

### **5.3 BIOLOGICAL RESOURCES**

This section addresses biological resources potentially affected by the Palomar Energy Project. The section encompasses both vegetation and wildlife resources. The biological resource evaluation addresses the 20-acre power plant site, as well as the proposed route for the project water supply and wastewater return pipelines, and the natural gas supply pipeline upgrade route.

The Palomar Energy Project will be developed in Planning Area 1 of the planned ERTC industrial park. Prior grading of the overall industrial park site (Planning Areas 1-8) will have fully disturbed the biological resources of Planning Area 1 before Palomar construction begins. Also, about half of the power plant's proposed water/wastewater pipeline route will be within areas of the industrial park site that will be disturbed before Palomar construction begins, and the other half will be within existing roadways. Finally, the short natural gas pipeline upgrade segment will be installed entirely within existing paved city streets, where there are no biological resources. Thus, Palomar project development will have virtually no biological impacts, because the facility will be constructed in areas that already will have been thoroughly modified from current conditions before power plant construction begins. The ERTC industrial park project is the subject of a separate California Environmental Quality Act (CEQA) review being performed under the auspices of the City of Escondido. This CEQA review will include biological resources issues.

In accordance with CEC requirements, botanical and wildlife surveys were completed for the power plant site, within a one-mile radius of the plant site boundary, and along 2,000-foot corridors (1,000 feet in each direction) surrounding the proposed water pipeline route. Likewise, the proposed natural gas pipeline upgrade route was evaluated for biological resources and potential biological impacts. In addition, protocol-level surveys were completed for four special status animals species: the Quino Checkerspot Butterfly (*Euphydryas editha quino*), California Gnatcatcher (*Polioptila californica*), Least Bell's Vireo (*Vireo bellii pusillus*), and Southwestern Willow Flycatcher (*Epidonax traillii extimus*).

Reports of the botanical and wildlife surveys, including the special status protocol-level surveys, are provided in Appendix F. The survey reports in Appendix F included detailed species lists, native species survey forms, survey methodologies, qualifications of the individuals who performed the work, etc., as required in the CEC guidelines.

#### **5.3.1 Affected Environment**

##### **5.3.1.1 Regional Setting**

The Escondido region historically supported a diversity of vegetation cover types including extensive areas of vegetation classified as the California Sagebrush Series (Diegan Sage Scrub) and various types of chaparral. Live oak woodlands and riparian vegetation were less extensive, but nevertheless were well represented in the region. Also present in the region were smaller areas of native grassland and other vegetation types, as well as a diverse fauna typical of the Mediterranean type ecosystems of cismontane Southern California.

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The Palomar project site is located on the fringes of the urbanized core of the City of Escondido. Urban development predominates to the north and east, while the areas to the west, south and southwest are predominantly rural (see Figure 5.3-1). The 186-acre planned industrial park site that includes the 20-acre Palomar site is within the area covered by the City of Escondido's Quail Hills Specific Plan, which is being updated and retitled the Escondido Research and Technology Center Specific Plan. Land uses to the south and southwest of the Escondido Research and Technology Center Specific Plan Area (SPA) are dominated by rural development, eucalyptus groves, and fallow agricultural fields. Patches of Coast Live Oaks, chaparral, and willows are also present in this area. Understory disturbance and development activities have degraded much of the Coast Live Oak Series in this area.

During the second half of the twentieth century, progressive loss of natural habitat occurred in the Escondido area, primarily due to agricultural expansion, followed by urbanization. Human use, fragmentation, and invasive non-native plants have degraded many of the remaining areas of natural habitat, causing an increase in the number of plant and animal species listed as having special regulatory status. Larger areas of native habitat occur in the more rugged lands to the west and south of the project site. However, rural home sites and agricultural land also are scattered throughout these areas.

#### 5.3.1.2 Project Vicinity

The City of Escondido is a participant in regional resource conservation planning efforts being undertaken in northern San Diego County pursuant to the California Natural Community Conservation Planning (NCCP) Act of 1991 and the California and Federal Endangered Species Acts (CESA and ESA, respectively). This subregional plan is identified by the City of Escondido in the 1999 draft Multiple Habitat Conservation Plan or MHCP (City of Escondido, 1999). Under the umbrella planning framework of the MHCP, the City of Escondido has prepared a draft subarea conservation plan (Escondido Subarea Plan) that addresses land conservation plans under the City's land use authority (see Figure 5.3-2, Biological Resource Areas, City of Escondido).

The power plant site, as well as the proposed and alternative water/wastewater pipeline routes, are located within the Southwestern Habitat Area, as identified in the Escondido Subarea Plan. The Southwestern Habitat Area does support stands of native habitat including sage scrub, chaparral, live oak woodland, and small extents of riparian communities. However, these habitats generally are degraded, and fragmented. They also are isolated from regional core areas identified for conservation in the draft Escondido Subarea Plan. Surrounding rural development, habitat fragmentation, and the lack of suitable soil types limits the potential occurrence of special-status plants and animals in the immediate site vicinity. The Palomar site and the remainder of the Escondido Research and Technology Center SPA are not identified in the draft Escondido Subarea Plan as conservation areas.

