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4.2 BIOLOGICAL RESOURCES

This section describes the biological resources in and near the Puente Power Project (P3 or project) site, and potential impacts to these resources associated with construction and operation of the project. The project area discussed in this section refers to all areas of temporary and permanent disturbance associated with the construction and operation of the new plant and ancillary systems, and construction laydown areas. No new offsite linear facilities are required for P3. The regional study area for biological resources evaluated in this section is defined as the area within a 10-mile radius of the P3 site, and the detailed study area is within 1 mile of the P3 site.

The sections below provide an overview of the affected environment; an evaluation of the environmental consequences of the proposed project to biological resources; a cumulative impact analysis; identification of measures that will avoid and reduce project impacts below the level of significance; and applicable laws, ordinances, regulations, and standards (LORS).

4.2.1 Affected Environment

Biological resources in the project site and adjacent areas were identified primarily based upon reviews of database records and field observations. The following sections describe regional and local biological resources, as well as sensitive habitats (e.g., wetlands) and species that may potentially occur in the area.

The biological information presented in this section was obtained from:

- U.S. Fish and Wildlife Service (USFWS), Ventura Fish and Wildlife Office Endangered Species Lists: Federally listed species with historic range or current distribution in the U.S. Geological Survey (USGS) 7.5 Oxnard quadrangle, accessed February 2015 (USFWS, 2015).
- California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB): Special-status species occurrence records from 10-mile radius from the project site, accessed January 2015 (CDFW, 2015a and 2015b) (Appendix D-1).
- California Native Plant Society (CNPS) Rare Plant Database: CNPS-listed plants in the USGS 7.5 Oxnard quadrangle and the surrounding eight quadrangles, accessed February 2015 (CNPS, 2015).
- Consortium of California Herbaria (CCH) collection records of vascular plant specimens (CCH, 2015).

High-quality aerial photography, previous studies of McGrath Lake, previous studies of the Santa Clara River mouth, approval documents for the adjacent McGrath Peaker Plant, and the databases described above were used to identify habitat that could support special-status plants or animals. In addition to literature review, biological information was obtained through a winter-season biological field reconnaissance performed by AECOM biologist Christopher Julian on January 12, 2015, and through botanical and wildlife surveys of the site and surrounding vicinity conducted by AECOM biologists Christopher Julian, Julie Love, and Elihu Gevirtz on March 12 and 31, 2015. The names, qualifications, and résumés for the biologists that conducted the survey are provided in Appendix D-2. Table 4.2-1 summarizes the special-status wildlife, plants, and habitats that have been previously documented in the project vicinity based on available data sources; locations of these documented occurrences are depicted on Figure 4.2-1. The potential for occurrence in the project area and the potential for impacts are evaluated based on a review of the databases listed above, knowledge of the area, and the project description. Tables 4.2-2 and 4.2-3 list plant and wildlife species observed on the project site and in the vicinity.

4.2.1.1 Regional Overview

The P3 site is situated in the fenced boundary of an existing electrical-generating facility, the Mandalay Generating Station (MGS). The project site is at the seaward edge of the broad Santa Clara River alluvial plain in the City of Oxnard, adjacent to Mandalay Beach. The site is approximately 2 miles south of the Santa Clara River mouth, and approximately 12 miles northwest of Mugu Lagoon (Figure 2.3-1). McGrath State Beach (which includes McGrath Lake) is more than 200 feet from the site's northern boundary. Historically, the shoreline between the mouth of the Santa Clara River and Mugu Lagoon consisted of sandy beaches, freshwater marshes, McGrath Lake, sand dunes, and an extensive series of mostly closed brackish to saline lagoons, seasonal ponds, salt flats, and salt/brackish marshes (Beller et al., 2011). The extent of the system has been significantly reduced, but remnants of these habitats remain.

4.2.1.1.1 Geologic and Hydrologic Processes

The geology of the surrounding lands is active Aeolian (wind-blown sand dune) deposits, consisting of loose sand and silt which lie on top of older alluvial deposits (California Department of Conservation, 2003). The Santa Clara River is a major source of sand for the beaches south of the river mouth. On the beach, sand particles in the surf zone are continuously being shifted to and from the ocean by wave action. Generally speaking, during the winter, these processes result in a net movement of sediment away from the shore, resulting in narrow, steeply sloped beaches during winter and early spring. During the summer, offshore sand is gradually deposited back on the beaches by gentle wave action. By the end of summer, the beaches are wider and have a more gradual, gentler slope (California Department of Parks and Recreation, 1979). Aside from the beach areas, lands in the project vicinity are generally stable and are not subject to significant geologic changes or hydrologic alteration.

Notwithstanding the general trends described above, movement of sand and the resulting impacts to the beach can vary based on site-specific characteristics. In the case of the beach adjacent to the MGS facility and P3 site, sand deposition, rather than erosion, has been occurring. Aerial photographs of the beach taken between 1947 and 2014 show significant accretion, as shown in Figure 4.15-7 in Section 4.15, Water Resources. The beach pictured in 2014 was approximately 300 feet wider than that pictured in 1947. Because the aerial photographs may not all have been taken at the same part of the tide, and because the average daily tidal horizontal variation is about 75 feet, we can conclude that the beach has widened at least 225 feet during this period. Therefore, even given the worst-case scenario outlined above, and assuming that historical accretion will not continue, the beach would be approximately the same width in 2060 as it was in 1947. This increase in beach width observed from the aerial photographs may be a consequence of the jetties and breakwater constructed at the mouth of Channel Islands Harbor, which may be trapping sediment and causing accretion. Also, the Santa Clara River is a large source of sediment, and accretion south of the river mouth has been measured as part of a U.S. Geological Survey study (Barnard, et al., 2009).

4.2.1.1.2 Sandy Beach

The P3 site is situated in close proximity to the Pacific Ocean, and abuts a long, sandy beach and dune system. The slope of the beach is moderate. The beach adjacent to the P3 site varies in width, but is generally greater than 300 feet wide. The coastline itself is straight, extending from northwest to southeast, with the Pacific Ocean situated to the west. Hummocks of sand dunes separate the beach from the inland flat areas that are in cultivated agriculture or are developed. The dunes vary in height, with the highest being about 30 feet above mean sea level. The inland flats between the dunes and Harbor Boulevard are about 10 to 16 feet above mean sea level (California Department of Parks and Recreation, 1979). The beaches in the area support colonies of nesting California least tern (*Sterna antillarum browni*) (endangered) and western snowy plover (*Charadrius nivosus nivosus*) (threatened).

4.2.1.1.3 McGrath Lake

McGrath Lake is a natural freshwater lake that occurs in a low spot between parallel ridges of sand dunes approximately 500 feet north of the P3 site. Historically, the lake received water from surface flows from the Santa Clara River and subsurface flows from groundwater. McGrath Lake, even in the 1850s, was a freshwater lake with extensive stands of tule (*Schoenoplectus* spp.). The lake has shifted about 1,500 feet to the south since 1855, and its size has increased from 8 acres in 1855 to 15 acres in 2005 (Beller et al., 2011). Currently, the southwestern tip of McGrath Lake is approximately 450 feet from the northwestern corner of the site (ESA, 2003).

Tile drains were installed in the region to facilitate the development of farms, which greatly reduced the extent of flooded soils, and consequently, wetlands. In 1958, Harbor Boulevard was built east of the park and lake, further disrupting the hydrological inputs to McGrath Lake. Under current conditions, the lake receives water from tile drain discharge, irrigation runoff, and stormwater from agricultural operations in the sub-watershed. An artificial discharge of lake water to McGrath State Beach occurs through the use of pumps to minimize flooding the fields east of Harbor Boulevard (California State Water Resources Control Board, 2010).

4.2.1.1.4 Sand Dunes

A topographic map of dunes near McGrath Lake drawn in 1855 indicates dune tussocks and alkaline grassland (probably populated by saltgrass) in the depressions, and willows on the higher portions of the dunes. Researchers have deduced that in the early 1800s, the project site itself was sand dunes, with scattered alkali meadows in the low spots between the dunes (Beller et al., 2011). Plants recorded on the dunes near Mandalay Beach in the 1930s include yellow bush lupine (*Lupinus arboreus*) and pink and red sand verbena (*Abronia umbellata* and *A. maritima*), among many others (Beller et al., 2011). The dunes currently support special-status animals, including globose dune beetle (*Coelus globosus*) and silvery legless lizard (*Anniella* sp.) (CDFW, 2015a).

4.2.1.1.5 Saltwater Marsh

Saltwater marsh, vegetated by pickleweed, jaumea, and saltgrass, is present between the campground at McGrath State Beach and the river mouth. Drainage of the marsh is controlled by a flood gate at the intersection of the levee and the dunes (California Department of Parks and Recreation, 1979). The marsh supports Ventura marsh milk-vetch (*Astragalus pycnostachyus* var. *lanosissimus*), saltmarsh bird's-beak (*Chloropyron maritimum*), black rail (*Laterallus jamaicensis*), and Belding's savannah sparrow (*Passerculus sandwichensis beldingi*) (CDFW, 2015a; California Department of Parks and Recreation, 1979).

4.2.1.1.6 Lagoons

An extensive series of lagoons between the Santa Clara River mouth and Mugu Lagoon was mapped in the 1850s. These maps depict the lagoons as a series of open water/salt flat/marsh complexes separated from the ocean by tall and wide sand dunes. None of the lagoons are shown with a tidal outlet. They probably opened infrequently, and would today be considered perched or dune-dammed lagoons. Some of them supported Ventura marsh milk-vetch and saltmarsh bird's-beak (Beller et al., 2011). Anecdotal evidence suggests that these lagoons supported tens of thousands of waterfowl in the winters when they were full of water (Beller et al., 2011).

4.2.1.2 Local Habitats

4.2.1.2.1 Vegetation Communities

P3 will encompass approximately 3 acres within the fenced boundaries of the existing MGS, near the northern edge of the facility. The site itself has been graded and subjected to various human uses in the past, and the vegetation is significantly disturbed. Dominant plants include many invasive weeds, including freeway iceplant (*Carpobrotus edulis*), slenderleaf ice plant (*Mesembryanthemum nodiflorum*), and Russian thistle (*Salsola tragus*); and horticultural species such as lollypop tree (*Myoporum laetum*). Remnant coastal dune scrub habitats occur in the southern portion of the site, supporting native species including coyote brush (*Baccharis pilularis*) and woolly seablite (*Suaeda taxifolia*). However, even this area is disturbed, and invasive species are prevalent. Soils in the P3 site appear to have been artificially compacted, and infiltration may be impaired. The presence of woolly seablite, a facultative wetland plant commonly found in salt marshes, supports this notion, because unimpacted soils in the vicinity are generally sandy and well-drained, and would not naturally retain water in the upper soil layers as required by this species.

The portion of the MGS property where P3 will be located was originally slated for development of future steam-generating units; however, these were never constructed at this location. A 30—inch-diameter gas line traverses the site; this gas line was intended to be the gas supply for these future steam-generating units. Previous uses of the portion of the MGS property where P3 will be constructed are summarized in Section 2.4 of the Project Description. Several times, the proposed site was used as a storage area for dredged spoils removed during maintenance dredging of the Edison Canal (Eagle North America, 2003). Vegetation on the site was kept to a minimum during that period, and the site was almost completely covered with linear stockpiles of soil. Because the material originated from a saltwater environment in the Edison Canal, it is probable that several years of storing this material on the proposed project site transferred some of the salt content to the onsite soils. If this is the case, it would help to explain the success of woolly seablite, a salt marsh plant, on the site. It is important to recognize that the project site has no connection to a saltwater environment and is not in an area of shallow groundwater, and that the presence of woolly seablite does not indicate wetland conditions.

A proposed overflow area for material storage and laydown during construction is roughly 100 feet south of the Edison Canal, in the southern portion of the existing MGS site. The vegetation in the overflow area exhibits signs of chronic disturbance, and is likely mowed on a periodic basis. Shrubs and trees are absent, with the exception of a single lollypop tree, and the herbaceous layer is dominated by invasive species, including slenderleaf ice plant, red-stem fillaree (*Erodium cicutarium*), and nonnative annual grasses. Vegetation in this area was mapped as ruderal, although a few native *Dudleya* are present.

Sand dunes are adjacent to the site's northern and western boundaries; and the southern tip of McGrath Lake is approximately 500 feet northwest of the northwestern corner of the site. Mandalay Beach is situated immediately west of the site.

Vegetation within 1,000 feet of the P3 site and laydown areas includes a variety of natural and anthropogenic vegetation communities. Locations of these communities relative to the project site are illustrated on Figure 4.2-2, and biological characteristics are described below. Vegetation communities are described based on the classification system developed by Sawyer and others (2009) and a vegetation map of McGrath State Beach (ESA, 2003). Some areas are unvegetated, either naturally or due to land use practices; these include open water at McGrath Lake and the Pacific Ocean, the sandy beaches, and developed hardscape. Vegetation communities and land covers mapped within 1,000 feet of the site are described below.

Agriculture

Although they typically exhibit high vegetative cover, agricultural areas are not classified or assigned nomenclature by Sawyer and others (2009). Agricultural areas are characterized by the presence of economically important food or forage crops that are actively planted, managed, and harvested by humans. Because the intent is usually to maximize economic output, the vegetative cover of agricultural species can be quite high, but diversity is limited, sometimes to a single crop. Due to land management practices, agricultural areas do not generally provide suitable habitat for native plant species. Habitat for wildlife can vary significantly depending on the species, the types of crops under cultivation, and the agricultural practices in use. For example, the value of agricultural areas for foraging raptors is well documented; however, agricultural areas provide almost no value to shrub-nesting bird species. In the vicinity of the P3 site, agricultural lands occur on the east side of Harbor Boulevard, north of the site.

Arroyo Willow Thickets (*Salix lasiolepis* Shrubland Alliance)

Salix lasiolepis is dominant or co-dominant in the shrub or tree canopy with *Baccharis pilularis*, *B. salicifolia*, and other species. Arroyo willow thickets occur on stream banks, benches, seeps, and along drainages (Sawyer et al., 2009), and are identified by the CDFW (2010) as a sensitive natural community. This community occurs north of the project site, in association with the McGrath Lake ecosystem and localized topographic depressions (ESA, 2003). In one localized area near the entrance to the existing MGS facility, arroyo willow thickets have interspersed with ornamental species used in the site landscaping. This area is illustrated on Figure 4.2-2.

California Bulrush Marsh (*Schoenoplectus californicus* Herbaceous Alliance)

California bulrush (*Schoenoplectus californicus*) marshes are a relatively widespread, emergent vegetation community that occurs in brackish to freshwater marshes, shores, bars, and channels of river estuaries. The community is dominated by California bulrush, with other emergent species such as alkali bulrush (*Bolboschoenus maritimus*), hardstem bulrush (*Schoenoplectus acutus*), and cattails (*Typha* spp.). In the vicinity of the P3 site, California bulrush marsh occurs on the margins of McGrath Lake, between the open water habitats and the surrounding scrub habitats. California bulrush marsh maintains no sensitivity designation, but is generally regarded as a riparian community and afforded consideration in environmental analyses under the California Environmental Quality Act (CEQA).

California Sagebrush Scrub (*Artemisia californica*, Shrubland Alliance)

California sagebrush (*Artemisia californica*) is dominant or co-dominant with coyote brush, bush monkeyflower (*Diplacus aurantiacus*), California encelia (*Encelia californica*), and others (Sawyer et al., 2009). This shrub community is common in southern California. Within 1,000 feet of the project site, this community occurs only adjacent to the McGrath Peaker Plant as a strip of native landscaping that has been planted along Harbor Boulevard.

Developed

Developed lands generally do not contain significant vegetation, and are not classified or assigned nomenclature by Sawyer and others (2009). Developed areas frequently contain hardscaped surfaces, buildings, and other manmade features, and generally do not provide significant value for native plants and wildlife. In many cases, development can cause transitions in species composition, wherein species (including native and nonnative species) that are tolerant of the developed condition are able to persist and increase in abundance, while those that are not become displaced. In the vicinity of the P3 site, developed areas include the existing MGS facility, the adjacent McGrath Peaker Plant, Harbor Boulevard, and other smaller structures and areas of hardscape.

Dune Mats (*Abronia latifolia*-*Ambrosia chamissonis* Herbaceous Alliance)

Abronia latifolia and/or *Ambrosia chamissonis* mixed with other perennial herbs, grasses, and low shrubs to form a low canopy with *Abronia maritima*, *A. umbellata*, *Achillea millefolium*, and others. Emergent shrubs of *Baccharis pilularis*, *Lupinus arboreus*, and others may be present. This community inhabits the inner dunes inland from the leading edge of the beach. These areas are rarely impacted by saltwater overwash during storms (Sawyer et al., 2009). This community occurs west and north of the project site (ESA, 2003). Dune mats are identified by the CDFW (2010) as a sensitive natural community.

