2.4 Biological Resources

This section discusses potential impacts to sensitive biological resources resulting from the implementation of the proposed project. The analysis is based on the review of existing resources, technical data, and applicable laws, regulations, and guidelines.

2.4.1 Existing Conditions

The landscape of the County of San Diego (County) is diverse and includes broad, flat valleys; deep canyons; perennially flowing rivers; intermittent and ephemeral drainages; moderately and steeply sloped terrain; steep coastal bluffs; flat mesas; rolling foothills; and a series of coastal bays, inlets, and lagoons (County of San Diego 1997). Due to the diverse topography, range of micro-climates, soils, and other natural features, a variety of habitats and species occur within the County, many of which are unique to the region. The development of urban, rural, and agricultural areas, as well as invasive plants and species, have posed a threat to the conservation of the County's native habitat and endemic species.

Projects implemented under the amended Zoning Ordinance could occur in areas throughout the County (Figure 1-2) that support or have the potential to support the development of Meteorological Testing (MET) facilities, wind turbine systems, and associated facilities. These systems can occur within both developed and natural areas.

Vegetation Communities

The multiple vegetation types within the project area have been combined into 10 vegetation community categories, which are described below. The extent and location of the vegetation communities present within the project are shown in Figure 2.4-1.

Scrub and Chaparral

Scrub and chaparral is one of the most widespread vegetation communities in the unincorporated County. This vegetation community category comprises 42 individual vegetation communities, including coastal scrub, sonoran desert scrub, southern mixed chaparral, northern mixed chaparral, coastal sage-chaparral scrub, chamise chaparral, Diegan coastal, and Riversidian sage scrub. General descriptions of the chaparral and scrub communities are provided below.

Scrub

Diegan coastal sage scrub is the dominant type of scrub in the County and is habitat for the sensitive California gnatcatcher (*Polioptila californica*). There are several different types of Diegan coastal

sage scrub throughout the County, including Diegan coastal scrub, Diegan coastal scrub (coastal form), Diegan coastal scrub (inland form), and Diegan coastal scrub (Baccharis-dominated).

Coastal sage scrub consists predominantly of low-growing, aromatic, and generally soft-leaved shrubs. Diegan coastal sage scrub is a native plant community characterized by soft, low, aromatic, shrubs and subshrubs characteristically dominated by drought-deciduous species. This community typically occurs on sites with low moisture availability, such as dry slopes and clay-rich soils that are slow to release stored water. The representative species in this habitat type are California sage (*Artemisia californica*), flat-topped buckwheat (*Eriogonum fasciculatum*), black sage (*Salvia mellifera*), saw-tooth goldenbush (*Hazardia squarrosa*), and laurel sumac (*Malosma laurina*).

Riversidean sage scrub has similar species as Diegan coastal sage scrub, but it occurs more inland in the northern part of the County and on steep slopes, severely drained soils, or clays that slowly release stored soils moisture. Representative species include several of the shrub species listed above, fourwing saltbrush (*Atriplex canescens*), brittlebrush (*Encelia farinosa*), deerweed (*Lotus scoparius*), and Lord's candle (*Yucca whipplei* ssp. *parishii*) (County of San Diego 2010a).

The California gnatcatcher, California towhee (*Melozone crissalis*), white crowned sparrow (*Zonotrichia leucophrys*), cottontail (*Sylvilagus* spp.), and California thrasher (*Toxostoma redivivum*) are representative birds of the coastal sage scrub communities. The orange-throated whiptail (*Aspidoscelis hyperythra*), San Diego horned lizard (*Phrynosoma coronatum*), banded gecko (*Coleonyx variegatus abbotti*), desert cottontail (*Sylvilagus audubonii*), and deer mouse (*Peromyscus maniculatus*) also use coastal sage scrub habitats. Coyotes (*Canis latrans*) are common predators in this community and mule deer (*Odocoileus hemionus*) are occasionally seen (County of San Diego 2010a).

Chaparral

The chaparral type at any one location is determined by the dominant soils, elevation, rainfall, and other conditions. While various forms of chaparral have been lost to agriculture and urbanization, chaparral still occurs throughout the mesas and slopes of the coastal lowlands. Chaparral is generally composed of hard-stemmed shrubs with leathery leaves that avoid desiccation during the dry season. For example, cismontane chaparrals are characterized by large shrub species such as manzanita (*Arctostaphylos* spp.), chamise (*Adenostoma fasciculatum*), scrub oak (*Quercus dumosa* or *Q. berberidifolia*), mountain mahogany (*Cercocarpus betuloides*), and wild lilac (*Ceanothus* spp.). Other types of chaparral included in this classification are southern mixed chaparral, northern mixed chaparral, chamise chaparral, red shank chaparral, montane chaparral, scrub oak chaparral, and maritime chaparral. Chaparral is home to a wide variety of birds. The spotted towhee (*Pipilo maculates*), wrentit (*Chamaea fasciata henshawi*), Bell's sage sparrow (*Amphispiza belli*), and California thrasher are representative birds of the chaparral community. A number of

reptiles also inhabit this community, including the western whiptail (*Cnemidophorus tigris*), granite spiny lizard (*Sceloporus orcutti*), San Diego horned lizard, and Pacific rattlesnake (*Crotalus oreganus helleri*). In rocky, boulder-strewn terrain on the eastern side of the mountains, the barefoot gecko (*Coleonyx switaki*) and chuckwalla (*Sauromalus ater*) live in chaparral. Mammals include a number of species of bats, deer mice, pocket mice (*Chaetodipus fallax*), the desert cottontail, coyote, bobcat (*Lynx rufus*), mule deer, and mountain lion (*Puma concolor*) (Oberbauer et al. 2008).

Woodland

Woodlands throughout the County generally include oak woodland (black oak woodland, coast live oak woodland, and Engelmann oak woodland), walnut woodland, peninsular pinon and juniper woodland, peninsular pinon woodland, peninsular juniper woodland and scrub, elephant tree woodland, and eucalyptus woodland. Oak woodlands occur in a variety of locations where soil conditions are moister than the soils that host coastal sage scrub and chaparral vegetation. In the lowlands, they are mostly confined to stream and canyon bottoms, but in the foothills and mountains they occur in areas with good soil on north- and south-facing slopes. Woodlands create an open canopy and serve as habitat for bird species including oak titmouse (*Baeolophus inornatus transpositus*), mountain chickadee (*Poecile gambeli baileyae*), Nuttall's woodpecker (*Picoides nuttallii*), northern flicker (*Colaptes auratus*), western scrub-jay (*Aphelocoma californica*), and a variety of flycatchers and owls. Since oak woodlands often occur as linear features along drainages, the mammals that inhabit them are often the same ones that occur in the surrounding chaparral habitat, including coyote, bobcat, spotted skunk (*Spilogale gracilis*), striped skunk (*Mephitis mephitis*), and several species of bats make their homes within this plant community. Shrews and long-tailed weasels (*Mustela frenata*) tend to prefer oak woodland areas that provide more moisture.

Grassland, Meadows, Vernal Polls, and Other Herb Communities

Grasslands

Grasslands in San Diego are generally divided into two types: native and non-native. Native grasslands are composed mostly of native perennial grasses and herbs, including several species of bunch grasses (*Nassella* spp.), blue-eyed grass (*Sisyrinchium bellum*), checker-bloom (*Sidalcea malviflora* ssp. *sparsifolia*), and San Diego goldenstar (*Muilla clevelandii*). Non-native grasslands consist of non-native annual grass species that originated in the Mediterranean region and support foxtail chess (*Bromus madritensis* ssp. *rubens*), ripgut grass (*Bromus diandrus*), wild oats (*Avena* spp.), fescues (*Vulpia* spp.), red-stem filaree (*Erodium cicutarium*), mustards (*Brassica* spp.), lupines (*Lupinus* spp.) and goldfields (*Lasthenia* spp.). Due to urbanization and

agricultural activities, non-native annual grasslands have predominately replaced native grasslands and shrub lands, including coastal sage scrub and chaparral.

Meadows

This classification includes montane meadows, alkali meadows and seeps, freshwater seeps, and vernal pools. Naturally occurring meadows exist primarily in the mountains and foothills where they form in areas of fine silty soils with groundwater close to the surface. Foothill valleys, such as Campo Valley, McCain Valley, and the area surrounding Lake Henshaw, support extensive meadows. Laguna Meadow in the Laguna Mountains and the area surrounding Cuyamaca Lake in the Cuyamaca Mountains are examples of montane meadows. Montane meadows are dominated by bunchgrasses (*Agropyron* spp.), sedges (*Carex* spp.), and spikesedges (*Eleocharis* spp.). During spring, they are somewhat boggy and moist, and they remain green long after the herbaceous vegetation of their surroundings has dried. Many of the plants and animals of the deserts rely on water from mountain runoff, and from springs, seeps, meadows, marshes, and other wet areas scattered on the desert floor and the desert slopes of the mountains. Dense growths of vegetation generally surround these wet areas and the temperature is usually cooler than the surrounding arid lands, thus providing wildlife some respite from the dry desert summer heat.

Vernal Pools

Vernal pools are found in grasslands and meadows; they sit above clay or hardpan subsoils. Vernal pools fill during winter and spring rains and dry during the early summer, which has caused unique assemblages of plant and animal life to have evolved with this wetting and drying regime.

Plant and animal species can remain dormant in soils for years until the right conditions are present to support the completion of their life cycles. Fairy shrimp hatch from hardened cysts to protect the animal during the dry season and complete their life cycles within a couple of weeks. Tadpoles and very small crustaceans hatch when the pools are full.

Forests

Coniferous forests generally occur above an elevation of 3,500 feet and extend across the major mountain ranges of the Palomar, Volcan, Hotsprings, Cuyamaca, and Laguna. Conifers generally grow in areas that receive more than 20 inches of precipitation each year, including some snow. Coniferous forests are identified by the presence of one or a number of species of pines including Coulter (*Pinus coulteri*), Jeffrey (*P. jeffreyi*), Pacific ponderosa (*P. ponderosa*), and sugar (*P. lambertiana*). The red-barked incense cedar (*Calocedrus decurrens*) and the Christmas tree-like white fir (*Abies concolor*), commonly mixed with the deciduous California black oak (*Quercus kelloggii*), canyon live oak (*Q. chrysolepis*), and coast live oak (*Q. agrifolia*), also characterize coniferous forests in the County. This habitat is very important for wildlife. Common birds that

inhabit coniferous forests include Steller's jay (*Cyanocitta stelleri*), American robin (*Turdus migratorius*), western bluebird (*Sialia mexicana*), black-headed grosbeak (*Pheucticus melanocephalus*), mountain chickadee, plain titmouse (*Baeolophus* spp.), and a variety of flycatchers. It is also important for mammals, including southern mule deer, bobcat, bat, and rodent species. Reptiles in coniferous forest include ringneck snake (*Diadophis punctatus*), mountain swift lizards, and mountain king snake (*Lampropeltis zonata*). The brightly colored large-blotched salamander (*Ensatina klauberi*) also occurs within this habitat.

Oak forest represents a community that is found near or blends in with other forest vegetation. Oak forests consist of substantial trees growing in a manner that produces a closed canopy of tree cover, and is characterized by coast live oak, California black oak (*Quercus kelloggii*), and canyon live oak. In many locations, these species grow into massive trees that are hundreds of years old. This habitat is often found adjacent to and intermixes with coniferous forest and oak woodland vegetation. The primary locations for oak forest are the northern end of Palomar Mountain, the slopes and canyons on Hot Springs Mountain, and parts of the Cuyamaca and Laguna Mountain ranges. Animal species found in oak forest include acorn woodpeckers (*Melanerpes formicivorus*), western bluebirds, plain titmouse, and mountain chickadees. Western gray squirrels (*Sciurus griseus*) and Merriam's chipmunks (*Tamias merriami*) are also known to inhabit these forests, as well as southern mule deer, bobcats, coyotes, and mountain lions.

Riparian

Riparian vegetation communities include southern coast live oak riparian forest, southern cottonwood-willow riparian forest, southern riparian scrub, southern sycamore-alder riparian woodland, southern willow scrub, desert dry wash woodland, Colorado Desert wash scrub, mule fat scrub, desert sink scrub, Sonoran wash scrub, white alder riparian forest, tamarisk scrub, and southern arroyo willow riparian forest. Riparian vegetation occurs along rivers, streams, and other drainages in the County. Generally willows (*Salix* spp.), cottonwoods (*Populus* spp.), sycamore (*Platanus racemosa*), or mulefat (*Baccharis salicifolia*) provide the structure of the riparian habitats in the unincorporated County. Oaks (*Quercus agrifolia* and *Q. engelmannii*) are also present in some riparian habitats, such as southern coast live oak riparian forest (County of San Diego 2010a).

Riparian vegetation communities are one of the most sensitive habitats in California and one of the most important vegetation communities for wildlife. The federally endangered least Bell's vireo (*Vireo bellii pusillus*) and southern willow flycatcher (*Empidonax traillii extimus*), as well as the more common yellow-breasted chat (*Icteria virens*) and common yellowthroat (*Geothlypis trichas*), are completely dependent on riparian habitats. Other bird species, such as the American goldfinch (*Carduelis tristis*), yellow warbler (*Dendroica petechia*), and long-eared owl (*Asio otus*), also frequent riparian scrubs and woodlands. Small carnivores that inhabit riparian

vegetation include spotted and striped skunks, raccoons (*Procyon lotor*), and bobcats. Riparian vegetation and associated stream courses are critical for a variety of amphibians, including the Pacific tree frog (*Pseudacris regilla*) and the federally endangered arroyo southwestern toad (*Bufo californicus*) that inhabit the water and damp banks of water courses. Silvery legless lizards (*Anniella pulchra pulchra*) live in the leaf litter. During the dry summer months, species from nearby arid terrestrial habitats use the riparian areas for respite from the heat. Riparian vegetation in the desert region includes unusually large mesquite bosque forests in Borrego Valley near the Borrego Sink. Mesquite bosques are dense woodlands of honey mesquite and mesquite trees (*Prosopis glandulosa* var. *torreyana* and *P. pubescens*).

