TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

5.6 BIOLOGICAL RESOURCES

The Pio Pico Energy Center Project (PPEC) is a proposed facility to be located within an unincorporated area south of the City of San Diego, California (see Figure 3.1-1, Regional Location). For the purposes of this section, the proposed PPEC project will be hereafter referred to as the "project." The project occurs within the San Bernardino Merdian, Section 30, Township 18 South, and Range 1 East of the Otay Mesa United States Geological Survey (USGS) 7.5-Minute Topographic Quadrangle Map (USGS, 1975). For the purposes of this evaluation, the project's "study area" is defined as the physical ground disturbance footprint (i.e., generating facility site, construction laydown area, transmission line pole locales, gas line, etc.) plus a 1,000-foot buffer (Figure 5.6-1). Facility placement and design were intended to avoid populations of special-status species within the region. The final design will also minimize impacts to wildlife connectivity and movement to avoid resource conflicts and permitting delays to the maximum extent practicable. Additionally, the industrial park developer grade the property in first quarter 2011 as described in the 2009-2010 County of San Diego Grading Permit 2700-1555. This planned soil removal and grading of the property was already planned for prior to the inception of this project and will occur regardless of the submittal of this Application for Certification (AFC) or its eventual approval. Site elevation for the purposes of this project will be approximately 635 feet above mean sea level (msl). This will establish the baseline conditions that this AFC is founded upon. The baseline site topography is shown on Figure 3.4-2, Baseline Site Topography.

This section of the AFC is intended to assess the impacts of the project on biological resources[1] and special-status species[2] and their habitats, as well as special aquatic resource areas[3]. The information contained in this section will only include summarized technical data, maps, and similar relevant information sufficient to allow assessment of any significant environmental consequences of the proposed project by reviewing agencies and members of the public. Furthermore, where the potential for significant impacts are identified, measures are presented to avoid, minimize, and mitigate impacts.

The botanical field studies have identified that no special-status plant species are found within the project study area.

The wildlife field studies identified the following special-status wildlife species have potential to occur within the project study area:

- San Diego Fairy Shrimp (*Branchinecta sandiegonensis*); and
- Burrowing Owl (*Athene cincularia*).

[1] For the purposes of this analysis, "biological resources" refers to the plants, wildlife, and habitats that occur, or have the potential to occur, within the Project's study area.

[2] For the purposes of this analysis, "special-status species" refers to any species that has been afforded special protection by federal, state, or local resource agencies (e.g., U.S. Fish and Wildlife Service, California Department of Fish and Game) or resource conservation organizations (e.g., California Native Plant Society). The term "special-status species" excludes those avian species solely identified under Section 10 of the Migratory Bird Treaty Act (MBTA) for federal protection. Nonetheless, MBTA Section 10 protected species are afforded avoidance and minimization measures per state and federal requirements.

[3] For the purposes of this analysis, special aquatic resource areas including vernal pools that are defined as potential: United States Army Corps of Engineers (USACE) jurisdiction pursuant to Section 404 of the Clean Water Act (CWA); Regional Water Quality Control Board (RWQCB) legal authority in accordance with Section 401 of the CWA and as defined within Section 13050(e) et seq. of the California Water Code (CWC) via the Porter-Cologne Water Quality Control Act (Porter-Cologne); and California Department of Fish and Game (CDFG) jurisdiction pursuant to Section 1600 et seq. of the California Fish and Game Code (CFG Code).

5.6.1 Methods

Prior to beginning field surveys, URS Corporation (URS) consulted resource specialists and reviewed available information from resource management plans and relevant documents to determine the locations and types of biological resources that have the potential to exist within and adjacent to the project study area; resources were evaluated within one mile and ten miles of the project pursuant to California Energy Commission's (CEC) evaluation guidelines. The materials reviewed included, but were not limited to, the following:

- County of San Diego, Biological Mitigation Ordinance (1996)
- County of San Diego in Conjunction with the United States Fish and Wildlife Service (USFWS) and California Department of Fish & Game (CDFG). Multiple Species Conservation Program
- USFWS Critical Habitat Mapper and File Data (USFWS, 2010a and 2010b)
- USFWS Carlsbad Field Office Species List for San Diego County
- The California Natural Diversity Database (CDFG, 2010) (See Appendix J-3)
- California Native Plant Society Electronic Inventory (CNPS, 2010)
- Aerial Photographs (Digital Globe 2009)
- Biological Database for California Department of Transportation (Caltrans) State Route (SR)-11 Project (URS, 2005)

Wildlife corridors were also evaluated within the study area. This evaluation included a literature review to identify any previously recognized regional[4] and/or local[5] wildlife corridors or linkages (Ogden Environmental, 1993). To evaluate the arrangement of open space for its usefulness as a wildlife corridor, a group of focal target species was selected as well. The focal species included the larger mammal species: mule deer (*Odocoileus hemionus*), mountain lion (*Felis concolor*), bobcat (*Felis rufus*), and coyote (*Canus latrans*). Detection of sign and/or visual observation of these species were documented during the various field efforts. These data will be analyzed to determine areas of high wildlife use.

Pedestrian-based field surveys were performed as well to assess general and dominant vegetation community types, community sizes, habitat types, and species present within communities. Detailed methods, field survey dates and results for the pedestrian-based field survey are provided in Appendix J-1, Biological Technical Report. In summary, community type descriptions were based on observed dominant vegetation composition based on the criteria and definitions of widely accepted vegetation classification systems (Holland 1986, Sawyer, Keeler-Wolf and Evens 2009). Plants were identified to the lowest taxonomic level sufficient to determine whether the plant species observed were non-native, native, or special-

4Regional corridors link two or more large areas of natural open space and serve to maintain demographic and genetic exchange between wildlife populations residing within these geographically distinct areas (Beier and Loe 1992).

5Local corridors give resident animals access to essential resources (e.g., water, food, cover, or den sites) within a large habitat patch and may also function as secondary connections to the regional corridor system (Beier and Loe 1992).

status. Plants of uncertain identity were subsequently identified from taxonomic keys (Hickman, 1993). Scientific and common species names were recorded according to Hickman (1993). The presence of a wildlife species was based on direct observation, and wildlife signs (e.g., tracks, burrows, nests, scat, or vocalization). Field data compiled for wildlife species included scientific name, common name, and evidence of sign when no direct observations were made. Wildlife of uncertain identity were documented and subsequently identified from specialized field guides and related literature (Burt and Grossenheider, 1980; Halfpenny, 2000; Sibley, 2000; Elbroch, 2003; and Stebbins, 2003).

The study area was also assessed for its potential to support special-status species based on habitat suitability comparisons with reported occupied habitats. The following definitions were utilized to determine the need for subsequent surveys and to assess project-related effects to special-status species:

Absent [A] - Species distribution is restricted by substantive habitat requirements, which do not occur within the project footprint, and no further survey or study is necessary to determine likely presence or absence of this species.

Low [L] - Species distribution is restricted by substantive habitat requirements, which are negligible within the project footprint, and no further survey or study is obligatory to determine likely presence or absence of this species.

Moderate [M] – Species distribution is restricted by substantive habitat requirements, which marginally occur within the Project's foot print, and further survey or study may be necessary to determine likely presence or absence of species.

Habitat Present [HP] - Species distribution is restricted by substantive habitat requirements, which occur within the project footprint, and further survey or study may be necessary to determine likely presence or absence of species.

Present [P] - Species or species sign were observed to be present in the project footprint.

Additionally, suspected special aquatic resource areas were examined and evaluated within the study area using the general methodology set forth in:

- The U.S. Army Corps of Engineers (USACE) Wetland Delineation Manual (Environmental Laboratory, 1987);
- The USACE's Interim Regional Supplement to the USACE Wetland Delineation Manual: Arid West Region Direction on Delineating Arid Streams (Wakeley et al., 2006);
- The USACE's and Environmental Protection Agency's June 2007 issued Clean Water Act (CWA) Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell v. United States Guidance Document (USACE, 2007); and
- Those analysis tools detailed in A Field Guide to Lake and Streambed Alteration Agreements Sections 1600-1607 (ESD, 1994).

Detailed field survey methods are provided in the Preliminary Jurisdictional Delineation Report which presents our best effort at estimating jurisdictional boundaries using the most up-to-date regulations, written policies, and guidance from the USACE, Regional Water Quality Control Board (RWQCB), and CDFG. Nonetheless, only the USACE, RWQCB, and CDFG can make a final determination of jurisdictional boundaries for this Project.

As a result of the above-referenced literature reviews, the following focused surveys were determined to be necessary:

- Fairy Shrimp
- Burrowing Owl

5.6.2 Affected Environment

The majority of the study area has been previously disturbed and the region includes developed areas containing commercial and public infrastructure. The project's proposed ground disturbance footprint is relatively flat and insulated from the adjacent drainage and open space by roughly 200 feet. Additionally, the industrial park developer will grade the property in first quarter 2011 as described in the 2009-2010 County of San Diego Grading Permit 2700-1555. This planned soil removal and grading of the property was already planned for prior to the inception of this project and will occur regardless of the submittal of this AFC or its eventual approval. Site elevation for the purposes of this project will be approximately 635 feet above msl. This will establish the baseline conditions that this AFC is founded upon. The baseline site topography is shown on Figure 3.4-2, Baseline Site Topography. Facility placement and design were also intended to avoid special-status species within the region. The final design also will also minimize impacts to wildlife connectivity and movement to avoid resource conflicts and permitting delays. Figures 5.6-2 and 5.6-3 identify biological resources within a one-mile and ten-mile radius of the project, respectively (CNDDB, 2010; CNPS, 2010; and USFWS, 2010).

Vegetation Communities

The project study area includes four vegetation communities/land cover types, which are discussed further below and listed in Table 5.6-1. Figure 5.6-4 depicts the vegetation communities/land cover types observed within the project study area.

TABLE 5.6-1
VEGETATION COMMUNITIES/LAND COVER TYPES OBSERVED WITHIN THE STUDY AREA

Vegetation Community Type	Acres
Non-Native Grassland	604.7
Mule fat	0.54
Riparian	5.6
Developed/Disturbed	317.3

Non-Native Grassland

Non-native grassland generally occurs on fine-textured loam or clay soils that are moist or even waterlogged during the winter rainy season and very dry during the summer and fall. This habitat is a disturbance-related community most often found in old fields or openings in native scrub habitats and is characterized by a dominant cover (greater than 50% cover) of annual grasses and occasionally native and nonnative annual forbs (Holland, 1986). Non-native grasses have replaced native grassland and coastal sage scrub at many localities throughout Southern California.

Mule Fat

Mule fat/scrub is a depauperate, tall, riparian scrub strongly dominated by mule fat (*Baccharis salicifolia*) and salt cedar (*Tamarix ramosissima*). This early seral community is maintained by frequent ephemeral flooding. Absent frequent flooding, most stands would succeed to cottonwood or sycamore dominated riparian forests or woodlands.

Riparian

Dominant riparian species within the study area include southern cattail (*Typha domingensis*), tall umbrella sedge (*Cyperus eragrostis*), and arroyo willow (*Salix lasiolepis*). This vegetation is present for most, or all, of the growing season in most years and is dominated by perennial species.

Developed/Disturbed

Developed lands within the study area include roadways, parking lots, vacant lots, residences and other private/public infrastructure with ornamental plantings. Species composition in developed communities within the study area varied and dominated by non-native cultivar species.

Disturbed or ruderal vegetation typically develops on sites with heavily compacted soils following intense levels of disturbance, such as grading, agriculture, off-road activities, or previous development. Disturbed areas are dominated by broad-leaf herbaceous species such as mustards (*Brassica* spp., *Hirshfeldia incana*), horseweed (*Conyza canadensis*), and thistles (*Centaurea* spp., *Silybum* spp., *Carduus* spp., etc.) and often have a subdominant cover (less than 50% cover) of annual non-native grasses.

Plant species observed within the project study area are identified in Table 5.6-2. Plant species observed within the study area are common to urban habitats and undeveloped natural areas.

