

2.2 Biological Resources

This section of the draft environmental impact report (EIR) evaluates impacts to biological resources of the Project site and vicinity that could result from future development of the Jacumba Solar Energy Project (Proposed Project). The analysis focuses on resultant effects to special status species, effects on riparian habits, impacts to federally protected wetlands, impacts to native fish or wildlife and associated movement corridors, and inconsistencies with any Habitat Conservation Plan as generated by the Proposed Project.

Information contained in this section is based on review of technical documentation, including the following:

- Draft Biological Resources Report for the Jacumba Solar Energy Project (Biological Resources Report) (Appendix 2.2-1)

Comments received in response to the Notice of Preparation (NOP) included concerns regarding sensitive species such as bighorn sheep (*Ovis canadensis nelsoni*), Quino checkerspot butterfly (*Euphydryas editha quino*), eagles and other bird species, habitat modification, wildlife movement, and recommendations for surveys and reports. These concerns are addressed in the Biological Resources Report and this section of the EIR. A copy of the NOP and comment letters received in response to the NOP is included in Appendix 1-1 of this EIR.

2.2.1 Existing Conditions

This section summarizes the existing biological resources within the Proposed Project area and identifies the resources that could be affected by the Proposed Project.

Biological resources include living organisms and the physical environment in which they occur. Biological resources are categorized in this section into vegetation communities, jurisdictional wetlands and waters, wildlife corridors, and special-status plant and wildlife species within the Project area. This section considers information obtained through a review of pertinent literature and through field reconnaissance.

The Proposed Project area is generally an arid desert environment that supports a limited range of habitats and biological communities. These habitats and communities include juniper woodland, desert scrub and chaparral. Additionally, these habitats and communities may vary depending on the ecoregion, soils and substrate, and topography. Topography within the Proposed Project site varies from a gentle slope to steeper terrain on the southwest portion of the Project site. The entire Project site is within the draft East County Multiple Species Conservation Program (ECMSCP) Plan Area (see Figure 2.2-1, Regional Context); this area is subject to

evaluation of consistency with the ECMSCP Planning Agreement (County of San Diego 2008). The Proposed Project is not located within the ECMSCP's Focused Conservation Area.

The surrounding Jacumba area, which includes the community of Jacumba Hot Springs, can be characterized as a high desert rural landscape featuring large lots with single-family homes and row crop agricultural operations that have been conducted in the recent past. Much public agency land (Bureau of Land Management (BLM), State Parks) is present in the area and offers recreational opportunities such as hiking and off-road driving. South of Interstate 8 (I-8), major infrastructure elements of the landscape include the Sunrise Powerlink and the Southwest Powerlink, which are a pair of 500 kV electric transmission lines supported by 150-foot-tall steel lattice structures, and the linear, rust-colored U.S./Mexico international border fence (located immediately south of the Proposed Project site).

The solar component of the Proposed Project would use photovoltaic (PV) fixed-tilt rack electric generation system technology to produce solar energy at the utility scale. The Proposed Project could produce up to 20 megawatts of solar energy and would be located on approximately 108 acres.

Literature Review

Special-status biological resources present or potentially present on site were identified through an extensive literature search using the following sources: U.S. Fish and Wildlife Service (USFWS) (2014), California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB) (CDFW 2014a), California Native Plant Society's Online Inventory of Rare and Endangered Vascular Plants (CNPS 2014), San Diego Plant Atlas (SDNHM 2014a), San Diego Bird Atlas (SDNHM 2014b), and survey results for the ECO transmission line project (RBC 2009a, 2009b, 2010; CPUC and BLM 2011). The literature review also included review of the list of plant species proposed for coverage under the draft ECMSCP Subarea Plan (County of San Diego 2009).

General information regarding wildlife species present in the region was obtained from Unitt (2004) for birds, Bond (1977) for mammals, Stebbins (2003) for reptiles and amphibians, and Emmel and Emmel (1973) for butterflies. The Soil Survey, San Diego Area, California Part 1 (Bowman 1973) also was reviewed to identify potentially occurring special-status plants based upon known soil associations. Native plant community classifications used in this report follow Preliminary Descriptions of the Terrestrial Natural Communities of California (Holland 1986) as modified by the County of San Diego (County) and noted in Draft Vegetation Communities of San Diego County (Oberbauer et al. 2008).

The County Department of Planning and Development Services (PDS) issued a review (scoping letter) for this Project on August 7, 2014, that identified target sensitive biological resources

present or potentially present on site (County of San Diego 2014a). In terms of regional preserve planning efforts, the Proposed Project is located within the County of San Diego. Therefore, the County RPO (Resource Protection Ordinance; County of San Diego 2007) and guidelines (County of San Diego 2010) were consulted to ensure consistency with local conservation efforts, goals, and policies. The Proposed Project would not preclude or prevent the preparation of the Subregional NCCP because the Project is designed in accordance with the Preliminary Conservation Objectives outlined in the Planning Agreement for ECMSCP (County of San Diego 2008). These objectives and Project applicability/compliance are provided in Section 2.2.3.6, Local Policies, Ordinances, and Adopted Plans.

Field Reconnaissance

Between December 2012 and July 2014, Dudek conducted vegetation mapping, wintering raptor surveys, nesting raptor and foraging surveys, jurisdictional delineations, and burrowing owl habitat assessments for the Proposed Project site. Between March and April 2013, focused surveys were conducted on the Proposed Project site for Quino checkerspot butterfly (see Appendix H of Appendix 2.2-1). Table 2.2-1A, Schedule of Surveys for the Jacumba Solar and Gen-Tie Alignment Sites, and Table 2.2-1B, Schedule of Focused Quino Checkerspot Surveys for the Jacumba Solar and Gen-Tie Alignment Sites, list the dates, conditions, and survey focus for each survey performed. A jurisdictional delineation and vegetation mapping were conducted in summer/fall 2014 for the gen-tie site.

All field surveys were completed according to County requirements and included directed searches and habitat assessments for the County list of potential special-status faunal and floral species. The entire Project site was surveyed by personnel qualified to perform biological surveys. Special-status biological resources were mapped and analyzed together with the Project plans (MUP Code 3300-12-010).

Per the Proposed Project scoping letter, dated August 7, 2014 (County of San Diego 2014a), focused surveys or wildlife habitat assessments were required for the following wildlife species, where appropriate: golden eagle (*Aquila chrysaetos*), turkey vulture (*Cathartes aura*), burrowing owl (*Athene cunicularia*), osprey (*Pandion haliaetus*), and Quino checkerspot butterfly. The winter raptor survey/assessments were conducted in December 2013 and January 2014. Nesting raptor and foraging surveys were conducted from May through July 2014. The Quino checkerspot butterfly surveys were conducted in March and April 2013. Burrowing owl surveys were conducted from March through July 2014.

The County's scoping letter also identified plant species that require focused surveys (County of San Diego 2014a). Focused surveys for special-status plant species were originally scheduled for spring and summer 2014. However, due to the ongoing drought conditions in the region, it was determined through discussions with the County that focused plant surveys conducted in

2014 likely would not have been adequate for documenting representative annual plant species on the Project site, and negative survey results for special-status species would not be conclusive. The County's guidelines provide additional guidance in circumstances where field surveys were not conducted (see Appendix 2.2.1).

2.2.1.1 Regional Overview

The Proposed Project is located in the unincorporated community of Jacumba in southeast San Diego County within private lands located adjacent to the U.S./Mexico border. In San Diego County, several resource conservation-planning efforts have been completed or are currently in progress with the long-term goal of establishing a regional reserve system that will protect native habitat lands and their associated biota. The ultimate goals of these plans are the establishment of biological reserve areas in conformance with the state's Natural Communities Conservation Plan (NCCP) Act, and to contribute to the preserve system already established by the approved Multiple Species Conservation Program (MSCP).

The majority of the Project area is mapped as Agriculture or Natural Upland outside Focused Conservation Areas (FCAs) (Figure 2.2-1, Regional Context). Although the Project area does not fall within a preliminarily delineated Focused Conservation Area of the ECMSCP planning area, a small portion of the Project area is mapped as Riparian/Wetland Habitat and Transition Zone outside of Focused Conservation Area. This suggests that the area has regional conservation value. Projects in this area are subject to the Planning Agreement for the ECMSCP (County of San Diego 2008), which is intended to establish whether their approval would have an effect on the preparation and approval of the Draft ECMSCP.

2.2.1.2 Habitat Types/Vegetation Communities

Four native vegetation communities and one land cover type was mapped by Dudek within the Proposed Project area.¹ Native vegetation communities within the Project area include Peninsular juniper woodland and scrub, semi-desert chaparral, Sonoran mixed woody scrub, and upper Sonoran subshrub scrub. One land cover type (non-vegetated area) occurs within the Project area: disturbed land. The vegetation communities and land cover types listed above are described as follows, their acreages are presented in Table 2.2-2, Vegetation Communities and Land Cover Types, and their spatial distributions are presented on Figure 2.2-2, Biological Resources.

In September 2010, the CDFG, now known as the California Department of Fish and Wildlife (CDFW), published the List of California Vegetation Alliances and Associations (CDFG 2010), which uses the scientific name of the dominant species in that alliance as the alliance name and

¹ As described above, since vegetation mapping for the gen-tie alignment site has not yet been conducted, vegetation data from SANDAG (2014) is being used at this time.

includes a global and state rarity rank based on the NatureServe Standard Heritage Program methodology (NatureServe 2012). The conservation status of a vegetation community is designated by a number from 1 to 5, preceded by a letter reflecting the appropriate geographic scale of the assessment (G = global, N = national, and S = subnational). The numbers have the following meaning (NatureServe 2012):

- 1 = critically imperiled
- 2 = imperiled
- 3 = vulnerable to extirpation or extinction
- 4 = apparently secure
- 5 = demonstrably widespread, abundant, and secure

For example, G1 would indicate that a vegetation community is critically imperiled across its entire range (i.e., globally). A rank of S3 would indicate the vegetation community is vulnerable and at moderate risk within a particular state or province, although it may be more secure elsewhere (NatureServe 2012). Because NatureServe ranks vegetation communities at the global level, they have few rankings at the state or province level available. However, the List of California Vegetation Alliances and Associations (CDFG 2010) includes state-level rarity rankings (i.e., the subnational (S) rank) for vegetation communities. The List of California Vegetation Alliances and Associations is considered the authority for ranking the conservation status of vegetation communities in California.

CDFW's guidelines for determining high priority vegetation types include considering any communities listed with a ranking of S1 to S3 and ascertaining whether the specific stands of the community type within the Project area are "considered as high-quality occurrences of a given community." The consideration of stand quality includes cover of non-native invasive species, human-caused disturbance, reproductive viability, and insect or disease damage (CDFG 2012a).

In addition, the County requires mitigation at varying ratios for many vegetation communities. These vegetation communities follow the *Draft Vegetation Communities of San Diego County* (Oberbauer et al. 2008). The *Manual of California Vegetation* (2nd edition) (Sawyer et al. 2009) was used as an additional reference to help determine characteristics (such as percentage of species cover) of various classifications. Vegetation communities considered special status are those with an S ranking of 1, 2, or 3 (CDFG 2010), as well as communities that require mitigation by the County (County of San Diego 2010, Table 5). These communities are denoted in Table 2.2-2 with a superscript b (^b).

Semi-Desert Chaparral (37400)

According to Holland (1986), semi-desert chaparral is similar to northern mixed chaparral (37710), but it is typically not quite as tall (4.9–10 feet) and more open. Dominant taxa within this community include *Juniperus* sp., *Eriogonum* sp., and *Opuntia* sp. Characteristic species include chamise (*Adenostoma fasciculatum*), *Arctostaphylos* sp., *Ceanothus* sp., *Quercus* sp., and a variety of other shrubs and subshrubs. This community is found on the high desert plateaus and escarpment of the Peninsular Range in San Diego County associated with drier, cooler winters (Holland 1986). On site, semi-desert chaparral is found within areas where California juniper is less prominent (less than 4% absolute cover), including areas where California junipers have burned in the past and have not yet recovered. The semi-desert chaparral on site includes jointfir (*Ephedra* sp.), goldenbush (*Ericameria* sp.), Eastern Mojave buckwheat (*Eriogonum fasciculatum* var. *polifolium*), creosote bush (*Larrea tridentata*), and deerweed (*Acemisson glaber*). There are no areas mapped as semi-desert chaparral within the gen-tie alignment. Semi-desert chaparral is the dominant vegetation community on site, totaling 179.4 acres within the study area (Figure 2.2-2).

Jointfir, Eastern Mojave buckwheat, and creosote bush were codominant species in this community; the *Ephedra* was not keyed to species, but the *Eriogonum fasciculatum* (California buckwheat scrub) and *Larrea tridentata* (creosote bush scrub) alliances have a rank of G5S5 in CDFG (2010), meaning they are globally secure and secure in the state. Semi-desert chaparral is not considered special status by CDFW, but is considered special status based on mitigation recommendations of the County (County of San Diego 2010).

Sonoran Mixed Woody Scrub (33210)

According to Holland (1986), Sonoran mixed woody scrub is similar to Sonoran mixed woody and succulent scrub (33220) but with additional woody species. Characteristic species include creosote bush, burrobush (*Ambrosia dumosa*), ocotillo (*Fouquieria splendens*), *Opuntia* sp., brittlebush (*Encelia farinosa*), and *Krameria* sp. In San Diego County, this community is associated with lower alluvial fans above the desert floor and below the coarse mountain substrates (Holland 1986).

Sonoran mixed woody scrub on site lacks California juniper and is dominated by creosote bush, in addition to other shrub and succulent cover. Other commonly occurring species include jointfir, cholla, goldenbush, and snakeweed (*Gutierrezia* sp.). Sonoran mixed woody scrub only occurs in one small patch within the solar site, composed of 3.2 acres toward the central portion of the study area (Figure 2.2-2).

The *Larrea tridentata* (creosote bush scrub) alliance has a rank of G5S5 in CDFG (2010), meaning it is globally secure and secure in the state. Sonoran mixed woody scrub is not

considered special status by CDFW, but is considered special status based on mitigation recommendations of the County (County of San Diego 2010).

Upper Sonoran Subshrub Scrub (39000)

Upper Sonoran subshrub scrub is composed of low, fairly penetrable scrub of soft-wooded, summer-dormant, drought-tolerant shrubs (Holland 1986). It is usually associated with well-drained soils derived from sandstone, shale, or sterile white diatomaceous deposits. In San Diego County, it intergrades with some chaparrals at higher elevations. Dominant vegetation found on site varies but usually includes narrowleaf goldenbush (*Ericameria linearifolia*), Eastern Mojave buckwheat, bladderpod spiderflower (*Isomeris arborea arborea*), or California jointfir (*Ephedra californica*) (Holland 1986). Areas mapped as upper Sonoran subshrub scrub are dominated by Eastern Mojave buckwheat, goldenbush, jointfir, cholla, and deerweed. This area contains native shrub cover but lacks California juniper and creosote bush. Sonoran subshrub scrub occurs in one patch (approximately 3.6 acres) located along the southern portion of the solar study area (Figure 2.2-2).

The *Eriogonum fasciculatum* (California buckwheat scrub) alliance has a rank of G5S5 in CDFG (2010), meaning it is globally secure and secure in the state. Sonoran mixed woody scrub is not considered special status by CDFW, but is considered special status based on mitigation recommendations of the County (County of San Diego 2010).

Peninsular Juniper Woodland and Scrub (72320)

Peninsular juniper woodland and scrub consists of relatively dense pinyon woodland dominated by Parry pinyon (*Pinus quadrifolia*), with California juniper (*Juniperus californica*) occurring within xeric sites below the trees' dripline. This community occurs in alluvial fans and desert slopes that are slightly lower and more xeric than the Peninsular pinyon woodland community (72310) with which it intergrades (Holland 1986). Other dominant species include Parry's beargrass (*Nolina parryi*), Sonoran scrub oak (*Quercus turbinella*), Mojave yucca (*Yucca schidigera*), and sagebrush (*Artemisia tridentata*).

Peninsular juniper woodland and scrub observed on site contains California juniper at greater than 4% absolute cover and lacks pines (*Pinus* sp.). Other commonly occurring species include creosote bush, jointfir, goldenbush, and snakeweed. Peninsular juniper woodland and scrub occurs in large patches throughout the study area within the Proposed Project site (Figure 2.2-2). Within the solar site, there are 98.2 acres and within the gen-tie alignment there are 3.5 acres.

The *Juniperus californica* (California juniper woodland) alliance has a rank of G4S4 in CDFG (2010), meaning it is considered apparently secure globally and in the state. Peninsular juniper

woodland and scrub is not considered special status by CDFW, but is considered special status based on mitigation recommendations of the County (County of San Diego 2010).

Disturbed Habitat (11300)

Disturbed land refers to areas that have been permanently altered by previous human activity that has eliminated all future biological value of the land for most species. The native or naturalized vegetation is no longer present, and the land lacks habitat value for special-status wildlife, including potential raptor foraging. Disturbed land found throughout the study area consists primarily of unpaved roads (Figure 2.2-2). These roads have been graded and contain little native vegetation. Within the solar site, there is no existing disturbed land and within the gen-tie alignment, there is 0.1 acre.

Disturbed land is not considered special status by CDFW or by the County (County of San Diego 2010).

2.2.1.3 Flora

Twenty-nine vascular plant species, consisting of 26 native species (90%) and 3 non-native species (10%), were recorded on site during the reconnaissance surveys and jurisdictional delineation (see Appendix 2.2-1, Appendix A, for a cumulative list of plant species observed on site). As noted in the discussion of survey limitations, the Project vicinity had subnormal rainfall in winter of 2013 and annual plants were expected to exhibit poor production. Therefore, several undetected annual plant species may occur on site. Special-status plant species that have moderate or high potential to occur in the Project site are discussed in Section 2.2.1.5.

2.2.1.4 Fauna

The Project area supports habitat for common upland species. Scrub, chaparral, and woodland habitats within the Project area provide foraging and nesting habitat for migratory and resident bird species and other wildlife species. Rock outcroppings are present north of Old Highway 80 within the Project area and provide cover and foraging opportunities for wildlife species, including reptiles and mammals.

See Appendix 2.2-1, Appendix B, for a cumulative list of animal species observed on site during focused Quino checkerspot butterfly surveys, vegetation mapping, burrowing owl survey, raptor survey, and jurisdictional delineation. There were 99 species observed on the Project site. Species richness in the Project area is moderate due to the property size, amount of undeveloped land, and the number of native upland habitats. Species richness is generally increased with the presence of more habitat types and ecotones. Although species richness is moderate, the number of species and the wildlife population levels (i.e., number of individuals) is typical for undeveloped areas in this

region, particularly those areas that support multiple upland habitat types. Special-status wildlife species are addressed in Section 2.2.1.6, Special-Status Animal Species.

2.2.1.5 Special-Status Plant Species

Endangered, rare, or threatened plant species, as defined in California Environmental Quality Act (CEQA) Guidelines Section 15380(b) (14 CCR 15000 et seq.), are referred to as “special-status plant species” in this report and include (1) endangered or threatened plant species recognized in the context of the California Endangered Species Act (CESA) and the federal Endangered Species Act (ESA), (2) plant species with a California Native Plant Society California Rare Plant Rank (CRPR) 1 through 4, (CDFW 2014b; CNPS 2014), and (3) plant species considered sensitive by the County (County of San Diego 2010, Table 2).

Special-status plant species known to occur in the surrounding vicinity and their potential to occur on site are presented in Appendix 2.2-1, Appendices C and D. These appendices analyze each of these special-status species’ occurrence or potential to occur based on known range, habitat associations, preferred soil substrate, life form, elevation, and blooming period. Appendix 2.2-1, Appendix C, includes the special-status species that have a moderate or high potential to occur. Appendix 2.2-1, Appendix D, includes the special-status species that are either not expected to occur or have a low potential to occur.

Fourteen special-status plant species have a moderate or high potential to occur on the Project site (Appendix 2.2-1, Appendix C), nine County List A or B species, one County List C species, and four County List D species (County of San Diego 2010). Each of these special-status species is described below.

Critical Habitat

There is no USFWS-designated critical habitat for plant species within 5 miles of the Project area (Figure 2.2-3, USFWS Critical Habitat) (USFWS 2014).

County List A and B Species

Plants categorized as County List A species are plants that are rare, threatened, or endangered in California and elsewhere. Plants categorized as County List B are rare, threatened, or endangered in California, but more common elsewhere (County of San Diego 2010). County List A and B species that have been identified as having a moderate to high potential to occur in the Proposed Project site are described as follows (see Appendix 2.2-1, Appendix C); the suitable habitat was quantified based on the Habitat Suitability Model (see Appendix 2.2-1, Appendix E).

Pygmy lotus (*Acmispon haydonii*)

Pygmy lotus is a County List A species and has a CRPR of 1B.3. This perennial herb is in the Fabaceae family, has been documented at elevations from 1,7016 to 3,937 feet above mean sea level (amsl), and blooms from January to June (CNPS 2014). Pygmy lotus occurs on rocky soils in pinyon and juniper woodland and Sonoran desert scrub. It has been documented within Imperial, Riverside, and San Diego Counties. Additional records are known from Baja California (CNPS 2014). Non-native plants and habitat disturbance resulting from off-highway vehicles are threats to the species. The Project site is within the known geographic range of this species; there is a known occurrence approximately 1.5 miles east of the Project site (CDFW 2014a). Additionally, the Project site is within the known elevational range of the species, and there is suitable vegetation present on site. Therefore, there is a moderate potential for this species to occur on site.

There are 90.6 acres of suitable habitat for pygmy lotus on the Project site.

Jacumba milk-vetch (*Astragalus douglasii* var. *perstrictus*)

Jacumba milk-vetch is a County List A species and has a CRPR of 1B.2. This perennial herb is in the Fabaceae family, has been documented at elevations from 2,953 to 4,495 feet amsl, and blooms from April to June (CNPS 2014). Jacumba milk-vetch occurs on rocky soils in chaparral, cismontane woodland, pinyon and juniper woodland, riparian scrub, and valley and foothill grasslands. It has been documented within San Diego County and Baja California (CNPS 2014). Development in desert regions and introduction of non-native plant species are threats to the species. The Project site is within the known geographic range of this species; there is a known occurrence that is immediately adjacent to the northwest corner of the Project site (CDFW 2014a). This species was also observed during surveys for San Diego Gas & Electric's (SDG&E's) East County (ECO) Substation project (CPUC and BLM 2011). Additionally, the Project site is within the known elevational range of the species, and there is suitable vegetation present. Therefore, there is a high potential for this species to occur on site.

There are 217.7 acres of suitable habitat for Jacumba milk-vetch on the Project site.

Tecate tarplant (*Deinandra floribunda*)

Tecate tarplant is a County List A species and has a CRPR of 1B.2. This annual herb is in the Asteraceae family, has been documented at elevations from 230 to 4,003 feet amsl, and blooms from August to October (CNPS 2014). Tecate tarplant occurs in chaparral and coastal scrub and is associated with drainages. It has been documented within San Diego County, with additional records from Baja California (CNPS 2014). Development and grazing activities are threats to this species. The Project site is within the known geographic range of this species; there is a known

occurrence approximately 1.8 miles west of the Project site (CDFW 2014a). Additionally, the Project site is within the known elevational range of the species, and there is suitable vegetation and drainages present on site. Therefore, there is a high potential for this species to occur on site.

There are 186.9 acres of suitable habitat for Tecate tarplant on the Project site.

Sticky geraea (*Geraea viscida*)

Sticky geraea is a County List B species and has a CRPR of 2.3. This perennial herb is in the Asteraceae family, has been documented at elevations from 1,476 to 5,577 feet amsl, and blooms from May to July (CNPS 2014). Sticky geraea occurs in chaparral, often in disturbed areas. It has been documented within Imperial and San Diego Counties, with additional records from Baja California (CNPS 2014). This species is threatened by increased development. The Project site is within the known geographic range of this species; there is a known occurrence approximately 1.3 miles north and 2 miles east of the Project site (CDFW 2014a). The species was also observed during the surveys for the ECO Substation project (CPUC and BLM 2011). Additionally, the Project site is within the known elevational range of the species, and there is suitable vegetation present on site. Therefore, there is a moderate potential for this species to occur on site.

There are 199.5 acres of suitable habitat for sticky geraea on the Project site.

Slender-leaved ipomopsis (*Ipomopsis tenuifolia*)

Slender-leaved ipomopsis is a County List B species and has a CRPR of 2.3. This perennial herb is in the Polemoniaceae family, has been documented at elevations from 328 to 3,937 feet amsl, and blooms from March to May (CNPS 2014). Slender-leaved ipomopsis occurs in chaparral, pinyon and juniper woodland, Sonoran desert scrub with gravelly to rocky soils. It has been documented within Imperial and San Diego Counties, with additional records from Baja California (CNPS 2014). The Project site is within the known geographic range of this species; there are known occurrences approximately 0.3 mile northwest and southeast of the Project site (CDFW 2014a). The species was also observed during the surveys for the ECO Substation (CPUC and BLM 2011). Additionally, the Project site is within the known elevational range of the species, and there is suitable vegetation present on site. Therefore, there is a moderate potential for this species to occur on site.

There are 220.9 acres of suitable habitat for slender-leaved ipomopsis on the Project site.

Desert beauty (*Linanthus bellus*)

Desert beauty is a County List B species and has a CRPR of 2.3. This annual herb is in the Polemoniaceae family, has been documented at elevations from 3,281 to 4,593 feet amsl, and

blooms from April to May (CNPS 2014). Desert beauty occurs on sandy soils in chaparral. It has been documented within San Diego County, with additional records from Baja California (CNPS 2014). Solar developments, off-road vehicles, and grazing are threats to this species. The Project site is within the known geographic range of this species; there is a known occurrence overlapping the Project site within the west-central portion (CDFW 2014a). This species was also observed during surveys for the ECO Substation (CPUC and BLM 2011). Additionally, the Project site is within the known elevational range of the species, and there is suitable vegetation present on site. Therefore, there is a high potential for this species to occur on site.

There are 186.9 acres of suitable habitat for desert beauty on the Project site.

Mountain Springs bush lupine (*Lupinus excubitus* var. *medius*)

Mountain Springs bush lupine is a County List A species and has a CRPR of 1B.3. This perennial herb is in the Fabaceae family, has been documented at elevations from 1,394 to 4,495 feet amsl, and blooms from March to May (CNPS 2014). Mountain Springs bush lupine occurs on in pinyon and juniper woodland and Sonoran desert scrub. It has been documented within Imperial and San Diego Counties, with additional records from Baja California (CNPS 2014). This species is threatened by off-road vehicles. The Project site is within the known geographic range of this species; there is a known occurrence directly adjacent to the northwest corner of the Project site (CDFW 2014a). Approximately 20 additional occurrences are within 5 miles of the Project (CDFW 2014a). Additionally, the Project site is within the known elevational range of the species, and there is suitable vegetation present on site. Therefore, there is a moderate potential for this species to occur on site.

There are 120.1 acres of suitable habitat for Mountain Springs bush lupine on the Project site.

Southern jewel-flower (*Streptanthus campestris*)

Southern jewel-flower is a County List A species and has a CRPR of 1B.3. This perennial shrub is in the Brassicaceae family, has been documented at elevations from 2,953 to 7,546 feet amsl, and blooms from May to July (CNPS 2014). Southern jewel-flower occurs on rocky soils in chaparral, lower montane coniferous forest, and pinyon and juniper woodland. It has been documented within Imperial, Riverside, Santa Barbara, San Bernardino, San Diego, and Ventura Counties, with additional records from Baja California (CNPS 2014). The Project site is within the known geographic range of this species; there is a known occurrence approximately 2 miles northeast and 4.8 miles northwest of the Project site (CDFW 2014a). Additionally, the Project site is within the known elevational range of the species, and there is suitable vegetation present on site. Therefore, there is a moderate potential for this species to occur on site.

There are 217.7 acres of suitable habitat for southern jewel-flower on the Project site.

Parry's tetracoccus (*Tetracoccus dioicus*)

Parry's tetracoccus is a County List A species and has a CRPR of 1B.2. This perennial deciduous shrub is in the Picrodendraceae family, has been documented at elevations from 541 to 3,281 feet amsl, and blooms from April to May (CNPS 2014). Parry's tetracoccus occurs in chaparral and coastal scrub. It has been documented within Orange, Riverside, and San Diego Counties, with additional records from Baja California (CNPS 2014). The Project site is within the known geographic range of this species; there is a known occurrence approximately 2.5 miles west of the Project site (CDFW 2014a). Additionally, the Project site is within the known elevational range of the species, and there is suitable vegetation present on site. Therefore, there is a moderate potential for this species to occur on site.

There are 186.9 acres of suitable habitat for Parry's tetracoccus on the Project site.

County List C and D Species; Other

Plants categorized as County List C species are plants that may be rare, but more information is needed to determine their true rarity status. Plants categorized as County List D are of limited distribution and are uncommon, but not presently rare or endangered (County of San Diego 2010). County List C and D species that have been identified as having a high potential to occur in the Proposed Project site are described as follows and included in Appendix 2.2-1, Appendix C.

Fremont barberry (*Berberis fremontii*)

Fremont barberry is a County List C species and has a CRPR of 2.3. It is a perennial evergreen shrub in the Berberidaceae family, and blooms from April to June. Fremont barberry has been documented at elevations from 2,756 to 6,070 feet amsl (CNPS 2014). This species occurs on rocky soils in chaparral, Joshua tree woodland, and pinyon and juniper woodland. In California, it has been documented in San Bernardino and San Diego Counties, with additional records outside of California. No threats to this species have been identified (CNPS 2014). Fremont barberry is known to occur approximately 1.8 and 3 miles west of the Project site (CDFW 2014a). Additionally, the Project site is in the known elevational range of the species, and suitable vegetation is present on site. Therefore, there is a moderate potential for this species to occur on site.

There are 217.7 acres of suitable habitat for Fremont barberry on the Project site.

Payson's jewel-flower (*Caulanthus simulans*)

Payson's jewel-flower is a County List D species and has a CRPR of 4.2. It is an annual herb in the Brassicaceae family, and blooms from March to May. Payson's jewel-flower has been documented at elevations from 295 to 7,218 feet amsl (CNPS 2014). This species occurs on granitic soils in chaparral and coastal scrub. It has been documented in Riverside and San Diego

Counties. No threats to this species have been identified (CNPS 2014). Payson's jewel-flower is known to occur approximately 6 miles west of the Project site (CDFW 2014a). Additionally, the Project site is in the known elevational range of the species, and suitable vegetation is present on site. Therefore, there is a moderate potential for this species to occur on site.

There are 186.9 acres of suitable habitat for Payson's jewel-flower on the Project site.

Colorado Desert Larkspur (*Delphinium parishii* ssp. *subglobosum*)

Colorado Desert larkspur is a County List D species and has a CRPR of 4.3. It is a perennial herb in the Ranunculaceae family, and blooms from March to June. Colorado Desert larkspur has been documented at elevations from 1,969 to 5,906 feet amsl (CNPS 2014). This species occurs in chaparral cismontane woodland, pinyon and juniper woodland, and Sonoran desert scrub. It has been documented in Imperial, Riverside, and San Diego Counties, with additional records in Baja California, Mexico. Non-native plants have been identified as a possible threat to this species (CNPS 2014). Colorado Desert larkspur is known to occur approximately 0.4 mile north and northwest of the Project site (Jepson Flora Project 2014). Additionally, the Project site is within the known elevational range of the species and suitable vegetation is present on site. Therefore, there is a moderate potential for this species to occur on site.

There are 307.0 acres of suitable habitat for Colorado Desert larkspur on the Project site.

Palmer's grapplinghook (*Harpagonella palmeri*)

Palmer's grapplinghook is a County List D species and has a CRPR of 4.2. It is an annual herb in the Boraginaceae family, and blooms from March to May. Palmer's grapplinghook has been documented at elevations from 66 to 3,133 feet amsl (CNPS 2014). This species occurs on clay soils in chaparral, coastal scrub, and valley and foothill grassland. It has been documented in Los Angeles, Orange, Riverside, and San Diego Counties, with additional records in Santa Catalina Island, Arizona, Baja California, and Sonora, Mexico. Development, agricultural activities, and non-native species introduction are common threats to this species; in addition, it is an inconspicuous and easily overlooked species (CNPS 2014). Palmer's grapplinghook was observed during surveys for the ECO Substation project as well as being observed within the vicinity (Jepson Flora Project 2014; SDNHM 2014a; RBC 2009a). Additionally, the Project site is in the known elevational range of the species, and suitable vegetation is present on site. Therefore, there is a moderate potential for this species to occur on site.

There are 65.6 acres of suitable habitat for Palmer's grapplinghook on the Project site.

Pride-of-California (*Lathyrus splendens*)

Pride-of-California is a County List D species and has a CRPR of 4.3. It is a perennial herb in the Fabaceae family, and blooms from March to July. Pride-of-California has been documented at elevations from 656 to 5,003 feet amsl (CNPS 2014). This species occurs in chaparral and has been documented in San Diego County, with additional records in Baja California. No threats to this species have been identified (CNPS 2014). Pride-of-California was observed during surveys for the ECO Substation project (RBC 2009a). Additionally, the Project site is in the known elevational range of the species, and suitable vegetation is present on site. Therefore, there is a moderate potential for this species to occur on site.

There are 179.4 acres of suitable habitat for pride-of-California on the Project site.

Low bush monkeyflower (*Mimulus aurantiacus* var. *aridus*)

Low bush monkeyflower is a County List D species and has a CRPR of 4.3. It is a perennial evergreen shrub in the Phrymaceae family, and blooms from April to July. Low bush monkeyflower has been documented at elevations from 2,461 to 3,937 feet amsl (CNPS 2014). This species occurs on rocky soils in chaparral and Sonoran desert scrub. It has been documented in Imperial and San Diego Counties, with additional records in Baja California. This species is possibly threatened by off-road vehicles (CNPS 2014). Low bush monkeyflower was observed during surveys for the ECO Substation project (CPUC and BLM 2011) and is known to occur within the vicinity (CDFW 2014a). Additionally, the Project site is in the known elevational range of the species, and suitable vegetation is present on site. Therefore, there is a moderate potential for this species to occur on site.

There are 186.9 acres of suitable habitat for pride-of-California on the Project site.

2.2.1.6 Special-Status Animal Species

Endangered, rare, or threatened wildlife species, as defined in CEQA Guidelines, Section 15380(b) (14 CCR 15000 et seq.), are referred to as “special-status wildlife species” and, as used in this report, include (1) endangered or threatened wildlife species recognized in the context of the CESA and ESA; (2) California Species of Special Concern (SSC) and Watch List (WL) species, as designated by the CDFW (2014c); (3) mammals and birds that are fully protected (FP) species, as described in the California Fish and Game Code, Sections 4700 and 3511; (4) Birds of Conservation Concern (BCC), as designated by the USFWS (2008); and (5) wildlife species considered sensitive by the County (County of San Diego 2010, Table 3).

Five special-status wildlife species were detected within the Project area: Bell’s sparrow, turkey vulture, California horned lark (*Eremophila alpestris actia*), loggerhead shrike (*Lanius*

ludovicianus), and San Diego black-tailed jackrabbit (*Lepus californicus bennettii*). Due to the high mobility of these species, not all observations were mapped. However, generally mapped special-status species points are depicted in Figure 2.2-2. These species are described in further detail below. A raptor survey and habitat assessment was conducted for the solar site in winter 2013/2014. Special-status wildlife species known to occur in the surrounding region and their potential to occur on site are presented in Appendix 2.2-1, Appendices F and G. This list includes the potentially occurring special-status wildlife species provided by the County's pre-application meeting letter for Jacumba Solar (County of San Diego 2014a), which was used as a reference document; Draft East County Plan – Species List (County of San Diego 2009); and wildlife species recorded in the Jacumba quadrangle and incorporating the surrounding six quadrangles (CDFW 2014a; USFWS 2014). The evaluation of each species' potential to occur on site is based on the habitat present on site and Dudek's knowledge of biological resources of the area and regional distribution of each species.

Critical Habitat

USFWS-designated critical habitat for Peninsular bighorn sheep (*Ovis canadensis nelsoni*) and Quino checkerspot butterfly occurs within 5 miles of the Project area (USFWS 2014) (Figure 2.2-3), but no critical habitat for wildlife species occurs on site.