At one time, all of the major riverbeds in the unincorporated County supported extensive areas of riparian forests and woodlands. Examples of riparian vegetation still exist along the major rivers of the County, including the Santa Margarita, San Luis Rey, San Dieguito, San Diego, Sweetwater, and Tijuana Rivers. Riparian vegetation exists along stream and valley bottoms as well as deep canyons in areas where the water table is not far below the soil surface (County of San Diego 2010a).

Bog and Marsh

Marshes are very important for wildlife and have been extensively reduced by channelization, dredging, and development. Most of the marshes in the unincorporated County are freshwater, with alkali marsh in areas where the soil is more alkaline, and saltmarsh directly along the coast. Freshwater marshes are found along rivers and their tributaries, around the edges of water bodies, and also near natural springs and ponded areas within major stream channels. Rushes (*Juncus* spp.), bulrushes (*Scirpus* spp.) and sedges (*Carex* spp. and *Scirpus* spp.) are common, and cattails (*Typha* spp.) are often found in the shallower water near the margins of the freshwater marsh. Arroyo willow (*Salix lasiolepis*), black willow (*S. gooddingii*) and red willow (*S. lasiandra*) are also often found in freshwater marshes. Open water stands in depressions or natural springs, and duckweeds (family: *Limnaceae*) often form floating mats. Plant species that typify alkali marsh are yerba mansa (*Anemopsis californica*), alkali heath (*Frankenia salina*), and pickleweed (*Salicornia* spp.). Mulefat is found around the margins of freshwater or alkali marsh.

Freshwater marshes support a variety of animal species including the common yellowthroat, red-winged and tricolor blackbirds (*Agelaius phoeniceus* and *A. tricolor*), and several species of egrets, rails (*Rallus* spp.), and migratory shore birds.

Dune

Small areas of active, stabilized, and partly stabilized desert dunes occur in the Borrego Valley in the Desert Subregion. Desert dunes include active desert dunes, stabilized and partially stabilized

desert sand fields, and stabilized alkaline dunes. Active desert dunes are barren expanses of actively moving sand. Stabilized and partially stabilized desert sand fields are desert sand accumulations that are not obviously worked into dune landforms. Vegetation varies from scant cover of widely scattered shrubs and herbs to nearly closed shrub canopies.

Wildlife species supported by the dune communities include reptiles such as Colorado Desert fringe-toed lizard (*Uma notate*), western shovel-nose snake (*Chionactis occipitalis annulata*), and Colorado Desert sidewinder (*Crotalus cerastes laterorepens*).

Agriculture

Agriculture is used to define lands that actively support agricultural production. Commercial agricultural operations include orchards, vineyards, dairies, nurseries, chicken ranches, fields, and row crops. Wildlife can be nonexistent within agricultural areas used for commercial row crops, orchards, and vineyards; however, fields and pastures can provide habitat for native small mammals and foraging habitat for raptors.

Developed Areas, Non-Native Vegetation, and Unvegetated

Developed

Developed areas, or urban land, consists of all residential, commercial, and industrial developments, and land covered by non-native vegetation (except grasslands). Most urban types of development provide little habitat for native species, but support several non-native species, such as mourning doves (*Zenaida macroura*), European starlings (*Sturnus vulgaris*), house sparrows (*Passer domesticus*), mice, and rats. Native species that exemplify adaptability to urban development include the northern mockingbird (*Mimus polyglottos*), mourning dove, house finch (*Carpodacus mexicanus*), black phoebe (*Sayornis nigricans*), opossum (*Didelphis virginiana*), and striped skunk. During the past decade, American crows (*Corvus brachyrhynchos*) have moved into urban areas of the unincorporated County. Migrating songbirds use large stands of ornamental plantings during spring or fall, and some species, such as white-crowned sparrow and cedar waxwing (*Bombycilla cedrorum*), spend the winter in residential neighborhoods of the coastal lowlands. Disturbed land includes areas in which there is sparse vegetative cover and where there is evidence of soil surface disturbance and compaction from previous human activity and/or the presence of building foundations and debris. Vegetation on disturbed land (if present) has a high predominance of non-native and/or weedy species that are indicators of surface disturbance and soil compaction, such as Russian thistle (*Salsola tragus*), telegraph weed (*Heterotheca grandiflora*), horehound (*Marrubium vulgare*), and sow-thistle (S*onchus oleraceus*) (County of San Diego 2010a).

Unvegetated

Disturbed land includes unvegetated areas or areas in which there is sparse vegetative cover and where there is evidence of surface disturbance and compaction from previous human activity and/or the presence of building foundations and debris. When vegetation occurs on disturbed land, it has a high predominance of non-native and/or weedy species that are indicators of surface disturbance and soil compaction, such as Russian thistle, telegraph weed, horehound, and sow-thistle.

Non-Native Vegetation

Non-native vegetation includes many ornamental plant species such as eucalyptus trees (*Eucalyptus* spp.), which are not native but occur within the County. Eucalyptus trees produce a large amount of leaf and bark litter. The chemical and physical characteristics of this litter limit the ability of other species to grow in the understory, and floristic diversity decreases beneath the canopy of these trees.

Sensitive Biological Resources

Special-status biological resources include declining habitats and species that have been accorded special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, rare, or otherwise of concern. Databases of such resources are maintained by the California Department of Fish and Game (CDFG), U.S. Fish and Wildlife Service (USFWS), and special groups such as the California Native Plant Society (CNPS). Sensitive biological resources are categorized as the following: (1) habitat areas of vegetation communities that are unique, of relatively limited distribution, or of particular values to wildlife; and (2) species that have been given special recognition by federal or state agencies, or are included in regional plans due to limited, declining, or threatened populations.

Federal listing of endangered and threatened wildlife and plants is administered by the USFWS for terrestrial and freshwater species, and by the National Marine Fisheries Service for marine and anadromous species. The USFWS and National Marine Fisheries Service also recognize species of special concern that are candidates for listing. Before a plant or animal species can receive protection under the federal ESA, it must first be placed on the federal list. The program follows a strict legal process to determine whether to list a species. An endangered species is defined as one that is in danger of extinction throughout all or a significant portion of its range. A threatened species is one that is likely to become endangered in the foreseeable future. The USFWS also maintains a list of plant and animal native to the United States that are not species of special concern for possible addition to the federal list but that are not currently regulated.

The CDFG implements the CESA, which is a program that is similar in structure to, but different in detail from, the USFWS program implementing the federal ESA. The CDFG maintains a list of designated endangered, threatened, and rare plant and animal species. Listed species are either designated under the Native Plant Protection Act or designated by the Fish and Game Commission. In addition to recognizing three levels of endangerment, the CDFG affords interim protection to candidate species while they are being reviewed by the Fish and Game Commission. The CDFG also maintains a list of "Species of Special Concern," most of which are species whose breeding populations in California may face extirpation. Although these species have no legal status, the CDFG recommends consideration of them during analysis of the impacts of a proposed project to protect declining populations and avoid the need to list them as endangered in the future. The CESA also protects plant species, which the federal ESA does not.

Under the provision of Section 15380(d) of the California Environmental Quality Act (CEQA) Guidelines, the lead agency, in making a determination of significance, must treat rare non-listed plant and animal species as equivalent to listed species if such species satisfy the minimum biological criteria for listing. In general, the CDFG considers species on Lists 1A, 1B, or 2 of the *Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2001) as qualifying for consideration under this CEQA provision. Species on the CNPS List 3 or 4 may, but generally do not, qualify for protection under this provision. Species on CNPS List 1A are "presumed extinct in California." Species on List 1B are "rare or endangered in California and elsewhere." Species on Lists 3 and 4 are those that require more information to determine status and plants of limited distribution, respectively.

The primary information source on the distribution of special-status species in California is the California Natural Diversity Database (CNDDB) inventory, which is maintained by the Wildlife and Habitat Data Analysis Branch of the CDFG. The CNDDB inventory provides the most comprehensive statewide information on the location and distribution of special-status species and sensitive natural communities. Occurrence data are obtained from a variety of scientific, academic, and professional organizations; private consulting firms; and knowledgeable individuals; and is entered into the inventory as expeditiously as possible. The occurrence of a species of concern in a particular region is an indication that an additional population may occur at another location if that habitat conditions are suitable. However, the absence of an occurrence in a particular location does not necessarily mean that special-status species are absent from the area in question, only that no data has been entered into the CNDDB inventory.

Sensitive Vegetation Communities

Of the vegetation communities list above, the following are considered sensitive by CDFG: scrub and chaparral; woodland; grassland, meadow, vernal pool, and other herb communities; forest; riparian and bottomland; bog and marsh; and dune.

Special-Status Plant and Wildlife Species

Plant or wildlife species are considered sensitive if they are: (1) on List A, B, C, or D of the County of San Diego Sensitive Plant List (County of San Diego 2010b); (2) covered or listed as a narrow endemic under the South County Multiple Species Conservation Program (MSCP) Subarea Plan (County of San Diego 1997); (3) listed by state or federal agencies as threatened or endangered or are proposed for listing; (4) on List 1B (considered endangered throughout its range) or List 2 (considered endangered in California but more common elsewhere) of the CNPS *Inventory of Rare and Endangered Vascular Plants of California* (2001); or (5) considered rare, endangered, or threatened by the CNDDB (CDFG 2011a–d) or local conservation organization or specialists.

Raptors (birds of prey) and active raptor nests are protected by the California Fish and Game Code, Section 3503.5, which states that it is "unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird" unless authorized.

Special-Status Plant Species

The species-status plant species that occur, or have the potential to occur, in the project area based on a search of the CNDDB (CDFG 2009) are provided in Table C-1 in Appendix C of the County's General Plan Update EIR. Table C-1 is a list of special status plant species with a potential to occur within San Diego County and is available online at http://www.sdcounty.ca.gov/pds/gpupdate/docs/BOS_Aug2011/EIR/Appn_C_Bio.pdf. There are 184 special-status plant species identified. Fourteen are federally endangered, six are federally threatened, and two are candidates for federal listing. Twenty-one of the special-status species are recognized under CESA as State endangered, two are listed as State threatened under CESA, and six are listed under the California Native Plant Protection Act as rare.

Special-status plant species are species that have been given special recognition by federal, state, or local conservation agencies and organizations due to limited, declining, or threatened population sizes. Species include those listed by the state and federal government as threatened or endangered; those proposed for state and/or federal listing or candidates; and those found on Lists 1A, 1B, 2, or 3 of the CNPS *Inventory of Rare and Endangered Plants of California* (2001) or CNPS online inventory (http://cnps.web.aplus.net/cgi-bin/inv/inventory.cgi).

As of 2008, there were approximately 267 special-status plant species documented throughout the County, 192 of which occur in upland habitats outside of natural stream channels, creeks, wetlands, and other special aquatic sites. The remaining 75 species typically occur in natural riparian and/or aquatic areas (vernal pools, riparian forests, riparian scrub, riparian woodland,

playas, meadows, marshes, swamps, bogs, and fens). Listed plant species have the potential to occur in project areas where suitable habitat and soils are present. Of the 267 documented special-status species, 33 are state- and/or federally listed endangered or threatened. Of those 33 species, 11 (including Gambel's watercress (*Rorippa gambellii*), Borrego bedstraw (*Galium angustifolium* ssp. *borregoense*), and Dehesa nolina (*Nolina interrata*)) are limited to higher elevations than occur within the incorporated municipal boundaries, or to desert habitats well outside the incorporated boundaries in the County. The remaining 22 listed plant species include wetland- or riparian-associated species and upland species (EDAW Inc. 2008).

Within the County, the USFWS has designated various areas as critical habitat for four listed plant species: Otay tarplant (*Deinandra conjugens*), thread-leaved Brodiaea (*Brodiaea filifolia*), spreading Navarretia (*Navarretia fossalis*), and willowy monardella (*Monardella viminea*). Pursuant to Section 3 of the federal ESA, critical habitat identifies geographic areas that contain features essential for the conservation of a threatened or endangered species and may require special management considerations or protection. In addition, critical habitat includes specific areas outside the geographic area occupied by the species at the time it is listed, if it is determined that such areas are essential for the conservation of the species.

Special-Status Wildlife Species

Special-status wildlife species that occur, or have the potential to occur, in the project area based on a search of the CNDDB (CDFG 2009) are provided in Table C-2 in Appendix C of the County's General Plan Update EIR. Table C-2 is a list of special status wildlife species with a potential to occur within San Diego County and is available online at http://www.sdcounty.ca.gov/pds/gpupdate/docs/BOS_Aug2011/EIR/Appn_C_Bio.pdf. Of the potentially occurring wildlife species within the project area nineteen are federally endangered, three are federally threatened, and one is a candidate for federal listing and one has been delisted. Eleven of the special-status species are recognized under CESA as State-endangered, five are listed as State-threatened under CESA, and 51 are listed as California Species of Concern. Special-status wildlife species are those listed as threatened or endangered, proposed for listing, or candidates for listing by the USFWS and CDFG, and that are considered sensitive by the CDFG.