**Figure 5.3-1 Regional Habitat Types**

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**Figure 5.3-2 Biological Resource Areas City of Escondido**

Special-status species within the project vicinity include the White Coast Ceanothus (*Ceanothus verrucosus*), California Gnatcatcher, Rufous-crowned Sparrow (*Aimophila ruficeps canescens*), Loggerhead Shrike (*Lanius ludovicianus*), and Western Spadefoot Toad. The ceanothus is restricted to the poorly represented chaparral habitat to the southwest of the site. It is extensively represented further to the south and west of the project site within intact habitat (Figure 5.3-3). The gnatcatcher and sparrow are extensively represented to the south and west of the site within sage scrub habitats. The shrike is a species commonly associated with grasslands and agricultural uses. This species is represented throughout field agricultural regions of San Diego County, but is poorly represented in the regional databases due to its listing as low conservation status (federal species of concern, but populations are stable in California), and an associated underreporting of occurrences.

The most prominent drainage in the project vicinity is Escondido Creek, which flows from the northeast to the southwest, and at its closest point lies about 2,500 feet southeast of the power plant site. As the creek traverses the City of Escondido, most of it is a concrete-lined channel. Downstream of the channel habitat, fragmentation and invasive non-native plant species have degraded the riparian habitats along the creek. The City of Escondido currently is undertaking the Escondido Creek Enhancement Project in this degraded riparian area.

### 5.3.1.3 Palomar Energy Project Site

The following section describes the biological resources that currently exist on the proposed power plant site, and along the linear facility routes associated with the power plant.

Three vegetation series occur on the power plant site and along the pipeline routes: the California Sagebrush Series, California Annual Grassland Series, and the Eucalyptus Series. Figure 5.3-3 shows the vegetation and sensitive species of the power plant site, and an approximate one-mile radius, an area that includes the pipeline routes and 1,000 feet around these routes. Figure 5.3-4 shows a closer view of the vegetation and sensitive species of the plant site and the overall 186-acre ERTC industrial park site.

Portions of the northern end of the plant site appeared to have been used as a shallow borrow site, or were otherwise scraped in the past. As revealed in the spring 2001 vegetation surveys, the area is devoid of vegetation and highly disturbed. In the extreme north of the site, there are abandoned orchards, which still contain a few avocado trees. There is a network of dirt roads and trails on the site, some of which have been used to access electrical transmission towers from the existing transmission line located adjacent to the site; others are the result of past and continuing recreational off-road vehicle uses.

The highly disturbed, unvegetated area in the north of the site contains several depressions that were retaining water during the spring 2001 survey period. These depressions also were noted as containing water in an earlier survey (Dudek, 1998). The Western Spadefoot Toad has used these pools for breeding during both the present (2001) and 1998 surveys, even though these temporary pools were filled with trash and had been impacted by off-road vehicles. The

**Figure 5.3-3 Vegetation and Sensitive Species within 1-Mile Radius**

**Figure 5.3-4 Vegetation and Sensitive Resources of Power Plant and Immediate Vicinity**

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depressions are not considered vernal pools in that they are located on inappropriate soils support no vernal pool indicator species, and appear to be formed in lands that have been scraped and kept in an unvegetated form by heavy disturbance.

The central and southern areas of the plant site are less highly disturbed than the northern portion. Coastal Sagebrush vegetation dominates this area.

The proposed water supply/wastewater return pipeline route would terminate adjacent to Escondido Creek near the end of the lined portion of the creek channel. The pipeline route passes through areas historically supporting annual grasslands and near a small stand of Blue Gum eucalyptus trees.

#### 5.3.1.4 Biological Surveys

Vegetation communities were delineated according to the Sawyer and Keeler-Wolf (1995) classification; however, the Holland (1986) vegetation types were also noted. Plant identifications either were made in the field or were later determined in the laboratory by the identification of voucher specimens. Plant species identified on the site are listed in Appendix F-1.

The presence of wildlife species was determined primarily through direct observation aided by binoculars. Identification of songs, call notes or alarm calls, and the observation of indirect sign (e.g. burrows, tracks, scat, etc.) were used to confirm the presence of some wildlife species. Appendix F-1 provides a list of wildlife species identified during the present study, and where appropriate, includes observations of additional species observed or reported by others.

Surveys were conducted for special-status species, such as the California Gnatcatcher, Quino Checkerspot Butterfly, Least Bell's Vireo, and Southwestern Willow Flycatcher, using the USFWS protocol methods. More information regarding the focused survey methodologies is available in Appendix F.

#### Vegetation

The project vicinity supports a notably low diversity of plant life. Given a long period of historic disturbance, and high degrees of urban encroachment, the proportion of exotic species relative to native species is relatively high: of 176 total species identified, 64 (36%) are non-native. There are no unique floristic assemblages present within the project vicinity.

The California Sagebrush Series, California Annual Grassland Series, and the Eucalyptus Series are the primary recognized vegetation communities in the entire industrial park area and along the proposed water supply/wastewater return pipeline route. Four other vegetation communities are minimally represented within a mile of the power plant site or along the pipeline route. In addition, the project site and pipeline route also include agricultural lands, disturbed habitats (principally dirt roadways), seasonal pond and drainage areas, and urban lands. The following text provides a brief discussion of the seven most common native habitat types found in the project vicinity.

California Sagebrush Series (includes the Holland type Diegan Coastal Sage Scrub, Code: 32500).