County Group 1 Species

County Group 1 species that have been observed in the Project area, or have a high potential to occur, are described below and included in Appendix 2.2-1, Appendices F and G. In addition, all federally or state-listed species identified in the County's Pre-Application Summary Letter (County of San Diego 2014a) are discussed in this subsection.

Birds

Sharp-shinned hawk (*Accipiter striatus*) – BCC/SSC/County Group 1

Sharp-shinned hawk is a BCC, SSC, and County Group 1 species. It is a fairly common migrant and winter resident throughout California. Nesting records for this species are poorly documented but it may nest south in Coast Ranges and at scattered locations in the Transverse and Peninsular Ranges (Zeiner et al. 1990a). This species breeds in ponderosa pine, black oak, riparian deciduous, mixed conifer, and Jeffrey pine habitats (with preferences towards riparian habitats). This species is also known to use all habitat types (except alpine, open prairie, and bare desert) in the winter. Sharp-shinned hawks forage on small birds, small mammals, insects, reptiles, and amphibians (Zeiner et al. 1990a). This species was observed during winter raptor surveys in December 2013 and January 2014; however, it was not mapped. Although suitable foraging habitat is on site, no suitable nesting habitat occurs. Therefore, this species is not

expected to nest in the Proposed Project area. Since this species is an aerial hunter (foraging primarily on flying birds), impacts to habitat are not expected to directly impact foraging habitat. Therefore, this species will not be analyzed for impacts to foraging habitat.

Cooper's hawk (*Accipiter cooperi*) – WL/County Group 1

Cooper's hawk is a WL and a County Group 1 species. It is found throughout California in wooded areas. It inhabits live oak, riparian, deciduous, or other forest habitats near water. Nesting and foraging usually occur near open water or riparian vegetation. Nests are built in dense stands with moderate crown depths, usually in second-growth conifer or deciduous riparian areas. Cooper's hawks use patchy woodlands and edges with snags for perching while they are hunting for prey such as small birds, small mammals, reptiles, and amphibians within broken woodland and habitat edges (Zeiner et al. 1990a).

This species was not observed during biological surveys. There are CNDDDB records for this species within the Live Oak Springs and Jacumba quadrangles (CDFW 2014a), approximately 3.5 miles west of the Project site (CPUC and BLM 2011), and elsewhere in the vicinity (SDNHM 2014b).

Within the Proposed Project area, there are no permanent water sources or nesting habitat (i.e., large trees) that would support nesting species. However, the Proposed Project area may support foraging opportunities within semi-desert chaparral, Sonoran mixed woodland scrub, upper Sonoran subshrub scrub, Peninsular juniper woodland and scrub, and disturbed land. This species has a low potential to nest and high potential to forage in Proposed Project area.

Burrowing owl (*Athene cunicularia*) – BCC/SSC/County Group 1

This species has a moderate to low potential to burrow and winter within the Proposed Project; however, since focused surveys were conducted for this species, it is described here in more detail but is not included in the impacts analysis (which is focused on observed species or those with high potential to occur).

The burrowing owl is a BCC, SSC, and County Group 1 species. It occurs throughout North and Central America west of the eastern edge of the Great Plains south to Panama (County of Riverside 2008a). The winter range is much the same as the breeding range, except that most burrowing owls apparently vacate the northern areas of the Great Plains and the Great Basin (County of Riverside 2008a) in winter. The majority of 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 2008a). The burrowing owls in Northern California are believed to migrate (Coulombe 1971).

In California, burrowing owls are year-round 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 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 2008a). They typically require burrows made by fossorial (burrowing) mammals, such as California ground squirrels.

No burrowing owl or sign was observed within the Proposed Project area during surveys. Although not recorded in the CNDDDB seven-quad search, a single burrowing owl was observed foraging approximately 3.5 miles west of the Project site (CPUC and BLM 2011). Surveys also found three suitable burrowing locations (including one complex) on site (Figure 2.2-2). Suitable habitat within the Proposed Project area includes semi-desert chaparral, Sonoran mixed woodland scrub, upper Sonoran subshrub scrub, Peninsular juniper woodland and scrub, and disturbed land.

Bell's sparrow (*Artemisiospiza belli*) – BCC/WL/County Group 1

The special-status nominate subspecies of the Bell's sparrow (Bell's sage sparrow, *A. b. belli*) is a BCC, WL, and County Group 1 species. It occurs as a nonmigratory resident on the western slope of the central Sierra Nevada Range, and in the coastal ranges of California, southward from Marin County and Trinity County, extending into north-central Baja California, Mexico (County of Riverside 2008b). The range of Bell's sparrow overlaps with that of at least one other subspecies of sage sparrow (County of Riverside 2008b).

The Bell's sparrow occupies semi-open habitats with evenly spaced shrubs that are 3.3 to 6.6 feet high (County of Riverside 2008b). For site selection, specific shrub species may be less important than overall vertical structure, habitat patchiness, and vegetation density (Wiens and Rotenberry 1981). Bell's sparrow is uncommon to fairly common in dry chaparral and coastal sage scrub along the coastal lowlands, inland valleys, and lower foothills of the mountains within its range.

The Bell's sparrow (*Artemisiospiza belli*) was observed on site during biological surveys, but its occurrence was not mapped. Within the Project study area, suitable foraging and nesting habitat includes semi-desert chaparral.

Golden eagle (*Aquila chrysaetos*) – BCC/WL; FP/County Group 1

Golden eagle is a BCC, WL, FP, and County Group 1 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 anytime during the year, but breeding typically begins in January with nest building and egg laying occurring in February to March (Brown 1976; WRI 2010, as cited in CPUC and BLM 2011). Pairs may build more than one nest and attend 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, as cited in CPUC and BLM 2011). 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 cited in CPUC and BLM 2011). As a result of the long breeding cycle, some pairs breed every other year even when food is abundant (WRI 2010, as cited in CPUC and BLM 2011). Other environmental conditions may also affect the breeding of eagles, including drought conditions that may affect 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, as cited in CPUC and BLM 2011). As a correlate to the lower prey population size, the Wildlife Research Institute (WRI) has confirmed unusually low reproductive levels of golden eagles in other regions of Southern California (WRI 2010, as cited in CPUC and BLM 2011).

There is no suitable nesting habitat within the Project area due to the lack of forested areas and cliffs. Based on the lack of observations of golden eagle during surveys, this species may not use the Project area regularly. There are no known nesting locations within 4,000 feet of the site within the United States, but golden eagles are known to historically nest directly north of the Project site (CDFW 2014a). CNDDDB describes two occurrences within Table Mountain for this

species. One occurrence is mapped approximately 1.4 miles north of the Project site, where one fledged young was observed in 1977 in the southern section of Table Mountain (Occ. No. 211). The second occurrence is mapped approximately 2.0 miles north of the Project site, where two nests and three other inactive nests were observed in the vicinity along the northern end of Table Mountain within rock outcrops. Additionally, this record documents one fledged young observed in 1976 and two spotted eggs observed at a nest in 2011 (Occ. No. 212). Within the Project area, suitable foraging habitat (approximately 304 acres) includes semi-desert chaparral, Sonoran mixed woodland scrub, upper Sonoran subshrub scrub, Peninsular juniper woodland and scrub, and disturbed land. However, open habitats are more suitable for foraging than trees or denser habitats.

Golden eagle was not observed during biological surveys. However, it has been documented in the Carrizo Mountain, Jacumba, and Sombrero Peak quadrangles surrounding the Jacumba Solar Project area (CDFW 2014a) and there has been confirmed breeding north of the Project site (SDNHM 2014b). Golden eagle has a high potential to forage and is not expected to nest in the Proposed Project area or within 4,000 feet of the Project site.

There is existing data for the region available from the Final EIR/Environmental Impact Statement for the SDG&E ECO Substation Project (CPUC and BLM 2011) and the Draft EIR for the Soitec Solar Development Project (County of San Diego 2014b).

Soitec Solar Development Project – Golden Eagle Surveys

In spring 2012, WRI conducted a golden eagle helicopter and ground survey within San Diego County, and in 2013 WRI prepared a golden eagle report for the Soitec Solar Development project, located approximately 10 miles west of the Jacumba Solar Project. In areas surrounding up to over 15 miles from Soitec, WRI biologists documented six active golden eagle territories: Tecate East, Morena Butte, Glenciff, Thing Valley, Carrizo Gorge, and Table Mountain (WRI 2013, as cited in County of San Diego 2014b). The Table Mountain territory, which is an estimated area based on the location of their nest and associated foraging habitat, appears to include areas north of the Jacumba Project site.

Tule Wind Project – Golden Eagle Surveys

In spring 2010, WRI conducted a golden eagle helicopter survey within a 10-mile radius of the proposed Tule Wind Project, located just north of the Project area. The 2010 survey for the Tule Wind Project found 10 golden eagle territories, 6 of which were active,² with 1 territory possibly active and the 3 remaining territories considered inactive. All 10 of the territories were documented

² Active territories were determined by the presence of active nests, which can be defined by either the presence of a golden eagle (e.g., an incubating female or a young bird), or evidence of new material having been added during the season in which the survey was conducted (WRI 2010).

to be active within the past 2 to 3 years. A total of 37 nests were recorded during the helicopter survey, 31 of which were considered golden eagle nests; many are alternative nesting sites for the same territory used in past years. Because the survey was conducted at the end of March, some of the eagle pairs may have already attempted and failed at nesting for the 2010 breeding season (WRI 2010, as cited in CPUC and BLM 2011). Every mountain range within the survey area, except for the Boundary Peak territory (approximately 2.5 miles to the east), has had recent nest evidence, but only 6 (possibly 7) territories showed evidence of 2010 activity. This is considered typical for breeding activity of this species, and golden eagles may average as few as 62% of the pairs breeding within any 1 year (Kochert et al. 2002 as cited in CPUC and BLM 2011).

Of the six active territories, three nests had golden eagles incubating eggs. The nests with incubating adults are generally described as the Canebrake, Moreno Butte, and Glenn Cliff/Buckman Springs locations.

In 2011, additional eagle observations were collected during bird use county surveys completed for the Tule Wind Project along the valley portion of the Project and the four closest territories: Table Mountain, Carrizo Gorge, Thing Valley, and Canebreak. Observations were made weekly during the breeding season. Based on these observations, Table Mountain is considered an occupied territory due to adult eagles flying in the area, but not active in 2011 since no nesting behavior was observed. The flight paths gathered during these observations demonstrate eagle use of the ridgeline area of the Tule project and limited foraging in the McCain Valley.

Also in 2011, five satellite transmitters were attached to golden eagle nestlings to collect data about their movements upon fledging. These data indicate the following regarding golden eagle behavior. The Canebreak fledgling used the north end of the ridge and would overlap the northernmost ridge line turbines (Tule Wind Project). The O'Neil fledgling flew more than 20 miles from its nest, likely crossing the Tule Wind Project ridgeline turbines and the northern end of the valley turbines. The Glen Cliff fledgling flew up to the Project area and south of the Project, going distances that are long enough to ultimately cross over or through the Tule Wind Project area. Data provided to the agencies regarding the Moreno Butte fledglings indicate that the birds were in the initial fledgling period; therefore, they had not begun the expanding movement phase of fledging, and thus the data did not provide any indication of their future use area.

Turkey vulture (*Cathartes aura*) – Group 1

Turkey vulture is not considered special status by any state or federal agencies; however, it is considered a Group 1 species by the County (County of San Diego 2010). In California, it is common during the breeding season and is a year-round resident west of the Sierra Nevada Mountains, especially in coastal areas. Summer and yearlong ranges also include the southeastern United States; portions of Texas, Mexico, Central America, and South America; and some islands in the Caribbean (Kirk and Mossman 1998).

Turkey vultures use a variety of habitats while foraging on both wild and domestic carrion. They prefer open stages of most habitats. In the western United States, they tend to occur regularly in areas of hilly pastured rangeland, non-intensive agriculture, and areas with rock outcrops suitable for nesting, although they are not generally found in high-elevation mountain areas (Kirk and Mossman 1998; Zeiner et al. 1990a). Nest locations tend to be difficult to find and are usually located in a crevice among granite boulders (Unitt 2004). However, this species prefers hilly areas that provide deflective updrafts for flight and generally avoids extensive areas of row-crop farmland (Kirk and Mossman 1998).

Turkey vulture was observed foraging throughout the Project area during biological surveys, but the observations were not mapped. The Project area does not support suitable cliffs and large trees for nesting, but there is suitable foraging habitat within the Project area. Suitable foraging habitat includes most vegetation communities and undeveloped land cover on site (i.e., semi-desert chaparral, Sonoran mixed woodland scrub, upper Sonoran subshrub scrub, Peninsular juniper woodland and scrub, and disturbed land). There are no CNDDDB records within the seven-quadrant searches. Although the species has been documented in the vicinity (SDNHM 2014b) turkey vulture breeding surrounding the Project area is poorly documented, and no nests have been recorded within the area (Unitt 2004).

Prairie Falcon (*Falco mexicanus*) – BCC/WL/County Group 1

Prairie falcon is a USFWS BCC, WL, and County Group 1 species. The prairie falcon is a permanent resident found throughout most of California. It prefers chaparral, desert grasslands, and creosote bush habitats for foraging, and nests on cliffs or bluffs near these open habitats.

Prairie falcon was not observed during surveys. Although the Proposed Project site lacks suitable nesting habitat, such as cliffs, there is suitable foraging habitat. This species has been documented in the Carrizo Mountain, In-ko-pah Gorge, Jacumba, Live Oak Springs, Sombrero Peak, Sweeney Pass, and Tierra Del Sol quadrangles (CDFW 2014a) and in the vicinity (SDNHM 2014b).

Within the Project area, suitable foraging habitat includes semi-desert chaparral, Sonoran mixed woodland scrub, upper Sonoran subshrub scrub, Peninsular juniper woodland and scrub, and disturbed land. This species is not expected to nest within the Project area but has a high potential to forage in the area.

Loggerhead shrike (*Lanius ludovicianus*) – BCC/SSC/County Group 1

Loggerhead shrike is a BCC, CDFW SSC, and County Group 1 species. It is found in lowlands and foothills throughout California, and it remains in the southern portion of the state year-round. Preferred habitats for the loggerhead shrike are open areas that include scattered shrubs, trees,

posts, fences, utility lines, or other structures that provide hunting perches with views of open ground, as well as nearby spiny vegetation or man-made structures (such as the top of chain-link fences or barbed wire) that provide means to skewer prey items. The species occurs most frequently in riparian areas along the woodland edge, grasslands with sufficient perch and butcher sites, scrublands, and open-canopied woodlands, although they can be quite common in agricultural and grazing areas; in addition, they can sometimes be found in mowed roadsides, cemeteries, and golf courses, although they occur rarely in heavily urbanized areas (Zeiner et al. 1990a). Loggerhead shrikes build nests in stable shrubs or trees, requiring dense foliage for well-concealed nests.

Loggerhead shrike was observed on multiple occasions during biological surveys along the southwestern portion of the Project area (Figure 2.2-2), but not all observations were mapped. There are no CNDDDB records for this species within the Project area or surrounding seven-quad search; however, the species is known to occur in the vicinity (SDNHM 2014b). Suitable nesting and perching habitat is present on site. Suitable foraging habitat in the Project area includes semi-desert chaparral, Sonoran mixed woodland scrub, upper Sonoran subshrub scrub, Peninsular juniper woodland and scrub, and disturbed land. Suitable nesting habitat includes semi-desert chaparral, Sonoran mixed woodland scrub, and Peninsular juniper woodland and scrub.

Invertebrates

Quino checkerspot butterfly (*Euphydryas editha quino*) – FE/County Group 1

The Quino checkerspot butterfly is a federally endangered species found only in western Riverside County, southern San Diego County, and northern Baja California, Mexico (USFWS 2003). This species is found on sparsely vegetated hilltops, ridgelines, and occasionally on rocky outcrops in open chaparral and coastal sage scrub habitat (typically at elevations less than 3,000 feet amsl). This species requires host plants within these vegetation communities for feeding and reproduction. The primary larval host plant is dwarf plantain (*Plantago erecta*); however, several other species have been documented as important larval host plants, including desert plantain, sometimes called woolly plantain (*P. patagonica*); thread-leaved bird's beak (*Cordylanthus rigidus*); white snapdragon (*Antirrhinum coulterianum*); owl's clover (*Castilleja exserta*); and Chinese houses (*Collinsia* spp.) (USFWS 2003). Nearly all areas except the urban/developed were surveyed during the protocol-level surveys. However, developed lands (i.e., Old Highway 80) traversing the Project site are not part of the Proposed Project.

No Quino checkerspot butterfly adult nectar plants were observed within the Proposed Project area. Protocol surveys were conducted in March and April 2013 (Appendix 2.2-1, Appendix H). The surveys were negative for the species and host plants. This species is documented in the Jacumba, Live Oak Springs, Sombrero Peak and Tierra Del Sol quadrangles (CDFW 2014a; USFWS 2014) and the ECO Substation approximately 3.5 miles west of the

Project site (RBC 2009b, 2010). Based on the negative survey results, Quino checkerspot butterfly has a low potential to occur in the Project area.

County Group 2 Species

County Group 2 species that have been observed in the Project area, or have high potential to occur (Appendix 2.2-1, Appendix F), are described below.

Reptiles

Belding's orange-throated whiptail (*Aspidoscelis hyperythra beldingi*) – SSC/County Group 2

Belding's orange-throated whiptail is a CDFW SSC and County Group 2 species. Its current range includes southwestern California and Baja California, Mexico, from the southern edges of Orange County (Corona del Mar) and San Bernardino County (near Colton), southward to the Mexican border. This species is located on the coastal slope of the Peninsular Ranges and extends from near sea level to 3,412 feet amsl (northeast of Aguanga, Riverside County) (Jennings and Hayes 1994). It commonly occurs in coastal sage scrub, chaparral, grassland, juniper, and oak woodland.

Although this species was recorded in the seven-quad search, there are no CNDDDB records for this species within the Project area and Belding's orange-throated whiptail was not detected during surveys. However, there is suitable habitat on site, including termite sign observed on site. Additionally, this species was observed during surveys for the ECO Substation (CPUC and BLM 2011). Therefore, this species has high potential to occur. Within the Project area, suitable habitat includes semi-desert chaparral, Sonoran mixed woody scrub, Peninsular juniper woodland and scrub, and disturbed land.

Coastal whiptail (*Aspidoscelis tigris stejnegeri*) – County Group 2

Coastal whiptail is not considered special status by any state or federal agencies; however, it is a County Group 2 species. It is found in coastal Southern California, mostly west of the Peninsular Ranges and south of the Transverse Ranges, north into Ventura County, and south into Baja California, Mexico (Lowe et al. 1970; Stebbins 2003).

Coastal whiptail was not detected during surveys; however, there is suitable habitat, including rock outcroppings and termite food sources observed in the Project area, and it has high potential to occur. This species is recorded in CNDDDB within the Live Oak Springs quadrangle. This species has a high potential to occur in the Proposed Project area. Within the Project area, suitable habitat includes semi-desert chaparral, Sonoran mixed woodland scrub, upper Sonoran subshrub scrub, Peninsular juniper woodland and scrub, and disturbed land.

Northern red-diamond rattlesnake (*Crotalus ruber ruber*) – SSC/County Group 2

The northern red-diamond rattlesnake is a SSC and County Group 2 species. It is found in a variety of habitats from the coast to the deserts, from San Bernardino County into Baja California, Mexico (below 5,000 feet amsl). It commonly occurs in rocky areas within coastal sage scrub, chaparral, juniper woodlands, and desert habitats, but can also be found in areas devoid of rocks (Lemm 2006).

Northern red-diamond rattlesnake was not observed during surveys, but there is suitable habitat in the vegetation communities with rocky outcroppings, and it has high potential to occur in the Project area. This species is recorded in CNDDDB within the Jacumba, In-Ko-Pah Gorge, and Sweeney Pass quadrangles. Within the Project area suitable habitat includes semi-desert chaparral, Sonoran mixed woodland scrub, upper Sonoran subshrub scrub, Peninsular juniper woodland and scrub, and disturbed land.

Rosy boa (*Lichanura trivirgata*) – County Group 2

Rosy boa is a County Group 2 species. The rosy boa in California ranges from Los Angeles, eastern Kern, and southern Inyo Counties, and south through San Bernardino, Riverside, Orange, and Diego Counties (Spiteri 1988; Stebbins 2003; Zeiner et al. 1990b). It occurs at elevations from sea level to 5,000 feet amsl in the Peninsular and Transverse Ranges. Within its range in Southern California, the rosy boa is absent only from the southeastern corner of California around the Salton Sea and the western and southern portions of Imperial County (Zeiner et al. 1990b). The rosy boa inhabits rocky shrubland and desert habitats, and is attracted to oases and streams, but does not require permanent water (Stebbins 2003).

Rosy boa was not observed during surveys, but there is suitable habitat in the vegetation communities with rocky outcroppings, and it has high potential to occur in the Project area. This species was recorded in the Live Oak Springs quadrangle (CDFW 2014a). Within the Project area suitable habitat includes semi-desert chaparral, Sonoran mixed woodland scrub, upper Sonoran subshrub scrub, Peninsular juniper woodland and scrub, and disturbed land.

Blainville's horned lizard (*Phrynosoma blainvillii*) – SSC/County Group 2

Blainville's horned lizard (previously coast horned lizard) is a SSC and a County Group 2 species. It is found from the Sierra Nevada foothills and central California to coastal Southern California. It is often associated with coastal sage scrub, especially areas of level to gently sloping ground with well-drained loose or sandy soil, but it can also be found in annual grasslands, chaparral, oak woodland, riparian woodland, and coniferous forest between 30 and 7,030 feet amsl (Jennings and Hayes 1994). This reptile typically avoids dense vegetation, preferring 20% to 40% bare ground in its habitat. The Blainville's horned lizard can be locally

abundant in areas where it occurs, with densities near 20 adults per acre. Adults are active from late March through late August, and young are active from August through November or December. Up to 90% of the diet of the Blainville's horned lizard consists of native harvester ants (*Pogonomyrmex* spp.).

Although not observed during biological surveys, this species is recorded in the CNDDDB within the northern section of the Proposed Project site (CDFW 2014a; see Figure 2.2-2) and Jacumba, Live Oak Springs, Sombrero Peak, and Tierra del Sol quadrangles (CDFW 2014a). In addition, the presence of harvester ants observed on site would provide a food source for this species.³ This species has a high potential to occur in the Proposed Project area. Suitable habitat includes semi-desert chaparral, Sonoran mixed woodland scrub, upper Sonoran subshrub scrub, Peninsular juniper woodland and scrub, and disturbed land.

Birds

California horned lark (*Eremophila alpestris actia*) – WL/County Group 2

The California horned lark is a WL and County Group 2 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 eastward 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 it nests on the ground in a hollow scrape.

This species was observed on site during biological surveys with several individuals generally occurring at mapped locations (Figure 2.2-2). However, due to the high mobility of this species not all observations were mapped. Although no CNDDDB occurrences are recorded during the seven-quad search, this species has been documented within the vicinity (CPUC and BLM 2011; SDNHM 2014b). Since the Project area lacks suitable grassland nesting habitat for this species, it is expected that this species would only occur during the non-breeding season. Suitable wintering habitat includes semi-desert chaparral, Sonoran mixed woodland scrub, upper Sonoran subshrub scrub, Peninsular juniper woodland and scrub, and disturbed land.

³ Harvester ants are a primary source of food for Blainville's horned lizards (Californiaherps.com 2014).

Western bluebird (*Sialia mexicana*) – County Group 2

Western bluebird is a County Group 2 species. They are common resident birds in San Diego County, where they prefer montane coniferous and oak woodlands (Unitt 2004). Because this species is not considered special status by state or federal agencies, it is not tracked in CNDDDB.

Western bluebirds were observed during surveys, but were not mapped. Although no suitable nesting habitat is present, suitable foraging habitat within the Proposed Project area includes semi-desert chaparral, Sonoran mixed woodland scrub, upper Sonoran subshrub scrub, Peninsular juniper woodland and scrub, and disturbed land

Barn owl (*Tyto alba*) – County Group 2

The barn owl is a not listed by federal or state agencies, but is a County Group 2 species. It is common throughout its range throughout most continents, and in the Americas, it occurs in much of continental United States, south through Central and South America to Tierra del Fuego (Marti et al. 2005).

In San Diego County, it is an uncommon permanent resident and occurs in urban settings, roosting in buildings, palm leaves, and nest boxes. Unitt (2004) considers this species uncommon in the Anza Borrego Desert region, and is found primarily in developed or agricultural areas, campgrounds, or other areas associated with human development. Nesting has been observed in the Borrego Valley and at Tamarisk Grove (Unitt 2004). Native fan palms, deeply eroded canyons, and other natural habitat types do not appear to be utilized by barn owls for nests.

Barn owls do not seem to exert specific habitat affinities, provided there are ample sites for nesting opportunities and adequate ground for hunting small mammals (Taylor 1994). Habitat types that are commonly utilized include open habitats such as grassland, chaparral, riparian, and other wetland types, from sea level to 1,680 meters (5,512 feet) amsl (Zeiner et al. 1990a).

This species was observed on site during wildlife surveys. Although there is suitable habitat for foraging, there are no trees (or similar structures) on site that would support nesting and nesting is not expected. Suitable foraging habitat within the Proposed Project area includes semi-desert chaparral, Sonoran mixed woodland scrub, upper Sonoran subshrub scrub, Peninsular juniper woodland and scrub, and disturbed land.

Mammals**Northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*) – SSC/County Group 2**

Northwestern San Diego pocket mouse is a SSC and County Group 2 species. This species occurs in coastal scrub, chaparral, grasslands, sagebrush, and similar habitats in western San

Diego County. Micro-habitat includes sandy, herbaceous areas, usually in association with rocks or coarse gravel (CDFW 2014a).

This species was not observed during wildlife surveys. Marginal records for this species are located in Jacumba, but site is located on range boundaries between this subspecies and the pallid San Diego pocketmouse (*C. f. pallidus*), which has the same SSC status and occurs on the eastern slope of the coast range mountains. In addition, this species was not recorded in the CNDDDB seven-quad search. However, this species is determined to have a high potential to occur based on suitable habitat and range. Suitable habitat within the Proposed Project area includes semi-desert chaparral, Sonoran mixed woodland scrub, upper Sonoran subshrub scrub, Peninsular juniper woodland and scrub, and disturbed land.

San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) – SSC/County Group 2

The San Diego black-tailed jackrabbit is a SSC and County Group 2 species. It is confined to coastal Southern California, with marginal eastern records being Mount Piños, Arroyo Seco, Pasadena, San Felipe Valley, and Jacumba (Hall 1981). It is found in many diverse habitats, but primarily in arid regions supporting short-grass habitats. Jackrabbits typically are not found in high grass or dense brush where it is difficult for them to move quickly, and the openness of open scrub habitat likely is preferred over dense chaparral. Jackrabbits are common in grasslands that are overgrazed by cattle, and they are well adapted to using low-intensity agricultural habitats (Hall 1981).

This species was observed on multiple occasions during biological surveys (Figure 2.2-2). Due to the high mobility of this species on site, not all observations were mapped. This species is also documented in the Live Oak Springs quadrangle (CDFW 2014a) and in the vicinity (CPUC and BLM 2011). It can occur within a variety of shrub and woodland habitats within the Project area, including semi-desert chaparral, Sonoran mixed woodland scrub, upper Sonoran subshrub scrub, Peninsular juniper woodland and scrub, and disturbed land.

San Diego desert woodrat (*Neotoma lepida intermedia*) – SSC/County Group 2

San Diego desert woodrat is a SSC and County Group 2 species. This species is found in coastal Southern California into Baja California, Mexico (Reid 2006). Marginal eastern records for the San Diego desert woodrat in the United States include San Luis Obispo, San Fernando in Los Angeles County, the San Bernardino Mountains and Redlands in San Bernardino County, and Julian in San Diego County (Hall 1981). Desert woodrats are found in a variety of shrub and desert habitats and are primarily associated with rock outcroppings, boulders, cacti, or areas of dense undergrowth.

This species is recorded by CNDDDB in the In-Ko-Pah Gorge and Live Oak Springs quadrangles (CDFW 2014a). Within the Project area, the three woodrat middens were observed, indicating this species has potential to occur on site (Figure 2.2-2). Suitable habitat within the Project area includes semi-desert chaparral, Sonoran mixed woodland scrub, upper Sonoran subshrub scrub, Peninsular juniper woodland and scrub, and disturbed land.

Mule deer (*Odocoileus hemionus*) – County Group 2

Mule deer is a County Group 2 species. It is a common species with a widespread distribution throughout the western United States and Canada and south into mainland and Baja California, Mexico (Hall 1981). It occurs throughout most of California, except in deserts and intensively farmed areas without cover (Zeiner et al. 1990c). Throughout its range, mule deer uses coniferous and deciduous forests, riparian habitats, desert shrub, coastal scrub, chaparral, and grasslands with shrubs. It is often associated with successional vegetation, especially near agricultural lands (NatureServe 2012). It uses forested cover for protection from the elements and open areas for feeding (Wilson and Ruff 1999). Mule deer fawn in a variety of habitats that have available water and abundant forage, including moderately dense shrubs and forests, dense herbaceous stands, and higher-elevation riparian and mountain shrub vegetation.

Although this species was not observed during biological surveys, the site contains suitable habitat and good connectivity to open space areas. Openings in the border fence (as described below) may facilitate movement to habitats south of the border. However, regular patrols may reduce the suitability of the habitat. Since this species is not considered special status by state or federal agencies, it is not tracked in CNDDDB. This species has a high potential to occur in the Proposed Project area. Suitable habitat in the Project area includes semi-desert chaparral, Sonoran mixed woodland scrub, upper Sonoran subshrub scrub, Peninsular juniper woodland and scrub, and disturbed land.

Mountain lion (*Puma concolor*) – County Group 2

The mountain lion is not considered special status by any state or federal agencies; however, it is considered a Group 2 species by the County of San Diego (2009) and is considered a Specially Protected Mammal under California Fish and Game Code Section 4800. Its range throughout California extends from deserts to humid forests in the Coast Ranges and from sea level to 3,050 meters (10,000 feet) amsl, but mountain lions do not inhabit xeric regions of the Mojave and Colorado deserts. They are most abundant in habitats that support their primary prey, mule deer, and their seasonal movements tend to follow migrating deer herds.

Mountain lions prefer habitats that provide cover, such as thickets in brush and timber in woodland vegetation (Zeiner et al. 1990c). They also use caves and other natural cavities for cover and breeding. They require extensive areas of riparian vegetation and brushy stages of

various habitats, with interspersions of irregular terrain, rocky outcrops, and tree–brush edges. Although the Proposed Project area lacks riparian habitats, suitable rocky outcrops, irregular terrain, good connectivity to large open spaces, and openings in the fence border (as described below) may serve as suitable habitat to this species. This species has a high potential to move through the Proposed Project area, but the site is generally open and does not provide a lot of cover. Within the Proposed Project area, suitable habitat includes semi-desert chaparral, Sonoran mixed woodland scrub, upper Sonoran subshrub scrub, Peninsular juniper woodland and scrub, and disturbed land.

Invertebrates

Monarch (*Danaus plexippus*) – County Group 2

The monarch butterfly is not considered special status by any state or federal agencies; however, it is considered a Group 2 species by the County of San Diego (2009). This species follows a pattern of seasonal migration. The summer grounds of the species are found in New England, the Great Lakes region, and the northern Rocky Mountains. These areas are occupied from May through late August to mid-September (Urquhart 1987). The New England and Great Lakes populations migrate southwest to wintering grounds in the Sierra Madre mountain range of Mexico. The Rocky Mountains population migrates southwest to wintering grounds along the California coast.

The species' distribution is controlled by the distribution of its larval host plant (i.e., various milkweeds, genus *Asclepias*). Eggs are deposited and hatch on the underside of leaves of the milkweed plant. Upon hatching, the larvae feed upon the fine hairs on the leaves of the plant and stay on the same plant throughout its molting stages. After molting, the larvae leave the milkweed and construct its chrysalis elsewhere. However, once an adult monarch butterfly emerges from the chrysalis, it soon returns to a milkweed plant for foraging and shelter (Urquhart 1987).

Monarch butterfly wintering sites are considered special status by CDFW (CDFG 2011). Wintering sites in California are associated with wind-protected groves of large trees (primarily eucalyptus or pine) with nectar and water sources nearby, generally near the coast. A few California sites (e.g., Pacific Grove and Natural Bridges) support concentrated numbers of overwintering adults, but adults often winter as scattered individuals or in small clusters (Emmel and Emmel 1973). Sexually mature monarch butterflies mate along their northern migratory route (while returning to their summer grounds) and deposit eggs on milkweed plants. Adults die shortly after mating and laying eggs, leaving the completion of the northern migration to their offspring.

This species was observed once during biological surveys. However, no eucalyptus or pine groves occur within the Proposed Project area and the species is not recorded in CNDDDB within the seven-quad search. In addition, no milkweed species were recorded on site. Therefore, this species is not expected to use resources present for foraging or wintering grounds.

2.2.1.7 Wetlands/Jurisdictional Waters

Dudek conducted a formal jurisdictional wetlands delineation in February 2013 for the proposed solar site. A formal jurisdictional delineation for the gen-tie site was then completed in September 2014. Details regarding the findings from the formal jurisdictional delineations for the solar site are discussed below.

Potential Wetlands

Within the solar site no areas were mapped as potential wetlands. Wetland hydrology indicators were not present (i.e., hydrophytic vegetation, hydric soils, or surface water).

RPO Wetland Determination

No areas were mapped as potential wetlands within the solar site. Wetland hydrology indicators, such as hydrophytic vegetation or undrained hydric soils, were not present. Therefore, no RPO wetlands were determined to occur within the solar site.

The County's scoping letter identified the Carrizo Wash on the solar site (County of San Diego 2014b). The National Hydrographic Database flowlines (USGS 2014) and 7.5-minute U.S. Geological Survey topographic map show a tributary to Carrizo Creek and unnamed stream channels on site; these were verified during the jurisdictional delineation. A portion of the tributary to Carrizo Creek travels through the northern area of the Project site, north of Old Highway 80, and smaller drainages that flow through the Project site connect to this tributary approximately one-quarter mile northwest of the Project site. None of these demonstrated RPO wetland features.

Potential Non-Wetland Waters

The solar site was surveyed to determine the presence of potential waters of the United States and state. Non-wetland waters were mapped based on the presence of an ordinary high water mark (OHWM) along several potential drainage channels. An OHWM was identified along several ephemeral unvegetated stream channels based on an observed, defined bed and bank and other evidence of hydrology (Figure 2.2-2). According to the National Hydrographic Database, an unnamed stream/river flows along an east–west direction through the central portion of the solar site (USGS 2014). All drainages mapped on site had a defined bed and bank, evidence of an OHWM, a channel bed of 1 to 17 feet wide, and were continuous for greater than 250 linear feet;

thus, were determined to be jurisdictional non-wetland waters. In total, there are approximately 3.3 acres (24,361 linear feet) of potential jurisdictional waters of the United States/state identified within the solar site. Flows within these drainages are directed northwest from the site and into a tributary to Carrizo Creek, which flows into Carrizo Creek, turns into Carrizo Wash, and connects San Felipe Wash and eventually the Salton Sea (USGS 2014) (see Figure 2.2-2 and Figure 2.2-4, Hydrologic Setting) and therefore form a significant nexus to a traditional navigable “water of the United States.” As stated above, these waters do not meet any one of the three criteria required to be considered a County RPO wetland. However, these non-wetland waters were determined to be under the potential combined jurisdiction of the U.S. Army Corps of Engineers (ACOE), Regional Water Quality Control Board (RWQCB), and CDFW.