In total, the County is home to approximately 114 special-status wildlife species, consisting of 21 invertebrates, 6 fish, 6 amphibians, 16 reptiles, 34 birds, and 31 mammals. Of the 114 special-status species, only 27 are state- and/or federally listed endangered or threatened. Of the 27 listed species, 7 (including desert pupfish (*Cyprinodon macularius*), mountain yellow-legged frog (*Rana muscosa*), and peninsular bighorn sheep (*Ovis canadensis* ssp. *nelsoni*)) are limited to areas well outside the incorporated municipal boundaries in the County. The remaining 20 wildlife species include aquatic species, wetland- or riparian-associated species, and upland species (EDAW Inc. 2008). USFWS has afforded critical habitat to eight of the species,

including least Bell's vireo, southwestern willow flycatcher, quino checkerspot butterfly (*Euphydryas editha quino*), arroyo toad, coastal California gnatcatcher, San Diego fairy shrimp (*Branchinecta sandiegonensis*), Riverside fairy shrimp (*Streptocephalus woottoni*), and tidewater goby (*Eucyclogobius newberryi*).

Species of Concern Related to Wind Turbine Projects

The following species are located within the project area and are of particular concern in relation to the development of wind turbines.

Golden Eagle

The golden eagle (*Aquila chrysaetos*) is a CDFG Watch List species and state Fully Protected Species, USFWS Birds of Conservation Concern species, and Bureau of Land Management (BLM) sensitive species, and is protected under the federal Bald and Golden Eagle Protection Act. It is a yearlong, diurnally active species that is a permanent resident and migrant throughout California. The species is sparsely distributed throughout California and it is found in Southern California occupying primarily mountain, foothill, and desert habitats. Golden eagles are more common in northeast California and the Coast Ranges than in Southern California and the deserts. Foraging habitat for this species is very broad and in California includes open habitats with scrub, grasslands, desert communities, and agricultural areas. This species nests on cliffs within canyons and escarpments and in large trees (generally occurring in open habitats) and is primarily restricted to rugged, mountainous country (Garrett and Dunn 1981; Johnsgard 1990). Most nests are located on cliffs or trees near forest edges or in small stands near open fields (Kochert et al. 2002). Nest locations tend to be more closely associated with topographic heterogeneity than with a particular vegetation type (Call 1978).

Nest building can occur almost any time during the year, but breeding typically begins in January with nest building and egg laying occurring from February to March (WRI 2010). Pairs may build more than one nest and attend to them prior to laying eggs (Kochert et al. 2002). Each pair can have up to 10 nests, but only 2 to 3 are generally used in rotation from one year to the next. Some pairs use the same nest each year, while others use alternate nests year after year, and still others apparently nest only every other year. Succeeding generations of eagles may even use the same nest (Terres 1980). The hatching and feeding of the nestlings takes place from April through June. After fledging, the adult eagles continue to feed the young birds until late November (WRI 2010). As a result of the long breeding cycle, some pairs breed every other year even when food is abundant (WRI 2010). Other environmental conditions may also affect the breeding of eagles, including drought conditions that may affect the prey populations. Currently, this region has been undergoing a prolonged drought, which has resulted in a reduced population size of jackrabbits, a primary prey source for golden eagles in this region (WRI 2010, 2011). As

a correlate to the lower prey population size, WRI has confirmed unusually low reproductive levels of golden eagles in other regions of Southern California (WRI 2010). Suitable foraging habitat for the golden eagle exists throughout the project area. Typically, denser forms of chaparral habitat are not suitable for foraging of golden eagle.

Peninsular Bighorn Sheep

The peninsular bighorn sheep (*Ovis canadensis nelsoni*) is a federally endangered and California state-threatened and Fully Protected Species. It is found in the Peninsular Ranges from the San Jacinto and Santa Rosa Ranges south into Mexico. Its habitat consists of alpine dwarf-shrub, low sage, sagebrush, bitterbrush, pinyon-juniper, palm oasis, desert riparian, desert succulent shrub, desert scrub, subalpine conifer, perennial grassland, montane chaparral, and montane riparian habitat. Peninsular bighorn sheep feed in open habitat while remaining near steep, rugged terrain that they can access for protection, lambing, and bedding areas. Their range also requires adequate water sources linking these habitat areas (CDFG 2008a).

In 2001, USFWS designated 844,897 acres of critical habitat for the Peninsular bighorn sheep in San Diego, Riverside, and Imperial Counties, California. The designation was for the distinct population segment, the Peninsular bighorn sheep, of the desert bighorn sheep. In 2009, the critical habitat was revised to include approximately 376,938 acres. This revised designation of critical habitat for Peninsular bighorn sheep reduces the 2001 designation by approximately 467,959 acres. The revised critical habitat is located in Riverside, San Diego, and Imperial Counties.

There are eight permanently occupied subpopulations of Peninsular bighorn sheep from Carrizo Gorge and portions of the In-Ko-Pah Mountains in San Diego and Imperial Counties to the San Jacinto Mountains in Riverside County (USFWS 2009).

Swainson's Hawk

Swainson's hawk (*Buteo swainsoni*) is a state-listed threatened species and USFWS Bird of Conservation Concern. It is considered a neotropical migrant (bird that winters south of the United States).

Peregrine Falcon

The Peregrine Falcon has one of the most global distributions of any bird of prey. This falcon is found on every continent except Antarctica, and lives in a wide variety of habitats from tropics, deserts, and maritime to the tundra, and from sea level to 12,000 feet. Peregrines are highly migratory in the northern part of their range. Peregrines may use a variety of hunting techniques, but typically prey is captured in the air after fast pursuit or a rapid dive to catch the prey. Peregrine Falcons frequently nest near water on ledges of rocky cliffs or buildings, but

occasionally will use abandoned stick nests of other species. They do not build nests, but scrape a small depression out of the soil.

Long-Eared Owl

The long-eared owl is a CDFG California Species of Special Concern. It is found in North America, Europe, Asia, and northern Africa between elevations from near sea level to over 2,000 meters (6,562 feet) above mean sea level (amsl) (Zeiner et al. 1990). In North America, this species breeds from British Columbia east across Canada and the United States and south to Southern California, southern Arizona, and northern Mexico. It also winters within most of its breeding range, except in the northernmost areas. The long-eared owl's wintering range extends from southern Canada and northern New England to the Gulf states and to the Jalisco, Michoacan, Guerrero, and Oaxaca states in Mexico (Marks et al. 1994).

The species is an uncommon yearlong resident throughout most of the state, with the exception of the Central Valley and Southern California desert regions, where it is generally a winter visitor (Zeiner et al. 1990). Along the coastline of Southern California, the long-eared owl may be a resident breeder (Marks et al. 1994; Bloom 1994) or a rare winter visitor (Garrett and Dunn 1981).

The long-eared owl primarily uses riparian habitat for roosting and nesting, but it can also use live oak thickets and other dense stands of trees (Zeiner et al. 1990). It appears to be more associated with forest-edge habitat than with open habitat or forest habitat (Holt 1997). The species usually does not hunt in the woodlands where it nests, but in open areas such as fields, rangelands, and clearings. Suitable foraging habitat is located throughout the project area and includes emergent wetland as well as agriculture, field/pasture, non-native grassland, and disturbed habitat land cover; suitable roosting habitat includes coast live oak woodland, southern riparian woodland, southern willow scrub, and southern willow scrub/mulefat scrub.

Burrowing Owl

The burrowing owl (*Athene cunicularia*) is a CDFG California Species of Special Concern, USFWS Birds of Conservation Concern species, and BLM sensitive species. It occurs throughout North and Central America west of the eastern edge of the Great Plains south to Panama (County of Riverside 2008). The winter range is much the same as the breeding range, except that most western burrowing owls apparently vacate the northern areas of the Great Plains and the Great Basin (County of Riverside 2008) in winter. The majority of western burrowing owls that breed in Canada and the northern United States are believed to migrate south during September and October and north during March and April, and into the first week of May. These individuals winter within the breeding habitat of more southern populations. Thus, winter

observations may include both the migratory individuals as well as the resident population (County of Riverside 2008). The western burrowing owls in northern California are believed to migrate (Coulombe 1971).

In California, western burrowing owls are yearlong residents of flat, open, dry grassland and desert habitats at lower elevations (Bates 2006). They can inhabit annual and perennial grasslands and scrublands characterized by low-growing vegetation. They may be found in areas that include trees and shrubs if the cover is less than 30% (Bates 2006); however, they prefer treeless grasslands. Although western burrowing owls prefer large, contiguous areas of treeless grasslands, they have also been known to occupy fallow agriculture fields, golf courses, cemeteries, road allowances, airports, vacant lots in residential areas and university campuses, and fairgrounds when nest burrows are present (Bates 2006; County of Riverside 2008). They typically require burrows made by fossorial mammals, such as California ground squirrels.

Tricolored Blackbird

The tricolored blackbird (*Agelaius tricolor*) is a USFWS Birds of Conservation Concern species and CDFG California Species of Special Concern with regard to its nesting colony status. It is found throughout the Central Valley of California and the coastal areas from Sonoma County south to San Diego County (CDFG 2008a). Locally, it breeds in southern and western San Diego County.

The tricolored blackbird forages and roosts in large flocks and breeds in large colonies. The tricolored blackbird forms the largest colonies of any North American passerine bird (Beedy and Hamilton 1999). These birds prefer to breed in freshwater marshes with dense growths of emergent vegetation dominated by cattails or bulrushes (*Schoenoplectus* spp.), but have also established colonies in willows, blackberries (*Rubus* spp.), thistles (*Cirsium* and *Centaurea* spp.), and nettles (*Urtica* sp.). More recently, the breeding habitat has included diverse upland and agricultural areas. Breeding individuals forage away from the nest sites, often well out of sight of the colony. Most individuals forage within 3 miles of colony sites but may travel up to 8 miles one way (Beedy and Hamilton 1999).

Northern Harrier

The northern harrier (*Circus cyaneus*) is a CDFG Species of Special Concern. Also known as the "marsh hawk" for its affinity for marshes and open grassland and prairie, this species has a wide geographical range throughout much of the Holarctic (northern continents). The northern harrier is common along the west coast in mountain and desert regions. Northern harriers winter throughout much of Canada, the United States, and the Caribbean islands (Macwhirter and Bildstein 1996).

This species occurs throughout California from sea level to 3,000 meters (10,000 feet) amsl as a widespread winter migrant (CDFG 2008b; Zeiner et al. 1990). The northern harrier is also a permanent resident in coastal areas, the northeastern plateau, the Central Valley, and the Sierra Nevada, where its elevational range as a breeder reaches 1,700 meters (5,700 feet) (Zeiner et al. 1990). Breeding populations are also known from around San Francisco Bay and in the Mono Lake area (Gaines 1977; CDFG 2008b). Most of the breeding population in California occurs in ungrazed parts of the state and in federal wildlife refuges (CDFG 2008b).

Northern harriers use a wide variety of open habitats in California, including deserts, coastal sand dunes, pasturelands, croplands, dry plains, grasslands, estuaries, flood plains, and marshes (Macwhirter and Bildstein 1996). Nesting areas are associated with marshes, pastures, grasslands, prairies, croplands, desert shrub-steppe, and riparian woodland (Macwhirter and Bildstein 1996). Winter habitats similarly include a variety of open habitats dominated by herbaceous cover.

California Horned Lark

The California horned lark (*Eremophila alpestris actia*) is a CDFG Watch List species. The California horned lark is a permanent resident found throughout much of the southern half of California. This species breeds and resides in the coastal region of California from Sonoma County southeast to the U.S.–Mexico border, including most of the San Joaquin Valley, and east to the foothills of the Sierra Nevada (Grinnell and Miller 1944; Beason 1995). It is found from grasslands along the coast and deserts near sea level to alpine dwarf-shrub habitat above tree line. This species prefers open habitats, grassland, rangeland, shortgrass prairie, montane meadows, coastal plains, and fallow grain fields, and nests on the ground in a hollow scrape. Within the proposed project area, suitable nesting and foraging habitat includes big sagebrush scrub (sparse), non-native grassland, and agriculture and field/pasture.

Jurisdictional Wetlands and Waterways

All wetland areas, wetland buffer areas, and non-wetland waters of the United States are considered sensitive biological resources. Disturbance to wetlands is regulated by several agencies, each of which has very specific definitions and considerable overlap. In general, wetlands and non-wetland waters are under the jurisdiction of the U.S. Army Corps of Engineers (ACOE). Streambeds and associated vegetation are under the jurisdiction of the CDFG. Waters of the state and waters of the United States are under the jurisdiction of the RWQCB, and wetlands and wetland buffer areas are under the jurisdiction of the County's RPO.

Jurisdictional wetlands and waterways occur throughout the project area. Formal jurisdictional delineations would be required to determine the extent of jurisdictional areas. However, the

following vegetation communities within the project area would likely fall under one or all of the jurisdictions listed above: vernal pool, riparian and bottomland, and bog and marsh.

Wildlife Movement and Habitat Connectivity

There are several elements that help to define wildlife movement and how wildlife move spatially through an area. Wildlife corridors are linear landscape features that connect large patches of natural open space and provide avenues for animals to migrate between these natural areas. Wildlife corridors contribute to population viability by assuring continual exchange of genes between populations, providing access to adjacent habitat areas for foraging and mating, and providing routes for recolonization of habitat after local extirpation or ecological catastrophes (e.g., fires).

Habitat linkages are small patches that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation. Habitat linkages provide a potential route for gene flow and long-term dispersal of plants and animals and may also serve as primary habitat for smaller animals, such as reptiles and amphibians. Habitat linkages may be continuous habitat or discrete habitat islands that function as stepping stones for dispersal.

Native wildlife nursery sites refer to areas in which members of the same species collectively breed and rear offspring in substantial numbers.