TABLE 5.6-2
OBSERVED PLANT SPECIES

SCIENTIFIC NAME	COMMON NAME
FLOWERING PLANTS	
MONOCOTS	
Arecaceae	**Palm Family**
Washingtonia sp.	Fan palm
Cyperaceae	**Sedge Family**
Cyperus eragrostis	Tall umbrella-sedge
Poaceae	**Grass Family**
Avena barbata *	Slender wild oat
Avena fatua *	Wild oat
Bromus diandrus * †	Ripgut brome
Bromus hordeaceus *	Soft chess
*Bromus japonicus**	Japanese broom
Bromus madritensis *	Foxtail chess
Bromus sp.* †	Brome grass
Cynodon dactylon *	Bermuda grass
Elymus condensatus	Giant wildrye
Lolium multiflorum *	Italian wild rye
Piptatherum miliaceum	Smilo grass
Polypogon monspeliensis *	Annual beard grass
Typhaceae	**Cattail Family**
Typha domingensis	Southern cattail
DICOTS	
Aizoaceae	**Fig-Marigold Family**
Carpobrotus edulis	Iceplant
Anacardiaceae	**Sumac Family**
Rhus ovata	Sugar bush
Schinus molle *	Pepper tree
Apiaceae	**Carrot Family**
Foeniculum vulgare *	Sweet fennel
Apocynaceae	**Dogbane Family**
Nerium oleander	Oleander
Asteraceae	**Aster Family**
Ambrosia psilostachya	Ragweed
Artemisia californica	California sagebrush
Artemisia douglasiana	Mugwort
Baccharis pilularis	Coyote brush
Baccharis salicifolia	Mule fat
Conyza canadensis	Common horseweed
Encilia californica	California encilia
Heterotheca grandiflora	Telegraph weed
Isocoma menziesii var. *menziesii*	Goldenbush
Iva hayesiana **	San Diego marsh elder
Lactuca serriola *	Prickly lettuce
Picris echioides *	Bristly ox-tongue
Sonchus asper *	Prickly sow thistle
Sonchus oleraceus *	Sow thistle
Stephanomeria exigua	Wreath-plant
Brassicaceae	**Mustard Family**
Brassica nigra *	Black mustard
Hirschfeldia incana *	Shortpod mustard

SCIENTIFIC NAME	COMMON NAME
Cactaceae	**Cactus Family**
Cylindropuntia sp.	Cholla
Opuntia littoralis	Coastal prickly pear
Chenopodiaceae	**Goosefoot Family**
Atriplex semibaccata *	Australian saltbush
Salsola tragus *	Russian thistle
Convolvulaceae	**Morning Glory Family**
*Convolvulus arvensis**	Bindweed
Euphorbiaceae	**Spurge Family**
Chamaesyce polycarpa	Small seeded spurge
Eremocarpus setigerus	Doveweed
Ricinus communis *	Castor bean
Fabaceae	**Pea Family**
Melilotus alba *	White sweetclover
Trifolium repens *	White clover
Geraniaceae	**Geranium Family**
Erodium botrys *	Longbeak stork's bill
Erodium cicutarium *	Redstem stork's bill
Lamiaceae	**Mint Family**
Marrubium vulgare *	Common horehound
Malvaceae	**Mallow Family**
Malva parviflora *	Cheeseweed
Myrtaceae	**Myrtle Family**
Eucalyptus sp. *	Eucalyptus tree
Onagraceae	**Evening Primrose Family**
Oenothera elata	Hooker's evening primrose
Polygonaceae	**Buckwheat Family**
Rumex crispus *	Curly dock
Primulaceae	**Primrose Family**
Anagallis arvensis *	Scarlet pimpernel
Rosaceae	**Rose Family**
Heteromeles arbutifolia	Toyon
Salicaceae	**Willow Family**
Salix exigua	Sandbar willow
Salix lasiolepis	Arroyo willow
Solanaceae	**Nightshade Family**
Nicotiana glauca *	Tree tobacco
Tamaricaceae	**Tamarisk Family**
Tamarix ramosissima	Mediterranean tamarisk
Urticaceae	**Nettle Family**
Urtica dioica	Stinging nettle
Verbenaceae	**Verbena Family**
Lantana sp.*	Lantana

* Non-native (California Invasive Plant Council, 2006),

Wildlife

The study area provides habitat for a diversity of wildlife species; species observed within the project study area are listed in Table 5.6-3.

TABLE 5.6-3
OBSERVED WILDLIFE SPECIES

Scientific Name	Common Name
REPTILES	
PHRYNOSOMATIDAE	**SPINY LIZARDS**
Sceloperous occidentalis	Western fence lizard
BIRDS	
ACCIPITRIDAE	**HAWKS, KITES, AND EAGLES**
Buteo jamaicensis	Red-tailed Hawk
ARDEIDAE	**HERONS AND EGRETS**
Ardea alba	Great Egret
COLUMBIDAE	**PIGEONS AND DOVES**
Zenaida mcroura	Mourning Dove
FALCONIDAE	**FALCONS**
Falco sparverius	American Kestrel
ICTERIDAE	**NEW WORLD BLACKBIRDS AND ORIOLES**
Sturnella neglecta	Western Meadowlark
POLIOPTILIDAE	**GNATCATCHERS**
Polioptila caerulea	Blue gray Gnatcatcher
TROCHILIDAE	**HUMMINGBIRDS**
Calypte anna	Anna's Hummingbird
TYRANNIDAE	**TYRANT FLYCATCHERS**
Sayornis nigricans	Black Phoebe
Tyrannus vociferans	Cassin's Kingbird
TYTONIDAE	**BARN OWLS**
Tyto alba	Barn Owl
MIMIDAE	**MOCKINGBIRDS AND THRASHERS**
Mimus polyglottos	Northern Mockingbird
CORVIDAE	**JAYS AND CROWS**
Corvus brachyrhynchos	American Crow
Corvus corax	Common Raven
EMBERIZIDAE	**AMERICAN SPARROWS**
Zonotrichia leucophrys	White-crowned Sparrow
FRINGILLIDAE	**FINCHES**
Carpodacus mexicanus	House Finch
MAMMALS	
CANIDAE	**FOXES, DOGS, WOLVES, AND COYOTES**
Canis familiaris	Domestic Dog (sign)
Canis latrans	Coyote (sign)
LEPORIDAE	**RABBITS AND HARES**
Sylvilagus sp.	cottontail (sign)
SCIURIDAE	**SQUIRRELS**
Otospermophilus beecheyi	California ground squirrel (sign)

Special-Status Plants

Thirty-nine (39) special status plant species are reported to occur within the USGS Otay Mesa 7.5-minute Quadrangle Map that includes the project footprint (Table 5.6-4). Eight of the listed plants are considered endangered or threatened plant species. All 39 listed species were determined to have an "Absent" or "Low" potential for occurrence within the project disturbance footprint, and no further survey or study is necessary to determine presence or absence of these species.

TABLE 5.6-4
SPECIAL-STATUS PLANTS AND THEIR POTENTIAL FOR OCCURRENCE WITHIN THE PROJECT FOOTPRINT

SCIENTIFIC AND COMMON NAME	HABITAT AND DISTRIBUTION	BLOOMING PERIOD	STATUS DESIGNATION	POTENTIAL FOR OCCURRENCE
Acanthomintha ilicifolia San Diego thorn-mint	Annual herb. Found in chaparral, coastal scrub, valley and foothill grassland, and vernal pools/clay soils. Occurs from 33 to 3,150 ft. in elevation.	Apr-Jun	Fed: THR CA: END CNPS: List 1B.1 Local: NE	Low
Adolphia californica California adolphia	Deciduous shrub. Found in chaparral, coastal shrub, and valley and foothill grassland/clay soils. Occurs from 150 to 2,400 ft. in elevation.	Dec-May	Fed: NONE CA: NONE CNPS: List 2.1	Low
Ambrosia chenopodiifolia San Diego bur-sage	Shrub. Found in coastal scrub. Occurs from 180 to 540 ft. in elevation.	Apr-Jun	Fed: NONE CA: NONE CNPS: List 2.1	Absent
Ambrosia monogyra Singlewhorl burrobush	Shrub. Found in chaparral and Sonoran desert scrub/sandy soils. Occurs from 33 to 1,640 ft. in elevation.	Aug-Nov	Fed: NONE CA: NONE CNPS: List 2.2	Absent
Atriplex coulteri Coulter's saltbush	Perennial herb. Found in coastal bluff scrub, coastal dunes, coastal scrub, and valley and foothill grassland/alkaline or clay soils. Occurs from 10 to 1,500 ft. in elevation.	Mar-Oct	Fed: NONE CA: NONE CNPS: List 1B.2	Low
Atriplex pacifica South Coast saltscale	Annual herb. Found in coastal bluff scrub, coastal dunes, coastal scrub, and playas. Occurs from 0 to 460 ft. in elevation.	Mar-Oct	Fed: NONE CA: NONE CNPS: List 1B.2	Absent
Bergerocactus emoryi Golden-spined cereus	Stem succulent. Found in closed-cone coniferous forest, chaparral, and coastal scrub/sandy soils. Occurs from 10 to 1,300 ft. in elevation.	May-Jun	Fed: NONE CA: NONE CNPS: List 2.2	Absent
Brodiaea orcuttii Orcutt's brodiaea	Bulbiferous herb. Found in closed-cone coniferous forest, chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, and vernal pools/mesic and clay soils, sometimes serpentine. Occurs from 100 to 5,500 ft. in elevation.	May-Jul	Fed: NONE CA: NONE CNPS: List 1B.1 Local: NE	Low

SCIENTIFIC AND COMMON NAME	HABITAT AND DISTRIBUTION	BLOOMING PERIOD	STATUS DESIGNATION	POTENTIAL FOR OCCURRENCE
California macrophylla Round-leaved filaree	Annual herb. Found in cismontane woodland and valley and foothill grasslands/clay soils. Occurs from 50 to 4,000 ft. in elevation.	Mar-May	Fed: NONE CA: NONE CNPS: List 1B.1	Low
Calochortus dunnii Dunn's mariposa-lily	Bulbiferous herb. Found in closed-cone coniferous forest, chaparral, and valley and foothill grassland/ gabbroic or metavolcanic, rocky soils. Occurs from 1,250 to 6,000 ft. in elevation.	Apr-Jun	Fed: NONE CA: RARE CNPS: List 1B.2 Local: NE	Absent
Camissonia lewisii Lewis' evening primrose	Annual herb. Found in coastal bluff scrub, cismontane woodland, coastal dunes, coastal scrub, and valley and foothill grassland/sandy or clay soils. Occurs from 0 to 980 ft. in elevation.	Mar-May	Fed: NONE CA: NONE CNPS: List 3	Low
Ceanothus cyaneus Lakeside ceanothus	Evergreen shrub. Found in closed-cone coniferous forest and chaparral. Occurs from 770 to 2,480 ft. in elevation.	Apr-Jun	Fed: NONE CA: NONE CNPS: List 1B.2 Local: NE	Absent
Ceanothus otayensis Otay Mountain ceanothus	Evergreen shrub. Found in chaparral/metavolcanic or gabbroic rock. Occurs from 1,968 to 3,600 ft. in elevation.	Jan-Apr	Fed: NONE CA: NONE CNPS: List 1B.2	Absent
Comarostaphylis diversifolia* ssp. *diversifolia Summer holly	Evergreen shrub. Found in chaparral and cismontane woodland. Occurs from 100 to 1,800 ft. in elevation.	Apr-Jun	Fed: NONE CA: NONE CNPS: List 1B.2	Absent
Cordylanthus orcuttianus Orcutt's bird's-beak	Annual herb; hemiparasitic. Found in coastal scrub. Occurs from 33 to 1,150 ft. in elevation.	Apr-Jul	Fed: NONE CA: NONE CNPS: List 2.1	Absent
Cylindropuntia californica* var. *californica Snake cholla	Perennial succulent. Found in chaparral and coastal scrub. Occurs from 100 to 165 ft. in elevation.	April - May	Fed: NONE CA: NONE CNPS: List 1B.1	Low
Deinandra conjugens Otay tarplant	Annual herb. Found in coastal scrub, and valley and foothill grassland/clay soils. Occurs from 246 to 985 ft. in elevation.	May-Jun	Fed: THR CA: END CNPS: List 1B.1 Local: NE	Low
Dudleya variegata Variegated dudleya	Perennial herb. Found in chaparral, cismontane woodland, coastal scrub, valley and foothill grassland, and vernal pools/clay soils. Occurs from 10 to 1,900 ft. in elevation.	Apr-Jun	Fed: NONE CA: NONE CNPS: List 1B.2 Local: NE	Low
Eryngium aristulatm* var. *parishii San Diego button-celery	Annual/perennial herb. Found in coastal scrub, valley and foothill grassland, and vernal pools/mesic soil. Occurs from 66 to 2,035 ft. in elevation.	Apr-Jun	Fed: END CA: END CNPS: List 1B.1	Low
Ferocactus viridescens San Diego barrel cactus	Stem succulent. Found in chaparral, coastal scrub, valley and foothill grassland, and vernal pools. Occurs from 10 to 1,500 ft. in elevation.	May-Jun	Fed: NONE CA: NONE CNPS: List 2.1	Low

SCIENTIFIC AND COMMON NAME	HABITAT AND DISTRIBUTION	BLOOMING PERIOD	STATUS DESIGNATION	POTENTIAL FOR OCCURRENCE
Fremontodendron mexicanum Mexican flannelbush	Evergreen shrub. Found in closed-cone coniferous forest, chaparral, and cismontane woodland/ gabbroic, metavolcanic, or serpentinite. Occurs from 32 to 2,350 ft. in elevation.	Mar-Jun	Fed: END CA: RARE CNPS: List 1B.1	Absent
Harpagonella palmeri Palmer's grapplinghook	Annual herb. Found in chaparral, coastal scrub, and valley and foothill grassland/clay. Occurs from 66 to 3,130 ft. in elevation.	Mar-May	Fed: NONE CA: NONE CNPS: List 4.2	Low
Hesperocyparis forbesii Tecate cypress	Evergreen tree. Found in closed-cone coniferous forest and chaparral/clay soils, gabbroic or metavolcanic rock. Occurs from 836 to 4,900 ft. in elevation.	N/A	Fed: NONE CA: NONE CNPS: List 1B.1	Absent
Iva hayesiana San Diego marsh-elder	Perennial herb. Found in marshes and swamps and playas. Occurs from 33 to 1640 ft. in elevation.	Apr-Oct	Fed: NONE CA: NONE CNPS: List 2.2	Low
Lepechinia ganderi Gander's pitcher sage	Shrub. Found in closed-cone coniferous forest, chaparral, coastal scrub, and valley and foothill grassland/gabbroic or metavolcanic rock. Occurs from 1,000 to 3,300 ft. in elevation.	Jun-Jul	Fed: NONE CA: NONE CNPS: List 1B.3 Local: NE	Absent
Lepidium virginicum* var. *robinsonii Robinson's pepper-grass	Annual herb. Found in chaparral and coastal scrub. Occurs from 3 to 2,900 ft. in elevation.	Jan-Jul	Fed: NONE CA: NONE CNPS: List 1B.2	Absent
Monardella stoneana Jennifer's monardella	Perennial herb. Found in closed-cone coniferous forest, chaparral, coastal scrub, and riparian scrub/usually rocky intermittent streambeds. Occurs from 33 to 2,600 ft. in elevation.	Jun-Sept	Fed: NONE CA: NONE CNPS: List 1B.2	Low
Monardella viminea Willowy monardella	Perennial herb. Found in chaparral, coastal scrub, riparian forest, riparian scrub, and riparian woodland/alluvial ephemeral washes. Occurs from 165 to 740 ft. in elevation.	Jun-Aug	Fed: END CA: END CNPS: List 1B.1 Local: NE	Absent
Muilla clevelandii San Diego goldenstar	Perennial bulbiferous herb. Chaparral, coastal scrub, valley and foothill grassland, and vernal pools/clay. Occurs from 64 to 1,525 ft. in elevation.	Apr-May	Fed: NONE CA: NONE CNPS: List 1B.1	Low
Myosurus minimus* ssp. *apus Little mousetail	Annual herb. Found in valley and foothill grassland and vernal pools/alkaline soils. Occurs from 66 to 2,100 ft. in elevation.	Mar-Jun	Fed: NONE CA: NONE CNPS: List 3.1	Low
Nama stenocarpum Mud nama	Annual/perennial herb. Found in marshes and swamps (lake margins, riverbanks). Occurs from 16 to 1,650 ft. in elevation.	Jan-Jul	Fed: NONE CA: NONE CNPS: List 2.2	Absent