Ice Plant Mats (*Carpobrotus edulis* or Other Ice Plants Semi-Natural Herbaceous Stands)

Ice plant mats are an invasive, nonnative vegetation community dominated by ice plant species. A total of eight ice plant species occur in California, and all can form this community. On the P3 site and surrounding vicinity, ice plant mats are dominated by freeway ice plant and slenderleaf ice plant (Freeway ice plant is a ground-hugging succulent perennial that forms impenetrable mats covering large areas. Its invasive species ranking is High (Cal-IPC, 2006). Stands of this species are common on coastal dune systems and along bluffs on the southern California coast (Sawyer et al., 2009). The P3 site is dominated by iceplant mats, and this community also occurs on the adjacent State Beach property to the north (ESA, 2003) and much of the surrounding land. In some portions of the P3 site, woolly seablite (*Suaeda taxifolia*) occurs as a dominant species, along with the iceplant species described above. Although this association is not assigned nomenclature by Sawyer and others (2009), areas dominated by ice plant species and woolly seablite are mapped as “woolly seablite scrub/ice plant mats” on Figure 4.2-2, to reflect the difference. Similarly, one area south of the MGS facility contains ice plant mats co-dominated by nonnative Mediterranean grasses. This area has been mapped as “ice plant mats/European beach grass swards” to reflect this co-dominance (see Figure 4.2-2).

Mock Heather Scrub

Mock heather (*Ericameria ericoides*) scrub is not recognized by Sawyer and others (2009) as a formal vegetation community, but was described based on the dominant plant species present. This community is generally similar to the ice plant mats observed elsewhere in the vicinity, where freeway ice plant and nonnative grasses form a significant portion of the ground cover. However, in areas mapped as mock heather scrub, mock heather was present in sufficient abundance to represent a shrub layer. Although the value of mock heather scrub for plants and wildlife is not known, it is likely greater than the value of ice plant mats, due to the greater proportion of native species and the presence of shrubs, which are important for many species of nesting birds. Mock heather scrub was mapped in three areas near the P3 site, including one area to the north, one area to the east, and one area to the south (see Figure 4.2-2).

Mule Fat Thickets (*Baccharis salicifolia* Shrubland Alliance)

Mule fat thickets are dominated by mule fat (*Baccharis salicifolia*), with California sagebrush (*Artemisia californica*), coyote brush (*Baccharis pilularis*), and other species. Willows (*Salix* spp) may be present at low cover. The canopy layer is typically continuous, and the herbaceous layer is sparse. This alliance occurs in seasonally and intermittently flooded habitats such as riparian corridors and along lake margins, and is inherently variable depending on the amount of inundation and scouring that occurs. It is a common vegetative alliance in southern California (Sawyer et al., 2009). Mule fat thickets occur adjacent to the northern perimeter of the MGS site, in association with the McGrath Lake ecosystem. During field surveys conducted in March 2015, habitat restoration efforts were observed to be underway in this area.

Myoporum Grove

Myoporum groves are not recognized by Sawyer and others (2009) as a formal vegetation community, but are described based on the dominant plant species present. This community consists of a near-

homogeneous stand of nonnative lollypop trees, with little to no other overstory vegetation present. Ground cover is either bare ground or comprises sparse annual herbaceous vegetation. In the vicinity of the P3 site, only one myoporum grove was mapped; the area occurs immediately adjacent to the eastern site boundary (see Figure 4.2-2). Although nonnative, myoporum groves may provide suitable habitat for nesting birds.

Ornamental

Ornamental vegetation is not classified or assigned nomenclature by Sawyer and others (2009), except where the species present conform to other existing community classifications. Ornamental vegetation is typically installed in association with manmade structures for beautification or landscaping purposes, and is normally watered and maintained. In the vicinity of the P3 site, ornamental vegetation is present along both sides of the entry drive to the MGS facility. This vegetation likely provides limited habitat for wildlife, and is unlikely to support rare plant species.

Open Water

Open water areas are not vegetated, and are not classified or assigned nomenclature by Sawyer and others (2009). The lack of vegetation occurs either due to water that is too deep for emergent vegetation or due to physical and/or chemical factors (such as wave action and excessive salinity) that preclude vegetation. Within 1,000 feet of the P3 site, open water occurs in the Pacific Ocean, McGrath Lake, and Edison Canal.

Ruderal

Ruderal vegetation is not classified or assigned nomenclature by Sawyer and others (2009). This vegetation community is usually the result of vegetation removal, soil compaction, or other intensive human activity, and is characterized by nonnative, disturbance-adapted plant species. Such species are mostly annuals, and include Mediterranean grasses, mustards, and others. Many ruderal species are identified by the California Invasive Plant Council as invasive weeds. Ruderal vegetation is generally of little value to wildlife, although it is not uncommon for burrowing mammals to occur in these areas. In the vicinity of the P3 site, ruderal vegetation occurs south of Edison canal, including throughout the proposed laydown area. Undeveloped portions of the adjacent McGrath Peaker Project site also exhibit ruderal vegetation (see Figure 4.2-2).

Sandy Beach

Sandy beach occurs west, as well as northwest and southwest of the site (ESA, 2003). Sandy beaches are naturally unvegetated, due to the unstable nature of the substrate and the dynamic ocean processes that shape beach systems. Despite the absence of vegetation, sandy beaches can provide valuable habitat features for some species, such as western snowy plover and California least tern.

4.2.1.2.2 Species Present

The majority of the MGS is composed of industrial use impervious surfaces (i.e., buildings, tanks, and paved lots/roads) that have little to no wildlife value. Animals that may use these areas likely are limited to species highly adapted to developed lands, such as western fence lizard (*Sceloporus occidentalis*), house sparrows (*Passer domesticus*), rock doves (*Columba livia*), and European starlings (*Sturnus vulgaris*). Ruderal areas in the facility may provide foraging and nesting habitat for these species. During the site reconnaissance conducted in January 2015, a northern harrier (*Circus cyaneus*) was observed flying over the P3 site as part of a foraging pattern that was mostly focused on the vegetation adjacent to McGrath Lake.

The sandy beaches to the west of the site, including McGrath State Beach to the north and Mandalay State Beach to the south, are known nesting sites for sensitive shorebirds, including the western snowy plover and California least tern. During biological surveys of the site vicinity in March 2015, a fenced enclosure with snowy plover protective signage was observed around a dune habitat approximately 500 feet northwest of the P3 site boundary. Although no snowy plovers or other nesting birds were observed at that time, it is presumed that this area is likely to support nesting snowy plovers.

The open water of Edison Canal may provide habitat for common coastal saltwater fishes, and may also support sensitive species such as the tidewater goby (*Eucyclogobius newberryi*). Freshwater aquatic species such as the western pond turtle (*Actinemys marmorata*) are not expected to occur in the canal due to salinity levels. The Edison Canal may also provide foraging habitat for sensitive birds such as California least tern and a variety of water fowl, including mallards (*Anas platyrhynchos*) and American coots (*Fulica americana*). No aquatic habitat occurs in the project site or proposed laydown areas, and aquatic species are not expected to occupy these areas.

The site is a former dune location that is currently dominated by iceplant and other non-native vegetation. Wildlife species that could be present include western toad (*Bufo boreas*), Baja California treefrog (*Pseudacris hypochondriaca hypochondriaca*), Blainville's horned lizard (*Phrynosoma blainvillii*), terrestrial gopher snake (*Pituophis catenifer*), common garter snake (*Thamnophis sirtalis*), western rattlesnake (*Crotalus viridis*), western fence lizard (*Sceloporus occidentalis*), side-blotched lizard (*Uta stansburiana*), mourning dove (*Zenaida macroura*), house finch (*Carpodacus mexicanus*), song sparrow (*Melospiza melodia*), white-crowned sparrow (*Zonotrichia leucophrys*) and western scrub jay (*Aphelocoma californica*), among others. Large and medium-sized mammals are not expected to occur on site, due to the existing facility fencing.

All native birds found commonly in the United States, with the exception of native resident game birds and introduced species, are protected under the federal Migratory Bird Treaty Act of 1918. The Act authorizes state governments to adopt and enforce laws and regulations protecting these species. More than 200 species of birds protected by the Act could occur in the vicinity of the project site (Appendix D-3).

4.2.1.3 Wetlands and Other Waters of the United States

As stated previously, the P3 site and associated laydown areas do not contain aquatic habitats. However, waters are present in proximity to these project areas, and include Edison Canal, McGrath Lake, and the Pacific Ocean. Although formal delineations of these resources have not been conducted, boundaries are fairly conspicuous and clearly do not encroach into project development areas (see Figure 4.2-4).

The Edison Canal was constructed in the late 1950s to provide cooling water to the existing MGS steam-generating plant. The current canal is approximately 10,800 feet long, extending from Channel Islands Harbor to the cooling water intake structure at the plant. The water source for the canal is the Pacific Ocean, although the water travels a significant distance through Channel Islands Harbor to reach the site. No natural freshwater inputs enter the canal (although the canal does convey stormwater and nuisance runoff from adjacent developments), and canal flows are returned to the Pacific Ocean via the existing MGS outfall west of the project site. Although manmade, the Edison Canal contains surface water year-round, and provides habitat for fishes and wildlife. The canal is a water of the U.S., and would be considered a streambed for purposes of CDFW regulations.

During botanical surveys in March 2015, a wetland delineation was performed within the P3 site. The investigation revealed that wetland hydrology and hydric soils were absent, but that the disturbed vegetation on the site exhibits a predominance of salt-tolerant hydrophytes. Because all three wetland parameters (hydrophytic vegetation, wetland hydrology, and hydric soils) were not present, the site does not constitute a wetland as defined by U.S. Army Corps of Engineers (USACE) regulations.

The California Coastal Act (see Section 4.2.5.2 below) provides protection for wetlands within California's Coastal Zone, and defines wetlands as "...lands within the Coastal Zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens." The Coastal Commission has issued regulations and guidance directing that the delineation of coastal wetlands should employ the three-parameter approach used by the USACE, but that a positive wetland determination can be made based on the presence of any one parameter, rather than requiring all three parameters to be present. Although the P3 site exhibits a predominance of hydrophytic vegetation, this vegetation is the result of chronic disturbance and human intervention, and is not indicative of wetland conditions.

As shown on data sheets in Appendix D-4, the P3 site contains three hydrophytes among its dominant plant species: woolly seablite, slenderleaf ice plant, and pickleweed (*Sarcocornia pacifica*). However, many obligate upland species are also abundant on the site, including coyote brush, freeway ice plant, Russian thistle, and others. It is uncommon for wetland species and obligate upland plant species to co-occur this extensively in natural settings, and the presence of hydrophytes on the P3 site is probably the result of past human uses. As described in Section 4.2.1.2.1 above, the P3 site was graded and used for storage of dredged spoils from the Edison Canal for a period of several years. Because the Edison Canal is a saltwater environment, it is presumable that the dredged spoils placed on the P3 site were saturated with saltwater, and that during the time of storage, saltwater infiltrated into the site soils. Over time, this practice likely resulted in an accumulation of salt in the site soils, making them more suitable for salt-tolerant plant species such as woolly seablite, slenderleaf ice plant, and pickleweed. This hypothesis is supported by the fact that none of the surrounding areas in the MGS facility, which exhibit disturbed conditions similar to the proposed P3 site but which were not used for storage of dredged material, support these salt-tolerant hydrophytes. Although it is not known, it is possible that the stored spoils may have contained propagules of these species and facilitated their introduction onto the site.

Due to the highly disturbed and anthropogenically influenced nature of the onsite vegetation, this parameter is not a reliable indicator of the site's wetland status. As directed by the USACE's Arid West Regional Supplement to the Wetland Delineation Manual, in cases where one parameter is naturally problematic or significantly disturbed, the other two parameters should be relied upon in greater detail for making the wetland determination. The site did not exhibit wetland hydrology or hydric soils, suggesting that despite the presence of hydrophytic vegetation under disturbed conditions, the site does not qualify as a wetland. This notion is further supported by a direct comparison with wetland definition in the Coastal Act statute: the site is not covered periodically or permanently by shallow water, and is not similar to a marsh or swamp. The site contains no hydrologic features, receives no hydrologic inputs other than direct rainfall, and is not connected to freshwater or tidal habitats. Indicators of wetland hydrology, which should have been evident if the site ponded water for considerable periods of time, were found to be absent. Considering this information, the P3 site is not a wetland as defined by the Coastal Act.

4.2.1.4 Special-Status Habitats

According to the CNDDDB, sensitive habitats in the vicinity (1-mile radius) of the project site include: Coastal and Valley Freshwater Marsh, Southern California Coastal Lagoon, Southern Coast Live Oak Riparian Forest, Southern Coastal Salt Marsh, and Southern Riparian Scrub (CDFW, 2015a). These habitat types do not occur in the site. However, coastal and valley freshwater marsh is mapped within 500 feet of the project site (Figure 4.2-3); and southern coastal salt marsh has been mapped within 1.5 miles of the site. The project would not require any work in these habitats.

4.2.1.5 Special-Status Species

A list of special-status species with potential to occur in the project vicinity was compiled based on records maintained by the USFWS, the CNDDDB, and the CNPS, as described in Section 4.2.1 (see Table 4.2-1). The term "special-status species," as used in this document, means:

- Those plants and wildlife that are listed, proposed for listing, or candidates for listing as threatened or endangered by the USFWS or National Marine Fisheries Service (NMFS) under the U.S. Endangered Species Act (ESA);
- Those plants and wildlife species that are listed or candidates for listing as threatened or endangered under the California Endangered Species Act (CESA);
- Those birds, mammals, reptiles and amphibians, and fishes listed as “fully protected” by the California Fish and Game Code (Sections 3511, 4700, 5050, and 5515, respectively);
- Those plants and animals identified by the CDFW as California Species of Special Concern, Special Plants, or Special Animals (CDFW, 2015b);
- Birds identified as Birds of Conservation Concern by the USFWS;
- Plants protected as rare under the California Native Plant Protection Act;
- Plants occurring on Ranks 1, 2, and 4 of the CNPS’ Inventory of Rare and Endangered Plants (CNPS, 2015); and
- Bats listed as high-priority species by the Western Bat Working Group.

Common avian species that receive protection under the Migratory Bird Treaty Act but otherwise maintain no applicable sensitivity designation are not treated as special-status species in this assessment. Table 4.2-1 lists special-status species with potential to occur within a 10-mile radius of the P3 site, and their potential for occurrence.

Lands in the existing MGS may support special-status species in Edison Canal and on the remnant dunes along the facility’s western border. Habitats within a 1-mile radius of the site that have the potential to support special-status plant species include Mandalay Beach, the dunes adjacent to the northern and western boundaries of the site, and the wetlands, freshwater marsh, and riparian areas associated with McGrath Lake, situated approximately 500 feet to the north. Special-status species that have been documented within 1 mile of the project site are shown on Figure 4.2-3. Special-status species with potential to occur within 1 mile of the project, or that have the potential to migrate through the project area or its surrounding areas, are described in greater detail below.

4.2.1.5.1 Special-Status Plant Species

Twelve special-status plant species have been documented within a 10-mile radius of the project site (Figure 4.2-1, Table 4.2-1). Of these twelve species, nine species are known to occur within 6 miles of the project site, and could potentially occur on or adjacent to the site based on the presence of suitable habitat. One of these species was detected in the P3 site during botanical surveys, and another was observed in the adjacent dunes. Special-status plants are described below:

- **Ventura Marsh Milk-Vetch** (*Astragalus pycnostachyus* var. *lanosissimus*) is a federally and state-listed endangered plant, and a CNPS Rank 1B.1 species, meaning it is rare throughout its range and seriously threatened in California (CNPS, 2015). It occurs in coastal upland terraces, coastal dunes, wetland transition zones and river edges, as well as recently disturbed sites (Meyer, 2007). There are four known occurrences of the species near the project site, including: 1) the Santa Clara River Mouth; 2) McGrath State Beach; 3) in Oxnard at the northeastern corner of West 5th Street and Harbor Blvd, 90 meters north of 5th Street; and 4) in Oxnard 150 meters northeast of the intersection of West 5th Street and Harbor Boulevard (CCH, 2015). This species was not observed on the project site during botanical surveys.