2.2.1.8 Habitat Connectivity and Wildlife Corridors

Wildlife corridors are defined as areas that connect suitable wildlife habitat in a region otherwise fragmented by rugged terrain, changes in vegetation, or human disturbance. Natural features, such as canyon drainages, ridgelines, or areas with vegetation cover, provide corridors for wildlife travel. Wildlife corridors are important because they provide access to mates, food, and water; allow the dispersal of wildlife from high-density areas; and facilitate the exchange of genetic traits between populations (Beier and Loe 1992). Wildlife corridors are considered sensitive by resource and conservation agencies. For the most part, the area in and around the Project area is very similar with regard to limited human disturbance and similar vegetation communities. Although rugged terrain generally surrounds the Project area to the north, east, and southwest, the area is not readily identifiable as a corridor per se, because wildlife movement is not constrained or directed through the Project area. The Project area is, however, still included within a Core Wildlife Area due to its size and the undeveloped land in the surrounding area.

To satisfy habitat loss mitigation requirements for the development of solar facility on this Project site, the Applicant is proposing to balance development with on-site preservation of habitat, providing a contiguous block of habitat consisting of 180.4 acres of habitat⁴ of equivalent function or value in an Open Space Preserve (Appendix 2.2-1, Appendix I).

The Proposed Project vicinity is generally surrounded by undeveloped landscapes to the north, east, and west. Old Highway 80, a two-lane highway, traverses the Project site in a northeast–southwest direction along the northern portion of the Project site. There are no wildlife crossings along the highway, but wildlife are generally able to make at-grade crossings over the highway, particularly where terrain is not steep. Wildlife currently are able to traverse the Project site and surrounding undeveloped areas in an unencumbered manner until they arrive at the international

⁴ Only considers habitat with equivalent function or value. An additional 3.1 acres are disturbed land (not included in the habitat with equivalent function or value acreage).

border fence south of the site. The Project site is located near two breaks in the international border fence: two are located approximately 1,400 feet to the west and the other is located approximately 3,000 feet to the east (Figure 2.2-5, Wildlife Corridors and Habitat Linkages). These breaks are due to the steep terrain and associated difficulties in building a fence in those areas. This topography does not pose difficulties for most wildlife use however. Mule deer, coyotes (*Canis latrans*), mountain lion, bobcat (*Lynx rufus*), and other species are readily able to scale steep slopes. Further, the Project site is situated adjacent to, or near, BLM holdings that allow for unhindered movement.

The Peninsular Ranges are located north and east of the Project area. The Project site is located approximately 2.6 miles southeast of designated critical habitat for Peninsular bighorn sheep, and 1 mile from the western slope of the Peninsular Ranges (Figure 2.2-3). The Project site is likely too far removed from mountainous terrain to provide high-quality habitat attractive to bighorn sheep and also does not provide intermountain connectivity habitat between occupied mountain ranges. Peninsular bighorn sheep have not been identified in the area previously; in addition, there are no water sources near the Project site that would attract bighorn sheep to the area. Based on their known range, USFWS Critical Habitat, and unsuitable habitat between the site and known range, this species is not expected to occur.

Sensitive habitat lands is a definition by the County (2007) that includes wildlife corridors. The existing conditions are that the Project site is not likely to be part of a regional corridor or linkage for large mammals due to the lack of topography surrounding the Project site that would constrain wildlife to traverse the Project site. In addition, the international border fence bordering the Project site is currently impermeable, such that wildlife movement between the United States and Mexico would occur along breaks in the border fence east and west of the Proposed Project area. In addition, the Project is unlikely to serve as a local or regional wildlife corridor since wildlife are not constrained to travel through the Project site. Therefore, the Project site is not considered a sensitive habitat land with regard to wildlife corridors. Further, as shown on Figure 2.2-5, the Proposed Project is designed as a single contiguous development adjacent to the border fence along the southern and southeastern portions of the site. It is designed to be consistent with current wildlife movement constraints and movement areas, with the development proposed along the southern edge of the site where wildlife cannot currently move through due to the border fence. The Project design maintains a large contiguous block of habitat to be left in Open Space Preserve within a larger regional landscape wildlife are more likely to move through. The Open Space Preserve is configured to complement the adjacent BLM lands to the north and west, and the configuration of the open space allows for continued use of the breaks in the border fence to the east and west by wildlife. It is expected that the configuration of the open space will allow for viable preservation of species and movement in the vicinity and region.

The Laguna Mountains are north of the Proposed Project area and the Anza-Borrego Desert and the eastern slopes of the Peninsular Range are to the east.

The Pacific Flyway is a major north–south migration route for birds that travel between North and South America. This is a broad-front route that covers much landscape. In Southern California, birds typically use the coast and inland areas. The Pacific Coast route is used by gulls, ducks, and other water birds. The longest and most important route of the Pacific Flyway is that originating in northeastern Alaska. This route, which includes most waterfowl and shorebirds, passes through the interior of Alaska and then branches such that large flights continue southeast into the Central and Mississippi Flyways, or they may turn in a southwesterly direction and pass through the interior valleys of California, ending or passing through the Salton Sea (BirdNature 2014). The southward route of long-distance migratory land birds of the Pacific Flyway that typically overwinter south of the United States extends through the interior of California to the mouth of the Colorado River and on to their winter quarters, which may be located in western Mexico (USGS 2006).

The Salton Sea, approximately 40 miles northeast, is an important stopover for many birds that travel inland (SDG&E 2009); the inland Pacific Flyway migration route, which is focused on a stopover at the Salton Sea, is east of the Project area. A study from 1985 to 1999 focused on shorebird migration and recorded avian use at the Salton Sea and adjacent Imperial Valley. Large numbers of shorebirds, including black-necked stilt (*Himantopus mexicanus*), American avocet (*Recurvirostra americana*), western sandpiper (*Calidris mauri*), and dowitchers (*Limnodromus* spp.) were recorded during migration periods (Shuford et al. 2003). In addition, the study showed that birds traveling to the Salton Sea use the sea not only as a migratory stopover, but the site is also a wintering area for many species, including the mountain plover (*Charadrius montanus*) (Shuford et al. 2003). Migration timing varies from species to species, and for some, there is little documentation of the timing; for others, the arrival and departure has been well documented species by species (Unitt 2004). In general, bird migration occurs during the months of March through April and August through November. However, the Project area does not support any bodies of water or wetlands that attract large migration stopovers or attractants for avian and bat species. The closest large bodies of water to the Project site are Tule Lake, located approximately 7 miles to the northwest, and Lake Domingo, approximately 8 miles to the west. Therefore, while birds likely migrate over the site and certain birds may forage on site, the Project site is not considered a stopover for birds migrating to and from the Salton Sea, particularly with the agricultural fields and irrigation resources available in the El Centro and Brawley areas south of the Salton Sea. Additionally, many birds are known to migrate at night (Emlen 1975; Lowery 1951; USGS 2013), which reduces visibility and glare-related impacts to migrants.

Certain types of solar panels may create a “pseudo-lake effect,” and birds may collide with solar panels that appear like a body of water due to the sky reflection. However, there is very little scientific information available regarding the pseudo-lake effect and a detailed discussion of the potential impacts would be speculative. Potential impacts associated with this effect are discussed in Section 2.2.3.1.

Special Habitat Management Areas

Several regional habitat management programs are planned for eastern San Diego County, including an MSCP Framework Management Plan and an Eastern San Diego County Resource Management Plan (RMP). Conservation initiatives, including the Las Californias Binational Conservation Initiative and the Parque to Park Binational Corridor, include lands within the Project area (see Conservation Biology Institute 2004, Figure 10).

The MSCP seeks to preserve the unique, native habitats and wildlife within San Diego County. The MSCP is a regional conservation effort that relies on multiple jurisdictions and agencies to ensure conservation goals and policies are implemented and successful. The MSCP includes three subareas each containing a separate conservation plan: North County, South County, and East County. Only the South County MSCP Subarea Plan has been approved.

The Proposed Project is located within the Draft ECMSCP plan area, and a Preliminary Planning Map has been completed. The intent of preparing the ECMSCP is to create a large, connected preserve system that addresses the regional habitat needs for multiple species. Projects in this area are subject to the Planning Agreement for the ECMSCP (County of San Diego 2008) which is intended to establish whether their approval would have an effect on the preparation and approval of the Draft ECMSCP.

2.2.2 Regulatory Setting

2.2.2.1 Federal Regulations

Federal Endangered Species Act

The ESA designates threatened and endangered animals and plant species and provides measures for their protection and recovery. Under the ESA, “take” of listed animal and plant species in areas under federal jurisdiction is prohibited without obtaining a federal permit. The ESA defines “take” as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct” (16 U.S.C. 1531). Harm includes any act that actually kills or injures fish or wildlife, including significant habitat modification or degradation that significantly impairs essential behavioral patterns of fish or wildlife. Activities that damage (i.e., harm) the habitat of listed wildlife species require approval from USFWS for terrestrial species. If critical habitat has been designated under the ESA for listed species, impacts to areas that contain the primary constituent elements identified for the species, whether or not it is currently present, is also prohibited without obtaining a federal permit. ESA Sections 7 and 10 provide two pathways for obtaining permission to take listed species.

Under Section 7 of the ESA, a federal agency that authorizes, funds, or carries out a project that “may affect” a listed species or its critical habitat must consult with USFWS. For example, ACOE must issue a permit for projects impacting waters or wetlands under ACOE jurisdiction.

In a Section 7 consultation, the lead agency (e.g., ACOE) prepares a Biological Assessment that analyzes whether the project is likely to adversely affect listed wildlife or plant species or their critical habitat, and it proposes suitable avoidance, minimization, or compensatory mitigation measures. If the action would adversely affect the species, USFWS has up to 135 days to complete the consultation process and develop a Biological Opinion determining whether the project is likely to jeopardize the continued existing species or result in adverse modification of critical habitat. If a “no jeopardy” opinion is provided, “the action agency may proceed with the action as proposed, provided no incidental take is anticipated. If incidental take is anticipated, the agency or the applicant must comply with the reasonable and prudent measures and implementing terms and conditions in the Service’s incidental take statement to avoid potential liability for any incidental take” (USFWS 1998). If a jeopardy or adverse modification opinion is provided, USFWS may suggest “reasonable and prudent alternatives for eliminating the jeopardy or adverse modification of critical habitat in the opinion” or “choose to take other action if it believes, after a review of the biological opinion and the best available scientific information, such action satisfies section 7(a)(2)” (USFWS 1998).

Under Section 10 of the ESA, private parties with no federal nexus may obtain an “incidental take permit” to harm listed wildlife species incidental to the lawful operation of a project. To obtain an incidental take permit, the applicant must develop a Habitat Conservation Plan (HCP) that specifies impacts to listed species, provides minimization and mitigation measures and funding, and discusses alternatives considered and the reasons why such alternatives are not being used. If USFWS finds the HCP will not appreciably reduce the likelihood of the survival and recovery of the species, it will issue an incidental take permit. Issuance of incidental take permits requires USFWS to conduct an internal Section 7 consultation, thus triggering coverage of any listed plant species or critical habitat present on site (thus listed plants on private property are protected under the ESA if a listed animal is present). Unlike a Section 7 consultation, USFWS is not constrained by a time limit to issue an incidental take permit.

Clean Water Act

The Clean Water Act (CWA) is intended to restore and maintain the quality and biological integrity of the nation’s waters. Section 402 of the CWA prohibits the discharge of pollutants to “waters of the United States” from any point source unless the discharge is in compliance with a National Pollutant Discharge Elimination System Permit. The CWA, Section 402, requires a National Pollutant Discharge Elimination System Permit for the discharge of stormwater from municipal separate storm sewer systems serving urban areas with a population greater than 100,000, construction sites that disturb 1 acre or more, and industrial facilities. The RWQCB administers these permits with oversight provided by the State Water Resources Control Board and EPA Region IX.

Section 404 of the CWA authorizes the Secretary of the Army, acting through the ACOE, to issue permits regulating the discharge of dredged or fill materials into the “navigable waters at specified disposal sites.” CWA Section 502 further defines “navigable waters” as “waters of

the United States, including territorial seas.” “Waters of the United States” are broadly defined in the Code of Federal Regulations (CFR), Title 33, Section 328.3, Subdivision (a)⁵ to include navigable waters; perennial and intermittent streams, lakes, rivers, ponds; as well as wetlands, marshes, and wet meadows.

The lateral limits of the ACOE’s CWA Section 404 jurisdiction in non-tidal waters are defined by the OHWM, unless adjacent wetlands are present. The OHWM is a line on the shore or edge of a channel established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed upon the bank, shelving, changes in the character of soil, destruction of vegetation, or presence of debris (33 CFR Section 328.3I). As such, waters are recognized in the field by the presence of a defined watercourse with appropriate physical and topographic features. If wetlands occur within, or adjacent to, waters of the United States, the lateral limits of the ACOE’s jurisdiction will extend beyond the OHWM to the outer edge of the wetlands. The upstream limit of jurisdiction in the absence of adjacent wetlands is the point beyond which the OHWM is no longer perceptible (33 CFR Section 328.4; see also 51 FR 41217).

Section 401 of the CWA requires that an applicant for a federal license or permit to discharge into navigable waters must provide the federal agency with a water quality certification, declaring that the discharge will comply with water quality standard requirements of the CWA. The ACOE is prohibited from issuing a CWA permit until the applicant receives a CWA Section 401 water quality certification or waiver from the RWQCB.

Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act (16 U.S.C. 661–666) “authorizes the Secretaries of Agriculture and Commerce to provide assistance to and cooperate with Federal and State agencies to protect, rear, stock, and increase the supply of game and fur-bearing animals, as well as to study the effects of domestic sewage, trade wastes, and other polluting substances on wildlife.” The term “wildlife” includes both animals and plants. For any federal project where the waters of any stream or other body of water are impounded, diverted, deepened, or otherwise modified, consultation with the USFWS appropriate state wildlife agency shall be undertaken to prevent the loss of and damage to wildlife resources. These agencies prepare reports and recommendations that document project effects on wildlife and identify measures that may be

⁵ This regulation, 33 CFR Section 328.3, and the definitions contained therein, have been the subject of recent litigation. In addition, the U.S. Supreme Court has addressed the scope and extent of the ACOE’s jurisdiction over “navigable waters” and “waters of the United States” under the CWA. See, e.g., *Solid Waste Agency of Northern Cook Cty. v. U.S. Army Corps of Engineers*, 531 U.S. 159 (2001); *Rapanos v. United States*, 126 S. Ct. 2208 (2006). Despite the impact of these recent decisions, the definitions continue to provide guidance to the extent that they establish an outer limit for the extent of the ACOE’s jurisdiction over “waters of the United States,” and, therefore, are referenced here for that purpose.

adopted to prevent loss or damage to wildlife resources. Provisions of the act are implemented through the Section 404 permit process.

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

The bald eagle (*Haliaeetus leucocephalus*) and golden eagle are federally protected under the Bald and Golden Eagle Protection Act, passed in 1940 to protect the bald eagle and amended in 1962 to include the golden eagle (16 U.S.C. 668 et seq.). This act prohibits the take, possession, sale, purchase, barter, offering to sell or purchase, export or import, or transport of bald eagles and golden eagles and their parts, eggs, or nests without a permit issued by the USFWS. The definition of “take” includes: to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb. The act prohibits any form of possession or taking of either eagle species and the statute imposes criminal and civil sanctions as well as an enhanced penalty provision for subsequent offenses. Further, the act provides for the forfeiture of anything used to acquire eagles in violation of the statute. The statute exempts from its prohibitions on possession the use of eagles or eagle parts for exhibition, scientific, and Indian religious uses.

However, there is allowance within the act that, after investigation, the Secretary of the Interior may determine that direct and purposeful taking is compatible with the preservation of the bald eagle or the golden eagle. If so, then the Secretary may permit the taking, possession, and transportation of specimens for the scientific or exhibition purposes of public museums, scientific societies, and zoological parks, or for the religious purposes of Indian tribes. The Secretary may also determine that it is necessary to permit the taking of eagles for the protection of wildlife or of agricultural or other interests in any particular locality. This permitting may be for the seasonal protection of domesticated flocks and herds, and may also permit the taking, possession, and transportation of golden eagles for the purposes of falconry if the eagles may cause depredations on livestock or wildlife. Finally, the Secretary of the Interior may permit the taking of golden eagle nests that interfere with resource development or recovery operations, or in an emergency.

In November 2009, the USFWS published the Final Eagle Permit Rule (74 FR 46836–46879) providing a mechanism to permit and allow for incidental (i.e., non-purposeful) take of bald and golden eagles pursuant to the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.). Disturb means “to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior.” These regulations may apply to projects such as wind turbines and transmission lines, and were followed by issuance of guidance documents for inventory and monitoring protocols and for avian protection plans (Pagel et al. 2010). In February 2011, the USFWS released Draft Eagle Conservation Plan Guidance, aimed at clarifying expectations for take permit acquisition by wind power projects consistent with the 2009 rule.

2.2.2.2 State Regulations

California Endangered Species Act

CDFW administers CESA (California Fish and Game Code, Section 2050 et seq.; CDFG 1984), which prohibits the take of plant and animal species designated by the Fish and Game Commission as endangered or threatened in the State of California. Under CESA, Section 86, take is defined as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” CESA Section 2053 stipulates that state agencies may not approve projects that will “jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available consistent with conserving the species or its habitat which would prevent jeopardy.”

CESA Sections 2080 through 2085 address the taking of threatened, endangered, or candidate species by stating, “No person shall import into this state, export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the Commission determines to be an endangered species or a threatened species, or attempt any of those acts, except as otherwise provided in this chapter, the Native Plant Protection Act (California Fish and Game Code, Sections 1900–1913), or the California Desert Native Plants Act (Food and Agricultural Code, Section 80001).”

California Environmental Quality Act

CEQA was enacted in 1970 to provide for full disclosure of environmental impacts to the public before issuance of a discretionary permit any by state or local public agency. Projects subject to CEQA include zoning ordinances, issuance of conditional use permits, variances, and the approval of tentative subdivision maps. If a project is regulated under CEQA, the developer

completes necessary studies and designs for the project and identifies the state lead agency for the project. The lead agency conducts an Initial Study that identifies the environmental impacts of the project and determines whether these impacts are significant. In some cases, the lead agency may skip the preparation of the Initial Study and proceed directly to the preparation of an EIR. The lead agency may prepare a Negative Declaration if it finds no potential significant impacts; a Mitigated Negative Declaration if it revises or conditions the project to avoid or mitigate potential significant impacts; or an EIR if it finds potential significant, unmitigated impacts. The EIR is subject to a more extensive public participation process and provides information on potential significant impacts of the project, lists ways to minimize these impacts, and discusses alternatives to the project. CEQA only provides a public review process, and projects with significant impacts may be approved if the lead agency makes a finding of overriding considerations.

In addition to state-listed or federally listed species, special-status plants and animals receive consideration under CEQA. Special-status species include wildlife Species of Special Concern listed by CDFW and plant species with a CRPR 1A, 1B, or 2.

California Fish and Game code

Birds and Mammals

According to Sections 3511 and 4700 of the California Fish and Game Code, which regulate birds and mammals, respectively, a fully protected species may not be taken or possessed, and incidental takes of these species are not authorized. However, the CDFW may authorize the taking of those species for necessary scientific research, including efforts to recover fully protected, threatened, or endangered species, and may authorize the live capture and relocation of those species pursuant to a permit for the protection of livestock. Fully Protected species include the California condor (*Gymnogyps californianus*), Peninsular bighorn sheep, ringtail (*Bassariscus astutus*), and golden eagle. In 2012, legislation (Senate Bill 618, Wolk) took effect, granting potential take of fully protected species which are included in an NCCP plan.

Resident and Migratory Birds

The California Fish and Game Code provides protection for wildlife species. It states that no mammals, birds, reptiles, amphibians, or fish species listed as fully protected can be “taken or possessed at any time.” In addition, CDFW affords protection over the destruction of nests or eggs of native bird species (Section 3503), and it states that no birds in the orders of Falconiformes or Strigiformes (birds of prey) can be taken, possessed, or destroyed (Section 3503.5). CDFW cannot issue permits or licenses that authorize the take of any Fully Protected species, except under certain circumstances such as scientific research and live capture and relocation of such species pursuant to a permit for the protection of livestock (Section 3511).

Separate from federal and state designations of species, CDFW designates certain vertebrate species as Species of Special Concern based on declining population levels, limited ranges, and/or continuing threats that have made them vulnerable to extinction.

California Native Plant Protection Act

The Native Plant Protection Act of 1977 (Fish and Game Code Section 1900–1913) directed the CDFW to carry out the legislature’s intent to “preserve, protect and enhance rare and endangered plants in this State.” The Native Plant Protection Act gave the California Fish and Game Commission the power to designate native plants as “endangered” or “rare” and to protect endangered and rare plants from take. When CESA was passed in 1984, it expanded on the original Native Plant Protection Act, enhanced legal protection for plants, and created the categories of “threatened” and “endangered” species to parallel the ESA. CESA categorized all rare animals as threatened species under the act but did not do so for rare plants, which resulted in three listing categories for plants in California: rare, threatened, and endangered. The Native Plant Protection Act remains part of the California Fish and Game Code, and mitigation measures for impacts to rare plants are specified in a formal agreement between CDFW and a project proponent.

California Desert Native Plants Act

California Food and Agriculture Code, Division 23, Chapter 3, Sections 80071–80075, affords protection to desert native plants under the California Desert Native Plants Act passed in 1981. Sections 1925–1926 of the California Fish and Game Code provide for enforcement the provisions of the act. The California Desert Native Plants Act prohibits the harvesting, transport, sale, or possession of designated native desert plants except for scientific or educational purposes (under a permit), or if the person has a valid permit, or wood receipt, and the required tags and seals. The provisions are applicable within the boundaries of Imperial, Inyo, Kern, Los Angeles, Mono, Riverside, San Bernardino, and San Diego Counties.

California Natural Community Conservation Planning Act

The California Natural Community Conservation Planning (NCCP) Act provides for regional planning to conserve listed and candidate species, their habitats, and natural communities through habitat-based conservation measures while allowing economic growth and development (California Fish and Game Code, Section 2800–2835). The initial application of the NCCP Act was in coastal sage scrub habitat in Southern California, home to the California gnatcatcher; it has subsequently been applied to the CALFED Bay-Delta Program and others in Northern California.

The Southern California coastal sage scrub NCCP region consists of 11 subregions, which may be further divided into subareas corresponding to the boundaries of participating jurisdictions or landowners. In each subregion and subarea, landowners, environmental organizations, and local

agencies participate in a collaborative planning to develop a conservation plan acceptable to USFWS and CDFW. The NCCP conservation requires threat impacts be mitigated to a level that contributes to the recovery of listed species, rather than just avoiding jeopardy.

Streambed Alteration Agreements (Section 1602 et seq.)

CDFW must be notified prior to beginning any activity that would obstruct or divert the natural flow of, use material from, or deposit or dispose of material into a river, stream, or lake, whether permanent, intermittent, or ephemeral water bodies under Section 1602 of the California Fish and Game Code. CDFW has 30 days to review the proposed actions and propose measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by CDFW and the applicant is the Streambed Alteration Agreement. The conditions of a Streambed Alteration Agreement and a CWA Section 404 permit often overlap.

Porter-Cologne Water Quality Control Act (Water Code, Section 13000 et seq.)

The intent of the Porter-Cologne Water Quality Control Act is to protect water quality and the beneficial uses of water, and it applies to both surface water and groundwater. Under this law, the State Water Resources Control Board develops statewide water quality plans, and the RWQCB develops basin plans that identify beneficial uses, water quality objectives, and implementation plans. The RWQCBs have the primary responsibility to implement the provisions of both statewide and basin plans. Waters regulated under the Porter-Cologne Water Quality Control Act include isolated waters that are no longer regulated by the ACOE. Developments with impact to jurisdictional waters must demonstrate compliance with the goals of the act by developing Stormwater Pollution Prevention Plans, Standard Urban Storm Water Mitigation Plans, and other measures in order to obtain a CWA Section 401 certification.

2.2.2.3 Local Regulations

San Diego County General Plan – Conservation and Open Space Element (Chapter 5), and Community and Subregional Plans

The Conservation and Open Space Element of the General Plan provides land-use based conservation goals and policies that protect the ecological and lifecycle needs of threatened, endangered, or otherwise sensitive species and their associated habitats. The Conservation and Open Space Element outlines the goals and policies pertaining to each type of open space, not all of which are for the preservation of biological resources. Resource Conservation Areas (RCAs) are described and delineated in each of the Community and Subregional Plans. Each RCA has been designated as such for a purpose specific to that area. When a site is located within a mapped RCA, the project must comply with the relevant policies for that RCA (e.g., avoidance of oaks).

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

The County’s 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.

RPO Sensitive Habitat Lands

The RPO defines Sensitive Habitat Lands as:

- Land which supports unique vegetation communities, or the habitats of rare or endangered species or sub-species of animals or plants as defined by Section 15380 of the State California Environmental Quality Act (CEQA) Guidelines (14 Cal. Admin. Code Section 15000 et seq.), including the area which is necessary to support a viable population of any of the above species in perpetuity, or which is critical to the proper functioning of a balanced natural ecosystem or which serves as a functioning wildlife corridor.
- “Unique vegetation community” refers to associations of plant species which are rare or substantially depleted. These may contain rare or endangered species, but other species may be included because they are unusual or limited due to a number of factors, for example: (a) they are only found in the San Diego region; (b) they are a local representative of a species or association of species not generally found in San Diego County; or (c) they are outstanding examples of the community type as identified by the California Department of Fish and Game listing of community associations (County of San Diego 2007, Section 86.602(p)).

According to Section 86.604, development, grading, grubbing, clearing or any other activity or use damaging to sensitive habitat lands is prohibited. However, development may be allowed when all feasible measures necessary to protect and preserve the sensitive habitat lands are required as a condition of permit approval and where mitigation provides an equal or greater benefit to the affected species (County of San Diego 2007). There are no unique vegetation

communities or endangered species on site, and the Project site is not considered a wildlife corridor, as described further in Section 1.4.8 of the *Draft Biological Resources Report for the Jacumba Solar Energy Project* (see Appendix 2.2-1); therefore, the Project site does not contain sensitive habitat lands.

2.2.3 Analysis of Project Impacts and Determination as to Significance

2.2.3.1 Definition of Impacts

This section defines the types of impacts considered in this report to analyze the potential effects of the Proposed Project on biological resources. These impacts are discussed in more detail as follows.

Direct Impacts

Direct impacts include short-term, construction-related impacts as well as permanent impacts, which refer to the 100% loss of a biological resource. For purposes of this EIR, it refers to the area within the permanent fencing for the solar site, the access road, and fuel modification zone (i.e., Project footprint). For the gen-tie alignment, direct impacts include areas of vegetation removal and maintenance within 150 feet of each pole. Temporary direct impacts refer to some areas where grading will occur outside of the fence and some areas associated with the gen-tie alignment. Direct impacts were quantified by overlaying the limits of grading on geographic information system (GIS)-located biological resources (Figure 2.2-6, Impacts to Biological Resources).

Indirect Impacts

Indirect impacts are reasonably foreseeable effects caused by project implementation on remaining or adjacent biological resources outside the direct limits of grading. Indirect impacts may affect areas within the defined project area but outside the limits of grading, including non-impacted areas and areas outside the project area, such as downstream effects. Indirect impacts include short-term effects immediately related to construction activities and long-term or chronic effects related to long-term maintenance of the solar panels. In most cases, indirect effects are not quantified, but in some cases quantification might be included, such as using a noise contour to quantify indirect impacts to nesting birds.

Indirect impacts include the generation of fugitive dust, habitat fragmentation, chemical pollutants, altered hydrology, non-native invasive species, increased human activity, alteration of the natural fire regime, shading, and noise, and are discussed as follows.

Generation of Fugitive Dust. Excessive dust can decrease the vigor and productivity of special-status plants through effects on light, penetration, photosynthesis, respiration, transpiration, increased penetration of phytotoxic gaseous pollutants, and increased incidence of pests and

diseases. These impacts to plants can result in changes to community structure and the function of vegetation communities, resulting in impacts to suitable habitat for wildlife species.

Habitat Fragmentation. Habitat fragmentation and isolation of plant and wildlife populations may cause extinction of local populations as a result of two processes: reduction in total habitat area, which reduces effective population sizes; and insularization of local populations, which affects dispersal rates (Wilcox and Murphy 1985; Wilcove et al. 1986). In addition, habitat fragmentation can reduce diversity of species, spread invasive species, and reduce access to important habitats (Lovich and Ennen 2011).

Chemical Pollutants. Erosion and chemical pollution (releases of fuel, oil, lubricants, paints, release agents, and other construction materials) can decrease the number of plant pollinators, increase the existence of non-native plants, and cause damage to and destruction of native plants. Accidental spills of hazardous chemicals could contaminate nearby surface waters and groundwater and indirectly impact wildlife species through poisoning or altering suitable habitat.

Changes in Hydrology. Hydrologic alterations include changes in flow rates and patterns in streams and rivers and dewatering, which may affect adjacent and downstream aquatic, wetland, and riparian vegetation communities. Water-quality impacts include chemical-compound pollution (fuel, oil, lubricants, paints, release agents, and other construction materials), erosion, increased turbidity, and excessive sedimentation. Direct impacts can remove native vegetation and increase runoff from roads and other paved surfaces, resulting in increased erosion and transport of surface matter into special-status plant occurrences. Altered erosion, increased surface flows, and underground seepage can allow for the establishment of non-native plants. Changed hydrologic conditions can also alter seed bank characteristics and modify habitat for ground-dwelling fauna that may disperse seed.

Alteration of the on-site hydrologic regime may potentially affect plants and wildlife. Altered hydrology can allow for the establishment of non-native plants and invasion by Argentine ants, which can compete with native ant species that could be seed dispersers or plant pollinators. Changes in plant composition could affect the native vegetation communities and wildlife habitat.

Non-Native, Invasive Plant and Animal Species. Invasive plant species that thrive in edge habitats are a well-documented problem in Southern California and throughout the United States. Development could also fragment native plant populations, which may increase the likelihood of invasion by non-native, invasive plants due to the increased interface between natural habitats and developed areas. Bossard et al. (2000) list several adverse effects of non-native species in natural open areas, including but not limited to the fact that non-native plants compete for light, water, and nutrients and can create a thatch that blocks sunlight from reaching smaller native plants. Non-native plant species may alter habitats and displace native species over time, leading to extirpation of native plant species and subsequently suitable habitat for wildlife species. The

introduction of non-native, invasive animal species could negatively affect native species that may be pollinators of or seed dispersal agents for special-status plant species. In addition, trash can attract invasive predators such as ravens and coyotes that could impact the wildlife species in the Project area.

Increased Human Activity. Increased human activity could result in the potential for trampling of vegetation outside of the impacts footprint, as well as soil compaction, and could affect the viability of plant communities and the function of suitable habitat for wildlife species. Trampling can damage individual special-status plants and alter their ecosystem, creating gaps in vegetation and allowing non-native, invasive plant species to become established, leading to soil erosion. Trampling may also affect the rate of rainfall interception and evapotranspiration, soil moisture, water penetration pathways, surface flows, and erosion. An increased human population increases the risk for the collection of and damage to plant species, and thus the risk of damage to suitable habitat for wildlife species. In addition, increased human activity can deter wildlife from using habitat areas in the Project vicinity.

Alteration of the Natural Fire Regime. An increased risk of fire can lead to shorter-than-natural fire return intervals, which can preclude recovery of the native vegetation between fires, weaken the ecological system, allow for invasion of non-native species, and result, in some cases, in permanent transition of the vegetation to non-native communities, such as annual grassland and weedy communities (Malanson and O’Leary 1982; Keeley 1987; O’Leary et al. 1992). If the natural fire regime is suppressed, longer-than-natural fire return intervals can result in excessive buildup of fuel loads so that when fires do occur, they are catastrophic. Unnaturally long fire intervals can also result in senescence of plant communities, such as chaparral, that rely on shorter intervals for rejuvenation. Alterations of plant communities could affect wildlife that relies on those habitat types.

Shading. Shading can reduce the amount of sunlight available for photosynthesis, eliminating longer wavelengths of the visible light spectrum, and can reduce transpiration due to reduced photosynthetic rates, increasing soil moisture and resulting in changes to soil nutrient availability and microbial communities, potentially favoring non-native species and other shade-tolerant plants.

Noise. Noise impacts can have a variety of indirect impacts on wildlife species, including increased stress, weakened immune systems, altered foraging behavior, displacement due to startle, degraded communication with conspecifics (e.g., masking), damaged hearing from extremely loud noises, and increased vulnerability to predators (Lovich and Ennen 2011; Brattstrom and Bondello 1983, as cited in Lovich and Ennen 2011).

Creation of Collision Hazards. The Proposed Project could potentially increase the risk of collisions due to sky reflection (or “pseudo-lake effect”). Although avian collisions with towers and structures have been well documented, there are few published papers available that study

the possibility that large areas of solar photovoltaic (PV) panels in the desert environment may mimic water bodies and inadvertently attract migrating or dispersing wetland bird species. Polarized reflections from solar PV arrays has been observed to attract insects (Horvath et al. 2010), which could in turn attract other sensitive wildlife, such as bats; however, the magnitude of this effect is unknown, since no comprehensive scientific studies have been conducted for this potential phenomenon either.

Anecdotal evidence suggests that certain wetland species, particularly those that require water to take flight (e.g., loons, grebes), may either collide with or become stranded in solar fields, resulting in fatalities. Of the two recent publicized deaths associated with solar projects in the desert southwest, one project is a different type of facility that does not rely on PV cells to generate electricity, but instead uses heat generated by mirrors reflecting and focusing sunlight on a central focal point to power a generator. Different types of effects might have killed the birds. Regardless, little is known about the actual percentage of species and individuals that are negatively affected by the hypothetical pseudo-lake effect of PV arrays. The USFWS recognizes the lack of data on the effects of solar facilities on migratory bird mortality and provided guidance on monitoring migratory bird mortalities at solar facilities (Nicolai et al. 2011). However, there is very little scientific information available to assess the magnitude or likely risk associated with such events and a detailed discussion of the potential impacts would be speculative. Regardless, the following factors minimize the risk of collision due to sky reflection because: (1) the Project is not located near bodies of water that would attract wetland-associated birds, particularly loons and grebes; (2) the locale is not considered to be a major contributor to the Pacific Flyway; (3) the solar units will be spaced approximately 12.5 feet away from one another (note: final engineering design to be determined), which would break up sky reflection from a single continuous surface to individual separate units and reduce the image of a continuous body of water; and (4) the solar units are uniformly dark in color, coated to be non-reflective, and designed to be highly absorptive of all light that strikes their glass surfaces, and may not appear like water from above, as water displays different properties by both reflecting and absorbing light waves.

The gen-tie line would include an approximately 1,500-foot overhead portion that would consist of a 138 kV overhead transmission line. The potential for avian collisions with the gen-tie cables is considered a minor risk compared to the higher voltage, long distance transmission lines in the region such as the Southwest Powerlink and Sunrise Powerlink. Furthermore, the Project area is not an area where birds flock to wetlands or is part of migratory flyway or within a known eagle territory. However, the utility poles would provide perches from which avian species may forage, thereby increasing the potential risk of fatality associated with collisions and electrocutions.

Electromagnetic. It is known that migrating birds use electromagnetic directional senses and that artificial electromagnetic pulses can cause a response in some migration behaviors in some species (Holland and Helm 2013). However, there is very little scientific information available and a discussion of the potential of the Project impacts would be speculative.

Impact Neutral/Open Space

Following the County Guidelines (County of San Diego 2010), areas that are not being directly impacted but cannot be counted toward mitigation will be considered “impact neutral/open space.” Impact neutral areas can include RPO lands, including wetland buffers, and isolated pockets of open space. Within the Proposed Project, these areas are limited to the setback area along the U.S./Mexico international border and to isolated pockets of open space.

2.2.3.2 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 and Report Format and Content Requirements: Biological Resources* (County of San Diego 2010) was used to evaluate direct, indirect, and cumulative impacts for the Proposed Project. Each general subject area is broken into more specific County guidelines, and lettered accordingly, to provide additional clarity on this complex resource topic.

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 CDFW or U.S. Fish and Wildlife Service (USFWS).

- A. The project would impact one or more individuals of a species listed as federally or state endangered or threatened.
- B. The project would impact an on-site population of a County List A or B plant species, or a County Group 1 animal species, or a species listed as a state Species of Special Concern (SSC). Impacts to these species are considered significant; however, impacts of less than 5% of the individual plants or of the sensitive species’ habitat on a project site may be considered less than significant if a biologically based determination can be made that the project would not have a substantial adverse effect on the local long-term survival of that plant or animal taxon.
- C. The project would impact the local long-term survival of a County List C or D plant species or a County Group 2 animal species.