SCIENTIFIC AND COMMON NAME	HABITAT AND DISTRIBUTION	BLOOMING PERIOD	STATUS DESIGNATION	POTENTIAL FOR OCCURRENCE
Navarretia fossalis Spreading navarretia	Annual herb. Found in chenopod scrub, marshes and swamps (assorted shallow freshwater), playas, and vernal pools. Occurs from 100 to 4265 ft. in elevation.	Apr-Jun	Fed: THR CA: NONE CNPS: List 1B.1	Low
Orcuttia californica California Orcutt grass	Annual herb. Found in vernal pools. Occurs from 50 to 2,165 ft. in elevation.	Apr-Aug	Fed: END CA: END CNPS: List 1B.1	Low
Pogogyne nudiuscula Otay Mesa mint	Annual herb. Found in vernal pools. Occurs from 295 to 820 ft. in elevation.	May-Jul	Fed: END CA: END CNPS: List 1B.1	Low
Quercus dumosa Nutall's scrub oak	Evergreen shrub. Found in closed-cone coniferous forest, chaparral, and coastal scrub/sandy, clay loam soils. Occurs from 50 to 1,312 ft. in elevation.	Feb-Apr	Fed: NONE CA: NONE CNPS: List 1B.1	Absent
Salvia munzii Munz's sage	Evergreen shrub. Found in chaparral and coastal scrub. Occurs from 390 to 3,500 ft. in elevation.	Feb-Apr	Fed: NONE CA: NONE CNPS: List 2.2	Absent
Stemodia durantifolia Purple stemodia	Perennial herb. Found in Sonoran desert scrub (often mesic, sandy soils). Occurs from 590 to 984 ft in elevation.	Jan-Dec	Fed: NONE CA: NONE CNPS: List 2.1	Absent
Streptanthus bernardinus Laguna Mountains jewel-flower	Perennial herb. Found in chaparral and lower montane coniferous forest. Occurs from 2,200 to 8,200 ft. in elevation.	May-Aug	Fed: NONE CA: NONE CNPS: List 4.3	Absent
Tetracoccus dioicus Parry's tetracoccus	Deciduous herb. Found in chaparral and coastal scrub. Occurs from 540 to 3,280 ft. in elevation.	Apr-May	Fed: NONE CA: NONE CNPS: List 1B.2	Absent

Status Codes
Federal designations: (Federal Endangered Species Act, USFWS):
END: Federal-listed, endangered.
THR: Federal-listed, threatened.
NONE: Not listed.

State designations: (California Endangered Species Act, CDFG)
END: State-listed, endangered.
THR: State-listed, threatened.
RARE: State-listed as rare
NONE: Not listed.

California Native Plant Society (CNPS) designations:
List 1A: Plants presumed extinct in California.
List 1B: Plants rare and endangered in California and throughout their range.
List 2: Plants rare, threatened, or endangered in California but more common elsewhere in their range.
List 3: Plants about which we need more information; a review list.
List 4: Plants of limited distribution; a watch list.

Threat Codes:
.1 Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 Fairly endangered in California (20-80% occurrences threatened)
.3 Not very endangered in California (<20% of occurrences threatened or no current threats known)

Local Designation: City of Chula Vista MSCP Subarea Plan
NE: Narrowly Endemic

Special-Status Wildlife

Twenty-five (25) special status wildlife species are reported to occur within the USGS Otay Mesa Quadrangle Map that includes the project footprint (Table 5.6-5). Twenty-three (23) of these special-status wildlife species had an "Absent" or "Low" potential of occurrence within the project study area and therefore no further survey or study is necessary to determine presence or absence of these species. The remaining two special-status wildlife species were determined to have a moderate potential for occurrence, and further evaluation would be necessary to assess project-related effects to these species.

The two species with a moderate potential for occurrence within the study area include:

- San Diego fairy shrimp (*Branchinecta sandiegonensis*),
- Burrowing Owl (*Athene cunicularia*),

Of the aforementioned special-status wildlife species, the San Diego fairy shrimp is federally listed as endangered. As of December 2010, none of the aforementioned special-status wildlife species have been identified within the proposed ground disturbance footprint. Furthermore, no fish or wildlife species that have commercial value were observed or are expected to be detected within the proposed ground disturbance footprint.

TABLE 5.6-5 SPECIAL-STATUS WILDLIFE AND THEIR POTENTIAL FOR OCCURRENCE WITHIN THE PROJECT FOOTPRINT

SCIENTIFIC AND COMMON NAME	HABITAT AND DISTRIBUTION	STATUS DESIGNATION	POTENTIAL FOR OCCURRENCE
INVERTEBRATES			
Branchinecta sandiegonensis San Diego fairy shrimp	Occurs in tectonic swales/earth slump basins in grassland and coastal sage scrub habitats. Inhabits seasonally astatic pools filled by winter/spring rains and hatches in warm water later in the season. Endemic to Orange and San Diego counties.	Fed: FE CA: NONE	Moderate
Callophrys thornei Thorne's hairstreak	Generally associated with chaparral or closed-coned coniferous habitats.	Fed: NONE CA: NONE *	Absent
Euphydryas editha quino Quino checkerspot butterfly	Occurs in open coastal sage scrub, chaparral and grassland habitats. Populations are limited to Riverside and San Diego counties.	Fed: FE CA: NONE	Absent
Streptocephalus woottoni Riverside fairy shrimp	Occurs in tectonic swales/earth slump basins in grassland and coastal sage scrub habitats. Inhabits seasonally astatic pools filled by winter/spring rains and hatches in warm water later in the season. Endemic to west Riverside, Orange, and San Diego counties.	Fed: FE CA: NONE	Absent
REPTILES AND AMPHIBIANS			
Aspidoscelis hyperythra Orange-throated whiptail	Frequents coastal chaparral, thornscrub, and streamside growth. Occurs in washes, streams, terraces, and other sandy areas, often where there are rocks and patches of brush and rocky hillsides.	Fed: NONE CA: SSC	Low

SCIENTIFIC AND COMMON NAME	HABITAT AND DISTRIBUTION	STATUS DESIGNATION	POTENTIAL FOR OCCURRENCE
Aspidoscelis tigris stejnegeri Coastal whiptail	Inhabits grasslands, coastal sage scrub, chaparral, and woodlands that support adequate prey species.	Fed: NONE CA: NONE *	Low
Phrynosoma coronatum blainvillii San Diego coast horned lizard	Found in a wide variety of habitats, including coastal sage, annual grassland, chaparral, oak woodland, riparian woodland, and coniferous forest. Key habitat elements are loose, fine soils with a high sand fraction; an abundance of native ants or other insects; and open areas with limited overstory for basking and low, but relatively dense shrubs for refuge.	Fed: NONE CA: SSC	Low
Salvadora hexalepis virgultea Coast patch-nosed snake	Found in semi-arid brushy areas and chaparral in canyons, rocky hillsides, and plains.	Fed: NONE CA: SSC	Absent
Spea hammondii Western spadefoot	Occurs primarily in grasslands; occasional populations occur in valley-foothill hardwood woodlands. Ranges throughout the Central Valley and adjacent foothills; usually common where it occurs. In the Coast Ranges, it is found from Point Conception, Santa Barbara county, south to the Mexican border. Found from near sea level to 4470 ft in elevation.	Fed: NONE CA: SSC	Low
Thamnophis hammondii Two-striped garter snake	Generally found around pools, creeks, cattle tanks, and other water sources; often in rocky areas, oak woodland, chaparral, brushland, and coniferous forest.	Fed: NONE CA: SSC	Absent
BIRDS			
Athene cunicularia Burrowing Owl	Found in open, dry, annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. A subterranean nester that is dependent upon burrowing mammals, most notably the California ground squirrel.	Fed: NONE CA: SSC	Moderate
Campylorhynchus brunneicapillus sandiegensis Coastal Cactus Wren	Found in coastal sage scrub habitat. Nests almost exclusively in prickly pear (*Opuntia littoralis*) and coastal cholla (*O. prolifera*).	Fed: NONE CA: SSC	Absent
Eremophila alpestris actia California Horned Lark	Occurs in open terrain, which is often sparsely vegetated.	Fed: NONE CA: NONE *	Low
Icteria virens Yellow-breasted Chat	Inhabits dense thickets, brush, and secondary growth. Nests in dense shrubs.	Fed: NONE CA: SSC	Absent
Polioptila californica californica Coastal California Gnatcatcher	Local, uncommon, obligate resident of arid coastal sage scrub vegetation on mesas, hillsides and in washes. Nests almost exclusively in California sagebrush.	Fed: FT CA: SSC	Absent

SCIENTIFIC AND COMMON NAME	HABITAT AND DISTRIBUTION	STATUS DESIGNATION	POTENTIAL FOR OCCURRENCE
Vireo belli pusillus Least Bell's Vireo	Resides in low riparian areas close to the water or dry riverbeds. Nests are usually constructed in bushes or within the branches of mesquite (*Prosopis* spp.), willows, and mule fat. Found below 2000 ft in elevation.	Fed: FE CA: SE	Absent
	MAMMALS		
Chaetodipus fallax fallax Northwestern San Diego pocket mouse	Found in sparse, low desert shrub lands up to dense, high coastal sage-scrub vegetation.	Fed: NONE CA: SSC	Low
Eumops perotis californicus Western mastiff bat	Forages in dry desert washes, floodplains, chaparral, oak woodland, open ponderosa pine forest, grassland, and agricultural areas. Roosts in colonies under exfoliating rock slabs (e.g., granite, sandstone, or columnar basalt) and in similar crevices in large boulders and buildings; generally high above ground.	Fed: NONE CA: SSC	Absent
Lasiurus blossevillii Western red bat	Occurs in riparian areas. Roosts alone, generally in the foliage of trees and shrubs.	Fed: NONE CA: SSC	Absent
Lepus californicus bennettii San Diego black-tailed jackrabbit	Occurs in coastal sage scrub and grassland habitats.	Fed: NONE CA: SSC	Low
Myotis ciliolabrum Western small-footed myotis	Occurs in rocky areas in coniferous forest, desert, chaparral, and riparian zones. Roosts alone or in small groups in cliff and rock crevices, buildings, concrete overpasses, caves, and mines.	Fed: NONE CA: NONE *	Absent
Myotis yumanensis Yuma myotis	Low-flying bat. Occurs in a wide variety of upland and lowland habitats, including riparian, arid scrublands and deserts, and forests. Often associated with permanent water sources, typically rivers and streams. Roosts in bridges, buildings, cliff crevices, caves, mines, and trees.	Fed: NONE CA: NONE *	Absent
Neotoma lepida intermedia San Diego desert woodrat	Typically found in the coastal scrub of southern California from San Diego County to San Luis Obispo County. Prefer moderate to dense vegetation canopies. They are particularly abundant in rock outcrops and rocky cliffs and slopes.	Fed: NONE CA: SSC	Absent
Nyctinomops femorosaccus Pocketed free-tailed bat	Found near large, open water sources in a variety of habitats, including desert shrub and pine-oak forest. Roosts in colonies in crevices of rugged cliffs, high rocky outcrops, slopes, and buildings.	Fed: NONE CA: SSC	Absent
Taxidea taxus American badger	Uncommon, permanent resident found throughout most of the state. Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Extirpated from many areas in Southern California.	Fed: NONE CA: SSC	Low

SCIENTIFIC AND COMMON NAME	HABITAT AND DISTRIBUTION	STATUS DESIGNATION	POTENTIAL FOR OCCURRENCE

Status Codes
FEDERAL
Federal Endangered Species Act
FE Federal Endangered
FT Federal Threatened
CH Critical Habitat
STATE
California Endangered Species Act
SE State Endangered
ST State Threatened
FP Fully Protected
CDFG Code
SSC California Species of Special Concern
* Other

Special Aquatic Resource Areas

Summary of USACE Jurisdiction Pursuant to Section 404 of the CWA

The USACE regulates discharge of fills to Waters of the United States (WoUS)[6] through Section 404 of the CWA. The study area contains six unnamed, potential WoUS drainage features. Each drainage feature is a non-Relatively Permanent Water (RPW) tributary to, and having a significant nexus with, a Traditional Navigable Water (TNW) and within the jurisdiction of Section 404 of the CWA. A total of 3.8 acres of CWA Section 404 jurisdiction occurs within the study area, consisting of 3.7 acres of non-wetland WoUS and 0.1 acres of WoUS with USACE-defined wetlands. Temporary impacts to CWA Section 404 jurisdiction within the project footprint include 0.1 acres of non-wetland WoUS. No permanent impacts to CWA Section 404 jurisdiction are expected with the project.

Summary of RWQCB Jurisdiction Pursuant to Section 401 of the CWA and the Porter-Cologne Water Quality Control Act

The RWQCB regulates fills to Waters of the State (WoS) through the CWA Section 401 Water Quality Certification (WQC) Program and Porter-Cologne. Pursuant to CWA Section 401, the RWQCB's legal authority within the project's study area is equal to CWA Section 404 jurisdiction. Because the six drainage features within the study area are potentially subject to CWA Section 404 jurisdiction (and subsequently CWA Section 401 jurisdiction), there is no additional RWQCB jurisdiction subject to Porter-Cologne. A total of 3.8 acres of CWA Section 401 jurisdiction occur within the study area, consisting of 3.7 acres of non-wetland WoS and 0.1 acres of WoS with included wetlands. Temporary impacts to CWA Section 401 jurisdiction within the project footprint include 0.1 acres of non-wetland WoS. No permanent impacts to CWA Section 401 jurisdiction are expected with the project.