The California Sagebrush Series is a low-growing native plant community dominated by drought-deciduous aromatic shrubs. This habitat occurs on the project site and is the best represented native vegetation series within the project vicinity. This series was historically one of the dominant habitat types on the lower coastal slopes of San Diego County, including the lands within the project vicinity, but its extent has been greatly reduced by urban and agricultural development. The continued loss of this vegetation and the threatened status of one of its most closely affiliated bird species, the California Gnatcatcher, is the driving force behind the Natural Community Conservation Planning (NCCP) process in San Diego County.

The vegetation stands of this series that are present in the project area are structurally typical of this community elsewhere in the region. Canopy height varies from approximately two to three feet and density ranges from fairly open to dense coverage in some areas. Shrub diversity on the site is relatively low for this series, and the vegetation has been degraded in many places by invasive non-native plant species, trash dumping, and off-road vehicle use.

California Annual Grassland Series (includes the Holland type Diegan Coastal Sage Scrub, Code: 32500).

The California Annual Grassland Series is dominated by exotic plant species, however, various native annuals such as the California Poppy (*Eschscholzia californica*) and lupine (*Lupinus sp.*) are often present. Limited amounts of this habitat occur on the Palomar site and along the proposed water pipeline route.

Coast Live Oak Series (includes the Holland types Coast Live Oak Woodland (Code: 71160) and Southern Coast Live Oak Riparian Forest, Code: 61310)

Coast Live Oak (*Quercus agrifolia*) is the dominant tree of this vegetation type. None of the oak woodland within the project vicinity can be considered to be representative of intact woodland communities. None of this habitat occurs on the project site or within the proposed water pipeline route, but it does occur within a one-mile radius of the power plant site.

Mixed Willow Series (includes the Holland type Southern Willow Scrub, Code: 63320)

The Mixed Willow Series is dominated by a variety of species of willows such as Goodding's Willow (*Salix gooddingii*), Arroyo Willow (*S. lasiolepis*), and Narrow-leaved Willow (*S. exigua*). This series is present along Escondido Creek and at scattered localities within a mile west of the power plant site. None of this habitat occurs on the plant site or within the proposed pipeline alignment.

Mulefat Series (includes the Holland type Mule Fat Scrub, Code 63310).

The Mulefat Series is typically found in canyon bottoms, along washes, and near streams where there is seasonal flooding or the substrate is saturated. This vegetation is also found on the drier benches along stream systems and is often dominated by a single shrub species,

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Mule Fat (*Baccharis salicifolia*). A small area of this series is present along a drainage within a mile west of the power plant site. None of this habitat occurs on the project site or along the proposed water pipeline route.

#### Cattail Series (includes the Holland type Coastal and Valley Freshwater Marsh, Code:52410)

Various species of cattails (*Typha spp.*) and/or bulrush (*Scirpus spp.*) dominate the Cattail Series. The stands present within the study area are dominated by Soft-flag Cattail (*Typha latifolia*) and are very small and scattered. These occur in association with the Mixed Willow Series located along Escondido Creek near the terminus of the proposed water pipelines. None of this habitat occurs on the plant site or within the water pipeline route.

#### Eucalyptus Series

This vegetation type has no equivalent in Holland (1986). One of the largest and most common species is Blue Gum (*Eucalyptus globulus*). This species is present in the project vicinity and forms large groves along Escondido Creek in the southern part of the one mile-radius study area. A large grove is present along a drainage area near the southwestern border of the project vicinity. Blue Gum and various other species of Eucalyptus are found at scattered localities throughout the project vicinity. None of these vegetation types occur on the project site; however, a portion of a small stand of *E. globulus* occurs within the water pipeline route.

### **Wildlife**

The project site currently supports a subset of the fauna typical of habitats dominated by California Sagebrush in coastal Southern California. Dozens of species are often found in this type habitat, but few such species were observed during the survey work and probably have a low potential of occurrence. This limited faunal diversity is likely due to the isolation of the site from other areas of California Sagebrush and the degraded nature of the habitat on and adjacent to the project site.

#### Butterflies

Butterflies species that were observed on the site include the Funereal Duskywing (*Erynnis funerals*), Anise Swallowtail (*Papilio zelicaon*), Sara Orangetip (*Anthocharis sara*), Silvery Blue (*Glaucopsyche lygdamus*), Behr's Metalmark (*Apodemia vigulti*), and Common Buckeye (*Junonia coenia*). Protocol surveys conducted in spring 2001 for the endangered Quino Checkerspot Butterfly (*Euphydryas editha quino*) found no specimens of the species on the site or in the vicinity (see Appendix F-2).

#### Amphibians

Three species of amphibians, the Garden Slender Salamander (*Batrachoseps major*), Pacific Chorus Frog (*Pseudacris regilla*) and Western Spadefoot Toad (*Spea hammondi*) were observed on the project site. Small populations of the Western Toad (*Bufo boreas*), which frequents many habitat types in the area, may also be present onsite and in the project vicinity.

### Reptiles

The Western Fence Lizard (*Sceloporus occidentalis*) and the Side-blotched Lizard (*Uta stansburiana*) were observed on the site and along the water pipeline route. A Coastal Whiptail (*Cnemidophorus tigris multiscutatus*) also was seen adjacent to the proposed pipeline route, and this lizard may be present on the project site as well. Snake populations are not expected to be high on the site or in the vicinity because of the nearby heavily traveled roads and the extensive human use of the area.