- D. The project may impact arroyo toad aestivation, foraging, or breeding habitat. Any alteration of suitable habitat within 1 kilometer (3,280 feet) in any direction of occupied breeding habitat or suitable stream segments (unless very steep slopes or other barriers constrain movement) could only be considered less than significant if a biologically based determination can be made that the project would not impact the aestivation or breeding behavior of arroyo toads.
- E. The project would impact golden eagle habitat. Any alteration of habitat within 4,000 feet of an active golden eagle nest could only be considered less than significant if a biologically based determination can be made that the project would not have a substantially adverse effect on the long-term survival of the identified pair of golden eagles.
- F. The project would result in the loss of functional foraging habitat for raptors. Impacts to raptor foraging habitat is considered significant; however, impacts of less than 5% of the raptor foraging habitat on a project site may be considered less than significant if a biologically based determination can be made that the project would not have a substantial adverse effect on the local long-term survival of any raptor species.
- G. The project would impact the viability of a core wildlife area, defined as a large block of habitat (typically 500 acres or more not limited to project boundaries, although smaller areas with particularly valuable resources may also be considered a core wildlife area) that supports a viable population of a sensitive wildlife species or supports multiple wildlife species. Alteration of any portion of a core habitat could only be considered less than significant if a biologically based determination can be made that the project would not have a substantially adverse effect on the core area and the species it supports.
- H. The project would cause indirect impacts, particularly at the edge of proposed development adjacent to proposed or existing open space or other natural habitat areas, to levels that would likely harm sensitive species over the long term. The following issues should be addressed in determining the significance of indirect impacts: increasing human access; increasing predation or competition from domestic animals, pests, or exotic species; altering natural drainage; and increasing noise and/or nighttime lighting to a level above ambient that has been shown to adversely affect sensitive species.
- I. The project would impact occupied burrowing owl habitat.
- J. The project would impact occupied cactus wren habitat, or formerly occupied coastal cactus wren habitat that has been burned by wildfire.
- K. The project would impact occupied Hermes copper habitat.
- L. The project would impact nesting success of the following sensitive bird species through grading, clearing, fire-fuel modification, and/or other noise-generating activities such as construction.

| Species | Breeding Season |
|--------------------------------|-----------------------------|
| Coastal cactus wren | February 15 to August 15 |
| Least Bell's vireo | March 15 to September 15 |
| Southwestern willow flycatcher | May 1 to September 1 |
| Tree-nesting raptors | January 15 to July 15 |
| Ground-nesting raptors | February 1 to July 15 |
| Golden eagle | January 1 to July 31 |
| Light-footed clapper rail | February 15 to September 30 |

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.

Project Effects Relevant to Guideline A

There are no federally listed or state-listed endangered or threatened species in the Project area; therefore, impacts would be **less than significant**.

Project Effects Relevant to Guideline B

Special-Status Plant Species (County List A and B Species)

No rare plant surveys were conducted for the Project site due to survey limitations, as described above; therefore, impacts to special-status plants are based on impacts to suitable habitat. In addition, due to the inability to conduct rare plant surveys in 2013 or 2014, the impact analysis for special-status plants includes those with a moderate or high potential to occur, whereas the County guidelines (County of San Diego 2010, page 11) only require text description of species identified on site or having a high potential to be present.

Short-term, construction-related, or temporary direct impacts to suitable habitat for County List A and B plant species would primarily result from construction activities. Clearing, trampling, or grading of suitable habitat for special-status plants outside designated construction zones could occur in the absence of avoidance and mitigation measures. Potential temporary direct impacts to County List A and B plant species on site would be **significant, absent mitigation (Impact BI-SP-1)**.

Suitable habitat for six County List A plant species that have a high to moderate potential to occur on site—Jacumba milk-vetch, pygmy lotus, Mountain Springs bush lupine, Parry's tetradococcus, southern jewel-flower, and Tecate tarplant—and five County List B plant species that have a high to moderate potential to occur on site—sticky geranium, slender-leaved ipomopsis, desert beauty,

pink fairy-duster, and Parish's desert-thorn—would experience long-term direct impacts from the Proposed Project (**Impact BI-SP-2**). Figure 2.2-6 shows the Proposed Project impacts to suitable habitat for County List A and B plant species on site, including semi-desert chaparral, Peninsular juniper woodland and scrub, Sonoran mixed woody scrub, and disturbed lands.

Table 2.2-3, Summary of Direct Impacts to Suitable Habitat for County List A and B Plant Species and Significance Prior to and After Mitigation, summarizes the proposed direct impacts to suitable habitat for County List A and B plant species and the significance of the impacts prior to and after mitigation (Appendix 2.2-1, Appendix E). The proposed impacts to suitable habitat for these special-status plants would be **significant, absent mitigation**.

Special-Status Wildlife Species (County Group 1 or State SSC)

Consistent with the County's guidelines, the impact analysis for special-status wildlife species focuses on those species identified on site or having a high potential to be present (see County of San Diego 2010, page 11).

Five County Group 1 and/or state SSC animal species were detected within the Project area: Bell's sparrow (*Artemisiospiza belli*), turkey vulture, loggerhead shrike, San Diego black-tailed jackrabbit, and potentially San Diego desert woodrat. Figure 2.2-6 shows the Proposed Project impacts in relation to the special-status wildlife observations mapped on site. In addition, four County Group 1 and/or state SSC wildlife species have high potential to occur within the Project area: Blainville's horned lizard, Belding's orange-throated whiptail, northern red diamond rattlesnake, and Northwestern San Diego pocket mouse. The following County Group 1 and/or state SSC wildlife species have a high potential to forage in the Project area, but not nest or roost: Cooper's hawk, prairie falcon, and golden eagle.

Species that have not been observed on site, have limited suitable habitat on site based on focused (e.g., burrowing owl) or general habitat assessments (e.g., coast patch-nosed snake), and/or are not known to occupy the immediate vicinity but have some potential to occur based on movement and distribution, are identified as having moderate potential to occur (see Appendix 2.2-1, Appendix F). Because of the reasons stated above, the Proposed Project is not considered to impact any on site populations or have an adverse effect on the long-term survival of species with a moderate potential to occur and therefore are not addressed further.

Loss of special-status wildlife species (County Group 1 or state SSC animals), including individual reptiles and small mammals, as a result of short-term construction-related activities would be **significant, absent mitigation (Impact BI-W-1)**. Based on the MBTA, if any active nests or the young of nesting special-status bird species (County Group 1 or state SSC animals) are impacted through direct grading, these impacts would be **significant, absent mitigation (Impact BI-W-2)**.

Potential long-term, permanent direct impacts from the Proposed Project to the wildlife species described above include removal of suitable nesting and/or foraging habitat, summarized in Table 2.2-4, Impacts to Suitable Habitat for Group 1 and/or SSC Wildlife Species. Loss of suitable nesting/foraging habitat would be **significant, absent mitigation (Impact BI-W-3)**.

Project Effects Relevant to Guideline C

Special-Status Plant Species (County List C and D Species)

Clearing, trampling, or grading of suitable habitat for one County List C plant species that has a moderate potential to occur on site—Fremont barberry—and six County List D plant species that have a high to moderate potential to occur on site—Payson’s jewel-flower, Colorado Desert larkspur, Wolf’s cholla, Palmer’s grappling hook, Pride-of-California, and low bush monkeyflower outside designated construction zones could occur in the absence of avoidance and mitigation measures. Of these species, Fremont barberry has a CRPR 2.3 which means the species is rare outside of California and fairly endangered in California; and within California less than 20% of occurrences are threatened or no current threats are known (CNPS 2014). Potential temporary direct impacts to Fremont barberry on site would be **significant, absent mitigation (Impact BI-SP-1)**.

Potential temporary direct impacts to County D plant species **would not be significant** because, based on the species’ CRPR of 4.2 and 4.3, these species are of limited distribution but are not considered rare and have a low “vulnerability or susceptibility to threat”; therefore, the impact will not substantially affect long-term survival of the species (CNPS 2014).

There are long-term direct impacts to suitable habitat for one County List C plant species that has a moderate potential to occur on site—Fremont barberry—and six County List D plant species that have a high to moderate potential to occur on site—Payson’s jewel-flower, Colorado Desert larkspur, Wolf’s cholla, Palmer’s grappling hook, Pride-of-California, and low bush monkeyflower; however, only impacts to Fremont barberry would be **significant, absent mitigation (Impact BI-SP-2)**. Figure 2.2-6 shows the Proposed Project impacts to suitable habitat for County List C and D plant species on site: semi-desert chaparral, Peninsular juniper woodland and scrub, Sonoran mixed woody scrub, and disturbed lands.

Similar to the short-term direct impacts to County D plant species, long-term direct impacts to potentially suitable habitat **would not be significant** because the potential impacts would not substantially affect long-term survival of the species.

Table 2.2-5, Summary of Direct Impacts to Suitable Habitat for County List C and D Plant Species and Significance Prior to and After Mitigation, summarizes projected direct impacts to County List C and D plant species habitat and the significance of the impacts before and after mitigation.

Special-Status Wildlife Species (County Group 2)

As summarized above, the following County Group 2 special-status wildlife species were incidentally observed either directly or indirectly (i.e., scat, tracks) within the Project area: California horned lark (*Eremophila alpestris actia*), western bluebird (*Sialia mexicana*), barn owl (*Tyto alba*), and monarch butterfly (*Danaus plexippus*). Figure 2.2-6 shows the Proposed Project impacts in relation to the special-status wildlife observations mapped on site.⁶ Two additional Group 2 species were observed and are analyzed in Section 3.2.2.2 because they are state SSC animals: San Diego black-tailed jackrabbit and San Diego desert woodrat.

The following four County Group 2 wildlife species have high potential to occur within the Project area: coastal whiptail (*Aspidoscelis tigris stejnegeri*), rosy boa, mule deer (*Odocoileus hemionus*), and mountain lion (*Puma concolor*). Five additional Group 2 species have high potential to occur and are analyzed in under Guideline A because they are state SSC animals: Belding's orange-throated whiptail, Blainville's horned lizard, northwestern San Diego pocket mouse, and northern red-diamond rattlesnake.

Loss of individual County Group 2⁷ special-status species as a result of short-term, construction-related activities would be **significant, absent mitigation (Impact BI-W-4)**. Additionally, under the MBTA, if any active nests or young of nesting special-status bird species (County Group 2) are impacted through direct grading, these impacts would be **significant, absent mitigation (Impact BI-W-5)**.

Long-term impacts from the potential loss of County Group 2 special-status wildlife species that are not state SSC animals would be **less than significant** due either to their regional widespread presence or the Project area's lack of relative importance to these species because they occur within a variety of habitats and through a wide geographic, topographic, and elevational range of which there is an abundance in the region; therefore, the Proposed Project would not impact the long-term survival of these species.

Project Effects Relevant to Guideline D

No arroyo toads (*Anaxyrus californicus*) have been detected in the Project area nor are they expected to occur. Arroyo toads are not known from this area and have not been documented in the Jacumba quadrangle or surrounding six quadrangles (CDFW 2014a). The Project area lacks suitable habitat for this species, such as perennial or intermittent stream channels. The closest

⁶ Please note: not all observations of these species were mapped.

⁷ County Group 2 special-status wildlife species that are state SSC are addressed under Guideline A, Special-Status Wildlife (Group 1).

USFWS occurrence is approximately 21 miles northwest of the Project area (CDFW 2014a; USFWS 2014). Therefore, **no impacts** to arroyo toad are anticipated.

Project Effects Relevant to Guideline E

Golden eagle was not observed during surveys and no active nests are known to occur within 4,000 feet of the Project area. The closest suitable nesting habitat is located approximately 1.3 miles north of the Project area in the Table Mountains where there may be rocky outcrops suitable for nesting, and where this species has been documented (CDFW 2014a). This species has potential to forage over the site, but there are no suitable nesting areas within 4,000 feet of the Project area. Therefore, **no impacts** to golden eagle habitat within 4,000 feet of a nest are anticipated.

Project Effects Relevant to Guideline F

Foraging habitat for raptors, including golden eagle, is present throughout portions of the Project area. Approximately 111.5 acres of vegetation communities and land covers will be impacted. Many of these habitats would be considered suitable foraging habitat for raptors. Therefore, impacts to raptor foraging habitat would be **significant, absent mitigation (Impact BI-W-6)**.

Project Effects Relevant to Guideline G

The solar site is included within a Core Wildlife Area (a large block of habitat that supports multiple wildlife species), even though the property is bordered by the U.S./Mexico international border fence which may exclude some larger wildlife from moving directly through the Proposed Project area. The gen-tie alignment is also within a core area or areas, but due to its linear nature and its permeability, its core status is not an issue.

The Project would impact 111.5 acres of land. This impact to viable populations of multiple wildlife species would be **significant, absent mitigation (Impact BI-W-7)** (see Appendix 2.2-1, Appendix F, for the species that were observed and the special-status species that are known or expected to occur).

Project Effects Relevant to Guideline H

Special-Status Plant Species

Short-term indirect impacts to County List A and B plant species (and one County List C: Fremont barberry, CRPR 2.3) as a result of the Proposed Project are described in above and include construction-related or temporary indirect impacts resulting in generation of fugitive dust, altered natural drainage (i.e., changes in hydrology due to construction), and the introduction of chemical pollutants. The potential short-term indirect impacts to County List A and B plant species (and Fremont barberry) would be **significant, absent mitigation (Impact BI-SP-3)**.

Potential long-term or permanent indirect impacts to County List A and B plant species (and Fremont barberry) as result of the Proposed Project include generation of fugitive dust, habitat fragmentation, chemical pollutants (herbicides), increased or introduction of non-native, invasive species, increased human access/activity, and alteration of the natural fire regime, which are described in more detail in Section 2.2.3.1, Definition of Impacts. Shading and/or nighttime lighting are expected to be contained within the Proposed Project impact footprint, and long-term indirect impacts associated with shading and/or nighttime lighting are not expected. These potential long-term indirect impacts would be **significant, absent mitigation (Impact BI-SP-4)**.

Special-Status Wildlife Species

Short-term indirect impacts to special-status wildlife species as a result of the Proposed Project are described above and include construction-related, or temporary indirect impacts that could result in generation of fugitive dust, noise, chemical pollutants, increased human access/activity, and increased predation and/or competition from non-native or domestic animal species.

Short-term indirect impacts to special-status wildlife species would be **significant, absent mitigation (Impact BI-W-8)**.

Potential long-term or permanent indirect impacts to special-status wildlife species include generation of fugitive dust; domestic or non-native, invasive plant and animal species; habitat fragmentation; increased human access/activity; noise; collision hazard; and altered hydrology; and alteration of the natural fire regime. Potential long-term indirect impacts to special-status wildlife species would be **significant, absent mitigation (Impact BI-W-9)**.

Project Effects Relevant to Guideline I

No burrowing owls have been detected in the Project area or are expected to regularly use the site, if at all. Based on focused habitat assessment and surveys conducted in the Project area (see Biological Resources Report in Appendix 2.2-1), although three suitably sized burrowing owl burrows were detected, no burrowing owl sign or individuals were observed. In addition, all three potential burrows are located outside of proposed impact zones. Since some suitable habitat is present and this species was detected approximately 3.5 miles west of the Project site (see Section 2.2.1.6) and they are potentially migratory, this species is considered to have a moderate to low potential to occur. Therefore, there are **no impacts** to occupied burrowing owl habitat. Preconstruction surveys for nesting birds (see **M-BI-6** in Section 2.2.6) will further ensure no impacts to individuals and/or additional suitable burrows that may have developed since focused surveys were conducted. If owls were to be discovered during the preconstruction surveys, and they would be within the CDFG 2012 guideline buffer limits, then a burrowing owl management plan would need to be written and approved by the County and CDFW. Table 2.2-6,

Recommended Restricted Activity Dates and Setback Distances by Level of Disturbance for Burrowing Owls, provides the CDFG-recommended restricted activity dates and setback distances around occupied burrowing owl nests for varying levels of disturbance (CDFG 2012b).

Project Effects Relevant to Guideline J

Although cactus wren (*Campylorhynchus brunneicapillus*) was observed in the Project area, the Project location is not within range of the special-status subspecies coastal cactus wren (*C. b. sandiegensis*) (Shuford and Gardali 2008). Therefore, there are **no impacts** to occupied coastal cactus wren habitat.

Project Effects Relevant to Guideline K

No Hermes copper butterflies (*Lycaena hermes*) have been detected in the Project area. The butterflies preferred the adult nectaring plant, California buckwheat (*Eriogonum fasciculatum foliolosum*) was not observed on site. Similarly, the larval host plant (i.e., true limiting factor), spiny redberry (*Rhamnus crocea*), has not been detected during biological surveys. Based on the lack of suitable habitat for this species, the Project area is not considered occupied Hermes copper butterfly habitat. Therefore, there are **no impacts** related to this guideline.

Project Effects Relevant to Guideline L

Coastal cactus wren, coastal California gnatcatcher, least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), tree-nesting raptors, golden eagle, and light-footed clapper rail (*Rallus longirostris levipes*) are not expected to nest in the Project area due to lack of suitable habitat and tree (or similar) structures to support nesting; therefore, there would be **no impacts** to the nesting success of those species as a result of the Proposed Project. No ground-nesting raptors (e.g., northern harrier (*Circus cyaneus*) and short-eared owl (*Asio flammeus*)) are expected to nest in the Project area. Therefore, there would be **no impacts** to the nesting success of those species as a result of the Proposed Project.

2.2.3.3 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 and Report Format and Content Requirements: Biological Resources* (County of San Diego 2010) was used to evaluate the direct, indirect, cumulative impact analysis. Each general subject area is broken into more specific County guidelines, and lettered accordingly, to provide additional clarity on this complex resource topic.

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 CDFW or USFWS.

- A. Project-related grading, clearing, construction, or other activities would temporarily or permanently remove sensitive native or naturalized habitat (as listed in County of San Diego 2010, Table 5, excluding those without a mitigation ratio) on or off the project site. This Guideline would not apply to small remnant pockets of habitat that have a demonstrated limited biological value. No de minimus standard is specified under which an impact would not be significant; however, minor impacts to native or naturalized habitat that is providing essentially no biological habitat or wildlife value can be evaluated on a case-by-case basis to determine whether the projected impact may be less than significant. For example, an impact to native or naturalized upland habitat under 0.1 acre in an existing urban setting may be considered less than significant (depending on a number of factors). An evaluation of this type should consider factors including, but not limited to, type of habitat, relative presence or potential for sensitive species, relative connectivity with other native habitat, wildlife species and activity in the project vicinity, and current degree of urbanization and edge effects in project vicinity, etc. Just because a particular habitat area is isolated, for example, does not necessarily mean that impacts to the area would not be significant (e.g., vernal pools). An area that is disturbed or partially developed may provide a habitat “island” that would serve as a functional refuge area “stepping stone” or “archipelago” for migratory species.
- B. Any of the following will occur to or within jurisdictional wetlands and/or riparian habitats as defined by U.S. Army Corps of Engineers (ACOE), California Department of Fish and Wildlife (CDFW), and the County of San Diego: removal of vegetation; grading; obstruction or diversion of water flow; adverse change in velocity, siltation, volume of flow, or runoff rate; placement of fill; placement of structures; construction of a road crossing; placement of culverts or other underground piping; any disturbance of the substratum; and/or any activity that may cause an adverse change in native species composition, diversity, and abundance.
- C. The project would draw down the groundwater table to the detriment of groundwater-dependent habitat, typically a drop of 3 feet or more from historically low groundwater levels.
- D. The project would cause indirect impacts, particularly at the edge of proposed development adjacent to proposed or existing open space or other natural habitat areas, to levels that would likely harm sensitive habitats over the long term. The following issues should be addressed in determining the significance of indirect impacts: increasing human access; increasing predation or competition from domestic animals, pests, or

exotic species; altering natural drainage; and increasing noise and/or nighttime lighting to a level above ambient that has been shown by the best available science to adversely affect the functioning of sensitive habitats.

- E. The project does not include a wetland buffer adequate to protect the functions and values of existing wetlands. If the project is subject to the Resource Protection Ordinance (RPO), buffers of a minimum of 50 feet and a maximum of 200 feet to protect wetlands are required based on the best available science available to the County at the time of adoption of the ordinance. The following examples provide guidance on determining appropriate buffer widths:
- i. A 50-foot wetland buffer would be appropriate for lower quality RPO-wetlands where the wetland has been assessed to have low physical and chemical functions, vegetation is not dominated by hydrophytes, soils are not highly erosive, and slopes do not exceed 25%.
 - ii. A wetland buffer of 50 to 100 feet is appropriate for moderate- to high-quality RPO wetlands that support a predominance of hydrophytic vegetation or wetlands within steep slope areas (greater than 25%) with highly erosive soils. Within the 50- to 100-foot range, wider buffers are appropriate where wetlands connect upstream and downstream, where the wetlands serve as a local wildlife corridor, or where the adjacent land use(s) would result in substantial edge effects that could not be mitigated.
 - iii. Wetland buffers of 100 to 200 feet are appropriate for RPO wetlands within regional wildlife corridors or wetlands that support significant populations of wetland-associated sensitive species, or where stream meander, erosion, or other physical factors indicate a wider buffer is necessary to preserve wildlife habitat.
 - iv. Buffering of greater than 200 feet may be necessary when an RPO wetland is within a regional corridor or supports significant populations of wetland-associated sensitive species and lies adjacent to land use(s) that could result in a high degree of edge effects within the buffer. Although the RPO stipulates a maximum of 200 feet for RPO wetland buffers, actions may be subject to other laws and regulations (such as the Endangered Species Act) that require greater wetland buffer widths.

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.

Project Effects Relevant to Guideline A

Short-term, construction-related, or temporary direct impacts to special-status upland vegetation communities would primarily result from construction activities. Clearing, trampling, or grading of special-status vegetation communities outside designated construction zones could occur in the absence of avoidance and mitigation measures. Potential temporary direct impacts to special-status vegetation communities on site would be **significant, absent mitigation (Impact BI-V-1)**.

Permanent direct impacts to disturbed land are **not significant**. Permanent direct impacts to 103.2 acres of special-status upland vegetation communities⁸ would occur as a result of the Proposed Project and would be **significant, absent mitigation (Impact BI-V-2)**.

Figure 2.2-6 illustrates the distribution of biological resources on site and the locations where proposed impacts would occur. Table 2.2-7, Summary of Impacts, Mitigation, and Open Space for Vegetation Communities and Jurisdictional Areas, summarizes the impacts and required mitigation for special-status vegetation communities in the Project area. Mitigation ratios provided in Table 2.2-7 conform to County guidelines (2010). Open space design and resources are shown on Figure 2.2-7, Open Space and Impact Neutral Areas (setback area along U.S./Mexico international border).

Semi-desert chaparral, Sonoran mixed woody scrub, and upper Sonoran subshrub scrub have many plant species and other characteristics in common. For example, areas mapped as semi-desert chaparral have species composition similar to Sonoran mixed woody shrub but have a lower percent cover of creosote; areas mapped as upper Sonoran subshrub have open structure and plant species similar to semi-desert chaparral, but lack creosote completely. The 26.3 acres of excess mitigation acreage of semi-desert chaparral would provide functions and values similar to the Sonoran mixed woody scrub (3.2 acres) and upper Sonoran subshrub scrub (3 acres) because the species compositions are similar and there is similar soils distribution within the open space areas compared to the Proposed Project impact areas. Although there would be a deficit of 6.2 acres at the required 1:1 mitigation ratio for Sonoran mixed woody scrub and upper Sonoran subshrub scrub, overall the Project would have an excess of 42 acres of required mitigation lands (see Table 2.2-7). Currently, wildlife species are free to move throughout all of these habitat types and would continue to utilize the designated semi-desert chaparral and Peninsular juniper woodland and scrub as habitat for breeding, nesting, cover, and foraging. Table 2.2-7 includes the impacts to vegetation communities and non-natural land covers and mitigation acreage (if required). Semi-desert chaparral and Peninsular juniper woodland and scrub have a combined excess of mitigation of 38.9 acres, and Sonoran mixed woody scrub and upper Sonoran subshrub scrub have a combined mitigation deficit of 6.2 acres. Wildlife species that are expected to move throughout both impacted and open space habitats include species

⁸ Includes fuel modification zone acres.

described in Table 2.2-4. These species include Blainville's horned lizard, Belding's orange-throated whiptail, northern red-diamond rattlesnake, northwestern San Diego pocket mouse, San Diego black-tailed jackrabbit, and San Diego desert woodrat. Avian species that may forage in these areas include Cooper's hawk, prairie falcon, golden eagle, Bell's sparrow, turkey vulture, and loggerhead shrike. Avian species that may nest in these areas include Bell's sparrow and loggerhead shrike. Modeled habitat, or similar vegetation communities and soils, for special-status plants occur throughout the open space areas. Because wildlife species are expected to use all of the on-site open space areas, and there is suitable habitat for plants within the open space areas, these lands would have functional equivalence, and no additional mitigation would be necessary. Additionally, the open space areas provide higher quality habitat compared to the impacted areas, and would result in conserved lands at a mitigation ratio greater than 1:1.

Project Effects Relevant to Guideline B

No wetlands under the jurisdiction of ACOE, RWQCB, CDFW, or County were identified within the solar site or gen-tie site and will not be further addressed.

The Proposed Project has been designed to avoid non-wetland waters to the maximum extent practicable. There will be direct impacts to 0.21 acre (4,261 linear feet) of non-wetland ephemeral waters under the jurisdiction of ACOE/RWQCB/CDFW. Impacts to 0.21 acre of non-wetland waters would be **significant, absent mitigation (Impact BI-V-3)**.

Short-term, construction-related, or temporary indirect impacts to jurisdictional non-wetlands waters would primarily result from construction activities. Indirect impacts could include the generation of fugitive dust; changes in hydrology resulting from construction, including sedimentation and erosion; and the introduction of chemical pollutants (including herbicides). Potential temporary indirect impacts to jurisdictional waters on site would be **significant, absent mitigation (Impact BI-V-4)**.

Potential long-term indirect impacts to jurisdictional non-wetlands waterways primarily result from impacts related to operation and maintenance activities, including chemical pollutants, altered hydrology, non-native invasive species, increased human activity, and alteration of the natural fire regime. These indirect impacts would be **significant, absent mitigation (Impact BI-V-5)**.

Project Effects Relevant to Guideline C

During construction activities, an estimated water demand of 58.6 acre-feet over a period of approximately 6 months is anticipated. Water used for construction activities would be supplied via water trucked in from a local water source. Construction water demands would be met by the Jacumba Community Services District (JCS D) and/or the Padre Dam Municipal Water District. No on-site groundwater will be used for construction or operational needs. Since the operational water demand of the Proposed Project is anticipated to be fairly low (the facility would not be

manned), because the cost of developing on-site water resources would be high, and because the yield of on-site wells is uncertain, the Proposed Project is anticipated to import all of its water needs from off-site sources. All operational water needs are anticipated to be met by the JCSD at Wells 4, 6, and 8. Wells 4 and 6 are approximately 500 feet south of riparian or bottomland vegetation communities and Well 8 is approximately 350 feet south of riparian or bottomland vegetation communities. A groundwater investigation report prepared for the Proposed Project has demonstrated that JCSD Well 6 can provide up to 100,000 gallons per day over 192 days, for a total of 59 acre-feet, without causing significant impacts to groundwater storage, well interference, or groundwater-dependent habitat (Appendix 3.1.4-3; Appendix 3.1.4-4).

Operational water demands are anticipated to be greatest for PV panel washing and application of a non-toxic soil binder to stabilize site soil. Total operational water demands are estimated at 3.4 acre-feet per year. Panel washing for the Proposed Project would use 2.5 acre-feet per year. Water used for application of soil binder (if required) would be 0.9 acre-feet per year. This information is based on the Project Description for Jacumba Solar Energy Project (see Chapter 1). Impacts to groundwater-dependent vegetation are anticipated to be **less than significant**.

Project Effects Relevant to Guideline D

Short-term, indirect impacts to special-status upland vegetation communities as a result of the Proposed Project include short-term; construction-related; or temporary, indirect impacts, and include generation of fugitive dust, changes in hydrology resulting from construction, and the introduction of chemical pollutants (including herbicides). Short-term, indirect impacts to special-status upland vegetation communities would be **significant, absent mitigation (Impact BI-V-6)**.

Potential long-term or permanent indirect impacts to special-status upland vegetation communities as a result of the Proposed Project include generation of fugitive dust, habitat fragmentation, chemical pollutants (herbicides), non-native invasive species, increased human activity, and alteration of the natural fire regime. Potential long-term, indirect impacts to special-status upland vegetation communities would be **significant, absent mitigation (Impact BI-V-7)**.

Project Effects Relevant to Guideline E

There are no RPO wetlands on site; therefore, no wetlands buffer would be required.

2.2.3.4 Jurisdictional Wetlands and Waterways

Guidelines for the Determination of Significance

For the purpose of this EIR, the County's Guidelines for Determining Significance and Report Format and Content Requirements: Biological Resources (County of San Diego 2010) was used to evaluate the direct, indirect, and 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, and coastal) through direct removal, filling, hydrological interruption, or other means.

Analysis

No wetlands under the jurisdiction of ACOE were identified within the solar site or gen-tie site. Therefore, **no impacts** to federally protected wetlands would result from the Proposed Project.

2.2.3.5 Wildlife Movement and Nursery Sites

Guidelines for the Determination of Significance

For the purpose of this EIR, the County's Guidelines for Determining Significance and Report Format and Content Requirements: Biological Resources (County of San Diego 2010) was used to evaluate the direct, indirect, and cumulative impact analysis. Each general subject area is broken into more specific County guidelines, and lettered accordingly, to provide additional clarity on this complex resource topic.

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.

- A. The project would impede wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their reproduction.
- B. The project would substantially interfere with connectivity between blocks of habitat, or would potentially block or substantially interfere with a local or regional wildlife corridor or linkage. For example, if the project proposes roads that cross corridors, fencing that channels wildlife to underpasses located away from interchanges will be required to provide connectivity. Wildlife underpasses shall have dimensions (length, width, height) suitable for passage by the affected species based on a site-specific analysis of wildlife movement. Another example is increased traffic on an existing road that would result in significant road-kill or interference with an existing wildlife corridor/linkage.
- C. The project would create artificial wildlife corridors that do not follow natural movement patterns; for example, constraining a corridor for mule deer or mountain lion to an area that is not well-vegetated or that runs along the face of a steep slope instead of through the valley or along the ridgeline.

- D. The project would increase noise and/or nighttime lighting in a wildlife corridor or linkage to levels likely to affect the behavior of the animals identified in a site-specific analysis of wildlife movement.
- E. The project does not maintain an adequate width for an existing wildlife corridor or linkage and/or would further constrain an already narrow corridor through activities such as (but not limited to) reduction of corridor width, removal of available vegetative cover, placement of incompatible uses adjacent to it, and placement of barriers in the movement path. The adequacy of the width shall be based on the biological information for the target species, the quality of the habitat within and adjacent to the corridor, topography, and adjacent land uses. Where there is limited topographic relief, the corridor should be well-vegetated and adequately buffered from adjacent development. Corridors for bobcats, deer, and other large animals should reach rim-to-rim along drainages.
- F. The project does not maintain adequate visual continuity (i.e., long lines of site) within wildlife corridors or linkage. For example, development (such as homes or structures) sited along the rim of a corridor could present a visual barrier to wildlife movement. For stepping-stone/archipelago corridors, a project does not maintain visual continuity between habitat patches.

Analysis

When analyzing the importance of this area from a wildlife corridor perspective, Dudek reviewed Las Californias Binational Conservation Initiative (Initiative; Conservation Biology Institute 2004) and other documents as appropriate. The goal of the Initiative is to provide for connectivity through the binational area between San Diego (roughly Laguna Mountains), U.S.A., south into Ensenada, northern Baja California (roughly Sierra Juarez), Mexico. The area is already compromised by dense development and human populations and infrastructure including major highways and the international border fence. Breaks in the international border fence occur both west and east of the Proposed Project (Figure 2.2-5).

Wildlife movement was analyzed using the Initiative as a tool. Impacts and contributions were reviewed as they related to the Initiative. The general area was identified as having Category B management objectives (requiring land uses and management that maintain habitat integrity and allow natural ecological processes to continue). Further, the general area is identified as a Critical Opportunity Area, supported by abundant federal lands (U.S. Forest Service and BLM lands) on the U.S. side. The Project was designed to be as condensed and with as little edge as possible and to nestle against the international border fence. Further, it was designed to provide connective open space adjacent to existing BLM lands. This provides for enhanced connectivity between the gaps in the international border fence and protected or managed lands within the United States. Management and protections within Mexico are not guaranteed, however.

Project Effects Relevant to Guideline A

Short-term, construction-related, or temporary direct impacts to potential foraging and breeding habitat for species that use the Project area (e.g., special-status birds) would primarily result from construction activities. Clearing, trampling, or grading of foraging and breeding habitat outside designated construction zones could occur in the absence of avoidance and mitigation measures. Potential temporary direct impacts to foraging and breeding habitat on site would be **significant, absent mitigation (Impact BI-WM-1)**.

Permanent direct impacts to approximately 111.5 acres of potential foraging and breeding habitat for species that use the Project area (e.g., special-status birds) would occur as a result of the Proposed Project. Permanent direct impacts to foraging and breeding habitat would be **significant, absent mitigation (Impact BI-WM-2)**.

Short-term and long-term indirect impacts to wildlife access to foraging and breeding habitat for small and mid-sized animals would be **significant, absent mitigation (Impact BI-WM-3)**, as discussed in detail in Section 2.2.1.8, Habitat Connectivity.

Project Effects Relevant to Guideline B

The site is undeveloped and on-site elevation ranges from approximately 3,010 to 3,160 feet amsl. The site is located 2.5 miles east of the community of Jacumba, south of Old Highway 80 (the highway traverses the northern portion of the site), and north of the international border. The site is generally flat except for a low hill near its southwest corner, and several unvegetated channels generally flow to the northwest across the site. The Project will include an interconnection to SDG&E's ECO Substation, located approximately 1,100 feet to the east of the Project site. Land use on site, and in the surrounding areas, consists of open space in both private and federal lands holdings. BLM lands are adjacent to the Project limits and a 500 kV substation is currently under construction to the east. A portion of study area borders Mexico and is separated by the international border fence (fence). There are breaks in the fence coverage approximately 1,400 feet west of the Project site within BLM lands, and approximately 3,000 feet to the east that allow for north/south wildlife movement. The border fence itself is permeable for smaller species, including reptiles, invertebrates and small mammals such as ground squirrels and rabbits. However, it is unlikely that it provides many opportunities for larger predators like bobcats or coyotes to move through. Additionally, the wide U.S. Customs and Border Protection road adjacent to the fence is heavily maintained and represents a poor habitat quality zone for smaller wildlife – making them susceptible to exposure or predation. The Project site is generally within the Peninsular Range in a transitional area between the coast and the desert. It is in a dry climate with average temperatures near the community of Jacumba ranging from approximately 34°F–94°F. This community generally receives an average rainfall of less than 15 inches per year (WRCC 2014).

The Project site will be fenced with barbed wire. Fencing will be 9 feet in height consisting of an 8-foot high chain-link perimeter fence with 1 foot of three-strand barbed wire along the top with a 4-inch maximum clearance from the ground surface. The fence would be constructed with anti-climbing material(s), such as extra small link size for the fence mesh. This fencing will still allow small reptiles, amphibians, and mammals to pass through; however, will not provide movement for larger species. Although the fencing will limit the ability of particularly large wildlife to access and traverse the solar site, the adjacent contiguous landscape is proposed as open space. While movement is constrained by the fencing surrounding the Project site, the Project site also is fairly uniform in topography and resources. Therefore it is unlikely to serve as a local or regional wildlife corridor since, as described in Section 2.2.1.8, wildlife corridors are defined as areas that connect suitable wildlife habitat in a region otherwise fragmented by rugged terrain, changes in vegetation, or human disturbance. For example, natural features, such as canyon drainages, ridgelines, or areas with vegetation cover, provide corridors for wildlife travel. A local example of a corridor would be where the breaks in the border fence occur. Those areas represent a confined area that wildlife are required to travel through if they choose to move north-south across the border area.