6 The term WoUS is defined as follows (33 CFR 328.3): (1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; (2) All interstate waters including interstate wetlands; (3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters: (i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or (ii) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or (iii) Which are used or could be used for industrial purpose by industries in interstate commerce; (4) All impoundments of waters otherwise defined as WoUS; (5) Tributaries of WoUS identified above; (6) The territorial seas; and (7) Wetlands adjacent to waters (other than waters that are themselves wetlands).

Summary of CDFG Jurisdiction Pursuant to Section 1600 (et seq.) of the CFG Code

Pursuant to Section 1600 (et seq.) of the CFG Code, the CDFG regulates diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or wildlife. Six features within the study area contain a bed, bank, and channel and function as drainages that provide functions and values for wildlife and are therefore subject to CFG Code Section 1600 (et seq.) jurisdiction. These features are all unnamed drainages consisting of 5.8 acres of non-riparian bed, bank, and channel, and 0.3 acres of associated riparian vegetation. Temporary impacts to CFG Code Section 1600 (et seq.) jurisdiction include 0.1 acres of non-riparian bed, bank, and channel. No permanent impacts to CFG Code Section 1600 (et seq.) jurisdiction are expected as a result of the project. Detailed methods, field survey dates and results for the pedestrian-based field survey are provided in Appendix J-2, Preliminary Jurisdictional Determination Report.

Special Environmental Areas in the Project Vicinity

The study area has been identified as a minor amendment area within the San Diego County Multiple Species Conservation Program (MSCP) (Figure 5.6-1). The MSCP is one of three subregional habitat planning efforts in San Diego County that contribute to preservation of regional biodiversity though coordination with other habitat conservation planning efforts throughout southern California. The MSCP addresses multiple species habitat needs and the preservation of native vegetation communities. The plan is designed to streamline and coordinate existing procedures for review and permitting of project impacts on biological resources. The MSCP has been implemented in the County of San Diego under Ordinance No. 8845 as the Biological Mitigation Ordinance (BMO). The study area is also located within the San Diego National Wildlife Refuge (Otay-Sweetwater Unit). The Otay-Sweetwater Unit of the San Diego NWR is part of the National Wildlife Refuge System's contribution to the MSCP, a program designed to conserve enough open space and habitat for species survival while enabling orderly development to occur where necessary.

Wildlife Corridors

A wildlife corridor is defined as a linear landscape feature that allows animal movement between two patches of habitat or between habitat and geographically discrete resources (e.g., water, Ogden Environmental, 1993). Connections between extensive areas of open space are integral to maintaining regional biological diversity and population viability. Areas that serve as wildlife movement corridors are considered biologically unique because they facilitate the persistence of special-status species. In the absence of corridors, habitats become fragmented, isolated islands surrounded by development. Fragmented habitats support significantly lower numbers of species and increase the likelihood of extinction for select species. The pedestrian surveys and literature reviews suggest that the project study area does not support any regionally important wildlife movement areas. The proposed ground disturbance footprint is isolated from any obvious connections to the Otay Valley. Accordingly, the closest known wildlife corridor is Johnson Canyon, which is roughly four miles north of the proposed ground disturbance footprint. Furthermore, the surveys and literature reviews also suggest that the project study area does not support denning or nesting sites for common and/or special status species and that no active nesting raptor or passerine birds were observed within the study area.

5.6.3 Environmental Consequences

Potential and expected direct and indirect impacts to biological resources are discussed below. Significant impacts are those that would involve jeopardizing the continued existence of a sensitive plant or wildlife species or degradation of their habitat to non-sustainable levels. The project would have significant impacts to vegetation and wildlife if it would:

- Cause a fish or wildlife population to drop below self-sustaining levels (California Environmental Quality Act [CEQA] Guidelines, Section 15065 (a)).
- Threaten to eliminate a plant or animal community (CEQA Guidelines, Section 15065 (a)).
- Substantially affect, reduce the number, or restrict the range of unique, rare, or endangered species of animal or plant, or the habitat of the species (CEQA Guidelines, Section 15065 (a), Appendix G (c), Appendix I (II.4.b) and (II.5.b)).
- Substantially diminish or reduce habitat for fish, wildlife, or plants (CEQA Guidelines, Section 15065 (a), Appendix G (t)).
- Interfere substantially with the movement of resident or migratory fish or wildlife species (CEQA Guidelines, Appendix G (d)).
- Change the diversity of species, or number of any species of plants (including trees, shrubs, grass crops, and aquatic plants) or animals (birds, land animals including reptiles, fish and shellfish, benthic organisms, or insects) (CEQA Guidelines, Appendix I (II.4.1) and (II.5.a)).
- Introduce new species of plants or animals into an area, or act as a barrier to the normal replenishment of existing species (CEQA Guidelines, Appendix I (II.4.c) and (II.5.c)).
- Deteriorate existing fish or wildlife habitat (CEQA Guidelines, Appendix I (II.5.d)).
- Conflict with any regional Habitat Conservation Plans (HCPs).

The above criteria were used to evaluate the project's impacts to plant communities and wildlife. The potential impacts associated with the construction, operation, and maintenance of the project are discussed below.

Construction Impacts

Construction of the project is not likely to have an adverse impact on common plant and wildlife species, including special-status species, as the result of the permanent removal of 9.99 acres of non-native habitat. Table 5.6-6 shows the acres of permanent impacts to vegetation communities/land cover types.

As discussed in Section 5.6.2, Affected Environment, the environmental baseline for this assessment includes facility placement and design that targets the majority of project impacts towards lands that are adjacent to cleared or disturbed areas and roads. The lands abutting the

project's ground disturbance footprint include the Otay Mesa Generating Project (OMGP) and its appurtenance, which would further isolate the project's construction and operational activities. Any individual species present in the area or in adjacent/surrounding areas are assumed to have acclimated and developed tolerance to substantial noise, light, and other effects resulting from the presence of an active power plant and its access roads. Nonetheless, the measures listed in Section 5.6.5 are expected to reduce construction and operational impacts to a less than significant level.

TABLE 5.6-6
IMPACTS TO VEGETATION COMMUNITIES / LAND COVER TYPES

Vegetation Community / land cover type	Acres
Non-Native Grassland	0
Mule fat	0
Riparian	0
Developed/Disturbed	9.99

The project study area includes documentation of historic and current occurrences of special-status species. Specifically, the study area may support the following special-status wildlife species: burrowing owl (*Athene cunicularia*) and San Diego fairy shrimp (*Branchinecta sandiegonensis*). As of December 2010, none of these species have been observed within the project's proposed ground disturbance footprint.

Construction of the project may result in minimal temporary and permanent impacts to the aforementioned special-status species because of the permanent removal of 9.99 acres of non-developed/disturbed native habitat. Compliance with the state and federal Endangered Species Acts will ensure that impacts to listed species would be less than significant with mitigation. Construction activities may result in a short-term loss of habitat, but may only temporarily and incrementally increase habitat fragmentation on a regional level. Some breeding potential could be lost during construction activities for species that may breed in close proximity to the project and other areas proposed for disturbance. This loss of productivity would be limited to one season, and breeding individuals would be expected to reoccupy adjacent habitats following completion of construction activities.

Construction of the project will not likely impact any special aquatic resource areas. The project will not adversely effect on federal- or state-protected waters.

No significant impacts to wildlife movement are expected from project implementation. The project avoids the adjacent open space and undeveloped locales essential for the regional long-term viability of plants and wildlife. In this context, facility placement and design deliberately avoid open space and other biological resources to further consolidate high-quality habitats within the region and minimize impacts to wildlife connectivity and movement to avoid resource conflicts. The project design complements the long-term preservation of the ecological processes within the area and is important to the cohesiveness and quality of the surrounding land for ecological purposes.

Operation and Maintenance Impacts

Project operational impacts include intermittent air emissions, noise, light, vibration, and potential collision hazards associated with the three approximately 100-foot-tall stacks. Migratory birds generally fly at an altitude that would avoid ground structures, except when crossing over topographic features (e.g., ridge tops) or when inclement weather forces them closer to the ground. Topographic or ecological features are not present that would likely attract birds to the project area. Raptor and other migratory bird species that are protected by the Migratory Bird Treaty Act (MBTA) are expected to occur in the general area (i.e., barn owl [*Tyto alba*], red-tailed hawk [*Buteo jamaicensis*] and Cooper's hawk [*Accipiter cooperii*]) and could potentially collide with the stacks during inclement weather (e.g., fog and rain). Smaller birds are assumed to be more agile and are less likely to collide with project facilities. Because of the relatively low structure heights, the potential for wildlife collisions is considered less than significant. In addition, placement of downward-facing lighting on the stacks to reduce wildlife attraction would minimize the potential for collisions.

Post-construction operation and maintenance could temporarily displace special-status species from some habitat areas and impair their ability to establish territories. Noise, light, vibration, and human activities may cause some species (e.g., burrowing owl) to avoid an area until the disturbance conditions are eliminated or the individuals become accustomed to the chronic disturbance activities.

As human populations expand geographically, artificial lighting also expands, and it is now almost impossible to find areas free from human influence. Verheijen (1981b) was the first to apply the term "photopollution" to situations in which artificial light has adverse effects on wildlife. Additionally, some evidence indicates that the increasing use of artificial light at night is having an adverse effect on wildlife populations, particularly those that typically migrate at night (Verheijen, 1985).

No special status species (e.g., burrowing owl) known from the vicinity are expected to be affected by lighting impacts if lighting BMPs are implemented. Intermittent air emissions, noise, light, vibration, and human activities may cause wildlife to avoid an area until the disturbance conditions are eliminated or the wildlife become accustomed to the disturbance. The measures listed in Section 5.6.5 are expected to reduce operation impacts to a less than significant level.

5.6.4 Cumulative Impacts

The purpose of this section is to identify past, present, and reasonably foreseeable actions in the PPEC project area that could affect the same resources as those of the project and provide the following analysis:

- Determine if the impacts of PPEC and the other actions would overlap in time or geographic extent.
- Determine if the impacts of the proposed project would interact with, or intensify, the impacts of the other actions.
- Identify any potentially significant cumulative impacts.

Section 5.18 presents a list of potential projects that could result in cumulative impacts with the proposed project.

The project occurs within an area that includes non-native habitats. Accordingly, the proposed ground disturbance foot print includes low habitat value (existing non-native grasses and human disturbances) and provides only low-quality foraging opportunities for local wildlife species. Furthermore the following potential projects within the region were evaluated and include similar low habitat value non-native habitats:

- International Industrial Park
- Corrections Corporation of America Correctional Facility
- Vulcan Batch Plant
- Otay Hills Construction Aggregate Extraction Operation
- Otay Crossings Commerce Park

The aforementioned surrounding projects include roughly the same low quality habitat as this project. Accordingly, the addition of this project would not significantly contribute to cumulative impacts to biological resources within the region. Therefore, there is no potential for cumulative impacts related to these biological resources.

5.6.5 Avoidance, Minimization, and Mitigation Measures

The following measures will be implemented to avoid and minimize impacts to biological resources:

BIO-1 The project owner will assign a Designated Biologist to the project. The project owner will submit the resume of the proposed Designated Biologist, with at least three references and contact information, to the California Energy Commission (CEC) Compliance Project Manager (CPM) for approval.

The Designated Biologist must meet the following minimum qualifications:

- Bachelor's Degree in biological sciences, zoology, botany, ecology, or a closely related field; and
- Three years of experience in field biology or current certification of a nationally recognized biological society, such as the Ecological Society of America or the Wildlife Society; and
- At least one year of field experience with biological resources found in or near the project area.

In lieu of the above requirements, the resume shall demonstrate to the satisfaction of the CPM, that the proposed Designated Biologist or alternate has the appropriate training and background to effectively implement the Conditions of Certification.

Verification: The project owner shall submit the specified information at least 90 days prior to the start of any site (or related facilities) mobilization. No site or related facility activities shall commence until an approved Designated Biologist is available to be on site.

If a Designated Biologist needs to be replaced, the specified information of the proposed replacement must be submitted to the CPM at least ten working days prior to the termination or release of the preceding Designated Biologist. In an emergency, the project owner shall immediately notify the CPM to discuss the qualifications and approval of a short-term replacement while a permanent Designated Biologist is proposed to the CPM for consideration.

BIO-2 The project owner shall ensure that the Designated Biologist performs the following during any site (or related facilities) mobilization, ground disturbance, grading, construction, operation, and closure activities.

The Designated Biologist may be assisted by the approved Biological Monitor(s), but the Designated Biologist will be the contact for the project owner and CPM. The Designated Biologist shall:

1. Advise the project owner's Construction and Operation Managers on the implementation of the biological resources Conditions of Certification;

2. Consult on the preparation of the Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP) to be submitted by the project owner;

3. Be available to supervise, conduct, and coordinate mitigation, monitoring, and other biological resources compliance efforts, particularly in areas requiring avoidance or containing sensitive biological resources, such as special-status species or their habitat;

4. Clearly mark sensitive biological resource areas and inspect these areas at appropriate intervals for compliance with regulatory terms and conditions;

5. Inspect active construction areas where animals may have become trapped prior to construction commencing each day. At the end of the day, inspect for the installation of structures that prevent entrapment or allow escape during periods of construction inactivity. Periodically inspect areas with high vehicle activity (i.e., parking lots) for animals in harm's way;

6. Notify the project owner and the CPM of any noncompliance with any biological resources Condition of Certification;

7. Respond directly to inquiries of the CPM regarding biological resource issues;

8. Maintain written records of the tasks specified above and those included in the BRMIMP. Summaries of these records shall be submitted in the Monthly Compliance Report and the Annual Report; and

9. Train the Biological Monitors as appropriate and verify their familiarity with the BRMIMP, Worker Environmental Awareness Program (WEAP) training, and all permits.

Verification: The Designated Biologist shall submit in the Monthly Compliance Report to the CPM copies of all written reports and summaries that document biological resources activities. If actions may affect biological resources during operation, a Designated Biologist will be available for monitoring and reporting.