### Birds

Most of the bird species observed on the project site were typical of California Sagebrush-dominated habitats in coastal San Diego County. The California Quail (*Callipepla californica*), Greater Roadrunner (*Geococcyx californianus*), Wrentit (*Chamaea fasciata*), Bewick's Wren (*Thryomanes bewickii*), California Gnatcatcher, California Thrasher (*Toxostoma redivivum*), and California Towhee (*Pipilo crissalis*) were observed. Red-tailed Hawks and Turkey Vultures were seen soaring over the project site. A pair of Cassin's Kingbirds (*Tyrannus vociferans*), which breed in tall trees and forage over open habitats were also observed. Appendix F-1 contains a complete list of the bird species observed on the site.

### Mammals

Relatively few mammalian species were observed on the project site. Most mammal species are nocturnal and not easily observed during daytime surveys. The California Ground Squirrel (*Spermophilus beecheyi*), Dulzura Kangaroo Rat (*Dipodomys simulans*), Brush Rabbit (*Sylvilagus bachmani*), and Coyote (*Canis latrans*) were seen or detected on the project site. These mammals are all common species in California Sagebrush or chaparral-dominated habitats in San Diego County. The site's isolation from other habitats would be expected to limit or even preclude the occurrence of larger wide-ranging species such as the Mountain Lion (*Felis concolor*).

### Wildlife Movement Corridors

Connectivity between large core areas of preserved habitat is critical in preserving biodiversity (Soule and Terborgh 1999). Landscape connectivity is the key concept in regional conservation efforts. As identified in the MHCP Escondido Subregional Plan, the Quail Hills Specific Plan area lacks connectivity to core conservation areas and contains fragmented and degraded habitat (City of Escondido, 1999). For these reasons the project site is not expected to be an important element in regional habitat connectivity.

#### **5.3.1.5 Special-Status Habitats and Species**

The following sections discuss special-status species found on or near the Palomar Energy site. For the purposes of this section, special-status biological resources are one of the following:

- Species listed under state or federal Endangered Species Acts;

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- Species listed by the State of California as Species of Special Concern;
- Species protected under the Multi Species Conservation Program (MSCP);
- Species considered sensitive under the California Environmental Quality Act (CEQA):
- Resources defined in §1702(q) and (v) of Title 20 of the California Code of Regulations; and
- Species or habitats identified by legislative acts as requiring protection.

#### Habitats

There are two special-status habitats found within a roughly one-mile radius of the proposed plant site (this radius also encompasses the study area for the linear facilities associated with the proposed project). These habitats, which are discussed below, are: the California Sagebrush Series (Diegan Coastal Sage Scrub) and California Annual Grassland (Non-native Grassland).

The California Sagebrush Series (Diegan Coastal Sage Scrub) is considered a special-status habitat in San Diego County. Urban and agricultural land use has claimed over 90 percent of the historical coverage of this vegetation type in San Diego County. Losses of such habitat have surpassed thresholds of cumulative significance. Even minor additional losses can result in continued fragmentation that threaten the long-term survival of several dependent species, without a concerted effort at strategic conservation of key habitat areas and associated linkages. The California Sagebrush Series is the primary habitat of the California Gnatcatcher and a host of other special-status species. These species are becoming rare because of habitat loss.

Large contiguous areas of California Annual Grassland (Non-native Grassland), although dominated by non-native plant species, are considered a special-status habitat in San Diego County. This is because it has largely replaced native grasslands and other open habitats on coastal mesas and within valleys as the supporting habitat for native species that are dependent on grassland resources.

Grasslands in coastal Southern California, whether dominated by native or non-native grasses, are important for foraging raptors such as the Barn Owl (*Tyto alba*), White-tailed Kite (*Elanus leucurus*), and Red-tailed Hawk. Grasslands also provide wintering habitat for raptors such as the Ferruginous Hawk and the Northern Harrier. While the grasslands found within the project vicinity were generally too limited and fragmented by development to serve an important regional habitat function, the regional conservation plans, such as the Escondido Subarea Plan, would require mitigation of disturbance of such lands as a means to finance acquisition and preservation of larger tracts of functional habitat.

#### Plants

The portion of San Diego County where the project site is located has a particularly limited number of special-status plants. This limited representation is because these plants are

usually found on metavolcanic substrates, on friable cracked clay soils, or within wetlands such as vernal pools. These circumstances are poorly developed within the project vicinity. Many rare plants in coastal San Diego County are associated with a Baja California flora that does not generally reach northward to Escondido. As a result the California Sagebrush Series in the Escondido area has a limited understory and shrub mix when compared with sage scrub in areas in the southern part of San Diego County (e.g., Chula Vista).

Based on CNDDDB records for the Escondido USGS Quadrangle, three special-status plant species are known from the region west of Escondido, including Wart-stemmed Ceanothus (*Ceanothus verrucosus*), Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*) and Summer-holly (*Comarostaphylis diversifolia* ssp. *diversifolia*). Despite their regional presence, no special-status plant species were identified within the project site and no MHCP narrow endemic species or critical populations of MHCP-covered species were identified within the project vicinity. Furthermore, these species are not expected to occur in this area due to lack of appropriate habitat.

#### **Wildlife**

Special-status wildlife species include those listed as Threatened or Endangered by the federal government or the State of California, those covered under the draft Escondido Subarea Plan, those recognized as declining within the region by non-governmental environmental organizations, and those identified by professional biologists as being locally of concern. Selected descriptions of special status species that were observed during the surveys have been included below.