The Proposed Project vicinity includes undeveloped landscapes and a fence at the border of Mexico to the south that is generally impermeable to larger wildlife, but allows smaller wildlife species to pass through. Aside from the fence at the border, currently there are a few factors that limit the ability of wildlife to access and traverse the site. The existing conditions are that the Project site is not likely to be part of a regional corridor or linkage for large mammals due to the lack of constrained topography surrounding the Project site that would constrain wildlife to traverse through the Project site. In addition, the international border fence bordering the Project site is currently impermeable to larger wildlife, such that movement of larger wildlife between the United States and Mexico would occur along breaks in the border fence east and west of the Proposed Project area; smaller wildlife species such as reptiles, invertebrates, birds, and smaller mammals can still travel through the border fence. In addition, the Project is unlikely to serve as a local or regional wildlife corridor since wildlife are not constrained to travel through the Project site. Wildlife would be able to traverse lands in an east-west manner across the northern portions of the site, utilizing all topography, to gain access between the Jacumba Mountains to the east and the Airport Mesa area to the west. The open space design of the Project complements the adjoining BLM lands and allows for continued and permanent use of those lands for connectivity purposes. Therefore, development of the site and installation of the new 9-foot fencing with barbed wire around the perimeter of the property will not substantially interfere with connectivity between blocks of habitat, or potentially block or substantially interfere with a local or regional wildlife corridor or linkage, and impacts for large mammals **would not be significant**.

Smaller wildlife species (e.g., lizards and small mammals) will still be able to access the site through openings in the fence; however, vegetation within the solar site would be maintained

at a maximum height of 4-inches above ground, thereby removing suitable on-site habitat. Smaller wildlife species would not be able to navigate through the site to access habitat on the far side since the size of the site would be insurmountable for small wildlife. Therefore, impacts to movement of small and mid-sized wildlife would be **significant, absent mitigation (Impact BI-WM-4)**.

Although the Proposed Project will remove habitat suitable for wildlife it is not expected to impact an existing wildlife corridor or linkage (of either regional or local scale) and **would not be significant**.

As described in Section 2.2.3.1, Definition of Impacts, the utility poles associated with the genetic alignment would provide perches from which avian species may forage, thereby increasing the potential risk of fatality associated with collisions and electrocutions. Therefore, impacts to resulting from collision and electrocution would be **significant, absent mitigation (Impact BI-WM-5)**. As discussed in Section 2.2.3.1 glare and pseudo-lake effect were deemed to be a low risk due to a number of factors, including array design, solar unit design, and site location. In addition, although there have been reported avian fatalities at some of the solar facilities in the desert, it has only been hypothesized that the facilities appear as a water body to migrating birds; there have been no empirical studies conducted on the effects PV solar installations on birds. Additionally, the Jacumba Solar Energy Project is substantially smaller and is located in a less likely flight path or migratory corridor than the solar projects that are reporting avian fatalities due to its location in the mountains away from the coast or Imperial Valley and not being situated between large water bodies. Nevertheless, mitigation as described under **Impact BI-WM-5** will be implemented to mitigate potential collisions and electrocutions.

Project Effects Relevant to Guideline C

As described above, the Proposed Project is not considered to be a significant local or regional wildlife corridor. In addition, the on-site preservation of the Open Space Preserve would consist of a single large block of habitat and the Proposed Project would not create any artificial wildlife corridors and this impact would be **less than significant**.

Project Effects Relevant to Guideline D

Minimal permanent lighting is associated with the Proposed Project. These areas include security lighting designed to minimize light pollution and preserve dark skies, while enhancing safety, security, and functionality. There would be short-term, construction-related noise associated with the use of mechanized equipment and increased traffic within the area. Noise would most likely only be a disturbance to those species that are active during the daytime, as the noise levels are less at night. Long-term noise associated with routine maintenance would not be expected to impact wildlife movement because these activities will typically occur on an as-needed basis and

be within the Project footprint. The potential noise and lighting impacts as a result of the Proposed Project would be **less than significant**.

Project Effects Relevant to Guideline E

The Project does not maintain an adequate width to be considered an existing wildlife corridor or linkage. Approximately 111.5 of the total 304 acres of Project area will be impacted by the Proposed Project. Although the Project area is not considered a local or regional wildlife corridor, it is considered a wildlife core area, with wildlife utilizing the area. Small wildlife species (e.g., lizards and small mammals) will be able to access the Project area through openings in the fence; however, loss of habitat and soil compaction, combined with soil binders will reduce the abundance of small wildlife utilizing the Project area and the value of habitat on site to wildlife. The site would not provide good habitat for small species, and will likely preclude movement (**Impact BI-WM-4**; see above).

Larger wildlife are similarly expected to utilize the area frequently. Although the Proposed Project will be fenced (thereby preventing movement of large wildlife through the site), a single contiguous block of habitat will be preserved as open space thereby facilitating movements of large wildlife through the area. The open space will be connected to adjacent BLM lands, thus adding to landscape-scale functional connectivity across disparate federally managed lands and internationally via direct access to the Border Fence openings. The international border fence is permeable to small wildlife and birds, but not to large wildlife. Large wildlife movement across the border is facilitated by openings in the border fence near the Project site. These openings in the fence are located approximately 1,400 feet west of the Project site within BLM lands, and approximately 3,000 feet to the east that allow for north–south wildlife movement.

Project Effects Relevant to Guideline F

The fencing between the border of Mexico and the United States already creates a visual and structural barrier to north and south wildlife movement in the Project area. The Proposed Project would be situated adjacent to the border fencing, and although visual continuity within the Project area could be exacerbated by the addition of solar panels and fencing, wildlife can likely use a variety of local wildlife corridors outside the Project area to move east, west, and north of the Project.

While focused wildlife corridor studies have not been completed within the vicinity, based on knowledge of the area, probable key wildlife species, and typical wildlife movement patterns the following discussion applies. Likely species of focus in the Project site vicinity include mule deer, coyotes, mountain lion, and bobcat. Avian species use the area during migrations, but those movements typically are oriented in a north–south direction, are broad-fronted, and are not focused on this site. Potential regional wildlife corridors probably connect between the Laguna

Mountains to the west and north, and to the east, the Anza-Borrego Desert and the eastern slope of the Peninsular Range. However, connections to the east likely occur north of the site and possibly along I-8 which provides the most direct and obvious potential corridor route between the Proposed Project and habitats east of the Peninsular Range – particularly in the “I-8 Island” area, which is a known lambing area for bighorn sheep, provides undercrossings, and is linked to similar connections within Mexico along Highway 2. Much of this area would be considered to be large, core blocks of habitat for which wildlife would be free to move through at will and with minimal constraint. In addition, large areas of undeveloped lands surrounding the Project area provide for local wildlife movement. The site does not exist between lakes/ponds, loafing spots, foraging areas, or nesting sites which might entice local movement of birds or larger wildlife, so it is not considered to be an important local wildlife corridor for avian species; therefore, impacts would be **less than significant**.

2.2.3.6 Local Policies, Ordinances, and Adopted Plans

Guidelines for the Determination of Significance

For the purpose of this EIR, the County’s Guidelines for Determining Significance and Report Format and Content Requirements: Biological Resources (County of San Diego 2010) was used to evaluate the direct, indirect, and cumulative impact analysis. Each general subject area is broken into more specific County guidelines, and lettered accordingly, to provide additional clarity on this complex resource topic.

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 HCP.

- A. For lands outside of the Multiple Species Conservation Plan (MSCP), the project would impact coastal sage scrub vegetation in excess of the County’s 5% habitat loss threshold as defined by the Southern California Coastal Sage Scrub Natural Communities Conservation Planning (NCCP) Process Guidelines.
- B. The project would preclude or prevent the preparation of the subregional NCCP Process. For example, the project proposes development within areas that have been identified by the County or resource agencies as critical to future habitat preserves.
- C. The project will impact any amount of wetlands or sensitive habitat lands as outlined in the Resource Protection Ordinance (RPO).
- D. The project would not minimize and/or mitigate coastal sage scrub habitat loss in accordance with Section 4.3 of the NCCP Process Guidelines.

- E. The project does not conform to the goals and requirements as outlined in any applicable Habitat Conservation Plan (HCP), Habitat Management Plan (HMP), Special Area Management Plan (SAMP), Watershed Plan, or similar regional planning effort.
- F. For lands within the MSCP, the project would not minimize impacts to Biological Resource Core Areas (BRCAs), as defined in the Biological Mitigation Ordinance (BMO).
- G. The project would preclude connectivity between areas of high habitat values, as defined by the Southern California Coastal Sage Scrub NCCP Process Guidelines.
- H. The project does not maintain existing movement corridors and/or habitat linkages as defined by the BMO.
- I. The project does not avoid impacts to MSCP narrow endemic species and would impact core populations of narrow endemics.
- J. The project would reduce the likelihood of survival and recovery of listed species in the wild.
- K. The project would result in the killing of migratory birds or destruction of active migratory bird nests and/or eggs (MBTA).
- L. The project would result in the take of eagles, eagle eggs, or any part of an eagle (Bald and Golden Eagle Protection Act).

Analysis

The County's local policies and ordinances that protect biological resources include the MSCP Plan, RPO, BMO, and HLP Ordinance.

Project Effect as Relevant to Guideline A

The Project area does not support nor would it impact coastal sage scrub vegetation; impacts would be **less than significant**.

Project Effect as Relevant to Guideline B

The Jacumba Solar Energy Project would not preclude or prevent the preparation of the Subregional NCCP because the Project has been planned in accordance with the planning principles of the MSCP and in consideration of preparation of the ECMSCP Subarea Plan. The Project design has been evaluated according to the Preliminary Conservation Objectives outlined in the Planning Agreement for ECMSCP (County of San Diego 2008). These objectives and Project applicability/compliance are listed in Table 2.2-8, ECMSCP Planning Agreement Conservation Objectives. Impacts would be **less than significant**.

Project Effect as Relevant to Guideline C

No wetlands or sensitive habitat lands under the jurisdiction of the County, as outlined in the RPO (County of San Diego 2007) were identified within the Proposed Project site. Sensitive habitat lands identified in the RPO include unique vegetation communities, land that supports endangered species, lands essential to a natural ecosystem and wildlife corridors. Therefore, **no impacts** would occur to RPO wetlands or sensitive habitats as a result of the Proposed Project.

Project Effect as Relevant to Guideline D

The Jacumba Solar Energy Project does not support nor would it impact coastal sage scrub vegetation; therefore **no impacts** would occur.

Project Effect as Relevant to Guideline E

The Jacumba Solar Energy Project conforms to the goals and requirements as outlined in all applicable regional planning efforts; therefore, **no impacts** would occur.

Project Effect as Relevant to Guideline F

The Jacumba Solar Energy Project is located approximately 32 miles east of the approved South County MSCP.

Since there is no approved ECMSCP and no associated BMO, this guideline does not apply to the Jacumba Solar Energy Project and therefore **no impacts** would occur.

Project Effect as Relevant to Guideline G

The Jacumba Solar Energy Project is not expected to preclude habitat connectivity as discussed above; therefore, **no impacts** would occur.

Project Effect as Relevant to Guideline H

Since there is no approved ECMSCP and no associated BMO, this guideline does not apply to the Jacumba Solar Energy Project; therefore, **no impacts** would occur.

Project Effect as Relevant to Guideline I

Narrow endemic species are evaluated under the County Guidelines for Determining Significance for Biological Resources. There are none on the Project site; therefore, **no impacts** would occur.

Project Effect as Relevant to Guideline J

No federally or state-listed plant or wildlife species have been observed in the Project area; therefore, **no impacts** would occur.

Project Effect as Relevant to Guideline K

Short-term, temporary, or construction-related impacts to migratory birds and active migratory bird nests and/or eggs protected under the MBTA would be **significant, absent mitigation (Impact BI-P-1)**.

Project Effect as Relevant to Guideline L

Impacts to 111.5 acres of suitable foraging habitat for eagles would be **significant, absent mitigation** (included with raptor foraging impacts, **Impact BI-W-7**). The Project, including the gen-tie, would not have site-specific impacts on golden eagle nesting.

2.2.4 Cumulative Impact Analysis

Geographic Extent

The geographic extent for the analysis of cumulative impacts associated with biological resources includes the vicinity of all reasonably foreseeable cumulative projects and extends throughout southeastern San Diego County. Within the extent of the cumulative projects, the Peninsular Ranges of the California Floristic Province, as defined in the Jepson Flora Project, was initially chosen to define the biological resources cumulative study area. However, since the Proposed Project is located approximately 1 mile east of the Peninsular Range boundary the southeastern portion of the Carrizo Creek Watershed (Hydrologic Unit Code (HUC): 18100202) was also included to define the southeastern extent of the cumulative study area (Figure 2.2-8, Biological Cumulative Study Area Vegetation).

The Peninsular Ranges eco-geographic extent was chosen because the geographic system developed by the Jepson Flora Project “combines features of natural landscapes and biota to delimit the units, as opposed to using the often arbitrary and unnatural boundaries of counties for that purpose. The Jepson geographic system most importantly reflects broad patterns of natural vegetation (and, at a finer scale, more specific plant assemblages), geology, topography, and climate.” (Jepson Flora Project 2014) In addition, habitat within the Peninsular Ranges would be biologically representative of that present within the Proposed Project. The southeastern portion of Carrizo Creek Watershed is used to define the southeastern extents of the cumulative study area. The approximately 653-square-mile Carrizo Creek Watershed boundaries are defined by “hydrographic and topographic criteria that delineate an area of land upstream from a specific point on a river, stream or similar surface waters” (USDA 2014). Similar to the Jepson Flora

Project, the boundaries of this watershed also reflect natural patterns of the landscape. The additional use of the Carrizo Creek Watershed boundaries provide a southeastern biologically relevant connection between the Proposed Project and Peninsular Ranges. Based on this system, the Peninsular Ranges and southeastern portion of the Carrizo Creek Watershed would define an appropriate study area for biological resources assessed in this EIR. The biological cumulative analysis study area is explained in the “Existing Cumulative Conditions” section that follows. The cumulative projects analyzed for biological resources are a subset of those projects summarized in Table 1-7, Cumulative Scenario – Reasonably Foreseeable Approved and Pending Projects (see Chapter 1, Project Description, of this EIR).

Existing Cumulative Conditions

The southeastern San Diego County area is considered a transition zone between biogeographic regions. The California Floristic Province occurs in the biological cumulative analysis study area, which encompasses a majority of California west of the extreme dry regions. The Desert Province occurs east of the cumulative analysis area, which encompasses the dry desert regions, and is not included in the biological cumulative analysis study area. Within the California Floristic Province, the Peninsular Ranges subregion (i.e., an area of similar climatic and plant community associations) stretches from southern Los Angeles County along the valley, foothills, and mountains south to Baja California, Mexico. Although the Proposed Project is located within the Desert Province boundaries, habitat on site is more characteristic of that within the Peninsular Ranges subregion. Therefore, the southeastern portion of the Carrizo Creek Watershed is included to define the southeastern boundaries of the biological cumulative analysis study area.

In the western and central portion of the analysis area in and around the McCain Valley, the mountain and foothill areas are characterized by a mosaic of chaparral and scrub communities that grade into oak woodlands and grasslands in the valleys. Many of the valleys are also characterized by grazing uses and rural residential development. This analysis area primarily includes transmission projects, large-scale renewable energy development, and residential and communications development in eastern San Diego County. The assemblage of plant and wildlife species, including special-status species, in the western and central portion of the analysis area is largely the same as that identified for the Proposed Project.

Cumulative Methodology

The cumulative analysis conducted for biological resources is based on the list method and considers relevant projects from Table 1-7. Figure 2.2-8 shows the extent of the cumulative study area. Of the cumulative projects listed in Table 1-7, the following projects would potentially affect biological resources within the cumulative study area: ECO Substation, Tule wind farm, Energia Sierra Juarez wind project, Energia Sierra Juarez transmission line, JCSD new well, and

Chapman Ranch solar facility. The locations of these cumulative projects can be found on Figure 2.2-8. Reasonably foreseeable cumulative projects located east of the overall cumulative analysis area are not included because they would affect more arid vegetation communities than those present on site; therefore, the Proposed Project would not cumulatively contribute to impacts to natural vegetation communities in this region or to impacts to species that are associated with these habitat types. Reasonably foreseeable cumulative projects located in the western, central, and southeastern portion of the cumulative analysis area (within San Diego County) within the cumulative study area, as described above, have the potential to affect similar vegetation communities as the Proposed Project, and therefore, could cumulatively contribute to impacts to natural vegetation communities in this region, or to impacts to species that are associated with these habitat types.

The cumulative analysis for wildlife movement and local and regional planning is similarly limited to the western, central, and southeastern portions of the cumulative study area. As described in Section 2.2.4.3, since the analysis area is largely undeveloped; wildlife movement through and around the reasonably foreseeable cumulative project areas would still be possible. Despite the development of the reasonably foreseeable cumulative projects, the area would remain predominantly rural with significant undeveloped areas and wildlife movement opportunity. Local and regional planning efforts are defined by the jurisdiction of local planning authorities, which in the case of the Proposed Project is San Diego County.

2.2.4.1 Candidate, Sensitive, or Special-Status Species

Special-Status Plant Species and Vegetation Communities

Direct

The Proposed Project area is characterized by a diverse assemblage of vegetation communities (see Table 2.2-2 for vegetation communities and associated acreage in the Proposed Project area) that supports or has the potential to support special-status plant species. Construction of the Proposed Project would result in the potential direct loss of special-status plant species, indirect effects to special-status plant species, and the loss of suitable habitat for special-status plant species. However, implementation of mitigation measures would reduce potentially significant impacts to special-status species to **less than significant**.

In order for a cumulative impact to special-status plant species to occur, the cumulative projects would have to result in the loss of the same special-status plant species or their habitat as the Proposed Project such that those species become more limited in their distribution, population size, or available suitable habitat within the cumulative analysis area. The cumulative projects that occur in the biological cumulative analysis study area are estimated to result in 2,578.2 acres of disturbance to similar vegetation communities and land covers as the Proposed

Project and would have the potential to impact the same special-status plant species as the Proposed Project (see Table 2.2-9, Cumulative Impacts – Vegetation Communities).

Many of the occurring or potentially occurring special-status plant species in the analysis area are found only in and around the cumulative study area. The Proposed Project combined with the reasonably foreseeable cumulative projects listed in Table 1-7, despite species avoidance, minimization, and mitigation measures that would likely be implemented by each project, would have the potential to reduce the distribution and/or the overall population size of one or more of these special-status plant species, such that they are vulnerable to environmental variability and are at a higher risk of becoming imperiled. The total acreage of vegetation communities analyzed in the biological cumulative analysis study area is approximately 499,048 acres. The Proposed Project impacts (111.5 acres) and cumulative project impacts (2,578.2 acres) are less than 1% of the total study area. Although the impact from the Proposed Project and reasonably foreseeable projects on suitable habitat for these species is not substantial relative to the amount of suitable habitat in the analysis area, the Proposed Project and the reasonably foreseeable projects are geographically oriented at or near the edge of the distribution of these species in the region such that the cumulative projects, including impact contributions from the Proposed Project, have the potential to result in a reduced distribution of the species in the region. The potential cumulative project impacts would be **significant, absent mitigation (Impact BI-C-1)**.

Indirect

Invasive Plant Species

Ground-disturbance activities and increased vehicle and human uses associated with construction of the Proposed Project have the potential to introduce and spread invasive, non-native, or noxious plant species in the area, which is generally characterized by undisturbed native vegetation communities with low levels of invasive or noxious plant species. The introduction of invasive, non-native, or noxious plant species resulting from the Proposed Project would result in potentially significant indirect impacts; however, impacts would be reduced to **less than significant** with the implementation of mitigation requiring avoidance, minimization, and best management practices during construction and operation.

In order for a cumulative impact related to the introduction and spread of invasive, non-native, or noxious plant species to occur, reasonably foreseeable cumulative projects would have to result in the introduction and spread of these species across the cumulative analysis area. The cumulative analysis area is a largely undeveloped area characterized by large expanses of undisturbed native vegetation communities. The listed cumulative projects have the potential to result in impacts to the introduction and spread of invasive, non-native, or noxious plant species due to the cumulative increase in ground disturbance in undeveloped native vegetation communities (as discussed above,

the total estimate of disturbance in the biological cumulative analysis study area to vegetation as a result of reasonably foreseeable cumulative projects was determined to be approximately 2,578.2 acres). The potential cumulative indirect Project impacts would be **significant, absent mitigation (Impact BI-C-2)**.

Fugitive Dust

In order for a cumulative impact related to construction dust generation resulting in vegetation degradation to occur, the reasonably foreseeable cumulative projects would have to be constructed at the same time and in proximity to cumulatively contribute to the degradation of vegetation from construction dust across the cumulative analysis area. The listed cumulative projects within the biological cumulative analysis study area involve a variety of project types. Additionally, most of the cumulative analysis area is generally characterized by undisturbed native vegetation communities. Construction of some cumulative projects may partially overlap or would be complete prior to commencement of Proposed Project construction activities, and impacts would be less severe than if they were constructed simultaneously. If all of the reasonably foreseeable cumulative projects in close proximity to the Proposed Project were to be constructed simultaneously, substantial dust generation could degrade nearby vegetation. The cumulative indirect Project impacts would be **significant, absent mitigation (Impact BI-C-2)**.

Special-Status Wildlife Species

Direct

In order for a cumulative impact to special-status wildlife species to occur, the cumulative projects would have to result in the loss of the same special-status wildlife species or their habitat as the Proposed Project such that those species become more limited in their distribution, population size, or available suitable habitat within the analysis area. The listed cumulative projects that occur in the biological cumulative analysis study area would have the potential to impact the same special-status wildlife species as the Proposed Project due to a similar climate and similar distribution of vegetation communities. As stated previously, the total estimated area of disturbance to similar native vegetation communities as the Proposed Project for reasonably foreseeable cumulative projects in the biological cumulative analysis study area was determined to be approximately 2,578.2 acres.

As described above, the biological cumulative analysis study area includes the Peninsular Ranges eco-geographic extent as defined by the Jepson Flora Project (Jepson Flora Project 2014). To analyze potential cumulative impacts to wildlife species, a habitat-based approach was used, which provides an overall view of suitable habitats within the study area. Similar to plants, the habitat model included (1) suitable vegetation communities that are being impacted within the biological cumulative analysis study area and (2) known elevation

ranges for the wildlife species. The habitat model is provided as Appendix 2.2-2 to this EIR, which includes the vegetation communities, elevation ranges, total suitable acreage in the biological cumulative analysis study area, total impacted acreage, and a discussion of the results. The Proposed Project combined with the reasonably foreseeable cumulative projects, despite species avoidance, minimization, and mitigation measures that would likely be implemented by each project, would have the potential to reduce the distribution and/or the overall population size of one or more special-status wildlife species such that they are vulnerable to environmental variability and are at a higher risk of becoming imperiled. However, the suite of wildlife species that occur or have potential to occur within the Project site are wide-ranging and occur in a wide variety of habitat types that occur throughout the biological cumulative analysis study area. The Proposed Project would not cumulatively contribute to impacts to these species or their habitat. Therefore, cumulative Project impacts would be **less than significant**.

Indirect

Given the nature, location, and timing of the reasonable foreseeable cumulative projects, the potential for cumulatively significant indirect construction-related impacts is low. Reasonably foreseeable cumulative projects within the biological cumulative analysis study area involve a variety of project types. Projects within a few miles of the Proposed Project are generally not anticipated to be constructed simultaneously (see discussion above).

However, construction of some listed cumulative projects in close proximity to the Proposed Project may overlap, in which case increased human presence, vehicle traffic, and construction noise could cause wildlife behavior modifications and avoidance of the area. These disruptions could result in changes in habitat usage and potentially affect species fitness and productivity. The potential mortality resulting from increased vehicle use in the area and construction area hazards (e.g., trenches) across the Proposed Project and listed cumulative project site areas could lead to decreased population numbers and reduced productivity. The Proposed Project and other reasonably foreseeable cumulative projects are located in a rural area and adjacent properties provide undeveloped areas for wildlife to evacuate. Additionally, there is suitable habitat available for wildlife species on portions of the Project site and throughout the biological cumulative analysis study area. Therefore, the potential for construction-related wildlife disturbance and mortality impacts from the Proposed Project combined with the reasonably foreseeable cumulative projects would be **less than significant**.

2.2.4.2 Riparian Habitat or Sensitive Natural Community

The reasonably foreseeable cumulative projects listed in Table 1-7 have the potential to result in adverse impacts to vegetation communities. Reasonably foreseeable cumulative projects have the potential to affect more than 2,578.2 acres of vegetation communities and land covers

within the biological cumulative analysis study area. For cumulative effects to occur, cumulative projects would have to result in the loss of the same vegetation communities as the Proposed Project such that those vegetation communities become limited in acreage or extent within the cumulative analysis area. Additionally, a cumulative impact to native vegetation communities could occur if the cumulative projects use all available land for mitigation such that the loss of native vegetation communities cannot be adequately compensated within the cumulative analysis study area.

The Proposed Project would impact up to 111.5 acres of vegetation communities and land covers. Many of the vegetation communities impacted by the Proposed Project are similar to those impacted by the other cumulative projects in the region. Impacts to chaparral account for over 50% of the total cumulative project impacts, which is consistent with the relatively common distribution of this vegetation community in the region (there is more than 350,000 acres of chaparral in the cumulative analysis study area). Impacts to other vegetation communities vary, but are generally similar between the Proposed Project and the other cumulative projects.

The Proposed Project's impacts to vegetation communities total approximately 0.02% of the cumulative analysis study area. The Proposed Project combined with the reasonably foreseeable cumulative projects would impact approximately 0.54% of the cumulative analysis study area. Therefore, the Proposed Project, combined with the reasonably foreseeable cumulative projects in the biological cumulative analysis study area, would contribute incrementally to adverse impacts on vegetation communities. However, the cumulative scenario would impact less than 1% of the total cumulative analysis study area; therefore, vegetation communities would not become limited in acreage or extent within the cumulative analysis area and cumulative impacts to native vegetation communities would be **less than significant**.

2.2.4.3 Wildlife Movement

A cumulative impact to linkages or wildlife movement corridors, the movement of fish, and/or native wildlife nursery sites would occur if the listed cumulative projects, combined with the Proposed Project, result in constraining or blocking known habitat linkages or result in a cumulative barrier to wildlife movement through the cumulative analysis area. The cumulative analysis study area encompasses a largely undeveloped landscape with few barriers to movement, except for I-8, the U.S./Mexico border fence, and, to a lesser extent, scattered rural development and property fencing.

Reasonably foreseeable projects that occur in the cumulative analysis area could potentially inhibit wildlife movement. Several of the larger reasonably foreseeable projects in the analysis area including the approximately 12,000-acre Tule wind project, could block wildlife movement (particularly for avian species) due to their size and location (e.g., along an avian flyway or migration route); however, there are no known or defined wildlife movement corridors in the

Proposed Project area, and these reasonably foreseeable project sites would not be entirely impermeable to wildlife movement.

The Proposed Project combined with the listed cumulative projects (see Table 1-7) would result in energy-related and other development throughout the McCain Valley and along the Tecate Divide from the northern end of the Proposed Project south to the U.S./Mexico border. Although this has the potential to disrupt wildlife movement patterns for wildlife species utilizing the McCain Valley and surrounding ridgelines (in particular, typical wide-ranging terrestrial species including mule deer, mountain lion, bobcat, and coyote), the analysis area is largely undeveloped, and wildlife movement through and around the reasonably foreseeable cumulative project areas would still be possible. Despite the development of the reasonably foreseeable cumulative projects, the area would remain predominantly rural with significant undeveloped areas and wildlife movement opportunity. Additionally, the total acreage of vegetation communities analyzed in the biological cumulative analysis study area is approximately 499,048 acres and the Proposed Project combined with reasonably foreseeable cumulative projects would only impact approximately 0.54% of the total acreage. Therefore, impacts from the Proposed Project combined with the reasonably foreseeable cumulative projects would be **less than significant** for habitat linkages and wildlife movement corridors.

2.2.4.4 Local Policies, Ordinances, and Adopted Plans

A cumulative impact to regional planning would occur if the reasonably foreseeable cumulative projects, combined with the Proposed Project, conflict with one or more local policies or ordinances protecting biological resources. Those projects within the biological cumulative analysis study area would, similar to the Proposed Project, be within the future ECMSCP Plan. The County and wildlife agencies review projects using the interim processing guidelines in Section 6.6 and Exhibit B of the MSCP East (and North) Planning Agreement and the Focused Conservation Areas map. Those projects that achieve conservation requirements when that review is completed are deemed consistent with the draft MSCP East Plan's Preliminary Conservation Objectives. Therefore, reasonably foreseeable projects, in combination with the Proposed Project, **would not cumulatively contribute** to a potential conflict with local plans.

2.2.5 Significance of Impacts Prior to Mitigation

Prior to mitigation, the Proposed Project would potentially result in significant direct and indirect impacts to biological resources, including vegetation communities and land covers (see Table 2.2-10, Summary of Significant Impacts), in the Project area. Some impacts would be related to the potential to reduce the distribution and/or the overall population size of one or more species of special-status plants (including Jacumba milk-vetch, Tecate tarplant, desert beauty, sticky geraea, Mountain Springs bush lupine, Perry's tetracoccus, southern jewel-flower, slender-leaved ipomopsis, pink fairy-duster, Parish's desert-thorn, and Fremont

barberry). Other impacts would be related to the potential to reduce the distribution and/or the overall population size of one or more special-status wildlife species.

2.2.6 Mitigation Measures and Design Considerations

The Applicant is proposing mitigation on site that includes 180.4 acres⁹ located west and north of the Proposed Project area to mitigate for the loss of sensitive vegetation communities and habitat (and protect cultural resources also) that will be impacted as a result of the Proposed Project. A description of the mitigation site, including a list of vegetation communities and the potential for special-status plant and wildlife species to occur, is provided in the Jacumba Solar Biological Open Space Memorandum (Appendix 2.2-1, Appendix I). A County-approved or qualified biologist is a professional biologist with a minimum of 2 years' experience, unless otherwise stated.

Mitigation measures and design considerations for special-status plant species will be determined following the impacts analysis.

M-BI-1 To prevent inadvertent disturbance to areas outside the limits of grading, temporary fencing shall be installed and all grading shall be monitored by a biologist.

Temporary Fencing. In order to prevent inadvertent disturbance to sensitive biological resources, temporary construction fencing shall be installed. Temporary fencing is required in all locations of the Project where proposed grading or clearing is within 300 feet of an open space easement boundary. The placement of such fencing shall be approved by the County of San Diego (County) Department of Planning and Development Services (PDS). Upon approval, the fencing shall remain in place until the conclusion of grading activities, after which the fencing shall be removed.

Monitoring. A County-approved biologist (Project Biologist) shall be contracted to perform biological monitoring during all grading, clearing, grubbing, trenching, and construction activities. The following shall be completed:

1. The Project Biologist shall perform the monitoring duties before, during, and after construction pursuant to the most current version of the County Biological Report Format and Requirement Guidelines and this permit. The contract provided to the County shall include an agreement that this will be completed, and a Memorandum of Understanding (MOU) between the biological

⁹ Only considers habitat with equivalent function or value. An additional 3.1 acres is disturbed land (not included in the habitat with equivalent function or value acreage).

consulting company and the County shall be executed. The contract shall include a cost estimate for the monitoring work and reporting. In addition to performing monitoring duties pursuant to the most current version of the County Biological Report Format and Requirement Guidelines, the Project Biologist also will perform the following duties:

- a. Attend the preconstruction meeting with the contractor and other key construction personnel prior to clearing, grubbing, or grading to reduce conflict between the timing and location of construction activities with other mitigation requirements (e.g., seasonal surveys for nesting birds).
 - b. Conduct meetings with the contractor and other key construction personnel describing the importance of restricting work to designated areas prior to clearing, grubbing, or grading.
 - c. Discuss procedures for minimizing harm to or harassment of wildlife encountered during construction with the contractor and other key construction personnel prior to clearing, grubbing, or grading.
 - d. Review and/or designate the construction area in the field with the contractor in accordance with the final grading plan prior to clearing, grubbing, or grading.
 - e. Conduct a field review of the staking to be set by the surveyor, designating the limits of all construction activity prior to clearing, grubbing, or grading.
 - f. Be present during initial vegetation clearing, grubbing, and grading.
 - g. Flush special-status species (i.e., avian or other mobile species) from occupied habitat areas immediately prior to brush-clearing and earth-moving activities.
 - h. To address hydrology impacts, the Project Biologist shall verify that grading plans include a Stormwater Pollution Prevention Plan (SWPPP) (if required, or equivalent); see M-BI-2 for required best management practices (BMPs).
2. The cost of the monitoring shall be added to the grading bonds that will be posted with the Department of Public Works (DPW), or bond separately with the County Department of Planning and Development Services (PDS).

Documentation: The Applicant shall provide a copy of the biological monitoring contract, cost estimate, and MOU to the PDS. Additionally, the cost amount of the monitoring work shall be added to the grading bond cost estimate.

Timing: Prior to approval of any grading and or improvement plans and issuance of any grading or construction permits.

Monitoring: The PDS shall review the contract, MOU, and cost estimate or separate bonds for compliance with this condition. The cost estimate should be forwarded to the Project Manager, for inclusion in the grading bond cost estimate, and grading bonds. The DPW shall add the cost of the monitoring to the grading bond costs.

M-BI-1 is intended to mitigate for **Impacts BI-SP-1, BI-SP-3, BI-W-1, BI-W-4, BI-W-8, BI-W-9, BI-V-1, BI-V-4, BI-V-6, BI-WM-1, and BI-C-2.**

M-BI-2 If required, the SWPPP will include, at a minimum, the BMPs listed below. The combined implementation of these requirements shall protect adjacent habitats and special-status species during construction to the maximum extent practicable. At a minimum, the following measures and/or restrictions shall be incorporated into the SWPPP and noted on construction plans, where appropriate, to avoid impacts on special-status species, special-status vegetation communities, and/or jurisdictional waters during construction. The Project Biologist shall verify the implementation of the following design requirements:

1. No planting or seeding of invasive plant species on the most recent version of the California Invasive Plant Council (Cal-IPC) California Invasive Plant Inventory for the Project region will be permitted.
2. Location and details will be provided for dust-control fencing, if any.
3. Construction activity will not be permitted in jurisdictional waters of the United States/state except as authorized by applicable law and permit(s), including permits and authorizations approved by the U.S. Army Corps of Engineers (ACOE), California Department of Fish and Wildlife (CDFW), and Regional Water Quality Control Board (RWQCB).
4. Silt settling basins installed during the construction process will be located away from areas of ponded or flowing water to prevent discolored, silt-bearing water from reaching areas of ponded or flowing water during normal flow regimes.
5. Temporary structures, staging, and storage areas for construction equipment and/or materials will not be located in jurisdictional waters, including wetlands and riparian areas.
6. Any equipment or vehicles driven and/or operated within a jurisdictional water of the United States/state will be checked and maintained by the operator daily to

prevent leaks of oil or other petroleum products that could be deleterious to aquatic life if introduced to the watercourse.

7. No stationary equipment, such as motors, pumps, generators, and welders, or fuel storage tanks will be located within jurisdictional waters of the United States/state.
8. No debris, bark, slash sawdust, rubbish, cement, or concrete, or washing thereof, oil, or petroleum products will be stored where it may be washed by rainfall or runoff into jurisdictional waters of the United States/state.
9. When construction operations are completed, any excess materials or debris will be removed from the work area.
10. No equipment maintenance will be performed within or near jurisdictional waters of the United States/state where petroleum products or other pollutants from the equipment may enter these areas.
11. Fully covered trash receptacles that are animal-proof and weather-proof will be installed and used by the operator to contain all food, food scraps, food wrappers, beverage containers, and other miscellaneous trash. Prohibit littering and remove trash from construction areas daily. All food-related trash and garbage shall be removed from the construction sites on a daily basis.
12. Pets on or adjacent to construction sites will not be permitted by the operator.
13. Enforce speed limits in and around all construction areas. Vehicles shall not exceed 15 miles per hour on unpaved roads and the right-of-way accessing the construction site or 10 miles per hour during the night.

