Alquist Act is a CEQA-equivalent process implemented by the CEC.	CEC	The AFC analysis and process is CEQA equivalent. All requirements under the Warren-Alquist Act are met with the analysis in the MREC AFC. (Section 5.2).

5.2.5.2 State LORS

CESA

The CESA (Fish and Game 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, and a CESA Section 2081(b) permit for incidental take of listed threatened and endangered animals from all activities. Although some riparian habitat is expected to be removed for Towers 3, 16, and 18, vegetation will be removed at the minimal amount feasible and outside of nesting season for least Bell's vireo and southwestern willow flycatcher. Therefore, significant adverse effects are not anticipated.

Fish and Game Code Section 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, 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. The MREC will affect foraging habitat and/or nesting habitat for several bird species protected under the MBTA.

Fish and Game Code Section 3511

This code identifies bird species, primarily raptors that are FP. FP birds, including the white-tailed kite, may not be taken or possessed, except under specific permit requirements. The MREC will affect foraging habitat and/or nesting habitat for the white-tailed kite.

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.

Title 14, CCR, Sections 670.2 and 670.5

This code lists animals designated as threatened or endangered in California. California species of special concern 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. Seven state SSC have potential to occur on the MREC site.

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.

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

The Warren Alquist Act is a CEQA-certified and CEQA-equivalent process implemented by the CEC. Preparation of this AFC will result in an assessment prepared by the CEC staff to fulfill the requirements of CEQA.

5.2.6 Permits and Permit Schedule

Consultation with CDFW and USFWS is recommended, with a focus on the generator tie-line. Further discussions will determine whether CDFW and USFWS will require formal consultation for this portion of the project.

It is not expected that a 1972 Amendments to the Federal Water Pollution Control Act (CWA) Section 404 permit will be required because the MREC will not affect waters of the United States. Similarly, a Streambed Alteration Agreement will not be needed because the MREC will not affect a streambed or alter waters of the state.

5.2.7 Agency Contacts

Table 5.2-5 lists regulatory agency contacts for biological resources, for this project.

Table 5.2-5 Agency Contacts for Biological Resources

Issue	Agency	Contact Information
State listed species	CDFW, South Coast Region	3883 Ruffin Road San Diego, CA 92123 (858) 467-4201
Federally listed species	USFWS	2493 Portola Road #B Ventura, CA 93003 (805) 644-1766

5.2.8 References

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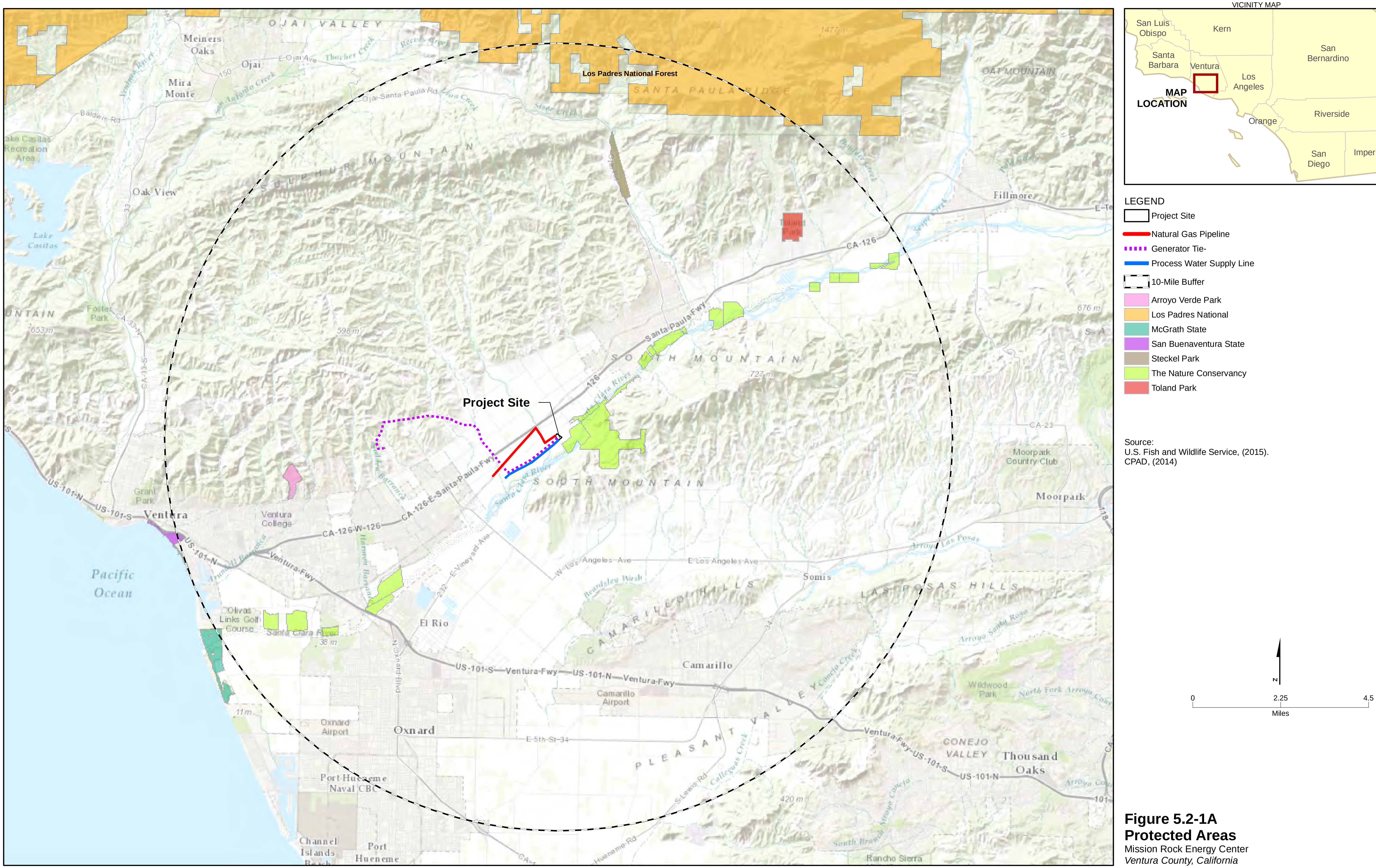

Figure 5.2-1A
Protected Areas
Mission Rock Energy Center
Ventura County, California

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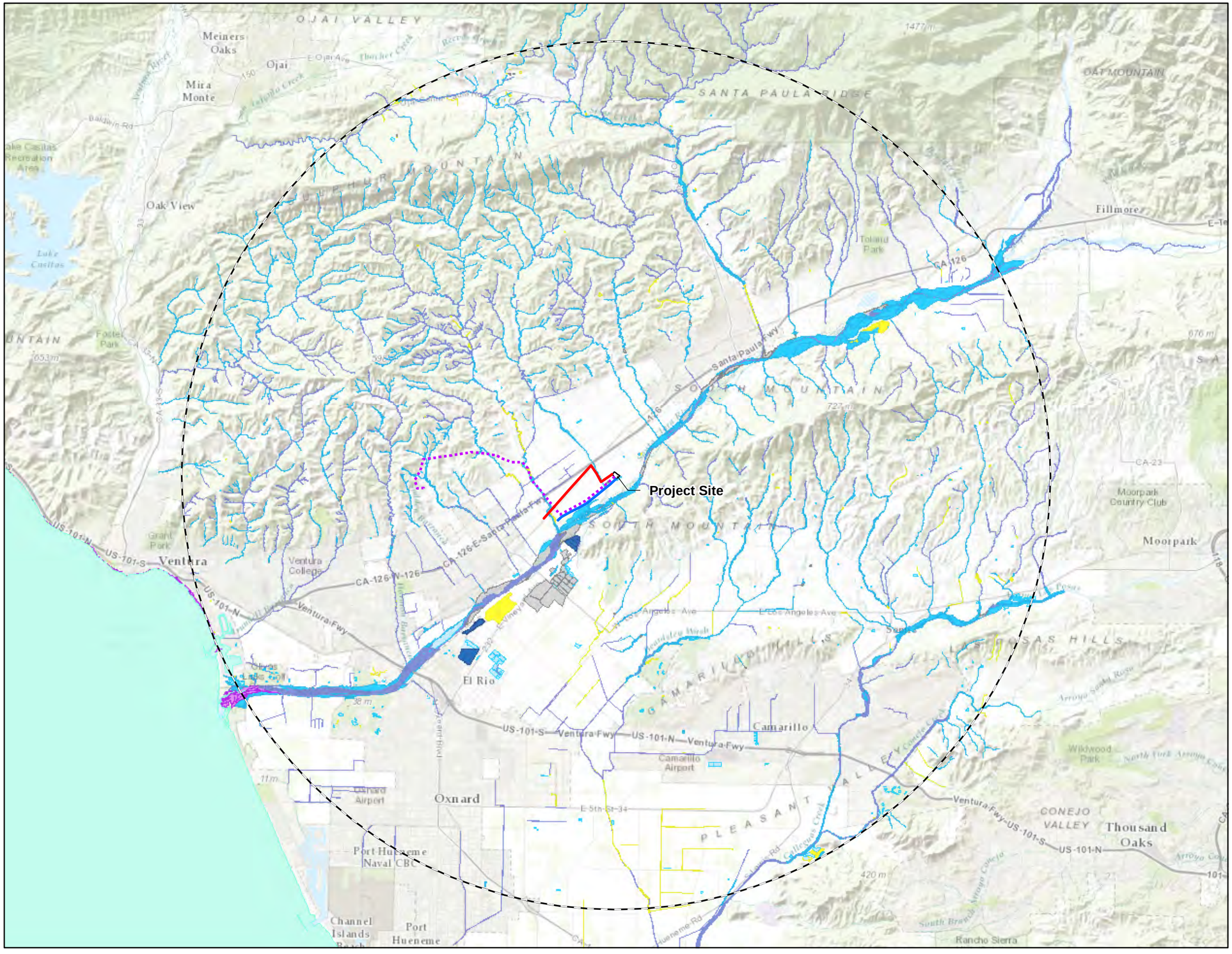


VICINITY MAP

LEGEND

- Project Site
- Natural Gas Pipeline Route
- Generator Tie-Line
- Process Water Supply Line
- 10-Mile Buffer
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine
- Lake
- Other

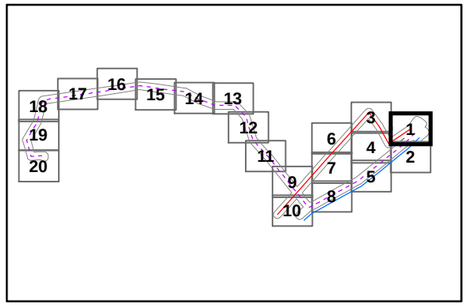
Source:
U.S. Fish and Wildlife Service, (2015).
CPAD, (2014)

N

0 2.25 4.5
Miles

Figure 5.2-1B
Significant Regional Wetlands
Mission Rock Energy Center
Ventura County, California

VICINITY MAP



LEGEND

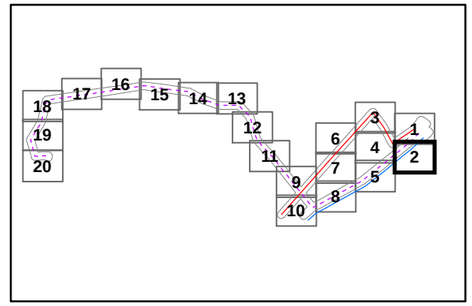
- Project Site
- Laydown Area
- Tower
- Natural Gas Pipeline Route
- Generator Tie-Line
- Process Water Supply Line
- 250-ft Buffer
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine
- Other

N

0 100 200
Feet

Figure 5.2-2 (Page 1 of 20)
National Wetland Inventory
Mission Rock Energy Center
Ventura County, California

VICINITY MAP



LEGEND

- Project Site
- Laydown Area
- Tower
- Natural Gas Pipeline Route
- Generator Tie-Line
- Process Water Supply Line
- 250-ft Buffer
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine
- Other

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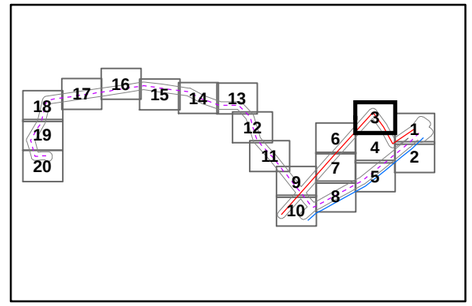
Feet

Figure 5.2-2 (Page 2 of 20)
National Wetland Inventory
Mission Rock Energy Center
Ventura County, California

VICINITY MAP



LEGEND

- Project Site
- Laydown Area
- Tower
- Natural Gas Pipeline Route
- Generator Tie-Line
- Process Water Supply Line
- 250-ft Buffer
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine
- Other

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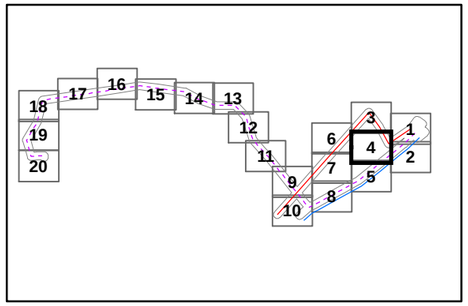
Feet

Figure 5.2-2 (Page 3 of 20)
National Wetland Inventory
Mission Rock Energy Center
Ventura County, California

VICINITY MAP



LEGEND

- Project Site
- Laydown Area
- Tower
- Natural Gas Pipeline Route
- Generator Tie-Line
- Process Water Supply Line
- 250-ft Buffer
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine
- Other

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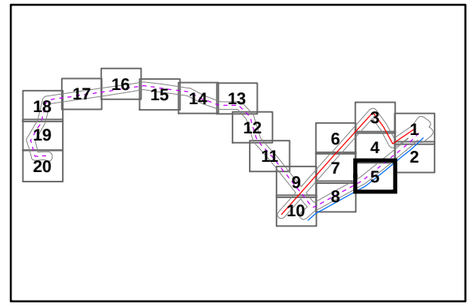
Feet

Figure 5.2-2 (Page 4 of 20)
National Wetland Inventory
Mission Rock Energy Center
Ventura County, California

VICINITY MAP



LEGEND

- Project Site
- Laydown Area
- Tower
- Natural Gas Pipeline Route
- Generator Tie-Line
- Process Water Supply Line
- 250-ft Buffer
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine
- Other

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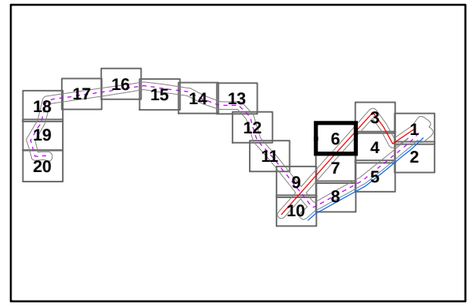
Feet

Figure 5.2-2 (Page 5 of 20)
National Wetland Inventory
Mission Rock Energy Center
Ventura County, California

VICINITY MAP



LEGEND

- Project Site
- Laydown Area
- Tower
- Natural Gas Pipeline Route
- Generator Tie-Line
- Process Water Supply Line
- 250-ft Buffer
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine
- Other

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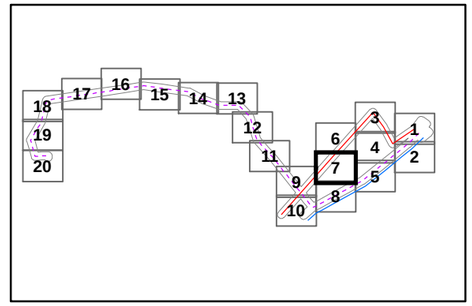
Feet

Figure 5.2-2 (Page 6 of 20)
National Wetland Inventory
Mission Rock Energy Center
Ventura County, California

VICINITY MAP



LEGEND

- Project Site
- Laydown Area
- Tower
- Natural Gas Pipeline Route
- Generator Tie-Line
- Process Water Supply Line
- 250-ft Buffer
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine
- Other