#### Western Spadefoot Toad

The Western Spadefoot Toad is listed as both a federal and state species of concern (Jennings and Hayes 1994), and is covered by the draft Escondido Subarea Plan. The spring 2001 survey found seven juvenile Western Spadefoot Toads under surface trash around the temporary pool in the northern portion of the power plant site. Dudek (1998) noted approximately 250 Western Spadefoot tadpoles in this area at the time of their spring 1998 survey. This amphibian occupies valleys and foothill areas in the Central Valley and along the central and southern coast of California. The species has greatly declined in San Diego County, due to the extensive agricultural and urban development along the coast and in inland valleys.

#### California Gnatcatcher

The California Gnatcatcher is found in California Sagebrush-supporting habitats in coastal southern California southward into Baja California, Mexico. The majority of the historical habitat occupied by this species within the United States has been converted for agriculture or urban development. As a result, the species has been listed as a threatened species under the federal Endangered Species Act. In addition, the California Gnatcatcher is listed as a Species of Special Concern by the State of California, and is a covered species under the Escondido Subarea Plan.

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In the spring of 2001, project biologists conducted a three-visit focused presence/absence survey for the California Gnatcatcher on the plant site and water pipeline route. In August 2001 a similar focused three-visit gnatcatcher survey was conducted of the entire ERTC Specific Plan Area (SPA), within which the Palomar site is located. These surveys were performed under federal 10(a)(1)(A) permit #797999, and followed the guidelines of the U.S. Fish and Wildlife Service California Gnatcatcher Survey Protocol, February 28, 1997.

Two pairs of the California Gnatcatcher were observed in or near the Palomar site in the spring 2001 survey. These pairs both included a black-capped male, and breeding/nesting was assumed. During the August 2001 surveys, up to fourteen individual gnatcatchers were observed, including three adult males, with the remaining birds being females and juveniles. Due to seasonal constraints, the surveyors were unable to precisely assess age or gender beyond inference on all non-adult male birds. In all, it is estimated that four pairs of gnatcatchers established nesting territories on the Escondido Research and Technology Center SPA in 2001-- two pairs in or near the 20-acre Palomar site and two pairs elsewhere on the 208-acre SPA (see Figure 5.3-3).

Dudek (1998) reported six pairs of gnatcatchers on the SPA. While speculative, it is possible that the difference in numbers between the 1998 and 2001 surveys is due to population dynamics. Animal populations in general are cyclic in nature, and this phenomenon has been apparent in California Gnatcatcher populations throughout San Diego County, particularly in areas of low-quality habitat, such as the SPA. Therefore the apparent decrease in numbers of breeding gnatcatcher pairs on the Palomar site and immediate surrounding area over a three-year period does not necessarily indicate a long-term downward trend in the gnatcatcher population.

#### Least Bell's Vireo and Southwestern Willow Flycatcher

Palomar Energy Project biologists conducted a focused presence/absence survey for Least Bell's Vireo (*Vireo bellii pusillus*) and the Southwestern Willow Flycatcher (*Empidonax traillii extimus*) along Escondido Creek in the project vicinity, nearly three-quarters of a mile from the power plant site. Both species are federally-listed as endangered. This area supports approximately four acres of low quality habitat for these species, i.e., the acreage is considered marginal for the vireo and mostly unacceptable for the flycatcher. The vireo and flycatcher surveys were conducted following the guidelines of the U.S. Fish and Wildlife Service Survey Protocol for these two riparian species. The surveys detected no members of either species. Potential predators of both species would be expected in the area. The Least Bell's Vireo and Southwestern Willow Flycatcher survey is described more fully in Appendix F.1.

#### Other Birds

With the exception of the California Gnatcatcher, no special status bird species are currently known to nest on the Palomar site (see Figure 5.3-3). As shown on Figure 5.3-3, the Southern

California Rufous-crowned Sparrow has been recorded on the SPA (Dudek 1998) and may intermittently occupy the SPA as a breeding species, while the Western Bluebird (*Sialia mexicana*) is a possible winter visitor to the area. Other species that may make intermittent use of the SPA include a number of raptors, such as the Northern Harrier (*Circus cyaneus*), and the White-tailed Kite.

Several species of raptors are expected to use the tall Eucalyptus and Coast Live Oaks in the project vicinity. An active Red-tailed Hawk nest containing three young birds was located in a large Blue Gum at the north end of the SPA during the field surveys. Even though nest sites were not found, the Red-shouldered Hawk probably nests in the SPA vicinity or on the SPA because several individuals were heard calling in the area. A single Cooper's hawk was observed on the SPA during August 2001. This woodland species may nest in the project vicinity and could conceivably use the oak woodland on the SPA. The White-tailed Kite (*Elanus leucurus*) and the Great Horned Owl (*Bubo virginianus*) are two other raptor species that could potentially nest within the SPA vicinity as well.

### Other Special-Status Species

Although there is a low probability of any substantial numbers of special status plants occurring on the SPA, there are several special status wildlife species that may be present or intermittently present. These include species with cryptic coloration that occur in naturally low densities such as the Coastal (San Diego) Horned Lizard (*Phrynosoma coronatum blainvillei*). Other sensitive reptile species that could conceivably occur on the SPA include the Orange-throated Whiptail (*Cnemidophorus hyperythrus*) and the Red Diamond Rattlesnake [*Crotalus (ruber) exsul*]. The Northwestern San Diego Pocket Mouse (*Chaetodipus fallax fallax*), a mammal that is strictly nocturnally active and leaves few distinguishing signs, also may occur on the SPA.