- **Coulter's Saltbush** (*Atriplex coulteri*) maintains no federal or state listing designation, but is a CNPS Rank 1B.2 species, meaning it is rare throughout its range and moderately threatened in California (CNPS, 2015). It occurs in sand dunes on the coast. The closest documented location is on a sandy-calcareous slope about 1.5 miles west of the Ventura River (CDFW, 2015a). This species was not observed on the project site during botanical surveys.
- **South Coast Saltscale** (*Atriplex pacifica*) maintains no federal or state listing designation but is a CNPS Rank 1B.2 species (CNPS, 2015). It occurs on alkali soils on cliffs, bluffs, and in coastal strand vegetation. The closest known location is adjacent to Highway 101 about 1.5 miles west of the Ventura River (CCH, 2015). This species was not observed on the project site during botanical surveys.
- **Davidson's Saltscale** (*Atriplex serenana* var. *davidsonii*) maintains no federal or state listing designation, but is a CNPS Rank 1B.2 taxon (CNPS, 2015). It occurs on alkali soils along roads and highways, and disturbed places. The closest location is in Oxnard in a disturbed area beside Ventura Boulevard north of Highway 101 (CCH, 2015). This species was not observed on the project site during botanical surveys.
- **Salt Marsh Bird's Beak** (*Chloropyron maritimum*) maintains no federal or state listing designation but is a CNPS Rank 1B.2 species (CNPS, 2015). It occurs in the upper areas of salt marshes, on beaches, and on alkali flats. The closest locations are McGrath State Beach; Ormond Beach on alkali flats northeast of the intersection of Arnold Road and Perimeter Road; and near Point Mugu (CCH, 2015). This species was not observed on the project site during botanical surveys.
- **Mexican Malacothrix** (*Malacothrix similis*) maintains no federal or state listing designation, but is a CNPS Rank 1A species, meaning it is presumed extirpated or extinct because it has not been seen or collected in the wild in California for many years (CNPS, 2015). This species used to occur in sand dunes at the back of beaches. It was last documented in 1925 in the vicinity of Port Hueneme Beach Park, and is assumed to be extirpated (CDFW, 2015a). This species was not observed on the project site during botanical surveys.
- **Woolly Seablite** (*Suaeda taxifolia*) maintains no federal or state listing designation, but is a CNPS Rank 4.2 species, meaning it has limited distribution or it is infrequent throughout a broader area in California; it is moderately threatened; and its status should be monitored regularly (CNPS, 2015). The species is a perennial shrub, and typically occurs in coastal dune scrub. It is not mapped in the CNDDDB (Figure 4.2-1), but it is recorded from the Southern California Edison property at Mandalay Beach, along the eastern side of Harbor Boulevard between Edison Canal and West 5th Street (CCH, 2015). This species was observed on the project site. Approximately 1,100 individuals are located in the construction area of the site. The species does not occur in the overflow and laydown area.
- **Red (Sticky) Sand Verbena** (*Abronia maritima*) maintains no federal or state listing designation, but is a CNPS Rank 4.2 species (CNPS, 2015). The species occurs on coastal dunes. It is not mapped in the CNDDDB (Figure 4.2-1), but it is known to occur on Mandalay Beach, McGrath State Beach, and other nearby locations (CCH, 2015). This species was not observed on the project site during botanical surveys, but was observed off site on Mandalay State Beach property.
- **Dunedelion** (*Malacothrix incana*) is a CNPS Rank 4.3 species (CNPS, 2015), meaning it has limited distribution or is infrequent throughout a broader area in California; it is not very threatened in California, but its status should be monitored regularly (CNPS, 2015). The species

occurs on coastal dunes. It is not mapped in the CNDDDB (Figure 4.2-1), but it is reported to occur in the vicinity of the project site (California Coastal Commission 2009). This species was not observed on the project site during botanical surveys.

4.2.1.5.2 Special-Status Wildlife Species

Thirty-four special-status animal species have been documented within a 10-mile radius of the project site (Figure 4.2-1, Table 4.2-1). Of these 34 species, 11 species are known to occur or could potentially occur in the immediate vicinity of the project site, and are described below.

- **Sandy Beach Tiger Beetle** (*Cicindela hirticollis gravida*) is identified by the CDFW as a Special Animal, meaning it meets certain criteria (CDFW, 2015b) and is tracked in the CNDDDB. It occurs in clean, dry sand in the upper zone of beaches. The larvae prefer moist sand, and burrow below the surface where they are unaffected by wave action. The closest documented location is at McGrath State Beach, just south of the Santa Clara River mouth (CDFW, 2015a). Suitable habitat is not present onsite, but the species could occur in the upper zone of the beach west of the project site.
- **Globose Dune Beetle** (*Coelus globosus*) is designated by the CDFW (2015b) as a Special Animal. It occurs in foredunes and sand hummocks; and is most common under native dune vegetation. This species has been documented at Hueneme, Ventura, and Point Mugu (CDFW, 2015a). Suitable habitat is not present onsite. However, this species could occur in the dunes adjacent to the site's western boundary.
- **Tidewater Goby** (*Eucyclogobius newberryi*) is a federally listed endangered species and a California Species of Special Concern. It occurs in lagoons, estuaries, and freshwater tributaries to estuaries. It has been documented in the Santa Clara River estuary and the Oxnard Drain ("J Street Canal"), the Ormond Beach Area, and southeast of Port Hueneme (CDFW, 2015a). This species could occur in Edison canal.
- **Western Pond Turtle** (*Actinemys marmorata*) is a California Species of Special Concern. It occurs in permanent slow-moving water such as creeks, ponds, lakes, and irrigation canals. The closest documented occurrence is the Santa Clara River estuary (CDFW, 2015a), and the species occurs in freshwater reaches of the Santa Clara River, as well. There is no suitable habitat for this species on the project site. Western pond turtles could occur in McGrath Lake and the surrounding riparian habitats.
- **Silvery Legless Lizard** (*Anniella pulchra* or *A. stebbinsi*) is not listed as threatened or endangered, but has been identified by the CDFW as a California Species of Special Concern. The taxonomy of the species in the project region of California has not been determined; therefore, the uncertainty of the species name. Silvery legless lizards occur in sand dunes, loose soil, and leaf litter. The nearest documented location is immediately north of the site, east of McGrath Lake (CDFW, 2015a). This species is known to occur in the dunes adjacent to the project site. The highly compacted soil on the site is not suitable habitat for this species. Therefore, it is unlikely to occur on the project site.
- **Blainville's Horned Lizard** (*Phrynosoma blainvillii*) is a California Species of Special Concern. It occurs in shrub vegetation, often on sandy soil. It is known from about 3.5 miles northeast of the site near the Santa Clara River (CDFW, 2015a). This species could occur on the site, but it is unlikely given the highly compacted soil.
- **Two-striped Garter Snake** (*Thamnophis hammondi*) is a California Species of Special Concern which occurs in creeks and in scrub habitat. The closest documented locality is 0.28 mile west of

the Ventura River (CDFW, 2015a), approximately 6 miles upcoast (northwest) of the project site. The species could occur near the project site in McGrath Lake and the surrounding mule fat scrub, due to the presence of suitable habitat; but it is unlikely to occur on the project site.

- **Burrowing Owl** (*Athene cunicularia*) is a California Species of Special Concern. It occurs in dry, open areas with short grass and no trees. This species also uses golf courses, roadways, levees, and ruderal borders around agricultural fields, airports, and vacant lots for breeding and foraging. In 2002, a burrow was documented 500 feet south of McGrath Beach campgrounds, about 1 mile from the project site. The burrow was at the edge of a gravel pile at the end of a service road (CDFW, 2015a). The project site is unlikely to support this species, due to the highly compacted soil.
- **Western Snowy Plover** (*Charadrius nivosus nivosus*) is a federally listed threatened species and a California Species of Special Concern. Critical habitat for western snowy plover is designated on the beaches and dunes west, northwest, and southwest of the project site (USFWS, 2012; and Figure 4.2-3). The beaches and sand dunes within Mandalay State Beach and McGrath State Beach in the immediate vicinity of the project site support both wintering populations and breeding populations of this species (California State Parks, 2013). The nesting areas are delineated with semi-permanent or seasonal symbolic fencing. Predators (crows, opossums, raccoons, and coyotes) and people and their unleashed dogs are the most significant threats to western snowy plovers at these State Beaches (California State Parks, 2013). There is no suitable habitat for the species on the project site. However, the northwest corner of the project site is approximately 500 feet from the closest potential nesting area.
- **California Least Tern** (*Sterna antillarum browni*) is a federally-listed endangered and state-listed endangered species. This species nests on relatively open beaches where vegetation is limited by tidal scouring and forages over open water. It nests in the immediate vicinity of the project between the Santa Clara River Mouth and McGrath Lake; and Ormond Beach between Ormond Beach Generating Station and Perkins Road (CDFW, 2015a). Suitable nesting habitat is not present on site, but this species is known to nest on the beach in the immediate vicinity of the project site. It may also forage over Edison Canal.
- **California Black Rail** (*Laterallus jamaicensis coturniculus*). The California black rail is a state-listed threatened species. California black rail inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. They require a constant water depth of approximately 1 inch, surrounded by dense vegetation for nesting. There is no suitable habitat for this species on the project site. This species is reported to occur between the McGrath State Beach campground and the Santa Clara River mouth, and could occur at McGrath Lake.

4.2.2 Environmental Consequences

4.2.2.1 Significance Criteria

The following sections evaluate the potential impacts to biological resources associated with construction and operation of the project. Appendix G of CEQA describes project-related effects that would normally be considered to have a significant effect on the environment. Based on this guidance, project-related biological impacts are considered significant if the project would do any of the following:

1. Substantially reduce the habitat of a fish or wildlife species;
2. Cause a fish or wildlife population to drop below self-sustaining levels;
3. Threaten to eliminate a plant or animal community;

4. Reduce the number or restrict the range of a rare or endangered plant or animal;
5. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game [now referred to as California Department of Fish and Wildlife (CDFW)] or USFWS;
6. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS;
7. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
8. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
9. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and
10. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Criterion 10 above does not apply to the project because the P3 site is not within the boundaries of an approved federal, state, regional, or local habitat conservation plan, and therefore, this criterion is not addressed below. The remaining criteria are evaluated below.

4.2.2.2 Impacts to Plants and Wildlife [Significance Criteria 1, 2, 3, 4, and 5]

As described in Section 4.2.1.5 above, 20 special-status plant and wildlife species are known to occur, or have low-to-moderate potential to occur, within the P3 site and surrounding lands. Implementation of the proposed project could impact these resources through direct means such as injury, mortality, and removal of habitat, and could also result in secondary impacts, including construction dust and noise, nighttime illumination, and increased levels of atmospheric nitrogen deposition. Impacts of the proposed project on special-status plants and wildlife are described below.

4.2.2.2.1 Impacts to Special-Status Plant Species

The following special-status plant and animal species may occur on the P3 site and/or in the areas adjacent to the P3 site: Ventura marsh milk vetch, salt marsh bird's beak, red (sticky) sand verbena, Coulter's saltbush, dunedelion, Mexican malacothrix, and woolly seablite. Potential impacts to special-status plant species are discussed below.

Impacts During Construction

Mechanical Removal during Construction

Implementation of the proposed project would entail the permanent clearing, grading, and development of the project site. Existing vegetation in this area, which includes 0.47 acre of ice plant mats and 2.03 acres of woolly seablite scrub/ice plant mats, would be permanently removed. All plants occurring in this area, including native and non-native species, would be eliminated from the development footprint. One special-status species, woolly seablite, has been documented in the project site, and approximately 1,100 individuals would be removed during construction. Because this species is of relatively low sensitivity

(CNPS Rank 4, which is a watch list), and because the occurrence to be affected is of small size and in a highly disturbed setting, this impact would not be significant.

Although not expected, the possibility exists for additional special-status plants to occur in the project disturbance footprint. If present, these species would be removed during construction. Although impacts are expected to be less than significant, they would be further reduced with incorporation of the proposed avoidance and minimization measures identified in Section 4.2.4.

Introduction of Non-Native Plants

As described previously, the P3 site is within the fenced confines of the MGS. Vegetation on the site and associated laydown area has been significantly disturbed, and does not contain intact examples of native vegetation communities. Invasive species, including freeway ice plant, slenderleaf ice plant, Russian thistle, red-stem fillaree, and exotic grasses are abundant and well-established in the site. Consequently, the site is not particularly vulnerable to additional introductions of invasive species. Construction vehicle traffic would be confined to the project site and laydown areas, as well as graveled and paved access routes across the MGS site, and would not traverse native habitat areas. Impacts associated with introduction of non-native plant species would be less than significant.

Impacts During Project Operations

Nitrogen Deposition

Nitrogen released during operation of the plant will be transported through the air to surrounding areas. Studies have shown that increases in atmospheric nitrogen deposition can have adverse effects on plant communities, including soil acidification and increases in non-native species that are able to take advantage of high nitrogen levels, such as grasses. If significant nitrogen deposition occurs in areas inhabited by special-status plants, particularly herbaceous species such as Ventura marsh milk-vetch and salt marsh bird's beak, it may cause rapid growth in non-native weedy species that could out-compete the native species. Although there is no published regulatory or biological threshold of significance for impacts related to nitrogen deposition, a commonly used concept is the notion that a "critical load" exists below which no environmental harm is perceptible. Critical loads differ depending on the pollutant concerned, the ecological setting for the impact, and the receptor resources present. For native terrestrial plant communities in the Mediterranean California eco-region, critical load values for nitrogen have been estimated between 3 and 39 kilograms of nitrogen per hectare per year ($\text{kg N}\cdot\text{ha}^{-1}\cdot\text{yr}^{-1}$) depending on the receptor community (Pardo et al., 2011). In the project vicinity, communities with the potential to support special-status plants are generally herbaceous in nature, and excess nitrogen in such habitats has been shown to result in invasion by annual grasses and displacement of native herbs. Critical nitrogen loads for herbaceous vegetation in Mediterranean California are around $6 \text{ kg N}\cdot\text{ha}^{-1}\cdot\text{yr}^{-1}$ (Pardo et al., 2011).

To evaluate the effect of the project's contribution to regional nitrogen deposition, increases in deposition at six ecologically sensitive locations in the project vicinity were modeled. The model considered both wet and dry atmospheric deposition, and estimated deposition rates using existing meteorological data for the years 2009, 2010, 2011, 2012, and 2013. For each year's meteorological data, the model output estimated project-related nitrogen deposition onto six sensitive receptor locations. Severity of these impacts was evaluated by comparing the increase in nitrogen deposition with published critical load values for the habitats present. To ensure that the analysis was conservative, the "worst-case" meteorological conditions from the five modeled years were used for this comparison. Results of this analysis are presented in Table 4.2-4. As shown, P3 would increase nitrogen deposition levels at five of the six modeled locations by only a fraction of 1 percent of the critical load value. At the beach immediately west of the site, which is situated less than 1,000 feet from the site boundary, project-related nitrogen deposition would account for 3.03 percent of critical load levels. Given the small magnitude of

these changes relative to critical load levels, it is unlikely that the project would result in a new exceedance of critical load, or substantially worsen any existing exceedance. Impacts associated with increased nitrogen deposition would be less than significant.

4.2.2.2.2 Impacts to Migratory and Resident Birds

This section describes impacts to migratory and resident bird species; impacts on special-status bird species are discussed in the following section.

Impacts During Construction

The reproductive success of some of migratory and resident bird species could be impacted during construction by elimination of 3 acres of habitat; however, as noted above, habitat on the P3 site is of low quality, and there is abundant higher-quality habitat nearby. In addition, for those birds nesting within 500 feet of the site, noise generated by construction equipment might negatively impact their reproductive success. Although impacts associated with construction noise affecting offsite areas would be unavoidable, the extent of these impacts is expected to be minor due to the relatively low noise levels, the temporary nature of the disturbance, existing topography (dunes and berms) that would limit visibility of construction workers from adjacent areas, and the site's immediate coastal location where strong wind patterns tend to diffuse sound. Avoidance and minimization measures outlined in Section 4.2.4 would be used as needed during the nesting season to ensure that construction-related noise does not result in nest failure in adjacent areas. Therefore, impacts would be less than significant.

Impacts During Project Operations

Some migrating bird species that fly at night are guided in part by constellations, and can become confused by brightly lit tall structures. Migratory waterfowl and other night-migrating bird species have the highest potential for collisions. Given the proximity of the Pacific Ocean and McGrath Lake to the project site, movements of migratory waterfowl and other night-migrating birds in the vicinity would be likely. Fog or low cloud cover can further add to collision potential, and both occur frequently in the study area. The existing stack is 200 feet tall, and has a flashing red light. The flashing red light warns birds of the presence of the stack, while avoiding drawing them toward it. Avian collisions with the stack are rare. The new stack will be 188 feet high, which is 12 feet shorter than the existing stack. The stack would be lighted as required by Federal Aviation Administration regulations. During operation and maintenance of the facility, migratory waterfowl and other night-migrating bird species would be unlikely, but could possibly collide with the new stack. Although the number of potential collisions cannot be quantified, collisions would likely occur relatively infrequently. This impact would be less than significant. P3 does not include any new transmission lines, eliminating the potential for impacts associated with avian collisions or electrocution from these facilities.

During operation and maintenance of the facility, reproductive success of migratory and resident bird species could be impacted by lighting in the facility at night. This could impact reproductive success of migratory and resident bird species. Because the facility has been lit at night for many years, the project does not represent a significant change to the existing setting with regard to lighting at night.

4.2.2.2.3 Impacts to Special-Status Animal Species

As described in Section 4.2.1.5, the project vicinity has the potential to support several special-status animal species. However, due to the degraded site conditions, it is unlikely that special status wildlife would be present in the P3 site. Potential impacts to special-status wildlife are discussed below.