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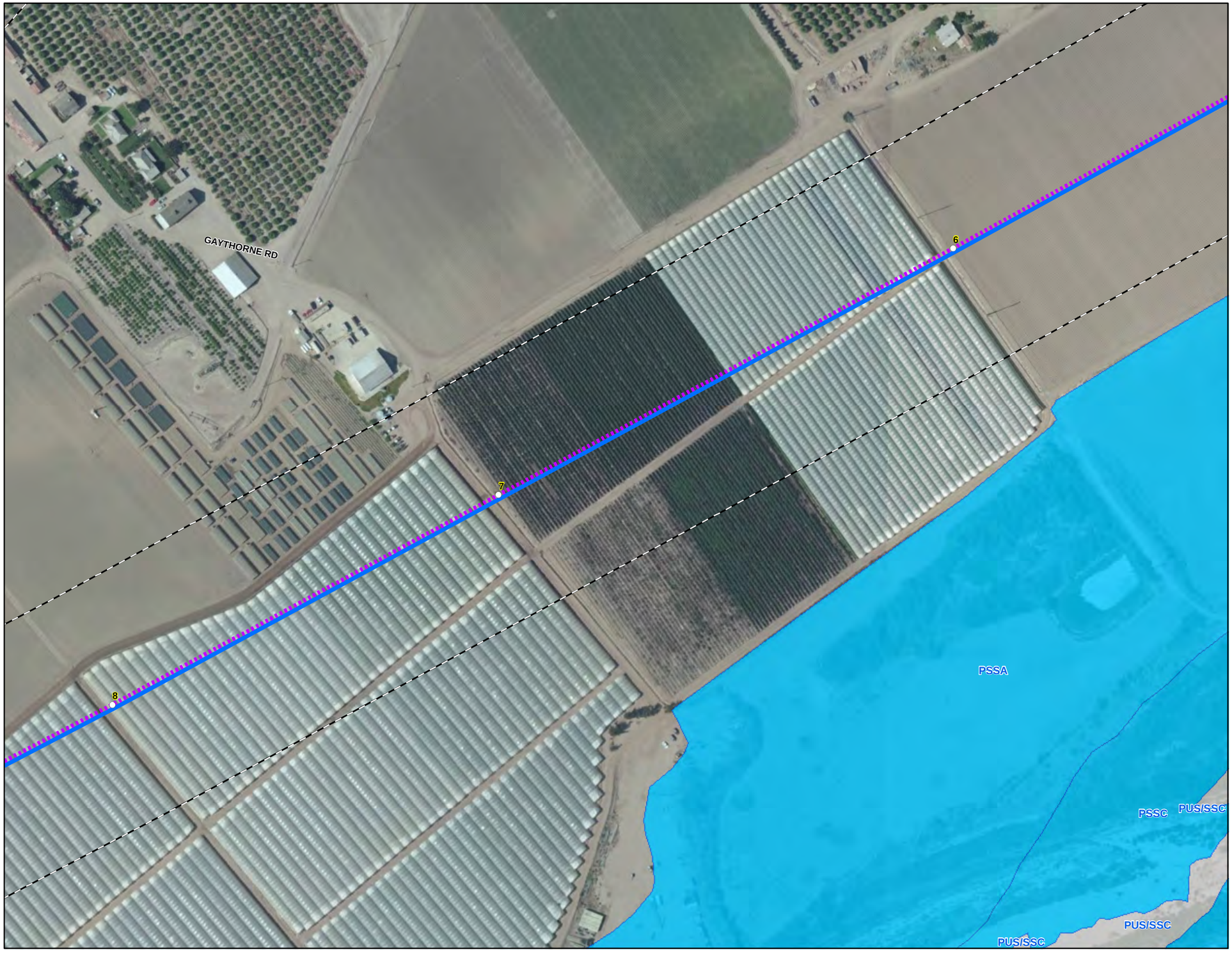
Feet

Figure 5.2-2 (Page 7 of 20)
National Wetland Inventory
Mission Rock Energy Center
Ventura County, California



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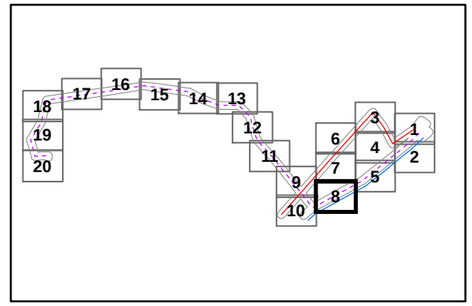

LEGEND

- Project Site
- Laydown Area
- Tower
- Natural Gas Pipeline Route
- Generator Tie-Line
- Process Water Supply Line
- 250-ft Buffer
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine
- Other

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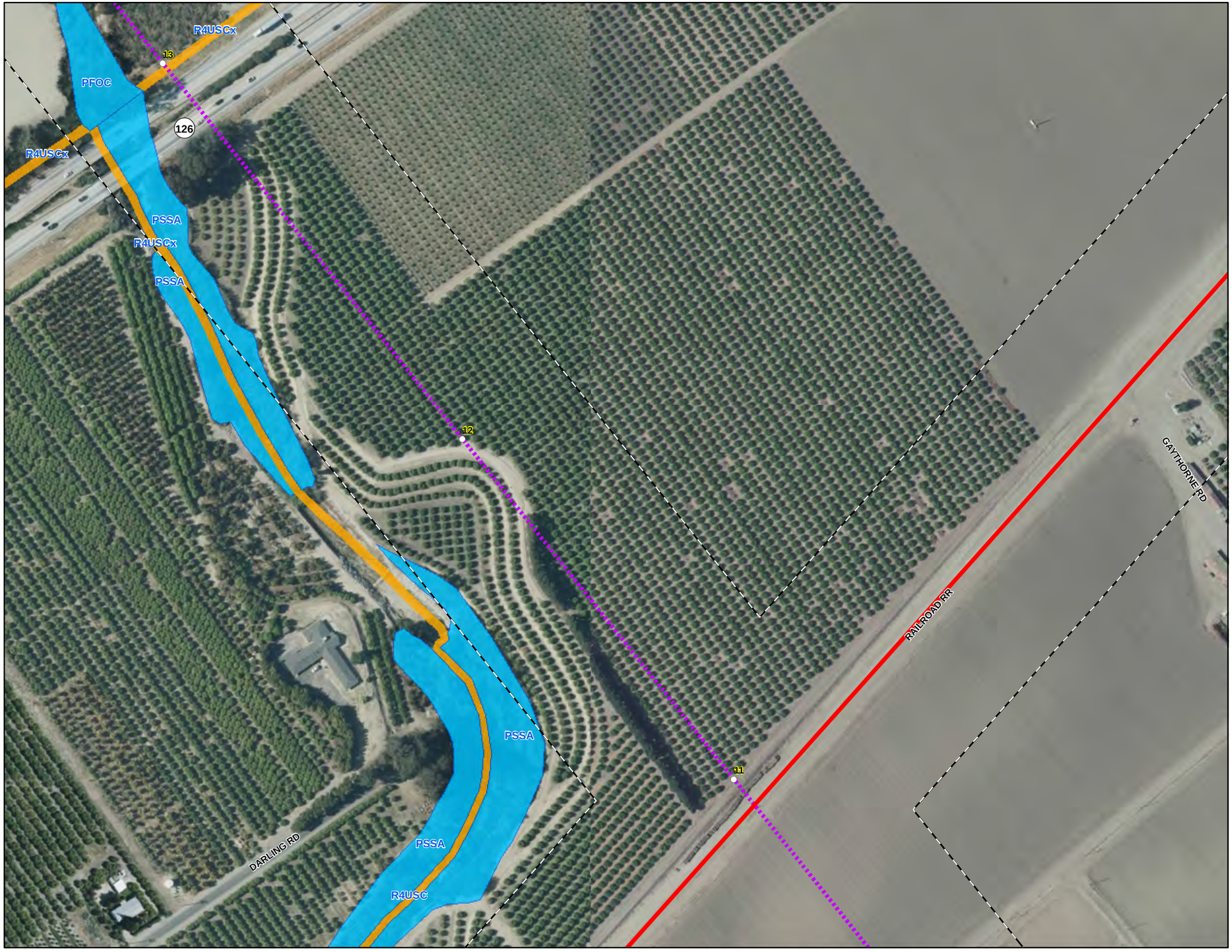
Figure 5.2-2 (Page 8 of 20)
National Wetland Inventory
Mission Rock Energy Center
Ventura County, California



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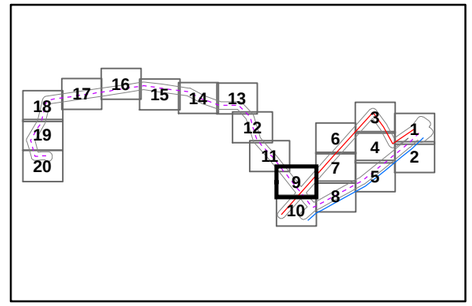

LEGEND

- Project Site
- Laydown Area
- Tower
- Natural Gas Pipeline Route
- Generator Tie-Line
- Process Water Supply Line
- 250-ft Buffer
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine
- Other

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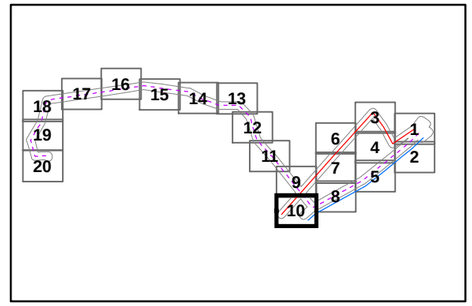
Figure 5.2-2 (Page 9 of 20)
National Wetland Inventory
Mission Rock Energy Center
Ventura County, California

VICINITY MAP



LEGEND

- Project Site
- Laydown Area
- Tower
- Natural Gas Pipeline Route
- Generator Tie-Line
- Process Water Supply Line
- 250-ft Buffer
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine
- Other

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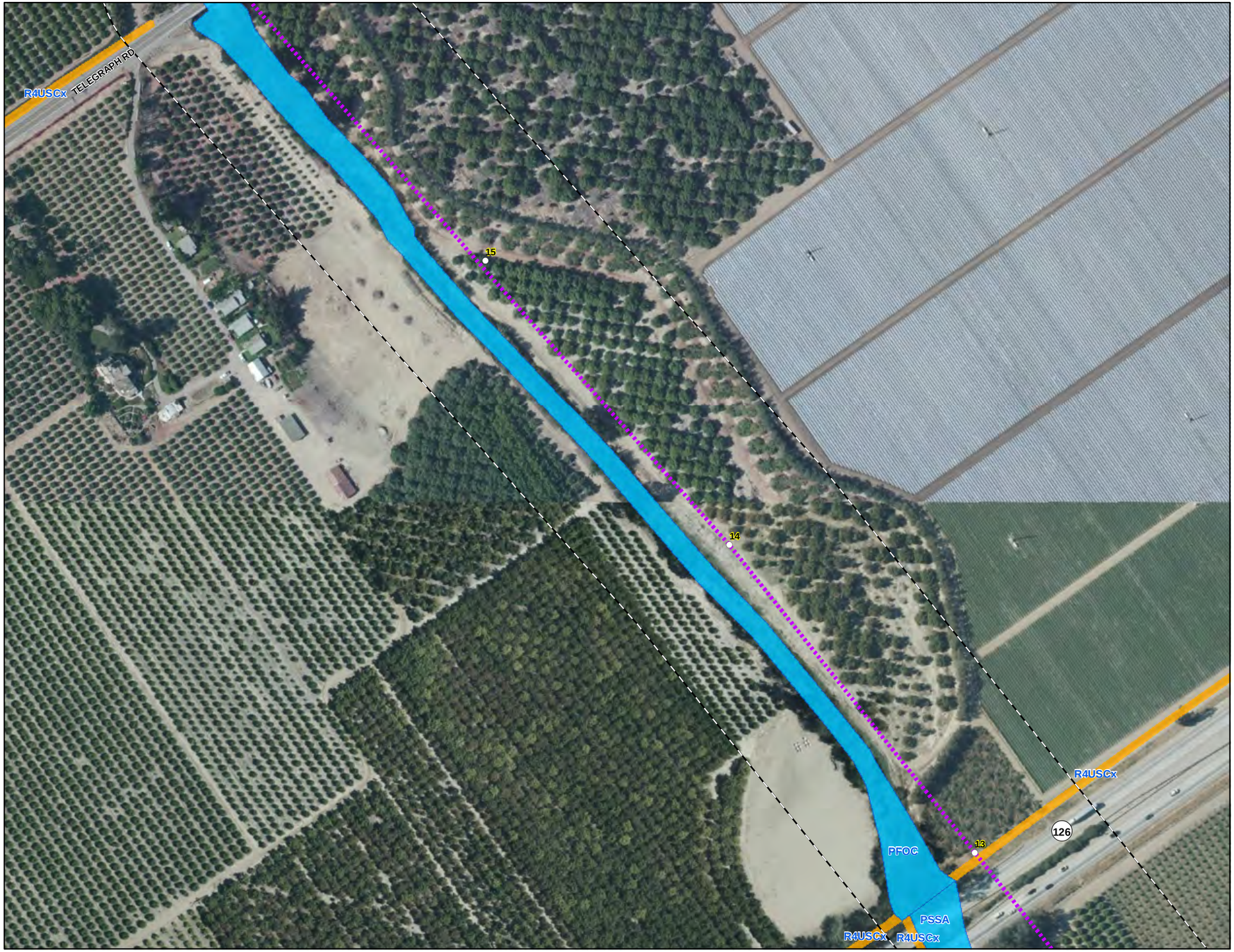
Figure 5.2-2 (Page 10 of 20)
National Wetland Inventory
Mission Rock Energy Center
Ventura County, California



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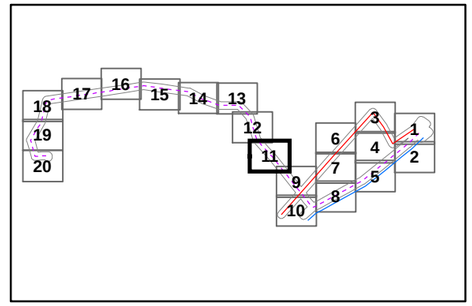

LEGEND

- Project Site
- Laydown Area
- Tower
- Natural Gas Pipeline Route
- Generator Tie-Line
- Process Water Supply Line
- 250-ft Buffer
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine
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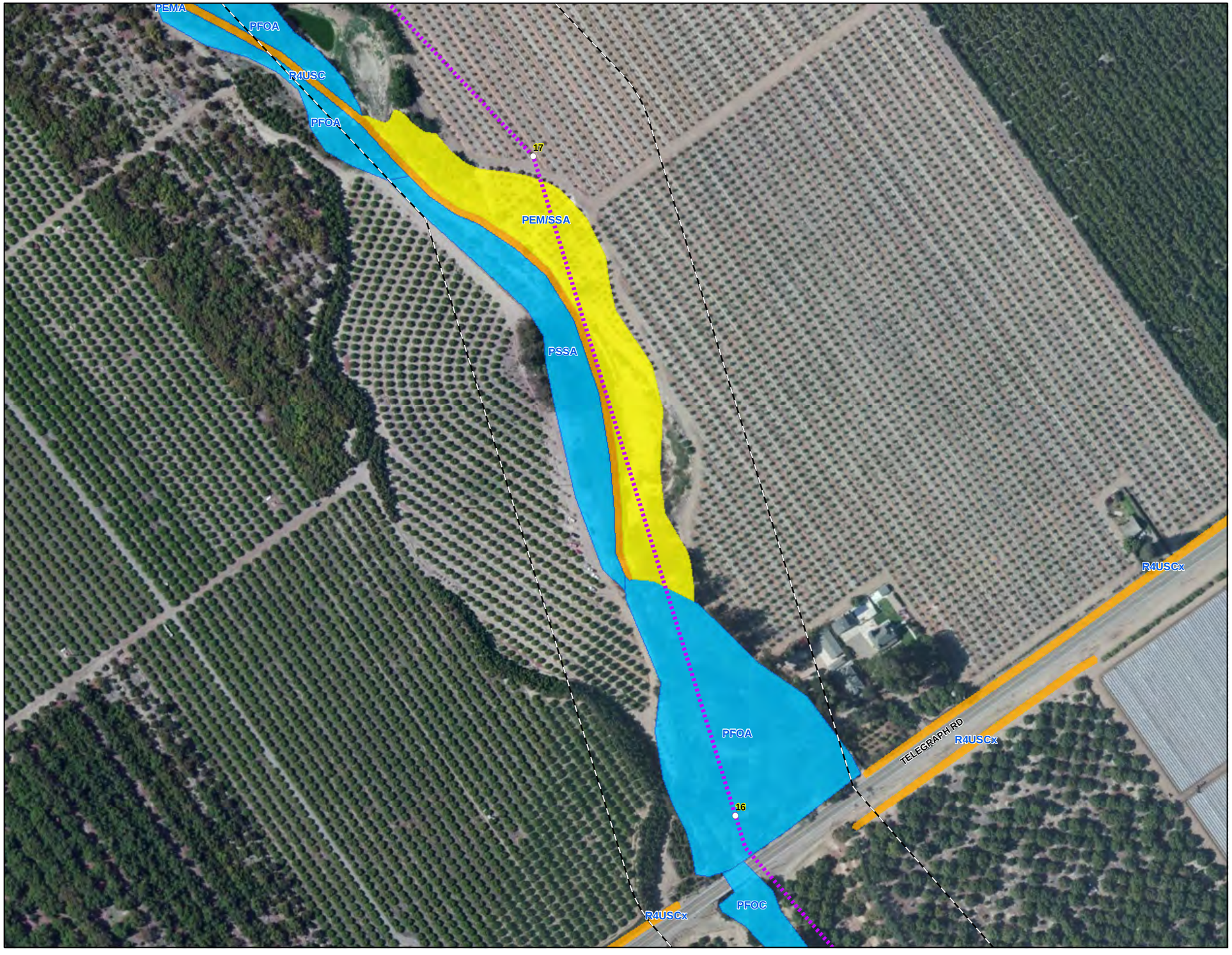
Figure 5.2-2 (Page 11 of 20)
National Wetland Inventory
Mission Rock Energy Center
Ventura County, California



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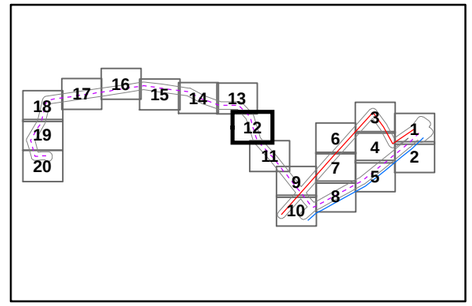

LEGEND

- Project Site
- Laydown Area
- Tower
- Natural Gas Pipeline Route
- Generator Tie-Line
- Process Water Supply Line
- 250-ft Buffer
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine
- Other

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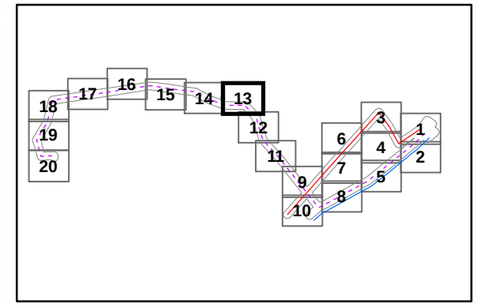
Figure 5.2-2 (Page 12 of 20)
National Wetland Inventory
Mission Rock Energy Center
Ventura County, California