The occurrence of any of these species within the impact area would be notable, but would not substantially alter the assessment of impacts relative to established significance criteria. This is because these species are generally less sensitive to human disturbances and are considered habitat associates that are not distributed in narrowly defined populations. Rather, these species have declined in association with a loss of suitable habitat. Because impacts to habitats in which these species are associated are being evaluated for significance, they are considered to be adequately addressed through a habitat based assessment.

### **5.3.2 Environmental Impacts**

Impacts to biological resources were assessed in terms of the California Environmental Quality Act (CEQA) criteria and through review of the project's consistency with applicable local and regional conservation and resource protection plans or ordinances. Both direct and indirect project impacts were assessed. There would be a significant effect on biological resources if the project would:

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- Have a substantial adverse effect, either directly or indirectly through habitat modification, on a candidate threatened or endangered species or the habitat of such a species;
- Have a substantial adverse effect on a sensitive natural community identified in local or regional plans;
- Interfere substantially with the movement of any resident or migratory fish or wildlife species;
- Have a substantial adverse effect on federally protected wetlands.

#### 5.3.2.1 Direct Impacts

Direct impacts occur when biological resources are altered or destroyed during the course, or as a result, of project implementation. Examples of such impacts include removal or grading of native vegetation and dredging or filling wetlands. Other direct impacts may include substantial loss of foraging or nesting habitat and loss of individuals of special-status species as a result of habitat clearing.

The Palomar project will have no direct impact on biological resources because the site and water pipeline route will be fully disturbed by prior grading of the ERTC industrial park project. The cumulative impacts of the Palomar project together with the industrial park project are discussed in Section 5.3.5. In order to provide data requested by the CEC Staff, the cumulative analysis delineates between effects associated with Planning Area 1 of the industrial park (the Palomar site) versus the remainder of the industrial park.

The proposed natural gas pipeline upgrade will extend 0.5-mile and will occur, entirely within existing paved roadways (Lincoln Avenue and Metcalf Street) about one mile northeast of the plant site, in areas of urban residential, commercial, and industrial land use. No biological resources will be affected. Although construction will cross (via the roadway) two minor culverted drainages, no wetlands or Waters of the U.S. would be impacted, and no wetland permits would be required.

#### 5.3.2.2 Indirect Impacts

Indirect impacts may include elevated noise levels, excessive night lighting within wildlife habitat, change in surface water elevations or flow locations within a floodplain, generation of dust from grading activities, deposition of operational air emissions, and increased erosion or sedimentation. These types of indirect impacts can affect vegetation or alter habitat use by special-status species.

Indirect impacts may be permanent or temporary in nature and may persist following project construction. They can include:

- Temporary artificial lighting during construction periods that deters nocturnal wildlife activity or artificially increases predation rates on vulnerable species;

- Temporary activity, noise, and vegetation dusting impacts that reduce suitability of adjacent habitats as a result of disturbance or reduced food supply associated with impacts to insect populations as a result of dust accumulation on plants;
- Alteration of run-off patterns that reduce or exacerbate water in an area in a detrimental fashion;
- Permanent noise impacts to resident species;
- Long-term artificial lighting of adjacent habitats; and
- Project air emission impacts on vegetation resources.

Industrial park development activities prior to Palomar project construction will have largely removed the habitats and species on/near the plant site and water pipeline route that potentially could be indirectly impacted by power plant construction. Thus, power plant construction would not have significant indirect impacts on biological resources.

More long-term indirect impacts potentially could occur during facility operations. These include impacts related to noise and light emissions, potential modifications to the drainage discharge from the site, and the effects on vegetation of project air emissions.

Inadequate controls in routing of onsite drainage can lead to uncontrolled discharges. Such uncontrolled discharges can cause erosion and deposition of sediments, damaging vegetation and smothering aquatic communities downstream. Palomar project drainage systems will be designed to meet current engineering standards and applicable regulatory (e.g., stormwater discharge and erosion control) requirements, which would be expected to adequately protect areas downstream of the discharge point. As a result, these impacts are not considered to be significant.

Long-term operations phase facility lighting and noise emissions potentially could affect wildlife species. Over-illumination of adjacent habitats can result in avoidance of the areas by some wildlife and an increased success level by some twilight and nocturnal predators. Likewise high noise levels can result in the avoidance of a nearby habitat area or interfere with breeding activities. With development of the industrial park to the west and south of the Palomar site, combined with the existing industrial area to the east, there will be only limited natural environment remaining in the immediate vicinity. The absence of biological resources inherently limits the potential for long-term project biological impacts. The industrial park project is expected to leave some areas of the site in their natural state. Lighting and noise from the Palomar Energy Project potentially could impact the biological resources of these preserved areas, although the facility will be more than 200 yards away at its closest point.

Impacts on vegetation are discussed in Section 5.2, Air Quality. Because of the planned use of natural gas that contains only trace quantities of sulfur, and the use of NO<sub>x</sub> emission control technologies, no significant impacts to vegetation are expected from project air emissions.

