2.3 Biological Resources

This section discusses potential impacts to biological resources resulting from the implementation of the Proposed Project. The analysis is based on the review of existing biological resources, technical data, and applicable laws, regulations, and guidelines, as well as the following technical reports prepared for the project:

- *Draft Biological Resources Report, Tierra del Sol Solar Farm Project* (Appendix 2.3-1)
- *Draft Biological Resources Report, Rugged Solar Farm (*Appendix 2.3-2)
- *LanEast Solar Energy Project, Quino Checkerspot Butterfly 45-Day Summary Report* (Appendix 2.3-3)
- *Draft Biological Resources Report for the Proposed LanWest Solar Farm LLC Project* (Existing Conditions Only) (Appendix 2.3-4)
- *Cumulative Habitat Models* (Appendix 2.3-5)
- *Mitigation Lands Memorandum – Evaluation of Biological Resources for the Soitec Mitigation Site* (Appendix 2.3-6).

2.3.1 Existing Conditions

This section summarizes the existing biological resources within the Proposed Project area, identifies the resources that could be affected by the Proposed Project, and suggests mitigation measures to lessen/reduce effects of the Proposed Project. The LanEast and LanWest solar farms are being analyzed at a program level in this Environmental Impact Report (EIR) because sufficient project details do not exist to analyze impacts at a project level.

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 each of the project areas.

This section considers information included in reports prepared for the Tierra del Sol, Rugged, LanEast and LanWest sites, as listed above. Data regarding biological resources present in the Proposed Project area were obtained through a review of pertinent literature and through field reconnaissance.

Literature Review

Special-status biological resources present or potentially present in the Proposed Project area were identified through a literature search, conducted in 2012.

Sources used for nomenclature, life history, and ranges of species and communities include the following:

- **Wildlife:** Latin and common names of animals follow Crother (2008) for reptiles and amphibians, American Ornithologists' Union (AOU) (2012) for birds, Wilson and Reeder (2005) for mammals, North American Butterfly Association (NABA) (2001) or San Diego Natural History Museum (SDNHM) (2012a) for butterflies, and Moyle (2002) for fish. Additional life history and range information is taken from San Diego County Bird Atlas (Unitt 2004) and Life History Accounts and Range Maps - California Wildlife Habitat Relationships System (Zeiner et al. 1988, 1990a, 1990b).
- **Plants and vegetation communities:** Latin and common names for plant species with a California Rare Plant Rank (CRPR; formerly CNPS List) follow the California Native Plant Society (CNPS) Online *Inventory of Rare, Threatened, and Endangered Plants of California* (CNPS 2012, 2013). For plant species without a CRPR, Latin names follow the Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California (Jepson Flora Project 2012a), and common names follow the United States Department of Agriculture (USDA) Natural Resources Conservation Service Plants Database (USDA 2012). Vegetation communities were mapped according to the *Draft Vegetation Communities of San Diego* (Oberbauer et al. 2008).

Field Reconnaissance

The following field surveys were conducted by Dudek in 2011 and 2012 for the 420-acre Tierra del Sol solar farm site: vegetation mapping; special-status plant surveys; jurisdictional wetlands delineation; focused, protocol-level surveys for Quino checkerspot butterfly (*Euphydryas editha quino*); and focused surveys or habitat assessments for additional wildlife surveys as directed by the County of San Diego (Appendix 2.3-1).

Vegetation mapping for the gen-tie alignment site was conducted by Dudek in February and April 2013, and a formal jurisdictional delineation was conducted in February, March, and April 2013. Focused botanical surveys were conducted within the gen-tie alignment site in April, June, and October through November 2013. Focused surveys for quino checkerspot butterfly were conducted in the spring of 2013 for the gen-tie alignment (Appendix 2.3-1).

Field surveys for the Rugged solar project were conducted by both AECOM and Dudek between 2009 and 2013, and included vegetation mapping; jurisdictional wetlands delineation; oak woodland surveys; special-status plant surveys; and focused, protocol-level surveys for Quino checkerspot butterfly (Appendix 2.3-2). In 2012 and 2013, Dudek conducted a rare plant survey for the northern off-site access road; in 2013 Dudek conducted focused Quino checkerspot butterfly protocol surveys for the northern off-site access road.

The following field surveys for the LanEast solar project were conducted by AECOM in 2011: vegetation mapping; oak woodland assessment; and focused, protocol-level surveys for Quino checkerspot butterfly (Appendix 2.3-3).

The following field surveys for the LanWest solar project were conducted by AECOM in 2011 and 2012: vegetation mapping; jurisdictional wetlands delineation; oak woodland assessment; special-status plant surveys; and focused, protocol-level surveys for Quino checkerspot butterfly (Appendix 2.3-4).

All field surveys were completed according to County Requirements and included directed searches and habitat assessments for the County list of potential sensitive faunal and floral species. The entire project site (100%) was surveyed by personnel on the ground over multiple field days and all sensitive environmental resources were mapped and analyzed together with the project's engineering plans.

2.3.1.2 Regional Overview

The Proposed Project area is located in or near the Boulevard area of southeastern San Diego County, California. The Proposed Project area generally is within the Peninsular Range in a transitional area between the coast and the desert. The topography is characterized by gently sloping hills, valleys, and scattered rock outcrops. It is in a dry climate with average temperatures near the community of Campo ranging from approximately 34°F to 94°F. This community generally receives an average rainfall of less than 15 inches per year (Western Regional Climate Center 2012).

The Tierra del Sol site is located in the unincorporated community of Tierra del Sol adjacent to the U.S.–Mexico border. The elevation across the project site ranges from approximately 3,530 to 3,740 feet above mean sea level (amsl). The Rugged solar site is located in the unincorporated community of Boulevard in McCain Valley. Tule Creek bisects the Rugged site, flowing in a northwest to southeast orientation; elevation ranges from 3,500 to 3,670 feet amsl. The LanEast and LanWest sites are located in an unincorporated area just east of Boulevard at an elevation of approximately 3,300 feet amsl.

The Proposed Project area is located within the County's draft East County Multiple Species Conservation Program (ECMSCP) planning area; however, this plan has not yet been adopted. The executed Natural Community Conservation Plan (NCCP) Planning Agreement Section 6.6 (2008) requires interim review by the County, USFWS, and CDFW to ensure project proposals do not preclude successful completion and implementation of the plan, while facilitating compliance with applicable endangered species laws and ensuring project processing is not delayed.

Habitat Types/Vegetation Communities

Vegetation communities and land cover types within the Proposed Project area are described below. The acreages occurring on the Tierra del Sol, Rugged, LanEast, and LanWest sites of each vegetation community and land cover type are presented in Table 2.3-, and their spatial distributions are shown on Figures 2.3-1a-d, 2.3-2, 2.3-3, and 2.3-4.

Upland Scrub and Chaparral

Big Sagebrush Scrub (35210)

Big sagebrush scrub is characterized as being a moderately open shrubland consisting predominantly (greater than 50% absolute cover) of big sagebrush (*Artemisia tridentata* ssp. *tridentata*). It often occurs in or adjacent to the floodplain in the sandy transition to chaparral.

The *Artemisia tridentata* alliance has a rank of G5S5 in California Department of Fish and Wildlife (CDFW; formerly California Department of Fish and Game (CDFG)) (2010), meaning it is globally secure and secure in the state. Big sagebrush scrub is considered special-status based on mitigation recommendations of the County (2010).

Montane Buckwheat Scrub (37K00)

Montane buckwheat scrub is not described by Holland but is included in Oberbauer et al. (2008). Montane buckwheat scrub is characterized by a nearly monoculture community of flat-topped buckwheat found at higher elevations in San Diego County.

The *Eriogonum fasciculatum* alliance has a rank of G5S5 (CDFG 2010), meaning it is globally secure and secure in the state. Montane buckwheat scrub is not included in the Habitat Mitigation Ratios in the County Guidelines for Determining Significance (Table 5, County of San Diego 2010); however, it was originally classified together with flat-topped buckwheat scrub, which is considered special-status based on mitigation recommendations of the County (2010).

Montane Buckwheat Scrub/Red Shank Chaparral (37K00/37300)

Montane buckwheat scrub/red shank chaparral is not described by Holland (1986) or Oberbauer et al. (2008). This community is co-dominated by montane buckwheat scrub and red shank (*Adenostoma sparsifolium*).

The *Eriogonum fasiculatum/Adenostoma sparsifolium* association is not recognized by CDFG (2010). However, montane buckwheat scrub and red shank chaparral are considered special-status based on mitigation recommendations of the County (2010).

Granitic Chamise Chaparral (37210)

Granitic chamise chaparral contains shrubs, overwhelmingly dominated by chamise, from 3 to 10 feet tall with little cover provided by other species. Stump sprouting allows this vegetation to adapt to repeated fires. Chamise chaparral typically occurs on dry slopes and ridges (Holland 1986).

The *Adenostoma fasciculatum* alliance has a rank of G5S5 (CDFG 2010), meaning it is globally secure and secure in the state. Granitic chamise chaparral is considered special-status based on mitigation recommendations of the County (2010).

Granitic Chamise Chaparral/Montane Buckwheat Scrub (37210/37K00)

Granitic chamise chaparral/montane buckwheat scrub is not described by Holland (1986) or Oberbauer et al. (2008). This community is co-dominated by chamise and montane buckwheat scrub.

The *Adenostoma fasciculatum/Eriogonium fasiculatum* association is not ranked in CDFG (2010); however, is considered special-status based on mitigation recommendations of the County (2010).

Granitic Northern Mixed Chaparral (37131)

Granitic northern mixed chaparral consists of broad-leaved sclerophyll shrubs that range from 2 to 4 meters (7 to 13 feet) in height and that form dense stands dominated by Nuttall's scrub oak (*Quercus dumosa*), chamise, manzanita (*Arctostaphylos* spp.), and ceanothus (*Ceanothus* spp.). This community occurs inland of southern mixed chaparral in San Diego County and is indicated by desert ceanothus (*Ceanothus greggii*) and other codominants (chamise, scrub oak (*Quercus berberidifolia*), and other oak hybrids). Granitic northern mixed chaparral is underlain by granitic soils.

Granitic northern mixed chaparral has a rank of G4S4 (CDFG 2010), meaning it is considered apparently secure globally and in the state. Granitic northern mixed chaparral is not considered special-status by CDFW, but it is considered special-status based on mitigation recommendations of the County (2010).

Granitic Northern Mixed Chaparral/Montane Buckwheat Scrub (37K00/32800)

Granitic northern mixed chaparral/ montane buckwheat scrub is not described by Holland (1986) or Oberbauer et al. (2008). This community is co-dominated by broad-leaved sclerophyll shrubs such as Nuttall's scrub oak, chamise, manzanita, ceanothus, and montane buckwheat scrub.

This association is not recognized by CDFG (2010); however, granitic northern mixed chaparral/ montane buckwheat scrub are considered special-status based on mitigation recommendations of the County (2010).

Red Shank Chaparral (37300)

Red shank chaparral is composed of nearly pure stands of red shank (*Adenostoma sparsifolium*) (Holland 1986). It is similar to chamise chaparral but is typically taller and somewhat more open (Holland 1986).

The *Adenostoma sparsifolium* alliance has a rank of G4S4 (CDFG 2010), meaning it is considered apparently secure globally and in the state. Red shank chaparral is considered special-status based on mitigation recommendations of the County (2010).

Semi-desert Chaparral (37400)

According to Holland (1986), semi-desert chaparral is very similar to northern mixed chaparral (37110), but is more open and not quite as tall (1.5 to 3 meters (4.9 to 10 feet)). Dominant taxa include *Juniperus* sp., *Eriogonum* sp., and *Opuntia* sp. but characteristic species include chamise, manzanita, ceanothus, oak, and a variety of other shrubs and subshrubs. It is most common from 2,000 to 5,000 feet amsl and includes the Peninsular Ranges bordering the Colorado Desert, which are consistent with the elevation range and geographic location of the Proposed Project area.

Semi-desert chaparral has a rank of G3S3.2 (CDFG 2010), meaning it is considered vulnerable to extirpation or extinction globally and in the state. It is also considered special-status based on mitigation recommendations of the County (2010).

Scrub Oak Chaparral (37900)

Scrub oak chaparral is a dense, evergreen chaparral up to 20 feet tall (Holland 1986). Holland describes the community as dominated by scrub oak.

The *Quercus berberidifolia* alliance has a rank of G4S4 (CDFG 2010), meaning it is considered apparently secure globally and in the state. Scrub oak chaparral is considered special-status based on mitigation recommendations of the County (2010).

Upland Woodland and Savannah

Coast Live Oak Woodland (71161)

Coast live oak woodland is an evergreen woodland dominated by coast live oak (*Quercus agrifolia* var. *oxyadenia*). The understory is typically made up of grassland, scrub, or chaparral species, and the community often intergrades with coastal sage scrub or mixed chaparral (Holland 1986).

The *Quercus agrifolia* alliance has a rank of G5S4 (CDFG 2010), meaning it is globally secure and apparently secure in the state. Coast live oak woodland is considered special-status based on mitigation recommendations of the County (2010).

Engelmann Oak Woodland (71180)

Engelmann oak woodland is dominated by *Quercus engelmannii* with an understory of grassland species. It is typically associated with sage scrubs on dry and rocky sites, often occurring between grasslands and shrubland. The *Quercus engelmannii* alliance has a rank of G3S3, meaning it is considered vulnerable to extirpation or extinction globally and in the state. It is considered special-status based on mitigation recommendations of the County (2010).

Mixed Oak Woodland (77000)

Mixed oak woodland is not described by Holland (1986) but is listed by Oberbauer et al (2008). Mixed oak woodland does not fit into a specific alliance in CDFG (2010), but the oak species that comprise the mixed oak woodland (coast live oak, Palmer's oak (*Quercus palmeri*), Muller oak (*Quercus cornelius-mulleri*), and scrub oak (*Quercus berberidifolia)*) have alliances in CDFG. Palmer's oak alliance has a rank of G3S2, meaning it is considered globally vulnerable to extirpation or extinction and imperiled in the state. Coast live oak, Muller oak, and desert scrub oak are ranked G5S4 or G4S4, meaning that they are considered at least apparently secure globally and in the state. Mixed oak woodland is considered special-status based on mitigation recommendations of the County (2010).

Riparian Herb

Wet Montane Meadow (45110)

Wet montane meadow is dominated by dense growth of sedges and other perennial herbs, and is characterized by soils that are saturated throughout the year (Holland 1986). Vegetation generally is about 0.5–1 meters (approximately 1.5 to 3 feet) in height, although some herbs will reach 2 meters (6.5 feet) (Holland 1986). The herbaceous layer contains sedges (*Carex* sp.), juncus (*Juncus* sp.), scirpus (e.g., *Scirpus cringer*), and slender rush grass (*Muhlenbergia filiformis*).

Alkali Meadow (45300)

Alkali meadow is a low-growing, dense or open association of grasses, sedges, and rushes on moist, alkaline soils. This community may intergrade with marsh communities in wetter settings or Great Basin scrub or non-native grassland in drier settings.

Alkali meadow (including disturbed) includes areas mapped under the jurisdiction of U.S. Army Corps of Engineers (ACOE), the San Diego Regional Water Quality Control Board (RWQCB), CDFW, and the County; some disturbed alkali meadow polygons are mapped under the jurisdiction of CDFW and the County only. The *Juncus mexicanus* alliance has a rank of G5S4 (CDFG 2010), meaning it is considered globally secure and apparently secure within the state. Alkali meadow is considered special-status by the County based on its qualification as a Resource Protection Ordinance (RPO) wetland (County of San Diego 2007) and the County's recommended mitigation ratio for this vegetation community (County of San Diego 2010).

Alkali Seep (45320)

According to the modified Holland classification system (Oberbauer et al. 2008), alkali seeps consist of low-growing perennial herbs, usually forming relatively complete cover and growing throughout the year. This vegetation community typically supports relatively few species. Alkali seeps are found in scattered coastal and transmontane locations throughout San Diego County, usually small in extent and part of narrow drainages or springs.

Alkali seep has a rank of G3S2.1 (CDFG 2010), meaning it is considered vulnerable to extirpation or extinction globally and imperiled in the state. It is also considered special-status based on mitigation recommendations of the County (2010).

Freshwater Seep (45400)

According to the modified Holland classification system (Oberbauer et al. 2008), freshwater seep consists of mostly perennial herbs, especially sedges and grasses, usually forming complete cover, often low-growing but sometimes taller, growing throughout the year in areas with mild winters. This community occurs on permanently moist or wet soil around freshwater seeps, often associated with grasslands or meadows. Freshwater seep has a rank of G4S3.2 (CDFG 2010), meaning it is considered apparently secure globally and vulnerable to extirpation or extinction in the state. It is also considered special-status based on mitigation recommendations of the County (2010).

Wildflower Field (42300)

According to the modified Holland classification system (Oberbauer et al. 2008), wildflower field is an amorphous "grab bag" of mostly native, herb-dominated types noted for conspicuous annual

wildflower displays. Wildflower field is usually found on fairly poor, sandy sites (droughty, low in nutrients) and often associated with grasslands or oak woodlands on surrounding, more productive sites. In Southern California, this vegetation community is found below 5,000 feet.

Wildflower field has a rank of G2S2.2 (CDFG 2010), meaning it is considered vulnerable to extirpation or extinction globally and in the state. It is also considered special-status based on mitigation recommendations of the County (2010).

Riparian Scrub

Riparian Habitat (60000)

Willow species (*Salix* spp.) were observed in the area mapped as riparian habitat; however, due to the timing of the survey, willow species and tamarisk were not easily distinguishable, and the extent and characteristics of herbaceous vegetation is unknown. Riparian habitat is considered special-status based on mitigation recommendations of the County (2010).

Disturbed Mulefat Scrub (63310)

Mulefat scrub is an herbaceous riparian scrub dominated by mule fat (*Baccharis salicifolia*) that occurs along intermittent stream channels with generally coarse substrate and a moderate depth to the water table (Holland 1986). Frequent flooding and/or scouring apparently maintain this community in an early successional state.

Disturbed mulefat scrub is mapped on the Rugged solar farm site where other wetland communities occur (i.e., alkali meadow and tamarisk scrub); it is mapped under the jurisdiction of ACOE, RWQCB, CDFW, and the County, and some polygons that are mapped under the jurisdiction of CDFW and the County only. The *Baccharis salicifolia* alliance has a rank of G5S4 (CDFG 2010), meaning it is globally secure and apparently secure in the state. Disturbed mulefat scrub is considered special-status based on mitigation recommendations of the County (2010).

Southern Cottonwood-Willow Riparian Forest (61330)

According to the modified Holland classification system (Oberbauer et al. 2008), southern cottonwood-willow riparian forest is a tall, open, broadleaf winter deciduous riparian forest dominated by Fremont cottonwood (*Populus fremontii*) and willows (*Salix* sp.). This community occurs in sub-irrigated and frequently overflowed lands along rivers and streams. Dominant species require moist, bare mineral soil for germination and establishment.

Southern cottonwood-willow riparian forest has a rank of G3S3.2 (CDFG 2010), meaning it is apparently secure globally and in the state. Southern cottonwood-willow riparian forest is considered special-status based on mitigation recommendations of the County (2010).

Southern Willow Scrub (63320)

According to Holland (1986) and Oberbauer et al. (2008), southern willow scrub is a thick, broad-leafed, winter-deciduous riparian habitat dominated by willows. Understory development is inhibited by the thickness of these stands. Southern willow scrub occurs next to stream channels with sandy to fine gravelly deposits where repeated flooding occurs.

The *Salix lasiolepis* alliance has a rank of G4S4 (CDFG 2010), meaning it is apparently secure globally and in the state. Southern willow scrub is considered special-status based on mitigation recommendations of the County (2010).

Tamarisk Scrub (63810)

According to Holland (1986), tamarisk scrub is a weedy, monoculture of any of several *Tamarix* species, usually supplanting native vegetation following a disturbance. This habitat is usually found in sandy or gravelly braided washes or intermittent streams. Common species according to Holland (1986) include narrowleaf willow (*Salix exigua*), salt grass (*Distichlis spicata*), and tamarisk (*Tamarix* sp.). Tamarisk often occupies jurisdictional wetlands. On site, tamarisk scrub is heavily invaded by tumble or Jim Hill mustard (*Sisymbrium altissimum*). Tamarisk scrub includes areas mapped under the jurisdiction of CDFW only.

Based on the following information, it is proposed that tamarisk scrub should not be considered a wetland under the County jurisdiction. The RPO definition of a wetland is based on the presence of one of three criteria: a vegetation community where "at least periodically, the land supports a predominance of hydrophytes (plants whose habitat is water or very wet places)," the presence of "predominately undrained hydric soils," or the presence of a stream in non-soil conditions (e.g., rock) (County of San Diego 2007). Tamarisk species are considered phreatophytes, which have deep roots to reach the water table and depend on groundwater for their water supply (DiTomaso 1996), rather than hydrophytes, which are plants that grow only in water or very moist soils (Dictionary.com 2012). Because tamarisk species are also able to grow in conditions where no groundwater is accessible, it is classified as a facultative phreatophyte rather than an obligate phreatophyte (Kerpez and Smith 1987, cited in DiTomaso 1996). Tamarisk scrub occurs in areas that do exhibit hydric soil indicators, but these indicators are also present in non-native grasslands and are assumed to be a natural feature of the parent material and not an indicator of wetlands. Tamarisk scrub does not occur within non-soil streams. Tamarisk scrub, therefore, does not qualify as a County RPO wetland. Based on lack of hydrophytic vegetation and hydric soils, most of the tamarisk scrub on site is likely

to have established in areas that did not previously support wetlands, but rather likely would have supported non-native grassland. Tamarisk is known to outcompete other vegetation due to its extensive lateral root system that can draw down the water table, and the allelopathic effect of the salt crystals that the leaves secrete, which can prevent other plants from growing around them (DiTomaso 1996). If preserved and restored, it is uncertain whether these areas would function as wetlands. The species that could most likely be established would include native phreatophytes such as oak and cottonwood *(Populus* sp.), but may not include typical hydrophytes such as willow *(Salix* sp.), mule fat, and rush *(Juncus* sp.).