LEGEND

- Project Site
- Laydown Area
- Tower
- Natural Gas Pipeline Route
- Generator Tie-Line
- Process Water Supply Line
- 250-ft Buffer
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine
- Other

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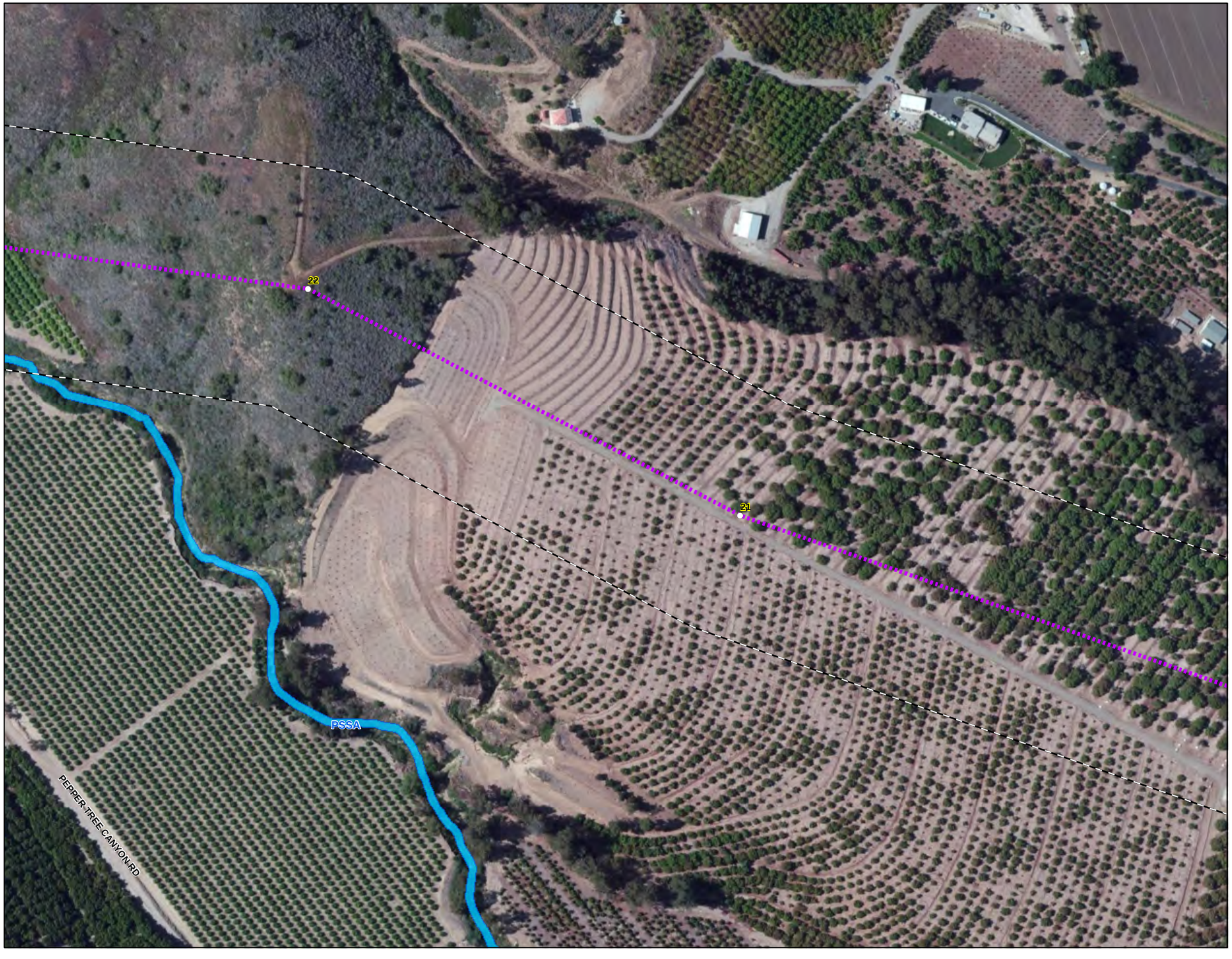
Figure 5.2-2 (Page 13 of 20)
National Wetland Inventory
Mission Rock Energy Center
Ventura County, California



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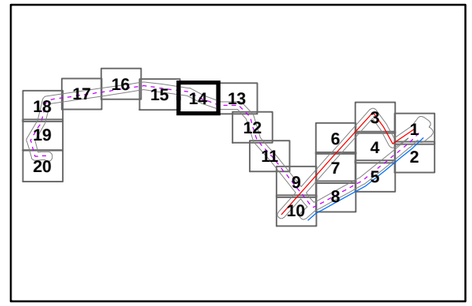

LEGEND

- Project Site
- Laydown Area
- Tower
- Natural Gas Pipeline Route
- Generator Tie-Line
- Process Water Supply Line
- 250-ft Buffer
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine
- Other

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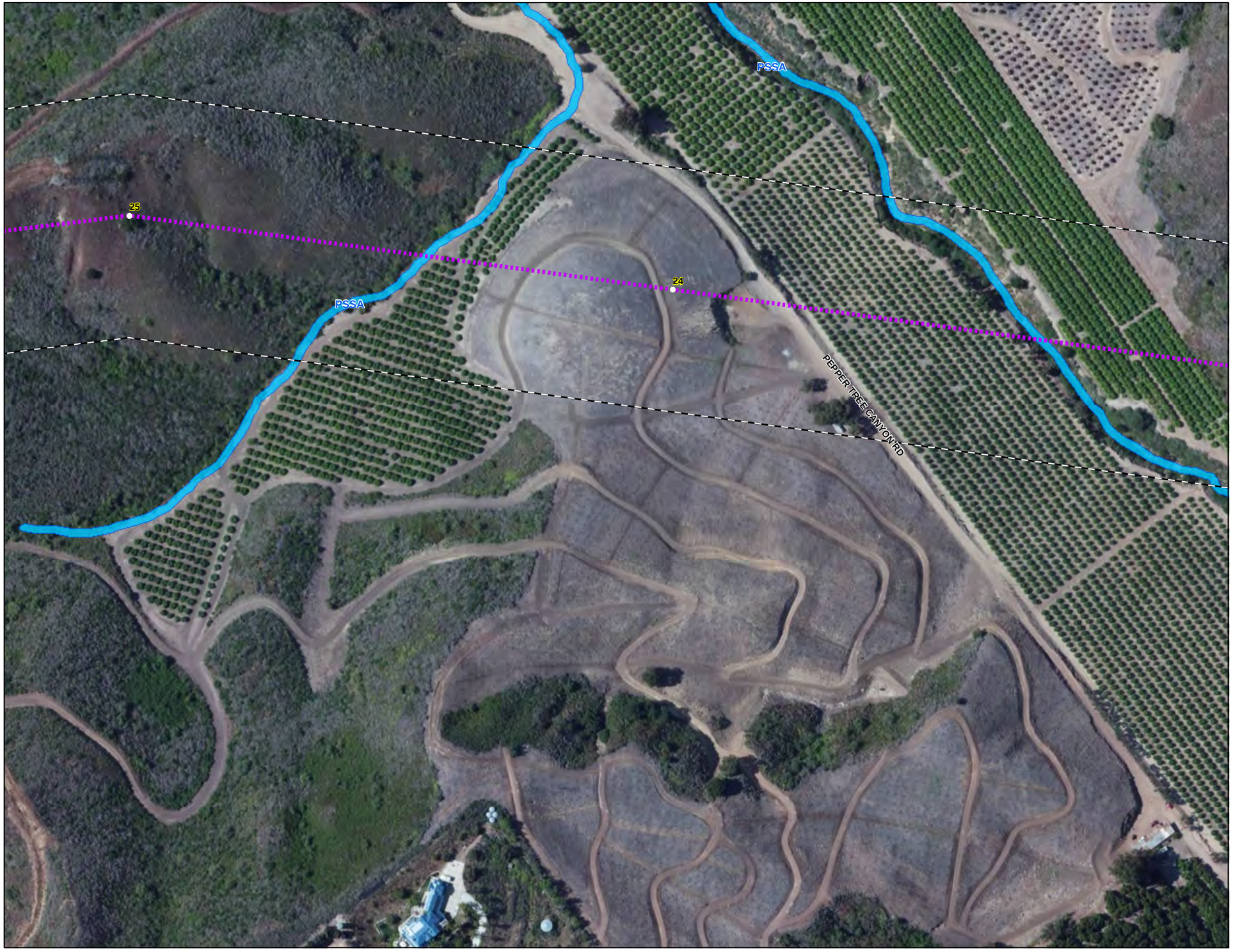
Figure 5.2-2 (Page 14 of 20)
National Wetland Inventory
Mission Rock Energy Center
Ventura County, California



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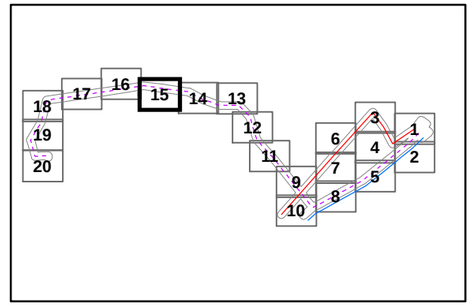


LEGEND

- Project Site
- Laydown Area
- Tower
- Natural Gas Pipeline Route
- Generator Tie-Line
- Process Water Supply Line
- 250-ft Buffer
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine
- Other

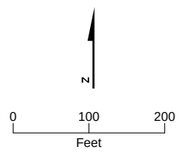
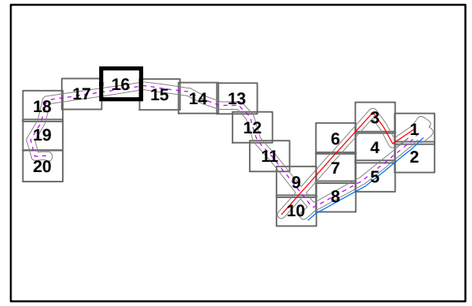


Figure 5.2-2 (Page 15 of 20)
National Wetland Inventory
Mission Rock Energy Center
Ventura County, California

VICINITY MAP



LEGEND

- Project Site
- Laydown Area
- Tower
- Natural Gas Pipeline Route
- Generator Tie-Line
- Process Water Supply Line
- 250-ft Buffer
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine
- Other

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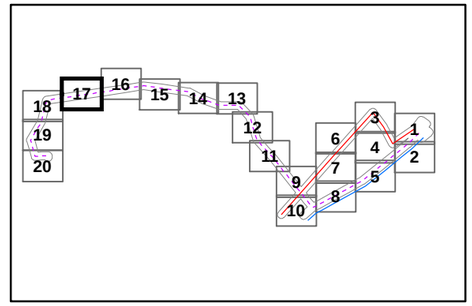
Feet

Figure 5.2-2 (Page 16 of 20)
National Wetland Inventory
Mission Rock Energy Center
Ventura County, California

VICINITY MAP



LEGEND

- Project Site
- Laydown Area
- Tower
- Natural Gas Pipeline Route
- Generator Tie-Line
- Process Water Supply Line
- 250-ft Buffer
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine
- Other

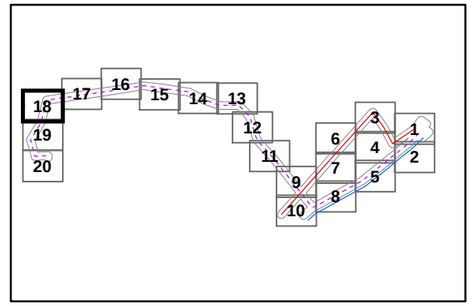
N

0 100 200

Feet

Figure 5.2-2 (Page 17 of 20)
National Wetland Inventory
Mission Rock Energy Center
Ventura County, California

VICINITY MAP



LEGEND

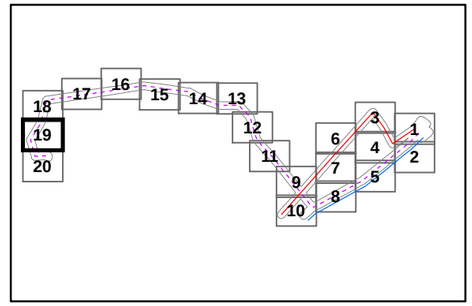
- Project Site
- Laydown Area
- Tower
- Natural Gas Pipeline Route
- Generator Tie-Line
- Process Water Supply Line
- 250-ft Buffer
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine
- Other

N

0 100 200
Feet

Figure 5.2-2 (Page 18 of 20)
National Wetland Inventory
Mission Rock Energy Center
Ventura County, California

VICINITY MAP



LEGEND

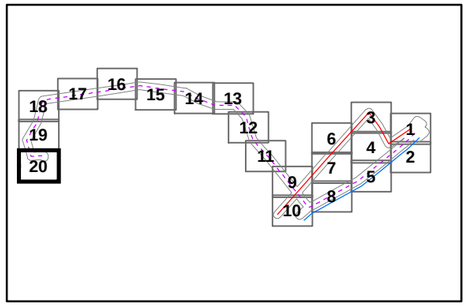
- Project Site
- Laydown Area
- Tower
- Natural Gas Pipeline Route
- Generator Tie-Line
- Process Water Supply Line
- 250-ft Buffer
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine
- Other

N

0 100 200
Feet

Figure 5.2-2 (Page 19 of 20)
National Wetland Inventory
Mission Rock Energy Center
Ventura County, California

VICINITY MAP



LEGEND

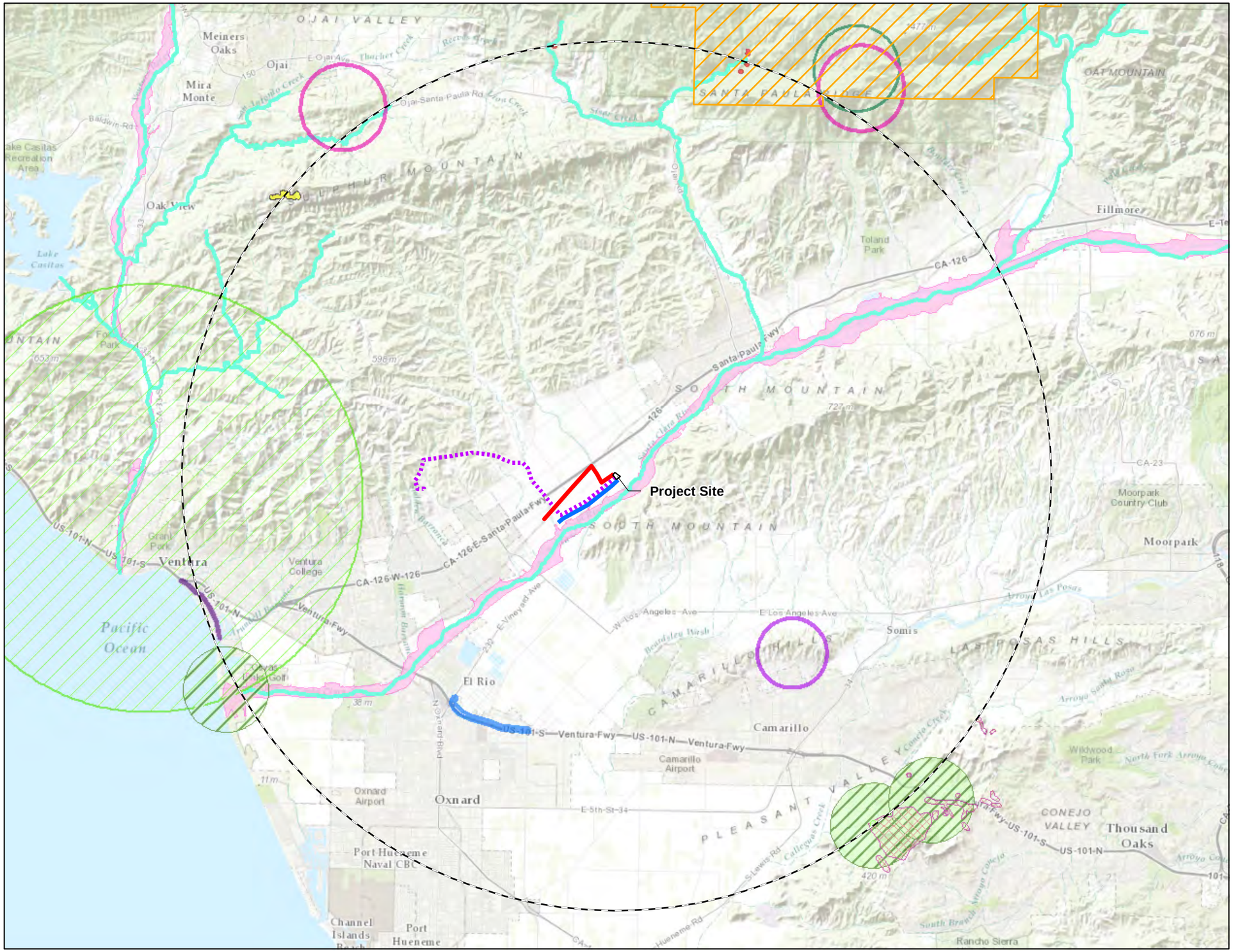
- Project Site
- Laydown Area
- Tower
- Natural Gas Pipeline Route
- Generator Tie-Line
- Process Water Supply Line
- 250-ft Buffer
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine
- Other

N

0 100 200

Feet

Figure 5.2-2 (Page 20 of 20)
National Wetland Inventory
Mission Rock Energy Center
Ventura County, California



VICINITY MAP

LEGEND

- Project Site
- Natural Gas Pipeline Route
- Generator Tie-Line
- Process Water Supply Line
- 10-Mile Buffer

Critical Habitat

- California Condor
- Southwestern willow flycatcher
- Steelhead

Vegetation Communities

- Blochman's dudleya
- Davidson's saltscale
- Ojai fritillary
- Ojai navarretia
- Orcutt's pincushion
- Ventura Marsh milk-vetch
- Verity's dudleya
- conejo buckwheat
- late-flowered mariposa-lily
- salt marsh bird's-beak
- southern curly-leaved monardella
- umbrella larkspur

Source:
U. S. Fish & Wildlife Service, Ventura Fish and Wildlife Office (2013).
U. S. Fish & Wildlife Service, Region 2, Regional Office (2013).