During project operation, the Designated Biologist will submit record summaries in the Annual Compliance Report, unless their duties are ceased as approved by the CPM.

BIO-3 The project owner's Designated Biologist will submit the resume, at least three references, and contact information of the proposed Biological Monitors to the CPM for approval. The resume will demonstrate to the satisfaction of the CPM, the appropriate education and experience to accomplish the assigned biological resource tasks.

Biological Monitor(s) training by the Designated Biologist will include familiarity with the Conditions of Certification and the BRMIMP, WEAP, and all permits.

Verification: The project owner will submit the specified information to the CPM for approval at least 30 days prior to the start of any site (or related facilities) mobilization. The Designated Biologist will submit a written statement to the CPM confirming that individual Biological Monitor(s) have been trained, including the date when training was completed. If additional Biological Monitors are needed during construction, the specified information will be submitted to the CPM for approval 10 days prior to their first day of monitoring activities.

BIO-4 Designated Biologist and Biological Monitor Authority. The project owner's Construction/Operation Manager will act on the advice of the Designated Biologist and Biological Monitor(s) to ensure conformance with the biological resources Conditions of Certification.

If required by the Designated Biologist and/or Biological Monitor(s), the project owner's Construction/ Operation Manager will halt all site mobilization, ground disturbance, grading, construction, and operation activities in areas specified by the Designated Biologist.

The Designated Biologist will:

1. Require a halt to all activities in any area when determined that there would be an unauthorized adverse impact to biological resources if the activities continued;

2. Inform the project owner and the Construction/Operation Manager when to resume activities; and

3. Notify the CPM if there is a halt of any activities and advise the CPM of any corrective actions that have been taken, or will be instituted, as a result of the work stoppage.

4. If the Designated Biologist is unavailable for direct consultation, the Biological Monitor will act on behalf of the Designated Biologist

Verification: The project owner will ensure that the Designated Biologist or Biological Monitor notifies the CPM immediately (and no later than the following morning of the incident, or Monday morning in the case of a weekend) of any noncompliance or a halt of any

site mobilization, ground disturbance, grading, construction, and operation activities. The project owner will notify the CPM of the circumstances and actions being taken to resolve the problem.

Whenever corrective action is taken by the project owner, a determination of success or failure will be made by the CPM within 5 working days after receipt of notice that corrective action is completed, or the project owner will be notified by the CPM that coordination with other agencies will require additional time before a determination can be made.

BIO-5 Worker Environmental Awareness Program. The project owner will develop and implement a CPM-approved WEAP by which each of its employees, as well as employees of contractors and subcontractors who work on the project site or any related facilities during site mobilization, ground disturbance, grading, construction, operation and closure, is informed about sensitive biological resources associated with the project.

The WEAP must:

1. Be developed by or in consultation with the Designated Biologist and consist of an on-site or training center presentation through which supporting written material and electronic media (video or DVD) is made available to all participants.

2. Discuss the locations and types of sensitive biological resources on the project site and adjacent areas.

3. Present the reasons for protecting these resources.

4. Present the meaning of various temporary and permanent habitat protection measures.

5. Identify whom to contact if there are further comments and questions about the material discussed in the program.

6. Include a training acknowledgment form to be signed by each worker indicating that they received training and will abide by the guidelines.

7. The specific program can be administered by a competent individual(s) acceptable to the Designated Biologist.

Verification: At least 60 days prior to the start of any site (or related facilities) mobilization, the project owner will provide to the CPM for review and comment, two copies each of the proposed WEAP and all supporting written materials and electronic media prepared or reviewed by the Designated Biologist and a resume of the person(s) administering the program.

The project owner will provide in the Monthly Compliance Report the number of persons who have completed the training in the prior month and a running total of all persons who have completed the training to date. The project owner will submit two copies of the CPM-approved materials at least ten days prior to site and related facilities mobilization.

The signed training acknowledgement forms will be kept on file by the project owner for a period of at least six months after the start of commercial operation.

During project operation, signed statements for active project operational personnel will be kept on file for six months following the termination of an individual's employment.

BIO-6 The project owner will submit two copies of the proposed BRMIMP to the CPM (for review and approval) and implement the measures identified in the approved BRMIMP.

The BRMIMP will be prepared in consultation with the Designated Biologist and will identify:

1. All biological resources mitigation, monitoring, and compliance measures proposed and agreed to by the project owner.

2. All biological resources Conditions of Certification identified as necessary to avoid or mitigate impacts.

3. All biological resources mitigation, monitoring, and compliance measures required in local agency permits, such as site grading and landscaping requirements.

4. All sensitive biological resources to be impacted, avoided, or mitigated by project construction, operation and closure.

5. All required mitigation measures for each sensitive biological resource.

6. Required habitat compensation strategy, including provisions for acquisition, enhancement, and management for any temporary and permanent loss of sensitive biological resources.

7. A detailed description of measures that will be taken to avoid or mitigate temporary disturbances from construction activities.

8. All locations on a map, at an approved scale, of sensitive biological resource areas subject to disturbance and areas requiring temporary protection and avoidance during construction. This includes the installation of prominently colored fencing or similar materials wherever the limits of grading are adjacent to native/non-native vegetation communities or other biological resources. Fencing will remain in place during all construction activities. Temporary fencing will also be shown on all grading plans and project specifications. Barriers and signage will be installed to direct public access to appropriate locations.

9. Aerial photographs, at an approved scale, of all areas to be disturbed during project construction activities – one set prior to any site or related facilities mobilization disturbance and one set subsequent to completion of project construction. Include planned timing of aerial photography and a description of why times were chosen.

10. Duration for each type of monitoring and a description of monitoring methodologies and frequency.

11. Performance standards to be used to help decide if/when proposed mitigation is or is not successful.

12. All performance standards and remedial measures to be implemented if performance standards are not met.

13. A preliminary discussion of biological resources-related facility closure measures.

14. A process for proposing plan modifications to the CPM and appropriate agencies for review and approval.

15. A copy of all biological resources related permits obtained.

Verification: The project owner will provide the specified document at least 60 days prior to start of any site (or related facilities) mobilization.

The CPM will determine the BRMIMP's acceptability within 45 days of receipt. If any permits have not yet been received when the BRMIMP is submitted, these permits will be submitted to the CPM within five days of their receipt, and the BRMIMP will be revised or supplemented to reflect the permit condition within ten days of their receipt by the project owner. Ten days prior to site and related facilities mobilization, the revised BRMIMP will be resubmitted to the CPM.

The project owner will notify the CPM no fewer than five working days before implementing any modifications to the approved BRMIMP to obtain CPM approval. Any changes to the approved BRMIMP must also be approved by the CPM to ensure no conflicts exist.

Implementation of BRMIMP measures will be reported in the Monthly Compliance Reports by the Designated Biologist (i.e., survey results, construction activities that were monitored, species observed). Within 30 days after completion of project construction, the project owner will provide to the CPM, for review and approval, a written construction closure report identifying which items of the BRMIMP have been completed; a summary of all modifications to mitigation measures made during the project's site mobilization, ground disturbance, grading, and construction phases; and which mitigation and monitoring items are still outstanding.

BIO-7 The project owner shall implement the following measures to manage their construction site and related facilities in a manner to avoid or minimize impacts on the local biological resources.

1. Install temporary fencing and provide wildlife escape ramps for construction areas that contain steep walled holes or trenches if outside of an approved, permanent exclusionary fence. The temporary fence shall be hardware cloth or similar materials that are approved by USFWS and CDFG. Before such holes or trenches are filled, they should be thoroughly inspected for trapped animals by the Designated Biologist or Biological Monitor.

2. Make certain all food-related trash is disposed of in closed containers and removed at least once a week from the project site.

3. Prohibit feeding of wildlife by staff and subcontractors.

4. Prohibit nonsecurity-related firearms or weapons from being brought to the project site.

5. Prohibit pets from being brought to the project site.

6. Report all inadvertent deaths of special-status species to the appropriate project representative.

7. Injured animals shall be reported to CDFG, and the project owner shall follow instructions that are provided by CDFG. The USFWS Office shall be notified in writing within three working days of the accidental death or injury to special-status species during project-related activities.

8. Contact USFWS and CDFG for specific notification procedures.

9. Minimize use of rodenticides and herbicides in the project area and prohibit the use of chemicals and pesticides known to cause harm to amphibians. If rodent control must be conducted, zinc phosphide or an equivalent product shall be used.

Verification: All mitigation measures and their implementation methods shall be included in the BRMIMP. Implementation of the measures will be reported in the Monthly Compliance Reports by the Designated Biologist. Within 30 days after completion of project construction, the project owner shall provide to the CPM, for review and approval, a written construction termination report identifying how all biological resource-related mitigation measures have been completed.

BIO-8 Any time the project owner modifies or finalizes the project design they shall incorporate all feasible measures to avoid or minimize impacts to the local biological resources, including:

1. Design, install, and maintain transmission line poles, access roads, pulling sites, and storage and parking areas to avoid identified sensitive resources.;

2. Design, install, and maintain transmission lines and all electrical components in accordance with the Avian Power Line Interaction Committee's (APLIC) Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 2006 (APLIC, 2006) to reduce the likelihood of electrocutions of large birds.

3. Eliminate any California Exotic Pest Plants of Concern (Cal-IPC, 2007) List A species from landscaping plans.

4. Prescribe a road sealant that is nontoxic to wildlife and plants.

5. Design, install, and maintain facility lighting to prevent side casting of light towards wildlife habitat.

6. Use straw wattles or silt fences to prevent sediment from reaching irrigation and drainage canals.

7. Fence buffer zones during construction to minimize habitat disturbance.

8. Restore temporarily impacted areas to approximate original site conditions.

Verification: All mitigation measures and their implementation methods shall be included in the BRMIMP. Implementation of the measures will be reported in the Monthly Compliance Reports by the Designated Biologist. Within 30 days after completion of project construction, the project owner shall provide to the CPM, for review and approval, a written construction termination report identifying how measures have been completed.

BIO-9 The project shall conduct a vernal pool and fairly survey derived from the *1996 USFWS Interim Survey Guidelines to Permittees for Recovery of Permits under Section 10(a)(1)(A) of the Endangered Species Act for the Listed Vernal Pool Branchiopods* in the Fall of 2010 and early winter of 2011.

Verification: The project owner shall provide the specified documents at least 60 days prior to the start of any site (or related facilities) mobilization.

BIO-10 The project shall conduct a burrowing owl survey in the spring of 2011 following the *1993 California Department of Fish and Game Survey Guidelines to* Burrowing Owl Survey Protocol and Mitigation.

Verification: The project owner shall provide the specified documents at least 60 days prior to the start of any site (or related facilities) mobilization and appropriate avoidance and minimization measures shall be implemented.

BIO-11 If federally protected species (e.g., San Diego fairy shrimp) are identified within the proposed ground disturbance footprint, the applicants will comply with the state and federal Endangered Species Acts will ensure that impacts to special-status species would be less than significant with mitigation.

Verification: The project owner shall provide the specified documents at least 60 days prior to the start of any site (or related facilities) mobilization.

BIO-12 In order to comply with the Migratory Bird Treaty Act and relevant sections of the CDFG Code (e.g., 3503, 3503.4, 3504, 3505, et seq.), any vegetation clearing would take place outside of the typical avian nesting season (i.e., February 1st – August 31st), to the maximum extent practical. If this is not possible, prior to ground-disturbing activities, construction, and so forth within the Action Area, a qualified biologist will conduct and submit a migratory nesting bird and raptor survey report. A qualified biologist is an individual with sufficient education and field experience in local California ecology and biology to adequately identify local plant and wildlife species. The survey shall occur not more than 72 hours prior to initiation of project activities and any occupied passerines and/or raptor nests occurring within or adjacent to the Action Area will be delineated. To the maximum extent practicable, a minimum buffer zone from occupied nests will be maintained during physical ground-disturbing activities. Once nesting has been determined to cease, the buffer may be removed.

BIO-12 Closure/ decommissioning of the proposed project.

Facility closure activities are not expected to impact biological resources. In addition, the decommissioning and closure of the project should not negatively affect biological resources since the majority of the ground disturbed during decommissioning and closure would have been already disturbed, and mitigated as required, during construction and operation of the project. Upon completion of operation, all areas subject to ground disturbances, including the facility storage areas, roads installed by the project, transmission line tower pads, etc. shall be addressed within a project specific closure plan. The closure plan shall include mitigation measures similar to the construction mitigation measures that will reduce impacts to common and special status plant and wildlife species.

Verification: The project owner shall submit the final to the CPM at least 60 days prior to site mobilization.

5.6.6 Laws, Ordinances, Regulations, and Standards

The following are laws, ordinances, regulations and standards (LORS) that are applicable or potentially applicable to the project. Construction and operation associated with the proposed project will adhere to the LORS pertinent to biological resources.