Tamarix spp. is considered a semi-natural stand in the *List of California Vegetation Alliances and Associations* (CDFG 2010) and is not ranked by NatureServe. However, it is considered special-status based on mitigation recommendations of the County (2010).

Unvegetated Waters

Open Water (64100)

Open water is not recognized by Holland (1986), but is described in Oberbauer et al. (2008). Open water consists of bodies of fresh water (extremely low salinity) in the form of lakes, streams, ponds, or rivers (Oberbauer et al. 2008). Open water areas are aquatic areas that generally lack emergent vegetation, but typically support hydrophytic vegetation around their margins (e.g., mulefat scrub, southern willow scrub, freshwater marsh, or herbaceous wetland).

Open water is not a vegetation community; therefore, it is not included in the *List of California Vegetation Alliances and Associations* (CDFG 2010). Although the County does recommend mitigation for impacts to open water, this land cover type is typically considered an RPO wetland and is considered jurisdictional waters (County of San Diego 2010). The open water mapped on the Tierra del Sol and Rugged sites are artificially fed and/or created from anthropogenic influences; therefore, the open water is considered non-jurisdictional and non-RPO and is not considered special-status.

Non-vegetated Channel (64200)

According to the modified Holland classification system (Oberbauer et al. 2008), non-vegetated channel consists of the sandy, gravelly, or rocky fringe of waterways or flood channels. The lack of vegetation may be due to the scouring effects of floods, or man-caused vegetation removal for flood control, access, sand mining, or other purposes. Vegetation cover is usually less than 10%.

Non-vegetated channel is not a vegetation community, and therefore, it is not included in the *List of California Vegetation Alliances and Associations* (CDFG 2010). However, it is considered special-status based on mitigation recommendations of the County (2010).

Non-native Communities and Land Covers

Disturbed Habitat (11300)

Disturbed habitat 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 habitat is not considered special-status by CDFW or the County (2010).

Non-native Grassland (42220)

According to Holland (1986), non-native grasslands include a dense to sparse cover of annual grasses that die during the summer months, persisting as seeds.

Non-native grassland has a rank of G4S4 (CDFG 2010), meaning it is apparently secure globally and in the state. Because non-native grassland can provide habitat for a variety of species, the County requires mitigation for impacts to it; therefore, it is considered special-status by the County (2010).

Urban/Developed (12000)

Urban/developed is not considered special-status by CDFW or the County (2010).

Special-Status Plant Species

Endangered, rare, or threatened plant species, as defined in CEQA Guidelines, Section 15380(b) (14 CCR 15000 et seq.), are referred to as "special-status plant species" in this EIR 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 (FESA), (2) plant species with a CRPR 1 through 4 (CDFW 2013; CNPS 2012), and (3) plant species considered "sensitive" by the County of San Diego (Table 2, County of San Diego 2010).

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).

Jacumba Milk-vetch

Jacumba milk-vetch (*Astragalus douglasii* var. *perstrictus*) is a CRPR 1B.2 (CNPS 2012) and County List A species (County of San Diego 2010). This perennial herb in the pea or bean family (*Fabaceae*) blooms from April through June. It occurs in chaparral, cismontane woodland, pinyon and juniper woodland, riparian scrub, valley and foothill grassland, and rocky communities at elevations of 2,953 to 4,495 feet (CNPS 2012). It has been recorded in San Diego County and Baja California, Mexico (CNPS 2012). The Jepson bioregional range for Jacumba milk-vetch is based on the elevation range restrictions, which shows its potential range along the foothills of the Peninsular Ranges, San Jacinto Mountain, and Santa Ana Mountain (Jepson Flora Project 2012b). Specimen records include Boulevard, Jacumba, La Posta, Tierra del Sol, Live Oak Springs, Kitchen Creek, and Julian (Jepson Flora Project 2012b). This species is relatively common in upland habitats and roadsides in this region based on the results of plant surveys in the area. As described in Section 1.4.5, Jacumba milk-vetch has been observed commonly during surveys throughout the Boulevard area.

Tecate Tarplant

Tecate tarplant (*Deinandra floribunda*) is a CRPR 1B.2 (CNPS 2012) and a County List A species (County of San Diego 2010). A member of the sunflower (*Asteraceae*) family, this species blooms from August through October in chaparral and coastal scrub habitats. Tecate tarplant is an annual herb that occurs at elevations of 230 to 4,003 feet (CNPS 2012). It has been recorded in San Diego County and Baja California, Mexico (CNPS 2012). The Jepson bioregional range for Tecate tarplant is based on the elevation range restrictions, which shows its potential range throughout inland San Diego County, a portion of southern Riverside County, and parts of Orange County (Jepson Flora Project 2012c). Specimen records are primarily from Jamul to the Boulevard area (Jepson Flora Project 2012c). This species is relatively common within dry, ephemeral drainages and washes in upland habitats in this region based on the results of plant surveys in the area.

Tecate Cypress

Tecate cypress (*Hesperocyparis forbesii*) is a CRPR 1B.1 (CNPS 2012) and a County List A species (County of San Diego 2010). A member of the cypress (*Cupressaceae*) family, this evergreen tree occurs in closed-cone conifer forests, chaparral, and riparian forest habitats, and it occurs at elevations between 836 feet and 4,921 feet (CNPS 2012).

Sticky Geraea

Sticky geraea (*Geraea viscida*) is a CRPR 2.3 (CNPS 2012) and a County List B species (County of San Diego 2010). A member of the sunflower (*Asteraceae*) family, this perennial

herb blooms from May through June in chaparral habitats and occurs at elevations between 1,476 and 5,557 feet (CNPS 2012). It has been recorded in San Diego County, Imperial County, and Baja California, Mexico (CNPS 2012). The Jepson bioregional range for sticky geraea is based on the elevation range restrictions, which shows its potential range throughout inland San Diego County, a portion of southern Riverside County, and parts of Orange County (Jepson Flora Project 2012d). Specimen records are primarily from Campo to the Ocotillo area (Jepson Flora Project 2012d). This species is relatively common within openings in upland habitats in this region based on the results of plant surveys in the area.

Desert Beauty

Desert beauty (*Linanthus bellus*) is a CRPR 2.3 (CNPS 2012) and a County List B species (County of San Diego 2010). A member of the phlox (*Polemoniaceae*) family, this annual herb blooms from April through May in chaparral habitats. This species typically occurs at elevations of 3,281 to 5,493 feet (CNPS 2012). It has been recorded in San Diego County and Baja California, Mexico (CNPS 2012). The Jepson bioregional range for desert beauty is based on the elevation range restrictions, which shows its potential range along the foothills of the Peninsular Ranges, San Jacinto Mountains, and Santa Ana Mountains (Jepson Flora Project 2012e). Specimen records are primarily from the Boulevard and McCain Valley areas, with a couple of records also north of Warner Springs, Tierra del Sol, and Jacumba (Jepson Flora Project 2012e). This species is relatively common within openings in upland habitats in this region based on the results of plant surveys in the area.

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).

Payson's Jewel Flower

Payson's jewel flower (*Caulanthus simulans*) is a CRPR 4.2 (CNPS 2012) and County List D species (County of San Diego 2010). A member of the mustard (*Brassicaceae*) family, this annual herb blooms from February through June and occurs in chaparral and coastal scrub on sandy and granitic substrates at elevations between 295 feet and 7,218 feet (CNPS 2012). It has been recorded in San Diego County and Riverside County (CNPS 2012). The Jepson bioregional range for Payson's jewel flower is based on the elevation range restrictions, which shows its potential range in the foothills and mountains of portions of San Diego, Riverside, Orange, Los Angeles, and Imperial Counties (Jepson Flora Project 2012f). Specimen records range from southeast San Diego County north to the San Jacinto Mountains, with some

scattered locations near Oceanside and Hemet, California (Jepson Flora Project 2012f). This species appears to be found in a variety of locations in San Diego and Riverside Counties.

Desert Larkspur

Desert larkspur (*Delphinium parishii* ssp. *subglobosum*) is a CRPR 4.3 (CNPS 2012) and a County List D species (County of San Diego 2010). A member of the buttercup family (*Ranunculaceae*), this perennial herb blooms from March through June in chaparral, cismontane woodland, pinyon and juniper woodland, and Sonoran desert scrub habitats. The species occurs at elevations between 1,969 feet and 5,906 feet (CNPS 2012). It has been recorded in San Diego, Imperial, and Riverside counties and Baja California, Mexico (CNPS 2012). The Jepson bioregional range for desert larkspur is based on the elevation range restrictions, which shows its potential range along the foothills of the eastern Peninsular Range in San Diego and Riverside counties and additional foothills in portions of Riverside and Imperial counties (Jepson Flora Project 2012g). Specimen records are concentrated from southeast San Diego County north to Warner Springs, with some scattered locations near Palm Springs and Beaumont, California (Jepson Flora Project 2012g). This species appears to be found in a variety of locations in San Diego and Riverside counties.

Pride-of-California

Pride-of-California (*Lathyrus splendens*) is a CRPR 4.3 (CNPS 2012) and a County List D species (County of San Diego 2010). A member of the *Fabaceae* family, this perennial herb blooms from March to June at elevations between 656 feet and 5,003 feet (CNPS 2012). It has been recorded in San Diego County and Baja California, Mexico (CNPS 2012). The Jepson bioregional range for pride-of-California is based on the elevation range restrictions, which shows its potential range in the coastal region and foothills of San Diego, Riverside, Orange, and Los Angeles counties (Jepson Flora Project 2012h). Specimen records are concentrated in the Boulevard region and In-Ko-Pah Mountains, with some scattered locations near Agua Caliente Springs (Jepson Flora Project 2012h). This species appears to be found in a variety of locations in San Diego and Riverside counties.

Desert (low bush) Monkeyflower

Desert (low bush) monkeyflower (*Mimulus aurantiacus* var. *aridus*) is a CRPR 4.3 (CNPS 2012) and a County List D species (County of San Diego 2010). Desert monkeyflower is a perennial evergreen shrub that blooms from April through July in rocky chaparral and Sonoran desert scrub at elevations of 2,461 to 3,937 feet (CNPS 2012). It has been recorded in San Diego and Imperial counties and Baja California, Mexico (CNPS 2012). The Jepson bioregional range for desert monkeyflower is based on the elevation range restrictions, which shows its potential range in the foothills of San Diego, Riverside, and Orange counties (Jepson

Flora Project 2012i). Specimen records are concentrated from southeast San Diego County north to Warner Springs, with some scattered locations near Palm Springs and Beaumont, California (Jepson Flora Project 2012i). This species appears to be found in a variety of locations in San Diego and Riverside counties.

Engelmann Oak

Engelmann oak (*Quercus engelmannii*) is a CRPR 4.2 (CNPS 2012) and a County List D species (County of San Diego 2010). A member of the oak (*Fagaceae*) family, this perennial deciduous tree flowers from March through June in chaparral, cismontane woodland, riparian woodland, valley grassland, and foothill grassland and occurs at elevations of 164 to 4,265 feet (CNPS 2012). It has been recorded in San Diego, Riverside, Los Angeles, Orange, and Imperial counties; Santa Catalina Island; and Baja California, Mexico (CNPS 2012). The Jepson bioregional range for Engelmann oak is based on the elevation range restrictions, which shows its potential range in the coastal region and foothills of San Diego, Riverside, Los Angeles, San Bernardino, and Orange counties (Jepson Flora Project 2012j). Specimen records are found through the coastal and interior regions of Southern California; there are a few records west of Palm Springs area, but they are not recorded in the low elevation deserts (Jepson Flora Project 2012j). This species is found in a variety of locations in Southern California.

Fremont barberry (*Berberis fremontii*)

Fremont barberry is a CRPR 3 (CNPS 2013) and is a County List C species (County of San Diego 2010). A member of the barberry (*Berberidaceae*) family, this perennial evergreen shrub blooms from April to June at elevations between 840 and 1,850 meters (2,756 and 6,070 feet) (CNPS 2013).

San Bernardino aster (*Symphyotrichum defoliatum*)

San Bernardino aster is a CRPR 1B.2 (CNPS 2013) and is not included on the *County of San Diego Sensitive Plant List* (County of San Diego 2010). A member of the *Asteraceae* family, this perennial rhizomatous herb blooms from July to November at elevations between 2 and 2,040 meters (7 and 6,693 feet) (CNPS 2013).

Special-Status Wildlife 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 EIR, 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 CDFG (2011); (3) mammals and birds that are fully

protected (FP) species, as described in 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 of San Diego (Table 3, County of San Diego 2010).

Special-status wildlife species that occur or have a moderate to high potential to occur within the Proposed Project site are described herein. A brief description of the life history, associated vegetation communities in the Proposed Project area, and occurrence or potential occurrence are included for each species. More detailed information for each species can be found in the Biological Resources Reports (BRR) prepared for each project (Appendices 2.3-1, 2.3.-2, 2.3-3, and 2.3-4).

County Group I Species

San Diego County has divided sensitive species into groups based on their rarity and known threats. Animals are divided into Groups I and II on the Sensitive Animal List in the County Guidelines for Determining Significance (Table 5, County of San Diego 2010). Group I Animals include those that have a very high level of sensitivity, either because they are listed as threatened or endangered or because they have very specific natural history requirements that must be met.

Reptiles

Two-striped Gartersnake

The two-striped gartersnake[1] (*Thamnophis hammondii*) is a CDFW SSC and County Group I species. It is found in coastal California in the vicinity of the southeast slope of the Diablo Range and the Salinas Valley, and south along the Coastal and Transverse Ranges to Rio Rosario in Baja California, Mexico (NatureServe 2012). Although the two-striped gartersnake was historically common throughout this range and is the most common gartersnake in the Southern California's cismontane region, it is now abundant only in eastern San Diego County (Jennings and Hayes 1994; Schwenkmeyer 2007).

Two-striped gartersnakes are found in a variety of perennial and intermittent freshwater streams within oak woodlands, shrublands, and sparse coniferous forests from sea level to 2,400 meters (7,874 feet) amsl (Stebbins 2003; Zeiner et al. 1988). The species tends to avoid open expanses because of increased risk of predation.

[1] The common name "gartersnake" follows Crother (2008) for this species account. The CDFG Special Animals List (2011) uses the common name "garter snake."

Birds

Cooper's Hawk

Cooper's hawk (*Accipiter cooperi*) is a CDFW WL and a County Group I 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).

Tricolored Blackbird

The tricolored blackbird (*Agelaius tricolor*) is a USFWS BCC, CDFW SSC, and County Group I species with regard to its nesting colony status. It is found throughout the Central Valley of California and the coastal areas from Sonoma County south to San Diego County (Zeiner et al. 1990a). Locally, it breeds in southern and western San Diego County.

The tricolored blackbird forages and roosts in large flocks and breeds in large colonies. These birds prefer to breed in freshwater marshes with dense growths of emergent vegetation dominated by cattails (*Typha* spp.) or bulrushes (*Schoenoplectus* spp.), but have also established colonies in willows (*Salix* spp.), blackberries (*Rubus* spp.), thistles (*Cirsium* and *Centaurea* spp.), and nettles (*Urtica* sp.). More recently, the breeding habitat has included diverse upland and agricultural areas.

Southern California Rufous-Crowned Sparrow

The Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*) is a CDFW WL and County Group I species. The rufous-crowned sparrow is a resident of the southwest region of the United States. The Southern California rufous-crowned sparrow is considered a resident throughout its range. The Southern California rufous-crowned sparrow occupies moderate to steep hillsides that are rocky, grassy, or covered by coastal sage scrub or chaparral. It is a secretive species, seeking cover in shrubs, rocks, grass, and forb patches. The species often occurs near the edges of denser scrub and chaparral associations, but usually does not occur within these associations.

Bell's Sage Sparrow

Bell's sage sparrow (*Amphispiza belli belli*) is a USFWS BCC, CDFW WL species, and County Group I 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 2008). The range of Bell's sage sparrow overlaps with that of at least one other subspecies of sage sparrow (County of Riverside 2008). Bell's sage 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.

Golden Eagle

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

Nest building can occur almost any time during the year, but breeding typically begins in January with nest building and egg laying occurring in February to March (Brown 1976; WRI 2011, 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 2011, 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 2011, 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 2011, as cited in CPUC and BLM 2011). As a correlate to the lower prey population size, Wildlife Research Institute (WRI) has confirmed unusually low reproductive levels of golden eagles in other regions of Southern California (WRI 2011, as cited in CPUC and BLM 2011).

WRI completed a golden eagle report specific to the Proposed Project (located in Appendices 2.3-3 and 2.3-4). WRI biologists confirmed recent golden eagle breeding activity in six golden eagle territories surrounding the Proposed Project site. Two active golden eagle territories ("Carrizo Gorge" and "Table Mountain") were found to overlap with the Proposed Project site and one extirpated golden eagle territory ("Boulevard") was found to be located within and around the Proposed Project site (Appendices 2.3-3 and 2.3-4). Additionally, the Proposed Project area is located in a potential golden eagle flyway zone, especially for golden eagles in territories established in nearby desert habitat. Results from satellite telemetry research documented 6 individual golden eagles flying near the Proposed Project area with estimated flight paths within the 4,000-foot buffer zone. Golden eagles equipped with telemetry are a small sample size of the local population; many other unmarked golden eagles could have traversed the area near or within Proposed Project area. However, there are no nests (active or otherwise) documented within 4,000 feet of the Proposed Project.

There are no CNDDB records of this species within the project area or surrounding quadrangles.

Red-Shouldered Hawk

The red-shouldered hawk (*Buteo lineatus*) is a County Group I species. In California, it is a yearlong resident along the coast, in the Central Valley woodlands west of the southern deserts, and occasionally in the western Sierra Nevada foothills. It nests in dense riparian areas below 5,000 feet elevation, and hunts in and along the edges of swamps, marshes, and wet meadows.

Swainson's Hawk

The Swainson's hawk (*Buteo swainsoni*) is state-listed as threatened and is a County Group I species. Swainson's hawk is a small hawk that is known to migrate seasonally over long distances. The annual round trip for this species, from South America (primarily Argentina) up to North America and back, covers up to 12,500 miles and passes through the Southern California and Baja region (England et al. 1997). The species breeds throughout much of the western United States and Canada, and in northern Mexico (Woodbridge 1998). In California, Swainson's hawks are locally common-to-rare breeders. Currently, approximately 94% of breeding pairs in California are found in the Central Valley between Modesto and Sacramento (Bloom 1980; CDFG 2007). According to Bloom (1980), Swainson's hawks historically nested throughout the California lowlands, including plains and coastal valleys, but they no longer occur today. There are some remnant (or recolonizing) populations in Southern California in the western Mojave Desert in the Antelope Valley and in the eastern Mojave Desert in the Mojave National Preserve. The hawk's breeding range is no longer considered to encompass San Diego County or Eastern Imperial County due to habitat loss and effects of pesticides in its South American range (Unitt 2004). Swainson's hawks inhabit primarily grassland habitats, but are also found in sparse shrubland and

small, open woodlands (Bechard et al. 2010). They nest within riparian forests near grassland or agricultural lands (such as fallow fields and alfalfa fields), narrow bands of trees, and isolated trees (Estep 1989; Babcock 1995). Swainson's hawks typically avoid mountainous terrain or steep canyons (Woodbridge 1998). They feed on a variety of mammalian, avian, and insect prey (Woodbridge 1998).

In the Anza-Borrego Desert State Park and Borrego Valley (located approximately 10 miles east of the project area in the desert region), detailed observation records of these birds have been collected during their peak migration months (February to April) (Hopkins 2013). Since 2004, during the month of March, observers have seen an average of 3,172 Swainson's hawks per year and an average of 4,489 Swainson's hawks per year between 2011 and 2013 (Hopkins 2013). The Borrego Valley is within a migration corridor for these species and is an important staging site in spring (Unitt 2004). While Swainson's hawks are more likely to migrate through the Borrego Valley than the project site, there is some potential for this species to forage over the project site based on their migration patterns, ranges, and records in San Diego (Unitt 2004; CDFG 2012). While no project-specific bird count studies were conducted for the Proposed Project, data was collected for two proposed project areas located in close proximity to the Proposed Project: Tule Wind project and a now defunct project in the McCain Valley.

Between October 2010 and May 2012, Dudek conducted weekly bird utilization counts at 10 different locations (with an additional location surveyed between July 2011 and May 2012) for the McCain Valley site, which was comprised of two disjunct project areas: the northern boundary was located within 0.5 mile of the Rugged boundary, and the second was located within 0.5 mile of the Tierra del Sol boundary. These surveys recorded all bird species observed, along with additional behaviors and data. No Swainson's hawks were observed during these surveys, even during their typical migration months (February to April) (Dudek, unpublished data). While these surveys were not conducted specifically for the Proposed Project, based on the proximity of the study areas to the Proposed Project, the recorded bird use would be similar to all or portions of the Proposed Project.

Between March 2005 and March 2006 and between September 2007 and September 2008, avian surveys were conducted every 2 weeks for the Tule Wind Project (located northeast of the Project area) using a fixed-point survey methodology and recording incidental observations of species (Tetra Tech EC 2008, 2009). No Swainson's hawks were recorded during either survey period. While these surveys were not conducted specifically for the Proposed Project, several of the fixed-point locations are within a couple of miles of the Rugged Solar project, and the recorded bird use would be similar to all or portions of the Proposed Project.