M-BI-2 is intended to mitigate for **Impacts BI-SP-1, BI-SP-3, BI-W-1, BI-W-4, BI-W-8, BI-W-9, BI-V-1, BI-V-4, BI-V-6, BI-WM-1, and BI-C-2.**

M-BI-3

To ensure that the biological monitoring occurred during the grading phase of the Project, a final biological monitoring report shall be prepared. The Project Biologist shall prepare a final biological monitoring report. The report shall substantiate the supervision of the grading activities, and state that grading or construction activities did not impact any additional areas or any other special-status biological resources. The report shall conform to the County Report Format Guidelines for Biological Resources and include the following items:

1. Photos of the temporary fencing that was installed during the trenching, grading, or clearing activities
2. Monitoring logs showing the date and time that the monitor was on site

3. Photos of the site after the grading and clearing activities.

Documentation: The Project Biologist shall prepare the final report and submit it to the PDS for review and approval.

Timing: Prior to any occupancy, final grading release, or use of the premises in reliance of this permit, the final report shall be approved.

Monitoring: The PDS shall review the final report for compliance with this condition and the report format guidelines. Upon approval of the report, PDS shall inform DPW that the requirement is complete and the bond amount can be relinquished. If the monitoring was bonded separately, then PDS shall inform DPW to release the bond back to the Applicant.

M-BI-3 is intended to mitigate for **Impacts BI-SP-1, BI-SP-3, BI-W-1, BI-W-4, BI-W-8, BI-W-9, BI-V-1, BI-V-4, BI-V-6, BI-WM-1, and BI-C-2.**

M-BI-4

The Applicant will preserve in permanent open space 180.4 acres of native habitats¹⁰ generally consistent with the assemblage of vegetation communities impacted by the Project in an on-site Open Space Preserve area. This will include preservation of 183.5 acres (including 180.4 acres of native habitats) to mitigate for Project impacts to 99.9 acres of special-status upland vegetation communities, thereby preserving compensatory habitat that provides equal or greater benefit to plant and wildlife species. Proposed on-site Open Space Preserve has already been evaluated (see Appendix I of Appendix 2.2-1) and may be used to satisfy this requirement.

In order to provide for the long-term management of the proposed Open Space Preserve, a Resource Management Plan (RMP) will be prepared and implemented. The final RMP will be completed to the satisfaction of the Director of PDS or Department of Parks and Recreation (DPR), as follows: (1) the plan will be prepared and approved pursuant to the most current version of the County of San Diego Biological Report Format and Content Requirements; (2) the habitat land to be managed will be owned by a land conservancy or equivalent; (3) open space easements will be dedicated in perpetuity; (4) a resource manager will be selected and approved, with evidence provided demonstrating acceptance of this responsibility; (5) the RMP funding mechanism will be identified and adequate to fund annual costs for implementation; and (6) a contract between the Applicant

¹⁰ Only considers habitat with equivalent function or value. An additional 3.1 acres is disturbed land (not included in the habitat with equivalent function or value acreage).

and County will be executed for the implementation of the RMP, and funding will be established with the County as the third party beneficiary.

Open Space Signage and Barriers. In order to protect the proposed open space easement from entry, informational signs will be installed, where appropriate, along all open space edges where open space is adjacent to Old Highway 80 and on-site dirt roads, and as indicated in the final RMP. The signs must be corrosion resistant, a minimum of 6 inches by 9 inches in size, on posts not less than 3 feet in height from the ground surface, and state “Sensitive Environmental Resources Protected by Easement. Entry without express written permission from the County of San Diego is prohibited.”

Additionally, some barriers will be constructed at select areas along the preserve boundary and within the Open Space Preserve in order to prevent access to the wider wash located in the western portion of the Open Space Preserve. These barriers may consist of large boulders, K-Rail barriers, fencing, or similar material that will prevent OHV use but allow natural water flow to occur. Where barriers occur at drainages, ACOE and CDFW will be consulted regarding their placement such that no additional permitting is required.

M-BI-4 is intended to mitigate for **Impacts BI-SP-2, BI-SP-4, BI-W-3, BI-W-6, BI-W-7, BI-W-9, BI-V-2, BI-V-3, BI-V-5, BI-V-7, BI-WM-2, BI-WM-3, BI-WM-4,** and **BI-C-1.**

M-BI-5 Operation and maintenance personnel will be prohibited from:

1. Harming, harassing, or feeding wildlife and/or collecting special-status plant or wildlife species
2. Traveling (either on foot or in a vehicle) outside of the Project footprint in undisturbed portions of the Project area
3. Bringing pets into the Project area
4. Littering on the Project area
5. Allowing persons not employed at the facility to remain on site after daylight hours or exceeding normal nighttime operational noise or lighting

M-BI-5 is intended to mitigate for **Impacts BI-SP-4, BI-W-1, BI-W-9, BI-V-5,** and **BI-V-7.**

M-BI-6 If construction work (i.e., grading, fence installation, trenching, augering, lifting and setting in place panels using tractors or other similar equipment, and building

construction) must occur during the avian nesting season (February 1 to August 31, and as early as January 1 for some raptors), the Applicant shall have surveys conducted by a qualified biologist to determine if active nests of bird species protected by the Migratory Bird Treaty Act and/or the California Fish and Game Code are present in the impact area or within 300 feet (500 feet for raptors) of the impact area.

If active nests are found, clearing and construction within 300 feet of the nest (500 feet for raptors) shall be postponed or halted, at the discretion of the biologist in consultation with CDFW, until the nest is vacated and juveniles have fledged, as determined by the biologist, and there is no evidence of a second attempt at nesting. Limits of construction to avoid an active nest shall be established in the field with flagging, fencing, or other appropriate barriers, and construction personnel shall be instructed on the sensitivity of nest areas.

If owls were to be discovered during the preconstruction surveys, and they would be within the CDFG 2012 guideline buffer limits, then a burrowing owl management plan would need to be written and approved by the County and CDFW. Table 2.2-6, Recommended Restricted Activity Dates and Setback Distances by Level of Disturbance for Burrowing Owls, provides the CDFG-recommended restricted activity dates and setback distances around occupied burrowing owl nests for varying levels of disturbance (CDFG 2012b).

A biological monitor shall serve as a construction monitor during those periods when construction activities will occur near active nest areas to ensure that no inadvertent impacts to these nests occur. Results of the surveys shall be provided to CDFW in the annual mitigation status report.

This measure does not apply to nests that are started on construction equipment or panels or supporting structures.

M-BI-6 is intended to mitigate for **Impacts BI-W-1, BI-W-2, BI-W-5, BI-W-8, and BI-P-1.**

M-BI-7

As a condition on the grading plans, the Project Biologist shall cover and/or provide escape routes for wildlife from excavated areas and monitor these areas daily. All steep trenches, holes, and excavations during construction shall be covered at night with backfill, plywood, metal plates, or other means, and the edges covered with soils and plastic sheeting such that small wildlife cannot access them. Soil piles will be covered at night to prevent wildlife from burrowing in. The edges of the sheeting will be weighed down by sandbags. These areas may also be fenced to prevent wildlife from gaining access. Exposed trenches, holes,

and excavations shall be inspected twice daily (i.e., each morning and prior to sealing the exposed area) by a qualified biologist to monitor for, and release wildlife, if they become entrapped. All excavations shall provide an earthen ramp to allow for a wildlife escape route.

M-BI-7 is intended to mitigate for **Impacts BI-W-1** and **BI-W-4**.

M-BI-8 The Applicant shall develop a Fugitive Dust Control Plan in compliance with San Diego County Air Pollution Control Regulations to reduce particulate matter less than 10 microns (PM₁₀) and fine particulate matter less than 2.5 microns (PM_{2.5}) emissions during construction. The Fugitive Dust Control Plan shall include:

1. Name(s), address(es), and phone number(s) of person(s) responsible for the preparation, submission, and implementation of the plan.
2. Description and location of operation(s).
3. Listing of all fugitive dust emissions sources included in the operation.
4. The following dust control measures shall be implemented:
 - a. The road leading to the facility entrance shall be paved as early as practical during construction.
 - b. All other on-site unpaved roads shall be effectively stabilized using soil stabilizers that can be determined to be as efficient, or more efficient for fugitive dust control than California Air Resources Board–approved soil stabilizers, and that it shall not increase any other environmental impacts including loss of vegetation.
 - c. All material excavated or graded will be sufficiently watered to prevent excessive dust. Watering will occur as needed with complete coverage of disturbed areas. The excavated soil piles are watered hourly for the duration of construction or covered with temporary coverings.
 - d. Construction activities that occur on unpaved surfaces will be discontinued during windy conditions when winds exceed 25 miles per hour and when those activities cause visible dust plumes. All grading activities shall be suspended when wind speeds are greater than 30 miles per hour.
 - e. Track-out shall not extend 25 feet or more from an active operation, and track-out shall be removed at the conclusion of each workday.
 - f. All haul trucks hauling soil, sand, and other loose materials shall be covered (e.g., with tarps or other enclosures that would reduce fugitive dust emissions).

- g. Soil loads should be kept below 18 inches of the freeboard of the truck.
- h. Drop heights should be minimized when loaders dump soil into trucks.
- i. Traffic speeds on unpaved roads shall be limited to 25 miles per hour.
- j. Disturbed areas should be minimized.
- k. Disturbed areas should be revegetated as soon as possible after disturbance.

M-BI-8 is intended to mitigate for **Impacts BI-SP-3, BI-SP-4, BI-W-8, BI-W-9, BI-V-5, BI-V-6, BI-V-7, and BI-C-2.**

M-BI-9 Prior to installation of any landscaping, plant palettes shall be reviewed by the Project Biologist to minimize the effects that proposed landscape plants could have on biological resources outside of the Project footprint due to potential naturalization of landscape plants in the undeveloped lands. Landscape plants will not include invasive plant species on the most recent version of the Cal-IPC California Invasive Plant Inventory for the Project region. Landscape plans will include a plant palette composed of native species that do not require high irrigation rates.

M-BI-9 is intended to mitigate for **Impacts BI-SP-4, BI-W-9, and BI-V-7.**

M-BI-10 To minimize the potential exposure of the Project area to fire hazards, all features of the Jacumba Solar Energy Project Fire Protection Plan (Appendix 2.4-2 of the Jacumba Solar Energy EIR) shall be implemented in conjunction with development of the Jacumba Solar Energy Project.

M-BI-10 is intended to mitigate for **Impacts BI-SP-4, BI-W-9, BI-V-5, and BI-V-7.**

M-BI-11 Weed control treatments shall include all legally permitted chemical, manual, and mechanical methods applied with the authorization of the San Diego County agriculture commissioner. The application of herbicides shall be in compliance with all state and federal laws and regulations under the prescription of a pest control adviser (PCA) and implemented by a licensed applicator working for the Project owner. Where manual and/or mechanical methods are used, disposal of the plant debris will follow the regulations set by the San Diego County agriculture commissioner. The timing of the weed control treatment shall be determined for each plant species in consultation with the PCA, the San Diego County agriculture commissioner, and Cal-IPC with the goal of controlling

populations before they start producing seeds. Weed treatment shall occur at least once per year throughout the life of the Project.

M-BI-11 is intended to mitigate for **Impacts BI-SP-4, BI-V-5, and BI-V-7.**

M-BI-12 As a condition on the grading plans, minimize night construction lighting adjacent to native habitats. Lighting of construction areas at night shall be the minimum necessary for personnel safety and shall be low illumination, selectively placed, and directed/shielded appropriately to minimize lighting in adjacent native habitats.

M-BI-12 is intended to mitigate for **Impact BI-W-8.**

M-BI-13 Provide evidence to the Director of PDS that all transmission towers and lines are designed to conform to Avian Power Line Interaction Committee (APLIC) standards. The Proposed Project shall implement recommendations by the APLIC (2006, 2012), which will protect raptors and other birds. The evidence will be provided to PDS prior to approval of the building permit.

M-BI-13 is intended to mitigate for **Impacts BI-W-9 and BI-WM-5.**

M-BI-14 To comply with the state and federal regulations for impacts to waters of the United States/state, the following agency permits are required, or verification that they are not required shall be obtained.

1. The following permit and agreement shall be obtained, or provide evidence from the respective resource agency satisfactory to the director of the Department of Planning and Development Services (PDS) that such an agreement or permit is not required:
 - a. A Clean Water Act, Section 401/404 permit issued by the California RWQCB and the ACOE for all Project-related disturbances of waters of the United States and/or associated wetlands.
 - b. A Section 1602 Streambed Alteration Agreement issued by the CDFW for all Project-related disturbances of any streambed.
2. **Documentation:** The Applicant shall consult each agency to determine if a permit or agreement is required. Upon completion of the agency review of this Project, the Applicant shall provide a copy of the permit(s)/agreement(s), or evidence from each agency that such an agreement or permit is not required to the PDS for compliance.
3. **Timing:** Prior to approval of any grading and/or improvement plans and issuance of any Grading or Construction Permits.

4. **Monitoring:** The PDS shall review the permits/agreement for compliance with this condition. Copies of these permits should be transmitted to the Department of Public Works (DPW) for implementation on the grading plans.

M-BI-14 is intended to mitigate for **Impacts BI-V-3** and **BI-V-5**.

M-BI-15 To address avian concerns pertaining to collisions, the Project will conduct the following avian monitoring during construction and operations:

1. Implement a Worker Response Reporting System (WRRS). A WRRS will provide a means of recording and collecting information on incidental bird and bat species found dead or injured within the Project area by site personnel. The WRRS will be used by site personnel who discover bird and bat carcasses during construction and routine maintenance activities. Site personnel will be provided a set of standardized instructions to follow in response to wildlife incidents in the Project.
2. During construction, site personnel will notify the Project's biologist to collect the following data on the incidentally detected avian wildlife: species, date, time, location (e.g., nearest Project structure), and how the animal died, if known. Results will be reported to CDFW and PDS on a quarterly basis unless listed species are involved. During operations, site personnel will collect the same data, take photographs, and notify the Project's environmental manager, who will then notify CDFW and PDS on a quarterly basis unless listed species are involved. In the event of an injury, CDFW will be contacted for instruction on how to handle the situation. Workers will be trained on the WRRS during the Worker Environmental Awareness Program. The WRRS will be used for the life of the Project. In order to accommodate these requirements, a Project Biologist will be on retainer throughout the construction period and one should be available during the life of the Project to assist in avian identifications and injury cases if needed.

M-BI-15 is intended to mitigate for **Impact BI-WM-5**.

M-BI-16 Prior to construction, rare plant surveys for Parry's tetraococcus, Tecate tarplant, pink fairy-duster, and Parish's desert-thorn will be conducted to determine presence/absence. If these species are found, the Applicant will develop a rare plant relocation plan within the on-site Open Space (prepared by a biologist with at least 5 years of experience in rare plant relocation) and plant specimens grown from on-site or local seed or cutting sources. The individuals would be planted within the open space to secure a 2:1 mitigation ratio for Parry's tetraococcus and Tecate tarplant and a 1:1 mitigation ratio for pink fairy-duster and Parish's desert-

thorn. The rare plant relocation plan shall require the Applicant to submit a revegetation plan including annual monitoring reports for at least 5 years after the replanting to demonstrate the plants have been successfully established at the required mitigation ratio.

M-BI-16 is intended to mitigate for **Impact BI-SP-2**.

2.2.7 Project Effects After Mitigation

With implementation of Project mitigation measures, impacts to biological resources, as described below, would be reduced to **less than significant**.

Impact BI-SP-1 The significant short-term direct impacts to suitable habitat for Jacumba milk-vetch, pygmy lotus, Mountain Springs bush lupine, Parry's tetraococcus, southern jewelflower, Tecate tarplant, sticky geraea, slender-leaved ipomopsis, desert beauty, pink fairy-duster, Parish's desert-thorn, and Fremont barberry will be reduced to a level that is **less than significant** through implementation of mitigation measures **M-BI-1** (biological monitoring), which prevents inadvertent disturbance to areas outside of the limits of grading, including areas where special-status species may occur; **M-BI-2** (SWPPP BMPs, including restrictions on plantings, equipment staging and storage, and construction vehicle speed limits), which prohibits planting of invasive plants that can compete with native plants for resources and avoids indirect impacts to jurisdictional resources that may be potential habitat for special-status plants; and **M-BI-3** (preparation of a biological monitoring report), which ensures the required biological monitoring has been conducted to prevent inadvertent impacts to special-status plants.

Impact BI-SP-2 The significant long-term direct impacts to Jacumba milk-vetch, pygmy lotus, Mountain Springs bush lupine, Parry's tetraococcus, southern jewelflower, Tecate tarplant, sticky geraea, slender-leaved ipomopsis, desert beauty, pink fairy-duster, Parish's desert-thorn, and Fremont barberry will be reduced to a level that is **less than significant** through implementation of mitigation measure **M-BI-4**, which provides for approximately 180.4 acres of on-site habitat conservation of equivalent function and value with vegetation communities and soil types to potentially support all of these species; and **M-BI-16**, which includes rare plant surveys prior to construction, and relocation of rare plants to the on-site Open Space Preserve at a 2:1 mitigation ratio for List A plants and 1:1 mitigation ratio for List B plants. The majority of the

modeled habitat (ranging from 58% to 95%, depending on the species) would be conserved in open space. While some modeled habitat for special-status species is described as one impacted vegetation community (e.g., pink fairy-duster and Parish's desert-thorn), there are suitable soils for these species throughout the open space areas, and the conserved vegetation communities have similar open and sparse characteristics and vegetation composition as the impacted Sonoran mixed woody shrub; therefore, considering the moderate potential to occur on site and that neither of these species are federally or state listed, the conservation of 180.4 acres of other habitat types is considered sufficient to mitigate potential impacts to **less than significant**.

Impact BI-SP-3

The significant short-term indirect impacts to Jacumba milk-vetch, pygmy lotus, Mountain Springs bush lupine, Parry's tetracoccus, southern jewelflower, Tecate tarplant, sticky geraea, slender-leaved ipomopsis, desert beauty, pink fairy-duster, Parish's desert-thorn, and Fremont barberry will be reduced to a level that is **less than significant** through implementation of mitigation measures **M-BI-1** (biological monitoring), which prevents inadvertent disturbance to areas outside of the limits of grading, including areas where special-status species may occur; **M-BI-2** (SWPPP BMPs, including restrictions on plantings, equipment staging and storage, and construction vehicle speed limits), which prohibits planting of invasive plants that can compete with native plants for resources and avoid indirect impacts to jurisdictional resources that may be potential habitat for special-status plants; **M-BI-3** (preparation of a biological monitoring report), which ensures the required biological monitoring has been conducted to prevent inadvertent impacts to special-status plants; and **M-BI-8** (implementation of a Fugitive Dust Control Plan), which prevents construction-related impacts to the viability of special-status plants by requiring soil stabilizers, watering, and other dust-control methods during construction activities.

Impact BI-SP-4

The significant long-term indirect impacts to Jacumba milk-vetch, pygmy lotus, Mountain Springs bush lupine, Parry's tetracoccus, southern jewelflower, Tecate tarplant, sticky geraea, slender-leaved ipomopsis, desert beauty, pink fairy-duster, Parish's desert-thorn, and Fremont barberry will be reduced to a level that is **less than significant** through implementation of mitigation measures **M-BI-4** (habitat preservation and management), which helps prevent habitat fragmentation through the conservation of a block of habitat in an open space conservation easement; **M-BI-5** (restrictions on

operation and maintenance personnel activity), which prohibits operation and maintenance personnel from collecting plants and traveling outside the Project footprint; **M-BI-8** (implementation of a Fugitive Dust Control Plan), which minimizes traffic speeds and requires the road leading to the facility entrance be paved to reduce dust; **M-BI-9** (biological review of landscape plans), which prohibits planting of invasive plants that can compete with native plants for resources and subsequently alter the habitat; **M-BI-10** (implementation of a Fire Protection Plan), which reduces potential loss of suitable habitat from increased fire risk through managed fuel clearing and maintenance; and **M-BI-11** (regulated herbicide application), which minimizes potential herbicide effects to plants through compliance with federal, state, and local laws, as well as requires weed control to minimize the spread of non-native species that can compete with natives for resources and alter habitat.

Impact BI-W-1

Potential significant short-term direct impacts from loss of County Group 1 Species will be reduced to **less than significant** through implementation of mitigation measures **M-BI-1** (biological monitoring), which prevents inadvertent disturbance to areas outside of the limits of grading, including areas where special-status species may occur; **M-BI-2** (SWPPP BMPs, including restrictions on plantings, equipment staging and storage, and construction vehicle speed limits), which requires a variety of BMPs to protect open space habitat and limits vehicle speeds to reduce potential collisions with wildlife species; **M-BI-3** (preparation of a biological monitoring report), which ensures the required biological monitoring has been conducted to prevent inadvertent impacts to special-status wildlife; **M-BI-5** (restrictions on construction and operation and maintenance personnel activity), which prevents harassment to wildlife, inadvertent impacts to habitat outside the disturbance areas, and attracting nuisance predators; **M-BI-6** (preconstruction surveys for nesting birds and setbacks), which prevents direct loss of active nests and indirect disturbance to active nests; **M-BI-7** (cover trenches and holes; monitoring excavated areas and soil piles), which prevents wildlife from becoming trapped in trenches, holes, and excavations. As described under **M-BI-6**, it is recommended that Project construction occur outside the typical nesting period for most bird species (i.e., outside the period February 1–August 31) in order to limit impacts to nesting birds, or that a nesting bird survey is conducted within 72 hours prior to Project implementation. These impacts have been reduced to **less than significant** because the measures will minimize the potential for loss of individuals.

- Impact BI-W-2** The significant short-term direct impacts to active nests or the young of nesting County Group 1 or SSC species will be reduced to **less than significant** through implementation of mitigation measure **M-BI-6**, which requires preconstruction surveys for nesting birds and setbacks for active nests, which prevents direct loss of active nests and indirect disturbance to active nests. These impacts have been reduced to **less than significant** by ensuring that nests and fledglings are not directly impacted by construction activities. Active nests will be flagged during the nesting bird surveys and buffers, which eliminate construction activities near nests, will be applied.
- Impact BI-W-3** The significant long-term direct impacts to County Group 1 and Group 2 species (described in Table 2.2.-4) as a result of removal of suitable habitat will be reduced to **less than significant** through implementation of mitigation measure **M-BI-4**, which provides commensurate on-site and off-site habitat management and conservation that has been demonstrated to contain habitat for these species. In addition, **M-BI-4** also includes preservation and management of more than a 1:1 mitigation ratio of suitable habitat for the wildlife species (see Table 2.2-4). Avoidance of direct impacts on site for the individuals would be done during construction. These impacts have been reduced to **less than significant** because the on-site and off-site habitat and its management will provide and management equivalent or better function and value for these species and be managed and monitored in perpetuity.
- Impact BI-W-4** The significant short-term direct impacts to County Group 2 species (described in Table 2.2.-4) as a result of removal of suitable habitat will be reduced to **less than significant** through implementation of mitigation measures **M-BI-1** (biological monitoring), which prevents inadvertent disturbance to areas outside of the limits of grading, including areas where special-status species may occur; **M-BI-2** (SWPPP BMPs, including restrictions on plantings, equipment staging and storage, and construction vehicle speed limits), which requires a variety of BMPs to protect open space habitat and limits vehicle speeds to reduce potential collisions with wildlife species; **M-BI-3** (preparation of a biological monitoring report), which ensures the required biological monitoring has been conducted to prevent inadvertent impacts to special-status plants; and **M-BI-7** (cover trenches and holes; monitoring excavated areas and soil piles), which prevents wildlife from becoming trapped in trenches, holes, and excavations. The SWPPP includes BMPs such as fumigating

plant stock for pests, including Argentine ants; dust control; covering trash receptacles; and reduced speed limits.

Impact BI-W-5 The significant short-term direct impacts to active nests or the young of nesting County Group 1 or Group 2 or SSC species will be reduced to **less than significant** through implementation of mitigation measure **M-BI-6**, which requires preconstruction surveys for nesting birds and setbacks for active nests. These impacts have been reduced to **less than significant** by ensuring that nests and fledglings are not directly impacted by construction activities. Active nests will be flagged during the nesting bird surveys and buffers that eliminate construction activities near nests will be applied.

Impact BI-W-6 The significant long-term direct impacts to foraging raptors, as a result of removal of suitable habitat, will be reduced to **less than significant** through implementation of mitigation measure **M-BI-4**, which conserves 180.4 acres (60%) of suitable raptor foraging habitat. The on-site open space conservation easement provides for preservation and management of suitable habitat that has been demonstrated to contain foraging habitat for raptors. Avoidance of direct impacts on site for the individuals would be done during construction and operation of the Project by a monitoring biologist.

Impact BI-W-7 The significant impact to a core wildlife area will be reduced to **less than significant** through implementation of mitigation measure **M-BI-4**, which would conserve approximately 180.4 acres (60%) of habitat through an on-site open space conservation easement. Both the special-status wildlife species observed on site, as well as non-special-status wildlife species that occur, are relatively common in the area (e.g., San Diego black-tailed jackrabbit and loggerhead shrike) and conservation of approximately 180.4 acres of a large block of habitat would reduce potential adverse effects on a core area and the species it supports to **less than significant**. A greater amount of on-site habitat will be preserved than will be impacted by the Project, thereby providing compensatory habitat to serve as a core wildlife area.

Impact BI-W-8 The significant short-term indirect impacts to special-status wildlife species will be reduced to **less than significant** through implementation of mitigation measures **M-BI-1** (biological monitoring), which prevents inadvertent disturbance to areas outside of the limits of grading, including areas where special-status species may occur; **M-BI-2** (SWPPP BMPs, including restrictions on plantings, equipment staging and storage,

and construction vehicle speed limits), which requires a variety of BMPs to protect open space habitat and limits vehicle speeds to reduce potential collisions with wildlife species; **M-BI-3** (preparation of a biological monitoring report), which ensures the required biological monitoring has been conducted to prevent inadvertent impacts to special-status wildlife; **M-BI-6** (preconstruction surveys for nesting birds and setbacks), which prevents indirect disturbance to active nests through avoidance buffers; **M-BI-8** (implementation of a Fugitive Dust Control Plan), which prevents construction-related impacts to the viability of vegetation communities by requiring soil stabilizers, watering, and other dust-control methods during construction activities; and **M-BI-12** (minimize night lighting), which prevents disruption of wildlife species' nocturnal behavior and/or increased predation risk.

Impact BI-W-9

The significant long-term indirect impacts to special-status wildlife species will be reduced to **less than significant** through implementation of mitigation measures **M-BI-1** (biological monitoring), which prevents inadvertent disturbance to areas outside of the limits of grading, including areas where special-status species may occur; **M-BI-2** (SWPPP BMPs, including restrictions on plantings, equipment staging and storage, and construction vehicle speed limits), which requires a variety of BMPs to protect open space habitat, jurisdictional waters, and limits vehicle speeds to reduce potential collisions with wildlife species; **M-BI-3** (preparation of a biological monitoring report), which ensures the required biological monitoring has been conducted to prevent inadvertent impacts to special-status wildlife; **M-BI-4** (habitat preservation and management), which helps prevent habitat fragmentation through the conservation of a block of habitat in an open space conservation easement; **M-BI-5** (restrictions on operation and maintenance personnel activity), which prohibits operation and maintenance personnel from harassing or collecting wildlife species, bringing pets on site, littering, and traveling outside the Project footprint; **M-BI-8** (implementation of a Fugitive Dust Control Plan), which minimizes traffic speeds and requires the road leading to the facility entrance be paved to reduce dust; **M-BI-9** (biological review of landscape plans), which prohibits planting of invasive plants that can compete with native plants for resources and subsequently alter habitat; **M-BI-10** (implementation of a Fire Protection Plan), which reduces potential loss of suitable habitat from increased fire risk through managed fuel clearing and maintenance; and **M-BI-13** (implement recommendations by the Avian Power Line Interaction

Committee), which requires all transmission towers and lines to implement measures that protect raptors and other birds from electrocution. Additionally, mitigation measure **M-N-1** (see Section 2.5.5) requires that Proposed Project-generated noise from the photovoltaic (PV) inverters, heating, ventilation, and air-conditioning (HVAC) systems, and power inverters associated with the energy storage facilities comply with the County's Noise Ordinance. Potential indirect impacts have been reduced to **less than significant** because human activity and noise has been limited to the Project operational footprint, long-term preservation of on-site wildlife habitat will be provided, the risk of fire has been reduced, and release of non-native plants and animals has been minimized.

Impact BI-V-1

The significant short-term direct impacts to special-status upland vegetation communities and jurisdictional wetlands and waters will be reduced to a level that is **less than significant** through implementation of mitigation measures **M-BI-1** (biological monitoring), which prevents inadvertent disturbance to areas outside of the limits of grading, including special-status vegetation communities; **M-BI-2** (SWPPP BMPs, including restrictions on plantings, equipment staging and storage, and construction vehicle speed limits), which prohibits planting of invasive plants that can compete with native plants for resources and alter habitat; and **M-BI-3** (preparation of a biological monitoring report), which ensures the required biological monitoring has been conducted to prevent inadvertent impacts to special-status vegetation communities.

Impact BI-V-2

The significant permanent direct impact to 103.2 acres of semi-desert chaparral, Sonoran mixed woody scrub, upper Sonoran subshrub scrub, and Peninsular juniper woodland and scrub will be reduced to a level that is **less than significant** through implementation of mitigation measure **M-BI-4**, which provides for approximately 180.4 acres of habitat conservation of equivalent function and value.

Impact BI-V-3

The significant permanent direct impact to 0.21 acre of non-wetland waters will be reduced to a level that is **less than significant** through implementation of mitigation measure **M-BI-4** (habitat preservation and management), which conserves approximately 180.4 acres in open space, including 3.14 acre of non-wetland waters that help maintain the natural flow of water across the landscape and downstream to Carrizo Creek; and **M-BI-14** (require permits from ACOE, RWQCB, and CDFW), which requires the Applicant to obtain permits from ACOE, RWQCB, and CDFW,

as required under federal and state law, and to demonstrate avoidance and minimization of impacts to jurisdictional resources to the extent feasible.

Impact BI-V-4

The significant short-term indirect impact to non-wetland waters will be reduced to a level that is **less than significant** through implementation of mitigation measures **M-BI-1** (biological monitoring), which prevents inadvertent disturbance to areas outside of the limits of grading, including jurisdictional resources; **M-BI-2** (SWPPP BMPs, including restrictions on plantings, equipment staging and storage, and construction vehicle speed limits), which avoids indirect impacts to jurisdictional resources; and **M-BI-3** (preparation of a biological monitoring report), which ensures the required biological monitoring has been conducted to prevent inadvertent impacts to jurisdictional resources.

Impact BI-V-5

The significant long-term indirect impacts to non-wetland waters will be reduced to a level that is **less than significant** through implementation of mitigation measures **M-BI-4** (habitat preservation and management), which conserves approximately 180.4 acres, including 3.14 acre of non-wetland waters, in open space, and in addition to the Project design, will reduce potential impacts to hydrology by maintaining the natural flow of water across the landscape and downstream to Carrizo Creek; **M-BI-5** (restrictions on operation and maintenance personnel activity), which prohibits operation and maintenance personnel from traveling outside the Project footprint; **M-BI-8** (implementation of a Fugitive Dust Control Plan), which minimizes traffic speeds and requires the road leading to the facility entrance be paved to reduce dust; **M-BI-10** (implementation of a Fire Protection Plan), which reduces potential loss of suitable habitat from increased fire risk through managed fuel clearing and maintenance; **M-BI-11** (regulated herbicide application), which minimizes potential herbicide effects to plants through compliance with federal, state, and local laws, as well as requires weed control to minimize the spread of non-native species that can compete with natives for resources and alter habitat; and **M-BI-14** (require permits from ACOE, RWQCB, and CDFW), which requires the Applicant to obtain permits from ACOE, RWQCB, and CDFW, as required under federal and state law, and to demonstrate avoidance and minimization of impacts to jurisdictional resources to the extent feasible.

Impact BI-V-6

The significant short-term indirect impacts to special-status upland vegetation communities and jurisdictional non-wetland waters will be reduced to a level that is **less than significant** through implementation of

mitigation measures **M-BI-1** (biological monitoring), which prevents inadvertent disturbance to areas outside of the limits of grading, including special-status species vegetation communities; **M-BI-2** (SWPPP BMPs, including restrictions on plantings, equipment staging and storage, and construction vehicle speed limits), which prohibits planting of invasive plants that can compete with native plants for resources; **M-BI-3** (preparation of a biological monitoring report), which ensures the required biological monitoring has been conducted to prevent inadvertent impacts to special-status vegetation communities; and **M-BI-8** (implementation of a Fugitive Dust Control Plan), which prevents construction-related impacts to the viability of vegetation communities by requiring soil stabilizers, watering, and other dust-control methods during construction activities.

Impact BI-V-7

The significant long-term indirect impacts to special-status upland vegetation communities and jurisdictional non-wetland waters will be reduced to a level that is **less than significant** through implementation of mitigation measures **M-BI-4** (habitat preservation and management), which helps prevent habitat fragmentation through the conservation of a block of habitat in an open space conservation easement; **M-BI-5** (restrictions on operation and maintenance personnel activity), which prohibits operation and maintenance personnel from traveling outside the Project footprint; **M-BI-8** (implementation of a Fugitive Dust Control Plan), which minimizes traffic speeds and requires the road leading to the facility entrance be paved to reduce dust; **M-BI-9** (biological review of landscape plans), which prohibits planting of invasive plants that can compete with native plants for resources and subsequently alter the habitat; **M-BI-10** (implementation of a Fire Protection Plan), which reduces potential loss of vegetation communities from increased fire risk through managed fuel clearing and maintenance; and **M-BI-11** (regulated herbicide application), which minimizes potential herbicide effects to plants through compliance with federal, state, and local laws, as well as requires weed control to minimize the spread of non-native species that can compete with natives for resources and alter habitat.

Since no wetlands under the jurisdiction of ACOE were identified within the Proposed Project site, **no impacts** would occur.

Impact BI-WM-1

The significant short-term direct impacts to potential foraging and breeding habitat will be reduced to **less than significant** through

implementation of mitigation measures **M-BI-1** (biological monitoring), which prevents inadvertent disturbance to areas outside of the limits of grading; **M-BI-2** (SWPPP BMPs, including restrictions on plantings, equipment staging and storage, and construction vehicle speed limits), which requires a variety of BMPs to protect open space habitat and limits vehicle speeds to reduce potential collisions with wildlife species; and **M-BI-3** (preparation of a biological monitoring report), which ensures the required biological monitoring has been conducted to prevent inadvertent impacts to habitat areas.

Impact BI-WM-2

The significant permanent, direct impact to the loss of potential foraging and breeding habitat will be reduced to **less than significant** through implementation of mitigation measure **M-BI-4**, which provides commensurate on-site habitat and habitat management and conservation that has been demonstrated to contain suitable foraging and breeding habitat for these species. Avoidance of direct impacts on site for the individuals would be done during construction. These impacts have been reduced to **less than significant** because the on-site or off-site habitat and its management will provide and management equivalent or better function and value for these species and be managed and monitored in perpetuity. Table 2.2-7 summarizes the impacts and required mitigation for habitat types in the Project area.

Impact BI-WM-3

The significant permanent, indirect impact associated with the loss of potential foraging and breeding habitat will be reduced to **less than significant** through implementation of mitigation measure **M-BI-4**, which will conserve approximately 180.4 acres of equivalent function and value and provide commensurate on-site habitat, habitat management, and conservation that has been demonstrated to contain suitable foraging and breeding habitat for these species. Avoidance of direct impacts on site for the individuals would be done during construction. Additionally, mitigation measure **M-N-1** (see Section 2.5.5) requires that Proposed Project-generated noise from the PV inverters, HVAC systems, and power inverters associated with the energy storage facilities comply with the County's Noise Ordinance. These impacts have been reduced to **less than significant** because the on-site or off-site habitat and its management will provide and management equivalent or better function and value for these species and be managed and monitored in perpetuity; and noise generated by the Project equipment would not interfere with movement in adjacent areas.