Impacts During Construction

Injury, Mortality, and Loss of Habitat

Construction of the project would result in the removal of existing vegetation in the P3 site. The existing vegetation is disturbed, but nonetheless provides limited value for wildlife. During construction, wildlife occurring on site, although expected to be very limited, would be exposed to potential injury or mortality caused by contact with construction equipment during initial clearing and site preparation activities. In most cases, adult animals would be flushed at the onset of construction and would leave the site to avoid being killed or injured. However, it would be likely that species of low mobility such as fossorial small mammals, reptiles, and young birds would be unable to escape mortality. Due to the degraded nature of the onsite habitat, and because the site is not likely to support special-status wildlife as described in Table 4.2-1, direct impacts during construction would likely be limited to common species. The severity of this impact would be greater for construction activity during the spring season, when birds and other species are more likely to be supporting young. Although impacts are expected to be less than significant, they would be further reduced with incorporation of proposed avoidance and minimization measures identified in Section 4.2.4.

Noise

Construction would require the use of typical heavy construction machinery, such as front-end loaders, excavators, graders, scrapers, cranes, miscellaneous rubber-tired trucks, generators, and compressors, and, for roughly 1 month, pile drivers. The noise levels would change over the 21-month schedule, with the highest noise levels occurring in months 2 through 14, and specifically month 4, the month that would experience the highest noise level. A predictive sound model was used to predict sound levels during construction and during the operational phase of the project to assess the potential effect on western snowy plovers, California least terns, and other species potentially nesting near the project site (see Section 4.7 of this Application for Certification for an explanation of sound levels and methodology).

Noise During Construction

Predicted sound levels during construction at potential bird nesting areas west and northwest of the site, 1 foot above the ground surface, would range between 46 and 69 A-weighted decibels (dBA), depending on wind conditions (calm conditions, east winds, or west winds) and the month of construction.

The effects of noise would be greatest in areas immediately abutting the project site, such as the beach situated to the west, the sand dunes to the northwest, and marsh vegetation along the southern edges of McGrath Lake. Noise is a concern during the nesting season because of the potential to disrupt nesting behavior and potentially cause abandonment of eggs and/or young of the year. Because construction will occur over a 21-month period, noise will be generated during at least one and possibly two nesting seasons.

For some wildlife species, elevated noise levels in the P3 site would trigger avoidance behaviors, wherein wildlife would temporarily alter behavior patterns to avoid use of areas proximate to the site during construction hours. The level of behavioral alteration would differ from species to species, and would be dependent on noise levels in conjunction with other factors, such as visibility and the noise levels to which the wildlife are currently accustomed.

If construction is initiated prior to the nesting season, when birds are not incubating nests or supporting young, it is possible that birds in the vicinity could become accustomed to elevated noise levels before selecting nesting locations. In this case, it is anticipated that elevated noise levels would not adversely affect the nesting birds choosing to nest in proximity to construction activities. Alternatively, birds that are disturbed by the elevated noise levels from construction would be expected to nest at a farther

distance from the site, where noise levels are tolerable. Because the beach and scrub ecosystems adjacent to the site are fairly extensive, and include significant suitable nesting habitat, these areas would provide nesting opportunities for birds opting to avoid nesting in proximity to construction areas.

Because western snowy plover and California least tern are federally listed species and nest in close proximity to the project site, a literature review was conducted to determine anticipated responses to loud noise by birds nesting near the project site, and to determine regulatory agency responses to potential noise effects on bird nesting sites. The results are provided below.

Effects of Elevated Noise Levels on Nesting Snowy Plovers and Least Terns

For most species of birds, response to noise is dependent on ambient noise levels. For example, birds nesting near a roadway are likely to become habituated to a predictable noise pattern of traffic, and unlikely to be disturbed by the sound of hundreds of cars moving past the nest site. Because the noise occurs at a particular pattern, and as long no harm associated with the noise occurs to the birds, the source of the noise is not considered a threat, and the birds will generally remain at the nest site. On the contrary, birds nesting in the interior of a forest would probably be startled by a single vehicle (USFWS, 2006).

Near the project site, sudden loud noises could provoke snowy plovers and least terns to temporarily or permanently emigrate from nesting sites; trigger a startle response that alerts predators to nest locations; cause temporary abandonment of nests; mask alarm calls that predators are approaching or sounds of the predators themselves; and reduce overall fitness by causing expenditures of energy (USFWS, 2011). Least tern pairs, in particular, are highly vocal, particularly when on nests, and high noise levels may interfere with communication between the pair and territorial defense (Slabbekoorn and Ripmeester, 2008; Francis et al., 2009).

Monitoring of nesting snowy plovers and least terns was conducted at Vandenberg Air Force Base during rocket launches that produce a sound level of 198 dBA at the launch pad upon liftoff, and 124 dBA at 0.62 mile from the launch pad. The monitoring conducted by Vandenberg Air Force Base was the only identified documented observations of snowy plover and least tern behavior during high noise events. It is therefore worthwhile to describe the results of the monitoring efforts and the opinion of the USFWS following review of the monitoring data. Startle responses of western snowy plover are rare, and reproductive success does not seem to be affected by launch activities, even near a launch site where rockets are launched within approximately 0.5 mile of nesting snowy plovers with a dBA level of at least 124 (Robinette et al., 2003; Robinette and Rogan, 2005; Robinette and Rogan, 2006; and Mantech SRS Technologies, 2008; all cited in USFWS, 2011). California least terns may be more sensitive to launch disturbances than western snowy plovers, but monitoring data from Vandenberg Air Force Base suggest that the response of least terns depends on where the terns are in the nesting cycle. The adults seem to be more readily disturbed at the beginning of the nesting season when they are arriving at the breeding colony. Once courtship and nest-building begins, the adults are more tenacious, tending to stay at their nest sites (USFWS, 2011).

Near the project site, snowy plovers and least terns could be affected by construction noise, particularly when noise levels reach levels higher than the ambient noise levels, and at sudden loud noises. Effects are unlikely, but could include temporary or permanent nest abandonment, decreased reproductive success, and even mortality.

Regulatory Responses to Potential Effects of Noise on Nesting Plovers and Terns

Some agencies, such as the City of Carlsbad, require implementation of noise reduction measures to reduce noise levels to below 60 dBA within 200 feet of breeding habitats (CEC, 2015). Similar measures were considered but rejected for the Huntington Beach Energy Project (CEC, 2014). The potential effect

of Navy aircraft flights over western snowy plovers and California least terns at Point Mugu Naval Air Station was considered, and mitigation and conservation measures were proposed to the USFWS, including enhancement of western snowy plover habitats, closure of nesting areas during the breeding season, and monitoring of these and other listed species (California Coastal Commission, 2001).

The USFWS reported in 2006 that it uses a “harassment threshold” of 0.25 mile for most federally listed species (USFWS, 2006). This threshold is of limited value however, because it does not identify the noise level that would cause a change in behavior that would be considered “harassment” pursuant to the definition of the term in the ESA. More recently, the USFWS (2011) issued a Programmatic Biological Opinion for activities on Vandenberg Air Force Base, including rocket launches near snowy plover and least tern nesting areas during the nesting season (described above). Because snowy plovers were expected to temporarily flush from their nests and return to their nests shortly thereafter, and California least terns were expected to have a range of effects possibly including permanent emigration from the breeding colony, the USFWS required monitoring during launches in the breeding season to avoid adverse effects on breeding success and modification of activities if harm is caused (USFWS, 2011).

Noise Impacts Conclusions

The research conducted at Vandenberg Air Force Base reveals that dBA levels of 69 would not be an issue for nesting western snowy plovers, and more than likely would not be a serious issue for nesting California least terns. Avoidance and minimization measures outlined in Section 4.2.4 would be used as needed during the nesting season to ensure that construction-related noise does not result in nest failure in adjacent areas. Therefore, impacts would be less than significant.

Impacts During Project Operations

Impacts to special-status wildlife that could occur during operation of the project would be associated with permanent changes in the character of the site, and are discussed below.

Noise

The site is on an undeveloped portion of the MGS, a power plant facility that has been in existence for approximately 60 years, and operation of P3 would not result in noise levels substantially different from those existing currently. With P3 operating and Unit 3 off, sound at the nest sites would range from 48 to 54 dBA. With P3 and Unit 3 on simultaneously, sound at the nest sites would range from 53 to 63 dBA, depending on wind conditions. Because these would become ambient noise levels, nesting plovers and terns are not expected to be adversely affected by noise during operations. It is expected that other wildlife occurring within and in proximity to the site are accustomed to these levels of noise and human presence, and that the proposed project would not cause behavioral changes in the local fauna. Impacts associated with noise during project operation would be less than significant.

Nighttime Illumination

Although the existing MGS is equipped with nighttime lighting to meet current site safety and security objectives, development of P3 would necessitate additional illumination on the site. Exterior lighting of the structures will be placed in locations that provide maximum illumination of operating work areas in compliance with Occupational Safety and Health Administration standards, while minimizing light trespass into adjacent habitat areas. Impacts of nighttime illumination on special-status species would be less than significant, and would be further reduced by avoidance and minimization measures described in Section 4.2.4 restricting the types of lighting that may be used.

4.2.2.3 Impacts to Natural Communities [Significance Criterion 6]

Natural communities in the immediate vicinity of the site include a variety of vegetative associations, as described in Section 4.2.1.2. Of the associations present, only one (dune mats) is designated as a sensitive natural community by CDFW (2010). However, two other communities (arroyo willow thickets and mule fat thickets) are commonly found in riparian areas and are regarded as biologically important due to the substantial historic losses of riparian habitat in Southern California.

The P3 site is situated entirely within the boundaries of the existing MGS, and the site has been subjected to soil compaction and complete vegetation removal in the past. Vegetation in the site is currently dominated by ice plant mats, an invasive plant community, with coyote brush scrub (a common, native plant community) also present. The proposed laydown area on the southern portion of the MGS site has also been previously disturbed, and contains ruderal vegetation. Project construction activities would be confined to these designated areas, with the exception of access routes along existing graveled and paved access roads in the MGS site. All vegetation in the proposed project site, including 0.47 acre of ice plant mats and 2.03 acres woolly seablite scrub/ice plant mats, would be permanently removed. In addition, 0.97 acre of ice plant mats in the laydown area would be impacted by the placement of compacted gravel, heavy vehicle traffic, and materials storage. Because these habitats are regionally abundant, and in most cases dominated by non-native species, the project's removal of habitat would be less than significant. Sensitive communities would not be affected by the proposed project.

4.2.2.4 Impacts to Jurisdictional Waters and Wetlands [Significance Criterion 7]

As illustrated on Figure 4.2-4, the P3 site does not contain any regulated wetlands, waters, or other aquatic resources. Although the National Wetland Inventory maps the existing basins on the MGS site as freshwater pond; these ponds are manmade, lined, and based on their historic industrial use would not be considered jurisdictional waters. Construction of the proposed project would not entail any work in jurisdictional waters or wetlands, and these resources would not be affected by the project.

4.2.2.5 Impacts to Wildlife Movement and Habitat Connectivity [Significance Criterion 8]

Fencing around the MGS site has been in place for many decades, and P3 would be constructed entirely within the confines of the existing fenced facility. For site safety and security purposes the existing fence would remain in place, and would be maintained in functional condition. Although a new generating unit would be constructed on a vacant portion of the MGS site, which could disrupt the local movements of avian species, the MGS contains three existing units in immediate proximity to the proposed location, and construction of a new unit would not substantially affect the character of the site. The project would not substantially change the existing configuration of barriers to terrestrial and avian wildlife movement, and impacts related to wildlife movement and habitat connectivity would therefore be less than significant. Nursery sites do not occur within the project site, and the proposed project would not affect these resources.

4.2.2.6 Conflicts with Local Policies and Ordinances [Significance Criterion 9]

The project's consistency with local policies and ordinances protecting biological resources is described below.

4.2.2.6.1 City of Oxnard Coastal Land Use Plan Policy 6d

This policy requires new development adjacent to wetlands or resource protection areas to be sited and designed to mitigate adverse impacts to wetlands or resources. The policy also requires a 100-foot buffer adjacent to resource protection areas that can be reduced to 50 feet if a larger buffer is unnecessary.

Potential jurisdictional wetlands are present on the adjacent parcel to the north, which is a habitat restoration area; however, project construction would not impact these features. This land is in Ventura County, and has a zoning designation of open space. Resource Protection is a designation in the City of Oxnard Coastal Land Use Plan (CLUP), and because the parcel to the north is in Ventura County, it is not addressed in the Oxnard CLUP. An existing berm separates the MGS property and P3 site from the properties to the north. In addition, an approximately 185-foot buffer would be provided between the nearest component of the P3 facilities and the restoration site.

4.2.2.6.2 Coastal Zoning Ordinance Section 37-2.11.1(3)

This ordinance prohibits energy-related development in coastal resources areas, including sensitive habitats, recreational areas, or archaeological sites. The project is consistent with this ordinance because the project site does not contain these features. Further, the site is zoned Public Utility/Energy Facility, and situated within the boundary of an existing facility; and Section 37-2.11.1(1) specifically provides for the reasonable expansion of energy developments in existing sites.

4.2.2.6.3 Coastal Zoning Ordinance Section 37-31.2

This ordinance requires all development in the Coastal Zone in, adjacent to, or having an effect on any environmentally sensitive habitat area to comply with Coastal Land Use Policies 6a,c,d,e, and f, and 10a-g. The project is expected to be consistent with this ordinance (refer to Section 4.2.5.3).

4.2.3 Cumulative Impacts Analyses

Three projects are proposed along Harbor Boulevard, in the immediate vicinity of the project site; and two others are situated to the east, in the urbanized area of Oxnard (Section 4.0). The three closest projects—North Shore Subdivision, Avalon Homes Subdivision, and Anacapa Townhomes—if developed as proposed, would result in the construction of a combined total of 426 housing units on roughly 102 acres. Two of the three projects are situated on sand dunes, and would eliminate sand dune habitat for common plant and wildlife species, including yellow bush lupine, western toad, terrestrial gopher snake, common garter snake, western rattlesnake, western fence lizard, and other common species. Special-status plant species such as Ventura marsh milk-vetch (federally and state-listed endangered), Mexican malacothrix (presumed extirpated or extinct), woolly seablite, red (sticky) sand verbena, and dunedelion, could occur on these project sites and be impacted by project development. Special-status wildlife species including silvery legless lizard and Blainville's horned lizard could also occur on these sites.

P3, on 3 acres of degraded land, might be, at best, marginal habitat for the common species listed above and Blainville's horned lizard. There is no dune habitat on the site that would support red (sticky) sand verbena or dunedelion; and the soil compaction is too great for silvery legless lizard to burrow. Given the degraded status of the habitat, and that the 3-acre project site constitutes 0.03 percent of the cumulative total number of acres of the projects, P3 is not expected to make a considerable contribution to the cumulative effect on sand dune habitat or most of the plant and wildlife species that could occur in this habitat.

The three residential projects could result in increased pedestrian use of the beach in the vicinity of the project site, which could adversely impact the reproductive success of western snowy plover and California least tern. P3 would not contribute to this cumulative impact, because the project would not add any pedestrian traffic to the beach.

4.2.4 Mitigation Measures

All project impacts would be less than significant without mitigation. This section presents measures that will be implemented to avoid and/or further reduce project-related impacts to biological resources.

4.2.4.1 Design of the Facility

BIO-1 Lighting Restrictions

Safety lighting will be shielded and pointed downward and inward from the perimeter of the site to reduce impacts to wildlife in adjacent habitat areas. Along the northern edge of the site, adjacent to the McGrath Lake ecosystem, lights will be equipped with motion-sensing or other technology to avoid “always-on” lighting. Nighttime lighting will be limited to the minimum necessary to achieve safety and security objectives. The use of light-emitting diode (LED) lights of wavelengths that are less disturbing to wildlife should be considered.

BIO-2 Design Structures and Landscape to Prevent Ravens and Crows Nests.

Because ravens and crows prey on California least terns and western snowy plovers, structures should be designed to prevent ravens and crows from building nests on the structures. Poles constructed of solid material rather than a lattice, and poles with diagonal crossbars rather than horizontal ones, would be harder for ravens to nest on.

4.2.4.2 Pre-Construction

BIO-3 Pre-Construction Surveys for Special-Status Plants

Surveys for special-status plants will be conducted in all impact areas and within 500 feet of said areas. If Ventura marsh milk vetch or Mexican malacothrix are found onsite or within 500 feet of the site, all individuals of these species will be protected in consultation with USFWS and/or CDFW. If other special-status plants such as red (sticky) sand verbena, Coulter’s saltbush, salt marsh bird’s beak, or woolly seablite are observed in an impact area or within 500 feet of said area, and it is determined that they could be impacted by the project, mitigation strategies will be developed in consultation with the CDFW.