Turkey Vulture

Turkey vulture (*Cathartes aura*) is not considered special status by any state or federal agencies; however, it is considered a Group I species by the County (2010). In California, it is common during the breeding season and is a yearlong resident west of the Sierra Nevada Mountains, especially in coastal areas. Turkey vultures use a variety of habitats while foraging on both wild and domestic carrion. They prefer open stages of most habitats. Nest locations tend to be difficult to find and are usually located in a crevice among granite boulders (Unitt 2004).

Northern Harrier

The northern harrier (*Circus cyaneus*) is a CDFW SSC and County Group I species. Also known as the "marsh hawk" because of its affinity for marshes and open grassland and prairie, this species has a wide geographical range throughout much of North America. The northern harrier is common along the West Coast in mountain and desert regions.

The northern harrier is also a permanent resident in coastal areas, the northeastern plateau, the Central Valley, and the Sierra Nevada, where its elevational range as a breeder reaches 1,700 meters (5,700 feet) (Zeiner et al. 1990a). Most of the breeding population in California occurs in ungrazed parts of the state and in federal wildlife refuges (Zeiner et al. 1990a).

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

Prairie Falcon

Prairie falcon (*Falco mexicanus*) is a USFWS BCC, CDFW WL, and County Group I 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.

Loggerhead Shrike

Loggerhead shrike (*Lanius ludovicianus*) is a USFWS BCC, CDFW SSC, and County Group I 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; and 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.

Invertebrates

Quino Checkerspot Butterfly

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 less than 3,000 feet in elevation). 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).

County Group II Species

County Group II Animals include those species that are becoming less common, but are not yet so rare that extirpation or extinction is imminent without immediate action. These species tend to be prolific in their suitable habitat types (County of San Diego 2010).

Amphibians and Reptiles

Western Spadefoot Toad

The western spadefoot toad (*Spea hammondii*) is a CDFW SSC and County Group II species. It is endemic to California and northern Baja California, Mexico. The species ranges from the north end of California's Central Valley near Redding, south, west of the Sierras and the deserts, and into northwest Baja California, Mexico (Jennings and Hayes 1994; Stebbins 2003). Although the species primarily occurs in lowlands, it also occupies foothill and mountain habitats. Within its range, the western spadefoot toad occurs from sea level to 4,000 feet amsl, but mostly at elevations below 3,000 feet (Stebbins 2003).

The western spadefoot toad is almost completely terrestrial, entering water only to breed. The species aestivates in upland habitats near potential breeding sites in burrows approximately 1 meter (3 feet) in depth (Stebbins 1972). The species prefers open areas with sandy or gravelly

soils in a variety of habitats, including mixed woodlands, grasslands, coastal sage scrub, chaparral, sandy washes, river floodplains, alluvial fans, playas, and alkali flats (Stebbins 2003; Holland and Goodman 1998). However, the species is most common in grasslands with vernal pools or mixed grassland/coastal sage scrub areas (Holland and Goodman 1998).

Group II Orange-Throated Whiptail

Orange-throated whiptail (*Aspidoscelis hyperythra*) is a CDFW SSC and County Group II 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 (northeast of Aguanga, Riverside County) (Jennings and Hayes 1994). It commonly occurs in coastal sage scrub, chaparral, grassland, juniper, and oak woodland.

Coastal Western Whiptail

Coastal western whiptail (*Aspidoscelis tigris stejnegeri*) is not considered special status by any state or federal agencies; however, it is a County Group II 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).

The western whiptail (*A. tigris*) is found in a variety of habitats, primarily in areas where plants are sparse and there are open areas for running. According to Stebbins (2003), the species ranges from deserts to montane pine forests where it prefers warmer and drier areas. The species is also found in woodland and streamside growth, and it avoids dense grassland and thick shrub growth.

Rosy Boa

The rosy boa (*Charina trivirgata*) is a County Group II species. The rosy boa in California ranges from Los Angeles, eastern Kern, and southern Inyo counties, and south through San Bernardino, Riverside, Orange, and San Diego counties (Spiteri 1988; Stebbins 2003; Zeiner et al. 1988). It occurs at elevations from sea level to 5,000 feet in the Peninsular and Transverse mountain ranges.

The rosy boa inhabits rocky shrubland and desert habitats, and is attracted to oases and streams, but does not require permanent water (Stebbins 2003). In the desert it occurs on scrub flats with good cover (Zeiner et al. 1988). Holland and Goodman (1998) add that the species is known in a variety of desert and semi-desert habitats, that it may occur in oak woodlands intergrading with scrub or chaparral habitats, but is absent from grasslands.

Northern Red-Diamond Rattlesnake

The northern red-diamond rattlesnake (*Crotalus ruber*) is a CDFW SSC and County Group II 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 in elevation). 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).

San Diego Ringneck Snake

The San Diego ringneck snake (*Diadophis punctatus similis*) is a County Group II species. A fair amount of information is available for the full species ringneck snake (*D. punctatus*), while less information is available for the subspecies San Diego ringneck snake (*D. p. similis*) Therefore, the habitat associations known for the full species ringneck snake are applied to San Diego ringneck snake subspecies.

San Diego ringneck snake occurs along the Southern California coast from northern San Diego County, south to Baja California. Mexico (Stebbins 2003). The ringneck snake is found in moist habitats, including woodlands, hardwood and conifer forest, grassland, sage scrub, chaparral, croplands/hedgerows, and gardens (NatureServe 2012; Stebbins 2003). In arid regions, the ringneck snake occurs in forests, woodlands, sage scrub, chaparral, and riparian corridors (Stebbins 2003).

Coronado Skink

The Coronado skink (*Plestiodon skiltonianus interparietalis*) is a CDFW SSC and County Group II species. The range of the Coronado skink is from inland Southern California, south through the north Pacific coast region of northern Baja California, from sea level to approximately 8,300 feet amsl (Nafis 2012). This reptile typically prefers grassland, woodlands, pine forests, and chaparral, especially in open sunny areas near the edges of creeks, rivers, and clearings. It prefers rocky areas near streams with abundant vegetation, but it is also found in areas away from water (Nafis 2012).

Blainville's Horned Lizard

Blainville's horned lizard (*Phrynosoma blainvillii*) (previously coast horned lizard) is a CDFW SSC and a County Group II 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 feet and 7,030 feet amsl (Jennings and Hayes 1994). This reptile typically avoids

dense vegetation, preferring 20% to 40% bare ground in its habitat. Up to 90% of the diet of the Blainville's horned lizard consists of native harvester ants (*Pogonomyrmex* spp.).

Coast Patch-Nosed Snake

The coast patch-nosed snake (*Salvadora hexalepis virgultea*) is a CDFW SSC and County Group II species. The coast patch-nosed snake subspecies occurs along the foothills and mountains of Southern California from San Luis Obispo County to San Diego County, and south into northern Baja California. The coast patch-nosed snake is found at elevations from near sea level to approximately 6,988 feet amsl (Goldberg 1995).

The western patch-nosed snake is a broad generalist in its habitat requirements, and it seems to make use of whatever cover is available and thrives in most environments (Stebbins 1954). Bogert (1939) noted a predilection in the subspecies coast patch-nosed snake for brush or chaparral. Coast patch-nosed snakes seem to require at least a low shrub structure of minimum density because they are not found in habitats lacking this structural component. Coast patch-nosed snakes are presumed to take refuge and perhaps overwinter in burrows or woodrat nests, so the presence of one or more burrow- or refuge-creating mammals may be necessary for this snake to be present (Zeiner et al. 1988).

Birds

California Horned Lark

The California horned lark (*Eremophila alpestris actia*) is a CDFW WL and County Group II 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 occurs in grasslands along the coast and deserts near sea level to alpine dwarf-shrub habitat above the 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.

Yellow Warbler

Yellow warbler (*Setaphago petechia*) is widely distributed, with a breeding range from northern Alaska eastward to Newfoundland and southward to northern Baja California and Georgia. It breeds in riparian woodlands southward from the northern border of California, generally west of the Sierra Nevada to the coastal slopes of Southern California, and from coastal and desert lowlands up to 2,700 meters (8,860 feet) amsl in the Sierra Nevada and other montane chaparral and forest habitats (Lowther et al. 1999; Grinnell and Miller 1944).

The yellow warbler usually nests in wet, deciduous thickets, especially those dominated by willows (*Salix* spp.), and in disturbed and early successional habitats (Lowther et al. 1999). In Southern California, it nests in lowland and foothill riparian woodlands dominated by cottonwoods (*Populus* spp.), alders (*Alnus* spp.), or willows and other small trees and shrubs typical of low, open-canopy riparian woodland (Garrett and Dunn 1981).

Western Bluebird

Western bluebird (*Sialia mexicana*) is a County Group II 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 CNDDB.

Barn Owl

Barn owl (*Tyto alba*) is a County Group II species. It is a common resident in San Diego County, except in the eastern deserts where it is only found near developed or agricultural areas. It is widespread along the coastal region of San Diego County where it nests in riparian and oak woodland, palm trees, buildings, man-made structures, and nest boxes (Unitt 2004). Because this species is not considered special-status by state or federal agencies, this species is not tracked in CNDDB.

Mammals

Ringtail

The ringtail cat (*Bassariscus astutus*) (ringtail) is a state fully protected species and County Group II species. It occurs throughout the southwestern United States and south into Baja California and the provinces of Guerrero, Oaxaca, and Veracruz of mainland Mexico (Hall 1981). The ringtail occurs throughout much of California, absent only in the San Joaquin Valley and the extreme northwestern corner of the state (Hall 1981; Zeiner et al. 1990). There is relatively little information for the current status of the ringtail in California.

Ringtails typically occur at elevations ranging from sea level to 1,400 meters (4,590 feet) amsl, but may occur at elevations ranging from 2,000 to 2,900 meters (6,560 to 9,514 feet) amsl (Poglayen-Neuwall and Toweill 1988). Their primary habitat is oak, pinyon pine, and juniper woodlands, but they also occur in conifer forests, chaparral, desert, and dry tropical habitats as long as rocky outcroppings, canyons, boulder piles, or talus slopes are present (Poglayen-Neuwall and Toweill 1988). Ringtails are dependent on open water and usually do not occur more than 0.6 mile (one kilometer) from a permanent water source (Zeiner et al. 1990).

Dulzura Pocket Mouse

The Dulzura pocket mouse (*Chaetodipus californicus femoralis*) is a CDFW SSC and County Group II species. It is associated with open habitat in coastal sage scrub, chaparral, oak woodland, and mixed conifer habitats up to 3,000 feet amsl.

Northwestern and Pallid San Diego Pocket Mouse

The northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*) is a CDFW SSC and County Group II species. The northwestern San Diego pocket mouse occurs in southwestern California in San Diego County and portions of Riverside and San Bernardino counties. It has potential to occur in a variety of habitats in the project area, including coastal sagebrush scrub, chaparral, and non-native grassland where there are sandy soils (Zeiner et al. 1990b). The project area is also generally located in the boundary zone between the ranges of the northwestern San Diego pocket mouse and the subspecies *C. f. pallidus* (pallid San Diego pocket mouse), which is also a CDFW SSC and County Group II species. The pallid San Diego pocket mouse occurs on the eastern slopes of the Peninsular Range, so this subspecies may also occur in the general project vicinity.

San Diego Black-Tailed Jackrabbit

The San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) is a CDFW SSC and County Group II 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).

San Diego Desert Woodrat

San Diego desert woodrat (*Neotoma lepida intermedia*) is a CDFW SSC and County Group II 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.

Mule Deer

Mule deer (*Odocoileus hemionus*) is a County Group II 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. 1990b). 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).

Mountain Lion

The mountain lion (*Puma concolor*) is not considered special status by any state or federal agencies; however, it is a County Group II species 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 10,000 feet (3,050 meters), 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. 1990b). 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.

American Badger

The American badger (*Taxidea taxus*) is a CDFW SSC and County Group II species; it ranges throughout the western United States, north into the western provinces of Canada, and east to Ohio; Michigan; and Ontario, Canada (Long 1972). It occurs from below sea level in Death Valley to the Arctic–Alpine Life Zone at about 3,600 meters amsl (11,810 feet). Within California, the badger occurs throughout the state except for the extreme northwestern coastal area (Zeiner et al. 1990).

Badgers are generally associated with dry, open, treeless regions, prairies and grasslands, low intensity agriculture (e.g., pasture, dryland crops), drier open shrublands and forest, parklands, and cold desert areas (Long 1973; Zeiner et al. 1990).

Special-Status Bats

A variety of special-status bats have moderate or high potential to roost and/or forage over the project areas (Appendices 2.3-1, 2.3-2, 2.3-4). Species that have potential to forage in the project

areas, but are not likely to roost, include Mexican long-tongued bat (*Choeronycteris mexicana*), a CDFW SSC and County Group II species; Townsend's big-eared bat (*Corynorhinus townsendii*), a CDFW SSC and County Group II species; spotted bat (*Euderma maculatum*), a CDFW SSC and County Group II species; California leaf-nosed bat (*Macrotus californicus*), CDFW SSC and County Group II species; fringed myotis (*Myotis thysanodes*), a County Group II species; Yuma myotis (*Myotis yumanensis*), a County Group II species; and big free-tailed bat (*Nyctinomops macrotis*), a CDFW SSC and County Group II species. Five tree-roosting species may roost in the woodlands on site and forage in the project areas: Pallid bat (*Antrozous pallidus*), a CDFW SSC and County Group II species; greater western mastiff bat (*Eumops perotis californicus*), a CDFW SSC and County Group II species; western red bat (*Lasiurus blossevillii*), a County Group II species; small-footed myotis (*Myotis ciliolabrum*), a County Group II species; and long-eared myotis (*Myotis evotis*), a County Group II species.

Invertebrates

Monarch Butterfly

The monarch butterfly (*Danaus plexippus*) is a CDFW special animal (CDFG 2011) and a County Group II species. The monarch butterfly occurs throughout North and South America. The populations in North America are split into populations east of the Rocky Mountains and populations west of the Rocky Mountains (The Xerces Society 2012). The western population overwinters at more than 200 coastal sites along the California coast, from north of San Francisco south to the Mexican border (The Xerces Society 2012). Monarchs are found in a variety of habitats including conifer forests, grasslands, old fields, dune habitat, scrublands, chaparral, orchards, woodlands, and herbaceous and shrub wetlands.

Jurisdictional Wetlands/Waters

Wetlands, open water features, and drainages in general are considered special-status biological resources and may be under the jurisdiction of the ACOE as wetlands or waters of the United States; CDFW as riparian areas, lakes, or streambeds; the RWQCB as waters of the state; or the County of San Diego as a RPO wetland.

The County's RPO (County of San Diego 2007) identifies environmental resources, including wetlands, present within the County, and provides measures to preserve these resources. The RPO defines wetlands as lands that have one or more of the following attributes: 1) lands that periodically support a predominance of hydrophytes (plants whose habitat is water or very wet places); 2) lands in which the substratum is predominantly undrained hydric soil; or 3) lands where an ephemeral or perennial stream is present and whose substratum is predominately non-soil, and where such lands contribute substantially to the biological functions or values of wetlands in the drainage system. CDFW- and County-regulated wetlands were identified where a predominance of

hydrophytic vegetation was associated with a stream channel or where an area supported at least one of the three wetlands indicators (i.e., hydrology, hydric soils, or hydrophytic vegetation).

Jurisdictional wetlands delineations were conducted for the Tierra del Sol, Rugged, and LanWest solar farms; the results of the surveys are discussed in more detail below.

Hydrologic Context/Connectivity

The Rugged, LanWest, and LanEast solar farm sites are located within the approximately 653-square-mile Carrizo Creek Watershed (Hydrologic Unit Code [HUC]: 18100202). Partially contained within the Carrizo Creek Watershed is the 1,501-square-mile Anza Borrego Hydrologic Unit (HU: 722.00). Within the Anza Borrego Hydrologic Unit is the approximately 135-square-mile Jacumba Hydrologic Area (HA: 722.70); within the Jacumba Hydrologic Area is the approximately 110-square-mile McCain Hydrologic Subarea (HSA: 722.71). The watershed is located within the approximately 19,865-square-mile RWQCB Colorado River Region (RWQCB Region 7) (see Figure 2.3-5). The Tierra del Sol project site is located within the Hipass Hydrologic Subarea of the Tijuana Watershed (see Figure 2.3-5).

The McCain Hydrologic Subarea (watersheds) drains a relatively underdeveloped region. However, these watersheds are still experiencing significant land development. The degree of imperviousness within this watershed can be used to consider the condition and health of the aquatic resources within them, which are often used as a measure for determining the amount of stress a watershed is experiencing (Shilling et al. 2005). There are no water bodies occurring within the project area that are listed on the Clean Water Act (CWA) Section 303(d) List (impaired water bodies) (SWRCB 2006).

RPO Wetland Buffer

County Guidelines for Determining Significance (County of San Diego 2010) provide the following examples for the establishment of appropriate RPO wetland buffers, to be based on the best available science:

- 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%.
- 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 cannot be mitigated.

- 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.
- 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.

Habitat Connectivity and Wildlife Corridors

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

Habitat linkages are small patches that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation. Habitat linkages provide a potential route for gene flow and long-term dispersal of plants and animals and may also serve as primary habitat for smaller animals, such as reptiles and amphibians. Habitat linkages may be continuous habitat or discrete habitat islands that function as stepping stones for dispersal. To function effectively, a wildlife corridor must link two or more patches of habitat for which connectivity is desired, and it must be suitable for the focal target species to achieve the desired demographic and genetic exchange between populations.

In general, there is a mixture of urbanized development, relatively natural lands, and intact natural landscapes fringed with encroaching development. High-mobility (e.g., coyote and mule deer) and moderate-mobility (e.g., raccoon and striped skunk) ground-dwelling species are likely to access more urban, populated centers by traversing major roadways, drainage culverts, and streams/creeks. The County supports numerous large, contiguous undeveloped areas that connect natural areas in eastern San Diego County to the Pacific coast and provide movement areas for wildlife. The Laguna Mountains are west and north of the Proposed Project site, and to the east, the Anza-Borrego Desert and the eastern slope of the Peninsular Range.

The project area is bordered by transportation-oriented development, including I-8. Located north of the project areas is State Route (SR)-78; State Highway S-2 is located to the east; and SR-79 (Sunrise Highway) and Kitchen Creek Road are located to the west. The roads vary in the degree to which they are barriers to wildlife, from the busy four-lane highway of I-8 to rural roads with light vehicle traffic, such as on S-2 and Kitchen Creek Road. The amount of constraint varies with the size of the road (four-, two-, or single-lane), frequency of travel, and the number of available crossings in each portion of the road. The roads and highways within the project region often have bridges and culverts that provide passage for wildlife, although it is likely that substantial at-grade movement occurs on roads in the more remote areas with little traffic and during nighttime.

In addition to roads, the upper McCain Valley and surrounding mountains support other uses and physical structures that may affect wildlife movement patterns, including campgrounds, fencing, off-highway vehicle uses, grazing uses, other scattered rural residential uses, and the existing Kumeyaay wind farm on the Campo Indian Reservation. The Sunrise Powerlink traverses the project area. The Boulevard area south of I-8 to the Mexico border supports low-density rural development that may somewhat affect wildlife movement, but the density of development is low enough to not severely constrain movement. The Laguna Mountains west of the project area have existing camping areas and a segment of the Pacific Crest Trail, and also support small communities such as Pine Valley, Guatay, and Descanso that have pockets of higher residential densities. Otherwise, there is little development in the Laguna Mountains that could constrain regional wildlife movement.

Most of the terrestrial wildlife movement in the project region is likely to be local movement and regional dispersal rather than large-scale, long-distance migration. However, migration by Peninsular bighorn sheep (*Ovis canadensis nelsoni*) along the Peninsular Mountain Range and south in the mountain ranges of Baja California, Mexico is an important issue in the eastern portion of the County. Although I-8 is a constraint to north–south wildlife movement, Peninsular bighorn sheep occasionally migrate south and cross into Mexico to breed with other populations. Additionally, movement between the United States and Mexico can only occur where gaps in the border fence occur in areas of rugged terrain. The closest Peninsular bighorn sheep population to the project area is the Carrizo Canyon subpopulation (63 FR 13134–13150; USFWS 2000). Also, west of the In-Ko-Pah Gorge and I-8 there are “island” areas that receive transient bighorn sheep use. Other “islands” between the east- and west-bound I-8 lanes on the desert slope are known to be yearly lambing areas. The project area is located well west of these areas, so development in the project area would not affect bighorn sheep movement or lambing areas.

The Pacific Flyway

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 2010). 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 of the Rugged solar project, is an important stopover for many birds that travel along the inland Pacific Flyway migration route. 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). On the other hand, the project sites do not support any large bodies of water or wetlands that attract large migration stopovers or are attractants for avian and bat species. 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.

Although many species of migrants have been documented to migrate at high altitudes, from 500 to 2,000 feet (Williams 1950), most migrants flying over or near the ocean migrate at lower altitude, below 300 feet (Hüppop et al. 2006). Birds migrating over terrestrial locations appear to migrate at higher altitudes, but do not frequently exceed 1,500 feet (Cooper and Ritchie 1995). Larger birds, such as ducks and geese, are frequently observed up to 7,000 feet (FAA 2010). Night-migrating birds that may pass through the region migrate at heights of 600 to 2,400 feet, with the lower end of this range occurring when traveling over a ridgeline (Mabee et al. 2006).