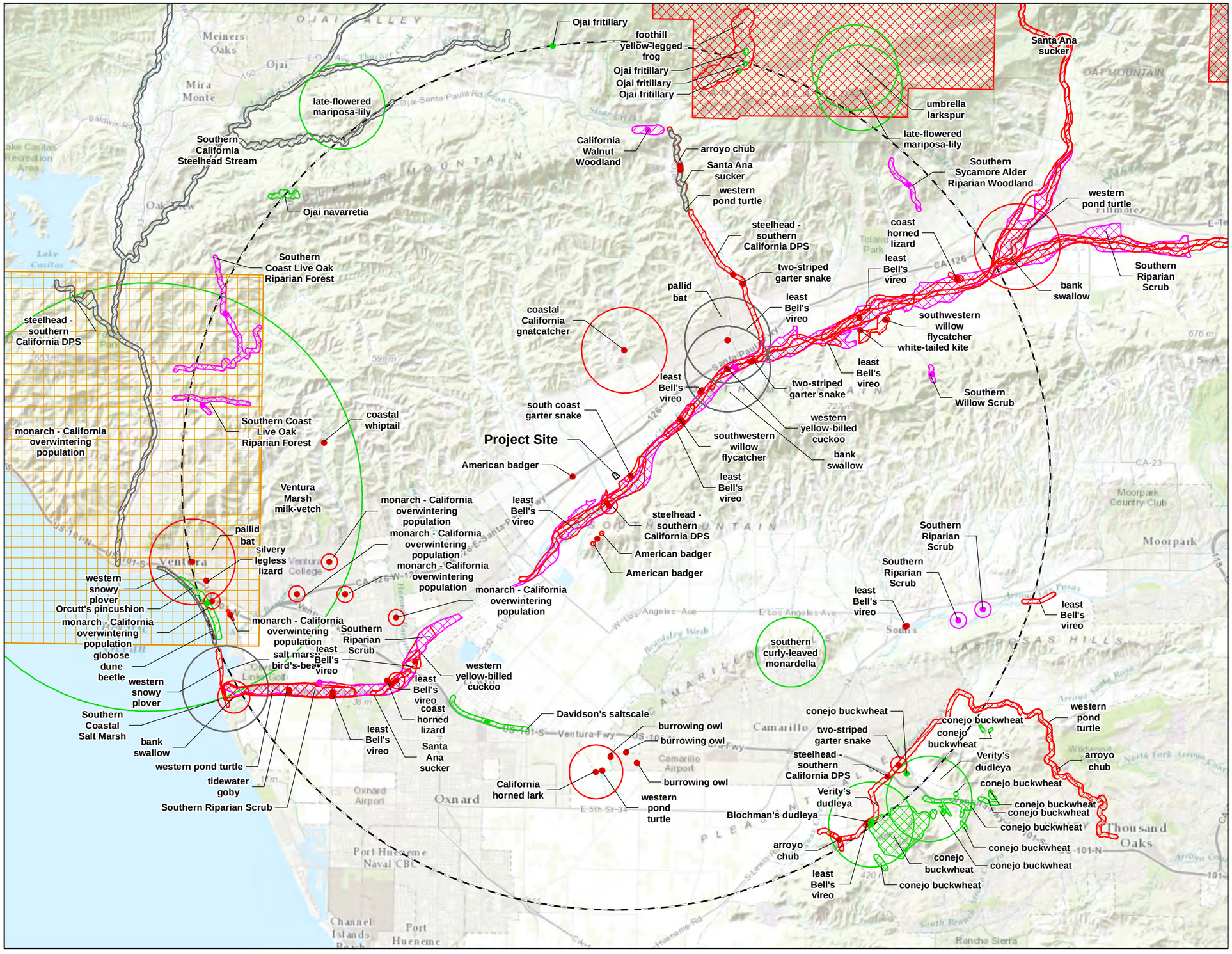
California Department of Fish and Game, Pacific States Marine Fisheries Commission,California Geospatial Information Data Library, State Coastal Conservancy, California Department of Forestry, US Geological Survey (2005).

CNDDB (2015).

N

0 2.25 4.5
Miles

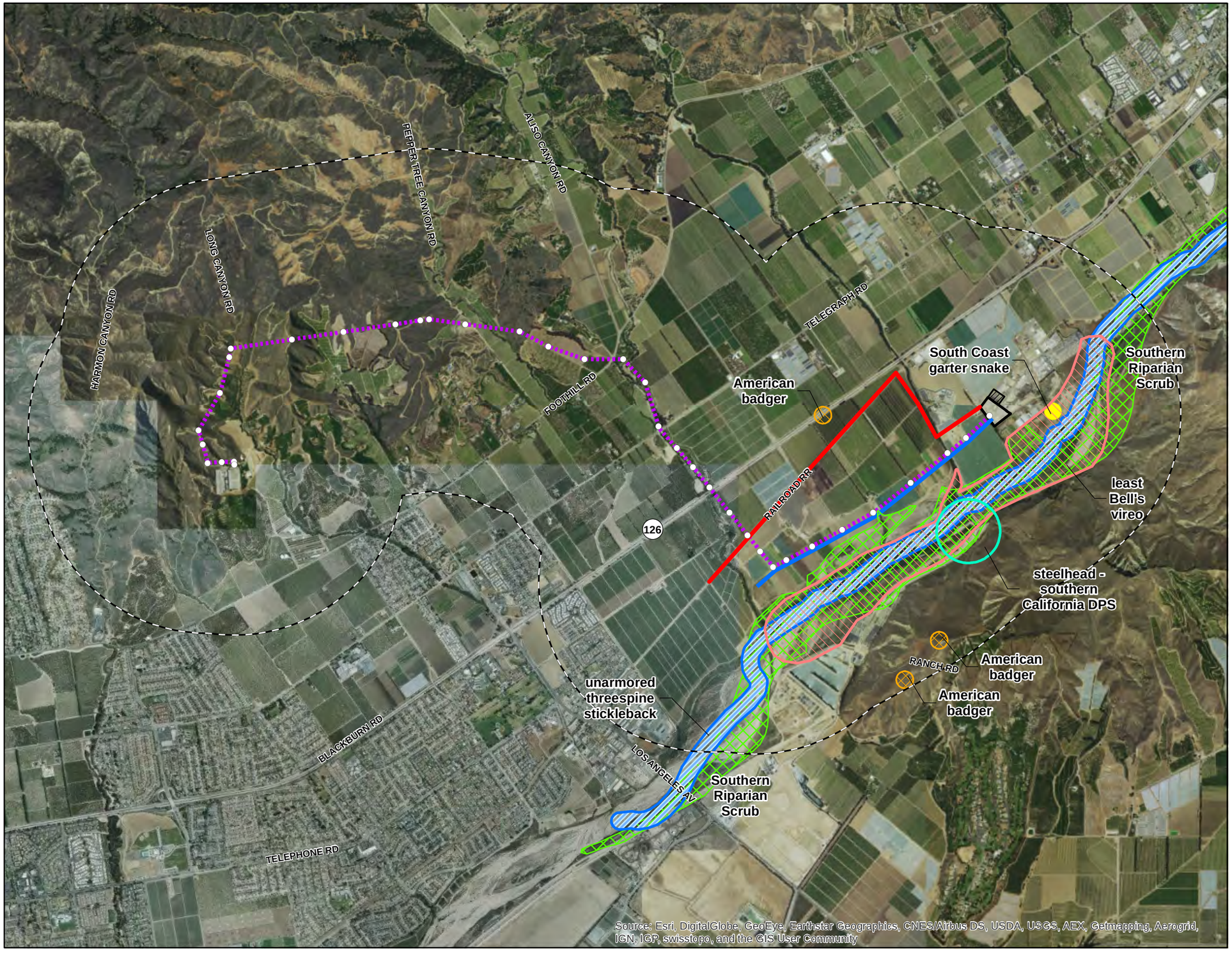
Figure 5.2-3
Sensitive Natural Communities and Critical Habitat
Mission Rock Energy Center
Ventura County, California



Source:
CNDDB (September 2015)

Note:
The occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not yet been surveyed and/or mapped. Lack of information in the CNDDB about a species or an area can never be used as proof that no special status species occur in an area.

Figure 5.2-4
Special-Status Species within the Regional Vicinity
Mission Rock Energy Center
Ventura County, California



LEGEND

- Project Site
- Laydown Area
- Natural Gas Pipeline Route
- Generator Tie-Line
- Process Water Supply Line
- Tower

Animals

- least Bell's vireo
- American badger
- unarmored threespine stickleback
- steelhead - southern California DPS
- South Coast garter snake

Terrestrial Community

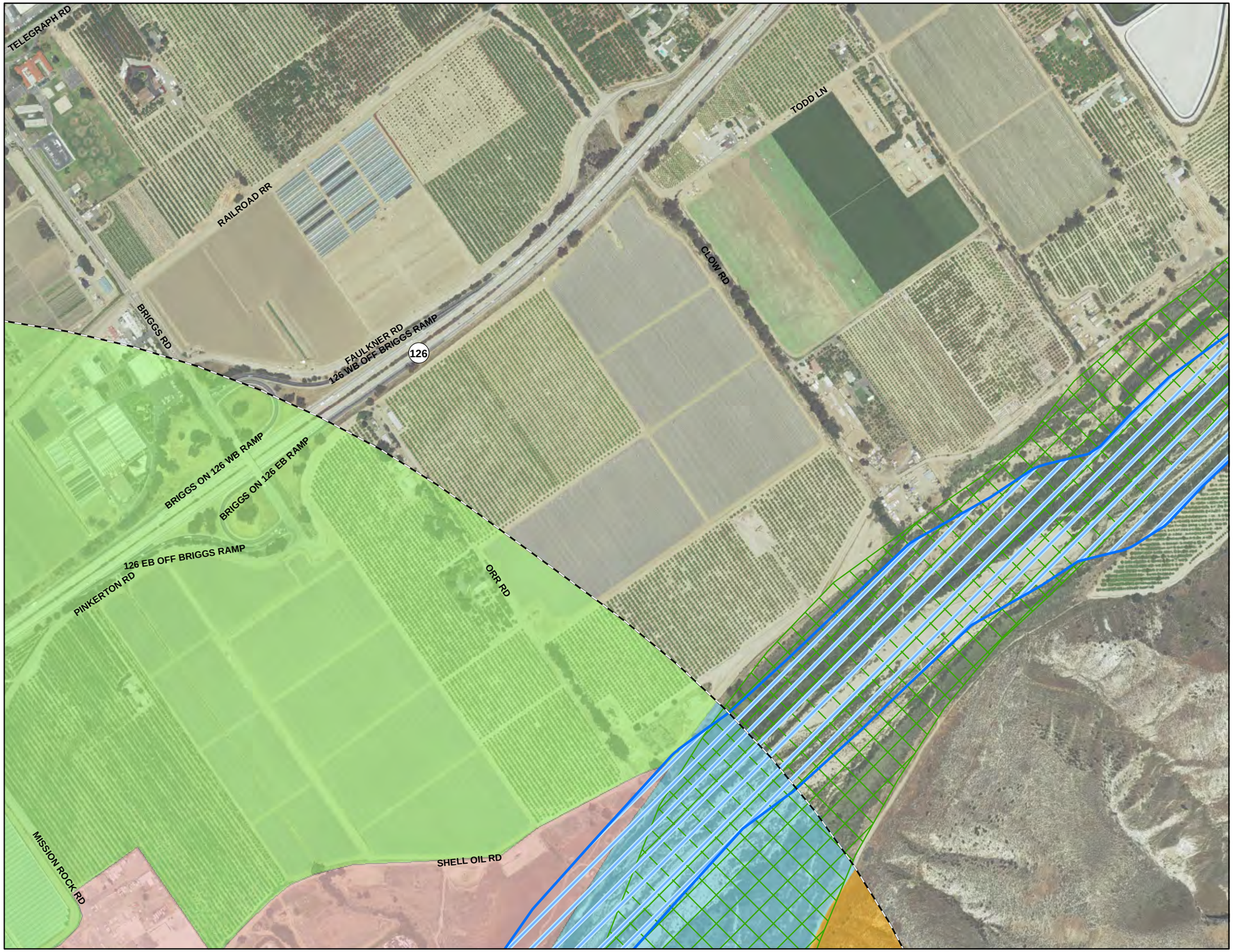
- Southern Riparian Scrub

Source:
CNDDB, September 2015

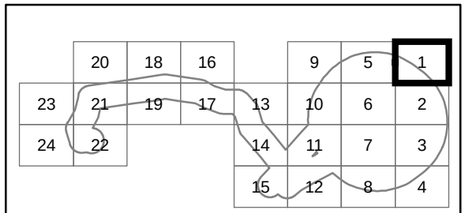
N

0 1,500 3,000
Feet

Figure 5.2-5
Special-Status Species within 1 Mile of Project Site
Mission Rock Energy Center
Ventura County, California



VICINITY MAP



LEGEND

- Project Site
- Laydown Area
- Tower
- Natural Gas Pipeline Route
- Generator Tie-Line
- Process Water Supply Line
- Biology Study Area
- Agricultural
- Coastal Sagebrush Scrub
- Riparian
- Santa Clara River/Riparian
- Urban/Developed

Animals

- least Bell's vireo
- American badger
- unarmored threespine stickleback
- steelhead - southern California DPS
- South Coast garter snake

Terrestrial Community

- Southern Riparian Scrub

Source:
CNDDB (2015).
CH2M (2015).

N

0 250 500
Feet

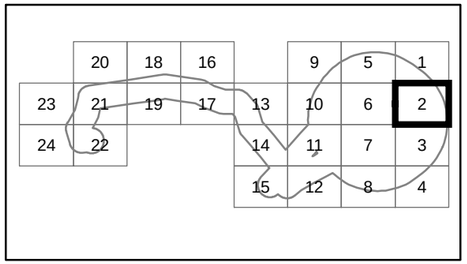
Figure 5.2-6 (Page 1 of 24)
Land Cover
Mission Rock Energy Center
Ventura County, California

ORR RD

SHELL OIL RD

MISSION ROCK RD

VICINITY MAP



LEGEND

- Project Site
- Laydown Area
- Tower
- Natural Gas Pipeline Route
- Generator Tie-Line
- Process Water Supply Line
- Biology Study Area
- Agricultural
- Coastal Sagebrush Scrub
- Riparian
- Santa Clara River/Riparian
- Urban/Developed

Animals

- least Bell's vireo
- American badger
- unarmored threespine stickleback
- steelhead - southern California DPS
- South Coast garter snake

Terrestrial Community

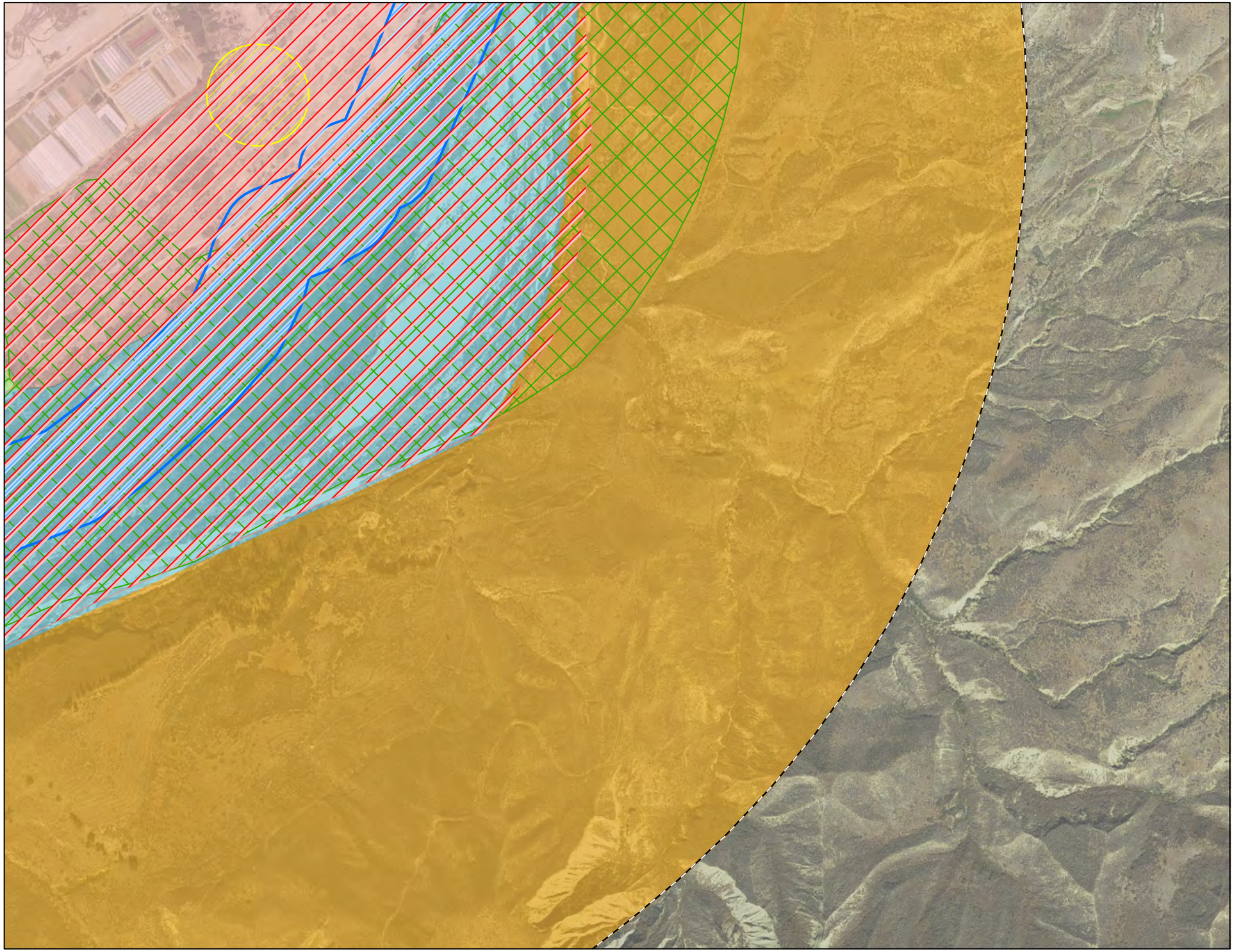
- Southern Riparian Scrub

Source:
CNDDB (2015).
CH2M (2015).