BIO-4 Pre-Construction Surveys for Nesting Birds

Vegetation in the construction area will be removed prior to March 1 (the beginning of the bird-nesting season) to avoid conflicts with nesting birds during the nesting season. Pre-construction surveys for nesting birds that are listed (including California least tern and western snowy plover) and all non-listed bird species will be conducted in all areas within 500 feet of the perimeter of the project site. Construction during the breeding season (generally March 1 – September 30) is not allowed within 300 feet of active nests even if the nests are located off site. If active nests are identified, an approved biologist will monitor the nests during construction to ensure that breeding is not impaired, and that young of the year are not injured or abandoned. If construction on the site appears to be negatively affecting nesting birds, work will be modified so that nesting birds are not disturbed.

BIO-5 Pre-Construction Surveys for Animals

Pre-Construction surveys for special-status animals will be conducted in all impact areas and within 500 feet of said areas.

If non-listed special-status animals (such as globose dune beetle, silvery legless lizard, coastal whiptail, Blainville’s horned lizard, and two-striped garter snake), are observed on the site, the animal(s) will be

moved or encouraged to move to a CDFW pre-authorized location prior to commencement of construction. Any relocation on State Park property would also require pre-authorization by the California Department of Parks and Recreation.

BIO-6 Biological Resources Monitoring and Mitigation Plan

Applicant will prepare a Biological Resources Monitoring and Mitigation Plan that identifies all biological resource mitigation, monitoring, and compliance measures for the project. The plan will provide identification of all required mitigation measures for each sensitive biological resource that could be impacted by the project; a detailed description of the measures that will be taken to avoid or mitigate temporary disturbances from construction activities; the duration for each type of monitoring, and a description of monitoring methodologies and frequency; and performance standards and remedial measures to be implemented if performance measures are not met.

BIO-7 Snowy Plover and Least Tern Monitoring During Construction

During construction, between March 1 and September 30, USFWS-approved biologists will monitor snowy plovers and least terns nesting within 0.25 mile of the project site to assess potential adverse effects of construction noise on reproductive success. Monitoring will consist of two mornings while the birds are nesting prior to construction, and at least 2 days each week during the nesting season during construction. Any abnormal behavior by incubating adults will be recorded. If behavior is observed that could be representative of harassment (such as permanently abandoning a nest), work that appears to be causing the behavior will stop temporarily, and the USFWS will be consulted until a resolution is identified. If the cause of abnormal behavior appears to be construction noise, measures will be taken to reduce construction noise during the nesting season; such measures could include modification of construction activities or installation of a temporary sound barrier. Other construction work that does not affect the nesting birds will continue in the interim. A report of the monitoring results will be submitted to the USFWS once per month, and final reports at the end of the nesting season(s).

BIO-8 Construction Fencing of Sensitive Habitats

Temporary silt fencing will be installed around sensitive habitats prior to commencement of construction. If sensitive species are found in the remnant dune habitat onsite, temporary silt fencing will be installed, if feasible, to protect the species during construction. Temporary fencing will be placed around the edges of Edison Canal. A monitoring biologist will check the fence each day to make sure that no animals are caught at the fence and that the fence is intact. Any needed repairs will be made immediately.

BIO-9 Worker Environmental Awareness Program

Provide worker environmental awareness training for all construction personnel. Training will include the identification of special-status biological resources and measures required to minimize project impacts during construction and operation.

4.2.4.3 During Construction

BIO-10 Biological Monitoring of Construction

An approved biologist will monitor all construction that involves vegetation removal and/or ground disturbance. Vegetation removal and/or ground disturbance is not permitted if the biologist is not present at the work site. If listed threatened or endangered species (such as California least tern or Western snowy plover) are observed on the site, work will be stopped and the USFWS and/or CDFW will be consulted. If special-status species are observed that are not listed as threatened or endangered (such as

globose dune beetle, silvery legless lizard, coastal whiptail, Blainville's horned lizard, two-striped garter snake, and burrowing owl) the biologist will work with construction personnel to avoid the impact.

BIO-11 Biological Monitoring of Nesting Birds During Construction

An approved biologist will monitor the activity of special-status birds within 500 feet of construction activities to ensure that construction does not interfere with breeding, nesting and raising young of the year until they have fledged.

BIO-12 Dust Control during Construction

Unvegetated dirt surfaces will be watered several times each day of construction (unless it is raining) in order to minimize dust leaving the site.

BIO-13 Capping of Stored Pipes

All pipes (both horizontal and vertical) will be capped at the end of each day to prevent small mammals and birds from getting trapped in the pipes.

BIO-14 Speed Limits

Speed will be limited to 15 miles per hour or less on all roads on the project site to reduce the potential for wildlife collisions.

BIO-15 Avoid Attracting Predators

During construction, ensure all food and other trash that could be considered food by coyotes or ravens is covered and sealed so that coyotes and ravens are not attracted to the site.

4.2.4.4 Operations and Maintenance

BIO-16 Herbicide Restrictions

Use only non-acetolactate synthase-inhibiting herbicides approved for use by the USFWS to control weeds and reduce fire hazards in and adjacent to the power plant site. The use of herbicides that target small areas and degrade quickly will reduce the potential for impacts to special-status plants outside of the application area.

BIO-17 Predators

Ensure all food and other trash that could be considered food by coyotes or ravens is covered and sealed so that coyotes and ravens are not attracted to the site.

4.2.5 Laws, Ordinances, Regulations, and Standards

P3 will be constructed and operated in accordance with all LORS applicable to biological resources. Federal, state, and local LORS applicable to biological resources are discussed below and summarized in Table 4.2-5, Applicable Laws, Ordinances, Regulations, and Standards.

4.2.5.1 Federal

Endangered Species Act of 1973 (16 United States Code [USC] 1531 et seq.) and implementing regulations (50 Code of Federal Regulations [CFR] Part 17, 50 CFR Part 402)

The ESA includes provisions for the protection and management of federally listed threatened or endangered plants and animals and their designated critical habitats. Section 9 of the ESA prohibits the import, export, take, possession, or sale of listed species. Authorization to take threatened or endangered species during lawful project activities can be obtained through Section 7 of the ESA (see below) for projects requiring federal authorization, and through Section 10(a)(1)(B) for projects without federal involvement. If there is no federal nexus for the project, a Habitat Conservation Plan may be necessary. The administering agencies for the above authority are the USFWS for terrestrial, avian, and freshwater aquatic species; and the National Oceanic and Atmospheric Administration's NMFS for most marine and anadromous species. Because the proposed project will not require federal authorization or result in take of federally listed species, there are no compliance requirements for P3 under the ESA.

Section 404 of the Clean Water Act of 1977 (33 USC 1251 et seq.) and Implementing Regulations 33 CFR Parts 320-334)

Section 404 of the Clean Water Act prohibits the discharge of dredge or fill material into waters of the U.S. without authorization from USACE. Authorizations under this section include General Permits authorizing common, low-impact activities, as well as Individual Permits for activities where authorization under a General Permit is not appropriate. Waters of the U.S. generally include navigable and interstate waters, their perennial and intermittent tributaries, and their adjacent wetlands. In addition, tributaries that do not carry flow at least seasonally and wetlands adjacent to tributaries may be waters of the U.S., in some cases. Manmade ditches and treatment systems are generally not waters of the U.S. Because the proposed project will not discharge dredge or fill material into waters of the U.S., there are no compliance requirements for P3 under the Section 404 of the Clean Water Act.

Section 401 of the Clean Water Act of 1977

Under Section 401 of the CWA, every applicant seeking federal authorization for an activity that may result in a discharge of dredge or fill material to a water body must obtain a state-issued Water Quality Certification that the proposed activity will comply with state water quality standards (i.e., beneficial uses, water quality objectives, and anti-degradation policy). In California, the State Water Resources Control Board has delegated the responsibility for issuing Water Quality Certifications to the nine Regional Water Quality Control Boards (RWQCBs) throughout the state. The proposed project will not discharge dredge or fill material into waters of the U.S. Compliance with state water quality standards is addressed in Section 4.15, Water Resources.

Migratory Bird Treaty Act 16 USC §§703-711

The Migratory Bird Treaty Act includes provisions for the protection of migratory birds, and prohibits the non-permitted take of most migratory birds. The administering agencies for this authority are the USFWS and CDFW (through Section 3513 of the California Fish and Game Code). As discussed in Section 4.2, project impacts to migratory birds would be less than significant and would be further reduced by proposed avoidance and minimization measures.

4.2.5.2 State

California Endangered Species Act of 1984, Fish and Game Code §2050 through §2098

CESA includes provisions for the protection and management of plant and animals species listed as endangered or threatened, or designated as candidates for such listing, and prohibits the unauthorized take of listed or candidate species. Section 2081 allows issuance of an Incidental Take Permit authorizing take of listed species incidental to lawful activities, but requires that the authorized take be minimized and fully mitigated. For species jointly listed under CESA and the federal ESA, Section 2080.1 allows streamlined permitting where the terms of an existing federal Incidental Take Permit or Biological Opinion would be consistent with CESA requirements. In this case, a Consistency Determination would be issued in place of an Incidental Take Permit. The administering agency for the above authority is the CDFW. Because it is not anticipated that construction or operation of P3 will result in take of state-listed species, an Incidental Take Permit will not be required for the project.

Fish and Game Code §1600 et seq., Streambed Alteration Agreement

Pursuant to Sections 1600–1616 of the California Fish and Game Code, the CDFW regulates diversions, obstructions, or substantial changes to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or wildlife. In regulations promulgated by the CDFW at 14 California Code of Regulations (CCR) 1.72, a stream is defined as “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation.” In practice, CDFW has interpreted the term “streambed” to encompass all portions of the bed, banks, and channel of any stream, including intermittent and ephemeral streams, extending laterally to the upland edge of riparian vegetation. Alterations to streambeds are generally prohibited unless authorized through a Streambed Alteration Agreement. The administering agency for the above authority is the CDFW. P3 does not include any improvements that will require a Streambed Alteration Agreement.

Native Plant Protection Act of 1977, Fish and Game Code, §1900 et seq.

The Native Plant Protection Act designates state rare and endangered plants and provides specific protection measures for identified populations. The act also includes a salvage provision, enabling CDFW to collect rare and endangered plants from properties in advance of construction or other activities that would destroy the plants. The administering agency for the above authority is CDFW.

CDFW Policies and Guidelines, Wetlands Resources Policy

The Wetlands Resource policy provides for the protection, preservation, restoration, enhancement, and expansion of wetland habitats in California, including vernal pools. The administering agencies for the above authority are CDFW, California Environmental Protection Agency (Cal/EPA), and the Central Coast RWQCB. P3 will not impact any wetlands as defined by the state.

California Coastal Act of 1976 (Public Resources Code, Division 20 §30000 et seq.)

The California Coastal Act of 1976 requires protection of ecological resources, balanced with carefully planned economic development in the Coastal Zone. Section 30240 requires that environmentally sensitive habitat areas be protected against any significant disruption of habitat values, and only uses dependent on those resources are allowed in those areas. Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas must be sited and designed to prevent impacts that would significantly degrade those areas, and must be compatible with the continuance of those habitat and recreation areas. As discussed in Section 4.2.2 above and Section 4.6, Land Use, P3 will be consistent with the California Coastal Act.

Public Resource Code Section 25527 and Associated Regulations (20 CCR §§1702 (q) and (v))

Section 25527 of the Public Resource Code generally prohibits the licensing of energy facilities in certain sensitive areas of the state, including parks, wilderness reserves, wildlife protection areas, natural preservation areas, natural estuaries, areas of critical environmental concern such as unique and irreplaceable scientific, scenic, and educational wildlife habitats, and areas under consideration by state or federal agencies for wilderness or wildlife and game reserves. If there is no alternative to siting projects in these areas, strict criteria are applied. The administering agency for the above authority is the California Energy Commission. P3 would not be sited in a sensitive area, as defined by this section of the code.

4.2.5.3 Local

City General Plans encourage preservation and management of biotic resources, including special-status species. The General Plans put some planning constraints on sensitive habitat areas, but do not supersede CDFW and USFWS requirements.

City of Oxnard Coastal Land Use Plan

The CLUP includes the following policies regarding biological resources.

- Policy 6d** Site and design new development adjacent to wetlands or resource protection areas to mitigate adverse impacts to wetlands or resources. Provide a 100-foot buffer adjacent to all resource protection areas. This can be reduced to 50 feet if larger buffer is unnecessary.
- Policy 10** Maintain and where feasible restore water quality of coastal waters.
- Policy 10a** Minimize effects of wastewater discharges which release toxic substances into coastal waters and streams.
- Policy 10b** Minimize entrainment of organisms (induction of subsurface cooling pipes and similar apparatus).
- Policy 10c** Minimize effects of increased amounts of runoff into coastal waters through grading, site development controls and buffer zones.
- Policy 10d** Maintain surface water discharge from streams and rivers to sustain functional capacity of coastal waters.
- Policy 10g** Encourage wastewater reclamation through using treated effluent to replenish groundwater supplies and providing freshwater for restoration of streams, wetlands and lakes.

As discussed in Section 4.2.2.6, P3 would be consistent with Policy 6d. The project would be consistent with or would not conflict with policies 10a-g. Compliance with water quality and discharge requirements is addressed in Section 4.15, Water Resources.

City of Oxnard General Plan

- Policy ER-4.1** Encourage protection of sensitive habitat.

Policy ER-4.4 Consider loss of sensitive habitats to be a significant environmental impact. All development that is proposed to disturb or remove sensitive habitat shall demonstrate appropriate feasible mitigation.

Policy ER-4.5 Require careful planning of new development in or near biological resource areas to maintain sensitive vegetation and wildlife habitat.

The project would not disturb or remove sensitive habitat and would be consistent with these policies.

City of Oxnard Coastal Zoning Ordinance

The City of Oxnard Coastal Zoning Ordinance includes the following provisions regarding biological resources.

Sec. 37-2.11.1(3) Energy related development shall not be located in coastal resources areas including sensitive habitats, recreational areas and archaeological sites...

Sec. 37-3.1.2 All development in the Coastal Zone, in, adjacent to, or having an effect on any environmentally sensitive habitat area shall comply with provisions of this section. Refer to Policy Nos. 6, a, c, d, e, and f, and 10 a-g of Coastal Land Use Plan for specific standards.

As discussed in Section 4.2.2.6, P3 would be consistent with these policies.

4.2.6 Involved Agencies and Agency Contacts

Because adverse effects on biological resources as a result of this project would be limited, no authorizations from state or federal agencies would be required. Although special-status species occur near the project area, they will not be significantly impacted by project construction. No waters of the U.S. (including wetlands) or other regulated aquatic resources would be impacted. Regulatory compliance will be required with regard to the Migratory Bird Treaty Act and State Fish and Game Code provisions protecting migratory birds, and coordination with USFWS and/or CDFW representatives may occur. There will be no impacts to aquatic resources, so no consultation with NMFS would be needed. No authorization from USACE or Los Angeles RWQCB is anticipated. Agencies with authority over biological resources in the project area are listed on Table 4.2-6.

4.2.7 Permits Required and Permit Schedule

No permits are expected. No construction will take place in sensitive areas or listed species habitat. No sensitive vegetation communities will be removed. There will be no impacts to wetlands.