TABLE 5.6-7 SUMMARY OF BIOLOGICAL RESOURCES LORS AND COMPLIANCE

JURIS-DICTION	AUTHORITY	AGENCY	DETAILS	COMPLIANCE	AFC SECTIONS
Federal	ESA of 1973: 16 United States Code (USC) Section 1531 et seq.; 50 Code of Federal Regulations (CFR) Parts 17 and 222	USFWS	The Federal Endangered Species Act (FESA)[7] protects plants and wildlife that are listed by the USFWS and the National Marine Fisheries Service as endangered or threatened (USA, 1973). Section 9 of the FESA prohibits the taking of endangered wildlife, where "taking" is defined as any effort to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct" (50 CFR 17.3). For plants, this statute governs removing, possessing, maliciously damaging, or destroying any endangered plant on federal land, and removing, cutting, digging up, damaging, or destroying any endangered plant on non-federal land in knowing violation of state law (16 United States Code [USC] 1538). Under Section 7 of FESA, federal agencies are required to consult with the USFWS if their actions, including permit approvals or funding, could adversely affect an endangered species (including plants) or its critical habitat. The County of San Diego has been issued a Federal Section 10(a)(1)(B) permit by the USFWS and an NCCP authorization from the CDFG that allows the Incidental Take within the Subarea of those Covered Species determined by USFWS and CDFG to be adequately conserved by the MSCP Subregional Plan and the County Southwestern and Metro Subarea Plan in accordance with the County's IA. Through the IA, the County may issue Incidental Take of Covered Species by Third Party Beneficiaries under direct control of the County, specifically project implementation activities in conformance with an approval granted by the County in compliance with the County's IA. FESA specifies that the USFWS designated habitat for a species at the time of its listing in which the physical or biological features "essential to the conservation of the species" are found or that may require "special management consideration or protection...." (16 USC 1533[a][3].2, 1532[a]).	The project may result in adverse temporary and permanent impacts to federally protected species; however, avoidance and minimization measures are incorporated into the project and are expected to reduce impacts to a less than significant level. As of December 2011, no federal listed species have been identified.	5.6.1, 5.6.2, 5.6.3 and 5.6.6

7 Endangered Species Act of 1973 (16 USC 1531 et seq.), as amended.

JURIS-DICTION	AUTHORITY	AGENCY	DETAILS	COMPLIANCE	AFC SECTIONS
Federal	Migratory Bird Treaty Act: 16 USC Sections 703 – 711; 50 CFR Subchapter B	USFWS	The Migratory Bird Treaty Act (MBTA)[8] implements international agreements between the United States and other nations; the Treaty was created to protect migratory birds, any of their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit (USA, 1918). As authorized by the MBTA, the USFWS issues permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits can be found in 50 CFR part 13 (General Permit Procedures) and 50 CFR part 21 (Migratory Bird Permits). The State of California has incorporated the protection of birds of prey in Sections 3800, 3513, and 3503.5 of the California Fish and Game Code (CFGC).	The project may result in adverse temporary and permanent impacts to migratory bird species; however, avoidance and minimization measures are incorporated into the project and are expected to reduce impacts to a less than significant level.	5.6.3
Federal	Bald and Golden Eagle Protection Act: 16 USC Section 668-668d, 54 Stat.250	USFWS	The Bald and Golden Eagle Protection Act (The Eagle Act) (1940) amended in 1962, was originally implemented for the protection of bald eagles (*Haliaeetus leucocephalus*). In 1962, Congress amended the Eagle Act to cover golden eagles (*Aquila chrysaetos*), a move that was, partially, an attempt to strengthen protection of bald eagles, because the latter were often killed by people mistaking them for golden eagles. This act makes it illegal to import, export, take (molest or disturb), sell, purchase, or barter any bald eagle or golden eagle or part thereof. The golden eagle, however, is accorded somewhat lighter protection under the Eagle Act than the bald eagle.	The project is not expected to result in a take of bald or golden eagle.	5.6.3

[8] Migratory Bird Treaty Act (16 USC 703 et seq.), as amended.

JURIS-DICTION	AUTHORITY	AGENCY	DETAILS	COMPLIANCE	AFC SECTIONS
	Clean Water Act of 1977: 33 USC Section 1251 - 1376; 30 CFR Section 330.5(a)(26)	USACE	The purpose of the Clean Water Act (CWA) (USA, 1977) is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." Section 404 of the CWA prohibits the discharge of dredged or fill material into "waters of the United States" without a permit from the U.S. Army Corps of Engineers (USACE). The definition of waters of the United States includes rivers, streams, estuaries, territorial seas, ponds, lakes, and wetlands. Wetlands are defined as those areas "that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3 7b). The U.S. Environmental Protection Agency also has authority over wetlands and may override a USACE permit. Substantial impacts to wetlands may require an individual permit. Projects that only minimally affect wetlands may meet the conditions of one of the existing nationwide permits. A water quality certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions; this certification or waiver is issued by the Regional Water Quality Control Board (RWQCB) in California.	The project will include measures requiring compliance with the Clean Water Act to minimize impacts to jurisdictional features.	5.6.1, 5.6.2, 5.6.3 and 5.6.6; Appendix J

JURIS-DICTION	AUTHORITY	AGENCY	DETAILS	COMPLIANCE	AFC SECTIONS
State	California Endangered Species Act of 1984: California Fish and Game Code Sections 2050 – 2098	CDFG	The California Endangered Species Act (CESA) generally parallels the main provisions of the FESA, but unlike its federal counterpart, CESA also applies take prohibitions to species proposed for listing (called "candidates" by the State) and has a much narrower definition of "take" (State of California, 1984). Section 2080 of the CFGC prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit or in the regulations. "Take" is defined in Section 86 of the CFGC as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA allows for take incidental to otherwise lawful development projects. State lead agencies are required to consult with CDFG to ensure that any action they undertake is not likely to jeopardize the continued existence of any endangered or threatened species.	The project may result in adverse temporary and permanent impacts to state listed species; however, avoidance and minimization measures are incorporated into the project and are expected to reduce impacts to a less than significant level. As of December 2011, no state listed species have been identified or are expected to be identified..	5.6.1, 5.6.2, 5.6.3 and 5.6.6
	California Fish and Game Code Section 3503	CDFG	This code section prohibits the taking and possessing of bird eggs and nests.	The project may result in adverse temporary and permanent impacts to California Fish and Game Code Section 3503 protected species; however, avoidance and minimization measures are incorporated into the project and are expected to reduce impacts to a less than significant level.	5.6.1, 5.6.2, 5.6.3 and 5.6.6
	California Fish and Game Code Section 3511, Section 4700, Section 5050, Section 5515	CDFG	This code section prohibits the taking of birds, mammals, reptiles, and fish listed as fully protected.	The project is not expected to result in a take of species listed as fully protected.	5.6.1, 5.6.2, 5.6.3 and 5.6.6

JURIS-DICTION	AUTHORITY	AGENCY	DETAILS	COMPLIANCE	AFC SECTIONS
State	CEQA, Public Resources Code Section 21000 et seq	CEC	The CEQA provides for protection of the environment in the State of California.	Provide information to the CEC through the AFC process showing protection of the environment and impact from the project.	5.6.1, 5.6.2, 5.6.3 and 5.6.6
	Multiple Species Conservation Program	County of San Diego	The study area is located within the San Diego Multiple Species Conservation Program (MSCP), which is a comprehensive, long-term habitat conservation plan that addresses the needs of multiple species and the preservation of natural vegetation communities in San Diego County. The MSCP addresses the potential impacts of urban growth and loss of natural habitat and species endangerment and creates a plan to mitigate for the potential loss of Covered Species and their habitat due to the direct, indirect, and cumulative impacts of future development of both public and private lands within the MSCP area. The MSCP is a subregional plan under the California Natural Community Conservation Planning (NCCP) Act of 1991. The MSCP Plan (August 1998) (MSCP Subregional Plan) was prepared for the Subregion, an area encompassing 12 jurisdictions and 582,243 acres. The MSCP Subregional Plan is implemented through local Subarea Plans.	Implement avoidance and minimization measures to reduce potentially significant temporary and permanent impacts in areas of the project that are located within the County MSCP boundaries.	5.6.3 and 5.6.6

5.6.7 Involved Agencies and Agency Contacts

Agencies with jurisdiction to issue applicable permits or enforce LORS related to biological resources are shown in Table 5.6-8.

TABLE 5.6-8
AGENCY CONTACT LIST

Agency	Contact	Address	Telephone
United States Fish And Wildlife Service (USFWS)	TBD	6010 Hidden Valley Road, Suite 101 Carlsbad, California 92011	(760) 431-9440
California Department of Fish and Game (CDFG)	TBD	4949 Viewridge Avenue San Diego, CA 92123	(858) 467-4201
United States Army Corps of Engineers (USACE)	TBD	911 Wilshire Blvd # 1525 Los Angeles, CA 90017	(213) 452-3908
Regional Water Quality Control Board (RWQCB)	TBD	9174 Sky Park Court, Suite 100 San Diego, CA. 92123-4340	(858) 467-2952

5.6.8 Permits Required and Permitting Schedule

A summary of applicable permits and permitting schedule is presented in Table 5.6-9.

TABLE 5.6-9
APPLICABLE PERMITS

Responsible Agency	Permit/Approval	Schedule
USACE	404 Nationwide Permit	TBD
CDFG	CDGC 1600 Stream Bed Alteration Agreement	TBD
RWQCB	401 Water Quality Certification	TBD

5.6.9 References

Burt, W.H. and R. P. Grossenheider. 1980. A Field Guide to Mammals: North America; North of Mexico. New York, NY: Houghton Mifflin Company.

CDFG (California Department of Fish and Game). 2010. RareFind California Department of Fish and Game Natural Diversity Database (CNDDB) La Habra USGS 7.5-Minute Quadrangle. Sacramento, CA: California Department of Fish and Game, Biogeographic Data Branch.

CNPS (California Native Plant Society). 2010. CNPS Electronic Inventory of Rare and Endangered Plants: CNPS.

County of San Diego, Board of Supervisors. 1996. Biological Mitigation Ordinance.

County of San Diego in conjunction with the United States Fish and Wildlife Service, California Department of Fish and Game. October 22, 1997. County of San Diego Multiple Species Conservation Program

Digital Globe. 2008. Aerial Photography: Digital Globe.

Elbroch, M. 2003. Mammal Tracks & Sign, A Guide to North American Species. Mechanicsburg, PA: Stackpole Books.

Halfpenny, J.C. 2000. Scats and Tracks of the Desert Southwest, A Field Guide to the Signs of 70 Wildlife Species. Helena, MT: Falcon Publishing, Inc.

Hickman, J.C. (ed) 1993. The Jepson Manual: Higher Plants of California. Berkeley: University of California Press.

Holland, R.F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California (California Department of Fish and Game The Resources Agency, ed), p. 156. Sacramento, CA.

Longcore, T., and C. Rich. 2004. Ecological light pollution. *Frontiers in Ecology and the Environment* 2(4):191-198.

Ogden Environmental and Energy Services. 1993. Baldwin Otay Ranch Wildlife Corridor Studies. Prepared for: Otay Ranch Project Team. December.

Rich, C., and T. Longcore (Eds.). 2006. *Ecological Consequences of Artificial Night Lighting*. Island Press.

Sawyer and Keeler-Wolf and Evens. 2009. *A Manual of California Vegetation.* Sacramento, CA: California Native Plant Society.

Sibley, D.A. 2000. National Audubon Society. The Sibley Guide To Birds. New York, NY: Alfred A. Knopf, Inc.

Stebbins, R.C. 2003. A Field Guide To Western Reptiles and Amphibians. New York, NY: Houghton Mifflin.

USGS (United States Geological Service). 1975 7.5-Minute Quadrangle Map La Habra, California.

USFWS (United States Fish and Wildlife Service). 2010a. Critical Habitat Portal. USFWS

USFWS (United States Fish and Wildlife Service). 2010b. San Diego Fish and Wildlife Office Endangered and Threatened Species List. In: U.S. Department of the Interior, editor. Carlsbad, CA: USFWS.

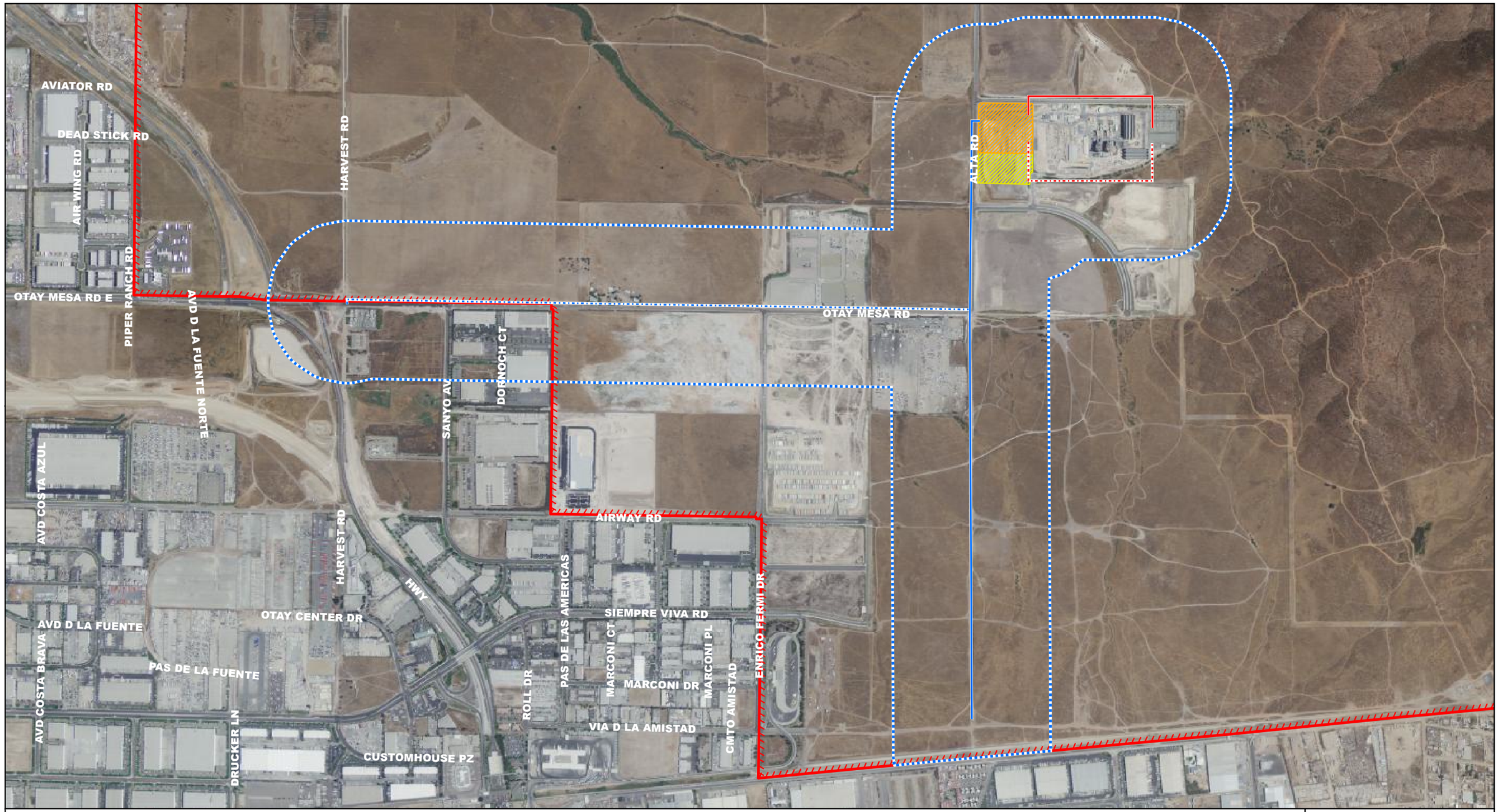
USA. 1918. Migratory Bird Treaty Act (16 USC 703 et seq.), as amended. USA.