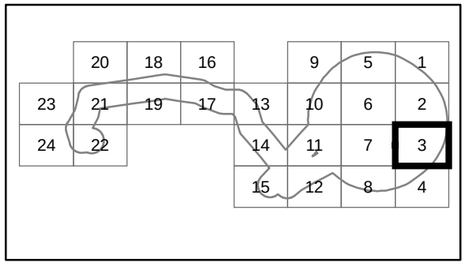
N

0 250 500
Feet

Figure 5.2-6 (Page 2 of 24)
Land Cover
Mission Rock Energy Center
Ventura County, California



VICINITY MAP



LEGEND

- Project Site
- Laydown Area
- Tower
- Natural Gas Pipeline Route
- Generator Tie-Line
- Process Water Supply Line
- Biology Study Area
- Agricultural
- Coastal Sagebrush Scrub
- Riparian
- Santa Clara River/Riparian
- Urban/Developed

Animals

- least Bell's vireo
- American badger
- unarmored threespine stickleback
- steelhead - southern California DPS
- South Coast garter snake

Terrestrial Community

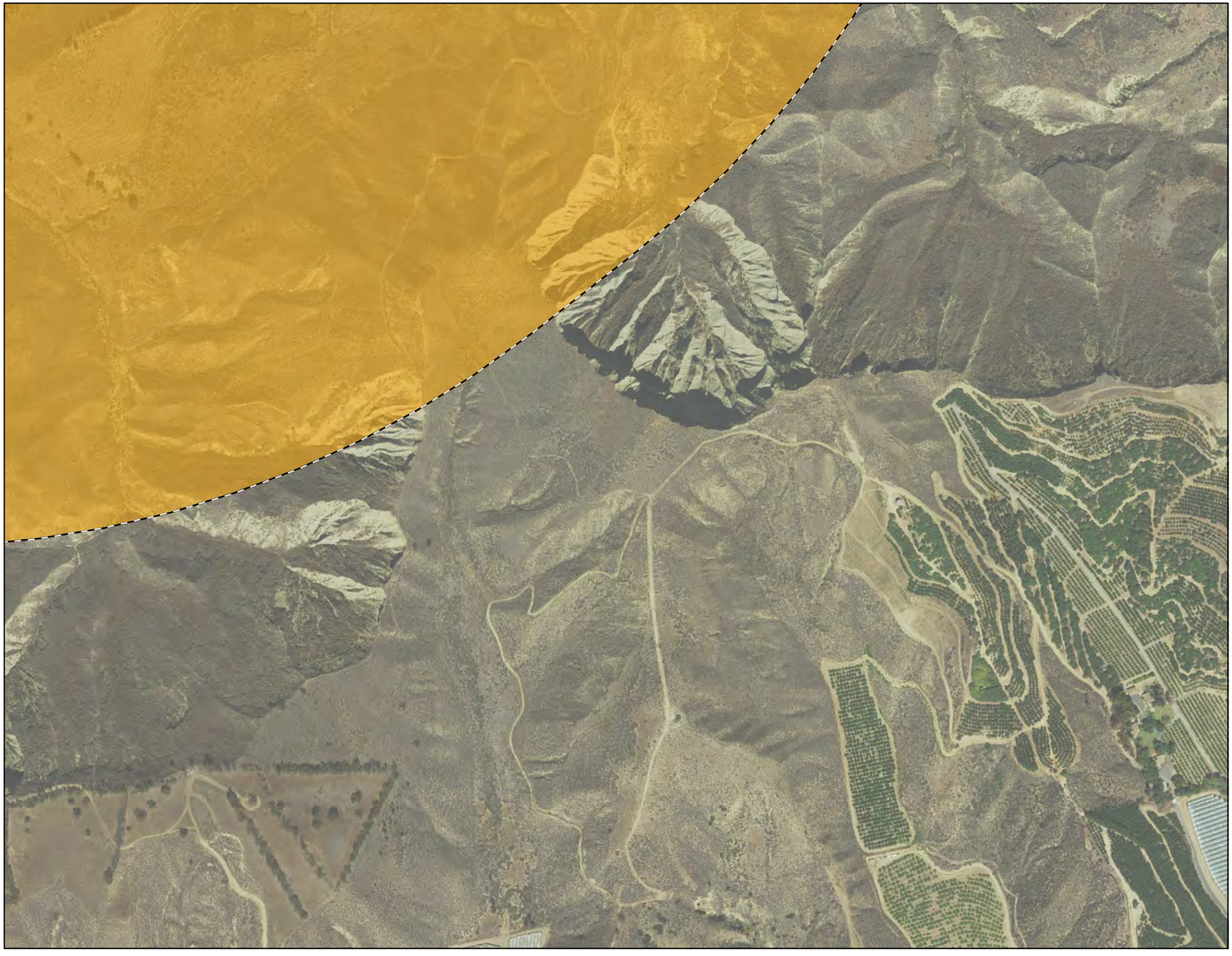
- Southern Riparian Scrub

Source:
CNDDB (2015).
CH2M (2015).

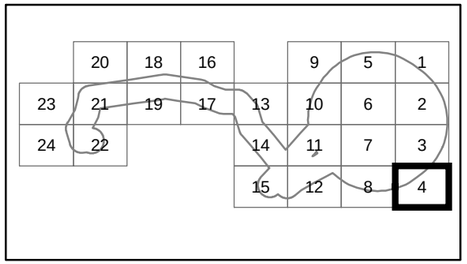
N

0 250 500
Feet

Figure 5.2-6 (Page 3 of 24)
Land Cover
Mission Rock Energy Center
Ventura County, California



VICINITY MAP



LEGEND

- Project Site
- Laydown Area
- Tower
- Natural Gas Pipeline Route
- Generator Tie-Line
- Process Water Supply Line
- Biology Study Area
- Agricultural
- Coastal Sagebrush Scrub
- Riparian
- Santa Clara River/Riparian
- Urban/Developed

Animals

- least Bell's vireo
- American badger
- unarmored threespine stickleback
- steelhead - southern California DPS
- South Coast garter snake

Terrestrial Community

- Southern Riparian Scrub

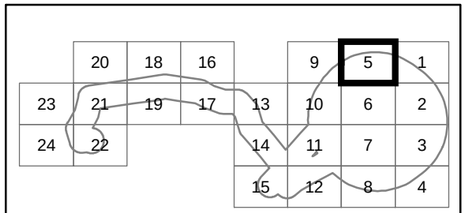
Source:
CNDDB (2015).
CH2M (2015).

N

0 250 500
Feet

Figure 5.2-6 (Page 4 of 24)
Land Cover
Mission Rock Energy Center
Ventura County, California

VICINITY MAP



LEGEND

- Project Site
- Laydown Area
- Tower
- Natural Gas Pipeline Route
- Generator Tie-Line
- Process Water Supply Line
- Biology Study Area
- Agricultural
- Coastal Sagebrush Scrub
- Riparian
- Santa Clara River/Riparian
- Urban/Developed

Animals

- least Bell's vireo
- American badger
- unarmored threespine stickleback
- steelhead - southern California DPS
- South Coast garter snake

Terrestrial Community

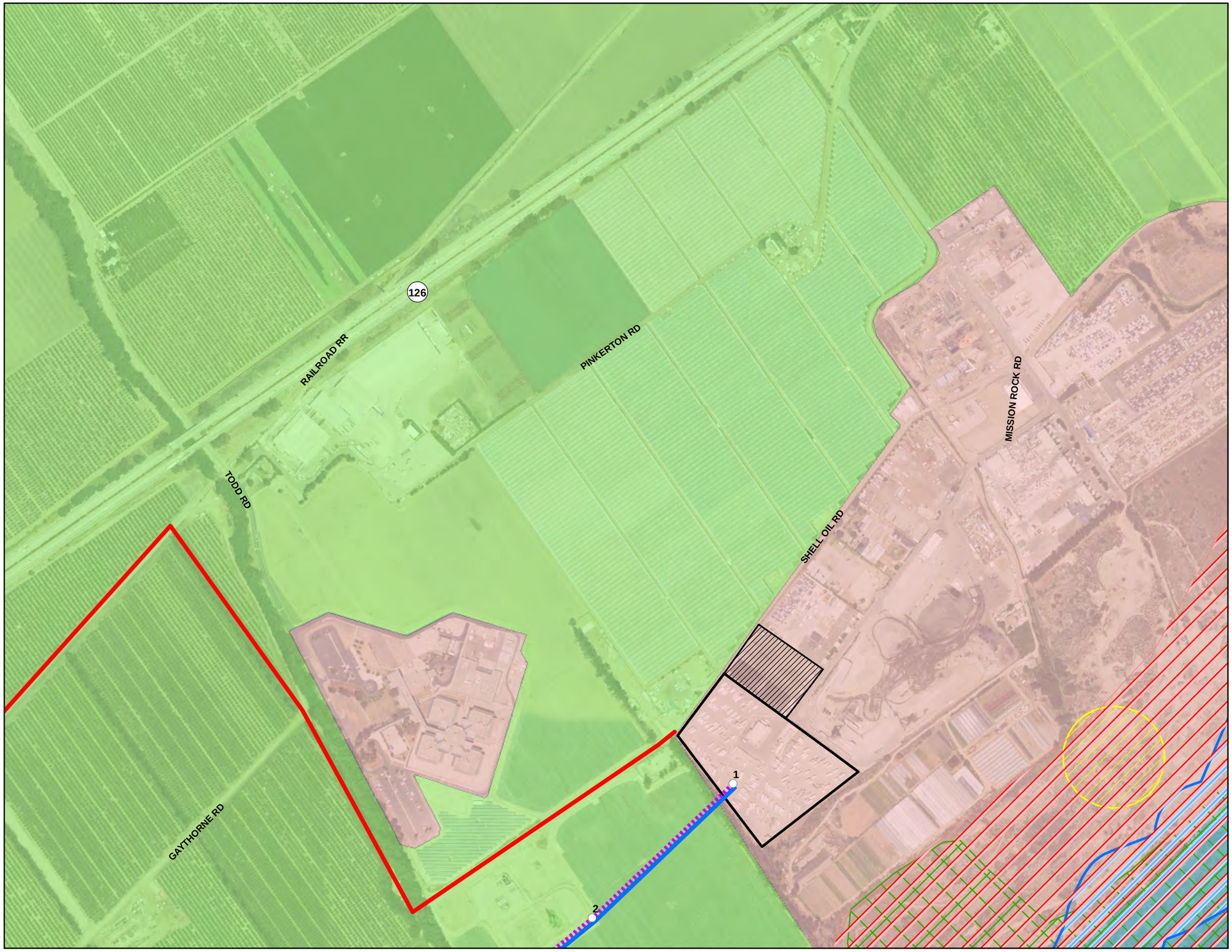
- Southern Riparian Scrub

Source:
CNDDB (2015).
CH2M (2015).

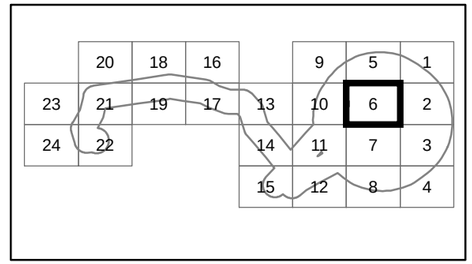
N

0 250 500
Feet

Figure 5.2-6 (Page 5 of 24)
Land Cover
Mission Rock Energy Center
Ventura County, California



VICINITY MAP



LEGEND

- Project Site
- Laydown Area
- Tower
- Natural Gas Pipeline Route
- Generator Tie-Line
- Process Water Supply Line
- Biology Study Area
- Agricultural
- Coastal Sagebrush Scrub
- Riparian
- Santa Clara River/Riparian
- Urban/Developed

Animals

- least Bell's vireo
- American badger
- unarmored threespine stickleback
- steelhead - southern California DPS
- South Coast garter snake

Terrestrial Community

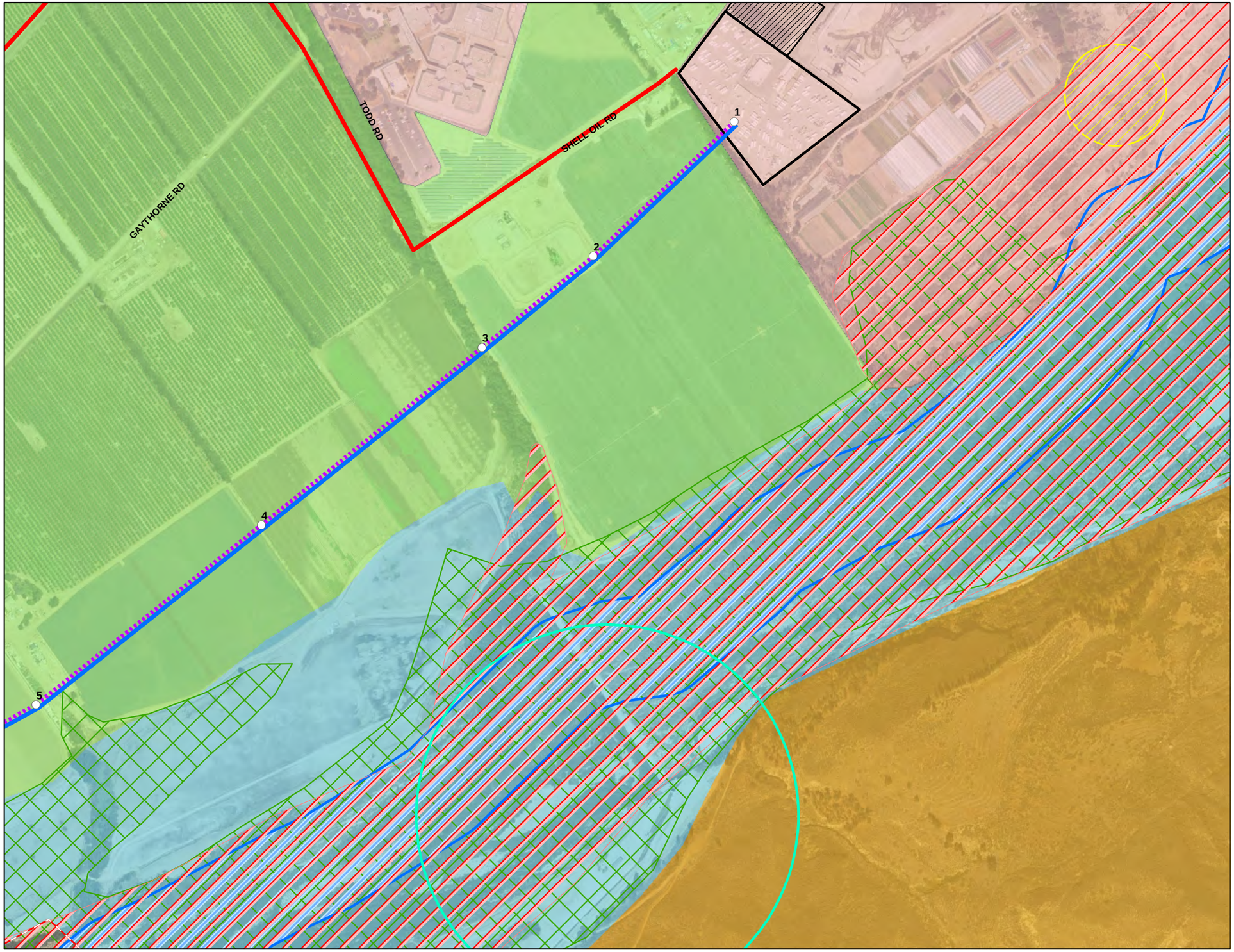
- Southern Riparian Scrub

Source:
CNDDB (2015).
CH2M (2015).