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**Table 4.2-1
Special-Status Species Reported Within a 10-Mile Radius and Potential for Occurrence**

Scientific Name	Common Name	Status (Federal, State, CNPS)	Habitat	Closest Documented Occurrences	Likelihood to Occur On Site (L = low; M = medium; H = high)	Rationale	Likelihood to Occur Adjacent to Site
Plants							
<i>Abronia maritima</i>	Red (sticky) sand verbena	CNPS 4.2	Coastal dunes	Mandalay Beach, McGrath State Beach	L	The only marginally suitable habitat on site is the loose sand along the edge of the road near the northern perimeter of the site, but species was not detected during floristic surveys.	Present
<i>Aphanisma blitoides</i>	Aphanisma	CNPS 1B.2	Coastal scrub, escarpments, bluffs	1–2 miles northwest of Ventura River	L	Suitable habitat is not present on the site. Species was not detected during botanical surveys.	L
<i>Astragalus pycnostachyus</i> var. <i>lanosissimus</i>	Ventura marsh milk vetch	FE, SE, CNPS 1B.1	Salt marsh, recently disturbed sites, coastal upland terraces, coastal dunes, wetland transition zones and river edges	Across road from McGrath State Beach, mouth of Santa Clara River, NE of intersection of Harbor Boulevard and West 5th Street near McGrath State Beach, Mandalay Beach	L	The iceplant and coyote brush on site are not suitable habitats for the species. Species was not observed during botanical surveys.	M
<i>Atriplex coulteri</i>	Coulter's saltbush	CNPS 1B.2	Coastal dunes	Coastal Bluff 1.5 miles west of Ventura River	L	The remnant dunes on the site are marginally suitable habitat, but species was not detected during botanical surveys.	M
<i>Atriplex pacifica</i>	South coast saltscale	CNPS 1B.2	Alkali soils on cliffs, bluffs, coastal strand	1.5 miles of Ventura River	M	The remnant dunes on the site are marginally suitable habitat, but species was not detected during botanical surveys.	M
<i>Atriplex serenana</i> var. <i> davidsonii</i>	Davidson's saltscale	CNPS 1B.2	Alkali soils along roads and highways, and disturbed places	Roadside of Ventura Boulevard north of Highway 101	L	This species might occur along the road edges and in other unvegetated parts of the site. Species was not detected during botanical surveys.	L
<i>Chloropyron maritimum</i>	Salt marsh bird's beak	CNPS 1B.2	Upper salt marsh, beach, alkali flats	Near mouth of Santa Clara River mouth near McGrath State Beach, Ormond Beach behind dunes in vicinity of power generation facility	L	The species might occur in sandy areas of project site. Species was not detected during botanical surveys.	H
<i>Lasthenia glabrata</i> ssp. <i> coulteri</i>	Coulter's goldfields	CNPS 1B.1	Disturbed salt-marsh hard pans, playas, vernal pools, moist silty loam, borders of saline hard-pans	Port Hueneme, Ormond Beach at terminus of McWane Boulevard, Point Mugu, Ventura	L	Suitable habitat is not present on the site. Species was not detected during botanical surveys.	L
<i>Malacothrix incana</i>	Dunedelion	CNPS 4.3	Coastal dunes	Project vicinity	L	The species might occur in dunes adjacent to the site, but was not observed during site botanical surveys.	H

**Table 4.2-1
Special-Status Species Reported Within a 10-Mile Radius and Potential for Occurrence (Continued)**

Scientific Name	Common Name	Status (Federal, State, CNPS)	Habitat	Closest Occurrences	Likelihood to Occur On Site (L = low; M = medium; H = high)	Rationale	Likelihood to Occur Adjacent to Site
<i>Malacothrix similis</i>	Mexican malacothrix	CNPS 1A	Sand dunes back of beach	In vicinity of Port Hueneme Beach Park. Last observed in 1925. Likely extirpated	L	Suitable habitat is not present on the site. Species was not detected during botanical surveys.	L
<i>Suaeda esteroa</i>	Estuary seablite	CNPS 1B.2	Edge of salt marsh	Mugu Lagoon	L	Suitable habitat is not present on the site. Species was not detected during botanical surveys.	L
<i>Suaeda taxifolia</i>	Woolly seablite	CNPS 4.2	Dune scrub	Southern California Edison property at Mandalay Beach, along the eastern side of Harbor Boulevard between Edison Canal and West 5th Street	Present	Species was detected on site during botanical surveys.	H
Snails							
<i>Tryonia imitator</i>	Mimic tryonia (California brackish water snail)	None	Permanently submerged areas of brackish water or freshwater marsh	Mugu Lagoon	NONE	Aquatic habitat is not present on the site.	L
Insects							
<i>Cicindela hirticollis gravida</i>	Sandy beach tiger beetle	None	Clean, dry sand in upper zone of beach. Larvae prefer moist sand – not affected by wave action.	McGrath State Beach just south of Santa Clara River Mouth	L	Suitable habitat is not present on the site.	H
<i>Cicindela senilis</i>	Senile tiger beetle	None; Extinct over much of range	Salt marsh	Mugu Lagoon	L	Suitable habitat is not present on the site.	L
<i>Coelus globosus</i>	Globose dune beetle	None	Fore dunes and sand hummocks. Most common under native dune vegetation.	Point Mugu Naval Air Station, Ventura, Hueneme, Ormond Beach?	M	The remnant dunes on the site might support this species.	H
<i>Danaus plexippus</i>	Monarch butterfly	None	Roosts in groves of trees that provide protection from wind with nectar and water sources nearby	West end of Etting Road at Olds Rod in Oxnard; Several sites in Ventura	L	Suitable habitat is not present on the site.	L
<i>Panoquina errans</i>	Wandering skipper (= saltmarsh skipper)	None	Dunes and edges of salt marsh. Larvae dependent on saltgrass (<i>Distichlis spicata</i>)	Mugu Lagoon	L	Suitable habitat is not present on the site.	L
Fishes							
<i>Catostomus santaanae</i>	Santa Ana sucker	FT, CSSC	Rivers	Santa Clara River	NONE	Suitable aquatic habitat is not present on the site.	NONE
<i>Eucyclogobius newberryi</i>	Tidewater goby	FE, CSSC	Lagoons, estuaries, backwater marshes, and freshwater tributaries	Santa Clara River estuary, Oxnard drain (J Street Canal), Ormond Beach Area, SE of Port Hueneme	NONE	Suitable aquatic habitat is not present on the site.	NONE

**Table 4.2-1
Special-Status Species Reported Within a 10-Mile Radius and Potential for Occurrence (Continued)**

Scientific Name	Common Name	Status (Federal, State, CNPS)	Habitat	Closest Occurrences	Likelihood to Occur On Site (L = low; M = medium; H = high)	Rationale	Likelihood to Occur Adjacent to Site
<i>Gasterosteus aculeatus williamsoni</i>	Unarmored threespine stickleback	FE, SE, CFP	Slow-moving stream, isolated from the ocean by stretches of dry stream-bed except during storms	Upper Santa Clara River	NONE	Suitable aquatic habitat is not present on the site.	NONE
<i>Gila orcutti</i>	Arroyo chub	CSSC	Coastal streams	Santa Clara River	NONE	Suitable aquatic habitat is not present on the site.	L
Reptiles							
<i>Actinemys marmorata</i>	Western pond turtle	CSSC	Creeks, ponds	Santa Clara River estuary	L	Suitable habitat is not present on the site.	H
<i>Anniella pulchra</i>	Silvery legless lizard	CSSC	Sand dunes, loose soil, leaf litter	North of energy plant, east of McGrath Lake	L	Sparsely vegetated sandy soils could support this species. Most of the site is not suitable habitat. Species was not detected during wildlife surveys.	H
<i>Aspidoscelis tigris stejnegeri</i>	Coastal whiptail	None	Dense shrubs	4 miles northeast of Ventura	L	Could occur in the coyote brush scrub.	L
<i>Phrynosoma blainvillii</i>	Blainville's horned lizard	CSSC	Open areas of sandy soil and low vegetation	South of Santa Clara River, southwest of intersection of Leland St./Auto Center Dr./Ventura Road	L	Sparsely vegetated sandy soils could support this species. Most of the site is not suitable habitat. Species was not detected during wildlife surveys.	M
<i>Thamnophis hammondi</i>	Two-striped garter snake	CSSC	Pools, creeks, shrub habitat	0.28 mile west of Ventura River	L	Shrub habitats could support this species. Most of the site is not suitable habitat. Species was not detected during wildlife surveys.	M
Birds							
<i>Agelaius tricolor</i>	Tri-colored blackbird	BCC, SE	Nesting in freshwater marshes dominated by cattails and bulrushes with willows and nettles also common. Fields of mustards blackberries, thistles, and mallows are also used.	No colonies reported from Ventura County since 1993	L	Suitable habitat is not present on the site. Emergent vegetation surrounding McGrath Lake could be suitable, but biology of this area has been monitored heavily with no records of tricolored blackbird.	L
<i>Athene cunicularia</i>	Burrowing owl	BCC, CSSC	Dry, open areas with short grass and no trees	500 feet south of McGrath State Beach campgrounds. Burrow at edge of gravel pile at end of service road, Point Mugu Naval Air Station, Camarillo	L	Open, grassy areas and edges of dunes could support this species. Most of the site is not suitable habitat. Species was not detected during wildlife surveys.	L
<i>Buteo regalis</i>	Ferruginous hawk	BCC, CSSC	Forages over dry grasslands and ploughed farm fields; nests on cliff or on ground	Mugu Lagoon	L	Open, grassy areas could support this species. No suitable habitat onsite. Species was not detected during wildlife surveys.	L
<i>Charadrius nivosus nivosus</i>	Western snowy plover	FT, CSSC	Beach and sand dunes	Mandalay State Beach, McGrath State Beach, Ormond Beach, Oxnard Beach, Ventura Beach, mouth of Santa Clara River	L	Suitable habitat is not present on the site.	H

**Table 4.2-1
Special-Status Species Reported Within a 10-Mile Radius and Potential for Occurrence (Continued)**

Scientific Name	Common Name	Status (Federal, State, CNPS)	Habitat	Closest Occurrences	Likelihood to Occur On Site (L = low; M = medium; H = high)	Rationale	Likelihood to Occur Adjacent to Site
<i>Coccyzus americanus occidentalis</i>	Western yellow-billed cuckoo	FT, SE	Nests almost always placed in willows; cottonwoods are extremely important for foraging	Santa Clara River	L	Suitable habitat is not present on the site.	L
<i>Eremophila alpestris</i>	California horned lark	WL	Short grasslands and empty fields	Camarillo	L	No suitable habitat onsite. Species was not detected during wildlife surveys.	L
<i>Laterallus jamaicensis coturniculus</i>	Black rail	BCC, ST, CFP	Freshwater and saltwater marshes	Mouth of Santa Clara River	L	None	H
<i>Passerculus sandwichensis beldingi</i>	Belding's savannah sparrow	SE	Salt marsh	McGrath State Beach just south of Santa Clara River mouth, Ormond Beach wetlands, Mugu Lagoon	L	Suitable habitat is not present on the site.	L
<i>Pelecanus occidentalis californicus</i>	California brown pelican	CFP	Foraging in estuaries and ocean. Resting on hard surfaces near ocean, and offshore rocks.	Mugu Lagoon	L	Suitable habitat is not present on the site.	H
<i>Rallus longirostris levipes</i>	Light-footed clapper rail	FE, SE	Salt marsh	Mugu Lagoon	L	Suitable habitat is not present on the site.	L
<i>Riparia riparia</i>	Bank swallow	ST	Vertical banks or bluffs of friable soils suitable for burrowing	Santa Clara River estuary. Considered extirpated	L	Suitable nesting habitat is not present on the site.	L
<i>Sterna antillarum browni</i>	California least tern	FE, SE, CFP	Nesting on relatively open beaches where vegetation is limited by tidal scouring	From Santa Clara River mouth to McGrath Lake, Ormond Beach between So Cal Edison Plant and Perkins Road	L	Suitable habitat is not present on the site.	H
<i>Vireo bellii pusillus</i>	Least Bell's vireo	FE, SE	Nests in dense riparian vegetation	1.5 miles southeast of McGrath Lake, Santa Clara River, Ventura River	L	Suitable habitat is not present on the site.	M
Mammals							
<i>Antrozous pallidus</i>	Pallid bat	CSSC, WBWG High-priority species	Day roosts in caves, crevices, mines, and occasionally in hollow trees and buildings; night roosts in more open sites, such as porches and open buildings	Ventura	L	Suitable habitat is not present on the site.	L
<i>Choeronycteris mexicana</i>	Mexican long-tongued bat	CSSC, WBWG High-priority species	Roosts in caves and mines, less-commonly in buildings	Ventura	L	Suitable habitat is not present on the site.	L
<i>Eumops perotis</i>	Western mastiff bat	CSSC, WBWG High-priority species	Day roosts in crevices in rock outcrops and buildings	Weldon Canyon/Ventura River	L	Suitable habitat is not present on the site.	L
<i>Microtus californicus stephensi</i>	South coast marsh vole	CSSC	Salt marsh	Point Mugu	L	Suitable habitat is not present on the site.	L
<i>Perognathus californicus femoralis</i>	Dulzura pocket mouse	None	Shrub communities	Weldon Canyon/Ventura River	L	Shrub habitats could support this species.	L

**Table 4.2-1
Special-Status Species Reported Within a 10-Mile Radius and Potential for Occurrence (Continued)**

Scientific Name	Common Name	Status (Federal, State, CNPS)	Habitat	Closest Occurrences	Likelihood to Occur On Site (L = low; M = medium; H = high)	Rationale	Likelihood to Occur Adjacent to Site
<i>Sorex ornatus salicornicus</i>	Southern California saltmarsh shrew	CSSC	Salt marsh	Point Mugu	L	Suitable habitat is not present on the site.	L
<i>Taxidea taxus</i>	American badger	CSSC	Loose soils in grasslands and other habitats	9 miles east of Ventura	L	Suitable habitat is not present on the site.	M

Legend
 BCC USFWS Bird of Conservation Concern
 CFP California Fully Protected
 CNPS California Native Plant Society
 CSSC California Species of Special Concern
 FE Federally Listed Endangered
 FT Federally Listed Threatened
 SE State of California Listed Endangered
 ST State of California Listed Threatened
 WBWG Western Bat Working Group
 WL CDFW Watch List
 1A Presumed Extinct
 1B.1 Rare throughout its range, seriously threatened in California
 1B.2 Rare throughout its range, moderately threatened in California

**Table 4.2-2
Plant Species Observed on the Site and in the Vicinity¹**

Scientific Name	Common Name	Native/Exotic	Observed On Site	Observed Off Site	Habitat						
					Arroyo Willow Thickets	California Sagebrush Scrub	Coyote Brush Scrub	Dune Mats	Iceplant Mats	Mule Fat Scrub	Ruderal
<i>Acmispon glaber</i> [<i>Lotus scoparius</i>]	deerweed	Native	X				X		X		
<i>Acmispon maritimus</i> var. <i>maritimus</i>	coastal lotus	Native						X			
<i>Ambrosia chamissonis</i>	beach bur	Native		X				X			
<i>Ambrosia psilostachya</i>	western ragweed	Native				X	X				
<i>Artemisia californica</i>	California sagebrush	Native	X	X		X	X				
<i>Artemisia douglasiana</i>	mugwort	Native		X						X	
<i>Atriplex lentiformis</i>	big saltbush						X	X	X		
<i>Atriplex semibaccata</i>	Australian saltbush	Exotic		X					X		
<i>Baccharis pilularis</i>	coyote brush	Native	X	X			X			X	X
<i>Baccharis salicifolia</i>	mule fat	Native	X	X					X	X	
<i>Bassia hyssopifolia</i>	five horn bassia	Exotic	X						X		X
<i>Brassica nigra</i>	black mustard	Exotic	X						X		X
<i>Bromus catharticus</i>	rescue brome	Exotic	X						X		X
<i>Bromus diandrus</i>	ripgut brome	Exotic	X						X		X
<i>Bromus madritensis</i>	foxtail brome	Exotic	X								X
<i>Cakile maritima</i>	European sea rocket	Exotic	X					X			
<i>Camissoniopsis cheiranthifolia</i>	beach primrose	Native	X	X				X			
<i>Carduus tenuiflorus</i>	Italian thistle	Exotic							X		X
<i>Carpobrotus edulis</i>	iceplant	Exotic	X	X				X	X		
<i>Centaurea melitensis</i>	tocalote	Exotic					X				X
<i>Chenopodium</i> sp.	goosefoot		X						X		X
<i>Conyza canadensis</i>	Canadian horseweed	Native	X				X		X		X
<i>Corethrogyne filaginifolia</i>	common sandaster	Native	X						X		
<i>Cotula coronopifolia</i>	brass buttons	Exotic	X						X		
<i>Crassula connata</i>	sand pygmyweed	Native	X				X		X		
<i>Cuscuta salina</i>	dodder	Native		X						X	

**Table 4.2-2
Plant Species Observed on the Site and in the Vicinity (Continued)**

Scientific Name	Common Name	Native/Exotic	Observed On Site	Observed Off Site	Habitat						
					Arroyo Willow Thickets	California Sagebrush Scrub	Coyote Brush Scrub	Dune Mats	Iceplant Mats	Mule Fat Scrub	Ruderal
<i>Cynodon dactylon</i>	Bermuda grass	Exotic	X						X		X
<i>Descurainia pinnata</i>	yellow tansy mustard	Native	X						X		
<i>Dudleya lanceolata</i>	lanceleaf live-forever	Native	X								X
<i>Ericameria ericoides</i>	mock heather	Native	X	X				X	X		
<i>Eriogonum parvifolium</i>	seacliff buckwheat	Native	X	X			X		X		
<i>Erodium botrys</i>	longbeak stork's bill	Exotic	X	X			X	X			X
<i>Foeniculum vulgare</i>	sweet fennel	Exotic	X				X				
<i>Heterotheca grandiflora</i>	telegraph weed	Native	X				X				X
<i>Hordeum murinum</i>	foxtail barley	Exotic	X						X		X
<i>Juncus acutus</i>	spiny rush	Native		X	X					X	
<i>Limonium perezii</i>	Perez's sealavender	Exotic	X						X		
<i>Lupinus chamissonis</i>	dune bush lupine		X					X			
<i>Malacothrix</i> sp.	aster	Exotic		X						X	
<i>Malva parviflora</i>	cheeseweed	Exotic	X	X							X
<i>Medicago polymorpha</i>	burr clover	Exotic	X	X			X				X
<i>Melilotus indicus/officinalis</i>	yellow sweet clover	Exotic	X					X	X		X
<i>Mesembryanthemum nodiflorum</i>	slenderleaf iceplant	Exotic	X	X			X		X		X
<i>Myoporum laetum</i>	lollypop tree	Exotic	X	X					X		X
<i>Nicotiana glauca</i>	tree tobacco	Exotic	X				X		X		
<i>Opuntia</i> sp.	prickly pear	Native(?)	X								X
<i>Oxalis pes-caprae</i>	Bermuda buttercup	Exotic	X					X	X		
<i>Plantago ovata</i>	woolly plantain	Native	X						X		
<i>Pseudognaphalium luteoalbum</i>	Jersey cudweed	Exotic	X				X				X
<i>Rhus integrifolia</i>	lemonade berry	Native	X				X				
<i>Sarcocornia [Salicornia] pacifica</i>	pickleweed	Native	X						X		
<i>Salix lasiolepis</i>	arroyo willow	Native	X	X	X						
<i>Salsola tragus</i>	Russian thistle	Exotic	X	X			X		X		X
<i>Solanum douglasii</i>	Douglas' nightshade	Native	X				X		X		

**Table 4.2-2
Plant Species Observed on the Site and in the Vicinity (Continued)**

Scientific Name	Common Name	Native/Exotic	Observed On Site	Observed Off Site	Habitat						
					Arroyo Willow Thickets	California Sagebrush Scrub	Coyote Brush Scrub	Dune Mats	Iceplant Mats	Mule Fat Scrub	Ruderal
<i>Sonchus asper</i>	sow thistle	Exotic	X				X		X		X
<i>Spergularia</i> sp.	spurrey						X				X
<i>Stipa miliacea</i> var. <i>miliacea</i>	smilo grass	Exotic	X								X
<i>Suaeda taxifolia</i>	woolly seablite	Native	X	X					X		
<i>Toxicodendron diversilobum</i>	poison oak	Native	X	X	X	X	X				

Note:

¹ The site vicinity includes areas within approximately 1,000 feet of proposed development and laydown areas.