USA. 1973. Endangered Species Act of 1973 (16 USC 1531 et seq.), as amended. USA.

USA. 1977. Clean Water Act of 1977 (33 USC 1251 et seq.). USA.

Verheijen, F.J. 1981. Bird kills at tall lighted structures in the USA in the period 1935-1973 and kills at a Dutch lighthouse in the period 1924-1928 show similar lunar periodicity. Ardea 69:199-203. In: Ecological Consequences of Artificial Night Lighting. Rich, Catherine, and T. Longcore (Eds.). Island Press. 2006.

Verheijen, F.J. 1985. Photopollution: Artificial light optic spatial control systems fail to cope with. Incidents, causations, remedies. Experimental Biology 44:1-18. In: Ecological Consequences of Artificial Night Lighting. Rich, Catherine, and T. Longcore (Eds.). Island Press. 2006.



Legend

- Biological Study Area
- Laydown Area
- Project Site
- MSCP Boundary
- Route A 230 kV Transmission Line
- Route B 230 kV Transmission Line
- Route A Natural Gas Line
- Route B Natural Gas Line

N

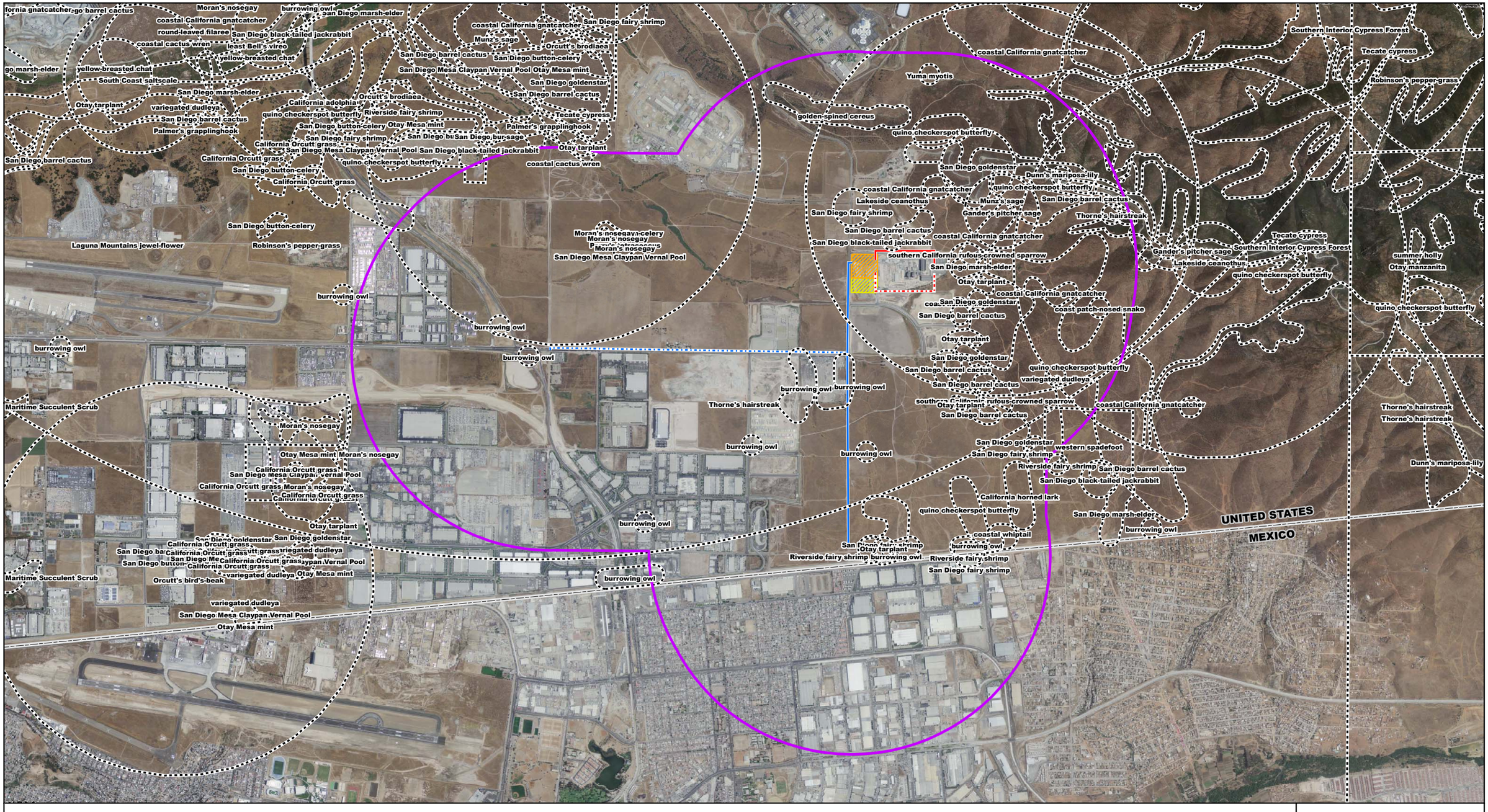
0 600 1,200 Feet

FIGURE 5.6-1
BIOLOGICAL STUDY AREA

PIO PICO ENERGY CENTER

PROJECT NO.: 29874827
DATE: DECEMBER 2010

URS



Legend

- 1-Mile Radius of Proposed Site
- Project Site
- Laydown Area
- Route A 230 kV Transmission Line
- Route B 230 kV Transmission Line
- Route A Natural Gas Line
- Route B Natural Gas Line
- California Natural Diversity Database (May 2010)

N

0 Feet 2,500

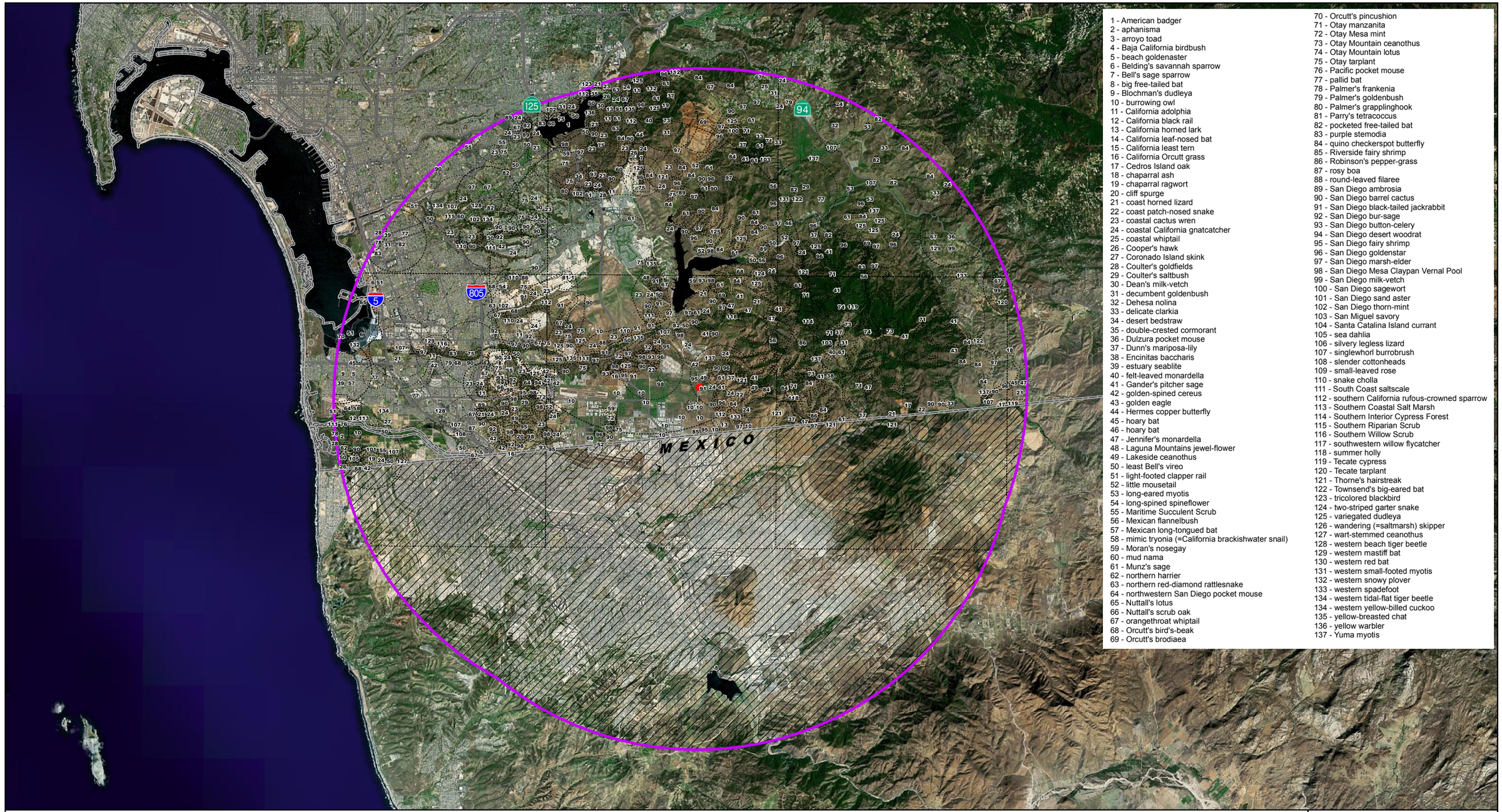
FIGURE 5.6-2
BIOLOGICAL RESOURCES WITHIN A 1-MILE RADIUS OF THE SITE

PIO PICO ENERGY CENTER

PROJECT NO.: 29874827

DATE: DECEMBER 2010

URS



1 - American badger
2 - aphanisma
3 - arroyo toad
4 - Baja California birdbush
5 - beach goldenaster
6 - Belding's savannah sparrow
7 - Bell's sage sparrow
8 - big free-tailed bat
9 - Blochman's dudleya
10 - burrowing owl
11 - California adolphia
12 - California black rail
13 - California horned lark
14 - California leaf-nosed bat
15 - California least tern
16 - California Orcutt grass
17 - Cedros Island oak
18 - chaparral ash
19 - chaparral ragwort
20 - cliff spurge
21 - coast horned lizard
22 - coast patch-nosed snake
23 - coastal cactus wren
24 - coastal California gnatcatcher
25 - coastal whiptail
26 - Cooper's hawk
27 - Coronado Island skink
28 - Coulter's goldfields
29 - Coulter's saltbush
30 - Dean's milk-vetch
31 - decumbent goldenbush
32 - Dehesa nolina
33 - delicate clarkia
34 - desert bedstraw
35 - double-crested cormorant
36 - Dulzura pocket mouse
37 - Dunn's mariposa-lily
38 - Encinitas baccharis
39 - estuary seablite
40 - felt-leaved monardella
41 - Gander's pitcher sage
42 - golden-spined cereus
43 - golden eagle
44 - Hermes copper butterfly
45 - hoary bat
46 - hoary bat
47 - Jennifer's monardella
48 - Laguna Mountains jewel-flower
49 - Lakeside ceanothus
50 - least Bell's vireo
51 - light-footed clapper rail
52 - little mousetail
53 - long-eared myotis
54 - long-spined spineflower
55 - Maritime Succulent Scrub
56 - Mexican flannelbush
57 - Mexican long-tongued bat
58 - mimic tryonia (=California brackishwater snail)
59 - Moran's nosegay
60 - mud nama
61 - Munz's sage
62 - northern harrier
63 - northern red-diamond rattlesnake
64 - northwestern San Diego pocket mouse
65 - Nuttall's lotus
66 - Nuttall's scrub oak
67 - orangethroat whiptail
68 - Orcutt's bird's-beak
69 - Orcutt's brodiaea
70 - Orcutt's pincushion
71 - Otay manzanita
72 - Otay Mesa mint
73 - Otay Mountain ceanothus
74 - Otay Mountain lotus
75 - Otay tarplant
76 - Pacific pocket mouse
77 - pallid bat
78 - Palmer's frankenia
79 - Palmer's goldenbush
80 - Palmer's grapplinghook
81 - Parry's tetracoccus
82 - pocketed free-tailed bat
83 - purple stemodia
84 - quino checkerspot butterfly
85 - Riverside fairy shrimp
86 - Robinson's pepper-grass
87 - rosy boa
88 - round-leaved filaree
89 - San Diego ambrosia
90 - San Diego barrel cactus
91 - San Diego black-tailed jackrabbit
92 - San Diego bur-sage
93 - San Diego button-celery
94 - San Diego desert woodrat
95 - San Diego fairy shrimp
96 - San Diego goldenstar
97 - San Diego marsh-elder
98 - San Diego Mesa Claypan Vernal Pool
99 - San Diego milk-vetch
100 - San Diego sagewort
101 - San Diego sand aster
102 - San Diego thorn-mint
103 - San Miguel savory
104 - Santa Catalina Island currant
105 - sea dahlia
106 - silvery legless lizard
107 - singlewhorl burrobrush
108 - slender cottonheads
109 - small-leaved rose
110 - snake cholla
111 - South Coast saltscale
112 - southern California rufous-crowned sparrow
113 - Southern Coastal Salt Marsh
114 - Southern Interior Cypress Forest
115 - Southern Riparian Scrub
116 - Southern Willow Scrub
117 - southwestern willow flycatcher
118 - summer holly
119 - Tecate cypress
120 - Tecate tarplant
121 - Thorne's hairstreak
122 - Townsend's big-eared bat
123 - tricolored blackbird
124 - two-striped garter snake
125 - variegated dudleya
126 - wandering (=saltmarsh) skipper
127 - wart-stemmed ceanothus
128 - western beach tiger beetle
129 - western mastiff bat
130 - western red bat
131 - western small-footed myotis
132 - western snowy plover
133 - western spadefoot
134 - western tidal-flat tiger beetle
134 - western yellow-billed cuckoo
135 - yellow-breasted chat
136 - yellow warbler
137 - Yuma myotis