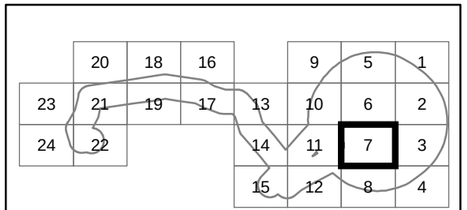
N

0 250 500
Feet

Figure 5.2-6 (Page 6 of 24)
Land Cover
Mission Rock Energy Center
Ventura County, California



VICINITY MAP



LEGEND

- Project Site
- Laydown Area
- Tower
- Natural Gas Pipeline Route
- Generator Tie-Line
- Process Water Supply Line
- Biology Study Area
- Agricultural
- Coastal Sagebrush Scrub
- Riparian
- Santa Clara River/Riparian
- Urban/Developed

Animals

- least Bell's vireo
- American badger
- unarmored threespine stickleback
- steelhead - southern California DPS
- South Coast garter snake

Terrestrial Community

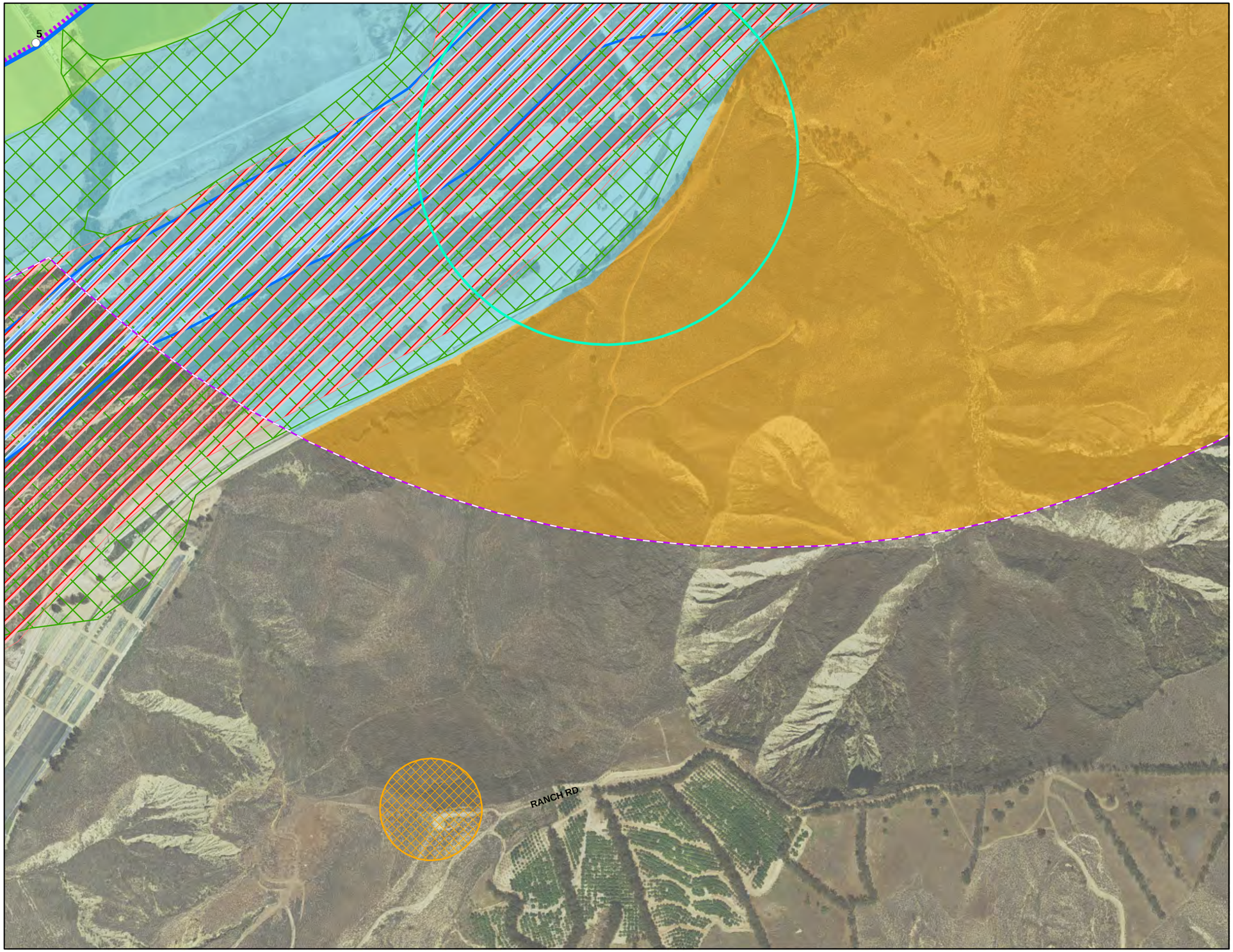
- Southern Riparian Scrub

Source:
CNDDB (2015).
CH2M (2015).

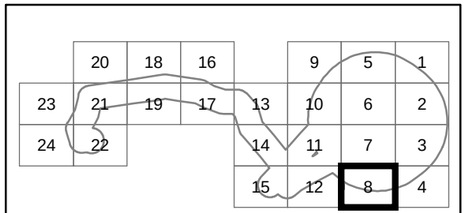
N

0 250 500
Feet

Figure 5.2-6 (Page 7 of 24)
Land Cover
Mission Rock Energy Center
Ventura County, California



VICINITY MAP



LEGEND

- Project Site
- Laydown Area
- Tower
- Natural Gas Pipeline Route
- Generator Tie-Line
- Process Water Supply Line
- Biology Study Area
- Agricultural
- Coastal Sagebrush Scrub
- Riparian
- Santa Clara River/Riparian
- Urban/Developed

Animals

- least Bell's vireo
- American badger
- unarmored threespine stickleback
- steelhead - southern California DPS
- South Coast garter snake

Terrestrial Community

- Southern Riparian Scrub

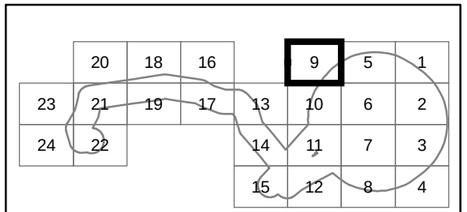
Source:
CNDDB (2015).
CH2M (2015).

N

0 250 500
Feet

Figure 5.2-6 (Page 8 of 24)
Land Cover
Mission Rock Energy Center
Ventura County, California

VICINITY MAP



LEGEND

- Project Site
- Laydown Area
- Tower
- Natural Gas Pipeline Route
- Generator Tie-Line
- Process Water Supply Line
- Biology Study Area
- Agricultural
- Coastal Sagebrush Scrub
- Riparian
- Santa Clara River/Riparian
- Urban/Developed

Animals

- least Bell's vireo
- American badger
- unarmored threespine stickleback
- steelhead - southern California DPS
- South Coast garter snake

Terrestrial Community

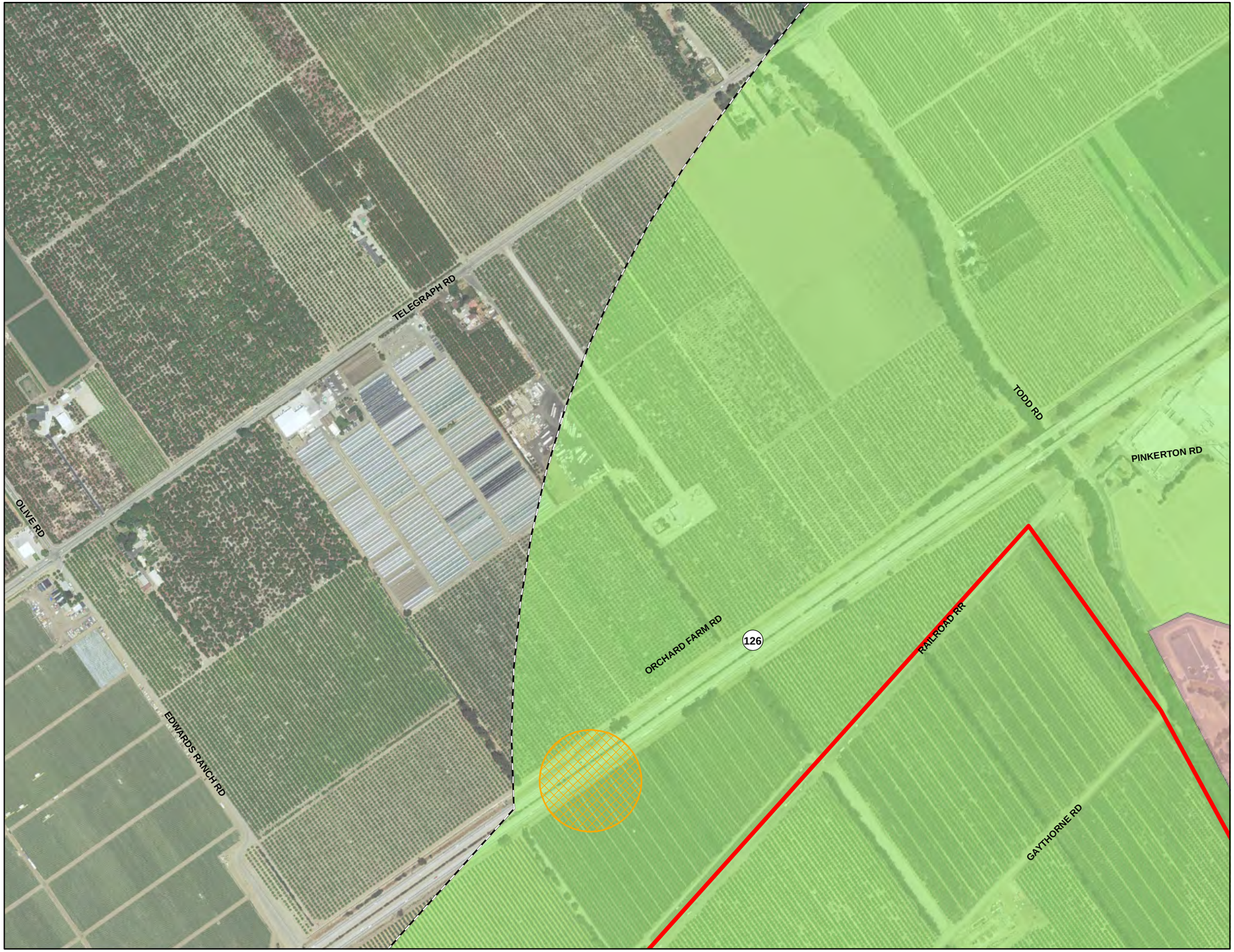
- Southern Riparian Scrub

Source:
CNDDB (2015).
CH2M (2015).

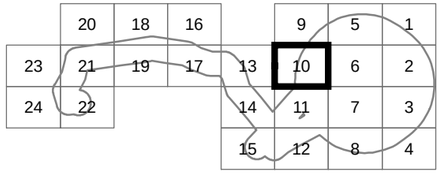
N

0 250 500
Feet

Figure 5.2-6 (Page 9 of 24)
Land Cover
Mission Rock Energy Center
Ventura County, California



VICINITY MAP



LEGEND

- Project Site
- Laydown Area
- Tower
- Natural Gas Pipeline Route
- Generator Tie-Line
- Process Water Supply Line
- Biology Study Area
- Agricultural
- Coastal Sagebrush Scrub
- Riparian
- Santa Clara River/Riparian
- Urban/Developed

Animals

- least Bell's vireo
- American badger
- unarmored threespine stickleback
- steelhead - southern California DPS
- South Coast garter snake

Terrestrial Community

- Southern Riparian Scrub

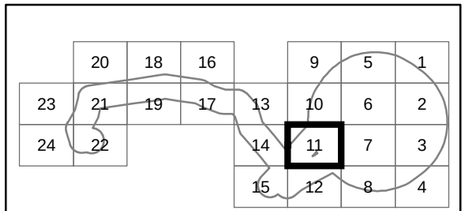
Source:
CNDDB (2015).
CH2M (2015).

N

0 250 500
Feet

Figure 5.2-6 (Page 10 of 24)
Land Cover
Mission Rock Energy Center
Ventura County, California

VICINITY MAP



LEGEND

- Project Site
- Laydown Area
- Tower
- Natural Gas Pipeline Route
- Generator Tie-Line
- Process Water Supply Line
- Biology Study Area
- Agricultural
- Coastal Sagebrush Scrub
- Riparian
- Santa Clara River/Riparian
- Urban/Developed

Animals

- least Bell's vireo
- American badger
- unarmored threespine stickleback
- steelhead - southern California DPS
- South Coast garter snake

Terrestrial Community

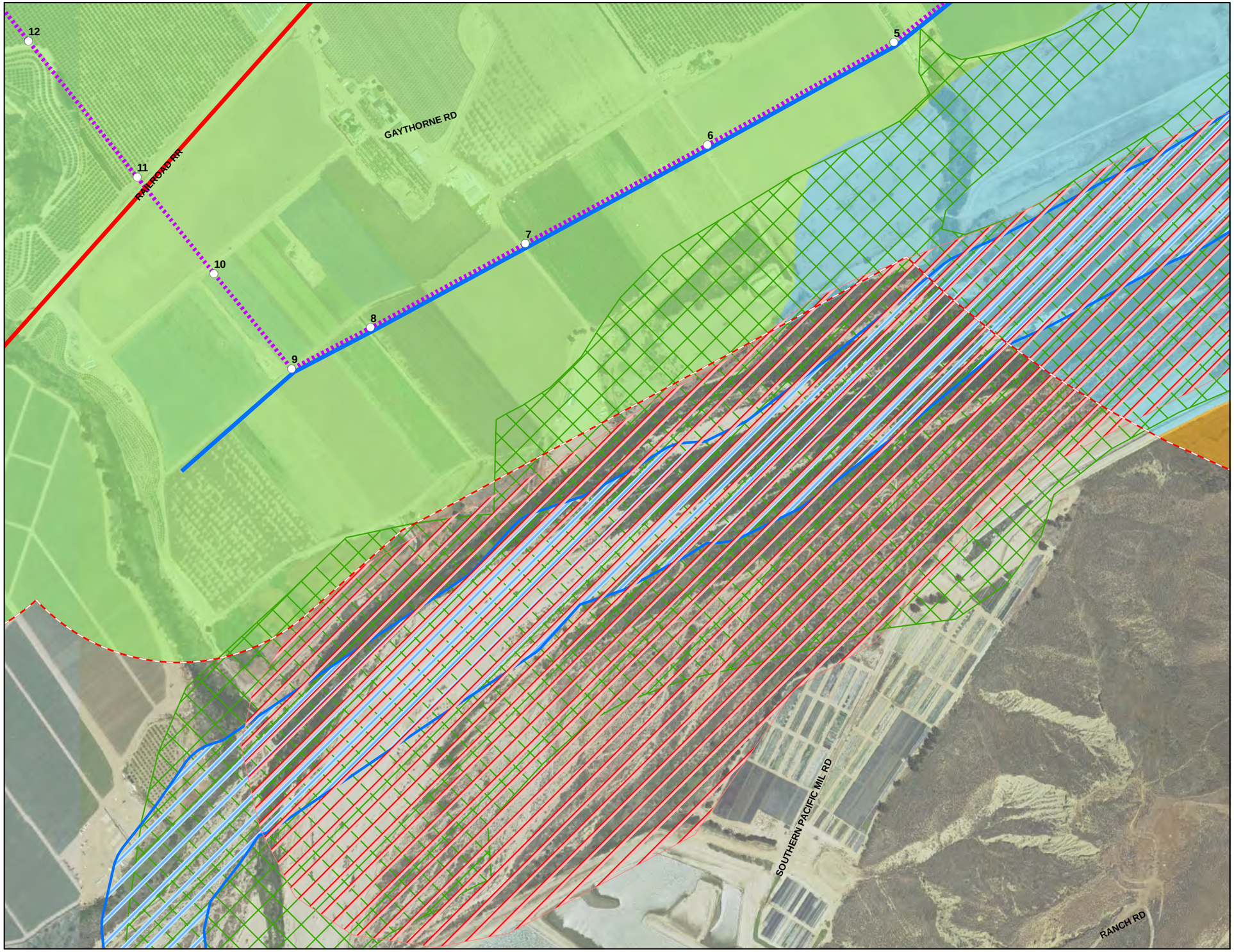
- Southern Riparian Scrub

Source:
CNDDB (2015).
CH2M (2015).

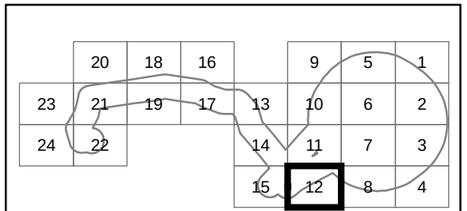
N

0 250 500
Feet

Figure 5.2-6 (Page 11 of 24)
Land Cover
Mission Rock Energy Center
Ventura County, California



VICINITY MAP



LEGEND

- Project Site
- Laydown Area
- Tower
- Natural Gas Pipeline Route
- Generator Tie-Line
- Process Water Supply Line
- Biology Study Area
- Agricultural
- Coastal Sagebrush Scrub
- Riparian
- Santa Clara River/Riparian
- Urban/Developed

Animals

- least Bell's vireo
- American badger
- unarmored threespine stickleback
- steelhead - southern California DPS
- South Coast garter snake

Terrestrial Community

- Southern Riparian Scrub

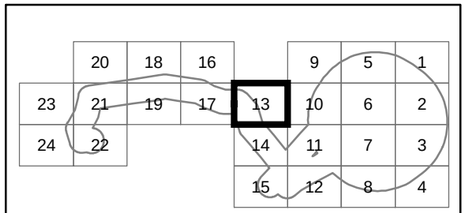
Source:
CNDDB (2015).
CH2M (2015).