To function effectively, a wildlife corridor must link two or more patches of habitat for which connectivity is desired, and it must be suitable for the focal target species to achieve the desired demographic and genetic exchange between populations. In general, the County supports a mixture of highly urbanized development, relatively natural lands, and intact natural landscapes fringed with encroaching development. High-mobility (e.g., coyote and mule deer) and moderate-mobility (e.g., raccoon and striped skunk) ground-dwelling species are likely to access more urban, populated centers by traversing major roadways, drainage culverts, and streams/creeks. The County supports numerous large, contiguous undeveloped areas that connect natural areas in eastern San Diego County to the Pacific coast and provide movement areas for wildlife.

There are no documented native wildlife nursery sites in the County; however, there is suitable habitat owing to successful wildlife movement throughout the region for common wildlife and resident and migratory avifauna. The South County MSCP Subarea Plan defines core habitat areas (i.e., biological resource core areas) and linkages between them (i.e., habitat linkages).

2.4.2 Regulatory Setting

Biological resources are subject to regulatory oversight at three levels: federal, state, and local (County of San Diego 2010b).

Federal Regulations

Federal Endangered Species Act

The federal Endangered Species Act (ESA) was enacted in 1973 to conserve threatened and endangered species and their ecosystems. Actions that jeopardize endangered or threatened species and the habitats upon which they rely are considered a "take" under the ESA. Take of a federally listed threatened or endangered species is prohibited without a special permit. The ESA allows for take of a threatened or endangered species incidental to development activities once a Habitat Conservation Plan (HCP) has been prepared to the satisfaction of the USFWS and an incidental take permit has been issued. The ESA also allows for the take of threatened or endangered species after consultation with the USFWS has deemed that development of the federal action associated with activities will not jeopardize the continued existence of the species.

"Critical habitat" is a term within the federal ESA designed to guide actions by federal agencies (as opposed to state, local, or other agency actions) and defined as "an area occupied by a species listed as threatened or endangered within which are found physical or geographical features essential to the conservation of the species, or an area not currently occupied by the species which is itself essential to the conservation of the species."

Federal Water Pollution Control Act (Clean Water Act)

The Clean Water Act (CWA) provides wetland regulation at the federal level as well as a structure for regulating discharges into the waters of the United States. The purpose of the CWA is to restore and maintain the chemical, physical, and biological integrity of all waters of the United States. Through this act, the U.S. Environmental Protection Agency (EPA) is given the authority to implement pollution control programs. These include setting wastewater standards for industry and water quality standards for contaminants in surface waters. The discharge of any pollutant from a point source into navigable waters is illegal unless a permit under its provisions is acquired. In California, the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCBs) are responsible for implementing the CWA.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) was enacted in 1918 to protect the native migratory birds or any part, nest, or egg of such bird unless allowed by another regulation adopted in accordance with the MBTA. Enforced in the United States by the USFWS, the MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). Disturbance that causes nest abandonment and/or loss of reproductive

effort (e.g., killing or abandonment of eggs or young) may be considered a "take" and is potentially punishable by fines and/or imprisonment.

Bald and Golden Eagle Protection Act and Draft Eagle Conservation Plan Guidance

The Bald and Golden Eagle Protection Act was enacted in 1940 to prohibit the take, transport, or sale of bald eagles (*Haliaeetus leucocephalus*), their eggs, or any part of an eagle except where expressly allowed by the secretary of the interior. This act was amended in 1962 to extend this protection to the golden eagle.

The Draft Eagle Conservation Plan Guidance (Draft Guidance), dated January 2011, was prepared by the USFWS and is intended to provide a means of compliance with The Bald and Golden Eagle Protection Act by:

(1) Conducting early pre-construction assessments to identify important eagle use areas
(2) Avoiding, minimizing, and/or compensating for potential adverse effects to eagles
(3) Monitoring for impacts to eagles during construction and operation.

The Draft Guidance calls for scientifically rigorous surveys, monitoring, assessment, and research designs proportionate to the risk to eagles. The Draft Guidance describes a process by which wind energy developers can collect and analyze information that could lead to a programmatic permit to authorize unintentional take of eagles at wind energy facilities.

The Draft Guidance provides recommendations for the development of Eagle Conservation Plans (ECPs) to support issuance of eagle programmatic take permits for wind facilities. Programmatic take permits will authorize limited, incidental mortality and disturbance of eagles at wind facilities, provided effective offsetting conservation measures that meet regulatory requirements are carried out. To comply with the permit regulations, conservation measures must avoid and minimize take of eagles to the maximum degree, and, for programmatic permits necessary to authorize ongoing take of eagles, advanced conservation practices must be implemented such that any remaining take is unavoidable. Further, for eagle management populations that cannot sustain additional mortality, any remaining take must be offset through compensatory mitigation such that the net effect on the eagle population is, at a minimum, no change. The Draft Guidance interprets and clarifies the permit requirements in the regulations at 50 Code of Federal Regulations (CFR) 22.26 and 22.27, and does not impose any binding requirements beyond those specified in the regulations.

The USFWS recommends that ECPs be developed in five stages. Each stage builds on the prior stage, such that together the process is a progressive, increasingly intensive look at likely effects of the development and operation of a particular site and configuration on eagles. The Draft Guidance recommends that project proponents employ fairly specific procedures in their site

assessments so the data can be combined with that from other facilities in a formal adaptive management process. This adaptive management process is designed to reduce uncertainty about the effects of wind facilities on eagles. Project proponents are not required to use the recommended procedures, but if different approaches are used, the proponent should coordinate with the USFWS in advance to ensure that proposed approaches will provide comparable data.

The Draft Guidance recommends that at the end of each of the first four stages, project proponents determine which of the following categories the project, as planned, falls into: (1) high risk to eagles, little opportunity to minimize effects; (2) high to moderate risk to eagles, but with an opportunity to minimize effects; (3) minimal risk to eagles; or (4) uncertain.

Projects in category 1 should be moved, significantly redesigned, or abandoned because the project would likely not meet the regulatory requirements for permit issuance. Projects in categories 2, 3, and possibly 4 are candidates for ECPs. USFWS biologists are available to work with project proponents in the development of their ECP. Frequent close coordination from the outset is beneficial to the USFWS and the project proponents, and it will help ensure the ECP meets the needs and requirements of all parties involved.

Draft USFWS Land-Based Wind Energy Guidelines

In response to increasing wind energy development in the United States, USFWS released a set of voluntary, interim guidelines for reducing adverse effects to fish and wildlife resources from wind energy projects for public comment in July 2003. After USFWS reviewed the public comments, the Secretary of the Interior (Secretary) established a Federal Advisory Committee to provide recommendations to revise the guidelines related to land-based wind energy facilities. In March 2007, USFWS announced in the *Federal Register* the establishment of the Wind Turbine Guidelines Advisory Committee (the Committee). The Committee submitted its final Recommended Guidelines (Recommendations) to the Secretary on March 4, 2010. USFWS used the Recommendations to develop its draft Land-Based Wind Energy Guidelines, dated September 2011.

These Recommendations are intended to:

(1) Promote compliance with relevant wildlife laws and regulations

(2) Encourage scientifically rigorous survey, monitoring, assessment, and research designs proportionate to the risk to species of concern

(3) Produce potentially comparable data across the nation

(4) Avoid, minimize, and, if appropriate, compensate for potential adverse effects on species of concern and their habitats

(5) Improve the ability to predict and resolve effects locally, regionally, and nationally.

The Recommendations are founded upon a tiered approach for assessing potential adverse effects to wildlife species of concern and their habitats. The tiered approach is an iterative decision-making process for collecting information in increasing detail; quantifying the possible risks of proposed wind energy projects to wildlife species of concern and habitats; and evaluating those risks to make siting, construction, and operation decisions. Subsequent tiers refine and build on issues raised and efforts undertaken in previous tiers. At each tier, a set of questions is provided to help the developer evaluate the potential risk associated with developing a project at the given location. The tiered approach guides a developer's decision process as to whether or not the selected location is appropriate for wind development. This decision is related to site-specific conditions regarding potential species and habitat effects.

Briefly, the tiers address:

- Tier 1 – Preliminary evaluation or screening of potential sites (landscape-scale screening of possible project sites)
- Tier 2 – Site characterization (broad characterization of one or more potential project sites)
- Tier 3 – Pre-construction monitoring and assessments (site-specific assessments at the proposed project site)
- Tier 4 – Post-construction fatality and habitat studies
- Tier 5 – Post-construction studies to further evaluate direct and indirect effects, and assess how they may be addressed.

The Recommendations are based on best available methods and metrics to help answer the questions posed at each tier. Research on wind energy effects on wildlife species of concern and their habitats is ongoing and new information is made available on a regular basis. Substantial variability can exist among project sites and as such, methods and metrics should be applied with the flexibility to address the varied issues that may occur on a site-by-site basis, while maintaining consistency in the overall tiered process. As research expands and provides new information, these methods and metrics will be updated to reflect current science.

State Regulations

California Endangered Species Act

The California Endangered Species Act (CESA), similar to the federal ESA, contains a process for listing of species and regulating potential impacts to listed species. State threatened and endangered species include both plants and wildlife, but do not include invertebrates. The designation "rare species" applies only to California native plants. State threatened and endangered plant species are regulated largely under the Native Plant Preservation Act in conjunction with the CESA. State threatened and endangered animal species are legally protected against "take." The CESA authorizes the CDFG to enter into a memorandum of agreement for take of listed species to issue an incidental take permit for a state-listed threatened and endangered species only if specific criteria are met.

State Species of Special Concern

Species of special concern is an informal designation used by the CDFG for some declining wildlife species that are not officially listed as endangered, threatened, or rare. This designation does not provide legal protection but signifies that these species are recognized as vulnerable by CDFG.

California Fully Protected Species

Species that are California fully protected include those protected by special legislation for various reasons, such as the white-tailed kite (*Elanus leucurus*).

California Fish and Game Code

The California Fish and Game Code provides protection from take for a variety of species, referred to as Fully Protected Species. Take is defined in Section 86 as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Section 5050 lists protected amphibians and reptiles. Section 3515 prohibits take of fully protected fish species. Eggs and nests of all birds are protected under Section 3503, nesting birds (including raptors and passerines) under Sections 3503.5 and 3513, birds of prey under Section 3503.5, and fully protected birds under Section 3511. Migratory non-game birds are protected under Section 3800. Mammals are protected under Section 4700.

Streambed Alteration Agreements (Section 1602 et seq.)

CDFG has jurisdictional authority over wetland resources associated with rivers, streams, and lakes under California Fish and Game Code, Section 1602. CDFG has the authority to regulate all work under the jurisdiction of California that would substantially divert, obstruct, or change

the natural flow of a river, stream, or lake; substantially change the bed, channel, or bank of a river, stream, or lake; or use material from a streambed.

Natural Community Conservation Planning Act of 1991

The state Natural Community Conservation Planning (NCCP) Act is designed to conserve natural communities at the ecosystem scale while accommodating compatible land use. The CDFG is the principal state agency implementing the NCCP program. NCCP plans developed in accordance with the act provide for comprehensive management and conservation of multiple wildlife species, and they identify and provide for the regional or area-wide protection and perpetuation of natural wildlife diversity while allowing compatible and appropriate development and growth.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act provides for statewide coordination of water quality regulations. The California SWRCB was established as the statewide authority, and nine separate RWQCBs were developed to oversee water quality on a day-to-day basis.

Local Regulations

San Diego Multiple Species Conservation Program

The Multiple Species Conservation Program (MSCP) is a long-term regional conservation plan designed to establish a connected preserve system that ensures the long-term survival of sensitive plant and animal species and protects the native vegetation found throughout the County. The MSCP addresses the impacts of urban growth, natural habitat loss, and species endangerment and is a plan that mitigates for the potential loss of sensitive species and their habitats. The goal of an MSCP is to maintain and enhance biological diversity in the region and maintain viable populations of endangered, threatened, and key sensitive species and their habitats while promoting regional economic viability through streamlining the land use permit process.

In December 1996, the CDFG and the USFWS approved the San Diego MSCP Subregional Plan, a habitat plan that encompasses 582,000 acres and establishes a 172,000-acre preserve system over 12 jurisdictions. Each jurisdiction has its own Subarea Plan and each differs in how it implements the MSCP Plan. The Subarea Plan for the County's jurisdiction, adopted by the Board of Supervisors (BOS) on October 22, 1997, covers 252,132 acres in the southwestern portion of the unincorporated area. This Subarea Plan covers 85 species of plants and animals and 23 vegetation types. The documents used to implement the MSCP include the South County Subarea Plan (adopted October 1997), the Biological Mitigation Ordinance (BMO), the Final MSCP Plan (dated August 1998), and the Implementing Agreement between the County and

wildlife agencies (signed March 1998). The Implementing Agreement, signed on March 17, 1998, between the USFWS, CDFG, and the County is a tool to fulfill the obligations of the MSCP. This 50-year cooperative agreement provides for the conservation of 85 plant and animal "covered species," establishes management conditions, and requires each of the parties to perform certain duties and responsibilities. It also provides for remedies and recourse should any of the parties fail to perform. All discretionary projects within the South County Subarea Plan boundaries are subject to the MSCP and must comply with requirements of the County BMO. The County Subarea Plan is regulated by the BMO, which outlines the specific criteria and requirements for projects within the MSCP boundaries. The MSCP and the BMO provide specific criteria for project design, impact allowances, and mitigation requirements. Ministerial projects are exempt from the BMO.

The protection of sensitive plant and animal species by the MSCP eliminates the need to list the species as endangered under federal ESA and CESA and reduces the costly permit process for private landowners and public agencies. The overall effect of the MSCP is to provide a large, connected preserve system that addresses a number of species at the habitat level, rather than on a species-by-species and area-by-area basis, to create a more effective preserve system, as well as to better protect the rare, threatened, and endangered species.