**Table 4.2-3
Wildlife Species Observed on the Site and in the Vicinity, March 12, 2015¹**

Scientific Name	Common Name	Status	Observed On Site				Observed Off Site	Observed In or Flew Over:												
			Development Site	Lay Down Area	Ornamental Plantings			Sandy Beach	Dune MatS	Iceplant Mats	Wooly Seablite Scrub/Ice Plant Mats	Developed	Coyote Brush Scrub	Mule Fat Scrub	Myoporum Grove	Arroyo Willow Thickets	Hardstem Bulrush Marsh	Open Fresh Water: McGrath Lake	Open Fresh Water: Mandalay Canal	Open Water: Ocean
Reptiles																				
<i>Uta stansburiana</i>	Common side-batched lizard	-	X					X	X	X	X									
Birds																				
<i>Anas clypeata</i>	Northern shoveler	-	X			X											X	X		
<i>Anas platyrhynchos</i>	Mallard	-				X											X			
<i>Aythya affinis</i>	Lesser scaup			X													X	X		
<i>Oxyura jamaicensis</i>	Ruddy duck	-	X	X		X											X	X		
<i>Gavia pacifica</i>	Pacific loon																		X	
<i>Aechmophorus occidentalis</i>	Western grebe	-				X													X	
<i>Podilymbus podiceps</i>	Pied-billed grebe	-				X												X		
<i>Phalacrocorax auritus</i>	Double-crested cormorant																		X	
<i>Phalacrocorax sp.</i>	Cormorant	-	X																X	
<i>Pelicanus occidentalis</i>	California brown pelican	FP				X													X	
<i>Ardea herodias</i>	Great blue heron	-				X											X			
<i>Cathartes aura</i>	Turkey vulture	-	X			X		X	X	X	X	X			X		X	X		
<i>Circus cyaneus</i>	Northern harrier	CSC				X								X	X	X				
<i>Accipiter cooperii</i>	Cooper's hawk	WL		X										X				X		
<i>Porzana carolina</i>	Sora					X											X			
<i>Fulica americana</i>	American coot	-		X													X	X		
<i>Calidris alba</i>	Sanderling	-				X	X													
<i>Charadrius vociferus</i>	Killdeer	-	X						X											
<i>Catoptrophorus semipalmatus</i>	Willet	-	X				X													
<i>Himantopus mexicanus</i>	Black-necked stilt	-				X											X			
<i>Numenius americanus</i>	Long-billed curlew	WL, BCC				X	X													
<i>Larus occidentalis</i>	Western gull	-		X			X	X												
<i>Sterna forsteri</i>	Forster's tern	-				X													X	

**Table 4.2-3
Wildlife Species Observed on the Site and in the Vicinity, March 12, 2015¹**

Scientific Name	Common Name	Status	Observed On Site				Observed Off Site	Observed In or Flew Over:											
			Development Site	Lay Down Area	Ornamental Plantings			Sandy Beach	Dune MatS	Iceplant Mats	Wooly Seablite Scrub/Ice Plant Mats	Developed	Coyote Brush Scrub	Mule Fat Scrub	Myoporum Grove	Arroyo Willow Thickets	Hardstem Bulrush Marsh	Open Fresh Water: McGrath Lake	Open Fresh Water: Mandalay Canal
<i>Thalasseus maximus</i>	Royal tern	-				X													X
<i>Calypte anna</i>	Anna's hummingbird	-	X		X														
<i>Selasphorus sasin</i>	Allen's hummingbird	BCC				X								X					
<i>Sayornis nigricans</i>	Black phoebe	-	X										X	X					
<i>Sayornis saya</i>	Say's phoebe	-	X										X						
<i>Corvus brachyrhynchos</i>	American crow	-	X						X		X	X	X		X				
<i>Corvus corax</i>	Common raven	-				X		X	X		X								
<i>Stelgidopteryx serripennis</i>	Northern rough-winged swallow	-	X						X				X	X		X		X	
<i>Cistothorus palustris</i>	Marsh wren	-				X										X			
<i>Sturnus vulgaris</i>	European starling	-	X						X		X	X							
<i>Melospiza melodia</i>	Song sparrow	-	X			X			X			X		X					
<i>Haemorhous mexicanus</i>	House finch	-	X						X		X	X		X					
<i>Haemorhous purpureus</i>	Purple finch	-				X			X										
Mammals																			
<i>Spermophilus beecheyi</i>	California ground squirrel	-	X	X					X	X									
<i>Thomomys bottae</i>	Botta's pocket gopher	-		X					X										
<i>Sylvilagus bachmani</i>	Western brush rabbit	-	X						X	X		X							
<i>Odocoileus hemionus</i>	Mule deer	-				X		X					X						

Note:
¹ The site vicinity includes areas within approximately 1,000 feet of proposed development and laydown areas.

**Table 4.2-4
Impacts From Nitrogen Deposition at Ecologically Sensitive Receptor Sites**

Receptor Location	Modeled Project-Related Nitrogen Deposition Using Past Meteorological Conditions (kg N·ha ⁻¹ ·yr ⁻¹)					Deposition Using Worst Modeled Scenario 2009-2013 (kg N·ha ⁻¹ ·yr ⁻¹)	Receptor Vegetation Type	Critical Load (kg N·ha ⁻¹ ·yr ⁻¹ , from Pardo et al., 2011)	Project Impact Under Worst-Case Modeled Scenario as a Percentage of Critical Load
	2009 Conditions	2010 Conditions	2011 Conditions	2012 Conditions	2013 Conditions				
Mugu Lagoon	0.00236	0.00213	0.00187	0.00214	0.00189	0.00236	Intertidal Wetlands	2.7	0.09%
Ormond Beach Wetlands	0.00241	0.00238	0.00191	0.00201	0.00217	0.00241	Intertidal Wetlands	2.7	0.09%
Oxnard Dunes	0.0079	0.0062	0.00336	0.00369	0.0048	0.0079	Herbaceous	6	0.13%
Beach due west of site	0.06123	0.18192	0.06131	0.08865	0.03013	0.18192	Herbaceous	6	3.03%
McGrath Lake/ McGrath State Beach	0.0119	0.01924	0.01184	0.01194	0.00574	0.01924	Freshwater Wetlands	6.8	0.28%
Santa Clara River Mouth	0.00786	0.00751	0.00576	0.00445	0.00569	0.00786	Herbaceous	6	0.13%

Table 4.2-5 Summary of Applicable Biological Resources Laws, Ordinances, Regulations, and Standards				
Jurisdiction and Document	Section	Administrating Agency	Applicability	Section of AFC
Federal				
United States Endangered Species Act and Implementing Regulations	Title 16 United States Code (USC) §1531 <i>et seq.</i> , Title 50 Code of Federal Regulations (CFR) §17.1 <i>et seq.</i>	U.S. Department of the Interior and U.S. National Oceanic and Atmospheric Administration/National Marine Fisheries Service	Requires protection and management of federally listed threatened or endangered plants and animals and their designated critical habitats. Because the proposed project will not require federal authorization or result in take of federally listed species, there are no compliance requirements for P3 under the ESA.	4.2.5.1
Migratory Bird Treaty Act	Title 16 USC §703-711; 50 CFR Subchapter B	U.S. Fish and Wildlife Service	Requires protection of migratory birds, and prohibits non-permitted take of most migratory birds.	4.2.5.1
Clean Water Act	Section 401	Los Angeles Regional Water Quality Control Board	Water Quality Certification is required that the proposed activity will comply with state water quality standards. See Section 4.15, Water	4.2.5.1
Clean Water Act	Section 404	U.S. Army Corps of Engineers	Prohibits discharge of dredge or fill material into waters of the U.S. without authorization from the U.S. Army Corps of Engineers. Project will not discharge dredge or fill material to waters of U.S.	4.2.5.1
State				
California Endangered Species Act of 1984	Fish and Game Code, §2050 through §2098	California Department of Fish and Wildlife	Protects California's endangered and threatened plant and animal species. Applies to the project regarding the project's effects on state-listed species. Because it is not anticipated that construction or operation of P3 will result in take of state-listed species, an Incidental Take Permit will not be required for the project.	4.2.5.2

Table 4.2-5 Summary of Applicable Biological Resources Laws, Ordinances, Regulations, and Standards (Continued)				
Jurisdiction and Document	Section	Administrating Agency	Applicability	Section of AFC
California Coastal Act	Public Resources Code, Division 20 §30000 et seq.	California Coastal Commission	Protects ecological resources in Coastal Zone, balanced with carefully planned economic development. P3 will be consistent with applicable policies of the Act.	4.2.5.2
California Stream Bed Alteration Agreements	Fish and Game Code §1600 et seq.	California Department of Fish and Wildlife	P3 does not include any improvements that will require a Streambed Alteration Agreement.	4.2.5.2
Native Plant Protection Act of 1977, Fish and Game Code, §1900 et seq.	Fish and Game Code §1900 et seq.	California Department of Fish and Wildlife	Provides for protection of native plants.	4.2.5.2
CDFW Policies and Guidelines, Wetlands Resources Policy		California Department of Fish and Wildlife and Central Coast Regional Water Quality Control Board	Provides broad guidance directing protection and restoration of wetlands. P3 will not impact any wetlands as defined by the state.	4.2.5.2
Licensing of Energy Facilities	Public Resource Code Section 25527 and Associated Regulations (20 CCR §§1702 (q) and (v))	California Energy Commission	Prohibits licensing of energy facilities in certain sensitive areas. If there is no alternative to siting projects in these areas, strict criteria are applied. P3 would not be sited in a sensitive area as defined by this section of the code.	4.2.5.2
City of Oxnard				
General Plan	ER-4.1	City of Oxnard Planning Division	Encourages protection of sensitive habitat. Applies to project design.	4.2.5.3
General Plan	ER-4.4	City of Oxnard Planning Division	Consider loss of sensitive habitats to be a significant environmental impact. All development that is proposed to disturb or remove sensitive habitat shall demonstrate appropriate feasible mitigation. Applies to the project's CEQA review and mitigation measures.	4.2.5.3

**Table 4.2-5
Summary of Applicable Biological Resources Laws, Ordinances, Regulations, and Standards (Continued)**

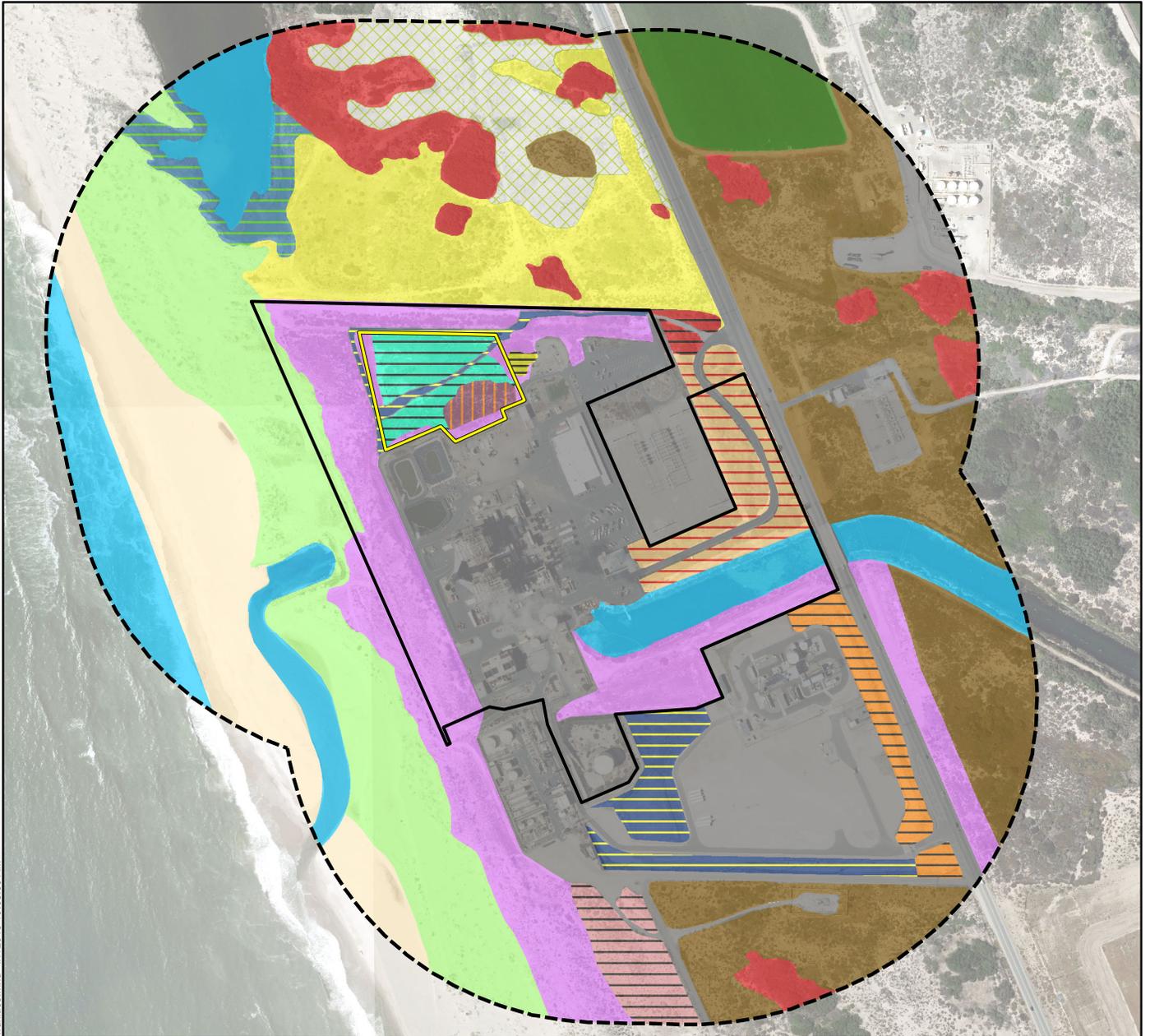
Jurisdiction and Document	Section	Administrating Agency	Applicability	Section of AFC
General Plan	ER-4.5	City of Oxnard Planning Division	Require careful planning of new development in or near biological resource areas to maintain sensitive vegetation and wildlife habitat. Applies to project design.	4.2.5.3
Coastal Land Use Plan	Policy 6d	City of Oxnard Planning Division	Site and design new development adjacent to wetlands or resource protection areas to mitigate adverse impacts to wetlands or resources. Provide 100-foot buffer adjacent to all resource protection areas. Can be reduced to 50 feet if larger buffer is unnecessary. Applies to project design on the northern and western site boundaries.	4.2.5.3
Coastal Land Use Plan	Policy 6e	City of Oxnard Planning Division	In an application for development, provide applicable topographic, vegetative, and soils information, including biological features of habitat areas. AFC provides this information.	4.2.5.3
Coastal Land Use Plan	Policy 10	City of Oxnard Planning Division	Maintain, and where feasible, restore water quality of coastal waters. Applies to the project.	4.2.5.3
Coastal Land Use Plan	Policy 10a	City of Oxnard Planning Division	Minimize effects of wastewater discharges that release toxic substances into coastal waters and streams. Applies to the project.	4.2.5.3
Coastal Land Use Plan	Policy 10b	City of Oxnard Planning Division	Minimize entrainment of organisms (induction of subsurface cooling pipes and similar apparatus). Does not apply to project.	4.2.5.3
Coastal Land Use Plan	Policy 10c	City of Oxnard Planning Division	Minimize effects of increased amounts of runoff into coastal waters through grading, site development controls, and buffer zones. Applies to project design and implementation.	4.2.5.3
Coastal Land Use Plan	Policy 10d	City of Oxnard Planning Division	Maintain surface water discharge from streams and rivers to sustain functional capacity of coastal waters... Applies to the project design and implementation.	4.2.5.3