Regional Planning Efforts

Other existing habitat management planning in the region is relevant to the analysis of regional wildlife corridors and habitat connectivity because these features cross broad areas of the landscape, and typically extend beyond the boundaries of a particular project. Habitat management programs in east San Diego County physically relevant to the project area include the MSCP, San Diego County Management Framework Plan (MFP), the 1978 and 1984 McCain Valley Wildlife Habitat Management Plans (WHMPs), and the Eastern San Diego County Resource Management Plan (RMP). The project area also is located within the study areas for larger scale conservation initiatives, including the Las Californias Binational Conservation Initiative (CBI 2004) and the Parque to Park Binational Corridor.

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 jurisdiction and agencies to ensure conservation goals and policies are implemented and successful. Three MSCP planning areas occur in the County. The three areas are North County, South County, and East County. Only the South County MSCP Plan is approved. The projects are located within the boundary of the proposed ECMSCP Plan (Figure 2.3-6). The ECMSCP Plan is currently in preparation (a Preliminary Draft Map has been completed). The overall intent of the ECMSCP Plan is to create a large, connected preserve that addresses the regional habitat needs for multiple species. It is unknown at this time when the ECMSCP Plan will be approved.

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, and those projects that achieve conservation requirements when that review is completed are deemed consistent with the draft MSCP East Plan's Preliminary Conservation Objectives. At that time, per the MSCP Framework Plan EIR/EIS, the projects will have the benefits of having cumulative impacts under CEQA addressed to proposed covered species such as raptors, including the golden eagle.

The 1978 McCain Valley WHMP contains specific management objectives for three groups of priority species including (1) Peninsular bighorn sheep, (2) small game species, and (3) small mammals and reptiles of high scientific interest (BLM 1978). Second priority species (small game species) of interest in the McCain Valley identified in the WHMP included Gambel's quail (*Callipepla gambelii*), California quail (*Callipepla californicus*), mountain quail (*Oreortyx pictus*), Audubon cottontail (*Sylvilagus audubonii*), mourning dove (*Zenaida macroura*), and brush rabbit (*Sylvilagus bachmani*). Third priority species of interest in the McCain Valley WHMP included the desert horned lizard (*Phrynosoma platyrhinos*), Blainville's horned lizard (*Phrynosoma blainvillii*), deer mouse (*Peromyscus maniculatus*), banded rock lizard (*Petrosaurus mearnsi*), and the Baja California brush lizard (*Urosaurus nigricaudus*). The

management objectives of the 1978 WHMP primarily focus on the protection and rehabilitation of priority species habitat within the McCain Valley area (the protection and rehabilitation of Peninsular bighorn sheep habitat is the top priority of the Plan) through deployment of specific actions, including the provision of free water; construction of road barriers on access routes into the bighorn sheep range; signing and posting (and patrol) of closed roads and trails; and restoration of closed roads, barrier sites, ditches, roads put to bed, and roads water-barred to minimize erosion (BLM 1978). In describing the location of priority species, the plan notes that "most of the unique sensitive species in the McCain subunit are found on the desert slopes area that may eventually be designated as an ACEC"—this area, the In-Ko-Pah area of critical environmental concern (ACEC), is located northeast of the project area (Figure 2.3-6).

The 1984 WHMP updated the 1978 WHMP and was determined to be necessary to address more current (to 1984) resource management problems. Similar to the 1978 WHMP, the management objectives of the 1984 WHMP focus on the management and protection of Peninsular bighorn sheep herds and habitat identified within plan boundaries and the improvement of habitat for native game and non-game species through the McCain Valley area. The protection of mule deer was an area of focus of the 1984 WHMP not established in the 1978 WHMP. Planned actions to achieve the management objectives of the Plan include (similar to the 1978 WHMP) water source development, habitat protection and rehabilitation (through continuance or expansion of existing programs and restrictions on burning and informal target shooting within the area), and ACEC designation (the area identified for designation has since been designated as the In-Ko-Pah ACEC). Unique to the 1984 WHMP, a land acquisition program was identified and implemented for the acquisition of lands for wildlife habitat (the plan itself merely identifies lands desired for acquisition and does not establish funds for acquisition). Similar to the 1978 WHMP, provisions for review and modification of the 1984 WHMP are included.

In 2008, BLM established the Eastern San Diego County RMP. The intent of the Eastern San Diego County RMP and Final EIS is to update the 1981 Eastern San Diego County MFP and direct future land uses and land management within the Eastern San Diego Planning Area. The RMP addresses conflicts among various recreational users accessing BLM lands, provides direction for future site-specific development including renewable energy projects, and provides for monitoring to determine the effectiveness of BLM land management strategies. The RMP stresses that future policy decisions and land management strategies shall be compatible with the multiple use mission of the BLM. The multiple use mission promotes recreational use and responsible development within BLM-managed lands while maintaining environmental quality of the land.

The Nature Conservancy's cross-border project, the Las Californias Binational Conservation Initiative (CBI 2004), functions as a binational partnership between the Nature Conservancy and Mexico's Pronatura and is intended to establish an interconnected conservation network and sustaining ecosystem process along the U.S.–Mexico border region. The proposed binational

conservation network, which includes lands from downtown San Diego, east to the Laguna Mountains, south to the southern extent of the Sierra Juarez mountain range, and west to Salsipuedes, consists of a vision report containing general objectives and land designations that coincide with one of four specific conservation objectives and functions.

2.3.1.3 Tierra del Sol

The Tierra del Sol solar farm incorporates two components/sites: 1) the solar farm site, and 2) the gen-tie alignment site. The Tierra del Sol solar farm site is situated south of Tierra del Sol Road and immediately north of the U.S.–Mexico border and is traversed by the 500-kilovolt (kV) Southwest Powerlink, which consists of steel lattice towers. The solar farm site is undeveloped, but has remnants of some small buildings near the western portion and middle of the site. The gen-tie alignment site includes areas of undeveloped land as well as rural residential properties.

Habitat Types/Vegetation Communities

As shown on Figures 2.3-1a-d and in Table 2.3-1, 14 vegetation communities and four non-native communities or land cover types were mapped within the Tierra del Sol project area. Native vegetation communities within the project area include big sagebrush scrub, montane buckwheat scrub (including disturbed), montane buckwheat scrub/red shank chaparral, granitic chamise chaparral, granitic chamise chaparral/montane buckwheat scrub, granitic northern mixed chaparral, granitic northern mixed chaparral/ montane buckwheat scrub, red shank chaparral, scrub oak chaparral, southern willow scrub, wet montane meadow, and coast live oak woodland (including disturbed forms). One non-native vegetation community, non-native grassland, occurs within the Tierra del Sol project area. Three land cover types (non-vegetated area) occur within the Tierra del Sol project area: open water, disturbed habitat, and urban/developed.

Flora

A total of 150 vascular plant species, consisting of 129 native species (86%), and 21 non-native species (14%), were recorded on the solar farm and gen-tie alignment sites during special-status plant surveys. A cumulative list of plant species observed on site is presented as Appendix A of the BRR for the Tierra del Sol solar farm (Appendix 2.3-1).

Fauna

The project area supports habitat for common upland and riparian 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 within the project area provide cover and foraging opportunities for wildlife species, including reptiles and mammals.

A list of the wildlife species observed within and adjacent to the project area during focused Quino checkerspot butterfly surveys, vegetation mapping, and rare plant surveys is provided in Appendix B of the BRR for the Tierra del Sol solar farm (Appendix 2.3-1). There were 81 species observed on the solar farm 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 and wetland habitat types.

Special-Status Plant Species

Special-status plant surveys were conducted to determine the presence or absence of plant species that are considered endangered, rare, or threatened under CEQA Guidelines, Section 15380 (14 CCR 15000 et seq.). Six special-status plant species were detected within the solar farm site during the course of the fall 2011 and spring/summer 2012 surveys (Appendix 2.3-1). Four special-status plant species were detected within the gen-tie alignment site during April and June 2013 surveys (Appendix 2.3-1). Each of these special-status species are described in more detail in Section 2.3.1.2, Regional Overview. Special-status plant surveys within the gen-tie alignment site were conducted in March and June 2013; additional surveys will be conducted in October 2013.

Special-status plant species known to occur in the surrounding region and their potential to occur on both the Tierra del Sol solar farm and gen-tie alignment sites are presented in Appendices C and D of the BRR for the Tierra del Sol solar farm (Appendix 2.3-1).

Critical Habitat

There is no USFWS-designated critical habitat for plant species within 5 miles of the Tierra del Sol project site (USFWS 2012, 2013).

County List A and B Species

County List A and B species that have been observed on the Tierra del Sol solar farm and gen-tie alignment sites are described as follows.

Jacumba Milk-vetch

On the solar farm site there are approximately 315 occurrences of Jacumba milk-vetch (Figure 2.3-7). Most occurrences were documented in the northeastern and southeastern portions of the project area within open areas of big sagebrush scrub and red shank chaparral

(Appendix 2.3-1). Between 250–1,520 individuals of Jacumba milk-vetch were mapped along the gen-tie alignment in 2013. Most occurrences were in the northeastern and southwestern region of the alignment in granitic northern mixed chaparral, red shank chaparral, scrub oak chaparral, and coast live oak woodland.

Tecate Tarplant

On site there are approximately 3,103 individuals of Tecate tarplant, associated with drainages in the southeastern portion of the solar farm site (Figure 2.3-7) (Appendix 2.3-1). Tecate tarplant within the solar farm site is located within three drainages associated riparian habitat. Within the gen-tie alignment there are 637–1,775 individuals of this species.

Tecate Cypress

There are 4 individuals of Tecate cypress in the western portion of the site and 15 individuals along the southern boundary (Figure 2.3-7) (Appendix 2.3-1). The Tecate cypress on site are of a single age class, appear to have been planted, and do not appear to naturally occur in the area. The nearest CNDDB location, recorded in 1981, is approximately 8.5 miles west of the Tierra del Sol solar farm area. This species was not observed within the gen-tie alignment site. The species is not known to naturally occur in the area.

Sticky Geraea

On site there are approximately 274 occurrences of sticky geraea within the project area (Figure 2.3-7). Most occurrences were documented in the northeastern and southeastern portion of the project area within areas of chamise chaparral and red shank chaparral (Appendix 2.3-1). Approximately 50–240 occurrences of sticky geraea were documented on the gen-tie alignment. Populations of sticky geraea were mapped in the northeastern section of the alignment

Desert Beauty

On site there are approximately 727 occurrences of desert beauty (Figure 2.3-7). Most occurrences were documented in the southeastern portion of the project area within open areas of bare rock within red shank chaparral (Appendix 2.3-1). Few occurrences were documented within granitic chamise chaparral and granitic northern mixed chaparral. On the gen-tie alignment site, approximately 660–3,210 individuals of desert beauty were mapped within red shank chaparral and granitic northern mixed chaparral primarily within the northeastern region of the site.

County List C and D Species; Other

County List C and D species that have been observed on the solar farm site, or have a high potential to occur on the gen-tie alignment site, are described as follows.

Pride-of-California

During the spring 2012 surveys, one occurrence of pride-of-California with approximately four individuals was documented within the central portion of the solar farm site within granitic chamise chaparral (Figure 2.3-7) (Appendix 2.3-1). This species was not observed within the gen-tie alignment site. Although there is suitable habitat present, focused surveys for this species were negative within the gen-tie alignment.

San Bernardino Aster

This species is absent from both the solar farm site and the gen-tie alignment. Although there is suitable habitat present, focused surveys for this species were negative.

Special-Status Wildlife Species

Seven special-status wildlife species were detected within the project area during surveys for the project site. Special-status wildlife species known to occur in the surrounding region and their potential to occur on site are presented in Appendix E of the BRR for the Tierra del Sol solar project (Appendix 2.3-1).

Critical Habitat

There is no USFWS-designated critical habitat within the project area, but there is critical habitat for two special-status wildlife species within 5 miles of the project area: Peninsular bighorn sheep and Quino checkerspot butterfly (Figure 2.3-8).

County Group I Species

Birds

Cooper's Hawk

There are CNDDB records for this species within the Tierra del Sol solar farm study area and this species was observed within the solar farm site within chaparral habitat (Appendix 2.3-1). Within the solar farm site, there are no permanent water sources. However, the solar farm site may support limited nesting opportunities within disturbed habitat, red shank chaparral, and coast live oak woodland. Suitable foraging habitat includes granitic chamise chaparral, granitic chamise chaparral/montane buckwheat scrub, granitic northern mixed chaparral, granitic northern mixed chaparral/montane buckwheat scrub, scrub oak chaparral, coast live oak woodland, and red shank chaparral.

Bell's Sage Sparrow

The Bell's sage sparrow was observed on multiple occasions throughout the project site (Figure 2.3-9) (Appendix 2.3-1). There are no CNDDB records within the 86-quad quadrangle search; however, there are confirmed breeding locations within the vicinity (Unitt 2004). Within the project site, suitable habitat includes big sagebrush scrub, montane buckwheat scrub, disturbed montane buckwheat scrub, montane buckwheat scrub/red shank chaparral, granitic chamise chaparral, granitic chamise chaparral/montane buckwheat scrub, granitic northern mixed chaparral, granitic northern mixed chaparral/montane buckwheat scrub, and disturbed habitat.

Golden Eagle

As described above, there are no known nesting locations within 4,000 feet of the site. Within the site, suitable foraging habitat includes big sagebrush scrub, montane buckwheat scrub, disturbed montane buckwheat scrub, montane buckwheat scrub/red shank chaparral, non-native grassland, and disturbed habitat. These habitat types make up approximately 121.9% of the total acreage on site. Typically, the denser forms of chaparral habitat are not suitable for foraging of golden eagle.

Two golden eagle territories are located within the vicinity of Tierra del Sol. One, an extirpated golden eagle territory is referred to as "Boulevard" and is located within and around the Tierra del Sol solar farm site. A second core nesting area, known as "Tecate East" contains an active breeding pair of golden eagles who have successful produced young each year since discovered by WRI in 2009. The core nesting area is located less than a half mile south of the U.S.–Mexico border in Baja California, Mexico, but these golden eagles have been seen foraging in the United States. Based on the presence of urban development to the west of the core nesting area and additional golden eagle territories documented to the north and more likely to the south, it is believed that the primary hunting territory of these golden eagles is to the east. Although the hunting area has not been defined, the core nest area is within 8 nautical miles west of the Tierra del Sol solar farm and may extend near the site.

Six golden eagles from territories within San Diego County have transmitted Global Positioning System (GPS) points near the Tierra del Sol solar farm as documented via WRI satellite telemetry. The exact flight paths between each bird's GPS locations are unknown; however, the short time duration between points and the altitude readings (averaging 1,000 meters above ground level) suggest trajectories over the Tierra del Sol site. Three individual golden eagles were estimated to have flown over the Tierra del Sol solar farm site between 2011 and 2012, one of which documented a GPS point 0.21 nautical mile to the north of the Tierra del Sol solar farm site.

There are no CNDDB records of this species within the Tierra del Sol solar farm site or surrounding quadrangles.

Turkey Vulture

Turkey vulture was observed throughout the project site, but the observations were not mapped (Appendix 2.3-1). The project site does not support suitable cliffs and large trees for nesting, but there is suitable foraging habitat within the project site. Suitable foraging habitat includes most vegetation communities and undeveloped land cover on site (i.e., montane buckwheat scrub, big sagebrush scrub, granitic chamise chaparral, granitic northern mixed chaparral, red shank chaparral, disturbed habitat). There are no CNDDB records of this species within the 8-quad quadrangle search; however, turkey vulture breeding surrounding the project site is poorly documented, and no nests have been recorded within the site (Unitt 2004).

Prairie Falcon

Prairie falcon was not detected during surveys; however, there is suitable foraging habitat in the solar farm site and it has moderate potential to forage in the area. Within the solar farm site, suitable foraging habitat includes all vegetation communities and undeveloped land cover on site (i.e., coast live oak woodland, big sagebrush scrub, montane buckwheat scrub, chamise chaparral, granitic northern mixed chaparral, red shank chaparral, and disturbed habitat). This species is not expected to nest within the solar farm site. There are CNDDB records within the 8-quad quadrangle search; however, there are no recorded observations within the Tierra del Sol or Live Oak Springs quadrangles.

Loggerhead Shrike

There are no CNDDB records for this species within the Tierra del Sol solar farm area or surrounding 6-quad quadrangle search; however, one loggerhead shrike was documented within the northeastern portion of the solar farm site (Figure 2.3-9) (Appendix 2.3-1). Within the project site, suitable habitat includes coast live oak woodland, big sagebrush scrub, montane buckwheat scrub (including disturbed), granitic chamise chaparral, granitic chamise chaparral/montane buckwheat scrub, granitic northern mixed chaparral, granitic northern mixed chaparral/montane buckwheat scrub, red shank chaparral, scrub oak chaparral, and disturbed habitat.

Invertebrates

Quino Checkerspot Butterfly

Potential habitat (i.e., all areas that are not excluded per the survey protocol, generally including sage scrub, open chaparral, grasslands, open or sparsely vegetated areas, rocky outcrops, trails and dirt roads) was surveyed on the project site. All of the areas surveyed within the project site contained a variety of potential Quino checkerspot butterfly adult nectar plants. However, protocol surveys were conducted in 2012 and 2013 for both the solar farm and gen-tie alignment sites (Appendix 2.3-1) and were negative. There are no CNDDB

records for this species within the solar farm area or surrounding 6-quad quadrangle search. Based on the lack of records in the project site and the negative survey results, Quino checkerspot butterfly is not expected to occur in the solar farm site.

County Group II Species

County Group II species that have been observed in the project site, or have high potential to occur, are described below.

Reptiles

Orange-Throated Whiptail

Although this species was recorded in the 6-quad quadrangle search, there are no CNDDB records for this species within the project area, and Orange-throated whiptail was not detected during surveys. However, there is suitable habitat on the solar farm site, and this species has high potential to occur. Within the solar farm area, suitable habitat includes coast live oak woodland, big sagebrush scrub, montane buckwheat scrub, disturbed montane buckwheat scrub, granitic chamise chaparral, granitic chamise chaparral/montane buckwheat scrub, granitic northern mixed chaparral, granitic northern mixed chaparral/montane buckwheat scrub, red shank chaparral, scrub oak chaparral, and disturbed habitat.

Coastal Western Whiptail

Coastal western whiptail was not detected during surveys; however, there is suitable habitat in the project site, and it has high potential to occur. This species is recorded in CNDDB within the Live Oak Springs quadrangle. Within the project site, suitable habitat includes coast live oak woodland, big sagebrush scrub, montane buckwheat scrub, disturbed montane buckwheat scrub, granitic chamise chaparral, granitic chamise chaparral/montane buckwheat scrub, granitic northern mixed chaparral, granitic northern mixed chaparral/montane buckwheat scrub, red shank chaparral, scrub oak chaparral, and disturbed habitat.

Rosy Boa

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 site. This species is recorded in CNDDB within the Live Oak Springs quadrangle. Suitable habitat in the project area includes granitic chamise chaparral, granitic chamise chaparral/montane buckwheat scrub, redshank chaparral, granitic northern mixed chaparral, and granitic northern mixed chaparral/montane buckwheat scrub.

Northern Red-Diamond Rattlesnake

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 site. This species is recorded in CNDDB within the project area and surrounding 6-quad quadrangle search. Within the project area suitable habitat includes coast live oak woodland, big sagebrush scrub, montane buckwheat scrub, disturbed montane buckwheat scrub, granitic chamise chaparral, granitic chamise chaparral/montane buckwheat, granitic northern mixed chaparral, granitic northern mixed chaparral/montane buckwheat scrub, red shank chaparral, scrub oak chaparral, and disturbed habitat.

Blainville's Horned Lizard

This species is recorded in the CNDDB 6-quad search and one Blainville's horned lizard observation was made within the project site (Figure 2.3-9) (Appendix 2.3-1). Suitable habitat includes sandy soils within coast live oak woodland, big sagebrush scrub, montane buckwheat scrub, disturbed montane buckwheat scrub, granitic chamise chaparral, granitic chamise chaparral/montane buckwheat, granitic northern mixed chaparral, granitic northern mixed chaparral/montane buckwheat scrub, red shank chaparral, scrub oak chaparral, and disturbed habitat.

Birds

Western Bluebird

Western bluebirds were observed during surveys in the central portion of the project site within granitic chamise chaparral (Figure 2.3-9) (Appendix 2.3-1).

Mammals

San Diego Black-Tailed Jackrabbit

This species is recorded by CNDDB in the project area and numerous observations of this species were recorded on the solar farm site, primarily within scrub and chaparral habitats (Figure 2.3-9) (Appendix 2.3-1). It can occur within a variety of shrub and woodland habitats within the project site, including coast live oak woodland, big sagebrush scrub, montane buckwheat scrub, disturbed montane buckwheat scrub, granitic chamise chaparral, granitic chamise chaparral/montane buckwheat, granitic northern mixed chaparral, granitic northern mixed chaparral/montane buckwheat, red shank chaparral, scrub oak chaparral, and disturbed habitat.

San Diego Desert Woodrat

This species is recorded by CNDDB in the project area and the presence of San Diego desert woodrat was observed within the solar farm site in the form of woodrat middens (Figure 2.3-9) (Appendix 2.3-1). Suitable habitat within the project site includes coast live oak woodland, big sagebrush scrub, montane buckwheat scrub, disturbed montane buckwheat, granitic chamise chaparral, granitic chamise chaparral/montane buckwheat scrub, granitic northern mixed chaparral, granitic northern mixed chaparral/montane buckwheat scrub, red shank chaparral, scrub oak chaparral, and disturbed habitat.