- Impact BI-WM-4** Short-term or long-term impacts to wildlife corridors and habitat linkages for larger wildlife species would be **less than significant** as a result of the Proposed Project and no mitigation is proposed. The significant impact to movement of small wildlife species from loss of wildlife corridors would be reduced to a level that is **less than significant** through implementation of mitigation measure **M-BI-4**, which will conserve approximately 180.4 acres of equivalent function and value habitat.
- Impact BI-WM-5** Significant impacts resulting from collision and electrocution would be mitigated to **less than significant** through implementation of mitigation measure **M-BI-13** (implement recommendations by the Avian Power Line Interaction Committee), which requires all transmission towers and lines to implement measures that protect raptors and other birds from electrocution, and **M-BI-15** (implement a Wildlife Response Reporting System), which will provide a means to collect information on incidental bird or bat species if found within the Project site. Implementation of these measures will protect raptors and other birds from electrocution.
- Impact BI-P-1** The significant short-term direct impacts to active nests or the young protected by the federal MBTA will be reduced to **less than significant** through implementation of mitigation measure **M-BI-6**, which requires preconstruction surveys for nesting birds and setbacks for avoiding impacts to active nests. This measure will prevent direct loss of active nests and indirect disturbance to active nests.
- Impact BI-C-1** The significant cumulative direct impacts to special-status plants will be reduced to **less than significant** through implementation of mitigation measure **M-BI-4**, which adequately mitigates for the loss of special-status species along with vegetation community impacts. In addition, it is reasonable to assume that the cumulative projects also adequately mitigate for sensitive species impacts because the cumulative vegetation community impacts amount to less than 1% of the land covers within the biological cumulative analysis study area. While the impacted special-status plant species are sensitive due to their restricted range, they are not particularly rare within the cumulative study area.
- Impact BI-C-2** The significant cumulative indirect impacts to special-status plants will be reduced to **less than significant** through implementation of mitigation measures **M-BI-1** (biological monitoring), which prevents inadvertent disturbance to areas outside of the limits of grading, including areas where

special-status species may occur; **M-BI-2** (SWPPP BMPs, including restrictions on plantings, equipment staging and storage, and construction vehicle speed limits), which prohibits planting of invasive plants that can compete with native plants for resources and avoid indirect impacts to jurisdictional resources that may be potential habitat for special-status plants; **M-BI-3** (preparation of a biological monitoring report), which ensures the required biological monitoring has been conducted to prevent inadvertent impacts to special-status plants; and **M-BI-8** (implementation of a Fugitive Dust Control Plan), which prevents construction-related impacts to the viability of special-status plants by requiring soil stabilizers, watering, and other dust-control methods during construction activities. Standard mitigation measures such as developing a noxious or invasive weed control plan would significantly reduce the potential noxious or invasive plant impacts caused by reasonably foreseeable cumulative projects, including impact contributions from the Proposed Project, and therefore, cumulative impacts would be **less than significant** with implementation of mitigation measures for the reasonably foreseeable projects and the Proposed Project.

Table 2.2-1A
Schedule of Surveys for the Jacumba Solar and Gen-Tie Alignment Sites

| Date | Time | Focus | Conditions | Personnel |
|----------|-------------|--|--|-----------|
| 12/5/12 | 08:30–16:30 | Vegetation Mapping | 0% cc, 62°F–78°F, 0–4 mph winds | CJF |
| 1/11/13 | 09:00–16:00 | Vegetation Mapping (Juniper Woodland Mapping) | 30% cc, 47°F–55°F, 0–2 mph winds | CJF, MP |
| 2/18/13 | 08:30–16:30 | Vegetation Mapping (Juniper Woodland Mapping) | 0%–30% cc, 55°F, 2–4 mph winds | CJF, MP |
| 2/18/13 | 08:30–16:30 | Jurisdictional Delineation | 0%–30% cc, 55°F, 2–4 mph winds | CJF, PCS |
| 2/21/13 | 09:00–15:00 | Vegetation Mapping (Juniper Woodland Mapping) | 0%–10% cc, 47°F–55°F, 0–3 mph winds | CJF, MP |
| 12/1/13 | 08:10–13:00 | Wintering Raptor Surveys | 80%–100% cc, 40°F–60°F, 3–4 mph winds | BAO |
| 12/23/13 | 08:30–13:30 | Wintering Raptor Surveys | 50%–100% cc, 50°F–61°F, 5–10 mph winds | BAO |
| 1/3/14 | 07:30–12:30 | Wintering Raptor Surveys | 30%–100% cc, 35°F–65°F, 0–5 mph winds | BAO |
| 1/18/14 | 08:00–13:00 | Wintering Raptor Surveys | 0%–100% cc, 38°F–67°F, 5–10 mph winds | BAO |
| 3/27/14 | 07:35–15:50 | Burrowing Owl Habitat Assessment and Survey | 20%–100% cc, 59°F–69°F, 3–10 mph winds | SG, MP |
| 5/8/14 | 06:10–09:00 | Burrowing Owl Survey | 90%–100% cc, 50°F–55°F, 0–3 mph winds | BAO |

Table 2.2-1A
Schedule of Surveys for the Jacumba Solar and Gen-Tie Alignment Sites

| Date | Time | Focus | Conditions | Personnel |
|---------|-------------|---|--------------------------------------|-----------|
| 5/8/14 | 09:00–14:00 | Nesting Raptor and Foraging Surveys | 40%–90% cc, 55°F–71°F, 3–5 mph winds | BAO |
| 6/1/14 | 05:50–08:30 | Burrowing Owl Survey | 50% cc, 60°F–62°F, 3 mph winds | BAO |
| 6/1/14 | 08:30–13:30 | Nesting Raptor and Foraging Surveys | 0%–50% cc, 62°F–88°F, 0–3 mph winds | BAO |
| 7/6/14 | 06:40–09:40 | Burrowing Owl Survey | 20%–30% cc, 64°F–80°F, 3–5 mph winds | BAO |
| 7/6/14 | 09:40–15:00 | Nesting Raptor and Foraging Surveys | 0%–20% cc, 80°F–95°F, 3–5 mph winds | BAO |
| 9/19/14 | 09:45–14:30 | Vegetation Mapping (Juniper Woodland Mapping) and Jurisdictional Delineation | 0% cc, 75°F–82°F, 0–5 mph winds | CJF, MP |

Notes: % cc = percent cloud cover; °F = degrees Fahrenheit; mph = miles per hour.
SG = Scott Gressard; MP = Marshall Paynard; CJF = Callie Ford; PCS = Patricia Schuyler; BAO = Brock A. Ortega.

Table 2.2-1B
Schedule of Focused Quino Checkerspot Surveys for the Jacumba Solar and Gen-Tie Alignment Sites

| Survey Area | Date | Time | Range of Conditions | | | Personnel |
|---------------|---------|-------------|------------------------|--------------------|--------------------------|---------------|
| | | | Temperature Range (°F) | Cloud Cover (% cc) | Wind (mph) | |
| <i>Week 1</i> | | | | | | |
| 1 | 3/14/13 | 09:45–15:05 | 69–78 | 0–0 | 6–8 to 4–6 | KJM |
| 2 | 3/14/13 | 11:00–17:00 | 79–80 | 0–0 | 5–8 to 0–2 | TLW |
| 3 | 3/18/13 | 09:05–13:00 | 70–86 | 30–30 | 0–1 | AMH, CF, PS |
| 4 | 3/18/13 | 13:00–17:00 | 86–84 | 5–50 | 0–5 to 2–6; gusts to 8 | AMH, CF, PS |
| <i>Week 2</i> | | | | | | |
| 1 | 3/25/13 | 09:30–15:00 | 68–72 | 0–10 | 2–6 to 6–8 | KJM |
| 2 | 3/21/13 | 09:30–15:30 | 60–70 | 30–0 | 3–6 to 3–6 | TLW |
| 3 | 3/25/13 | 09:20–14:30 | 66–78 | 0–0 | 0–2 to 6–8 | TLW |
| 4 | 3/21/13 | 10:45–16:10 | 61–71 | 70–70 | 4–5 to 3–5 | BAO |
| <i>Week 3</i> | | | | | | |
| 1 | 3/29/13 | 09:30–14:50 | 66–80 | 10–80 | 0–2 to 4–6 | TLW |
| 2 | 3/29/13 | 10:30–16:20 | 70–73 | 100–80 | 3–5; gusts to 10 | BAO |
| 3 | 4/3/13 | 08:30–14:15 | 70–81 | 0–0 | 0–2 to 3–4 | TLW |
| 4 | 4/2/13 | 10:00–16:00 | 64–82 | 0–0 | 2–4 to 3–5 | VRJ, SKV |
| <i>Week 4</i> | | | | | | |
| 1 | 4/5/13 | 09:00–16:00 | 60–78 | 10–0 | 3–5 to 5–10; gusts to 10 | BAO |
| 2 | 4/4/13 | 08:30–14:30 | 70–80 | 80–90 | 0–1 to 3–8; gusts to 10 | JDP |
| 3 | * | N/A | N/A | N/A | N/A | N/A |
| 4 | 4/4/13 | 10:00–15:00 | 76–76 | 80–50 | 5–3 to 3–9, gusts to 10 | KJM, SKV, JMW |

Table 2.2-1B
Schedule of Focused Quino Checkerspot Surveys for the
Jacumba Solar and Gen-Tie Alignment Sites

| Survey Area | Date | Time | Range of Conditions | | | Personnel |
|---------------|---------|-------------|------------------------|--------------------|-----------------------------|-------------|
| | | | Temperature Range (°F) | Cloud Cover (% cc) | Wind (mph) | |
| <i>Week 5</i> | | | | | | |
| 1 | * | N/A | N/A | N/A | N/A | N/A |
| 2 | * | N/A | N/A | N/A | N/A | N/A |
| 3 | 4/11/13 | 08:30–16:30 | 60–74 | 0–0 | 1–5; gusts to 10 | BAO |
| 4 | 4/11/13 | 08:45–14:45 | 75–82 | 5–0 | 2–6 to 8–12, gusts to 12–20 | JDP |
| <i>Week 6</i> | | | | | | |
| 1 | 4/19/13 | 12:00–16:00 | 72–75 | 0–0 | 4–8 to 4–8 | AMH, CF, PS |
| 2 | 4/19/13 | 08:10–12:00 | 63–72 | 0–0 | 4–8 to 4–8, gusts to 11 | AMH, CF, PS |
| 3 | 4/17/13 | 08:30–14:15 | 64–73 | 0–0 | 0–3 to 1–4; gusts to 7–12 | PML |

Notes: °F = degrees Fahrenheit; % cc = percent cloud cover; mph = miles per hour; * = survey not conducted due to adverse weather conditions; N/A = not applicable.

AMH = Anita M. Hayworth, PhD (TE-781084-6); BAO = Brock A. Ortega (TE-813545-5); JDP = Jeffrey D. Priest (TE-840619-2); KJM = Kamarul J. Muri (TE-051250-0); PML = Paul M. Lemons (TE-051248-4); VRJ = Vipul R. Joshi (TE-019949-0); PS = Patricia Schuyler; CF = Callie Ford; SKV = Shane Valiere; TLW = Tricia L. Wotipka; JMW = Jonathan M. Walker.

Table 2.2-2
Vegetation Communities and Land Cover Types

| Habitat Types/Vegetation Communities | Code ^a | Jacumba Solar Existing Acreage | Gen-Tie Existing Acreage |
|--|-------------------|--------------------------------|--------------------------|
| <i>Upland Scrub and Chaparral</i> | | | |
| Semi-Desert Chaparral ^b | 37400 | 179.4 | 0.1 |
| Sonoran Mixed Woody Scrub ^b | 33210 | 3.2 | — |
| Upper Sonoran Subshrub Scrub ^b | 39000 | 3.6 | — |
| <i>Subtotal</i> | | 186.2 | 0.1 |
| <i>Woodland</i> | | | |
| Peninsular Juniper Woodland and Scrub ^b | 72320 | 98.2 | 3.3 |
| <i>Subtotal</i> | | 98.2 | 3.3 |
| <i>Non-Native Communities and Land Covers</i> | | | |
| Disturbed Land | 11300 | 13.1 | — |
| <i>Subtotal</i> | | 13.1 | — |
| Total | — | 297.5^c | 3.4 |

^a Holland (1986) as modified by Oberbauer et al. (2008).

^b Considered special-status by the County (2010).

^c Does not include existing road acreage (such as Old Highway 80).

Table 2.2-3
Summary of Direct Impacts to Suitable Habitat for County List A and B Plant Species
and Significance Prior to and After Mitigation

| County List | Species | CRPR | Acreage of Suitable Habitat | Acreage of Suitable Habitat within Impact Footprint ¹ | Percentage of Suitable Habitat Impacted | Significance Prior to Mitigation | Significance After Mitigation |
|-------------|------------------------------|------|-----------------------------|--|---|----------------------------------|-------------------------------|
| A | Jacumba milk-vetch | 1B.2 | 217.7 | 30.3 | 14% | Significant | Less than significant |
| | Pygmy lotus | 1B.3 | 90.6 | 4.1 | 5% | Significant | Less than significant |
| | Mountain Springs bush lupine | 1B.3 | 120.1 | 25.5 | 21% | Significant | Less than significant |
| | Parry's tetracoccus | 1B.2 | 186.9 | 74.9 | 40% | Significant | Less than significant |
| | Southern jewel-flower | 1B.3 | 217.7 | 30.3 | 14% | Significant | Less than significant |
| | Tecate tarplant | 1B.2 | 186.9 | 74.9 | 40% | Significant | Less than significant |
| B | Sticky geraea | 2.3 | 199.5 | 83.2 | 42% | Significant | Less than significant |
| | Slender-leaved ipomopsis | 2.3 | 220.9 | 33.6 | 15% | Significant | Less than significant |
| | Desert beauty | 2.3 | 186.9 | 74.9 | 40% | Significant | Less than significant |
| | Pink fairy-duster | 2.3 | 3.2 | 3.2 | 100% | Significant | Less than significant |
| | Parish's desert-thorn | 2.3 | 3.2 | 3.2 | 100% | Significant | Less than significant |

¹ Includes direct impacts from access road, maintenance around gen-tie poles, solar site, and fuel modification zone.

Table 2.2-4
Impacts to Suitable Habitat for Group 1 and/or SSC Wildlife Species

| Species Name | Acreage of Suitable Habitat | Acreage of Suitable Habitat within Impact Footprint ¹ | Percentage of Suitable Habitat Impacted | Significance Prior to Mitigation | Significance After Mitigation |
|------------------------------------|-----------------------------|--|---|----------------------------------|-------------------------------|
| <i>Amphibians and Reptiles</i> | | | | | |
| Blainville's horned lizard | 300.9 | 111.5 | 37% | Significant | Less than significant |
| Belding's orange-throated whiptail | 297.4 | 108.6 | 37% | Significant | Less than significant |
| Northern red-diamond rattlesnake | 300.9 | 111.5 | 37% | Significant | Less than significant |
| <i>Birds</i> | | | | | |
| Cooper's hawk – foraging | 300.9 | 111.5 | 37% | Significant | Less than significant |

**Table 2.2-4
Impacts to Suitable Habitat for Group 1 and/or SSC Wildlife Species**

| Species Name | Acreage of Suitable Habitat | Acreage of Suitable Habitat within Impact Footprint ¹ | Percentage of Suitable Habitat Impacted | Significance Prior to Mitigation | Significance After Mitigation |
|---------------------------------------|-----------------------------|--|---|----------------------------------|-------------------------------|
| Prairie falcon – foraging | 300.9 | 111.5 | 37% | Significant | Less than significant |
| Golden eagle – foraging | 300.9 | 111.5 | 37% | Significant | Less than significant |
| Bell’s sparrow – foraging and nesting | 179.5 | 74.9 | 42% | Significant | Less than significant |
| Turkey vulture – foraging | 300.9 | 111.5 | 37% | Significant | Less than significant |
| Loggerhead shrike – foraging | 300.9 | 111.5 | 37% | Significant | Less than significant |
| Loggerhead shrike – nesting | 284.2 | 100.3 | 35% | Significant | Less than significant |
| <i>Mammals</i> | | | | | |
| Northwestern San Diego pocket mouse | 300.9 | 111.5 | 37% | Significant | Less than significant |
| San Diego black-tailed jackrabbit | 300.9 | 111.5 | 37% | Significant | Less than significant |
| San Diego desert woodrat | 300.9 | 111.5 | 37% | Significant | Less than significant |

¹ Includes direct impacts from access road, maintenance around gen-tie poles, solar site, and fuel modification zone

**Table 2.2-5
Summary of Direct Impacts to Suitable Habitat for County List C and D
Plant Species and Significance Prior to and After Mitigation**

| County List | Species | CRPR | Acreage of Suitable Habitat | Acreage of Suitable Habitat within Impact Footprint ¹ | Percentage of Suitable Habitat Impacted | Significance Prior to Mitigation | Significance After Mitigation |
|-------------|--------------------------|------|-----------------------------|--|---|----------------------------------|-------------------------------|
| C | Fremont barberry | 2.3 | 217.7 | 30.3 | 14% | Significant | Less than significant |
| D | Payson’s jewel-flower | 4.2 | 186.9 | 74.9 | 40% | Less than significant | Less than significant |
| | Colorado Desert larkspur | 4.3 | 307.0 | 100.3 | 33% | Less than significant | Less than significant |
| | Wolf’s cholla | 4.3 | 3.2 | 3.2 | 100% | Less than significant | Less than significant |
| | Palmer’s grappling hook | 4.2 | 65.6 | 29.4 | 45% | Less than significant | Less than significant |

**Table 2.2-5
Summary of Direct Impacts to Suitable Habitat for County List C and D
Plant Species and Significance Prior to and After Mitigation**

| County List | Species | CRPR | Acreage of Suitable Habitat | Acreage of Suitable Habitat within Impact Footprint ¹ | Percentage of Suitable Habitat Impacted | Significance Prior to Mitigation | Significance After Mitigation |
|-------------|-----------------------|------|-----------------------------|--|---|----------------------------------|-------------------------------|
| | Pride-of-California | 4.3 | 186.9 | 74.9 | 40% | Less than significant | Less than significant |
| | Low bush monkeyflower | 4.3 | 186.9 | 74.9 | 40% | Less than significant | Less than significant |

¹ Includes direct impacts from access road, maintenance around gen-tie poles, solar site, and fuel modification zone.

**Table 2.2-6
Recommended Restricted Activity Dates and Setback Distances
by Level of Disturbance for Burrowing Owls**

| Location | Time of Year | Level of Disturbance (meters) | | |
|---------------|----------------------|-------------------------------|--------|------|
| | | Low | Medium | High |
| Nesting sites | April 1–August 15 | 200 | 500 | 500 |
| Nesting sites | August 16–October 15 | 200 | 200 | 500 |
| Nesting sites | October 16–March 31 | 50 | 100 | 500 |

Source: CDFG 2012b.

**Table 2.2-7
Summary of Impacts, Mitigation, and Open Space for
Vegetation Communities and Jurisdictional Areas**

| Habitat Types/Vegetation Communities | Existing Acreage ¹ | Total Impacts (Ac.) ² | Mitigation Ratio | Mitigation Required (Ac.) | Open Space (Ac.) | Mitigation Excess (Deficit) |
|--|-------------------------------|----------------------------------|------------------|---------------------------|------------------|---------------------------------------|
| <i>Non-Jurisdictional Vegetation Communities</i> | | | | | | |
| <i>Upland Scrub and Chaparral</i> | | | | | | |
| Semi-Desert Chaparral ³ | 179.5 | 74.9 | 1:1 | 74.9 | 101.2 | 26.3 |
| Sonoran Mixed Woody Scrub ³ | 3.2 | 3.2 | 1:1 | 3.2 | — | (3.2) Mitigated through excess SDC |
| Upper Sonoran Subshrub Scrub ³ | 3.6 | 3.0 | 1:1 | 3.0 | — | (3.0) Mitigated through excess SDC |
| <i>Subtotal</i> | <i>186.2</i> | <i>81.1</i> | <i>—</i> | <i>81.1</i> | <i>101.2</i> | <i>26.3</i> |

**Table 2.2-7
Summary of Impacts, Mitigation, and Open Space for
Vegetation Communities and Jurisdictional Areas**

| Habitat Types/Vegetation Communities | Existing Acreage ¹ | Total Impacts (Ac.) ² | Mitigation Ratio | Mitigation Required (Ac.) | Open Space (Ac.) | Mitigation Excess (Deficit) |
|---|-------------------------------|----------------------------------|------------------|---------------------------|------------------|-----------------------------|
| <i>Woodland</i> | | | | | | |
| Peninsular Juniper Woodland and Scrub ³ | 101.5 | 22.2 | 3:1 | 66.6 | 79.2 | 12.6 |
| <i>Subtotal</i> | <i>101.5</i> | <i>22.2</i> | <i>—</i> | <i>66.6</i> | <i>79.2</i> | <i>12.6</i> |
| <i>Non-Natural Land Covers</i> | | | | | | |
| Disturbed Land | 13.2 | 8.3 | N/A | — | 3.1 | 3.1 |
| <i>Subtotal</i> | <i>13.2</i> | <i>8.3</i> | <i>—</i> | <i>—</i> | <i>3.1</i> | <i>3.1</i> |
| <i>Jurisdictional Vegetation Communities and Waters</i> | | | | | | |
| Non-Wetland Ephemeral Waters ⁴ | 3.3 | 0.121 | 1:1 | 0.21 | 3.14 | N/A |
| <i>Subtotal</i> | <i>3.3</i> | <i>0.21</i> | <i>—</i> | <i>0.21</i> | <i>3.14</i> | <i>N/A</i> |
| Total | 300.9 | 111.5 | — | 147.9 | 183.5 | 42.0 |

¹ Includes acreage from the gen-tie line.

² Includes acreage from the fuel modification zones and gen-tie line.

³ Considered special status by the County (2010).

⁴ These features are overlays to the vegetation community layer and are not counted toward the total acreage.

**Table 2.2-8
ECMSCP Planning Agreement Conservation Objectives**

| Conservation objective | Applicability/Compliance |
|--|---|
| Provide for the protection of species, natural communities, and ecosystems on a landscape level. | Project, with mitigation, will provide for protection and conservation of special-status species and natural communities. |
| Preserve the diversity of plant and animal communities throughout the Planning Area. | Not applicable |
| Protect threatened, endangered, or other special status plant and animal species, and minimizes and mitigate the take or loss of proposed Covered Species. | Project, with mitigation, will provide for protection and conservation of special-status species and natural communities. |
| Identify and designate biologically sensitive habitat areas. | Biological studies have been conducted for the site to determine sensitive habitat areas. |
| Preserve habitat and contribute to the recovery of Covered Species. | Project, with mitigation, will provide for protection and conservation of special-status species and natural communities. |
| Reduce the need to list additional species. | Not applicable |
| Set forth species-specific goals and objectives. | Not applicable |
| Set forth specific habitat-based goals and objectives expressed in terms of amount, quality, and connectivity of habitat. | Not applicable |

**Table 2.2-9
Cumulative Impacts – Vegetation Communities**

| Vegetation Community ^{1,2} | Inventory of Vegetation Communities in the Cumulative Analysis Study Area | Jacumba Project Impacts | Cumulative Project Impacts | | Cumulative Analysis Study Area | |
|-------------------------------------|---|-------------------------|--|--------------------------|---|--|
| | | | Total Impacts to Vegetation Communities in the Biological Cumulative Analysis Study Area | Total Cumulative Impacts | Project impacts as percentage of Cumulative Analysis Study Area | Total Cumulative Impacts as percentage of Cumulative Analysis Study Area |
| Alkali Marsh | 87.6 | — | — | — | — | — |
| Broadleaved Upland Forest | 2,884.1 | — | — | — | — | — |
| Chaparral | 358,001.7 | 74.9 | 1,580.8 | 1,656.2 | 0.02% | 0.46% |
| Chenopod Scrub | 1,801.0 | — | — | — | — | — |
| Cismontane Woodland | 25,085.0 | — | 56.2 | 56.2 | — | 0.02% |
| Closed-cone Coniferous Forest | 113.5 | — | — | — | — | — |
| Coastal Sage-Chaparral Transition | 7,828.1 | — | — | — | — | — |
| Coastal Scrub | 18,887.9 | — | 109.4 | 109.4 | — | 0.03% |
| Disturbed Habitat | 590.2 | 8.3 | — | 8.3 | <0.01% | — |
| Freshwater Marsh | 278.6 | — | — | — | — | — |
| General Agriculture | 6,696.3 | — | 98.5 | 98.5 | — | 0.03% |
| Great Basin Scrub | 2,147.2 | — | 94.2 | 94.2 | — | 0.03% |
| Lower Montane Coniferous Forest | 9,644.1 | — | — | — | — | — |
| Meadows and Seeps | 5,379.5 | — | 0.1 | 0.1 | — | <0.01% |
| Mojavean Desert Scrub | 180.9 | — | — | — | — | — |
| Non-Native Vegetation | 30.5 | — | 0.3 | 0.3 | — | <0.01% |
| Non-Native Woodland | 48.4 | — | — | — | — | — |
| Pinon and Juniper Woodlands | 3,014.3 | 22.2 | 96.9 | 116.0 | 0.01% | 0.03% |
| Riparian Forests | 7,070.9 | — | — | — | — | — |
| Riparian Scrub | 1,415.0 | — | 3.6 | 3.6 | — | <0.01% |
| Riparian Woodlands | 143.3 | — | — | — | — | — |
| Sonoran Desert Scrub | 6,023.5 | 3.2 | 44.3 | 47.5 | <0.01% | 0.01% |
| Undifferentiated Open Woodland | 194.0 | — | — | — | — | — |
| Unvegetated Habitat | 1,728.1 | — | 1.5 | 1.5 | — | <0.01% |

**Table 2.2-9
Cumulative Impacts – Vegetation Communities**

| Vegetation Community ^{1,2} | Inventory of Vegetation Communities in the Cumulative Analysis Study Area | Jacumba Project Impacts | Cumulative Project Impacts | | Cumulative Analysis Study Area | |
|-------------------------------------|---|-------------------------|--|--------------------------|---|--|
| | | | Total Impacts to Vegetation Communities in the Biological Cumulative Analysis Study Area | Total Cumulative Impacts | Project impacts as percentage of Cumulative Analysis Study Area | Total Cumulative Impacts as percentage of Cumulative Analysis Study Area |
| Upper Montane Coniferous Forest | 13,585.2 | — | — | — | — | — |
| Upper Sonoran Subshrub Scrub | 3,815.0 | 3.0 | 101.5 | 104.5 | <0.01% | 0.03% |
| Urban/Developed | 11,518.2 | — | 214.1 | 214.1 | — | 0.06% |
| Valley and Foothill Grassland | 10,786.8 | — | 176.9 | 176.9 | — | 0.05% |
| Total | 499,048.7 | 111.5 | 2,578.2 | 2,689.8 | 0.02% | 0.54% |

¹ The vegetation communities are described within the higher level of their classification category (e.g., semi-desert chaparral is described under chaparral; Sonoran mixed woody scrub is described under Sonoran desert scrub).

² Vegetation community categories are based on Oberbauer et al. 2008 classifications.

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**Table 2.2-10
Summary of Significant Impacts**

| Section of Report Analysis Is Described (see Appendix 2.2-1) | Impact Number | Impacted Resource | Impact Type | Proposed Mitigation | Level of Significance After Mitigation | Guideline Number and Letter |
|--|----------------|--|-------------------|--|--|-----------------------------|
| Guideline 4.1: 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 California Department of Fish and Game or U.S. Fish and Wildlife Service. | | | | | | |
| 3.2.2.1/3.2.3.1 | Impact BI-SP-1 | Special-Status Plants , County List A and B: Jacumba milk-vetch Pygmy lotus Mountain Springs bush lupine Parry's tetraococcus Southern jewel-flower Tecate tarplant Sticky geraea Slender-leaved ipomopsis Desert beauty Pink fairy-duster Parish's desert-thorn List C (CRPR 2.3): Fremont barberry | Short-term direct | M-BI-1 (biological monitoring) M-BI-2 (SWPPP BMPs, including restrictions on plantings, equipment staging and storage, and construction vehicle speed limits) M-BI-3 (preparation of a biological monitoring report) | Less than significant | 4.1, B/ 4.1, C |
| 3.2.2.1/3.2.3.1 | Impact BI-SP-2 | Special-Status Plants , County List A and B: Jacumba milk-vetch Pygmy lotus Mountain Springs bush lupine Parry's tetraococcus Southern jewel-flower Tecate tarplant Sticky geraea Slender-leaved ipomopsis Desert beauty Pink fairy-duster Parish's desert-thorn List C (CRPR 2.3): Fremont barberry | Long-term direct | M-BI-4 (on-site or off-site habitat preservation and management) M-BI-16 (rare plant surveys and relocation of rare plants to the on-site Open Space Preserve) | Less than significant | 4.1, B/ 4.1, C |
| 3.2.2.2 | Impact BI-W-1 | Special-Status Wildlife , County Group 1 | Short-term direct | M-BI-1 (biological monitoring) M-BI-2 (SWPPP BMPs, including restrictions on plantings, equipment staging and storage, and construction vehicle speed limits) M-BI-3 (preparation of a biological monitoring report) M-BI-5 (restrictions on operation and maintenance personnel activity) M-BI-6 (breeding season avoidance) M-BI-7 (cover trenches and holes; monitoring excavated areas and soil piles) Line Interaction Committee) | Less than significant | 4.1, B |

**Table 2.2-10
Summary of Significant Impacts**

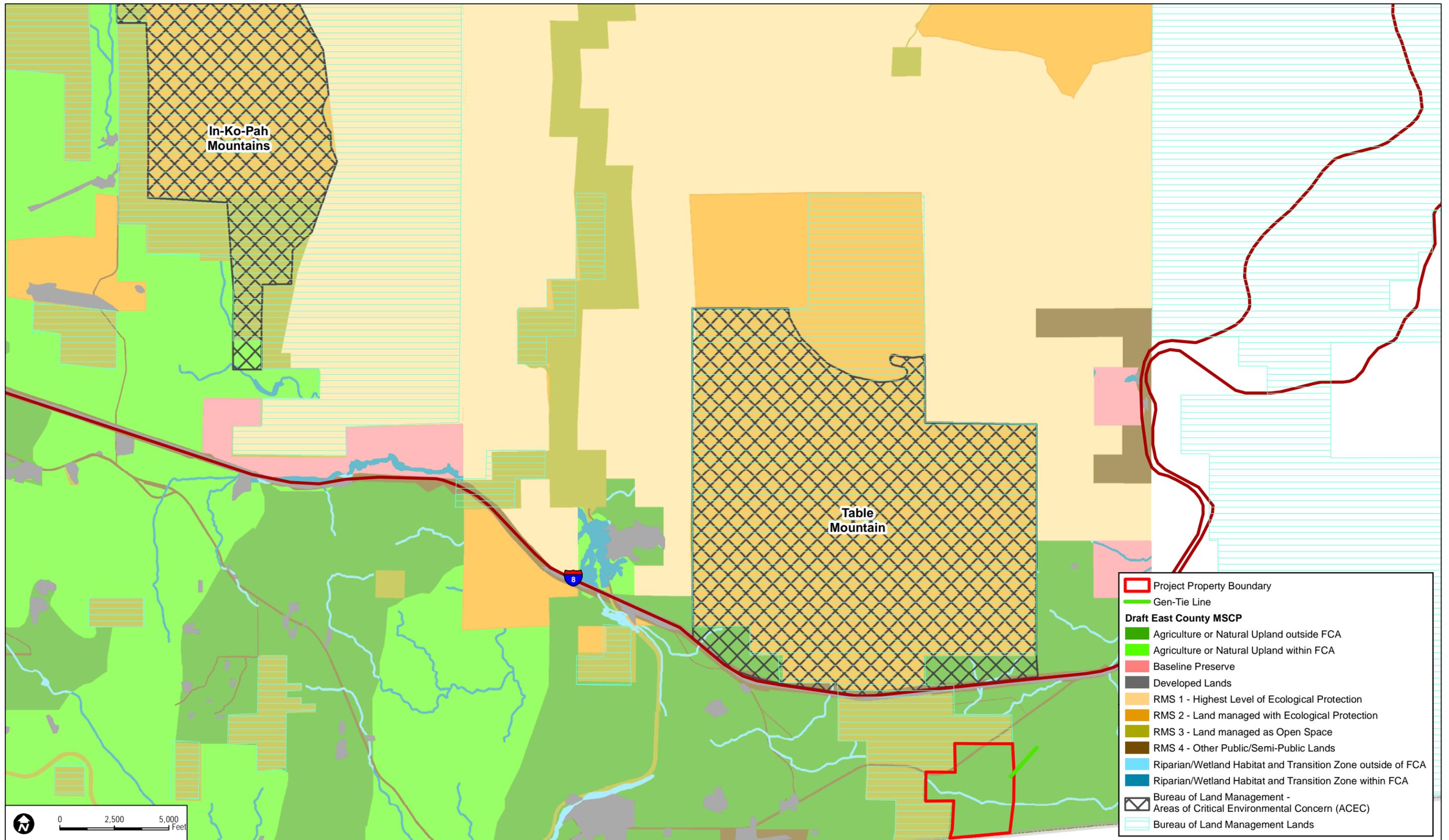
| Section of Report Analysis Is Described (see Appendix 2.2-1) | Impact Number | Impacted Resource | Impact Type | Proposed Mitigation | Level of Significance After Mitigation | Guideline Number and Letter |
|--|----------------|--|---------------------|--|--|-----------------------------|
| 3.2.2.2 | Impact BI-W-2 | Special-Status Wildlife , County Group 1 or CDFW Species of Special Concern Impacts to active nests or young of nesting County Group 1 or CDFW Species of Special Concern | Short-term direct | M-BI-6 (preconstruction surveys for nesting birds and setbacks) | Less than significant | 4.1, B |
| 3.2.2.2 | Impact BI-W-3 | Special-Status Wildlife , County Group 1 or CDFW Species of Special Concern Removal of suitable habitat of County Group 1 wildlife species (see Table 3-2 for details). | Long-term direct | M-BI-4 (on-site or off-site habitat preservation and management) | Less than significant | 4.1, B |
| 3.2.3.2 | Impact BI-W-4 | Special-Status Wildlife , County Group 2 Species | Short-term direct | M-BI-1 (biological monitoring) M-BI-3 (preparation of a biological monitoring report) M-BI-7 (cover trenches and holes; monitoring excavated areas and soil piles) | Less than significant | 4.1, C |
| 3.2.3.2 | Impact BI-W-5 | Special-Status Wildlife , County Group 2 Impacts to active nests or young of nesting County Group 1 or CDFW Species of Special Concern | Short-term direct | M-BI-6 (preconstruction surveys for nesting birds and setbacks) | Less than significant | 4.1, C |
| 3.2.6 | Impact BI-W-6 | Special-Status Wildlife , Loss of foraging habitat for raptors | Long-term direct | M-BI-4 (off-site habitat preservation and management) | Less than significant | 4.1, F |
| 3.2.7/7.2.12 | Impact BI-W-7 | Loss of Core Wildlife Area, Loss of habitat | Long-term direct | M-BI-4 (off-site habitat preservation and management) | Less than significant | 4.1, G/4.5, L9- |
| 3.2.8.1 | Impact BI-SP-3 | Special-Status Plants , County List A and B: Jacumba milk-vetch Pygmy lotus Mountain Springs bush lupine Parry's tetraococcus Southern jewel-flower Tecate tarplant Sticky geraea Slender-leaved ipomopsis Desert beauty Pink fairy-duster Parish's desert-thorn List C (CRPR 2.3): Fremont barberry | Short-term indirect | M-BI-1 (biological monitoring) M-BI-2 (SWPPP BMPs, including restrictions on plantings, equipment staging and storage, and construction vehicle speed limits) M-BI-3 (preparation of a biological monitoring report) M-BI-8 (implementation of a Fugitive Dust Control Plan) | Less than significant | 4.1, H |
| 3.2.8.1 | Impact BI-SP-4 | Special-Status Plants , County List A and B: Jacumba milk-vetch Pygmy lotus Mountain Springs bush lupine Parry's tetraococcus Southern jewel-flower Tecate tarplant Sticky geraea Slender-leaved ipomopsis Desert beauty | Long-term indirect | M-BI-4 (off-site habitat preservation and management) M-BI-5 (restrictions on operation and maintenance personnel activity) M-BI-8 (implementation of a Fugitive Dust Control Plan) M-BI-9 (biological review of landscape plans) M-BI-10(implementation of a Fire Protection Plan) M-BI-11 (regulated herbicide application) | Less than significant | 4.1, H |