The County is currently in the process of creating MSCPs for the unincorporated areas of northern and eastern San Diego County (North County MSCP and East County MSCP, respectively). The programs are being modeled after the approved San Diego MSCP. A draft North County MSCP was released for public review on February 19, 2009. Comments received during the public review period are now being used to revise the North County MSCP. A draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS), as well as the revised draft North County Plan, will be released for public review in 2012. The draft Plan covers 63 plant and animal species in a 294,849 acre area in North County stretching from Camp Pendleton and the Riverside County line to the community of Ramona. The East County MSCP is in the preliminary planning stages. Because the North and East County Plans have not been adopted, they have no authority, and projects do not have to comply with the plans.

County of San Diego Code of Regulatory Ordinances Sections 86.501–86.509, Biological Mitigation Ordinance (BMO)

The County's BMO (2004) enables the County to achieve the conservation goals set forth in the Subarea Plan for the MSCP. The BMO sets forth the criteria for avoiding impacts to biological resource core areas and to plant and animal populations within those areas, as well as the mitigation requirements for most projects requiring a discretionary permit.

County of San Diego Code of Regulatory Ordinances Sections 86.601–86.608, Resource Protection Ordinance (RPO)

The County's Resource Protection Ordinance (RPO) was adopted in 1989 and was last amended in August 2011. The RPO places special controls on development that could affect the County's wetlands, wetland buffers, floodplains, steep slopes, sensitive biological habitats, and prehistoric and historic sites. Certain discretionary permit types are subject to the requirement to prepare resource protection studies under the RPO. Such discretionary permits include Tentative Maps, Tentative Parcel Maps, Revised Tentative Maps, Revised Tentative Parcel Maps, Rezones, Major Use Permits, Major Use Permit modifications, Site Plans, and Administrative Permits. The RPO requires that wetlands and their adjacent wetland buffers be protected on sites where these permits are granted. However, it also sets forth certain allowable uses within these areas. In addition, the RPO requires that applicable discretionary projects protect sensitive habitat lands. Sensitive habitat lands include unique vegetation communities and/or the habitat that is either necessary to support a viable population or sensitive species, is critical to the proper functioning of a balanced natural ecosystem, or which serves as a functioning wildlife corridor.

County of San Diego Code of Regulatory Ordinances Sections 86.501–86.509, Habitat Loss Permit (HLP) Ordinance

The HLP Ordinance establishes a process that enables the County to issue "take" permits for the federally listed coastal California gnatcatcher (*Polioptila californica californica*), which is permitted by the federal ESA pursuant to the Special 4(d) Rule. The HLP is required if coastal sage scrub or related habitat will be impacted, regardless of whether or not the site is currently occupied by coastal California gnatcatcher. The HLP Ordinance requires projects to obtain a Habitat Loss Permit prior to the issuance of a Grading Permit, Clearing Permit, or improvement plan if the project will indirectly or directly impact any coastal sage scrub habitats. HLPs are not required for projects within the boundaries of an adopted MSCP since take authorization is conveyed to those projects through compliance with the MSCP plan.

County of San Diego Code of Regulatory Ordinances Sections 67.801–67.814, Watershed Protection, Stormwater Management, and Discharge Control Ordinance

Requirements in the Watershed Protection, Stormwater Management, and Discharge Control Ordinance are intended to (1) prohibit polluted non-stormwater discharges to the stormwater conveyance system and receiving waters, (2) establish requirements to prevent and reduce pollution to water resources, (3) establish requirements for development project site design to reduce stormwater pollution and erosion, (4) establish requirements for the management of stormwater flows from development projects to prevent erosion and to protect and enhance existing water-dependent habitats, (5) establish standards for the use of off-site facilities for

stormwater management to supplement on-site practices at new development sites, and (6) establish notice procedures and standards for adjusting stormwater and non-stormwater management requirements, where necessary.

Special Area Regulations

The provisions of San Diego County Zoning Ordinance Sections 5000 through 5999 are known as the Special Area Regulations. The purpose of these provisions is to set forth specialized regulations that have limited application within the County, but which assure that consideration is provided in those areas of special interest or unusual value. Some Special Area Regulations are for the protection of biological resources, including Sections 5300 through 5307, Sensitive Resource Area Regulations (Designator G); Sections 5950 through 5957, Coastal Resource Protection Area Regulations (Designation R); and/or Sections 5850 through 5856, Vernal Pool Area Regulations (Designator V).

2.4.3 Analysis of Project Effects and Determination as to Significance

The proposed project consists of amendments to the Zoning Ordinance related to wind turbines and temporary Meteorological Testing (MET) facilities. Under the proposed project, large turbines will continue to require approval of a Major Use Permit, while a small wind turbine or MET facility meeting the height designator of the zone in which it is located would be allowed without discretionary review. The following impact analysis below has been separated into "Small Turbine(s)/MET Facilities" and "Large Turbine(s)" to reflect the distinction in the level of review required for the establishment of each use (discretionary vs. non-discretionary).

2.4.3.1 Candidate, Sensitive, or Special-Status Species

Guidelines for the Determination of Significance

For the purpose of this EIR, the County's *Guidelines for Determining Significance: Biological Resources* (2010b) applies to both the direct impact analysis and the cumulative impact analysis. A significant impact would result if:

- The project would have a substantial adverse effect, either directly or through habitat modifications, on a candidate, sensitive, or special-status species listed in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

Analysis

Special-status species are those species that have been given special recognition by federal, state, or local conservation agencies and organizations due to limited, declining, or threatened population sizes. Candidate species are eligible for listing as federal or state threatened or endangered species. The proposed Zoning Ordinance amendment applies to the entire unincorporated County with regards to small turbines and to a significant portion of the unincorporated County with regard to large turbines (see Section 1.2); therefore, it includes sites with candidate, sensitive, or special-status species within the County. The proposed project would allow development of wind turbines and MET facilities that could adversely affect candidate, sensitive, or special-status species.

Small Turbine(s) and MET Facilities

The proposed project would allow small wind turbines or MET facilities without discretionary review if they meet the zoning verification requirements in the amended ordinance. Future small wind turbines or MET facilities may be located in areas that would impact a candidate, sensitive, or special-status species. These future facilities may require ground disturbance that would not be subject to environmental review and, therefore, could affect sensitive species if habitat is present. For purposes of evaluating small wind turbines, a worst-case ground disturbance footprint was developed based on CEQA assumptions described in Section 1.4.2. For a single small wind turbine, the worst-case footprint utilizes a foundation size of approximately 441 square feet and excavation of roughly 61 cubic yards. The proposed project would potentially allow for multiple small turbines or MET facilities on eligible properties. Three small wind turbines would amount to approximately 1,323 square feet of ground disturbance and roughly 183 cubic yards of excavation. Furthermore, the worst-case footprint determines that approximately 7,724 acres of total ground disturbance could potentially result for the entire County based on parcels and land use designations (refer to Section 1.4.2 for further details). Some small wind turbines would be roof-mounted and would not result in any ground disturbance.

In addition to ground disturbance resulting in habitat impacts, wind turbines of any size can potentially result in collisions with sensitive bat species and avian species, sometimes called bird and bat “strikes.” Moreover, migrant birds, including golden eagle, may collide with wind turbines of any size while taking off or landing. Under the zoning verification requirements, small wind turbines would be limited to a height of no more than 80 feet and would have relatively small blades on a vertical or horizontal axis. No trellis-style towers that allow for perching or nesting would be allowed. In addition, these small towers would occur intermittently near existing development. MET facilities are required to be less than 200 feet in height and spaced at least 500 feet from any other MET facility. This type of setting combined with the design of the turbines would not be expected to result in frequent bird and bat strikes. Furthermore, the height of small wind turbines and MET facilities is not tall enough to be within

migratory wildlife flight paths, such as that of the golden eagle. However, migrating and resident eagles (and other raptors) conserve energy by using deflective updrafts or thermals to go long periods without flapping their wings. Because eagles are adapted to use even the smallest and weakest of thermals, they can migrate at elevations low to the ground. They may also fly low to the ground when weather conditions are "poor," or while they are foraging. Therefore, significant impacts to these types of avian species may still occur. To further reduce potential impacts, small wind turbines are prohibited within 4,000 feet of a known golden eagle nest, and they are prohibited on ridgelines or within the airspace of ridgelines. Additionally, setbacks of 300 feet, or five times the turbine height, whichever is greater, are required from known significant roosts of bat species, blue-line watercourses or water bodies mapped on the US Geological Survey topographic maps, mapped wetland vegetation, open space or preserve areas, and known locations of transmission towers or power lines. Small turbines cannot include guy wires for structural support or aboveground power lines. Guy wires and power lines can be additional collision hazards; and power lines can result in electrocutions. Towers that are not roof-mounted must also include at least 10 feet of vegetation clearance around the base combined with placement of gravel to reduce potential habitat for prey species that would attract birds and bats. Moreover, any small turbines proposed within designated Pre-approved Mitigation Area in the MSCP require a discretionary administrative permit, thereby resulting in site-specific environmental review and MSCP findings.

The small amount of ground disturbance and the environmental design considerations included in the zoning verification process would minimize potential impacts to sensitive species. However, removal of small areas of sensitive habitat and infrequent bird or bat strikes would still potentially result in significant impacts to candidate, sensitive, or special-status species (**BIO-1**).

Large Turbine(s)

The proposed project amends certain provisions of the County's Zoning Ordinance related to large turbines. These updates are necessary to address advancements in technology that have obviated many of the current provisions. The proposed amendments related to large wind turbines consist of updated definitions and requirements related to setbacks, noise, height, and locations where large turbines are permissible. All future large turbine projects will be subject to discretionary review and required to obtain a Major Use Permit. As part of the County's discretionary review process all future projects would be evaluated under CEQA and would be required to implement measures to minimize impacts to candidate, sensitive, or special-status species, as necessary. CEQA requires proposed projects to provide detailed information on the potentially significant environmental effects they are likely to have, list ways in which the significant environmental effects would be minimized, and identify alternatives that would reduce or avoid the significant impacts identified for the project.

USFWS's Draft Eagle Conservation Plan Guidance and Land-Based Wind Energy Guidelines, as described in Section 2.4.2, provide guidance for addressing impacts to species and their habitats from the development of wind turbines. These guidelines are compatible with each other and are intended to help guide the process of assessing and mitigating risk to species and their habitat. The actual locations and details of future projects are unknown at this time; therefore, impacts as a result of the development of future large wind turbines cannot be fully analyzed. However, a summary of potential impacts are discussed below.

Ground Disturbance

Temporary impacts to native vegetation communities could potentially result from the construction of the transmission line and poles, overhead and underground collector lines, new and existing roadways, temporary parking area, temporary batch plant, or temporary staging areas. Permanent impacts to native vegetation communities could potentially result from the construction of turbines, support facilities, and access roads. Vegetation management around project facilities is also considered a permanent impact to vegetation communities. Wildlife could potentially be displaced within the construction areas. Site clearing, access roads, transmission lines, and arrays of turbine towers may displace some species or fragment continuous habitat areas into smaller, isolated tracts. Habitat fragmentation is of particular concern when species require large expanses of habitat for activities such as breeding, foraging, and sheltering (USFWS 2011a). Additionally, use of access roads around the construction area has the potential to result in the direct mortality of less mobile wildlife and rare plants.

Avian and Bat Collision Risk

The Pacific Flyway is a known migratory pathway for birds in the western United States. In San Diego County, the Pacific Flyway is generally split into a coastal route and an interior route. The Pacific Flyway is a large, general migration route. The interior route of the Pacific Flyway is centered in the Coachella Valley and the Salton Sea. Birds migrating via the Pacific Flyway may cross over the project area, but these birds likely fly at an elevation above the height of large wind turbines and associated transmission infrastructure. Nevertheless, future large wind turbine projects pose the potential risk of bird and bat collision with resident and migratory species.

USFWS states that "collision risk to individual birds and bats at a particular wind turbine may be the result of complex interactions among species distribution, relative abundance, behavior, weather conditions (e.g., wind, temperature) and site characteristics" (USFWS 2011a). Collision risk for a particular bird or bat species may be low regardless of abundance if its behavior does not place it within the rotor-swept zone. If individuals frequently occupy the rotor-swept zone

but effectively avoid collisions, they are also at low risk of collision with a turbine (e.g., ravens) (USFWS 2011a).

Alternatively, if the behavior of individual bird or bat species frequently places them in the rotor-swept zone, and they do not actively avoid turbine blade strikes, they are at higher risk of collisions with turbines regardless of abundance. For a given species (e.g., red-tailed hawk), increased abundance increases the likelihood that individuals will be killed by turbine strikes, although the risk to individuals will remain about the same (USFWS 2011a). A study by de Lucas et al. (2008) describes certain bird species that have high wing loading for flight (e.g., turkey vultures), which have a resulting lower maneuverability and thus are at a greater risk of collision with objects. The risk to a population increases as the proportion of individuals in the population at risk to collision increases. At some project sites, bat fatalities may be higher than bird fatalities, but the exposure risk of bats is not fully understood (USFWS 2011a).

The golden eagle is of particular concern as it is a CDFG Watch List and Fully Protected Species, as well as a USFWS Birds of Conservation Concern species, and is protected under the Bald and Golden Eagle Protection Act. It is a diurnally active species that is a permanent resident and migrant throughout California. This species could forage over locations within the project area and may nest in coast live oak woodlands or on cliffs. Based on studies of the flight behavior of golden eagles, they are at lower risk than species such as red-tailed hawks because only 15% of their flight behaviors put them in a vulnerable position to turbine collisions (flying at the height of the rotor plane), and they do not spend significant time within close proximity (within 50 meters or 164 feet) to turbines (Thelander et al. 2003). The golden eagle has high maneuverability and therefore may be able to use high-powered flight to avoid collisions with turbines. Despite this, the development of large wind turbines still poses risks to golden eagles, especially during foraging.