N

0 250 500
Feet

Figure 5.2-6 (Page 12 of 24)
Land Cover
Mission Rock Energy Center
Ventura County, California

VICINITY MAP



LEGEND

- Project Site
- Laydown Area
- Tower
- Natural Gas Pipeline Route
- Generator Tie-Line
- Process Water Supply Line
- Biology Study Area
- Agricultural
- Coastal Sagebrush Scrub
- Riparian
- Santa Clara River/Riparian
- Urban/Developed

Animals

- least Bell's vireo
- American badger
- unarmored threespine stickleback
- steelhead - southern California DPS
- South Coast garter snake

Terrestrial Community

- Southern Riparian Scrub

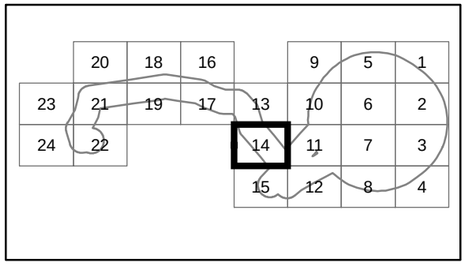
Source:
CNDDB (2015).
CH2M (2015).

N

0 250 500
Feet

Figure 5.2-6 (Page 13 of 24)
Land Cover
Mission Rock Energy Center
Ventura County, California

VICINITY MAP



LEGEND

- Project Site
- Laydown Area
- Tower
- Natural Gas Pipeline Route
- Generator Tie-Line
- Process Water Supply Line
- Biology Study Area
- Agricultural
- Coastal Sagebrush Scrub
- Riparian
- Santa Clara River/Riparian
- Urban/Developed

Animals

- least Bell's vireo
- American badger
- unarmored threespine stickleback
- steelhead - southern California DPS
- South Coast garter snake

Terrestrial Community

- Southern Riparian Scrub

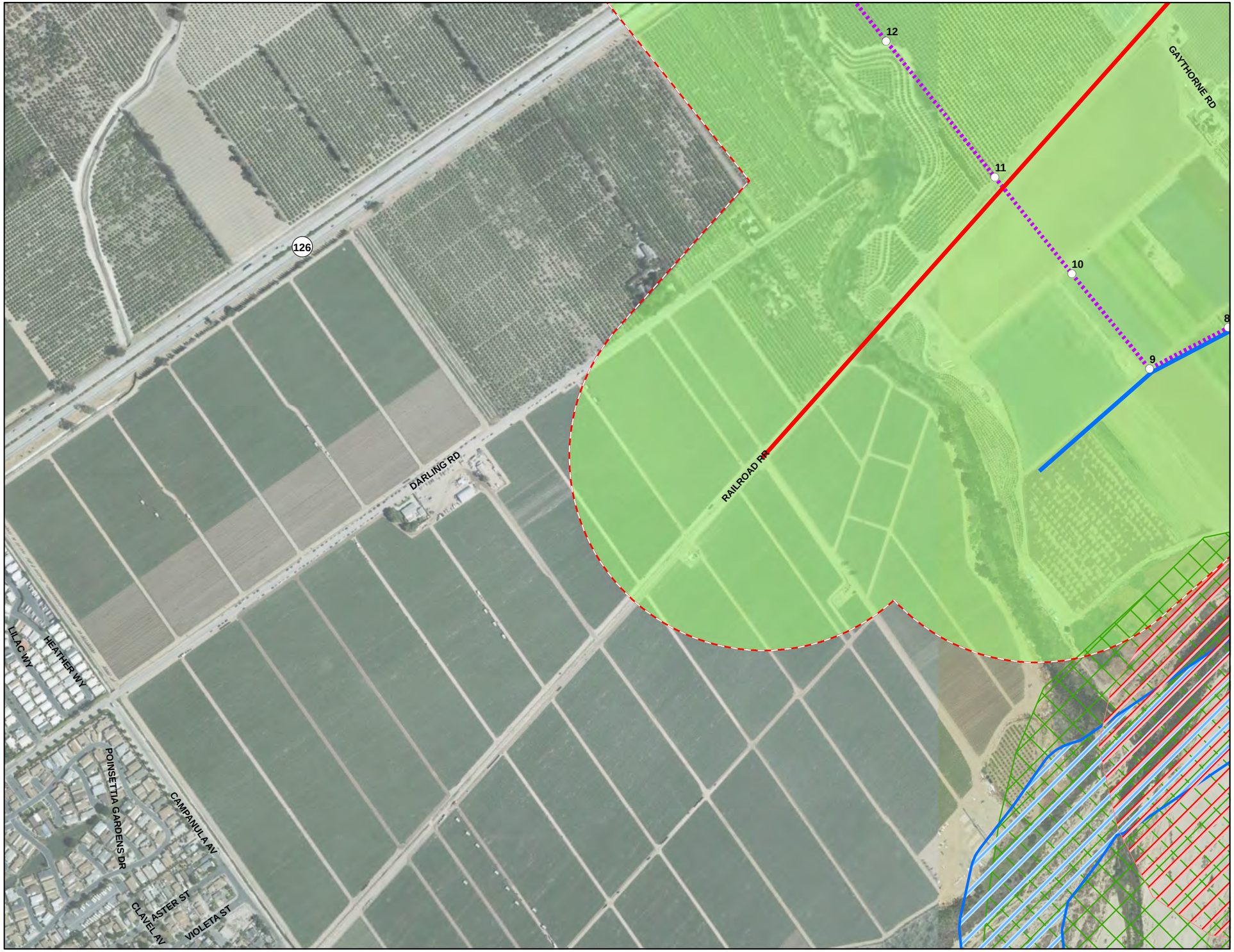
Source:
CNDDB (2015).
CH2M (2015).

N

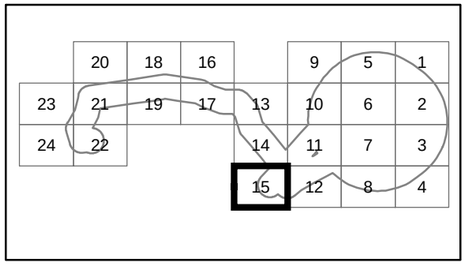
0 250 500
Feet

Figure 5.2-6 (Page 14 of 24)
Land Cover

Mission Rock Energy Center
Ventura County, California



VICINITY MAP



LEGEND

- Project Site
- Laydown Area
- Tower
- Natural Gas Pipeline Route
- Generator Tie-Line
- Process Water Supply Line
- Biology Study Area
- Agricultural
- Coastal Sagebrush Scrub
- Riparian
- Santa Clara River/Riparian
- Urban/Developed

Animals

- least Bell's vireo
- American badger
- unarmored threespine stickleback
- steelhead - southern California DPS
- South Coast garter snake

Terrestrial Community

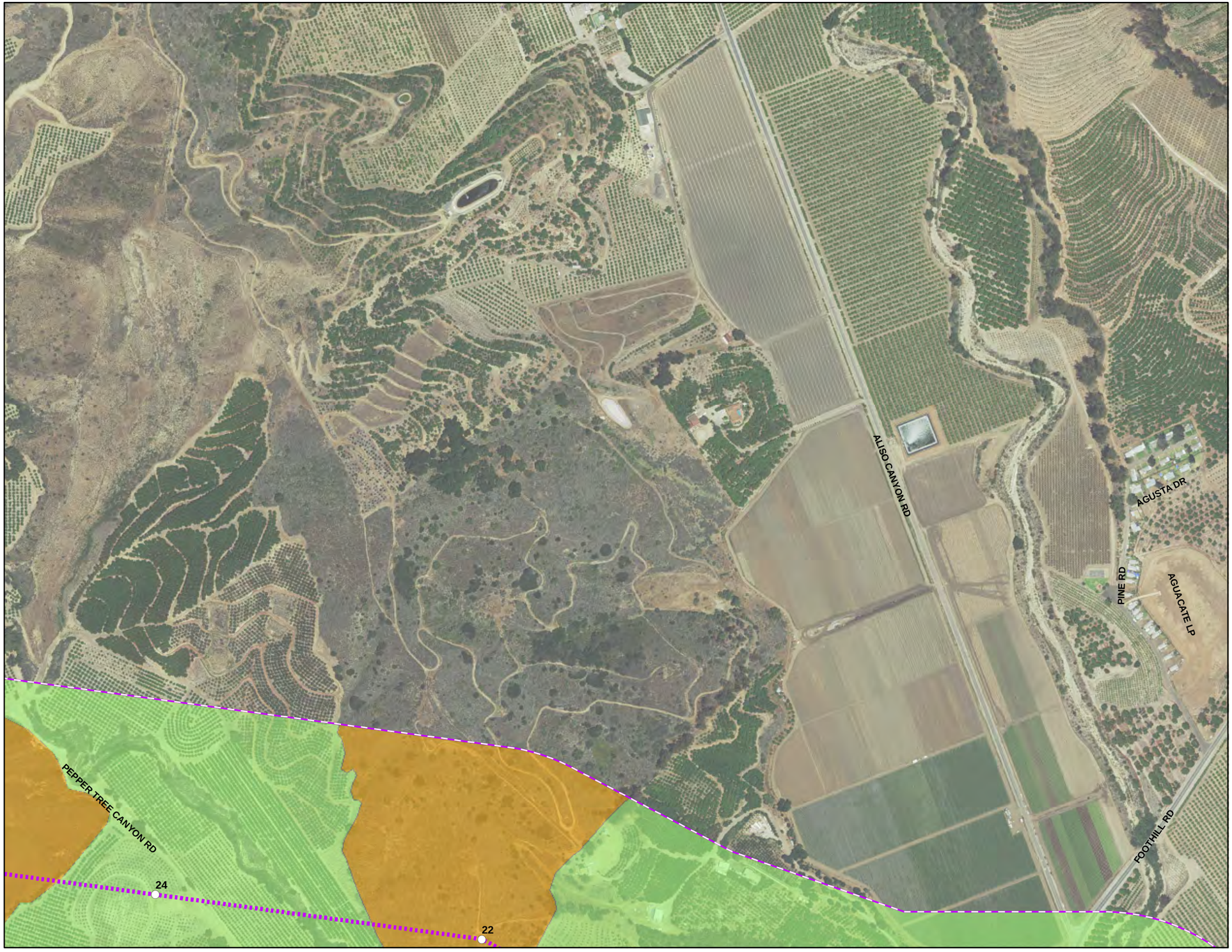
- Southern Riparian Scrub

Source:
CNDDB (2015).
CH2M (2015).

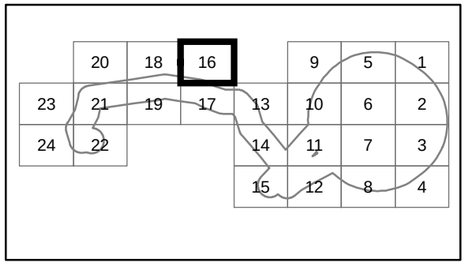
N

0 250 500
Feet

Figure 5.2-6 (Page 15 of 24)
Land Cover
Mission Rock Energy Center
Ventura County, California



VICINITY MAP



LEGEND

- Project Site
- Laydown Area
- Tower
- Natural Gas Pipeline Route
- Generator Tie-Line
- Process Water Supply Line
- Biology Study Area
- Agricultural
- Coastal Sagebrush Scrub
- Riparian
- Santa Clara River/Riparian
- Urban/Developed

Animals

- least Bell's vireo
- American badger
- unarmored threespine stickleback
- steelhead - southern California DPS
- South Coast garter snake

Terrestrial Community

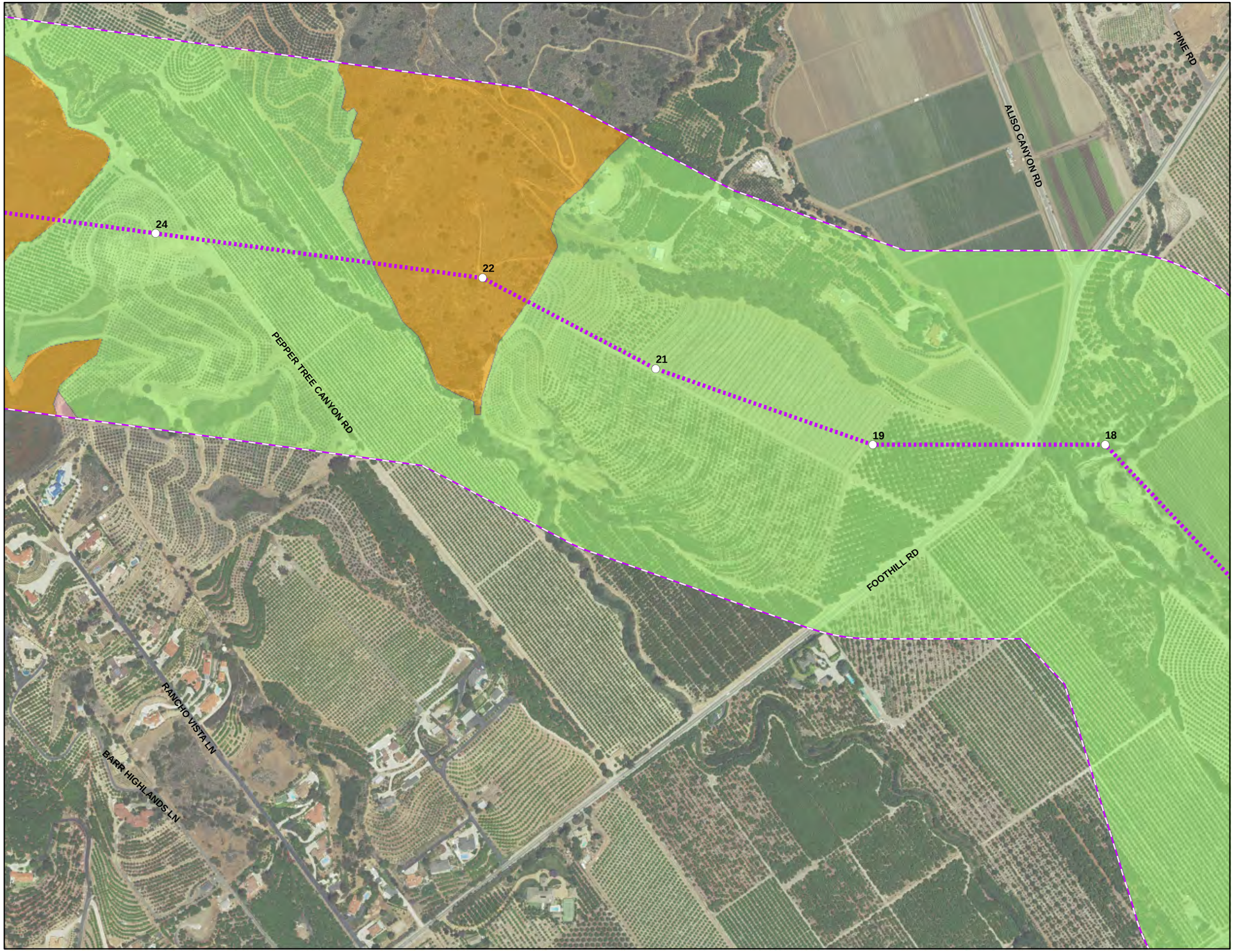
- Southern Riparian Scrub

Source:
CNDDB (2015).
CH2M (2015).

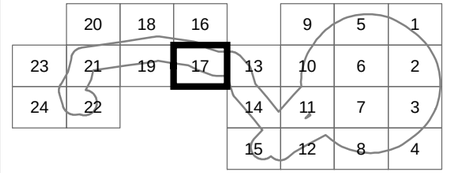
N

0 250 500
Feet

Figure 5.2-6 (Page 16 of 24)
Land Cover
Mission Rock Energy Center
Ventura County, California



VICINITY MAP



LEGEND

- Project Site
- Laydown Area
- Tower
- Natural Gas Pipeline Route
- Generator Tie-Line
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Animals

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Terrestrial Community

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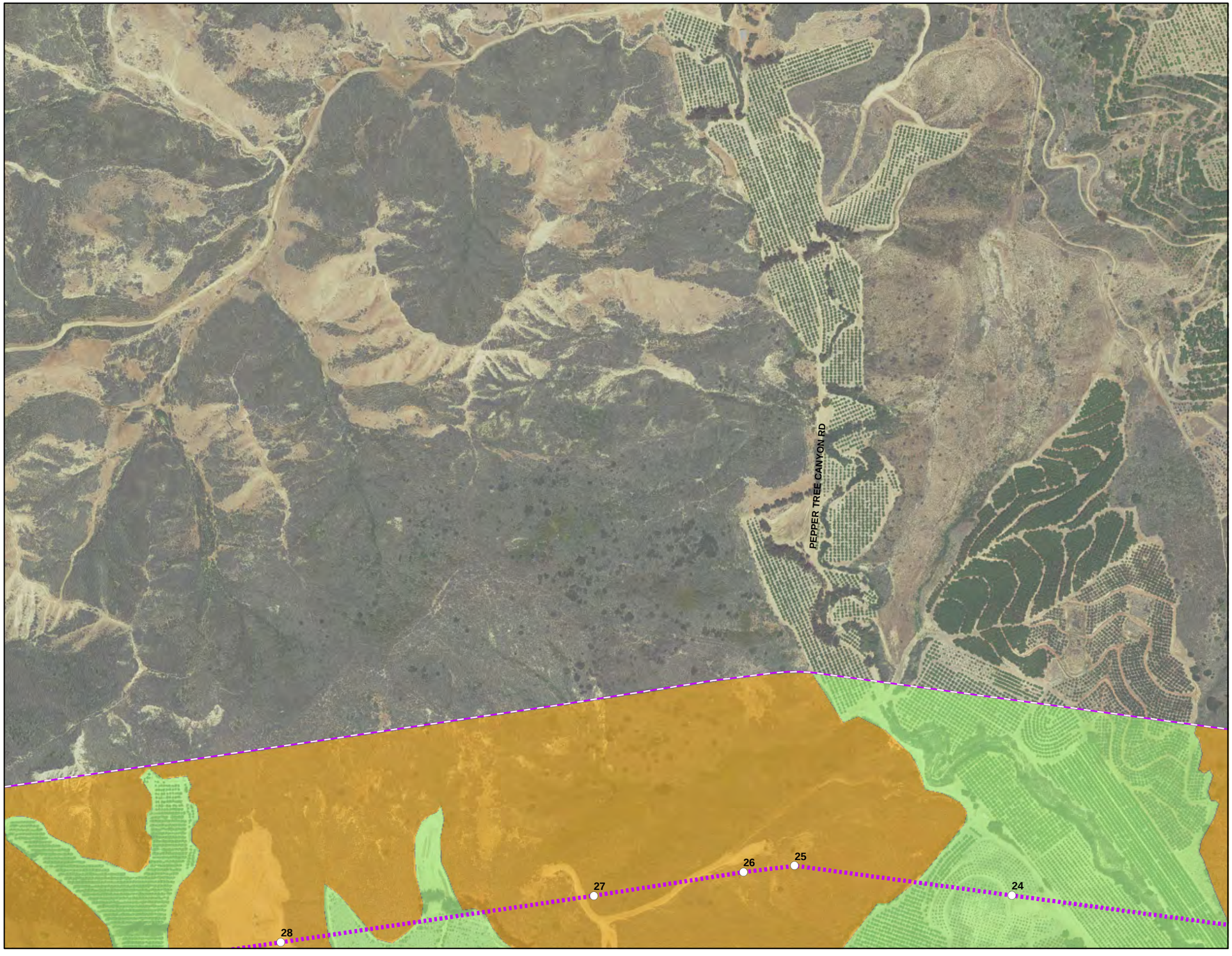
Source:
CNDDB (2015).
CH2M (2015).