**Table 4.2-5
Summary of Applicable Biological Resources Laws, Ordinances, Regulations, and Standards (Continued)**

Jurisdiction and Document	Section	Administrating Agency	Applicability	Section of AFC
Coastal Land Use Plan	Policy 10g	City of Oxnard Planning Division	Encourage wastewater reclamation through using treated effluent to replenish groundwater supplies and providing freshwater for restoration of streams, wetlands and lakes. Does not apply to the project.	4.2.5.3
Coastal Zoning Ordinance	Sec. 37-2.11.1	City of Oxnard Planning Division	The purpose of the EC sub-zone (Coastal Energy Facilities) is to provide areas for siting, construction, modification, and maintenance of power-generating facilities and electrical substations consistent with Policies 40 and 41 of the Coastal Land Use Plan. Applies to the project. The project is consistent with the designation.	4.2.5.3
Coastal Zoning Ordinance	Sec. 37-2.11.1(1)	City of Oxnard Planning Division	Coastal-dependent energy facilities shall be encouraged to locate or expand in existing sites and shall be permitted reasonable, long-term growth where consistent with Coastal Act, Section 30260. The project is consistent.	4.2.5.3
Coastal Zoning Ordinance	Sec. 37-2.11.1(3)	City of Oxnard Planning Division	Energy-related development shall not be located in coastal resources areas, including sensitive habitats, recreational areas, and archaeological sites. The project is consistent.	4.2.5.3
Coastal Zoning Ordinance	Sec. 37-2.11.1(6)	City of Oxnard Planning Division	Wastewater shall be treated as necessary and put to reuse. Applies to the project.	4.2.5.3
Coastal Zoning Ordinance	Sec. 37-2.11.2	City of Oxnard Planning Division	Conditionally permitted uses include: (1) electrical power-generating plant and accessory uses; (2) electrical substation. Applies to the project. The project is consistent.	4.2.5.3
Coastal Zoning Ordinance	Sec. 37-3.1.2	City of Oxnard Planning Division	All development in the Coastal Zone—in, adjacent to, or having an effect on any environmentally sensitive habitat area—shall comply with provisions of this section. Refer to Policy Nos. 6, a, c, d, e, and f, and 10 a-g of Coastal Land Use Plan for specific standards. Applies to the project. The project is consistent.	4.2.5.3

Table 4.2-6 Involved Agencies and Agency Contacts		
Issue	Agency	Contact and Telephone
Federal special-status wildlife species; migratory birds, nesting birds	U.S. Fish and Wildlife Service Ventura Field Office 2493 Portola Road, Suite B Ventura, CA 93003	Chris Dellith (805) 644-1766
Dredge and Fill in Waters and Wetlands of the U.S.	U.S. Army Corps of Engineers, Los Angeles District Regulatory Division – Ventura Field Office 2151 Alessandro Drive, Suite 110 Ventura, CA 93001	Dr. Aaron Allen, Branch Chief (805) 585-2140
Water Quality Certification	Los Angeles RWQCB 320 West Fourth Street, Suite 200 Los Angeles, CA 90013	Valerie Carrillo Zara (213) 576-6759
State special-status wildlife species; migratory birds; nesting birds, fully protected wildlife species	California Department of Fish and Wildlife 3883 Ruffin Road San Diego, CA 92123	Martin Potter (805) 640-3677
State special-status plant species	California Department of Fish and Wildlife 3883 Ruffin Road San Diego, CA 92123	Mary Meyer (805) 640-8019

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Vegetation type

- | | | | | | |
|--|--|--|--|--|-------------------------------------|
| | California sagebrush scrub | | Developed | | Myoporum grove |
| | Agriculture | | Dune mats | | Ornamental |
| | Arroyo willow thickets | | Habitat restoration in progress | | Open water |
| | Arroyo willow thickets/Ornamental | | Ice plant mats | | Ruderal |
| | California bulrush marsh | | Ice plant mats/European beach grass swards | | Sandy beach |
| | California sagebrush scrub (installed) | | Mule fat scrub (Habitat restoration in progress) | | Wooly seablite scrub/ice plant mats |
| | Coyote brush scrub | | Mock heather scrub | | |

Source: Imagery, U.S. Geological Survey, 2013; USFWS, 2014.

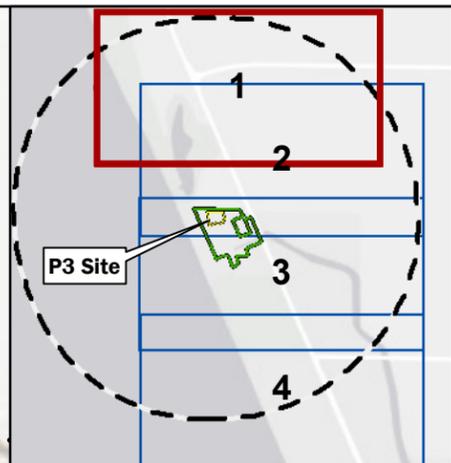
VEGETATION COMMUNITIES

- Puente Power Project (P3) Site
- 1,000-foot Buffer of Project Components
- Mandalay Generating Station Property



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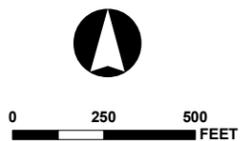
FIGURE 4.2-2



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Source: California Natural Diversity Database, 2015; USFWS, 2014.

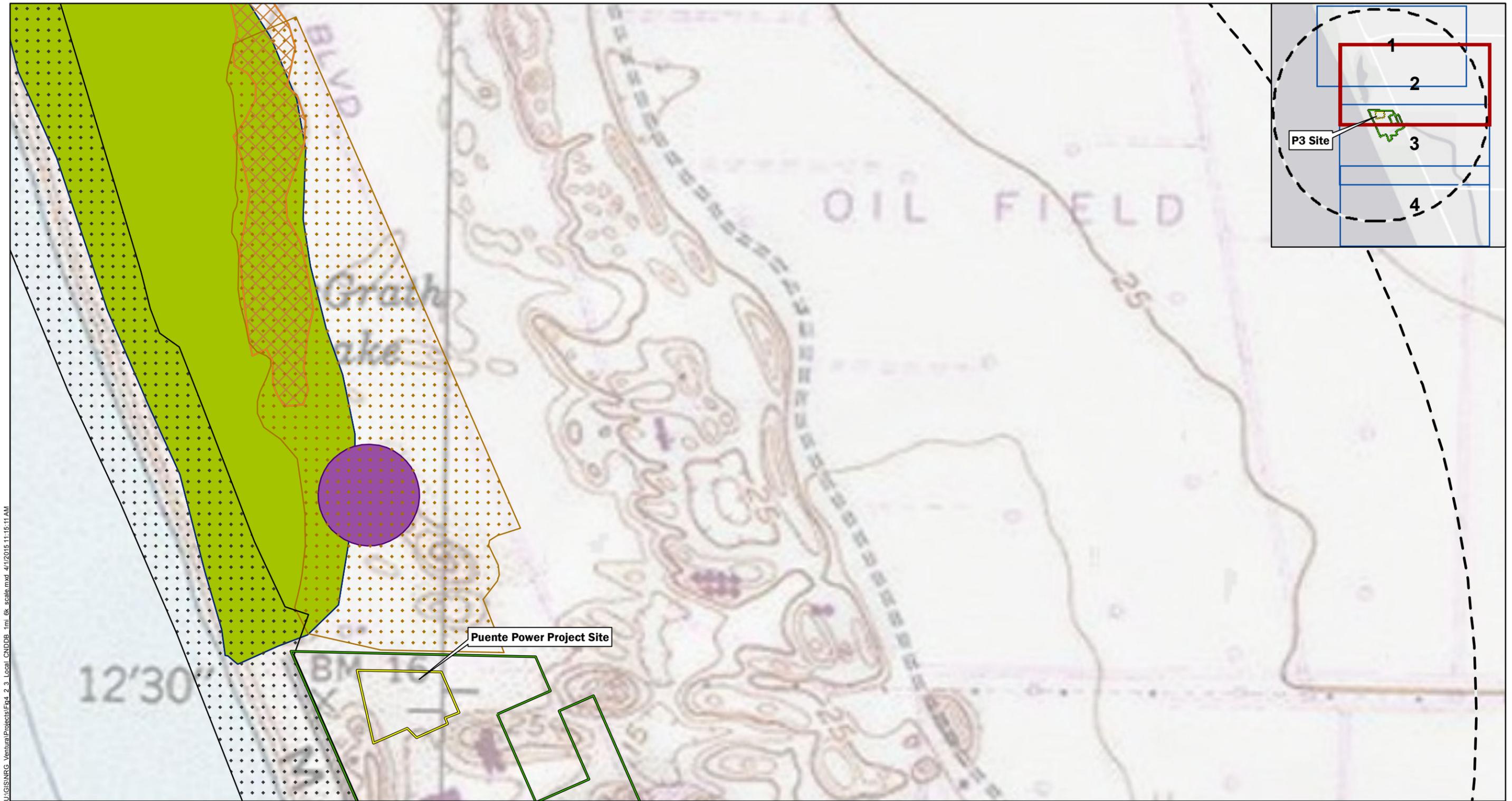
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|--------------------------------------|--|-------------------------------|
| Puente Power Project (P3) Site | Ventura marsh milk-vetch | USFWS Critical Habitat |
| Mandalay Generating Station Property | Coincident records: California least tern, western snowy plover & sandy beach tiger beetle | Western snowy plover |
| 1-mile Buffer of P3 | silvery legless lizard | Ventura marsh milk-vetch |
| | Coastal and Valley Freshwater Marsh | |



**SPECIAL-STATUS SPECIES AND COMMUNITIES
WITHIN 1-MILE RADIUS OF PROJECT SITE**

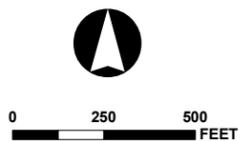
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FIGURE 4.2-3 SHEET 1



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 Source: California Natural Diversity Database, 2015; USFWS, 2014.

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|--------------------------------------|--|-------------------------------|
| Puente Power Project (P3) Site | Ventura marsh milk-vetch | USFWS Critical Habitat |
| Mandalay Generating Station Property | Coincident records: California least tern, western snowy plover & sandy beach tiger beetle | Western snowy plover |
| 1-mile Buffer of P3 | silvery legless lizard | Ventura marsh milk-vetch |
| | Coastal and Valley Freshwater Marsh | |



**SPECIAL-STATUS SPECIES AND COMMUNITIES
WITHIN 1-MILE RADIUS OF PROJECT SITE**

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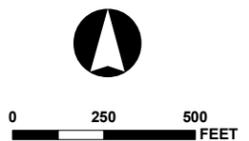
FIGURE 4.2-3 SHEET 2



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Source: California Natural Diversity Database, 2015; USFWS, 2014.

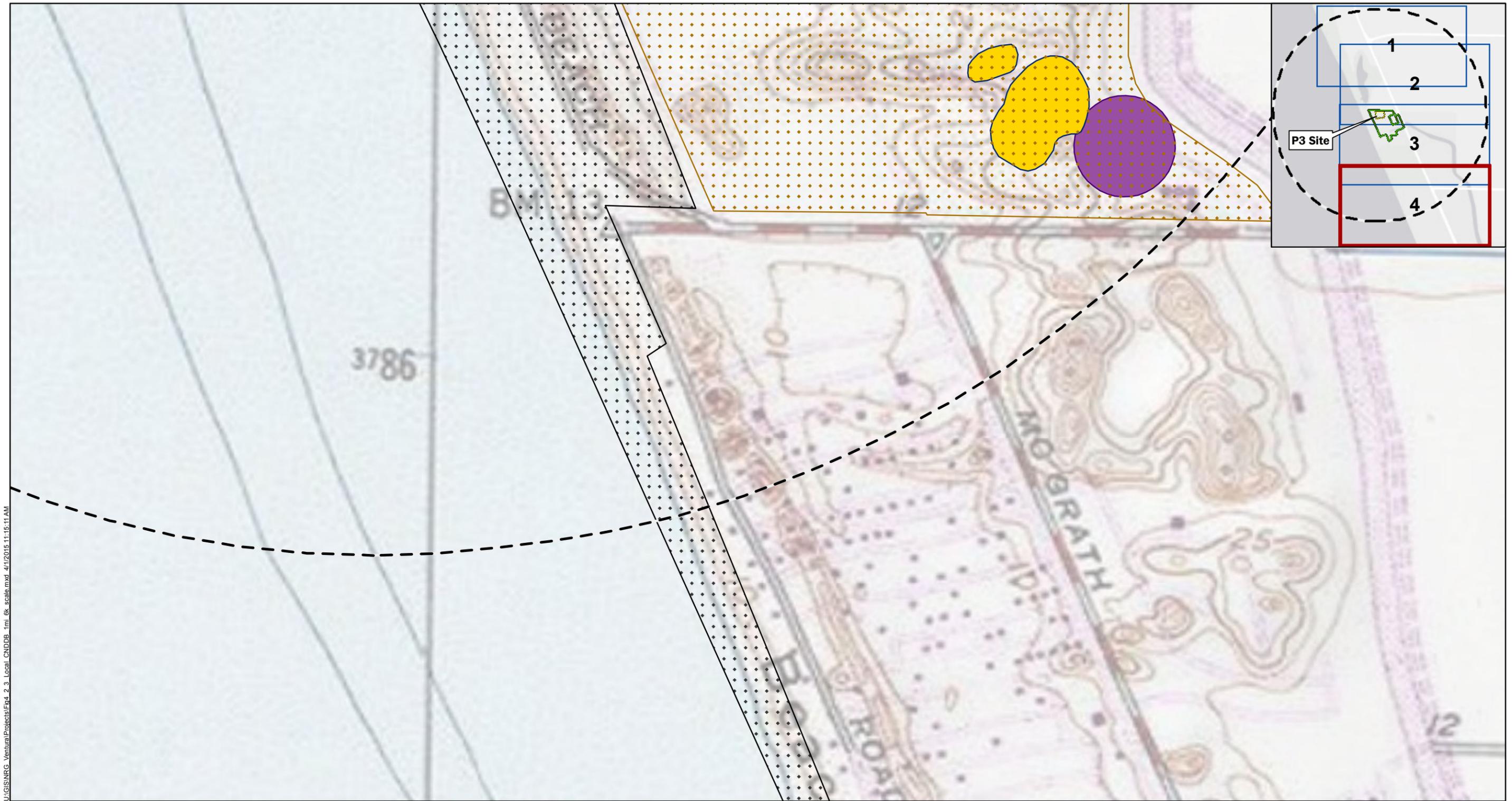
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|--------------------------------------|--|-------------------------------|
| Puente Power Project (P3) Site | Ventura marsh milk-vetch | USFWS Critical Habitat |
| Mandalay Generating Station Property | Coincident records: California least tern, western snowy plover & sandy beach tiger beetle | Western snowy plover |
| 1-mile Buffer of P3 | silvery legless lizard | Ventura marsh milk-vetch |
| | Coastal and Valley Freshwater Marsh | |



**SPECIAL-STATUS SPECIES AND COMMUNITIES
WITHIN 1-MILE RADIUS OF PROJECT SITE**

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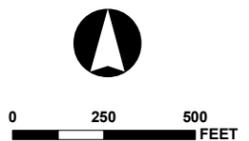
FIGURE 4.2-3 SHEET 3



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Source: California Natural Diversity Database, 2015; USFWS, 2014.

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|--------------------------------------|--|-------------------------------|
| Puente Power Project (P3) Site | Ventura marsh milk-vetch | USFWS Critical Habitat |
| Mandalay Generating Station Property | Coincident records: California least tern, western snowy plover & sandy beach tiger beetle | Western snowy plover |
| 1-mile Buffer of P3 | silvery legless lizard | Ventura marsh milk-vetch |
| | Coastal and Valley Freshwater Marsh | |



**SPECIAL-STATUS SPECIES AND COMMUNITIES
WITHIN 1-MILE RADIUS OF PROJECT SITE**

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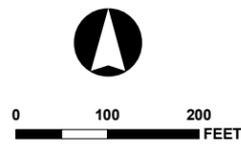
FIGURE 4.2-3 SHEET 4



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Source: Imagery, U.S. Geological Survey, 2013; Wetlands, National Wetland Inventory (NWI) 2013; USFWS, 2014.

- | | |
|---|--|
|  Construction and Laydown Areas | NWI Wetland Type |
|  Puente Power Project (P3) Site |  Estuarine and Marine Deepwater |
|  Mandalay Generating Station Property |  Freshwater Emergent Wetland |
|  250-foot Radius of Project Components |  Freshwater Pond |



**POTENTIAL WETLANDS IN SITE
VICINITY: 250-FOOT RADIUS**

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FIGURE 4.2-4