Mule Deer

Multiple observations of mule deer were recorded within the project site but were not mapped (Appendix 2.3-1). Because this species is not considered special-status by state or federal agencies, it is not tracked in CNDDB. Suitable habitat in the project site includes coast live oak woodland, big sagebrush scrub, montane buckwheat scrub, disturbed montane buckwheat scrub, granitic chamise chaparral, granitic chamise chaparral/montane buckwheat scrub, granitic northern mixed chaparral, granitic northern mixed chaparral/montane buckwheat scrub, red shank chaparral, scrub oak chaparral, and disturbed habitat.

Jurisdictional Wetlands/Waters

The results of the jurisdictional delineation, performed by Dudek, concluded there are jurisdictional waters and potentially jurisdictional wetland areas within the Tierra del Sol solar farm area. Jurisdictional waters, including wetlands, were not detected within the solar farm site in 2012. Jurisdictional waters and potentially jurisdictional wetlands were detected in 2013 within the gen-tie alignment site. Details regarding the findings from the formal jurisdictional delineations in 2012 and 2013 are discussed according to each project component (i.e., solar farm site and gen-tie alignment site) below.

Solar Farm Site

Potential Wetlands

Within the solar farm site there is an area mapped as open water (Appendix 2.3-1). This 0.10-acre area of open water was not inundated or saturated during the field investigation, but did show signs of ponding (i.e., cracked soils) and supported some hydrophytic vegetation. The area supports some wetland indicators; however, this area is not considered jurisdictional because of its isolated and artificial nature and because it is small and of limited function and value.

Results of the three data sampling stations (Table 2.3-2) document that this open water area is characterized by a variety of soil textures (i.e., silty clay loam, sandy clay loam, loamy sand, and sand) and hydric soil characteristics (i.e., redox depressions and depleted matrix). Wetland hydrology indicators present include oxidized rhizospheres along living roots and surface soil cracks.

RPO Wetland Determination

Although the open water does meet standard RPO wetland criteria, the RPO provides an exemption for areas which meet the following criteria: (i) having negligible biological function or value as wetlands; (ii) being small and geographically isolated from other wetland systems; (iii) not being a vernal pool; and, (iv) not having substantial or locally important populations of wetland-dependent sensitive species (County of San Diego 2007).This open water area was likely established because of a man-made berm placed at the downstream, eastern end of the open water area. The approximately 5-foot tall berm likely interrupts surface water flows causing an impoundment of water within the open water area. Thus, the wetland attributes present in the area are artificial in nature and not a natural occurrence. The open water area has limited potential function as a wetland based primarily on its small size (0.10 acre), location in the upper portion of the watershed and lack of connectivity with lower potions of the watershed, and limited vegetation. Based on these factors, the area likely has:

- low function for nutrient retention and transformation (due to limited vegetated area and lack of connectivity within the watershed)
- low function for toxicant trapping (due to limited vegetation and lack of toxicant source in watershed)
- low to moderate potential for groundwater recharge (due to limited area of inundation)
- low to moderate potential for flood flow medication and flood storage (due to limited area to inundation)
- low potential for sediment trapping (due to small watershed, limited vegetation)
- low potential for wildlife habitat (due to limited vegetated area)
- low potential for aquatic habitat (due to limited ponding duration, small size of wetland)
- no potential for public use (due to location on private property).

It is important to note that the areas of greatest function, groundwater recharge, flood flow modification, and flood storage, are primarily due to the artificial impoundment. This artificial impoundment has the detrimental effect of interrupting flows within the watershed. Therefore, taken as a whole, the wetland is considered to have negligible function and value as a wetland.

As discussed above and is clearly represented geographically, the wetland is small and geographically isolated. The open water area is in the upper portion of the watershed approximately 1,500 feet downstream from the crest of the hill to the west and approximately 4,000 feet upstream of the blue-line stream, dominated by oak woodlands, east of the open water. The berm at the downstream end of the open water area restricts surface water flows from the wetland downstream to the blue-line stream east of the project site. Therefore the wetland is small (0.10 acre) and isolated.

A botanical inventory of the project site has been completed and no vernal pool indicator species, as defined by ACOE (1997) were identified within this open water area, or within other portions of the project.

Finally, the open water area does not support any populations of wetland-dependent sensitive species. Such species typically include riparian-dependent species such as least Bell's vireo (*Vireo bellii pusillus*) and yellow-breasted chat (*Icteria virens*) or aquatic species such as San Diego fairy shrimp (*Branchinecta sandiegonensis*). None of these species have been identified or are expected to occur given the very limited resource that the open water wetland provides. The sensitive species that have been identified on site, including several plant and wildlife species, all are primarily associated with upland scrub and chaparral communities. Some wildlife species may occasionally utilize the open water as a water source; however these species are not wetland dependent, but rather are dependent on upland scrub and chaparral habitats.

ACOE/CDFW/RWQCB Wetland Determination

The 0.10-acre open water area within the solar farm site does not meet ACOE and RWQCB criteria for jurisdictional wetlands because it is hydrologically isolated from downstream waters (e.g., TNW, RPW or non-RPW) such as the unnamed blue-line stream located northeast of the site (i.e., no significant nexus). The nearest TNW's to the site include the Pacific Ocean and Salton Sea, both of which are approximately 50 linear-miles west and east of the site, respectively. The nearest blue-line streams are two unnamed tributaries to the Tijuana River; one located approximately 175 to 1,200 feet to the east of the eastern project site boundary and the other located approximately 3,500 feet to the west of the western project site boundary. The eastern blue-line stream was reviewed from public roads, is dominated by coast live oak woodland and rural residential/agricultural lands, and appears to have inconsistent ordinary high water mark (OHWM) and very sporadic wetlands in this vicinity. There are no obvious wetlands or stream channels extending from the project site boundaries to these blue-line streams.

Based on the results of the jurisdictional delineation and completion of the Approved Jurisdictional Determination Data Form, the open water area within the solar farm site does not have a significant

nexus through surface or groundwater to waters of the United States and therefore is mapped as isolated and considered non-jurisdictional. The open water area within the solar farm site does not meet CDFW jurisdictional criteria because it is not associated with a lake or streambed.

Potential Non-Wetland Waters

The solar farm site was also surveyed to determine if there are drainages with an OHWM that could convey runoff off site. Although drainage swales were observed in some areas of the solar farm site, none of these areas exhibited a consistent OHWM, such as bed and bank topography.

These swales are characterized by unvegetated, sandy areas, mostly with bed and bank topography limited to less than 6-inch deep cuts approximately 1 foot apart. In one location, a more defined bed and bank (up to 3 feet deep and 1 foot wide) is present in a single 1,000-foot reach in the middle of the site, but areas "downstream" showed no OHWM. A few other short reaches (each less than 250 linear feet) have a distinctive bed and bank (approximately 1 foot deep and 1 foot wide), but the majority of the topographic low points on site, including areas adjacent to the boundaries of the site, do not support any OHWM. Therefore, site evidence, as well as investigations of off-site areas, indicates that runoff does not leave the solar farm site but presumably infiltrates within the site.

No wetlands or waters of the United States under the jurisdiction of ACOE, RWQCB, CDFW, or the County were identified within the solar farm site.

Gen-Tie Alignment Site

Wetlands Determination

Results of the seven sampling data stations (Table 4.3-3) indicate that there are a total of three riparian habitats and one wetland mapped within the gen-tie alignment (Figures 2.3-1c and 2.3-1d). One riparian habitat is mapped as wet montane meadow and is under the jurisdictional of CDFW and the County. It is adjacent to Data Stations 2 and 3 in the southwestern section of the alignment, and is 0.07 acre. The second riparian habitat is mapped as southern willow scrub and is under the jurisdictional of CDFW and the County. It is located adjacent to Data Station 4 just north of the wet montane meadow, and is 0.38 acre. The third riparian habitat is mapped as coast live oak woodland and is under the jurisdictional of CDFW and the County. The coast live oak woodland extends beyond the study area, and Data Station 5 is located outside the study area to capture the full extent of this riparian habitat. It is 0.15 acre and is located near the middle of the gen-tie alignment.

One area is mapped as a wetland under the jurisdiction of ACOE, CDFW, RWQCB, and the County. Southern willow scrub is mapped in an artificial impoundment which supports

hydrophytic vegetation (e.g. willows), hydric soils (e.g. sandy, loam, depleted matrix), and surface water. This wetland is located adjacent to Data Station 7 in the northeastern region of the alignment and is 0.13 acre. Because this area meets all three wetland determination indicators (hydrophytic vegetation, hydric soils, and hydrology), it is jurisdictional under the ACOE as well as CDFW, RWQCB, and the County.

RPO Wetland Determination

The four riparian habitats/wetlands mapped within the gen-tie alignment meet the County's RPO wetland definition. These wetlands support hydrophytic vegetation (i.e., willows, juncus) and are associated with stream channels. Although all are relatively small in size, they all form a nexus with other hydrological processes in the region and support important wetland features.

The riparian habitat mapped as wet montane meadow supports Mexican juncus and other hydrophytic vegetation, and is surrounded by an unvegetated stream channel; therefore this meadow meets the definition of an RPO wetland. The riparian habitat mapped as coast live oak woodland supports coast live oak along the banks of an unvegetated stream channel as well as occasional hydrophytic herbs. The southern willow scrub mapped under the jurisdiction of CDFW and the County supports both hydrophytic vegetation (red willows, juncus, and sedges) and hydrology (drainage patterns). It is located just north of the wet montane meadow and is part of the same direct hydrological system. The southern willow scrub wetland under the jurisdiction of ACOE, CDFW, RWQCB, and the County was created from an artificial impoundment. Although this wetland is man-made, it supports the necessary wetland criteria and forms a nexus with downstream hydrology.

Potential Non-wetland Waters

The gen-tie alignment site was surveyed to determine the presence of an OHWM along several potential drainage channels. An OHWM was identified along several stream channels based on an observed, defined bed and bank and other evidence of hydrology. According to the National Hydrographic Database, multiple creeks/streams flow within the gen-tie alignment; specifically, Boundary Creek (blue-line stream channel) is mapped in the northern portion of the alignment, one tributary to Boundary Creek is mapped in the central portion of the alignment, and two unnamed stream channels are mapped within the southwest portion of the alignment (U.S. Geological Survey (USGS) 2013). All of these drainages observed on site had a defined bed and bank, showed evidence of an OHWM, a channel bed of 1 to 3 feet wide, and were continuous for greater than 250 linear feet; thus, they were determined to be jurisdictional waters. In total, there is approximately 0.58 acre of jurisdictional waters of the United States/state identified within the gen-tie alignment site. These waters do not meet any

one of the three criteria required to be considered a County RPO wetland. Flows within these drainages are directed southward into Mexico and ultimately connect with the Tijuana River.

RPO Wetland Buffer

County Guidelines for Determining Significance (County of San Diego 2010) provide the following examples for the establishment of appropriate RPO wetland buffers, to be based on the best available science:

- 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%.
- 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 count not be mitigated.
- 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.
- 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.

The RPO wetlands within the gen-tie alignment are located along unvegetated stream channels that feed generally south and southeast towards Mexico. The wetlands are characterized by hydrophytic vegetation, such as juncus and willows. As the topography of the gen-tie alignment is shaped by the hilly topography in the vicinity, these wetlands occur primarily within valleys or adjacent to the hillside slopes. In general, the alignment does not support important or unique wildlife movement functions for wetland species or wildlife in general. The RPO wetlands do not occur in areas where slopes are extremely steep or where soils are highly erosive. Although the wetlands themselves are dominated by hydrophytes, they occur surrounded by chaparral vegetation that is not dominated by hydrophytes. Furthermore, overall function and value of wetlands on site is low to moderate due to the

limited habitat diversity, lack of channel topography, limited aquatic habitat, and public use. The gen-tie alignment, as a linear project, will not substantially impact the function and integrity of the regional hydrology because flow will still occur unimpeded in the same direction. Finally, edge effects of current or future conditions are of relatively low intensity compared with urban or even rural residential land uses. Given these factors, a 50-foot wetland buffer is considered adequate to protect RPO wetlands on site.

Habitat Connectivity and Wildlife Corridors

The Tierra del Sol solar farm site is surrounded by rural residences to the north, east, and west, and an impermeable fence that restricts all wildlife movement at the border of Mexico to the south. In addition, the solar farm site itself is fenced with barbed wire, which is not a constraint to most species. However, the adjacent residence to the east is surrounded by a large chain-link fence and while it would still allow small reptiles, amphibians, and mammals to pass through, larger species are constrained. All of these factors limit the ability of wildlife to access and traverse the site. Due to the constrained nature of the site, specifically the fencing surrounding the solar farm and to the south and east, the solar farm is unlikely to serve as a local or regional wildlife corridor (Figure 2.3-10). Larger wildlife in the Boulevard area is currently able to cross to and from Mexico through a gap in the border fence several miles to the east of the Tierra del Sol in a mountainous area too rugged for fencing.

The gen-tie alignment contains barbed-wire fencing along the perimeter of the two large blocks of land. The alignment to the north and west of that area contain sporadic fencing, much of which was damaged in the Shockey Fire. The southern portion of the alignment is located immediately adjacent to Tierra del Sol Road and private property, and is fenced in areas. The residences and fencing in this portion of the project area are a constraint to wildlife movement. The remaining alignment is a linear feature that traverses over large spans of undeveloped lands. Fencing may be located throughout the undeveloped lands but would not be considered a barrier to wildlife movement.

2.3.1.4 Rugged

Habitat Types/Vegetation Communities

As shown on Figure 2.3-2 and in Table 2.3-1, there are 16 vegetation communities or land covers mapped on the Rugged solar farm site. The native vegetation communities on site are alkali meadow (including disturbed), big sagebrush scrub (including disturbed), coast live oak woodland, montane buckwheat scrub (including disturbed), granitic chamise chaparral, granitic northern mixed chaparral, mixed oak woodland, disturbed mule fat scrub, red shank chaparral, scrub oak chaparral (including disturbed), semi-desert chaparral (including disturbed), and semi-desert chaparral-rock. The non-native, vegetation communities and land cover types occurring within the

project area are non-native grassland, disturbed habitat, urban/developed land, tamarisk scrub, open water and non-vegetated channel.

An off-site private access road (Northern Off-Site Access Road) from McCain Valley Road that connects to the northeast portion of the Rugged solar farm site is proposed if Rough Acres Ranch MUP 3300-09-019 and associated Rough Acres Ranch Road is not constructed. Vegetation communities and acreage for the proposed off-site portions of the off-site access road are shown in Table 2.3-4.

Flora

A total of 296 plant species have been recorded within the project site, with 254 species (86%) encountered considered native and the remaining 42 species (14%) considered non-native and/or naturalized into the area. A cumulative list of plant species observed on site is presented as Appendix B of the BRR prepared for the Rugged solar project (Appendix 2.3-2).

Fauna

The project area supports habitat for common upland and riparian species. Scrub, chaparral, and oak woodland habitats within the project area provide foraging and nesting habitat for migratory and resident bird species and other wildlife species. Grassland habitat provides foraging habitat for a variety of raptor species. Rock outcroppings within the project area provide cover and foraging opportunities for wildlife species, including reptiles and mammals. Finally, wetland features within the project area provide habitat to amphibian and invertebrate species.

A list of the wildlife species observed within and adjacent to the project site during biological surveys is provided in Appendix C of the BRR prepared for the Rugged solar project (Appendix 2.3-2). There were 132 species observed on the project site. Species richness in the project area is relatively high due to the property size, amount of undeveloped land, and the number of native upland and wetland habitats. Species richness is generally increased with the presence of more habitat types and ecotones. Although species richness is high, 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, riparian, and wetland habitat types.

Special-Status Plant Species

Nine special-status plant species were observed in the project site during the course of the 2011 and 2012–2013 surveys (Appendix 2.3-2). Each of these special-status species are described below.

Critical Habitat

There is no USFWS-designated critical habitat for plant species within or near the project site (USFWS 2012).

County List A and B Species

County List A and B species that have been observed in the project site are described below.

Jacumba Milk-vetch

On site there are 236 occurrences of Jacumba milk-vetch mapped with 1 to 10 individuals per occurrence, and 6 occurrences with 11 to 50 individuals per occurrence. Therefore, approximately 302 to 2,660 individuals of Jacumba milk-vetch were documented within the project site during 2011 surveys (Appendix 2.3-2). Additionally, there are 3 occurrences of Jacumba milkvetch with 1 to 10 individuals per occurrence that are off site within the boundary of the access roads (see Figure 2.3-11). Populations are scattered throughout the entire project site but on site are restricted to uplands habitat including scrub, chaparral, woodlands and grasslands, and disturbed areas.

During the June 2013 surveys of the proposed off-site access road, approximately 20 Jacumba milk-vetch were recorded. Additional species were observed outside of the access road boundaries, particularly in open and disturbed habitats.

Tecate Tarplant

On site there are 48 occurrences of Tecate tarplant including 14 occurrences with 1 to 10 individuals per occurrence; 12 occurrences with 11 to 50 individuals per occurrence; 1 occurrence with 51 to 100 individuals; 1 occurrence with 501 to 1,000 individuals; 7 occurrences with 1,001 to 5,000 individuals; and 13 occurrences with greater than 10,000 individuals per occurrence. Therefore, approximately 137,717 to 166,852 individuals[2] of Tecate tarplant were documented within the project site during 2011 surveys (Appendix 2.2-2). The majority of the occurrences are in the northwestern portion of the project area (Figure 2.3-11).

Tecate tarplant was not observed during the March or June 2013 rare plant surveys of the off-site access roads, even though the survey was conducted during its bloom period. It is not expected to occur in the off-site access road.

[2] For occurrences that were mapped as greater than 10,000 individuals, the range of individuals on site was calculated assuming that 10,001 individuals was the low end of the range and the high end of the range.

Sticky Geraea

On site there are 41 occurrences of sticky geraea including 37 occurrences with 1 to 10 individuals per occurrence; 1 occurrence with 11 to 50 individuals per occurrence; 1 occurrence with 51 to 100 individuals; 2 occurrences with 101 to 500 individuals. Therefore, approximately 301 to 1,520 individuals of sticky geraea were documented within the project site during 2011 surveys (Appendix 2.3-2). All of the occurrences were documented in uplands, including chaparral and scrub habitats, or disturbed areas (Figure 2.3-11).

This species was not observed during the March or June 2013 surveys of the proposed off-site access road even though the survey was conducted during its bloom period. It is not expected to occur in the access road.

Desert Beauty

On site there are 235 occurrences of desert beauty including 186 occurrences with 1 to 10 individuals per occurrence; 39 occurrences with 11 to 50 individuals per occurrence; 5 occurrences with 51 to 100 individuals; 4 occurrences of 101 to 500 per occurrence; and 1 occurrence with 501 to 1,000. Therefore, approximately 1,775 to 7,310 individuals of desert beauty were documented within the project site during 2011 surveys (Appendix 2.3-4). All of the occurrences were documented in uplands, including chaparral and scrub habitats and areas of bare rock (Figure 2.3-11).

Desert beauty was not observed during the March or June 2013 rare plant survey of the off-site access roads, even though the survey was conducted during its bloom period. It is not expected to occur in the access road.

County List C and D Species

County List C and D species that have been observed in the project site are described below.

Payson's Jewel Flower

During 2011 surveys, one occurrence of 1 to 10 individuals of Payson's jewel flower was documented in within the northwestern central portion of the project site and was found within semi-desert chaparral (rock outcrop) (see Appendix 2.3-2 and Figure 2.3-11).

This species was not observed during the March or June 2013 surveys of the proposed off-site access roads even though the survey was conducted during its bloom period. It is not expected to occur in the off-site access road.

Desert Larkspur

On site there are 127 occurrences of desert larkspur including 97 occurrences with 1 to 10 individuals per occurrence; 23 occurrences with 11 to 50 individuals per occurrence; and 7 occurrences with 51 to 100 individuals. Therefore, approximately 707 to 2,820 individuals of desert larkspur were documented within the project site during 2011 surveys (Appendix 2.3-2). All of the occurrences were documented in uplands, including chaparral, scrub and woodlands habitats, or disturbed areas (Figure 2.3-11).

This species was not observed during the March or June 2013 surveys of the proposed off-site access roads even though the survey was conducted during its bloom period. It is not expected to occur in the off-site access road.

Pride-of-California

During 2011 surveys, approximately 7 occurrences of pride-of-California with 1 to 10 individuals were documented on site—6 occurrences in chaparral and 1 occurrence in disturbed alkali meadow (Appendix 2.3-2). Additionally, there is 1 occurrence of pride-of-California with 1 to 10 individuals that is off site and lies within in the impact footprint (Figure 2.3-11).

This species was not observed during the March or June 2013 surveys of the proposed off-site access roads even though the survey was conducted during its bloom period. It is not expected to occur in the off-site access road.

Desert Monkeyflower

During 2011 surveys, one occurrence of 1 to 10 individuals of desert monkeyflower was documented within the project area in the central northwestern portion of the project site in chaparral, specifically semi-desert chaparral (rocky areas) (Appendix 2.3-2) (Figure 2.3-11).

This species was not observed during the March or June 2013 surveys of the proposed off-site access roads even though the survey was conducted during its bloom period. It is not expected to occur in the off-site access road.

Engelmann Oak

During 2011 surveys, 1 occurrence of 1 to 10 individuals of Engelmann oak was documented in the northwestern portion of the project site in non-native grasslands. Additionally, there is 1 occurrence of Engelmann oak with 1 to 10 individuals that is off site and lies within in the impact footprint (Appendix 2.3-2) (Figure 2.3-11).

This species was not observed during the March or June 2013 surveys of the proposed off-site access roads. Because Engelmann oak is a conspicuous tree, it would have been observed if it was present in the survey area. This species was not observed within the Harmony Grove access road.