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Cooling tower PM<sub>10</sub> emissions would include dissolved solids evaporated from the cooling water. Total PM<sub>10</sub> emissions from the project are not expected to have significant impacts in terms of the applicable primary ambient air quality standards. The primary air quality standards are established at levels that are protective of human health. Standards that are designed to protect human health are more stringent than standards that would be protective of plant life. Thus, project PM<sub>10</sub> emissions would not be expected to have significant adverse impacts on vegetation.

The specific composition of dissolved solids in the cooling water was reviewed for potential toxicity of individual components to plants. Some of the dissolved solids contained in the cooling water (e.g., sulfate, calcium, and magnesium) are plant nutrients. Emissions of the dissolved solids in project cooling water would be low. When atmospheric dispersion of these solids is considered, deposition levels on vegetation near the Palomar facility would have insignificant impacts on vegetation.

#### **5.3.3 Mitigation Measures**

Mitigation of impacts to the overall ERTC industrial park site, including Planning Area 1 (the Palomar site), will be addressed in the CEQA and permitting processes conducted by the City of Escondido for the ERTC project. Habitat replacement approaches to compensate for lost habitat are expected to be a major element of such a mitigation program. However, the biological impacts attributable to construction and operation of the Palomar project would be minimal. Virtually all the impacts will have occurred as a result of the ERTC project and been mitigated before Palomar project construction begins, as discussed in Section 5.3.3.

There will be no impacts to commercially and/or recreationally valuable fish and wildlife species with the implementation of the Palomar project.

#### **5.3.4 Significant Unavoidable Adverse Impacts**

Palomar project construction and operations activities will not have significant unavoidable adverse impacts on biological resources.

#### **5.3.5 Cumulative Impacts**

The projects included in the cumulative analysis include the CalPeak power plant (<50 MW), the RAMCO power plant (<50 MW), and the overall ERTC industrial park project within which the Palomar site is located. The CalPeak project is under construction on a largely disturbed lands approved adjacent to the northern boundary of the Palomar site. The RAMCO project is under construction on a disturbed urban industrial site about 0.5 mile northwest of the Palomar site. Thus, there will be no cumulative biological resource impacts from the power plant projects. Cumulative biological impacts of the Palomar project and the overall ERTC industrial park project are discussed in the following paragraphs.

**Overall ERTC Industrial Park Construction**

Construction of the overall industrial park project (Planning Areas 1-8, within which the Palomar site is Planning Area 1) will disturb the existing biological resources of most of the 186-acre industrial park site. Impacted native vegetation communities will include 45.1 acres of coastal sage scrub and 47.6 acres of annual grasslands. Both the coastal sage scrub and the annual grasslands are considered special status habitats in San Diego County, and ERTC impacts would be considered cumulatively significant. A combined total of approximately seven acres of native vegetation communities will be preserved in their natural state within the SPA. This includes 3.8 acres of coastal sage scrub, 1.8 acres of oak woodland, and 1.5 acres of annual grasslands. The preserved acreage is in a contiguous area in the western portion of the 186-acre industrial park site, outside Planning Area 1 (the Palomar site).

There are two wildlife species of concern on the ERTC site. Coastal sage scrub is the habitat of the California Gnatcatcher. The majority of the historical habitat occupied by this species in southern California has been converted for agriculture or urban development. As a result, the gnatcatcher has been listed as a threatened species under the federal Endangered Species Act, is considered a Species of Special Concern by the California Department of Fish and Game (CDFG), and is a covered species under the draft Escondido Subarea Plan. Surveys conducted in 2001 identified four nesting pairs and a number of juveniles on the ERTC, two gnatcatcher pairs were found in or near Planning Area 1, the other two pairs and the juveniles were found elsewhere on the industrial park site.

A small population of Western Spadefoot Toads were found in Planning Area 1 of the ERTC site and would be directly impacted by the ERTC project. This amphibian has greatly declined in San Diego County due to the extensive agricultural and urban development. The Western Spadefoot Toad is considered a Species of Special Concern by the CDFG and is a covered species under the draft Escondido Subarea Plan. While the losses of Western Spadefoot populations do not appear to be critical, they remain a significant concern perhaps best addressed by conservation and restoration of other population areas and suitable breeding habitat within protected regional preserves. Western Spadefoot impacts should be mitigated through creation, or restoration of an equivalent acreage of habitat that supports seasonal ponds in preserve lands within the local FPAs.

The recommended mitigation for the impacts on coastal sage scrub, annual grasslands, and coast live oak woodland habitats is to provide replacement acreage. Coastal sage scrub habitat replacement also is the recommended mitigation for impacts to the California gnatcatcher. Replacement acreage should be provided in ratios established in the City of Escondido's draft Multiple Habitat Conservation Plan. Mitigation under the Plan's standards would require a 2:1 replacement ratio for gnatcatcher-occupied sage scrub acreage, and conservation of an equal number of gnatcatchers within a preserve system. This acquisition should occur within the Escondido Subarea Plan Focused Planning Areas (FPAs), or in occupied gnatcatcher habitat that has been identified by the MHCP within the unincorporated San Diego County core area, or in other areas approved by the City of Escondido, state, and

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federal jurisdictional agencies. Mitigation ratios for the other impacted habitats are 0.5:1 for grasslands, and 3:1 for oak woodlands.