N

0 250 500
Feet

Figure 5.2-6 (Page 17 of 24)
Land Cover
Mission Rock Energy Center
Ventura County, California



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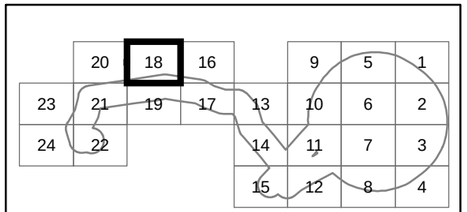

LEGEND

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- Laydown Area
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Terrestrial Community

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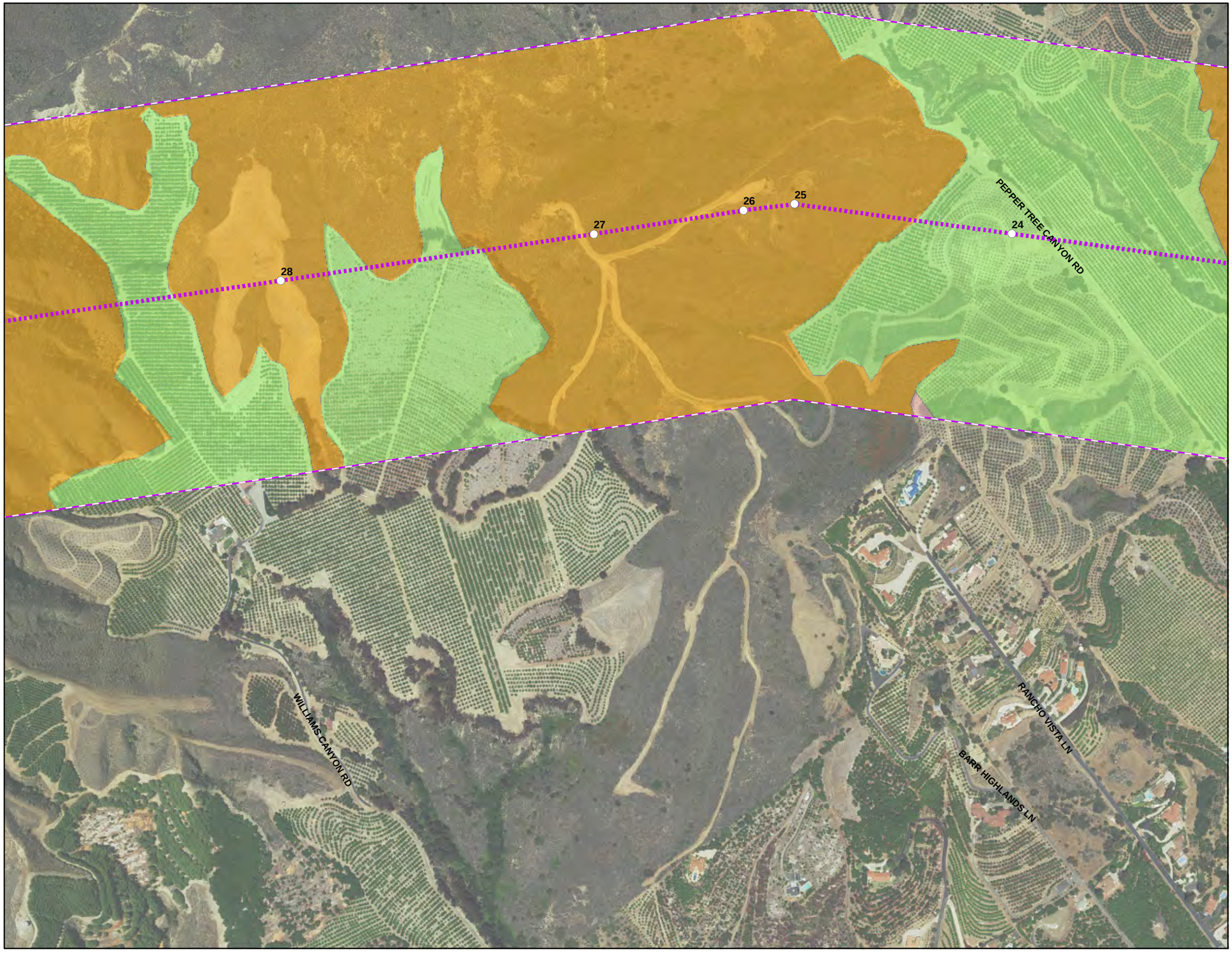
Source:
CNDDB (2015).
CH2M (2015).

N

0 250 500
Feet

Figure 5.2-6 (Page 18 of 24)
Land Cover
Mission Rock Energy Center
Ventura County, California



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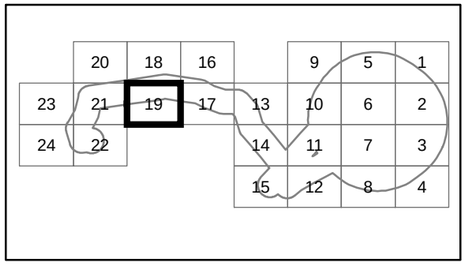

LEGEND

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Terrestrial Community

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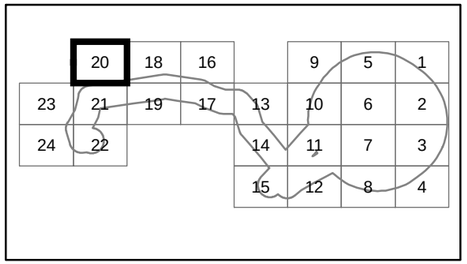
Source:
CNDDB (2015).
CH2M (2015).

N

0 250 500
Feet

Figure 5.2-6 (Page 19 of 24)
Land Cover
Mission Rock Energy Center
Ventura County, California

VICINITY MAP



LEGEND

- Project Site
- Laydown Area
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- Generator Tie-Line
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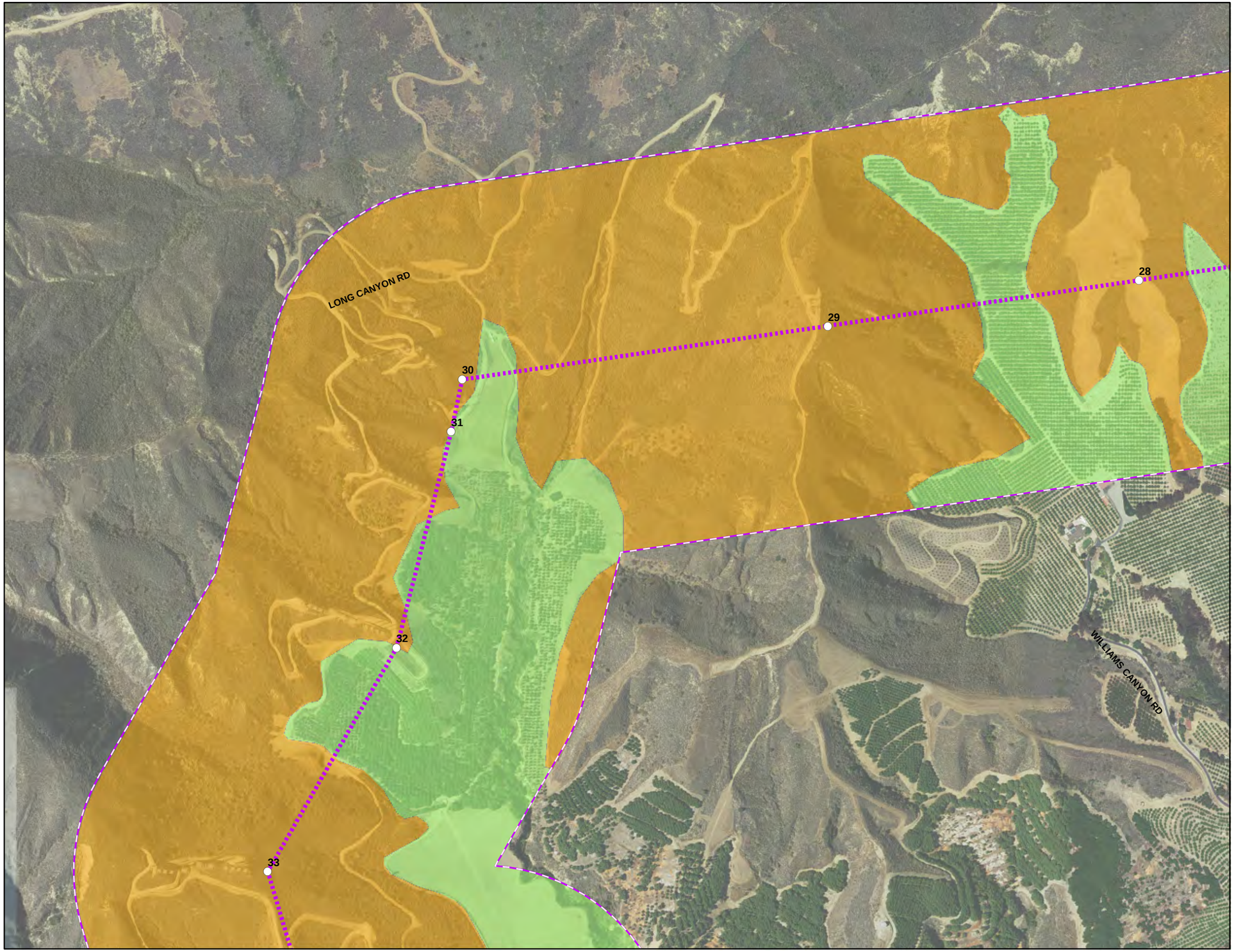
Source:
CNDDB (2015).
CH2M (2015).

N

0 250 500
Feet

Figure 5.2-6 (Page 20 of 24)
Land Cover
Mission Rock Energy Center
Ventura County, California



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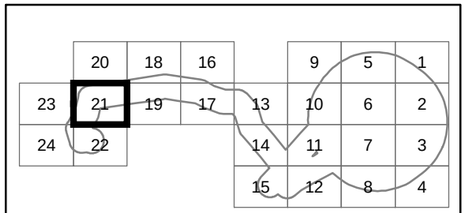

LEGEND

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- Laydown Area
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- Generator Tie-Line
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Terrestrial Community

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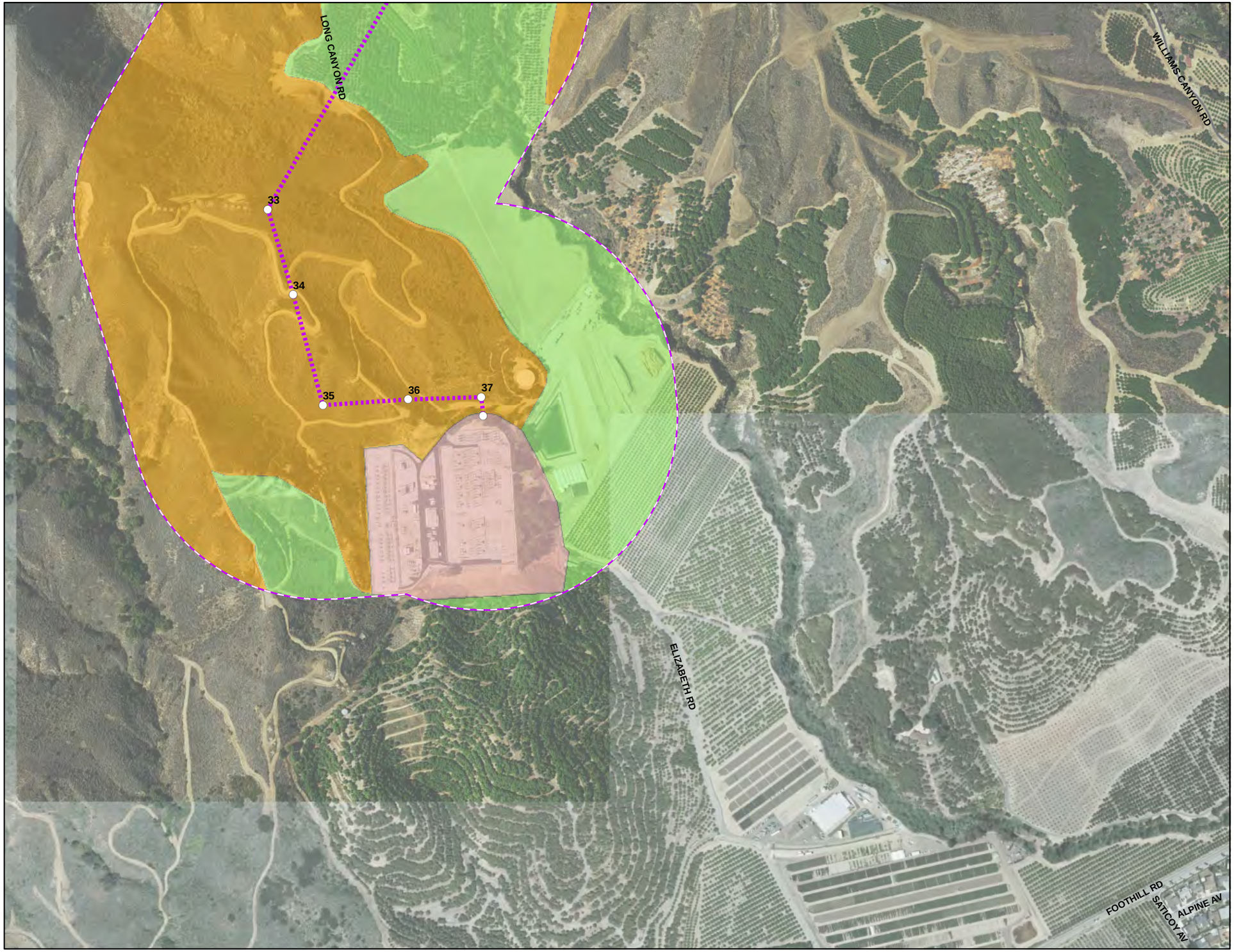
Source:
CNDDB (2015).
CH2M (2015).

N

0 250 500
Feet

Figure 5.2-6 (Page 21 of 24)
Land Cover
Mission Rock Energy Center
Ventura County, California



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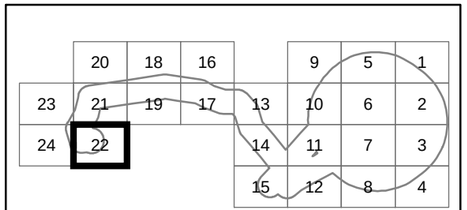

LEGEND

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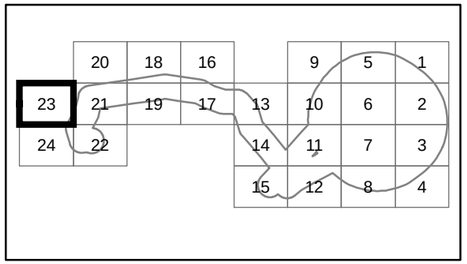
Source:
CNDDB (2015).
CH2M (2015).

N

0 250 500
Feet

Figure 5.2-6 (Page 22 of 24)
Land Cover
Mission Rock Energy Center
Ventura County, California

VICINITY MAP



LEGEND

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- Laydown Area
- Tower
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Terrestrial Community

- Southern Riparian Scrub

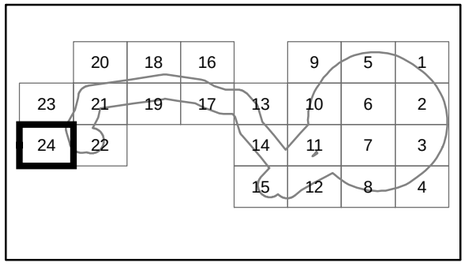
Source:
CNDDB (2015).
CH2M (2015).

N

0 250 500
Feet

Figure 5.2-6 (Page 23 of 24)
Land Cover
Mission Rock Energy Center
Ventura County, California

VICINITY MAP



LEGEND

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Source:
CNDDB (2015).
CH2M (2015).

N

0 250 500
Feet

Figure 5.2-6 (Page 24 of 24)
Land Cover
Mission Rock Energy Center
Ventura County, California