Special-Status Wildlife Species

Twelve special-status wildlife species were detected within the project site in 2011 (Appendix 2.3-2). Special-status wildlife species known to occur in the surrounding region and their potential to occur on site are presented in Appendix H of the BRR for the Rugged solar project (Appendix 2.3-2).

Critical Habitat

There is no critical habitat within the project site. The USFWS has designated critical habitat for one species within 5 miles of the project area: Peninsular bighorn sheep. Designated Critical Habitat Unit 3 is located approximately 1.5 miles from the eastern extent of the project (Figure 2.3-12). Unit 3 of the 2009 revised critical habitat for Peninsular bighorn sheep includes the Carrizo Gorge and portions of the In-Ko-Pah Mountains (74 FR 17288–17365). The overall area of Unit 3 contains the physical and biological features that are essential for peninsular bighorn sheep habitat, including a range of vegetation types, foraging and watering areas, and steep to very steep, rocky terrain with appropriate elevations and slope (74 FR 17288–17365). In addition, Unit 3 is currently occupied by Peninsular bighorn sheep (74 FR 17288–17365). The project area does not contain constituent elements required for Peninsular bighorn sheep.

County Group I Species

County Group I species that have been observed in the project site, or have high potential to occur, are described below.

Reptiles

Two-Striped Gartersnake

Two-striped gartersnake has not been observed in the project site, but based on the seasonal ponding of some of the alkali meadow habitat in the project area, this species has high potential to occur. Within the project site, suitable habitat includes mulefat scrub (including disturbed), mulefat scrub/tamarisk scrub, tamarisk scrub, alkali meadow (including disturbed), and open water.

Birds

Cooper's Hawk

Three Cooper's hawk observations were made within the project site during 2011 surveys, and additional points were mapped adjacent to the project site (Appendix 2.3-2) (Figure 2.3-13). Two records are mapped in the northern portion of the project site; the other observation was made in the eastern portion of the project site, west of McCain Valley Road. Both observations were made in semi-desert chaparral habitat.

Within the project site, there are no permanent water sources. However, the project site may support limited nesting opportunities within coast live oak woodland, mixed oak woodland, and scrub oak chaparral (including disturbed). Suitable foraging habitat includes coast live oak woodland, mixed oak woodland, granitic chamise chaparral, granitic northern mixed chaparral, red shank chaparral, scrub oak chaparral (including disturbed), semi-desert chaparral (including disturbed), mulefat scrub (including disturbed), mulefat scrub/tamarisk scrub, and tamarisk scrub.

Tricolored Blackbird

A group of tricolored blackbirds was observed flying overhead, south of the project site, during 2011 surveys (Appendix 2.3-2). This species has high potential to forage in the project site in the alkali meadow (including disturbed), disturbed habitat, non-native grassland, and open water habitats, but it is not expected to nest in the project area due to lack of suitable nesting habitat.

Southern California Rufous-Crowned Sparrow

No Southern California rufous-crowned sparrows were observed during surveys; however, there is suitable habitat, and it has high potential to occur in the project area. Within the project site, suitable habitat includes big sagebrush scrub (including disturbed), granitic chamise chaparral, redshank chaparral, montane buckwheat scrub (including disturbed), granitic northern mixed chaparral, semi-desert chaparral (including rocky and disturbed), and scrub oak chaparral (including disturbed). There are records of this species in the area (SDNHM 2012b).

Bell's Sage Sparrow

The Bell's sage sparrow was observed once in the central portion of the project site within big sagebrush scrub habitat (Figure 2.3-13). There are no CNDDB records within Live Oak Springs quadrangle; however, there are confirmed breeding locations within the vicinity

(Unitt 2004). Within the project site, suitable habitat includes big sagebrush scrub (including disturbed), granitic chamise chaparral, montane buckwheat scrub (including disturbed), semi-desert chaparral (including rocky and disturbed), southern mixed chaparral, and scrub oak chaparral (including disturbed).

Golden Eagle

There is no suitable nesting habitat within the project area due to the lack of forested areas and cliffs. Within the site, suitable foraging habitat includes big sagebrush scrub (including disturbed), montane buckwheat scrub (including disturbed), semi-desert chaparral (including rocky and disturbed), non-native grassland, and disturbed habitat. These habitat types make up approximately 64% of the total acreage on site. Typically, the denser forms of chaparral habitat are not suitable for foraging of golden eagle.

WRI prepared a golden eagle report in 2013, which describes the active territories of several golden eagle territories in southeast San Diego County, including the Table Mountain and Carrizo Canyon pairs, as well as flight paths and GPS points of the golden eagles with satellite transmitters. The estimated territories of the Table Mountain and Carrizo Canyon pairs overlap with the northeast portion of Rugged Solar and a 4,000-foot buffer around the project site (WRI 2013). WRI has documented various golden eagle nest locations on two separate cliffs on Table Mountain; the most recent use was on the southwest cliff. Several golden eagle nests are documented in Carrizo Canyon; one nest was active in 2010, and the pair was productive (i.e., produced young) in 2011 and 2012 (WRI 2013).

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[3], with 1 territory possibly active and the 3 remaining territories considered inactive. All of the 10 territories were documented 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 2011, as cited in CPUC and BLM 2011). Every mountain range within the survey area, except for the Boundary Peak territory, has had recent nest evidence, but only six or possibly seven territories showed evidence of 2010 activity. This is considered typical for

[3] 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 2011).

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. The Canebrake location is approximately 10 miles north of the project area. The Moreno Butte location is approximately 10 miles southwest of the project. The Glenn Cliff/Buckman Springs location is approximately 9 miles west of the central portion of the project. The other active territories, located at Garnet Mountain, Monument Peak, and Thing Valley, are approximately 8, 7, and 7 miles west or northwest of the project area, respectively.

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 since no nesting behavior was observed. The flight paths gathered during these observations demonstrate eagle use of the ridge line area of the project and support limited golden eagle use in the 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 cannot indicate whether the birds may or may not use the Tule Wind project area. Regardless, none of these nests or territories occurred within 4,000 feet of the Rugged solar farm area.

There are no CNDDB records of this species where the Rugged solar farm site is located. The San Diego County Bird Atlas corroborates the above description, with active breeding locations found southwest and northwest of the project site, as well as nesting locations farther east within the Carrizo Gorge area (Unitt 2004).

Red-Shouldered Hawk

No red-shouldered hawks were observed during the surveys; however, there is suitable habitat for this species, and it has high potential to occur in the project area. Within the project site, there

are no permanent water sources. However, the project site may support limited nesting opportunities within coast live oak woodland, mixed oak woodland, and scrub oak chaparral (including disturbed). Suitable foraging habitat includes coast live oak woodland, mixed oak woodland, granitic chamise chaparral, granitic northern mixed chaparral, red shank chaparral, scrub oak chaparral (including disturbed), semi-desert chaparral (including disturbed), mulefat scrub (including disturbed), mulefat scrub/tamarisk scrub, and tamarisk scrub.

Swainson's Hawk

The Swainson's hawk was detected flying over the northern portion of the project site (see Appendix 2.3-2 and Figure 2.3-13). This species no longer nests in the majority of Southern California, including San Diego County. Therefore, this species is expected only as an occasional and temporary visitor of the project site during annual migration from wintering habitat in South America to suitable breeding areas in western North America and suitable habitat is not identified within the project site.

Turkey Vulture

Turkey vulture was observed in the project site, but the observations were not mapped (Appendix 2.3-2). The project site does not support suitable cliffs and large trees for nesting, but there is suitable foraging habitat within the project site. Suitable foraging habitat includes most vegetation communities and undeveloped land cover on site (i.e., coast live oak woodland, mixed oak woodland, big sagebrush scrub (including disturbed), montane buckwheat scrub (including disturbed), granitic chamise chaparral, granitic northern mixed chaparral, red shank chaparral, scrub oak chaparral (including disturbed), semi-desert chaparral (including rock-dominated and disturbed), alkali meadow, mulefat scrub (including disturbed), mulefat scrub/tamarisk scrub, tamarisk scrub, non-native grassland, disturbed habitat, and non-vegetated channel). Turkey vulture breeding surrounding the project is poorly documented, and no nests have been recorded within the area (Unitt 2004).

Northern Harrier

The northern harrier was documented southeast of the project site during 2011 surveys, but its location was not recorded (Appendix 2.3-2). However, based on the lack of observations during the breeding season, this species is only expected as a winter visitor in grassland habitat and the more open areas of scrub and chaparral communities on site. There are no CNDDB records of this species within the project site, but it has been recorded in the area (SDNHM 2012b). Within the project area, suitable winter and foraging habitat includes big sagebrush scrub (including disturbed), montane buckwheat scrub (including disturbed), semi-desert chaparral – rock, disturbed semi-desert chaparral, disturbed scrub oak chaparral, alkali meadow (including disturbed), non-native grassland, open water, disturbed habitat, and non-vegetated channel.

Prairie Falcon

One prairie falcon observation was made within the project site (see Appendix 2.3-2 and Figure 2.3-13). Within the project site, suitable foraging habitat includes all vegetation communities and undeveloped land cover on site (i.e., coast live oak woodland, mixed oak woodland, big sagebrush scrub (including disturbed), montane buckwheat scrub (including disturbed), granitic chamise chaparral, granitic northern mixed chaparral, red shank chaparral, scrub oak chaparral (including disturbed), semi-desert chaparral (including rocky and disturbed), alkali meadow (including disturbed), mulefat scrub (including disturbed), mulefat scrub/tamarisk scrub, tamarisk scrub, non-native grassland, open water, disturbed habitat, urban/developed land, and non-vegetated channel). Potential nest locations within the vicinity include Carrizo Gorge and other rocky mountain and cliff terrain north and east of the project site (Unitt 2004).

Loggerhead Shrike

Loggerhead shrikes were documented several times in the same location within the eastern portion of the project site within semi-desert chaparral habitat (see Appendix 2.3-2 and Figure 2.3-13). Within the project site, suitable habitat includes mixed oak woodland, big sagebrush scrub (including disturbed), montane buckwheat scrub (including disturbed), granitic chamise chaparral, granitic northern mixed chaparral, scrub oak chaparral (including disturbed), semi-desert chaparral (including rocky and disturbed), mulefat scrub (including disturbed), mulefat scrub/tamarisk scrub, tamarisk scrub, and disturbed habitat.

Invertebrates

Quino Checkerspot Butterfly

All of the areas surveyed in the project site contained a variety of potential Quino checkerspot butterfly adult nectar plants and dot-seed plantain, their primary larval food plant. Protocol surveys were conducted in 2011 (Appendix 2.3-2) and were negative. Based on the lack of records in the project site and the negative survey results, Quino checkerspot butterfly is not expected to occur in the project site.

The nearest USFWS occurrence for Quino checkerspot butterfly is located approximately 2.5 miles southwest of the project site (USFWS 2012). This species was also observed approximately 6 miles north of the project area during surveys for the Tule Wind project (HDR 2010, as cited in Appendix 2.3-2).

County Group II Species

County Group II species that have been observed in the project site, or have high potential to occur, are described below.

Amphibians and Reptiles

Western Spadefoot Toad

Western spadefoot was not detected during surveys; however, there is suitable habitat in the project site and spadefoot tadpoles were observed on the nearby Tule Wind project site (HDR 2010, as cited in Appendix 2.3-2). This species can occur in a variety of habitats within the project site, including coast live oak woodland, mixed oak woodland, big sagebrush scrub (including disturbed), montane buckwheat scrub (including disturbed), alkali meadow (including disturbed), mulefat scrub (including disturbed), mulefat scrub/tamarisk scrub, tamarisk scrub, non-native grassland, disturbed habitat, open water, and non-vegetated channel.

Orange-Throated Whiptail

Orange-throated whiptail was observed in the eastern portion of the project site, west of McCain Valley Road, within semi-desert chaparral habitat (see Appendix 2.3-2 and Figure 2.3-13). Within the project site, suitable habitat includes coast live oak woodland, mixed oak woodland, big sagebrush scrub (including disturbed), montane buckwheat scrub (including disturbed), granitic chamise chaparral, granitic northern mixed chaparral, red shank chaparral, scrub oak chaparral (including disturbed), semi-desert chaparral (including rocky and disturbed), non-native grassland, disturbed habitat, non-native grassland, and non-vegetated channel.

Coastal Western Whiptail

Within the project site, scattered coastal western whiptail observations were made within montane buckwheat scrub and semi-desert chaparral habitats (Appendix 2.3-2) (Figure 2.3-13). Within the project site, suitable habitat includes coast live oak woodland, mixed oak woodland, big sagebrush scrub (including disturbed), montane buckwheat scrub (including disturbed), granitic chamise chaparral, granitic northern mixed chaparral, red shank chaparral, scrub oak chaparral (including disturbed), semi-desert chaparral (including rock-dominated and disturbed), disturbed habitat, urban/developed land, and non-vegetated channel.

Rosy Boa

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 site. Suitable habitat includes coast live oak woodland, mixed oak woodland, granitic chamise chaparral, montane buckwheat scrub (including disturbed), redshank chaparral, southern mixed chaparral, semi-desert chaparral (including rocky and disturbed), scrub oak chaparral, and non-vegetated channel. This species was also observed approximately 3 miles north of the project site in similar habitat during surveys for the Tule Wind project (HDR 2010, as cited in Appendix 2.3-2).

Red-Diamond Rattlesnake

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 site. Suitable habitat includes coast live oak woodland, mixed oak woodland, big sagebrush scrub (including disturbed), montane buckwheat scrub (including disturbed), granitic chamise chaparral, granitic northern mixed chaparral, red shank chaparral, scrub oak chaparral (including disturbed), semi-desert chaparral (including rocky and disturbed), disturbed habitat, non-native grassland, and non-vegetated channel.

San Diego Ringneck Snake

San Diego ringneck snake was not observed during surveys; however, based on suitable habitat, it has high potential to occur in the project site. Suitable habitat includes coast live oak woodland, mixed oak woodland, big sagebrush scrub (including disturbed), montane buckwheat scrub (including disturbed), alkali meadow (including disturbed), mulefat scrub (including disturbed), mulefat scrub/tamarisk scrub, tamarisk scrub, granitic chamise chaparral, granitic northern mixed chaparral, red shank chaparral, scrub oak chaparral (including disturbed), semi-desert chaparral (including rock-dominated and disturbed), disturbed habitat, urban/developed land, non-native grassland, and non-vegetated channel.

Coronado Skink

Coronado skink was not observed during surveys; however, there is suitable habitat, and it has high potential to occur in the project site. Suitable habitat includes coast live oak woodland, mixed oak woodland, alkali meadow (including disturbed), mulefat scrub (including disturbed), mulefat scrub/tamarisk scrub, and tamarisk scrub.

Blainville's Horned Lizard

Scattered Blainville's horned lizard observations were made within a variety of upland habitats in the project site (see Appendix 2.3-2 and Figure 2.3-13), and it is expected to occur throughout suitable habitat on site. Suitable habitat includes sandy soils within coast live oak woodland, mixed oak woodland, big sagebrush scrub (including disturbed), montane buckwheat scrub (including disturbed), granitic chamise chaparral, granitic northern mixed chaparral, red shank chaparral, scrub oak chaparral (including disturbed), semi-desert chaparral (including rocky and disturbed), disturbed habitat, non-native grassland, and non-vegetated channel.

Coast Patch-Nosed Snake

Coast patch-nosed snake was not observed during surveys; however, there is suitable habitat, and it has high potential to occur in the project site. Within the project site, suitable habitat includes big sagebrush scrub (including disturbed), montane buckwheat scrub (including disturbed), granitic chamise chaparral, granitic northern mixed chaparral, red shank chaparral, scrub oak chaparral (including disturbed), and semi-desert chaparral (including rocky and disturbed).

Birds

California Horned Lark

Scattered horned lark observations were made, primarily in the eastern portion of the project site within montane buckwheat scrub habitat (see Appendix 2.3-2 and Figure 2.3-13). Within the project site, suitable nesting and foraging habitat includes big sagebrush scrub (including disturbed), montane buckwheat scrub (including disturbed), alkali meadow (including disturbed), and non-native grassland.

Western Bluebird

No western bluebirds were observed during surveys; however, there is suitable habitat, and it has high potential to occur in the project site. Suitable habitat includes coast live oak woodland and mixed oak woodland.

Barn Owl

No barn owls were observed during surveys; however, there is suitable nesting and foraging habitat, and it has high potential to occur in the project site. Suitable nesting habitat includes coast live oak woodland and mixed oak woodland. Suitable foraging habitat includes all vegetation communities and undeveloped land cover on site (i.e., coast live oak woodland, mixed oak woodland, big sagebrush scrub (including disturbed), montane buckwheat scrub (including disturbed), granitic chamise chaparral, granitic northern mixed chaparral, red shank chaparral, scrub oak chaparral (including disturbed), semi-desert chaparral (including rock-dominated and disturbed), alkali meadow, mulefat scrub (including disturbed), mulefat scrub/tamarisk scrub, tamarisk scrub, non-native grassland, open water, disturbed habitat, urban/developed land, and non-vegetated channel).

Mammals

Dulzura Pocket Mouse

The Dulzura pocket mouse was not observed during surveys; however, detection of this species usually requires focused live trapping studies, which were not conducted in the project site. However, there is suitable habitat, and this species has high potential to occur in the project site because it is a relatively common species in suitable habitat. Suitable habitat includes coast live oak woodland, mixed oak woodland, big sagebrush scrub (including disturbed), montane buckwheat scrub (including disturbed), granitic chamise chaparral, granitic northern mixed chaparral, red shank chaparral, scrub oak chaparral (including disturbed), semi-desert chaparral (including rocky and disturbed), disturbed habitat, and non-vegetated channel. There are three CNDDB records of this species within the Mount Laguna, Sombrero Peak, and Live Oak Springs quadrangles; the closest record is from 1958 approximately 1 mile northwest of the project site.

Northwestern and Pallid San Diego Pocket Mouse

Neither the northwestern nor pallid San Diego pocket mouse subspecies was observed during surveys; however, detection of these subspecies usually requires focused live trapping studies, which were not conducted in the project site. Live-trapping would also be required to determine which subspecies of San Diego pocket mouse occurs on site, if present. Nonetheless, there is suitable habitat and at least one of the San Diego pocket mouse subspecies has high potential to occur in the project site because San Diego pocket mouse is a relatively common species in suitable habitat. Within the project site, suitable habitat includes mixed oak woodland, big sagebrush scrub (including disturbed), montane buckwheat scrub (including disturbed), granitic chamise chaparral, granitic northern mixed chaparral, red shank chaparral, scrub oak chaparral (including disturbed), semi-desert chaparral (including rocky and disturbed), disturbed habitat, non-native grassland, and non-vegetated channel. There are no CNDDB records for this species in the project site.

San Diego Black-Tailed Jackrabbit

Numerous observations of this species were recorded within the project site, primarily within scrub and chaparral habitats (see Appendix 2.3-2 and Figure 2.3-13). It can occur within a variety of shrub and woodland habitats within the project site, including coast live oak woodland, mixed oak woodland, big sagebrush scrub (including disturbed), montane buckwheat scrub (including disturbed), granitic chamise chaparral, granitic northern mixed chaparral, red shank chaparral, scrub oak chaparral (including disturbed), and semi-desert chaparral (including rock-dominated and disturbed).

San Diego Desert Woodrat

Sign of the woodrat was observed within the project area in the form of woodrat middens. Given that suitable habitat for San Diego desert woodrat is present in the project site, this species has high potential to occur on site. Within the project site, suitable habitat includes coast live oak woodland, mixed oak woodland, big sagebrush scrub (including disturbed), montane buckwheat scrub (including disturbed), granitic chamise chaparral, granitic northern mixed chaparral, red shank chaparral, scrub oak chaparral (including disturbed), and semi-desert chaparral (including rocky and disturbed). The species has previously been documented at two locations approximately 2 miles north of the project site (CDFG 2012).

Mule Deer

Sign of mule deer (tracks) was observed in the northeastern portion of the project site, along an access road in montane buckwheat scrub (Figure 2.3-13). Suitable habitat in the project site includes coast live oak woodland, mixed oak woodland, big sagebrush scrub (including disturbed), montane buckwheat scrub (including disturbed), granitic chamise chaparral, granitic northern mixed chaparral, red shank chaparral, scrub oak chaparral (including disturbed), semi-desert chaparral (including rock-dominated and disturbed), mulefat scrub (including disturbed), mulefat scrub/tamarisk scrub, tamarisk scrub, open water, non-native grassland, disturbed habitat, urban/developed land, and non-vegetated channel.

Mountain Lion

Mountain lion sign was detected during the 2010/2011 surveys, but the location was not mapped. However, mountain lions are expected to use suitable habitat throughout the project site when hunting. Within the project site, suitable habitat includes coast live oak woodland, mixed oak woodland, granitic chamise chaparral, granitic northern mixed chaparral, red shank chaparral, scrub oak chaparral (including disturbed), and semi-desert chaparral (including rock-dominated and disturbed).

Special-Status Bats

No special-status bats were observed during surveys; however, no focused surveys (e.g., acoustic, mist-netting, or visuals surveys) were conducted during suitable times to observe bats (e.g., sunset and night). Although there is no suitable roosting habitat in rock crevices and cliffs in the project site for several of the special-status bat species, there is high potential for several of the species to forage in the project site. These species include Mexican long-tongued bat, Townsend's big-eared bat, spotted bat, California leaf-nosed bat, and big free-tailed bat. Two tree-roosting species may roost in the woodlands on site and forage in the project site: greater western mastiff bat and western red bat.