Indirect impacts to avian species include reduced nesting and breeding densities and the social ramifications of those reductions; loss or modification of foraging habitat; loss of population vigor and overall population density; increased isolation between habitat patches; loss of habitat refugia; attraction to modified habitats; effects on behavior, physiological disturbance, and habitat unsuitability (USFWS 2011a). It is well documented that eagles can become disturbed and abandon nests if human activity is present (USFWS 2010; WEST, Inc. 2010). While there is no consensus on the recommended buffer zones around nest sites to avoid disturbance of most species, a nest search within at least one mile of large wind turbines and transmission lines and other infrastructure is recommended (USFWS 2011a). Larger nest search areas are needed for eagles, as explained in USFWS's Draft Eagle Conservation Plan Guidance (USFWS 2011b).

Indirect Impacts

The proposed project could also result in indirect impacts to sensitive species due to construction activities. These include impacts to breeding birds from construction noise and lighting, increased drainage, and exposure to additional toxins from runoff from streets and landscaping.

Due to the potential for future large turbine projects to directly and indirectly affect sensitive wildlife, rare plants, and native habitat, the proposed project may result in significant impacts related to candidate, sensitive, or special-status species **(BIO-2).**

2.4.3.2 Riparian Habitat or Sensitive Natural Community

Guidelines for the Determination of Significance

For the purpose of this EIR, the County's *Guidelines for Determining Significance: Biological Resources* (2010b) applies to both the direct impact analysis and the cumulative impact analysis. A significant impact would result if:

- The project would have a substantial adverse effect on riparian habitat or another sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

The guideline listed above is from Appendix G of the CEQA Guidelines and the County's *Guidelines for Determining Significance: Biological Resources* (2010b), and is intended to protect riparian or other sensitive habitats.

Analysis

Riparian vegetation occurs along rivers, streams, and other drainages in the County. Riparian areas connect terrestrial and aquatic habitats and provide linkages between water bodies and upstream vegetation communities. The proposed project would allow development of wind turbines and MET facilities that could adversely affect riparian habitat or another sensitive natural community through ground-disturbing activities.

Small Turbine(s) and MET Facilities

The proposed project would allow small wind turbines or MET facilities without discretionary review if they meet the zoning verification requirements in the amended ordinance. Future small wind turbines or MET facilities may be located in areas that would impact a riparian habitat or sensitive natural community. These future facilities may require ground disturbance that would not be subject to environmental review and, therefore, could adversely affect sensitive vegetation communities. For purposes of evaluating small wind turbines, a worst-case

ground disturbance footprint was developed based on CEQA assumptions described in Section 1.4.2. For a single small wind turbine, the worst-case footprint utilizes a foundation size of approximately 441 square feet and excavation of roughly 61 cubic yards. The proposed project would potentially allow for multiple small turbines or MET facilities on eligible properties. Three small wind turbines would amount to approximately 1,323 square feet of ground disturbance and roughly 183 cubic yards of excavation. Furthermore, the worst-case footprint determines that approximately 7,724 acres of total ground disturbance could potentially result for the entire County based on parcels and land use designations (refer to Section 1.4.2 for further details). Some small wind turbines would be roof-mounted and would not result in any ground disturbance. In addition, small wind turbines must be set back from any blue-line streams or water bodies, from mapped wetland vegetation, and from open space or preserve areas by a distance of 300 feet or five times the turbine height, whichever is greater. This standard will help reduce potential impacts to riparian and sensitive habitats.

The small amount of ground disturbance and the environmental design considerations included in the zoning verification process would minimize potential impacts to riparian habitat or sensitive natural communities. However, removal of small areas of sensitive habitat would still potentially result in significant impacts to riparian habitat or sensitive natural communities (**BIO-3**).

Large Turbine(s)

The proposed project amends certain provisions of the County's Zoning Ordinance related to large turbines. These updates are necessary in order to address advancements in technology that have obviated many of the current provisions. The proposed amendments related to large wind turbines consist of updated definitions and requirements related to setbacks, noise, height, and locations where large turbines are permissible. All future large turbine projects will be subject to discretionary review and required to obtain a Major Use Permit. As part of the County's discretionary review process, all future projects would be evaluated under CEQA and would be required to implement measures to minimize impacts to riparian habitat or another sensitive natural community, as necessary. Pursuant to the County's *Report Format and Content Requirements: Biological Resources* (County of San Diego 2010c), when native or sensitive vegetation communities are present on a project site, a Biological Resources Report is required. The report would assess site-specific conditions, analyze the potential effects of projects and require projects to apply feasible mitigation, as necessary. Additionally, the Major Use Permit is subject to RPO, MSCP, BMO, NCCP, and other local or regional plans, policies, or regulations. The County's RPO, in particular, has provisions for the protection of sensitive habitat lands, including riparian resources. However, as there is ultimately no guarantee on a project-specific level that mitigation measures will reduce impacts to a level below significant, the proposed project may result in significant impacts related to riparian habitat or another sensitive natural community **(BIO-4).**

2.4.3.3 Federally Protected Wetlands

Guidelines for the Determination of Significance

For the purpose of this EIR, the County's *Guidelines for Determining Significance: Biological Resources* (2010b) applies to both the direct impact analysis and the cumulative impact analysis. A significant impact would result if:

- The project would have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

The guideline listed above is from Appendix G of the CEQA Guidelines and the County's *Guidelines for Determining Significance: Biological Resources* (2010b), and is intended to protect federally defined wetlands.

Analysis

Federally protected wetlands are defined in Section 404 of the CWA as areas that are inundated or saturated by surface or groundwater 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. Such wetlands generally include swamps, marshes, bogs, and similar areas. Direct impacts to federally protected wetlands would occur if development under the proposed Zoning Ordinance amendment would result in the removal, filling, hydrological interruption, or other disturbance to these resources. The proposed Zoning Ordinance amendment applies to the entire unincorporated County with regards to small turbines and to a significant portion of the unincorporated County with regard to large turbines (see Section 1.2); therefore, it includes federally protected wetlands within the County. The proposed project would allow development of wind turbines and MET facilities that could adversely affect federally defined wetlands through ground-disturbing activities.

Small Turbine(s)/MET Facilities

The proposed project would allow small wind turbines or MET facilities without discretionary review if they meet the zoning verification requirements in the amended ordinance. Under the proposed ordinance, small wind turbines must be set back from any blue-line streams or water bodies, and from riparian vegetation mapped on the County's Wetland Vegetation Map, by a distance of 300 feet or five times the turbine height, whichever is greater. This requirement will help to prevent potential direct impacts to federally protected wetlands. In addition, the ACOE and RWQCB regulate the discharge of dredged or fill material into waters of the United States under

Sections 404 and 401 of the CWA. Section 401 of the CWA requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the United States to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards. At the state level, the Lake and Streambed Alteration Program requires written notification to CDFG prior to altering a riparian area (a type of wetland) supported by a lake, river, or stream, including federally protected wetlands. For water quality impacts to all wetlands, the California Porter-Cologne Water Quality Control Act directs the RWQCBs to develop regional Basin Plans, which, for the San Diego Region, is designed to preserve and enhance the quality of water resources in the region. At the local level, both the WPO and the Zoning Ordinance include special protections for wetlands that would apply to federally protected wetlands. Compliance with these permit requirements and regulations will avoid substantial adverse impacts to federally protected wetlands.

Under the proposed ordinance, a small turbine or MET facility may be located in an area that would impact a federally protected wetland. These future facilities may require ground disturbance that would not be subject to environmental review. However, all future small wind turbines and MET facilities would be required to comply with applicable federal regulations such as Sections 401 and 404 of the CWA. If potentially significant impacts would occur, then mitigation measures would be implemented to reduce impacts to the extent feasible to meet the no-net-loss standard for federally protected wetlands. Impacts would be **less than significant**.

Large Turbine(s)

The proposed project amends certain provisions of the County's Zoning Ordinance related to large turbines. These updates are necessary in order to address advancements in technology that have obviated many of the current provisions. The proposed amendments related to large wind turbines consist of updated definitions and requirements related to setbacks, noise, height, and locations where large turbines are permissible. All future large turbine projects will be subject to discretionary review and required to obtain a Major Use Permit. As part of the County's discretionary review process, all future projects would be evaluated under CEQA and would be required to implement measures to minimize impacts to wetlands, as necessary. Pursuant to the County's *Format and Content Requirements: Biological Resources* (County of San Diego 2010c), when wetlands are present on a project site, a Biological Resources Report is required. The report would assess site-specific conditions, analyze the potential effects of projects and require projects to apply feasible mitigation, as necessary.

In addition, at the federal level, the ACOE and RWQCB regulate the discharge of dredged or fill material into waters of the United States under Sections 404 and 401 of the CWA. Section 401 of the CWA requires a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the United States and to obtain a certification that the

discharge will comply with the applicable effluent limitations and water quality standards. At the State level the Lake and Streambed Alteration Program requires written notification to CDFG prior to altering a riparian area (a type of wetland) supported by a lake, river, or stream, including federally protected wetlands. For water quality impacts to all wetlands, the California Porter-Cologne Water Quality Control Act directs the RWQCBs to develop regional Basin Plans, which, for the San Diego Region, is designed to preserve and enhance the quality of water resources in the region. At the local level the RPO restricts impacts from Major Use Permits to various wetlands, wetland buffers, floodways, and floodplain fringe areas, which would potentially contain federally protected wetlands. In addition, both the WPO and the Zoning Ordinance include special protections for wetlands that would apply to federally protected wetlands. Compliance with these permit requirements and regulations will avoid substantial adverse impacts to federally protected wetlands. Impacts would be **less than significant.**

2.4.3.4 Wildlife Movement

Guidelines for the Determination of Significance

For the purpose of this EIR, the County's *Guidelines for Determining Significance: Biological Resources* (2010b) applies to both the direct impact analysis and the cumulative impact analysis. A significant impact would result if:

- The project would interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.

The guideline listed above is from Appendix G of the CEQA Guidelines and the County's *Guidelines for Determining Significance: Biological Resources* (2010b), and is intended to ensure no interference or prevention of wildlife movement.

Analysis

The proposed project area encompasses the entire unincorporated County that includes a large undeveloped landscape, characterized by broad valleys surrounded by boulder and chaparral-covered hillsides. For the most part, wildlife movement through the eastern portion of the County, which contains wind resources, is unconstrained. North–south wildlife movement is generally constrained by Interstate 8, the U.S.–Mexico international border fence, and to a lesser extent, scattered rural development and property fencing. The proposed project would allow development of wind turbines and MET facilities that could adversely affect wildlife movement through building structures on land that contains native habitat and possibly on land that provides linkages to wildlife corridors. Future development under the proposed Zoning Ordinance amendment would also have the potential to result in a significant impact to nursery sites.

Nursery sites are located throughout the unincorporated County and include areas that provide the resources necessary for reproduction of a species, including foraging habitat, breeding habitat, and water sources.

Small Turbine(s)/MET Facilities

The proposed project would allow small wind turbines or MET facilities without discretionary review if they meet the zoning verification requirements in the amended ordinance. The MSCP South County Subarea Plan covers the southwest portion of the unincorporated County. Pursuant to the BMO, discretionary projects must generally avoid corridors and linkages within the MSCP to the maximum extent practicable. The County is preparing MSCP plans (north and east) to cover the remaining lands under the County's jurisdiction. Potential habitat linkages and corridors have been identified for the draft North County Plan; however, these features will not be formally designated until the plan is adopted. Linkages and corridors have not yet been identified for the draft East County Plan.

Under the proposed ordinance, no ministerial small turbines are allowed on properties designated as Pre-Approved Mitigation Area (PAMA) within the boundaries of the Multiple Species Conservation Program Subarea Plan. A discretionary Administrative Permit may be processed for small turbines in PAMA. Within the MSCP, most known corridors and linkages are mapped as PAMA; therefore, the requirement to obtain an Administrative Permit will help to minimize potential corridor impacts within the South County MSCP since site-specific avoidance criteria will be applied as part of the discretionary MSCP process.

Under circumstances where future small wind turbines or MET facilities would not be subject to discretionary review, a small turbine or MET facility may be located in an area that would impact a wildlife corridor. Some small wind turbines would be roof mounted and would not result in any ground disturbance; however, they may introduce a new vertical element that would impact a wildlife corridor, such as a flight path for birds or bats. Wind turbines of any size can potentially result in collisions with sensitive bat species and avian species, sometimes called bird and bat "strikes." As described in Section 2.4.3.1, the zoning verification requirements include a height of no more than 80 feet for small wind turbines, a height of no more than 200 feet for MET facilities, no trellis style structures, and no guy wires for structural support or aboveground power lines. Small wind turbines must also be set back by a distance of 300 feet or five times the height of the tower from features such as blue line water courses and water bodies, wetland vegetation, significant known bat roosts, and open space easements and preserve areas. In addition, small wind turbines are prohibited on ridgelines, which are typical movement paths for both terrestrial and avian species.

These environmental design considerations included in the zoning verification process would minimize potential impacts to wildlife corridors. However, the proposed project may still result

in significant impacts due to the introduction of new structures or vertical elements, or due to ground disturbance that could interfere with wildlife movement or impede the use of nursery sites (**BIO-5**).