Legend

- Proposed Site Location
- 10-Mile Radius of Proposed Site
- California Natural Diversity Database (CNDDB - May 2010)
- Outside U.S. Jurisdiction

N

0 2.5 Miles

FIGURE 5.6-3
BIOLOGICAL RESOURCES WITHIN A 10-MILE RADIUS OF THE SITE

PIO PICO ENERGY CENTER

PROJECT NO.: 29874827
DATE: DECEMBER 2010

URS

AVIATOR RD
DEAD STICK RD
AIR WING RD
HARVEST RD
PIPER RANCH RD
OTAY MESA RD E
AVD D LA FUENTE NORTE
OTAY MESA RD
DORNOCH CT
SANYO AV
AVD COSTA AZUL
HARVEST RD
AIRWAY RD
HWY
OTAY CENTER DR
SIEMPRE VIVA RD
PAS DE LAS AMERICAS
MARCONI CT
MARCONI PL
ENRICO FERMI DR
AVD D LA FUENTE
AVD COSTA BRAVA
PAS DE LA FUENTE
ROLL DR
MARCONI DR
CMTO AMISTAD
DRUCKER LN
VIA D LA AMISTAD
CUSTOMHOUSE PZ

Legend

- Biological Study Area
- Project Site
- Laydown Area
- Route A 230 kV Transmission Line
- Route B 230 kV Transmission Line
- Route A Natural Gas Line
- Route B Natural Gas Line
- Developed/Disturbed
- Mulefat Scrub
- Riparian
- Non-Native Grassland

N

0 600 1,200 Feet

FIGURE 5.6-4
VEGETATION COMMUNITIES/ LAND COVER TYPES

PIO PICO ENERGY CENTER

PROJECT NO.: 29874827
DATE: DECEMBER 2010

URS

Adequacy Issue: Adequate _____ Inadequate _____ **DATA ADEQUACY WORKSHEET** Revision No.: _____ Date: _____

Technical Area: **BIOLOGY** Project: Pio Pico Energy Center Technical Staff: _____
Project Manager: _____ Docket: _____ Technical Senior: _____

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	Sections 5.6.2, 5.6.3, 5.6.4, and 5.6.5 Appendix J		
Appendix B (g) (13) (A)	A regional overview and discussion of terrestrial and aquatic biological resources, with particular attention to sensitive biological resources within (10) miles of the project Include a map at a ten scale of 1:100,000 (or other suitable scale) showing sensitive biological resource location(s) in relation to the project site and related facilities and any boundaries of a local Habitat Conservation Plan or similar open space land use plan or designation. Sensitive biological resources include the following:	Section 5.6.2 Figure 5.6-3 Appendix J2		
Appendix B (g) (13) (A) (i)	species listed under state or federal Endangered Species Acts;	Section 5.6.2 Tables 5.6-4 and 5.6-5		
Appendix B (g) (13) (A) (ii)	resources defined in sections 1702(q) and (v) of Title 20 of the California Code of Regulations;	Section 5.6.2		
Appendix B (g) (13) (A) (iii)	species identified as state Fully Protected;	Section 5.6.2 Tables 5.6-4 and 5.6-5		
Appendix B (g) (13) (A) (iv)	species covered by Migratory Bird Treaty Act;	Section 5.6.2		
Appendix B (g) (13) (A) (v)	species and habitats identified by local, state, and federal agencies as needing protection, including but not limited to those identified by the California Natural Diversity Database, or where applicable, in Local Coastal Programs or in relevant decisions of the California Coastal Commission; and	Section 5.6.2		

Adequacy Issue: Adequate _____ Inadequate _____ **DATA ADEQUACY WORKSHEET** Revision No.: _____ Date: _____

Technical Area: **BIOLOGY** Project: Pio Pico Energy Center Technical Staff: _____
Project Manager: _____ Docket: _____ Technical Senior: _____

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (13) (A) (vi)	fish and wildlife species that have commercial and/or recreational value .	Section 5.6.2		
Appendix B (g) (13) (B)	Include a list of the species actually observed and those with a potential to occur within 1 mile of the project site and 1,000 feet from the outer edge of linear facility corridors. Maps or aerial photographs shall include the following:	Section 5.6.2 Figure 5.6-2 Tables 5.6-2 and 5.6-3		
Appendix B (g) (13) (B) (i)	Detailed maps at a scale of 1:6,000 or color aerial photographs taken at a recommended scale of 1 inch equals 500 feet (1:6,000) with a 30 percent overlap that show the proposed project site and related facilities, biological resources including, but not limited to, those found during project-related field surveys and in records from the California Natural Diversity Database, and the associated areas where biological surveys were conducted. Label the biological resources and survey areas as well as the project facilities;	Section 5.6.2 Figures 5.6-1 and 5.6-2		
Appendix B (g) (13) (B) (ii)	A depiction of the extent of the thermal plume at the surface of the water if cooling water is proposed to be discharged to a water source. Provide the location for the intake and discharge structures on an aerial photograph(s) or detailed maps. Water sources include, but are not limited to, waterways, lakes, impoundments, oceans, bays, rivers, and estuaries; and	Not Applicable		
Appendix B (g) (13) (B) (iii)	An aerial photo or wetlands delineation maps at a scale of (1:2,400) showing any potential jurisdictional and non-jurisdictional wetlands delineated out to 250 feet from the edge of disturbance if wetlands occur within 250 feet of the project site and/or related facilities that would be included with the US Army Corps of Engineers Section 404 Permit application. For projects proposed to be located within the coastal zone, also provide aerial photographs or maps as described above that identify wetlands as defined by the Coastal Act.	Appendix J2		

Adequacy Issue: Adequate _____ Inadequate _____ **DATA ADEQUACY WORKSHEET** Revision No.: _____ Date: _____

Technical Area: **BIOLOGY** Project: Pio Pico Energy Center Technical Staff: _____
Project Manager: _____ Docket: _____ Technical Senior: _____

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (13) (C)	A discussion of the biological resources at the proposed project site and related facilities. Related facilities include, but are not limited to, laydown and parking areas, gas and water supply pipelines, transmission lines, and roads. The discussion shall address the distribution of vegetation community types, denning or nesting sites, population concentrations, migration corridors, breeding habitats, and other appropriate biological resources including the following:	Section 5.6.2		
Appendix B (g) (13) (C) (i)	A list of all the species actually observed;	Section 5.6.2 Tables 5.6-2 and 5.6-3		
Appendix B (g) (13) (C) (ii)	A list of sensitive species and habitats with a potential to occur (as defined in (A) above); and	Section 5.6.2 Tables 5.6-2 and 5.6-3		
Appendix B (g) (13) (C) (iii)	If cooling water is taken directly from or discharged to a surface water feature source, include a description of the intake structure, screens, water volume, intake velocity hydraulic zone field of influence, and the thermal plume dispersion area as depicted in response to B(ii) above. Describe the thermal plume size and dispersion under high and low tides, and in response to local currents and seasonal changes. Provide a discussion of the aquatic habitats, biological resources, and critical life stages found in these affected waters. For repower projects that anticipate no change in cooling water flow, this information shall be provided in the form of the most recent federal Clean Water Act 316(a) and (b) studies of entrainment and impingement impacts that has been completed within the last five (5) years. For new projects or repower projects proposing to use once-through cooling and anticipating an increase in cooling water flow, provide a complete impingement and entrainment analysis per guidance in (D)(ii), below.	Not Applicable		

Adequacy Issue: Adequate _____ Inadequate _____ **DATA ADEQUACY WORKSHEET** Revision No.: _____ Date: _____

Technical Area: **BIOLOGY** Project: Pio Pico Energy Center Technical Staff: _____
Project Manager: _____ Docket: _____ Technical Senior: _____

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (13) (D)	A description and results of all field studies and seasonal surveys used to provide biological baseline information about the project site and associated facilities. Include copies of the California Natural Diversity Database records and field survey forms completed by the applicant's biologist(s). Identify the date(s) the surveys were completed, methods used to complete the surveys, and the name(s) and qualifications of the biologists conducting the surveys. Include:	Section 5.6.2 Appendix J-3		
Appendix B (g) (13) (D) (i)	Current biological resources surveys conducted using appropriate field survey protocols during the appropriate season(s). State and federal agencies with jurisdiction shall be consulted for field survey protocol guidance prior to surveys if a protocol exists;	Appendix J1 Appendix J2		
Appendix B (g) (13) (D) (ii)	If cooling water is proposed to be taken directly from or discharged to a surface water feature source seasonal aquatic resource studies and surveys shall be conducted. Aquatic resource survey data shall include, but is not limited to, fish trawls, ichthyoplankton and benthic sampling, and related temperature and water quality samples. For new projects or repower projects anticipating a change in cooling water flows, sampling protocols shall be provided to the Energy Commission staff for review and concurrence prior to the start of sampling. For repower projects not anticipating a change in cooling water flows, this information shall be provided in the form of the most recent federal Clean Water Act 316(b) impingement and entrainment impact study completed within five (5) years of the AFC filing date; and	Not Applicable		

Adequacy Issue: Adequate _____ Inadequate _____ **DATA ADEQUACY WORKSHEET** Revision No.: _____ Date: _____

Technical Area: **BIOLOGY** Project: Pio Pico Energy Center Technical Staff: _____
Project Manager: _____ Docket: _____ Technical Senior: _____

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (13) (D) (iii)	If the project or any related facilities could impact a jurisdictional or non-jurisdictional wetland, provide completed Army Corps of Engineers wetland delineation forms and/or determination of wetland status pursuant to Coastal Act requirements, name(s) and qualifications of biologist(s) completing the delineation, the results of the delineation and a table showing wetland acreage amounts to be impacted.	Appendix J2		
Appendix B (g) (13) (E)	Impacts discussion of the following:			
Appendix B (g) (13) (E) (i)	all impacts (direct, indirect, and cumulative) to biological resources from project site preparation, construction activities, plant operation, maintenance, and closure. Discussion shall also address sensitive species habitat impacts from cooling tower drift and air emissions;	Sections 5.6.3 and 5.6.4		
Appendix B (g) (13) (E) (ii)	facilities that propose to take water directly from, and/or discharge water to surface water features, daytime and nighttime impacts from the intake and discharge of water during operation, water velocity at the intake screen, the intake field of influence, impingement, entrainment, and thermal discharge. Provide a discussion of the extent of the thermal plume, effluent chemicals, oxygen saturation, intake pump operations, and the volume and rate of cooling water flow at the intake and discharge location; and	Not Applicable		
Appendix B (g) (13) (E) (iii)	Methods to control biofouling and chemical concentrations, and temperatures that are currently being discharged or will be discharged to receiving waters.	Not Applicable		
Appendix B (g) (13) (F)	A discussion of all feasible mitigation measures including, but not limited to the following:	Section 5.6.5		
Appendix B (g) (13) (F) (i)	All measures proposed to avoid and/or reduce adverse impacts to biological resources;	Section 5.6.5		

Adequacy Issue: Adequate _____ Inadequate _____ **DATA ADEQUACY WORKSHEET** Revision No.: _____ Date: _____

Technical Area: **BIOLOGY** Project: Pio Pico Energy Center Technical Staff: _____
Project Manager: _____ Docket: _____ Technical Senior: _____

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (13) (F) (ii)	All off -site habitat mitigation and habitat improvement or compensation, and an identification of contacts for compensation habitat and management;	Section 5.6.5		
Appendix B (g) (13) (F) (iii)	Design features to better disperse or eliminate a thermal discharge;	Not Applicable		
Appendix B (g) (13) (F) (iv)	All measures proposed to avoid or minimize adverse impacts of cooling water intake. This shall include a Best Technology Available (BTA) discussion. If BTA is not being proposed, the rationale for not selecting BTA must be provided; and	Not Applicable		
Appendix B (g) (13) (F) (v)	Educational programs to enhance employee awareness during construction and operation to protect biological resources.	Section 5.6.5		
Appendix B (g) (13) (G)	A discussion of compliance and monitoring programs to ensure the effectiveness of impact avoidance and mitigation measures incorporated into the project.	Section 5.6.5		
Appendix B (g) (13) (H)	Submit copies of any preliminary correspondence between the project applicant and state and federal resource agencies regarding whether federal or state permits from other agencies such as the U. S. Fish and Wildlife Service the National Marine Fisheries, Service, the U.S. Army Corps of Engineers, the California Department of Fish and Game, and the Regional Water Quality Control Board will the proposed project be required for	Pending		
Appendix B (i) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, leases, and permits applicable to the proposed project, and a discussion of the applicability of, and conformance with each. The table or matrix shall explicitly reference pages in the application wherein conformance, with each law or standard during both construction and operation of the facility is discussed; and	Section 5.6.6 Table 5.6-7		

Adequacy Issue: Adequate _____ Inadequate _____ **DATA ADEQUACY WORKSHEET** Revision No.: _____ Date: _____

Technical Area: **BIOLOGY** Project: Pio Pico Energy Center Technical Staff: _____
Project Manager: _____ Docket: _____ Technical Senior: _____

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (i) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits, leases, and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.	Sections 5.6.6 and 5.6.7 Tables 5.6-7 and 5.6-8		
Appendix B (i) (2)	The name, title, phone number, address (required), and email address (if known), of an official who was contacted within each agency, and also provide the name of the official who will serve as a contact person for Commission staff.	Section 5.6.7 Table 5.6-8		
Appendix B (i) (3)	A schedule indicating when permits outside the authority of the commission will be obtained and the steps the applicant has taken or plans to take to obtain such permits.	Section 5.6.8 Table 5.6-9		