**Table 2.2-10
Summary of Significant Impacts**

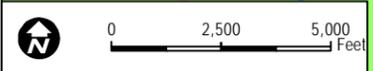
| Section of Report Analysis Is Described (see Appendix 2.2-1) | Impact Number | Impacted Resource | Impact Type | Proposed Mitigation | Level of Significance After Mitigation | Guideline Number and Letter |
|---|---------------|--|---------------------|---|--|-----------------------------|
| | | Pink fairy-duster Parish's desert-thorn List C (CRPR 2.3): Fremont barberry | | | | |
| 3.2.8.2 | Impact BI-W-8 | Special-Status Wildlife Detected or Potentially Occurring | Short-term indirect | M-BI-1 (biological monitoring) M-BI-2 (SWPPP BMPs, including restrictions on plantings, equipment staging and storage, and construction vehicle speed limits) M-BI-3 (preparation of a biological monitoring report) M-BI-6 (preconstruction surveys for nesting birds and setbacks) M-BI-8 (implementation of a Fugitive Dust Control Plan) M-BI-12 (minimize night lighting) | Less than significant | 4.1, H |
| 3.2.8.2 | Impact BI-W-9 | Special-Status Wildlife Detected or Potentially Occurring | Long-term indirect | M-BI-4 (off-site habitat preservation and management) M-BI-5 (restrictions on operation and maintenance personnel activity) M-BI-8 (implementation of a Fugitive Dust Control Plan) M-BI-9 (biological review of landscape plans) M-BI-10 (implementation of a Fire Protection Plan) M-BI-13 (implement recommendations by the Avian Power Line Interaction Committee) M-N-1 (compliance with the County's Noise Ordinance) | Less than significant | 4.1, H |
| Guideline 4.2: <i>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 California Department of Fish and Game or U.S. Fish and Wildlife Service.</i> | | | | | | |
| 4.2.1 | Impact BI-V-1 | Special-Status Upland Vegetation Communities | Short-term direct | M-BI-1 (biological monitoring) M-BI-2 (SWPPP BMPs, including restrictions on plantings, equipment staging and storage, and construction vehicle speed limits) M-BI-3 (preparation of a biological monitoring report) | Less than significant | 4.2, A |
| 4.2.1 | Impact BI-V-2 | Special-Status Upland Vegetation Communities | Long-term direct | M-BI-4 (off-site habitat preservation and management) | Less than significant | 4.2, A |
| 4.2.2 | Impact BI-V-3 | Jurisdictional Resources | Long-term direct | M-BI-4(off-site habitat preservation and management) M-BI-14 (require permits from ACOE, RWQCB, and CDFW) | | |
| 4.2.2 | Impact BI-V-4 | Jurisdictional Resources | Short-term indirect | M-BI-1 (biological monitoring) M-BI-2 (SWPPP BMPs, including restrictions on plantings, equipment staging and storage, and construction vehicle speed limits) M-BI-3 (preparation of a biological monitoring report) | | |
| 4.2.2 | Impact BI-V-5 | Jurisdictional Resources | Long-term indirect | M-BI-4 (off-site habitat preservation and management) M-BI-5 (restrictions on operation and maintenance personnel activity) M-BI-8 (implementation of a Fugitive Dust Control Plan) M-BI-10 (implementation of a Fire Protection Plan) M-BI-11 (regulated herbicide application) M-BI-14 (require permits from ACOE, RWQCB, and CDFW) | | |
| 4.2.4 | Impact BI-V-6 | Special-Status Upland Vegetation Communities | Short-term indirect | M-BI-1 (biological monitoring) M-BI-2 (SWPPP BMPs, including restrictions on plantings, equipment staging and storage, and construction vehicle speed limits) M-BI-3 (preparation of a biological monitoring report) M-BI-8 (implementation of a Fugitive Dust Control Plan) | Less than significant | 4.2, D |

**Table 2.2-10
Summary of Significant Impacts**

| Section of Report Analysis Is Described (see Appendix 2.2-1) | Impact Number | Impacted Resource | Impact Type | Proposed Mitigation | Level of Significance After Mitigation | Guideline Number and Letter |
|--|-----------------------|--|-----------------------------------|---|--|-----------------------------|
| 4.2.4 | Impact BI-V-7 | Special-Status Upland Vegetation Communities | Long-term indirect | M-BI-4 (off-site habitat preservation and management) M-BI-5 (restrictions on operation and maintenance personnel activity) M-BI-8 (implementation of a Fugitive Dust Control Plan) M-BI-9 (biological review of landscape plans) M-BI-10 (implementation of a Fire Protection Plan) M-BI-11 (regulated herbicide application) | Less than significant | 4.2, D |
| Guideline 4.3: 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. | | | | | | |
| 5.2.1 | No Significant Impact | Jurisdictional Wetlands and Waterways | No significant impact | None | No Significant Impact | 4.3 |
| Guideline 4.4: The project would interfere substantially with the movement of a 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. | | | | | | |
| 6.2.1 | Impact BI-WM-1 | Foraging and Breeding Habitat | Short-term direct | M-BI-1 (biological monitoring) M-BI-2 (SWPPP BMPs, including restrictions on plantings, equipment staging and storage, and construction vehicle speed limits) M-BI-3 (preparation of a biological monitoring report) | Less than significant | 4.4, A |
| 6.2.1 | Impact BI-WM-2 | Foraging and Breeding Habitat | Long-term direct | M-BI-4 (off-site habitat preservation and management) | Less than significant | 4.4, A |
| 6.2.1 | Impact BI-WM-3 | Foraging and Breeding Habitat | Short-term and long-term indirect | M-BI-4 (off-site habitat preservation and management) M-N-1 (compliance with the County's Noise Ordinance) | Less than significant | 4.4, A |
| 6.2.2 | Impact BI-WM-4 | Wildlife Movement , small and mid-sized animals | Long-term direct | M-BI-4 (off-site habitat preservation and management) | Less than significant | 4.4, B; 4.4, E |
| 6.2.2 | Impact BI-WM-5 | Collision and Electrocution | Long-term direct | M-BI-13 (implement recommendations by the Avian Power Line Interaction Committee) M-BI-15 (implement a WRRS) | Less than significant | 4.4, B; 4.4, E |
| Guideline 4.5: 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 Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state HCP. | | | | | | |
| 7.2.11 | Impact BI-P-1 | Migratory Bird Treaty Act | Short-term direct | M-BI-6 (preconstruction surveys for nesting birds and setbacks) | Less than significant | 4.5, K |



- Project Property Boundary
- Gen-Tie Line
- Draft East County MSCP**
- Agriculture or Natural Upland outside FCA
- Agriculture or Natural Upland within FCA
- Baseline Preserve
- Developed Lands
- RMS 1 - Highest Level of Ecological Protection
- RMS 2 - Land managed with Ecological Protection
- RMS 3 - Land managed as Open Space
- RMS 4 - Other Public/Semi-Public Lands
- Riparian/Wetland Habitat and Transition Zone outside of FCA
- Riparian/Wetland Habitat and Transition Zone within FCA
- Bureau of Land Management - Areas of Critical Environmental Concern (ACEC)
- Bureau of Land Management Lands



DUDEK

SOURCE: SanGIS 2014, BLM 2010

8477

Jacumba Solar Energy Project

FIGURE 2.2-1
Regional Context

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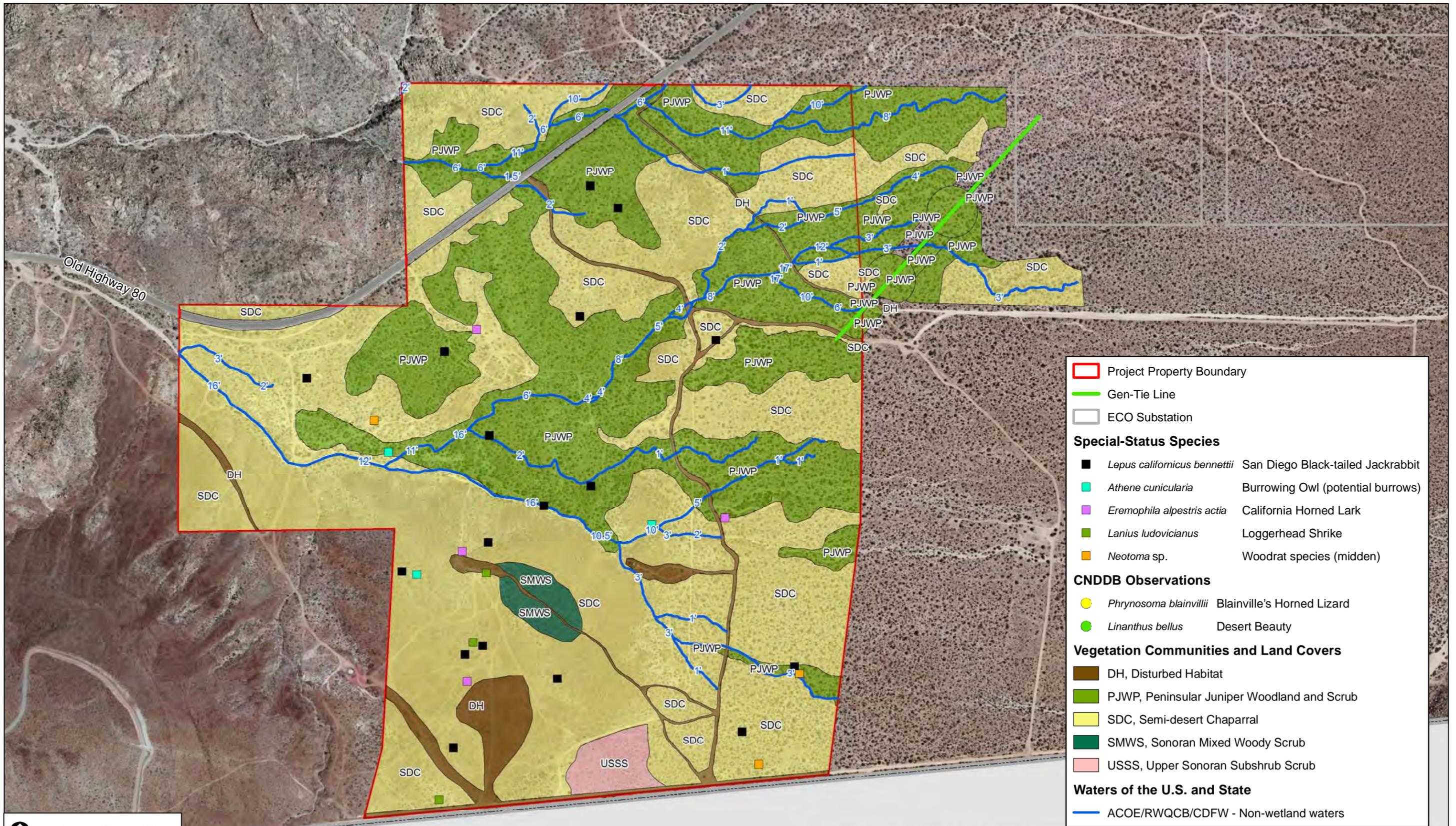
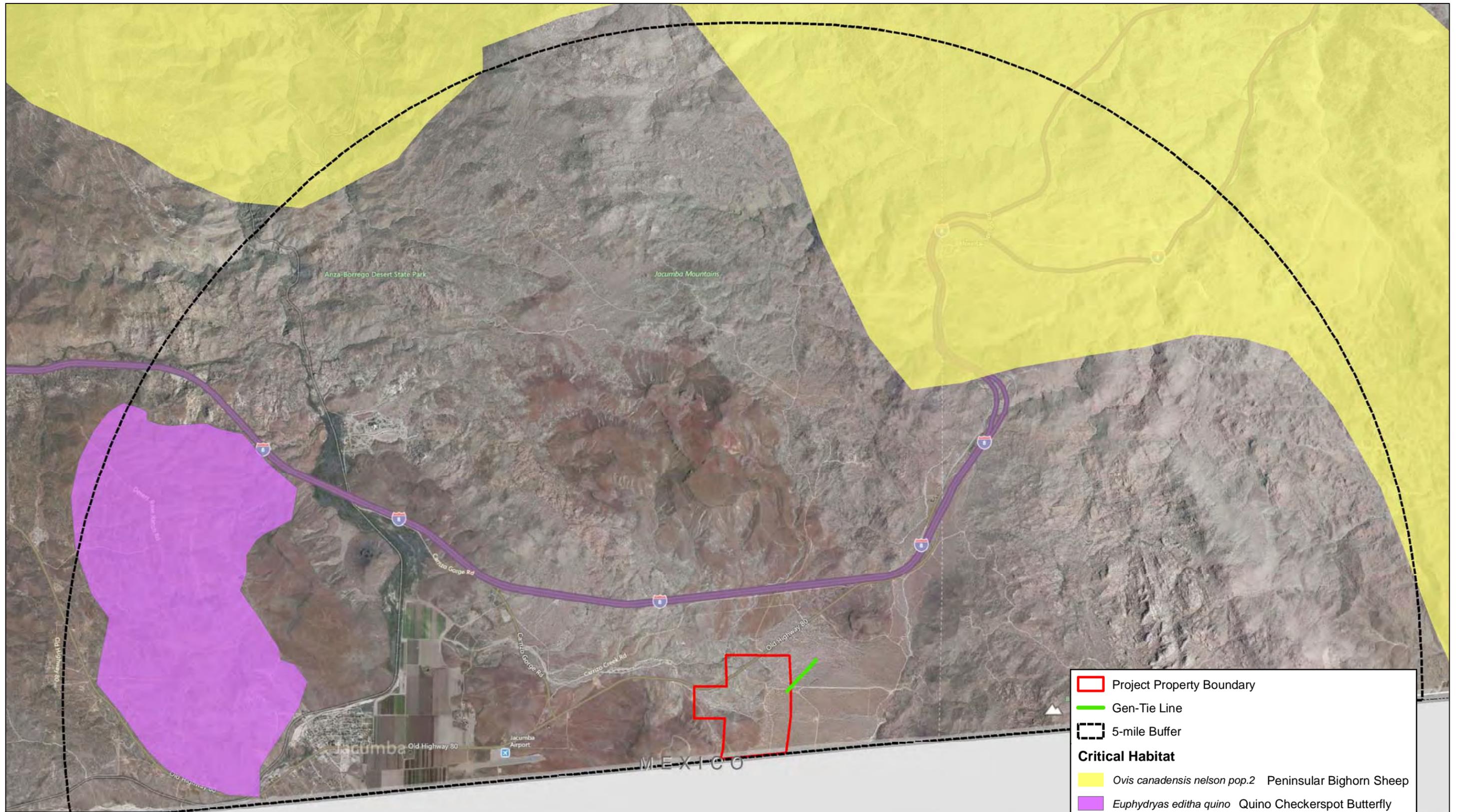


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| | |
|-------------------------|--|
| | Project Property Boundary |
| | Gen-Tie Line |
| | 5-mile Buffer |
| Critical Habitat | |
| | <i>Ovis canadensis nelson pop.2</i> Peninsular Bighorn Sheep |
| | <i>Euphydryas editha quino</i> Quino Checkerspot Butterfly |



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DUDEK

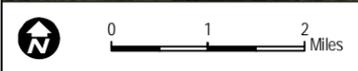
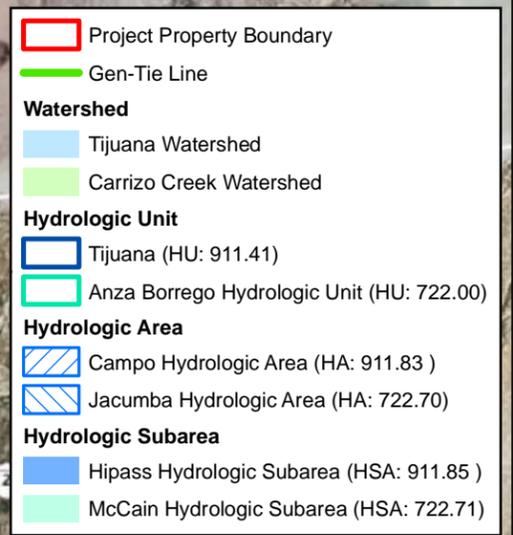
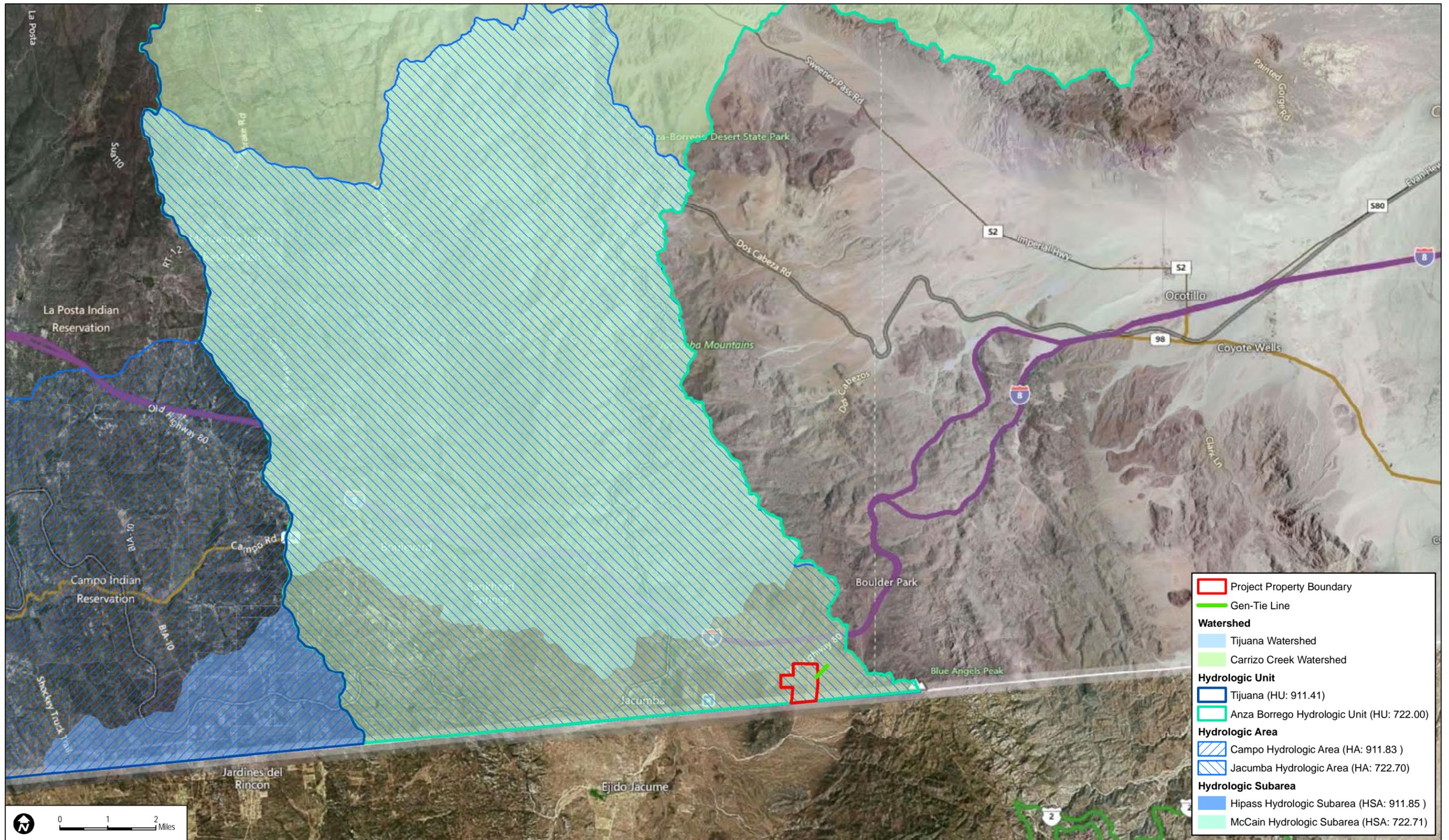
SOURCE: Bing 2014, USFWS 2014

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FIGURE 2.2-3
USFWS Critical Habitat

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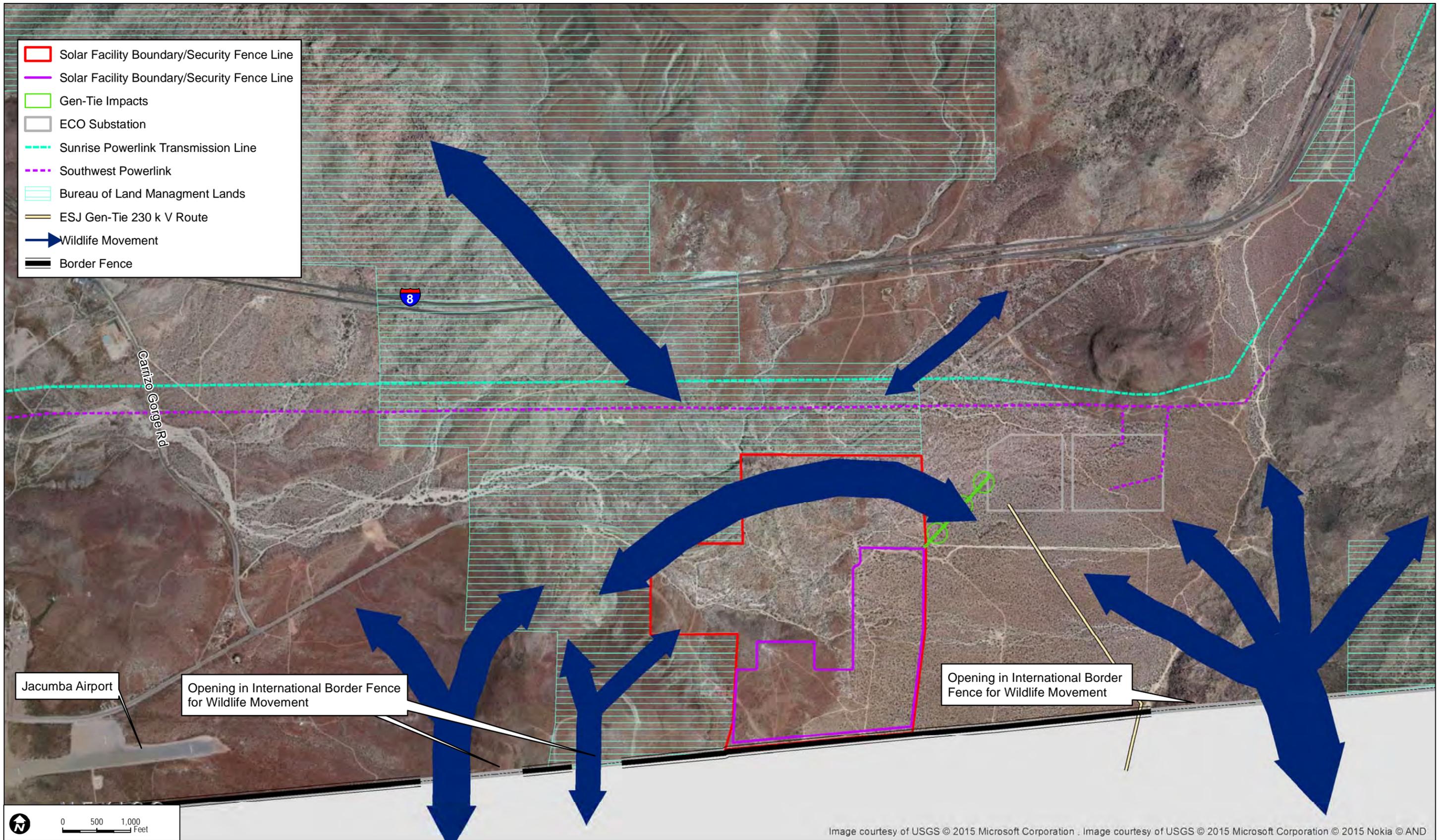
SOURCE: U.S. Geological Survey National Hydrography Dataset (USGS 2012); Bing 2014

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FIGURE 2.2-4
Hydrologic Setting

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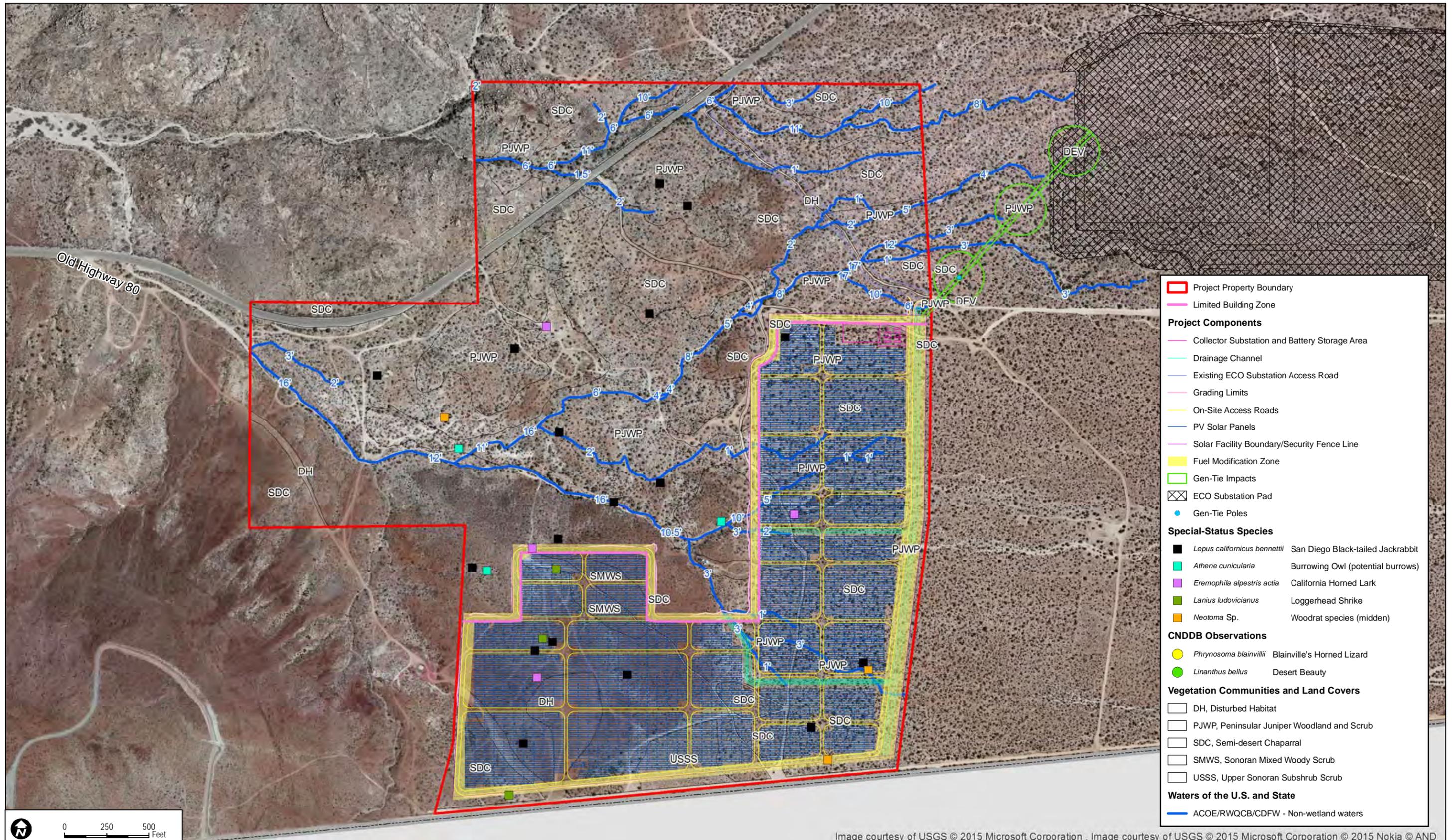


Image courtesy of USGS © 2015 Microsoft Corporation . Image courtesy of USGS © 2015 Microsoft Corporation © 2015 Nokia © AND

FIGURE 2.2-6
Impacts to Biological Resources

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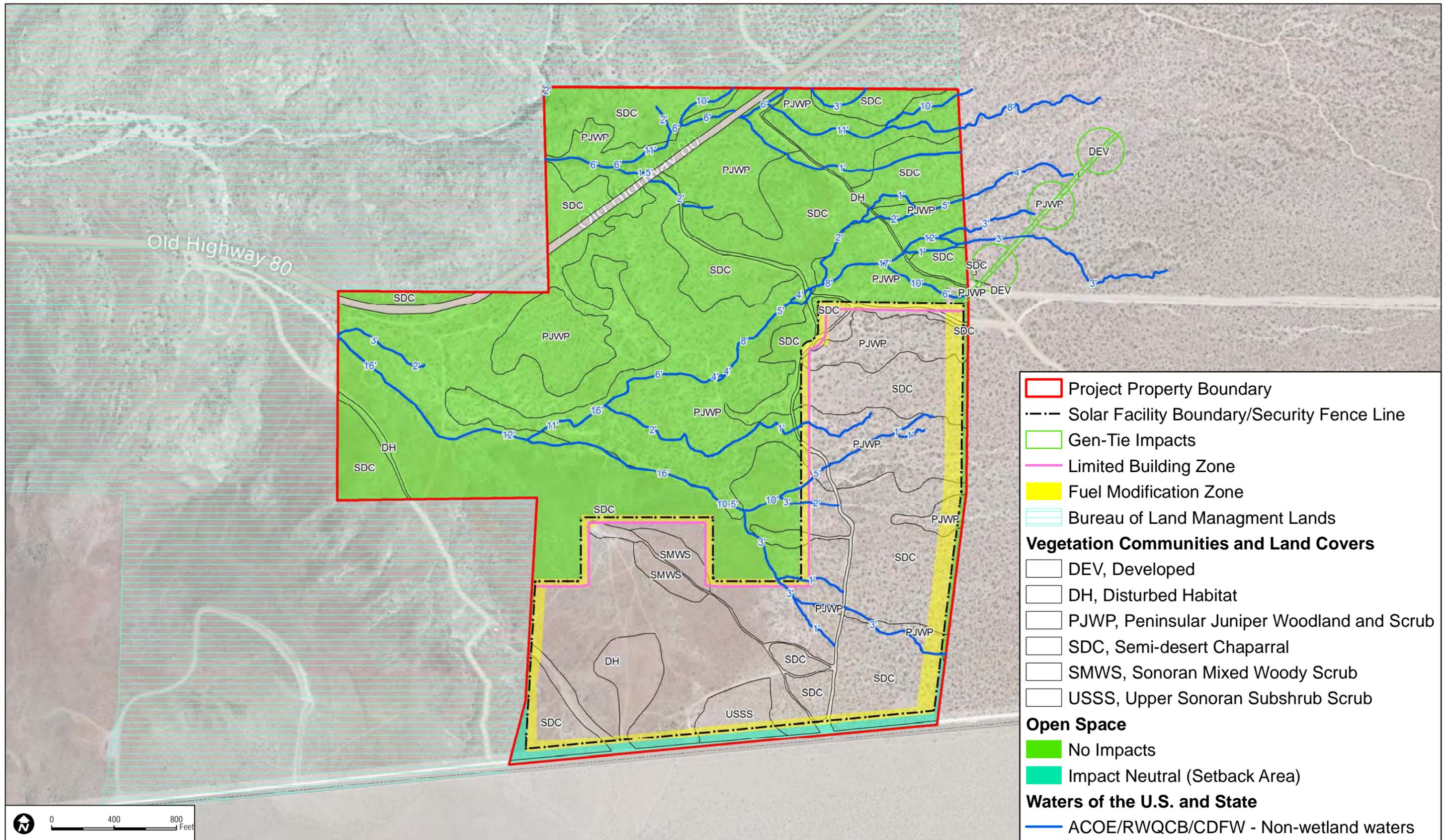


FIGURE 2.2-7
Open Space and Impact Neutral Areas

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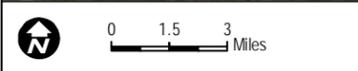
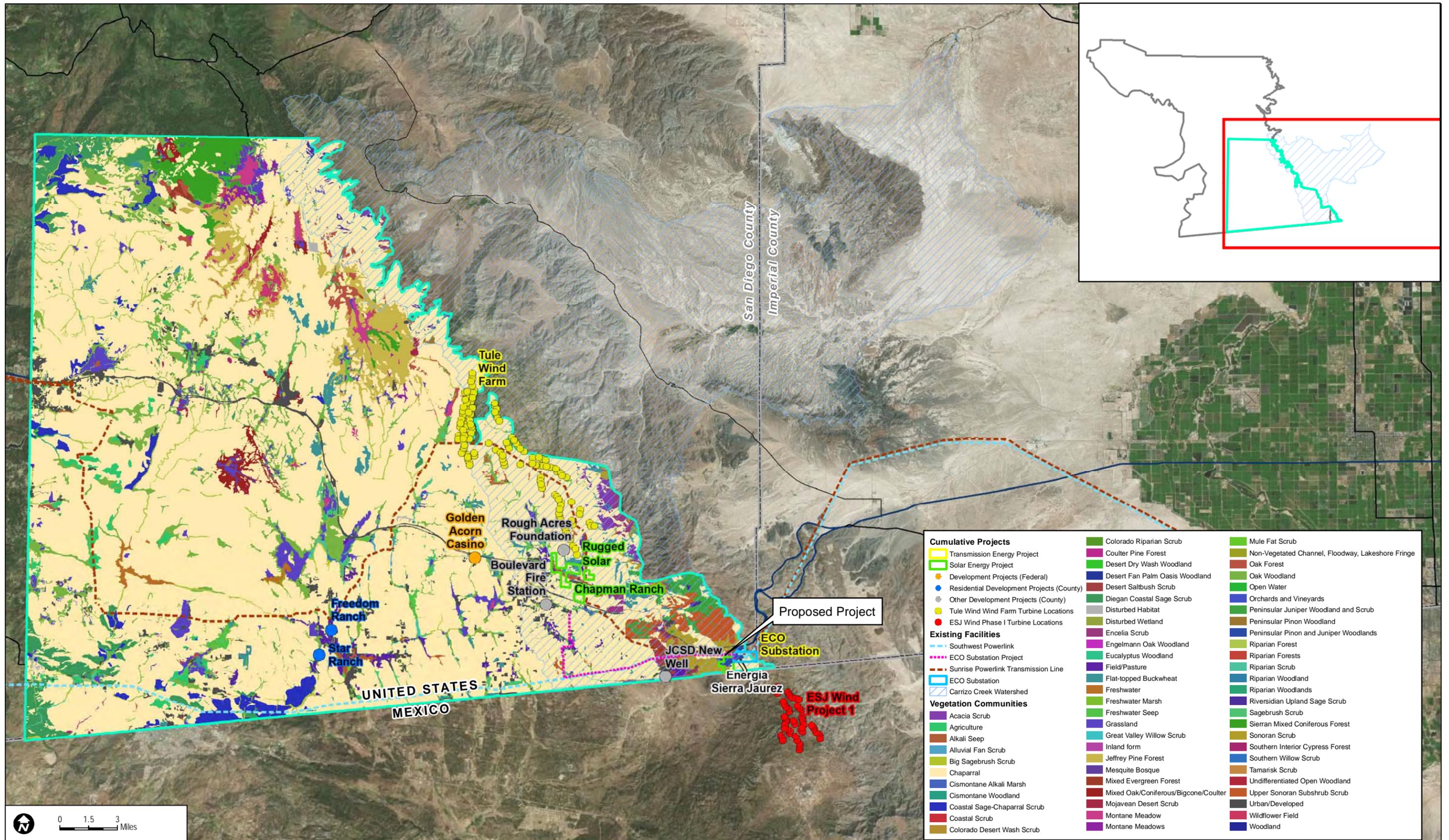


FIGURE 2.2-8
Biological Cumulative Study Area Vegetation

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