Construction of the ERTC industrial park will required review by the U.S. Fish and Wildlife Service, and the California Department of Fish and Game under the federal and state endangered species acts. This review will be conducted concurrently with the City-led CEQA process. The applicable plans and policies of the wildlife agencies are expected to require mitigation measures related to rough grading of the industrial park. This is expected to include monitoring of construction, training of construction workers, and procurement and conservation of mitigation lands in accordance with replacement ratios provided in draft habitat conservation plans.

#### Planning Area 1 Construction Phase Earthwork

The rough grading of the 20-acre Planning Area 1 (PA1) along with the water pipeline would cause the loss of vegetation communities as shown in Table 5.3-1 below. The remainder of the site is disturbed or agricultural land. The table also shows the recommended replacement acreages to mitigate the native vegetation community impacts, based on the ratios and approach described immediately above for the overall ERTC industrial park. As mentioned above, earthwork in Planning Area 1 would affect the habitat of one nesting pair of the threatened California Gnatcatcher and a small population of the Western Spadefoot Toad (a CDFG Species of Concern). As also mentioned above, habitat-based mitigation is the recommended mitigation approach for both species.

**Table 5.3-1 Habitat Loss and Mitigation Requirements (Acres)  
Planning Area 1 Rough Grading**

Habitat Type	Acreage Impact			Mitigation
	PA 1	Water Line <sup>1</sup>	Total	
Coastal Sage Scrub	6.9	0.5	7.4	14.8
Annual Grasslands	1.5	1.5	3.0	1.5
Disturbed/Agricultural	11.5	1.8	13.3	0.0
Seasonal Ponds/Drainages	0.1	0.0	0.0	0.0
<b>Total Area</b>	<b>20.0</b>	<b>3.8</b>	<b>23.8</b>	<b>--</b>

<sup>1</sup> Based on a 40-foot wide pipeline construction corridor between PA 1 and Harmony Grove Road.

Planning Area 1 contains approximately 0.1 acre of ephemeral channels and seasonal ponds. The ephemeral channels may constitute federal and State of California jurisdictional wetlands under Sections 401 and 404 of the Clean Water Act and/or Section 1603 of the California Fish

and Game Code. The resources associated with the PA 1 drainage are relatively minimal and not dissimilar from those found in the surrounding landscape. No unique biological functions or resources are supported by this drainage, and as such, impacts to this drainage would not be considered biologically significant.

The mitigation measures required by the wildlife agencies and the City of Escondido, including the habitat replacement, are expected to be applied to PA 1 along with the rest of the ERTC industrial park project site. With application of these measures, no significant cumulative impacts are expected to result from rough grading of PA 1

**5.3.6 LORS Compliance**

Design, construction, and operation of the Palomar Energy Project, including its linear facilities, will be conducted in accordance with all LORS pertinent to biological resources. The applicable LORS are discussed in Section 6.4.3.

**5.3.7 Involved Agencies and Agency Contacts**

Agencies and agency contacts relevant to biological resources for the ERTC industrial park project are provided in Table 5.3-2, since impacts to biological resources at the Palomar site are assumed to have been fully covered under the CEQA review and approval for the industrial park.

**Table 5.3-2 Involved Agencies and Agency Contacts**

<b>Agency</b>	<b>Contact/ Telephone</b>	<b>Permit/Reason for Involvement</b>
U.S. Fish and Wildlife Service 2730 Loker Ave. West Carlsbad, CA 92008	Ms. Kathleen Brubaker (760) 431-9440	ESA compliance
California Department of Fish and Game 4949 Viewridge Avenue San Diego, CA 92123	David Mayer (858) 467-4234	Streambed Alteration Agreement, Special-Status Species Consultation (if needed)
San Diego Regional Water Quality Control Board (RWQCB) 9771 Clairemont Mesa Blvd., Suite A San Diego, CA 92124	(858) 467-3272	Section 401 Water Quality Consultation (if needed)
US Army Corp of Engineers 911 Wilshire Boulevard Los Angeles, CA 90017	Los Angeles District (213) 452-3908	ACOE Section 404 Permit (if needed)

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### 5.3.8 Permits Required and Permit Schedule

As discussed above, impacts to biological resources at the plant site and along a major portion of the water pipeline route are expected to have been fully covered under the permitting process for ERTC industrial park development. Pipeline impacts outside the industrial park site will have been avoided by staying within city streets. Thus, there should be no need for consultation with or permitting by the US Fish and Wildlife Service, California Department of Fish and Game, or US Army Corps of Engineers for the Palomar Energy Project.

### 5.3.9 References

- California Department of Fish and Game. July 2000. List of State and Federally Listed Endangered and Threatened Animals of California.
- City of Escondido. 1999. Draft Multiple Habitat Conservation Plan.
- Collins, Joseph. 1990. Standard Common and Current Scientific Names for North American Amphibians and Reptiles (3rd ed.). The Society for the Study of Amphibians and Reptiles. Herpetological Circular No. 19.
- Dudek & Associates. June 1998. Draft Existing Conditions Biological Resources Report for the Quail Hills Industrial Specific Plan Area Escondido, California.
- Holland, Robert. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. Non-game Heritage Program. California Department of Fish and Game.
- Jennings, Mark. and Marc P. Hayes. 1994. Amphibian and Reptile Species of Special Concern in California. Final Report submitted to the California Department of Fish and Game, Inland Fisheries Division. Contract Number 8023.
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