Large Turbine(s)

The proposed project amends certain provisions of the County's Zoning Ordinance related to large turbines. These updates are necessary in order to address advancements in technology that have obviated many of the current provisions. The proposed amendments related to large wind turbines consist of updated definitions and requirements related to setbacks, noise, height, and locations where large turbines are permissible. All future large turbine projects will be subject to discretionary review and required to obtain a Major Use Permit. As part of the County's discretionary review process all future projects would be evaluated under CEQA and would be required to implement measures to minimize impacts to wildlife corridors as necessary.

Pursuant to the County's *Report Format and Content Requirements: Biological Resources* (County of San Diego 2010c), when native or sensitive vegetation communities are present on a project site, a Biological Resources Report is required. The report would analyze the potential effects of private and public projects on wildlife movement, corridors, and nursery sites. The report would assess site-specific conditions and would require projects to apply feasible mitigation, as necessary. Additionally, USFWS's Draft Eagle Conservation Plan Guidance and Land-Based Wind Energy Guidelines, as described in Section 2.4.2, provide guidance for addressing impacts to species and their habitats from the development of wind turbines. These guidelines are compatible with each other and are intended to help guide the process of assessing and mitigating risk to species and their habitat. Refer to Section 2.4.3.1 for an analysis of large turbines and potential impacts relative to wildlife corridors, such as habitat fragmentation and bird and bat strikes.

The proposed project may result in direct impacts to wildlife movement and nurseries due the introduction of new structures or vertical elements from future large wind turbine projects. Indirect effects may also occur from increased noise levels or nighttime lighting that would discourage movement within corridors or linkages. Potential direct and indirect impacts to wildlife corridors and nursery sites will vary based on location and design of large turbine projects. Therefore, impacts to wildlife corridors or wildlife nursery sites would be potentially significant **(BIO-6)**.

2.4.3.5 Local Policies, Ordinances, Adopted Plans

Determination of Significance

For the purpose of this EIR, the County's *Guidelines for Determining Significance: Biological Resources* (2010b) applies to both the direct impact analysis and the cumulative impact analysis. A significant impact would result if:

- The project would conflict with one or more local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, and/or would conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state habitat conservation plan.

The guideline listed above is from Appendix G of the CEQA Guidelines and the County's *Guidelines for Determining Significance: Biological Resources* (2010b), and is intended to ensure conformance with applicable regional plans.

Analysis

As described previously in Section 2.4.2, Regulatory Setting, the County's local policies and ordinances that protect biological resources include the MSCP Plan, RPO, BMO, and HLP Ordinance. The proposed Zoning Ordinance amendment applies to the entire unincorporated County with regards to small turbines and to a significant portion of the unincorporated County with regard to large turbines (see Section 1.2). Therefore, it would be applicable in areas where local policies, other ordinances, and habitat conservation plans would also be in effect.

Small Turbine(s)/MET Facilities

The proposed project would allow small wind turbines or MET facilities without discretionary review if they meet the zoning verification requirements in the amended ordinance. Ministerial permits are covered by the MSCP and exempt from requirements of the local ordinances such as BMO, RPO, and HLP Ordinance. While development of small wind turbines and temporary MET facilities would likely result in direct impacts to biological resources, it would not hinder or interfere with the assembly of the MSCP preserve or conflict with the provisions of local ordinances such as the RPO. This is because impacts would occur near existing development with minimal ground disturbance, if any. Outside of the MSCP, these small projects could be proposed within or near other adopted NCCPs or other habitat conservation plans. However, the boundaries of such plans are mapped by the County and sensitive areas or preserves will be avoided prior to zoning verification for small wind turbines and MET facilities. Therefore, future small wind turbines and MET facilities developed under the proposed project would not conflict with any local policies or ordinances protecting biological resources and impacts are **less than significant**.

Large Turbine(s)

The proposed project amends certain provisions of the County's Zoning Ordinance related to large turbines. These updates are necessary in order to address advancements in technology that have obviated many of the current provisions. The proposed amendments related to large wind turbines consist of updated definitions and requirements related to setbacks, noise, height, and locations where large turbines are permissible. All future large turbine projects will be subject to

discretionary review and required to obtain a Major Use Permit. As part of the County's discretionary review process all future projects would be evaluated under CEQA.

All discretionary projects located within the boundaries of the existing MSCP South County Subarea Plan are reviewed for consistency with the Plan and the BMO. The BMO provides predetermined mitigation ratios, directs mitigation to biological resource core areas, and gives criteria for project design and preserve design in order to be consistent with the MSCP Plan. Section 86.503(a) of the BMO lists the types of projects that are exempt from the BMO. While some projects would be exempt from the BMO, they must still conform to the MSCP South County Subarea Plan. If a project is in the County's adopted Subarea Plan, MSCP Conformance Findings must be prepared for the project based on both MSCP and BMO standards.

Outside of the MSCP South County Subarea Plan boundary, the Southern California Coastal Sage Scrub NCCP is in effect. This program enables the County to benefit from interim take provisions established in the USFWS special rule (4[d]). The interim take refers to the authorization for removal of coastal sage scrub and/or any incidental impacts to target species (such as coastal California gnatcatcher and orange-throated whiptail) if achieved in accordance with findings set forth in the NCCP Process Guidelines. Application of the NCCP Process Guidelines and the HLP Ordinance to projects with the potential to impact coastal sage scrub ensures that development will not conflict with the provisions of the Southern California Coastal Sage Scrub NCCP program. This interim process is proposed to be replaced with established MSCP Plans for North County and East County. Until then, authorization to impact coastal sage scrub is issued in the form of an HLP. For projects that will affect coastal sage scrub, NCCP 4(d) findings must be made to the satisfaction of the USFWS and the CDFG.

Major Use Permits are also subject to the RPO, which requires applicable projects to protect steep slopes, preserve sensitive habitat lands, avoid wetlands and wetland buffers, and protect floodplain and floodplain fringe areas. In addition, the discretionary review process for Major Use Permits includes review of any other applicable NCCP or HCP to ensure that its provisions are met. Since future large turbine projects proposed under the Zoning Ordinance amendment would be required to comply with applicable local polices and ordinances regulating biological resources, including adopted NCCPs and HCPS, impacts would be **less than significant**.

2.4.4 Cumulative Impact Analysis

The geographic scope of cumulative impact analysis for biological resources varies depending on the type of resource with potential to be impacted. Geographic scope can be the entire area within which the resource has the potential to occur. For the purpose of this EIR, the geographic

scope for the cumulative analysis of biological resources includes the County, including both incorporated and unincorporated areas and surrounding counties.

2.4.4.1 Candidate, Sensitive, or Special-Status Species

Cumulative projects located in the County would have the potential to result in impacts to candidate, sensitive, or special-status species, including loss of habitat. The MSCP addresses biological resources and provides protection of plants, animals, and their habitats at a regional level while also allowing economic activity where compatible and appropriate to reduce cumulative effects of individual projects. A portion of the project is located within the adopted MSCP Subarea Plan. In project areas not subject to the adopted MSCP Subarea Plan, a comprehensive regional plan for habitat and species conservation does not exist, and incremental contributions to the impacts assessed could occur. For example, the General Plan Update project identified significant unavoidable impacts to special-status species and their habitats in areas of the unincorporated County outside of the MSCP boundaries. Another cumulative project is the Sunrise Powerlink Project, which would result in an increase in the risk of avian and bird impacts due to collision and electrocution. Other projects in adjacent jurisdictions would be required to comply with applicable federal and/or state regulations, such as the Federal ESA, CESA, and NCCP and may require approval from the USFWS and the CDFG. However, without a comprehensive NCCP in place for the entire Southern California region, a cumulative loss of habitat supporting special-status plant and wildlife species may occur, even after mitigation has been implemented on an individual project basis.

Small Turbine(s)/MET Facilities

As described in Section 2.4.3.1, future small wind turbines and MET facilities may result in a potentially significant adverse impact to a candidate, sensitive, or special-status species since they could potentially result in excavation and grading activities or tall obstructions to avian or bat species that are not subject to discretionary review. Therefore, the development of small wind turbines and MET facilities under the proposed project would contribute to a cumulatively considerable impact **(BIO-7).**

Large Turbine(s)

As described in Section 2.4.3.1, all future large wind turbine projects are required to comply with MSCP, BMO, NCCP and other such regulations prior to approval. However, as there is ultimately no guarantee on a project-specific level that mitigation measures will reduce impacts to a level below significant, the proposed project may result in significant impacts related to candidate, sensitive, or special-status species. Therefore, the development of large wind turbines under the proposed project would contribute to a cumulatively considerable impact **(BIO-8).**

2.4.4.2 Riparian Habitat or Sensitive Natural Community

Cumulative projects located in the County would have the potential to result in impacts to riparian habitat or sensitive natural communities through direct and indirect loss or degradation. Some projects included in Table 1-4e, Private Project Not Included in the General Plan Update, are large developments that are planned within undeveloped areas and could affect riparian habitat. For example, the Jacumba Valley Ranch project in the Mountain Empire Subregion proposes 2,125 new residential units. Other projects in adjacent jurisdictions would be required to comply with applicable federal and/or state regulations, such as the California Lake and Streambed Alteration Program or the NCCP. These programs provide protections for riparian and other sensitive habitats. However, without a comprehensive NCCP plan in place for the entire Southern California region, a cumulative loss of habitat supporting special-status plant and wildlife species may occur, even after mitigation has been implemented on an individual project basis.

Small Turbine(s)/MET Facilities

As described in Section 2.4.3.2, future small wind turbines and MET facilities may result in a potentially significant adverse impact to a riparian habitat or another sensitive natural community since they could potentially result in excavation and grading activities, which are not subject to discretionary review (**BIO-9**).

Large Turbine(s)

As described in Section 2.4.3.2, all future large wind turbine projects are required to comply with MSCP, BMO, NCCP and other such regulations prior to approval. However, as there is ultimately no guarantee on a project-specific level that mitigation measures will reduce impacts to a level below significant, the proposed project may result in significant impacts related to riparian habitat or another sensitive natural community. Therefore, the development of large wind turbines under the proposed project would contribute to a cumulatively considerable impact **(BIO-10).**

2.4.4.3 Federally Protected Wetlands

Cumulative projects located in the San Diego region would have the potential to result in a cumulative impact associated with federally protected wetlands. For example, some projects listed in Table 1-4e, Private Project Not Included in the General Plan Update, are large developments that are planned within undeveloped areas and could have the potential to affect federally protected wetlands. Rancho Lilac in Valley Center is one project that proposes 360 new residential units in an area that potentially contains federally protected wetlands. Other projects in adjacent jurisdictions would be required to comply with applicable federal and/or state regulations, such as Sections 401 and 404 of the CWA. If potentially significant impacts would occur from cumulative

projects, then mitigation measures would be implemented to reduce impacts to the extent feasible to meet the no-net-loss standard. Existing regulations would ensure that a significant cumulative impact associated with federally protected wetlands would not occur.

Small Turbine(s)/MET Facilities

As described in Section 2.4.3.3, all future small wind turbines and MET facilities would be required to comply with applicable federal regulations, such as Sections 401 and 404 of the CWA. Therefore, the development of small wind turbines and MET facilities under the proposed project **would not contribute to a cumulatively considerable impact.**

Large Turbine(s)

As described in Section 2.4.3.3, all future large wind turbine projects are required to comply with federal regulations such as Section 401 and 404 of the CWA. In addition, both the WPO and the Zoning Ordinance include special protections for wetlands that would apply to federally protected wetlands. Compliance with these permit requirements and regulations will avoid substantial adverse impacts to federally protected wetlands. Therefore, the development of large wind turbines under the proposed project **would not contribute to a cumulatively considerable impact.**

2.4.4.4 Wildlife Movement

Cumulative projects located in the San Diego region would have the potential to result in a cumulative impact associated with wildlife movement corridors and nursery sites. For example, development of projects such as the proposed high-occupancy vehicle connector between Interstate 15 (I-15) and State Route 94 (SR-94) as a part of the San Diego Regional Transportation Plan would have the potential to block an existing wildlife movement corridor or remove habitat used as a nursery site. Adjacent jurisdictions, including incorporated cities, adjacent counties, and federal and state-managed lands would be required to comply with applicable federal and/or state regulations. If potentially significant impacts would occur from particular cumulative projects, then mitigation measures would be implemented to reduce impacts to the extent feasible. However, without a comprehensive NCCP in place for the long-term protection of wildlife movement corridors and nursery sites for the entire Southern California region, a cumulative loss of wildlife movement corridors and nursery sites would occur, even after mitigation has been implemented for individual projects. Therefore, a significant cumulative impact associated with wildlife movement corridors and nursery sites would occur.

Small Turbine(s)/MET Facilities

As described in Section 2.4.3.4, future small wind turbines and MET facilities could potentially result in the introduction of a new structure or vertical element that could interfere

with wildlife movement or impede use of nursery sites. Therefore, the development of small wind turbines and MET facilities under the proposed project could contribute to a cumulatively considerable impact **(BIO-11).**

Large Turbine(s)

As described in Section 2.4.3.4, some future large wind turbines may result in impacts to wildlife corridors and nursery sites. As there is ultimately no guarantee on a project-specific level that mitigation measures will reduce impacts to a level below significant, the proposed project could contribute to a cumulatively considerable impact **(BIO-12).**

2.4.4.5 Local Policies, Ordinances, and Adopted Plans

Cumulative projects under the County's jurisdiction are required to comply with applicable local policies and ordinances, such as the MSCP Plan or the Southern California Coastal Sage Scrub NCCP Process Guidelines, in order for such projects to be approved. For example, the cumulative projects in the unincorporated County listed in Table 1-4e, Projects Not Included in the Proposed General Plan Update, are subject to local County of San Diego policies and ordinances. However, it cannot be determined with certainty that regional projects in other jurisdictions would conform to applicable local ordinances.