Invertebrates

Monarch Butterfly

Within the project site, suitable habitat includes coast live oak woodland, mixed oak woodland, big sagebrush scrub (including disturbed), granitic chamise chaparral, montane buckwheat scrub (including disturbed), redshank chaparral, southern mixed chaparral, semi-desert chaparral (including rocky and disturbed), and scrub oak chaparral (including disturbed). Suitable mass roosting locations (e.g., eucalyptus groves) are not present. Eggs are laid on milkweed plants (genus *Asclepias*). This species was observed in the project site during 2011 focused Quino surveys, east of McCain Valley Road in scrub and chaparral habitats (Appendix 2.3-2); its location was not recorded.

Jurisdictional Wetlands/Waters

A wetland delineation and water mapping was conducted on the Rugged solar farm site. Wetland determinations were made at 21 data station sampling points (Appendix 2.3-2) to determine the status of three wetland criteria (vegetation, soils, and hydrology) within representative potential wetlands on site. In 2009, eight areas were sampled within the southern portion of Tule Creek on site; in 2012, eight additional areas were sampled, in 2013 five additional areas were sampled. The extent of wetland areas was determined by mapping the areas with similar vegetation and topography to sampled locations.

In general, areas supporting greater than 50% cover of Mexican rush, mulefat, or tamarisk were mapped as alkali meadow, mulefat scrub, or tamarisk scrub, respectively. The occurrences of these communities in the northern and northwestern portions of the Tule Creek do not support hydric soils or indicators of hydrology and/or are adjacent to the main flow path of the creek and were therefore mapped as CDFW/County jurisdiction (with the exception of tamarisk scrub which is CDFW jurisdiction only). Tamarisk meets CDFW's definition of riparian vegetation but does not meet the County's requirement for a predominance of hydrophytes (tamarisk is a phreatophyte – see discussion in Section 1.4.2.4.2). Further downstream, the cover of Mexican rush, mulefat, and/or tamarisk increases and additional hydrophytic species are found. These areas generally support all three wetland criteria and were therefore mapped as ACOE/CDFW/RWQCB/County jurisdiction. The exception to this are stands of disturbed mulefat scrub and tamarisk scrub. The disturbed mulefat scrub in this area does not support a predominance of hydrophytic vegetation, as required by the ACOE but does meet CDFW/County jurisdictional criteria. The tamarisk scrub in this area, with the exception of one polygon located in an area surrounded by alkali meadow (which is classified as ACOE/CDFW/RWQCB/County jurisdiction), does not support an understory of hydrophytes and is therefore classified as CDFW jurisdiction only.

Most of these communities along Tule Creek occur adjacent to non-native grassland that can sometimes support hydrophytic vegetation, hydric soils, or hydrology indicators. However, these adjacent non-native grassland areas do not support typical wetland plant species, such as rush, mulefat, and tamarisk, and therefore these areas function as grasslands as opposed to wetlands. Despite the presence of some wetland indicators, these areas have negligible biological function or value as wetlands and do not support wetland-dependent sensitive species. Therefore these areas do not meet CDFW or County wetland criteria.

Vegetation mapped on the project site includes communities that meet jurisdictional criteria by some or all of the regulatory agencies. These communities include alkali meadow and disturbed alkali meadow, mulefat scrub, disturbed mulefat scrub, mulefat/tamarisk scrub, and tamarisk scrub (Table 2.3-5). Additionally, several washes were mapped as non-vegetated channels, based on the presence and location of an OHWM, which would be regulated as non-wetland jurisdictional waters. Other narrow, non-vegetated waters of the United States/state, varying in width from 1 to 3 feet between the ordinary high water marks, have been mapped as an overlay to the vegetation classification.

Figure 2.3-14 shows the distribution of jurisdictional wetlands and non-wetland waters in the project area.

RPO Wetland Determination

The riparian habitats/wetlands mapped within the project meet the County's RPO wetland definition. These wetlands support hydrophytic vegetation (i.e., juncus) and are associated with stream channels. They form a nexus with other hydrological processes in the region and support important wetland features.

The riparian habitat mapped as alkali meadow supports Mexican rush and other hydrophytic vegetation, and has hydrology indicators; therefore this meadow meets the definition of an RPO wetland.

The riparian habitat mapped as disturbed mulefat scrub supports mulefat and other hydrophytic vegetation, has indicators of hydrology, and occurs near other wetland communities occur (i.e., alkali meadow); therefore, this habitat meets the definition of an RPO wetland.

The vegetation mapped as disturbed southern willow scrub is not associated with any stream channels or lakes, no hydrologic indicators were observed, and it is located in an otherwise upland area; therefore, it does not meet the definition of an RPO wetland.

The RPO determination for tamarisk scrub, as described in Section 2.3.1.2, consists of areas dominated by a phreatophyte but lacking a predominance of hydrophytic vegetation or hydric

soils and therefore does not meet the definition of an RPO wetland, with the exception of one polygon surrounded by alkali meadow that does have an understory of Mexican rush and therefore meets the definition of an RPO wetland.

The ephemeral stream channels and non-vegetated channels lack hydrophytic vegetation and hydric soils, and do not support substratum that is "predominately non-soil and such lands contribute substantially to the biological functions or values of wetlands in the drainage system." Therefore, they do not meet the definition of an RPO wetland.

The open water mapped on site does not have any associated streambeds or channels, but there is a pipe outlet that apparently provides hydrology to this depressional area. It is presumed that this area is an historical upland area that has been artificially manipulated to function as a stock pond. The RPO wetland exemption applies if it has the following characteristics:

i. Has negligible biological function or value as wetlands: The pond does not support any hydrophytic vegetation or provide watershed functions because it is man-made and not connected to other wetlands or waters.

ii. Is small and geographically isolated from other wetland systems: The pond is 0.2 acre and does not have any hydrologic connection to wetlands or waters.

iii. Is not a vernal pool: A botanical inventory of the project site has been completed and no vernal pool indicator species, as defined by ACOE (1997) were identified within the open water area, or within other portions of the project.

iv. Does not have substantial or locally important populations of wetland dependent sensitive species: No special-status species have been detected in this area; based on the lack of vegetation, species such as tricolored blackbird are not expected.

Therefore, this particular location is not an RPO wetland because it meets the exemption for areas which have wetland attributes solely due to man-made structures.

Hydrologic Context and Connectivity

The primary hydrologic feature within the project survey area is Tule Creek. Within the project area, Tule Creek is essentially a subsurface (or near surface) riverine feature that likely daylights only during rain events. Tule Creek bisects the project area and flows in a northwest to southeast orientation, supporting an active floodplain, which in turn promotes wetland hydrology development. Tule Creek's surface proximity and flow regime is a product and result of an alluvium overlaying fractured and decomposed granite (DG), which in turn overlays deep bedrock. The DG layer is pervious and allows groundwater to collect and be retained to the point

of subsurface flow while the bedrock layer creates an impervious surface that results in conditions similar to a perched water table.

Tule Creek on site drains to the southeast. Tule Lake is located approximately 1.8 miles downstream to the southeast from the portion of the project area that crosses Tule Creek. Tule Lake was not investigated to determine connectivity with downstream waters. It is presumed that Tule Lake does have downstream connectivity with Carrizo Creek, which is in turn presumed to have connectivity with the Salton Sea. The Salton Sea is considered a traditional navigable waters, and ACOE and RWQCB jurisdiction of waters within the study area is based on the presumed connectivity between waters on site and the Salton Sea. The actual extent of physical, chemical, and/or biological connectivity between these waters has not been determined.

RPO Wetland Buffer

As discussed previously, the RPO wetlands within the project area are located sporadically within the upper portion of Tule Creek on site and occupy more of the valley in the lower portion of Tule Creek. Most wetlands are classified as alkali meadow with other areas characterized by mulefat and tamarisk. These wetlands occur within a broad, flat valley that, overall, is dominated by annual non-native grassland. Tule Creek, within the project area, does not support significant populations of wetland-associated special-status species and does not support important or unique wildlife movement functions for wetland species or wildlife in general. The RPO wetlands occur in areas where slopes do not exceed 25% and where soils are not highly erosive. These wetlands occur in a broader valley that is dominated by annual (non-hydrophitic) grasslands. Furthermore, overall function and value of wetlands on site is low to moderate due to the limited habitat diversity, lack of channel topography, limited aquatic habitat, effects from cattle grazing, and public use. Finally, edges effect of current or future conditions are of relatively low intensity compared with urban or even rural residential land uses, and would not require a broad buffer. Given these factors, a 50-foot wetland buffer is considered adequate to protect RPO wetlands on site (Figure 2.3-14).

Habitat Connectivity and Wildlife Corridors

The project site is located within an area that is generally referred to as McCain Valley, located in the In-Ko-Pah Mountains region of southeastern San Diego County. These mountains have few dramatic peaks and are characterized by broad rolling upland areas of granite rock formations. The mountains are oriented generally northwest to southeast and rise gradually above the McCain Valley in the west and drop off into the Carrizo Canyon in the east.

Local wildlife movement in immediate the vicinity of the project area is currently constrained by existing transportation infrastructure. Specifically, movement is hindered by I-8 to the south and, to a much lesser degree, by McCain Valley Road through the eastern portion of the project area,

and by Ribbonwood Road through the western portion of the project area. As a major transportation corridor, I-8 can be a significant barrier to wildlife movement and source of mortality for large animals (CBI 2003). In contrast, the rural two-lane roads, McCain Valley Road and Ribbonwood Road, have low traffic densities and are much less of a risk and constraint to movement than I-8.

Some migrant birds species were observed on site, but the project site does not support the large abundance and diversity of birds observed in the Salton Sea area. Although the site supports a small (0.2 acre) pond, it lacks large bodies of water, wetlands, and agricultural areas that attract the large numbers of birds to the Salton Sea area. There are some other larger water bodies in the general region, however, that may attract migrating birds, including Tule Lake to the southwest, Lake Domingo about 5 miles south, and Cuyamaca Lake located approximately 30 miles northwest, as well as several other smaller reservoirs. Birds using these water bodies may fly over the project site but are less likely to land on the site.

Typical wildlife species expected to move across the project site include mule deer, mountain lion, bobcat (*Lynx rufus*), coyote, small mammals, reptiles, and birds. Winged wildlife such as birds and butterflies would be able to move freely over the entire site. In general, the project site does not support clearly definable wildlife corridors for the large mobile species (mule deer, mountain lion, bobcat, coyote), as indicated by prominent landscape features such as canyons or ridgelines or vegetative cover, such as woodland or riparian zones. The landscape in and around the project site is composed of relatively flat or gentle slopes where wildlife can move throughout and among a variety of habitats (approximately 70% scrub and chaparral) without constraint; i.e., wildlife movement is not limited to canyons or ridgelines. For the most part, the area in and around the project site is very similar with regard to vegetation communities and limited human disturbance. While existing movement is likely to be fairly unconstrained, there could be concentrations of movement within on-site drainages and on ridgelines, or wildlife may use some areas relatively more where higher cover is present, especially during the daytime. Some species may use areas with the least resistance (e.g., less expenditure of energy) such as dirt roads and game trails as long associated risks are low (e.g., vehicle collisions, predation). Figure 2.3-15 shows conceptual movement corridors that would follow topographic features (ridgelines, drainages, vegetation cover, and roads).

In conclusion, the entire area currently functions as a block of habitat and is not constrained to only function as a wildlife corridor between two larger blocks. The area is not readily identifiable as an existing wildlife corridor or habitat linkage, per se, to adjacent large habitat blocks because wildlife movement is not constrained or funneled through the project area by adjacent landscape constraints. Therefore, the designation of the project area as a specific habitat linkage is not appropriate. Rather, the site allows for a variety of wildlife movement opportunities and supports habitats and movement corridors that are similar to other sites within the region.

2.3.1.5 LanEast

Habitat Types/Vegetation Communities

As shown on Figure 2.3-4 and in Table 2.3-1, there are 15 vegetation communities or land covers mapped on LanEast solar farm site (Appendix 2.3-3). Native vegetation communities on site include big sagebrush scrub, red shank chaparral, semi-desert chaparral, upper Sonoran subshrub scrub, coast live oak woodland, mixed oak woodland, Engelmann oak woodland, wildflower field, alkali seep, freshwater seep, southern willow scrub, southern cottonwood–willow riparian forest, and non-vegetated channel. The non-native land cover types occurring within the project area are composed of disturbed habitat and developed land.

Flora

A total of 300 plant species have been recorded within, and adjacent to, the project area, with 260 species (87%) encountered considered native and the remaining 40 species (13%) considered nonnative and/or naturalized into the area[4] (Appendix 2.3-4).

Fauna

The majority of the project area ranges from moderate to high value for wildlife species. Scrub, chaparral, and oak woodland habitats within the project area provide foraging and nesting habitat for a variety of migratory and resident bird species, and other wildlife species. Wildflower field provides foraging habitat for a variety of raptor species. Rock outcroppings within the project also provide cover and foraging opportunities for a variety of wildlife species, including reptiles and mammals. Finally, wetland features within the project area provide habitat important to amphibian and invertebrate species.

A list of the wildlife species observed within and adjacent to the project area during focused Quino checkerspot butterfly surveys, vegetation mapping, and special-status plant surveys is provided in Appendix F of the BRR for the LanWest solar project[5] (Appendix 2.3-4).

[4] Per AECOM (Appendix 2.3-4): "The project area was initially part of a larger survey area that was separated into three separate projects (LanWest Solar LLC, LanEast Solar LLC, and Rugged Solar LLC). LanEast Solar LLC is located adjacent to the eastern boundary of LanWest). Rugged Solar LLC is located directly north of I-8. All three sites were surveyed concurrently. Therefore, Appendix D represents plant species detected for all project areas."

[5] Per AECOM (Appendix 2.3-4): "The project area was initially part of a larger survey area that was separated into three separate projects (LanWest Solar LLC, LanEast Solar LLC, and Rugged Solar LLC). LanEast Solar LLC is located adjacent to the Proposed Project (on the eastern boundary of LanWest). Rugged Solar LLC is located directly north of I-8. All three sites were surveyed concurrently. Therefore, Appendix F represents wildlife species detected for all project areas."

Special-Status Plant Species

Special-status plant species potentially occurring on the project site would be determined during focused surveys for special-status plants to be completed during processing of the necessary use permit for this project.

Critical Habitat

There is no USFWS-designated critical habitat for plant species within or near the project site (USFWS 2012).

Special-Status Wildlife Species

Special-status wildlife species occurring, or with the potential to occur, on the project site would be determined during focused surveys to be completed during processing of the necessary use permit for this project. Focused surveys for Quino checkerspot butterfly were conducted; none were observed on site.

Critical Habitat

USFWS-designated critical habitat for Peninsular bighorn sheep is located approximately 0.8 mile to the east of the LanEast solar farm site boundary (Figure 2.3-20), though unsuitable habitat occurs between this and the project site.

Jurisdictional Wetlands/Waters

A jurisdictional delineation has not yet been conducted for this site and will be conducted prior to construction. However, an RPO buffer of an appropriate width would be established around any identified riparian wetland to protect the functions and values of the wetland. Walker Creek crosses the project site and is considered an RPO wetland; this will be confirmed when a formal jurisdictional delineation is completed.

Habitat Connectivity and Wildlife Corridors

At a local level, the project site is part of a larger area of scattered rural residential uses and open space allowing relatively unconstrained wildlife movement. Based on the general openness of the vicinity and surrounding area, it functions as part of a much larger contiguous block of habitat for a variety of species. The project site supports foraging (e.g., wildflower fields) and cover (e.g., rock outcroppings, oak woodlands) habitat for migrating and resident wildlife species. Potential water sources for migrating or resident wildlife within and near the vicinity of the project area include several unnamed creeks, seeps, man-made ponds, and springs, and Tule Lake, located approximately 1 mile to the northeast. Thus, the project site and vicinity supports a variety of wildlife movement resources. (Appendix 2.3-4).

North/south wildlife movement is hindered to varying degrees by major roads within the project vicinity. Specifically, movement is constrained by I-8 to the north and to a lesser extent, by Old Highway 80 to the south. As a major transportation corridor, I-8 can be a significant barrier and source of mortality for large animals (CBI 2003, as cited in Appendix 2.3-4), though mule deer, coyotes, mountain lion, bobcats, and other species may cross under I-8 at McCain Valley Road when traffic allows. The activity patterns of deer, lion, and coyotes have been shown to occur when traffic volumes would be expected to be reduced (Clevenger 2013). The degree for which transportation corridors, including I-8 and Old Highway 80, constrain movement does, however, vary with the frequency of travel, number of available crossings, and the extent of directional fencing to guide wildlife toward crossings. As a rural, low-traffic road, Old Highway 80 represents less of a barrier to movement relative to the I-8 transportation corridor. Wildlife would be expected to prefer at-grade crossings along Old Highway 80 and make many more successful crossings as well. Dodd (2013) noted that terrestrial wildlife stop attempting at-grade crossings in Arizona above 10,000 vehicle daily trips. Additionally, constraints on movement vary by species. For instance, winged species (e.g., birds, butterflies) are more able to move freely across significant transportation barriers such as I-8 than large mammals. Nevertheless, the McCain Valley Road undercrossing, east of the project site, may be used by larger species to access areas north of I-8. Culverts located just east of the project site, between the project site and McCain Valley Road, may also provide safe passage to areas north of I-8 for some smaller species. Smaller species are able to utilize, and may prefer smaller culverts. Therefore, although movement is constrained, north/south movements may still occur (Appendix 2.3-4).

In contrast, there are few barriers to east/west movement in the local vicinity of the project site. Therefore, the project site may serve as an important area for locally dispersing wildlife and movements related to home range activities in the east/west direction. As discussed above, wildlife movement is currently hindered by existing transportation infrastructure to the north; while locally occurring species moving east/west between SR-94/Old Highway 80 and I-8 would potentially be funneled through the project site, it is likely that wildlife movement would not be constrained by SR-94/Old Highway 80 due to reduced traffic levels and a lack of fencing. As a rural, low-traffic road, SR-94/Old Highway 80 is not a significant barrier to movement, and east/west movement could continue to occur south of the project site. The presence of Walker Creek within the site does not make that route a focal wildlife movement corridor. While some species, such as bobcat, may typically prefer to use wooded creeks (Cramer 2013), Walker Creek is fairly open through the site and would not be expected to be preferred due to provision of enhanced cover. Walker Creek appears to be dry for most of the year. Walker Creek crosses under I-8 approximately 7,200 feet downstream of McCain Valley Road to the east, and aerials show that it roughly parallels the southern side of I-8 to the west for several miles. Walker Creek crosses under I-8 through box or pipe culverts, ranging from 6 to 8 feet in diameter. The culvert length would be approximately 300 feet long. Based on these dimensions, the openness ratios

would be in the range of 0.04 to 0.07 – very small ratios that indicate a perceptibly long and dark culvert. This would not be suitable for mule deer or mountain lions, and it is likely that this would be too small for coyote, though bobcat and smaller meso-predators might use it still.

In general, larger wildlife seek to use the most open paths for movement; this allows for less energetic cost when trying to get from point A to point B. There are approximately 3.7 miles of relatively open natural and exurban land available between I-8 and the U.S. Border fence at this location, which provides for abundant east/west movement. This is part of an estimated 48-mile wide block that reaches from the eastern part of metropolitan San Diego (Chula Vista area) to eastern San Diego County. This back country area stretches at least 58 miles to the northern San Diego County limit, and beyond, with the only moderately sized towns including Alpine and Ramona. While movement may be constrained at I-8, genetic flow likely does occur, but, no species would be expected to rely on crossing north through this project area.

In conclusion, the region south of I-8 primarily functions as a block of habitat and is not currently constrained to well-defined wildlife corridors between larger blocks. However, as stated above, locally occurring species moving northward could be directed east/west between SR-94/Old Highway 80 and I-8 and be funneled through the project site. However, the block of habitat with rural uses extends at least 3.7 miles to the south. Therefore, the designation of the project area as a specific habitat linkage is not appropriate. Based on this evaluation of habitat connectivity and wildlife corridor functions, the site does not support significant linkage or movement functions that would warrant designation of these areas as Sensitive Habitat Lands under RPO. Rather, the site allows for a variety of wildlife movement opportunities and supports habitats and movement corridors that are similar to other sites within the region (Appendix 2.3-4).

2.3.1.6 LanWest

Habitat Types/Vegetation Communities

As shown on Figure 2.3-3 and in Table 2.3-1, there are 11 vegetation communities or land covers mapped on LanWest solar farm site (Appendix 2.3-4). Native vegetation communities on site include southern willow scrub, non-vegetated channel, big sagebrush scrub, granitic chamise chaparral, red shank chaparral, semi-desert chaparral (including rocky), wildflower field, coast live oak woodland, and mixed oak woodland. The non-native, vegetation communities and land cover types occurring within the project area are composed of disturbed habitat.

Flora

A total of 300 plant species have been recorded within, and adjacent to, the project area, with 260 species (87%) encountered considered native and the remaining 40 species (13%) considered nonnative and/or naturalized into the area[6] (Appendix 2.3-4).

Fauna

The majority of the project area ranges from moderate to high value for wildlife species. Scrub, chaparral, and oak woodland habitats within the project area provide foraging and nesting habitat for a variety of migratory and resident bird species, and other wildlife species. Wildflower field provides foraging habitat for a variety of raptor species. Rock outcroppings within the project also provide cover and foraging opportunities for a variety of wildlife species, including reptiles and mammals. Finally, wetland features within the project area provide habitat important to amphibian and invertebrate species.

A list of the wildlife species observed within and adjacent to the project area during focused Quino checkerspot butterfly surveys, vegetation mapping, and special-status plant surveys is provided in Appendix F of the BRR for the LanWest solar project[7] (Appendix 2.3-4).