Small Turbine(s)/MET Facilities

As described in Section 2.4.3.5, all future small wind turbines and MET facilities will be screened during the zoning verification to ensure they do not conflict with the RPO, MSCP, BMO, NCCP and other such regulations prior to approval. Therefore, the proposed project **would not contribute to a cumulatively considerable impact.**

Large Turbine(s)

As described in Section 2.4.3.5, all future large wind turbines are required to comply with the RPO, MSCP, BMO, NCCP and other such regulations prior to approval. Therefore, the proposed project **would not contribute to a cumulatively considerable impact.**

2.4.5 Significance of Impacts Prior to Mitigation

The proposed project would result in potentially significant impacts associated with biological resources including special-status species, riparian and other sensitive natural communities, as well as wildlife movement corridors. The proposed project would not result in potentially significant impacts to wetlands or to local policies and ordinances.

2.4.6 Mitigation Measures

2.4.6.1 Candidate, Sensitive, or Special-Status Species

The proposed project would allow for the development of small wind turbines and temporary MET facilities that would have significant adverse effects to candidate, sensitive, or special-status species. The proposed project would also allow for development of large wind turbines with a Major Use Permit that may directly or indirectly affect candidate, sensitive, or special-status species. The mitigation measures described below have been identified to reduce potentially significant impacts, but not below a significant level.

Mitigation Measures

M-BIO-1: During the environmental review process for future Major Use Permits for wind turbines, the County Guidelines for Determining Significance for Biological Resources shall be applied. When impacts to biological resources are determined to be significant, feasible and appropriate project-specific mitigation measures shall be incorporated. Examples of standard mitigation measures within the County Guidelines include: avoidance of sensitive resources; preservation of habitat; revegetation; resource management; and restrictions on lighting, runoff, access, and/or noise.

M-BIO-2: Update the County Guidelines for Determining Significance for Biological Resources to include, or incorporate by reference, recommendations from the California Department of Fish and Game, the Avian Power Line Interaction Committee, the USFWS Draft Guidance, and the California Energy Commission (e.g., California Guidelines for Reducing Impacts to Birds and Bats from Wind Energy Development). Examples of recommended mitigation measures include: site screening; pre-permitting monitoring; acoustic monitoring; buffer zone inclusion; reduction of foraging resources near turbines; specific lighting to reduce bird collisions; post-construction monitoring; and avian protection plans.

M-BIO-3 All ministerial permits for small wind turbines will include a notice to the permittee explicitly stating that additional state and federal regulations may apply to the construction and operation of the wind turbine including, but not limited to, U.S. Endangered Species Act, the California Endangered Species Act, and the California Fish and Game Code related to Lake and Streambed Alteration.

M-BIO-4 A joint evaluation between the County of San Diego, the California Department of Fish and Game, and the US Fish and Wildlife Service of the permitted small turbines will be conducted five years after the ordinance goes into effect and after

the first 100 small wind turbines are permitted. These evaluations will summarize where the majority of turbines are located, how many are roof-mounted, how many are vertical axis, what the average height is, etc.

Infeasible Mitigation Measures

The following measure was considered in attempting to reduce impacts associated with candidate, sensitive, or special-status species within the County to below a level of significance. However, the County has determined that this measure is infeasible for reasons described as follows. Therefore, the following mitigation measure would not necessarily be implemented.

- Adopt MSCP Plans for North County and East County that provide coverage for special status species as well as protections for wildlife corridors, habitat linkages, and core habitat areas in those regions. Because the County is currently in the process of preparing such plans, this measure is feasible and attainable. However, these conservation plans require approval at the federal and State levels, which the County cannot guarantee would occur prior to approval and implementation of the proposed project. In addition, the timing of these programs (i.e., MSCP adoption and implementation) may not coincide with the proposed project impacts in these areas. Therefore, this measure cannot be considered feasible mitigation for the proposed project.

Because the measure listed above has been found to be infeasible, impacts would remain significant and unavoidable. Chapter 4, Project Alternatives, provides a discussion of alternatives to the proposed project that would result in some reduced impacts associated with candidate, sensitive, or special-status species as compared to the proposed project.

2.4.6.2 Riparian Habitat or Sensitive Natural Community

The proposed project would allow for the development of small wind turbine and temporary MET facilities that would have significant adverse effects to riparian habitat or sensitive natural communities. The proposed project would also allow for development of large wind turbines with a Major Use Permit that would have potentially significant adverse effects to riparian habitat or sensitive natural communities. Mitigation measures **M-BIO-1 M-BIO-2**, **M-BIO-3**, and **M-BIO-4** listed in Section 2.4.6.1 above, are also applicable to this issue and are incorporated here by reference. Incorporation of these mitigation measures could reduce potentially significant impacts to riparian habitat and sensitive natural communities, but not below a significant level.

Infeasible Mitigation Measures

The following measure was considered in attempting to reduce impacts associated with riparian habitat or sensitive natural communities within the County to below a level of significance. However, the County has determined that this measure is infeasible for reasons described as follows. Therefore, the following mitigation measure would not necessarily be implemented.

- Adopt MSCP Plans for North County and East County that provide coverage for special status species as well as protections for wildlife corridors, habitat linkages, and core habitat areas in those regions. Because the County is currently in the process of preparing such plans, this measure is feasible and attainable. However, these conservation plans require approval at the federal and State levels, which the County cannot guarantee would occur prior to approval and implementation of the proposed project. In addition, the timing of these programs (i.e., MSCP adoption and implementation) may not coincide with the proposed project impacts in these areas. Therefore, this measure cannot be considered feasible mitigation for the proposed project.

Because the measure listed above has been found to be infeasible, impacts would remain significant and unavoidable. Chapter 4, Project Alternatives, provides a discussion of alternatives to the proposed project that would result in some reduced impacts associated with riparian habitat or sensitive natural communities as compared to the proposed project.

2.4.6.3 Federally Protected Wetlands

The project will not result in any significant impacts to federally protected wetlands and no mitigation measures are required.

2.4.6.4 Wildlife Movement

The proposed project would allow for the development of small wind turbine and temporary MET facilities that would have significant adverse effects to wildlife corridors. The proposed project would also allow for development of large wind turbines with a Major Use Permit that would have potentially significant adverse effects on wildlife movement corridors or nursery sites. Mitigation measures **M-BIO-1 M-BIO-2**, **M-BIO-3**, and **M-BIO-4** listed in Section 2.4.6.1 above, are also applicable to this issue and are incorporated here by reference. Incorporation of these mitigation measures could reduce potentially significant impacts to wildlife movement corridors and nursery sites, but not below a significant level.

Infeasible Mitigation Measures

The following measure was considered in attempting to reduce impacts associated with wildlife movement corridors and nursery sites within the County to below a level of significance. However, the County has determined that this measure is infeasible for reasons described as follows. Therefore, the following mitigation measure would not necessarily be implemented.

- Adopt MSCP Plans for North County and East County that provide coverage for special status species as well as protections for wildlife corridors, habitat linkages, and core habitat areas in those regions. Because the County is currently in the process of preparing such plans, this measure is feasible and attainable. However, these conservation plans require approval at the federal and State levels, which the County cannot guarantee would occur prior to approval and implementation of the proposed project. In addition, the timing of these programs (i.e., MSCP adoption and implementation) may not coincide with the proposed project impacts in these areas. Therefore, this measure cannot be considered feasible mitigation for the proposed project.

Because the measure listed above is infeasible, impacts would remain significant and unavoidable. Chapter 4, Project Alternatives, provides a discussion of alternatives to the proposed project that would result in some reduced impacts associated with wildlife movement corridors and nursery sites as compared to the proposed project.

2.4.6.5 Local Policies, Ordinances, and Adopted Plans

The project will not result in any significant impacts to local policies, ordinances, and adopted plans, and no mitigation measures are required.

2.4.7 Conclusion

The following discussion provides a synopsis of the conclusion reached in each of the above impact analyses, and the level of impact that would occur after mitigation measures are implemented.

Candidate, Sensitive, or Special-Status Species

Development of small wind turbines and temporary MET facilities pursuant to the proposed Zoning Ordinance amendments would have the potential to result in significant adverse effects to candidate, sensitive, or special-status species. In addition, the proposed project would alleviate current restrictions on large wind turbine projects that may directly or indirectly affect candidate, sensitive, or special-status species in the County. Therefore, impacts would be potentially significant. The proposed project would also potentially contribute to cumulatively considerable

impacts to candidate, sensitive, or special-status species. The mitigation measures would reduce direct and cumulative impacts, but not to below a level of significance.

Riparian Habitat or Sensitive Natural Community

Development of small wind turbines and temporary MET facilities pursuant to the proposed Zoning Ordinance amendments would have the potential to result in significant adverse effects to riparian habitat or sensitive natural communities. In addition, the proposed project would alleviate current restrictions on large wind turbine projects would have the potential to result in significant impacts to riparian habitat or sensitive natural communities in the County. Therefore, impacts would be potentially significant. The proposed project would also potentially contribute to cumulatively considerable impacts to riparian habitat or sensitive natural communities. The mitigation measures would reduce direct and cumulative impacts, but not to below a level of significance.

Federally Protected Wetlands

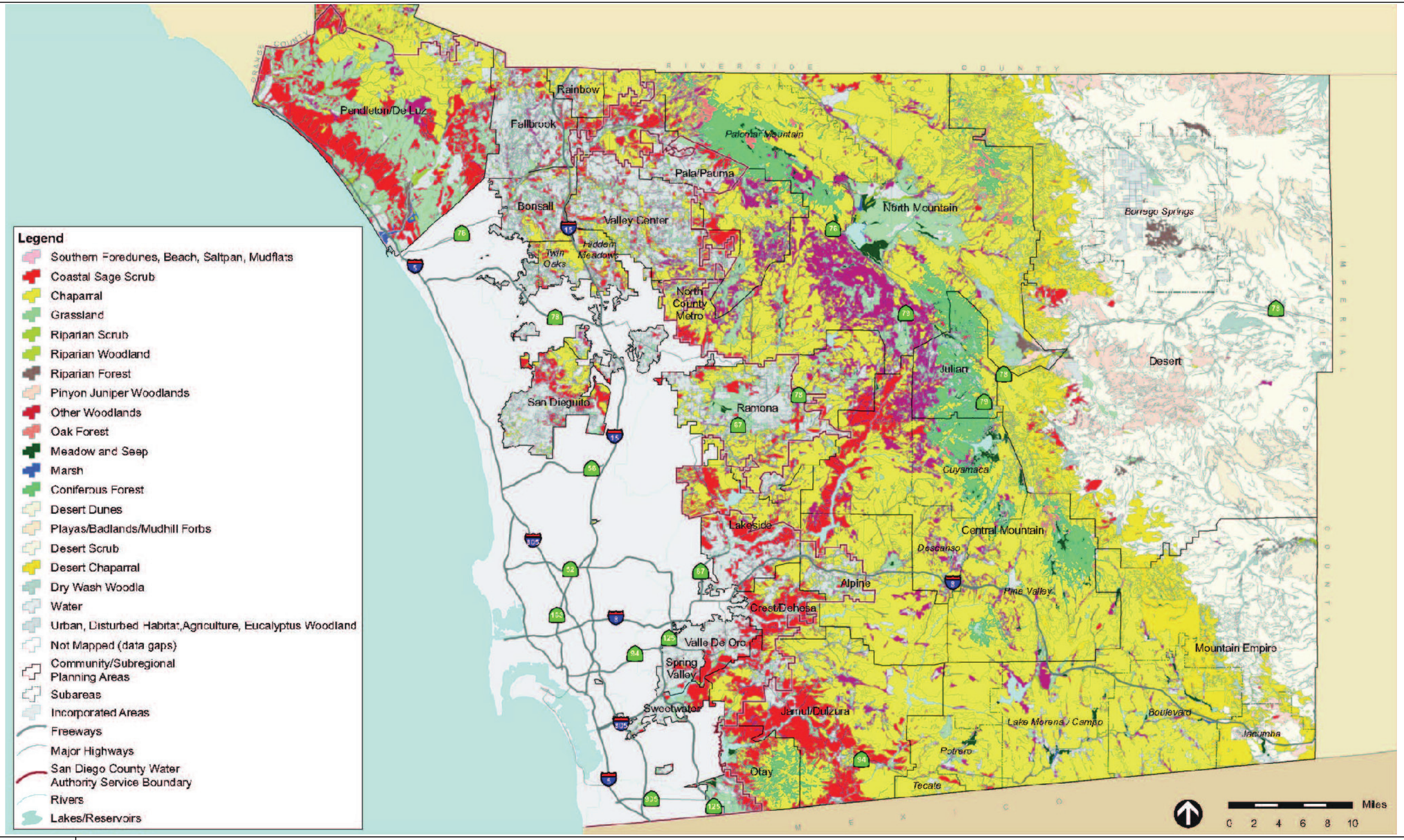
The project will not result in significant impacts to federally protected wetlands.

Wildlife Movement

Development of small wind turbines and temporary MET facilities pursuant to the proposed Zoning Ordinance amendments would have the potential to result in significant adverse effects to wildlife corridors and nursery sites. In addition, the proposed project would alleviate current restrictions on large wind turbine projects that may directly or indirectly affect wildlife corridors and nursery sites in the County. Therefore, impacts would be potentially significant. The proposed project would also potentially contribute to cumulatively considerable impacts to wildlife corridors. The mitigation measures would reduce direct and cumulative impacts, but not to below a level of significance.

Local Policies, Ordinances, and Adopted Plans

The project will not result in significant impacts to local policies, ordinances, and adopted plans.



DUDEK

6281-01

SOURCE: County of San Diego 2008, 2011

FIGURE 2.4-1

Vegetation Communities

Wind Energy Ordinance Draft EIR

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