Special-Status Plant Species

Focused surveys for special-status plants were conducted for the LanWest solar project in 2011 by AECOM (Appendix 2.3-4). As described below, five special-status plant species were documented within the project area during 2011 rare plant surveys. Special-status plant species observed or potentially occurring in the project site are discussed below and listed in Appendix E of the BRR for the LanWest solar project (Appendix 2.3-4).

Critical Habitat

There is no USFWS-designated critical habitat for plant species within or near the project site (USFWS 2012).

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6 Per AECOM (Appendix 2.3-4): "The project area was initially part of a larger survey area that was separated into three separate projects (LanWest Solar LLC, LanEast Solar LLC, and Rugged Solar LLC). LanEast Solar LLC is located adjacent to the Proposed Project (on the eastern boundary of LanWest). Rugged Solar LLC is located directly north of I-8. All three sites were surveyed concurrently. Therefore, Appendix D represents plant species detected for all project areas."

7 Per AECOM (Appendix 2.3-4): "The project area was initially part of a larger survey area that was separated into three separate projects (LanWest Solar LLC, LanEast Solar LLC, and Rugged Solar LLC). LanEast Solar LLC is located adjacent to the Proposed Project (on the eastern boundary of LanWest). Rugged Solar LLC is located directly north of I-8. All three sites were surveyed concurrently. Therefore, Appendix F represents wildlife species detected for all project areas."

Jacumba Milk-Vetch

Numerous occurrences of Jacumba milk-vetch were documented within the project site during 2011 surveys (Appendix 2.3-4). These populations were most abundant on the northern portion of the project site (Figure 2.3-16). These populations occur within wildflower field, semi-desert chaparral, red shank chaparral, and big sagebrush scrub (including both disturbed and undisturbed habitat types). The largest populations on site occur within big sagebrush scrub and red shank chaparral.

Tecate Tarplant

Numerous occurrences of tecate tarplant were documented within the northern portion of the project site during 2011 surveys (Appendix 2.3-4). These populations were most abundant in the northwestern corner of the site inside and around a large wash (Figure 2.3-16). Populations of this species were detected in or around riparian communities, particularly in dry sandy washes classified as non-vegetated channels.

Desert Larkspur

Numerous occurrences of desert larkspur were documented within the project site during the 2011 surveys (Appendix 2.3-4). Populations of this species were most abundant on the northern portion of the site (Figure 2.3-16). These populations occur within semi-desert chaparral, semi-desert chaparral (rock outcrop), red shank chaparral, and big sagebrush scrub. The most abundant populations of desert larkspur within the project site were documented in semi-desert chaparral habitat.

Sticky Geraea

Numerous occurrences of sticky geraea were documented within the project site during 2011 surveys (Appendix 2.3-4). These populations occur within coast live oak woodland, semi-desert chaparral, red shank chaparral, granitic chamise chaparral, and big sagebrush scrub (Figure 2.3-16). These populations were most abundant on the northern portion of the site within big sagebrush scrub.

Desert Beauty

Numerous occurrences of desert beauty were documented within the project site during 2011 surveys (Appendix 2.3-4). These populations were most abundant on the northern portion of the site within semi-desert chaparral, semi-desert chaparral (rock outcrop) red shank chaparral, and big sagebrush scrub (Figure 2.3-16). The largest populations on site occur within big sagebrush scrub and red shank chaparral.

Special-Status Wildlife Species

Five special-status wildlife species have the potential to occur on the project site. Special-status wildlife species known to occur in the surrounding region and their potential to occur on site are presented in Appendix G of the BRR for the LanWest solar project (Appendix 2.3-4), and are discussed below.

Critical Habitat

There is no USFWS-designated critical habitat for wildlife within or near the project site (USFWS 2012).

County Group I Species

County Group I species that have been observed in the project site, or have high potential to occur, are described below.

Birds

Tricolored Blackbird

The tricolored blackbird was observed east of the project site during 2011 surveys (Appendix 2.3-4). There is moderate potential for the species to forage within wildflower field habitat of the project site.

Golden Eagle

No golden eagle nests were discovered within the site. It is also unlikely that eagles nest within 4,000 feet[8] of the project site. However, golden eagle territories are known to exist within 10 miles[9] of the project site. Big sagebrush scrub, disturbed big sagebrush scrub, granitic chamise chaparral, disturbed granitic chamise chaparral, semi-desert chaparral, semi-desert chaparral (rock), disturbed semi-desert chaparral, disturbed habitat, and wildflower field provide suitable foraging habitat for golden eagle within the Rugged site. These habitat types make up approximately 87% of the total acreage on site. Therefore, there is high potential for this species to forage within the site.

Swainson's Hawk

The Swainson's hawk was detected north of the project site during 2011 surveys (Appendix 2.3-4). However, as mentioned above, the species no longer nests in Southern California, including San Diego County. Therefore, this species is expected as an occasional and temporary visitor of the

[8] County guidelines (2010) require a 4,000-foot "no-disturbance zone" around eagle nest locations.
[9] USFWS (2010) recommends assessing golden eagle use on and within a 10-mile perimeter of a project footprint.

project site. There is moderate potential for the species to use the project site as stopover habitat during annual migration from wintering habitat in South America to suitable breeding areas in western North America.

Northern Harrier

The northern harrier was documented east of the project site during 2011 surveys (Appendix 2.3-4). However, the species is only expected as a winter visitor in wildflower field habitat and the more open areas of scrub and chaparral communities on-site; breeding within the project site is unlikely.

Loggerhead Shrike

The loggerhead shrike was documented east of the project site during 2011 surveys (Appendix 2.3-4). There is high potential for the species to nest and forage within big sagebrush scrub and chaparral habitat of the project site.

County Group II Species

County Group II species that have been observed in the project site, or have high potential to occur, are described below.

Amphibians and Reptiles

Orange-Throated Whiptail

While the project site is near the elevational limit of the orange-throated whiptail's distribution, the species was observed north of the project site during 2011 surveys (Appendix 2.3-4). Therefore, there is high potential for the species to occur within the project site.

Coastal Western Whiptail

Within the project site, coastal western whiptail observations were made in the northern portion of the site within semi-desert chaparral and big sagebrush scrub habitats (see Appendix 2.3-4 and Figure 2.3-17).

Blaineville's Horned Lizard

A single Blaineville's horned lizard[10] was observed once within the project site during 2011 surveys (see Appendix 2.3-4 and Figure 2.3-17). The individual was observed on an access road within semi-desert chaparral.

[10] This is referred to as coast horned lizard (*Phrynosoma coronatum blainevillii*) in the BRR for LanWest solar project (Appendix 2.3-4).

Birds

Yellow Warbler

The yellow warbler was detected east of the project site during 2011 surveys. In addition, suitable breeding habitat was found south of the project site. Although suitable breeding habitat is limited on site, there is high potential for the species to use the project site as foraging or dispersal habitat.

Mammals

San Diego Black-Tailed Jackrabbit

Nine observations of this species were recorded within scrub and chaparral habitats in the central and northern portions of the project site (see Appendix 2.3-4 and Figure 2.3-17).

Mule Deer

No southern mule deer were observed; however, mule deer tracks were observed in the northwestern portion of the project site, along a small trail in semi-desert chaparral (see Appendix 2.3-4 and Figure 2.3-17).

Mountain Lion

Mountain lion scat was observed in the northern portion of the project site, along the edge of a sandy wash (see Appendix 2.3-4 and Figure 2.3-17).

Ringtail

As described above, this species is usually not found more than 0.6 mile from a permanent water source. Suitable habitat is present within the project site, including rock outcroppings. However, the nearest permanent water source is approximately 1.05 miles from the project site (Tule Lake). Therefore, there is only moderate potential for the species to occur within the project site (Appendix 2.3-4).

Northwestern San Diego Pocket Mouse

Potentially suitable habitat for the species exists within the rocky and open areas associated with the wildflower field, scrub, and chaparral habitats of the project site (Appendix 2.3-4).

American Badger

Potentially suitable habitat for the American badger was found within the level, open areas of scrub, chaparral, and wildflower field habitats associated with the project site (Appendix 2.3-4).

Special-Status Bats

There is potentially suitable roosting habitat for pallid bat within rock outcroppings associated with the semi-desert chaparral habitat in the project site. In addition, wildflower field and shrub habitats within the project site provide potentially suitable foraging habitat for the species. Oak woodland and wetland habitats within the project site have the potential to support foraging Townsend's big-eared bats. Potentially suitable roosting habitat for greater western mastiff bat is present within rock outcroppings associated with the semi-desert chaparral habitat in the project site. In addition, wildflower field and shrub habitats within the project site provide potentially suitable foraging habitat for the species. Potentially suitable roosting habitat for the western red bat is present within oak woodland habitats associated with the project site. In addition, wildflower field, shrub, and woodland habitats within the project site provide potentially suitable foraging habitat for the species.

Jurisdictional Wetlands/Waters

The extent and distribution of the potential jurisdictional waters of the United States and state within the project site is approximately 0.93 acre (Table 2.3-6, Figure 2.3-18, and Appendix 2.3-4). A portion of Walker Creek crosses the project site and is considered an RPO wetland.

Hydrologic Context and Connectivity

The project area is populated by two small (and limited) unvegetated ephemeral dry washes (or drainage features) that both transition and convert into swale features near their terminuses (Appendix 2.3-4). Although these unvegetated ephemeral dry washes do not exceed 1,300 linear feet in length (before transitioning into swales and/or swale complexes), they are the major aquatic features occurring within the project area. Although small and limited, these ephemeral channels can be classified as single-thread, discontinuous ephemeral streams (Appendix 2.3-4).

RPO Wetland Buffer

A 50-foot wetland buffer is proposed around the riparian wetland (vegetated swale) in the southern portion of the project site to protect the functions and values of this existing wetland (Figure 2.3-18) (Appendix 2.3-4). Based on County guidelines, buffer widths shall be 50 to 200 feet from the edge of the wetland as appropriate. The vegetated swale on site parallels Old Highway 80, functions as a roadside ditch, and is essentially a terminus of a more developed unvegetated ephemeral wash feature occurring upstream. The swale is vegetated with southern willow scrub. A 50-foot buffer is appropriate due to the location, next to a road, and low quality of the wetland feature.

Habitat Connectivity and Wildlife Corridors

At a local level, the project site is part of a larger area of scattered rural residential uses and open space allowing relatively unconstrained wildlife movement. Based on the general openness of the vicinity and surrounding area, it functions as part of a much larger contiguous block of habitat for a variety of species. The project site supports foraging (e.g., wildflower fields) and cover (e.g., rock outcroppings, oak woodlands) habitat for migrating and resident wildlife species. Potential water sources for migrating or resident wildlife within and near the vicinity of the project area include several unnamed creeks, seeps, manmade ponds, and springs, and Tule Lake, located approximately 1 mile to the northeast. Thus, the project site and vicinity supports a variety of wildlife movement resources (see Appendix 2.3-..).

North/south wildlife movement is hindered to varying degrees by major roads within the project vicinity. Specifically, movement is constrained by I-8 to the north and, to a lesser extent, Old Highway 80 to the south. As a major transportation corridor, I-8 can be a significant barrier and source of mortality for large animals (CBI 2003, as cited in Appendix 2.3-4), though mule deer, coyotes, mountain lion, bobcats, and other species may cross under I-8 at McCain Valley Road when traffic allows. The activity patterns of deer, lion, and coyotes have been shown to occur when traffic volumes would be expected to be reduced (Clevenger 2013). The degree for which transportation corridors, including I-8 and Old Highway 80, constrain movement does, however, vary with the frequency of travel, number of available crossings, and the extent of directional fencing to guide wildlife toward crossings. As a rural, low-traffic road, Old Highway 80 represents less of a barrier to movement relative to the I-8 transportation corridor. Wildlife would be expected to prefer at-grade crossings along Old Highway 80 and make many more successful crossings as well. Dodd (2013) noted that terrestrial wildlife stop attempting at-grade crossings in Arizona above 10,000 vehicle daily trips. Additionally, constraints on movement vary by species. For instance, winged species (e.g., birds, butterflies) are more able to move freely across significant transportation barriers such as I-8 than large mammals. Nevertheless, the McCain Valley Road undercrossing, east of the project site, may be used by larger species to access areas north of I-8. Culverts located just east of the project site, between the project site and McCain Valley Road, may also provide safe passage to areas north of I-8 for some smaller species. Smaller species are able to utilize, and may prefer smaller culverts. Therefore, although movement is constrained, north/south movements may still occur (Figure 2.3-19). (See Appendix 2.3-4.)

In contrast, there are few barriers to east/west movement in the local vicinity of the project site. Therefore, the project site may serve as an important area for locally dispersing wildlife and movements related to home range activities in the east/west direction. Additionally, as discussed above, wildlife movement is currently hindered by existing transportation infrastructure; therefore, locally occurring species moving east/west between SR-94/Old Highway 80 and I-8

would potentially be funneled through the project site. However, as a rural, low-traffic road, SR-94/Old Highway 80 is not a significant barrier to movement and east/west movement also continues to occur south of the project site see Appendix 2.3-4).

2.3.2 Regulatory Setting

2.3.2.1 Federal Regulations

Federal Endangered Species Act

The federal Endangered Species Act (FESA) designates threatened and endangered animals and plant species and provides measures for their protection and recovery. Under FESA, "take" of listed animal and plant species in areas under federal jurisdiction is prohibited without obtaining a federal permit. FESA 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 FESA 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. FESA Sections 7 and 10 provide two pathways for obtaining permission to take listed species.

Under Section 7 of FESA, 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 FESA, 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 FESA 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 (NPDES) Permit. The CWA, Section 402, requires a NPDES Permit for the discharge of stormwater from municipal separate storm sewer systems (MS4) 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)[11] to include navigable waters; perennial and intermittent streams, lakes, rivers, ponds; as well as wetlands,

[11] 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.

marshes, and wet meadows. Specifically, Section 328.3(a) defines "waters of the United States" as follows:

1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
2. All interstate waters, including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce including any such waters:
    a. Which are or could be used by interstate or foreign travelers for recreational or other purposes;
    b. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
    c. Which are or could be used for industrial purpose by industries in interstate commerce;
4. All impoundments of waters otherwise defined as waters of the United States under the definition;
5. Tributaries of waters identified in paragraphs (a)(1) through (4) of this section;
6. The territorial seas; and
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a)(1) through (6) of this section.
8. Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 123.11(m) which also meet the criteria of this definition) are not waters of the United States.
9. Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of CWA, the final authority regarding CWA jurisdiction remains with the EPA.

The lateral limits of the ACOE's CWA Section 404 jurisdiction in non-tidal waters are defined by the "ordinary high water mark" (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.

Executive Order 11990 Protection of Wetlands

Executive Order 11990 states that measures should be taken to "avoid to the extent possible the long- and short-term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative."

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 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.

2.3.2.2 State Regulations

California Endangered Species Act

CDFW administers CESA (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 (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, Peninsular bighorn sheep, ringtail, and golden eagle. In 2012, legislation (SB 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 (NPPA) 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 NPPA 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 NPPA, enhanced legal protection for plants, and created the categories of "threatened" and "endangered" species to parallel FESA. 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 NPPA 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 waterbodies 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.

2.3.2.3 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 (i.e., avoidance of oaks, etc.).

County of San Diego Zoning Ordinance

Land may also have a zoning designation or Special Area Regulation with certain restrictions pursuant to the Zoning Ordinance. For instance, lands may have a zoning designation of S81 Ecological Resource Area Regulations. The few uses allowed on lands with this designation are subject to strict provisions and limitations. The Zoning Ordinance also applies other Special Area Regulations with specific restrictions and provisions, including designator G (Sensitive Resource), R (Coastal Resource Protection Area) and/or V (Vernal Pool Area).

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 Wetlands

The RPO, Section 86.602(p), defines wetlands as (County of San Diego 2007):

Lands having one or more of the following attributes:

- At least periodically, the land supports a predominance of hydrophytes (plants whose habitat is water or very wet places);
- The substratum is predominantly undrained hydric soil; or
- An ephemeral or perennial stream is present, whose substratum is predominately non-soil, and such lands contribute substantially to the biological functions or values of wetlands in the drainage system.

Wetlands are not lands which have the attributes specified above solely due to man-made structures (e.g., culverts, ditches, road crossings, or agricultural ponds), provided that the Director of Planning and Development Services determines that they:

- Have negligible biological function or value as wetlands even if restored to the extent feasible; and,
- Do not have substantial or locally important populations of wetland dependent sensitive species.

Lands are also not considered wetland if they have been degraded by past legal land disturbance activities, to the point that they meet the following criteria as determined by the Director of Planning and Development Services:

- Have negligible biological function or value as wetlands;
- Are small and geographically isolated from other wetland systems;
- Are not vernal pools; and,
- Do not have substantial or locally important populations of wetland dependent sensitive species.

According to Sec. 86.604, the RPO restricts specific development on wetlands to include aquaculture; scientific research and educational or recreational uses; wetland creation and habitat restoration. In addition, the ordinance requires that a wetland buffer be provided to further protect the wetland resources. Improvements necessary to protect the adjacent wetlands and those uses allowed within the actual wetland are the only allowed uses within the buffer. Section 86.604 goes on to specify, "There must be no net loss of wetlands and any impacts to wetlands shall be mitigated at a minimum ratio of 3:1" (County of San Diego 2007).

RPO Sensitive Habitat Lands

The RPO, Section 86.602(p), defines Sensitive Habitat Lands as (County of San Diego 2007):

> 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.

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).

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

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

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

Requirements in the Watershed Protection, Stormwater Management, and Discharge Control Ordinance are intended to (1) prohibit polluted non-stormwater discharges to the stormwater conveyance system and receiving waters, (2) establish requirements to prevent and reduce pollution to water resources, (3) establish requirements for development project site design to reduce stormwater pollution and erosion, (4) establish requirements for the management of stormwater flows from development projects to prevent erosion and to protect and enhance existing water-dependent habitats, (5) establish standards for the use of off-site facilities for stormwater management to supplement on-site practices at new development sites, and (6) establish notice procedures and standards for adjusting stormwater and non-stormwater management requirements, where necessary.

2.3.3 Analysis of Project Effects and Determination as to Significance

The Proposed Project consists of four renewable energy solar farms in southeastern San Diego County. The following impact analysis has been separated into discussions for each of the four solar farms: Tierra del Sol, Rugged, LanEast, and LanWest, as well as a combined discussion of the Proposed Project as a whole. For the purposes of this Program EIR, the Tierra del Sol and Rugged solar farms are analyzed at a project level, whereas the LanEast and LanWest solar

farms are analyzed at a programmatic level as sufficient project-level data has not been developed at this time.

Definition of Impacts

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 where the limits of grading (associated with the trackers and inverter transformer units, collection system, operations and maintenance (O&M) buildings, and on-site substation) and fuel modification are proposed (i.e., Development Footprint). For the Tierra del Sol gen-tie alignment, direct impacts also include areas of vegetation removal where underground trenching will occur. Direct impacts were quantified by overlaying the limits of grading on geographic information system (GIS)-located 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 exotic 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 exotic plants compete for light, water, and nutrients and can create a thatch that blocks sunlight from reaching smaller native plants. Exotic 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 exotic, non-native 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 a shorter-than-natural fire return intervals, which can preclude recovery of the native vegetation between fires, weaken the ecological system, allow for invasion of exotic 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).

Collision or Electrocution. Presence of transmission lines may result in electrocution of, and/or collisions by, listed or special-status bird or bat species.

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"; these areas include RPO lands, including wetland buffers, and isolated pockets of open space.

2.3.3.1 Candidate, Sensitive, or Special-Status Species

Guidelines for the Determination of Significance

For the purpose of this EIR, the County's *Guidelines for Determining Significance and Report Format and Content Requirements: Biological Resources* (County of San Diego 2010) was used to evaluate direct, indirect, and cumulative impacts for each 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 I 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 II 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

Species	Breeding Season
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

Tierra del Sol

There are no federally listed or state-listed endangered or threatened species on the Tierra del Sol site. Focused protocol surveys were conducted for the federally listed endangered Quino checkerspot butterfly in 2012 and 2013. The survey areas contained a variety of potential Quino adult nectar plants; however, protocol surveys were negative. The nearest USFWS occurrence for Quino is located approximately 4 miles west of the project area (USFWS 2012). Based on the lack of records in the Tierra del Sol site and the negative survey results, Quino is not expected to occur in the project area; impacts would be **less than significant**.

Rugged

There are no federally listed or state-listed endangered or threatened species in the Rugged site. Protocol-level surveys were conducted for the federally listed endangered Quino checkerspot butterfly in 2011 based on the presence of suitable Quino habitat throughout the Rugged site. The survey areas contained a variety of potential Quino adult nectar plants; however, protocol surveys were negative. The nearest USFWS occurrence for Quino is located approximately 2.5 miles southwest of the project area (USFWS 2012). Based on the lack of records in the Rugged site and the negative survey results, Quino is not expected to occur in the Rugged site; impacts would be **less than significant**.

Swainson's hawk, state-listed threatened, was observed in the Rugged site; this species no longer nests in Southern California, including San Diego County, but could use the Rugged site during annual migration from wintering habitat in South America to suitable breeding areas in western North America. However, based on comparing data gathered in Borrego

Springs to data gathered in the project vicinity, far fewer Swainson's hawks use this area for migration purposes. Therefore, the site is not expected to be an important foraging location. Impacts would be **less than significant**.

LanEast

There are no federally listed or state-listed endangered or threatened species in the LanEast site. Protocol-level surveys were conducted for the federally listed endangered Quino checkerspot butterfly in 2012 based on the presence of suitable Quino habitat throughout the LanEast site. The survey areas contained a variety of potential Quino adult nectar plants; however, protocol surveys were negative. Therefore, impacts to Quino are not anticipated as a result of implementation of the LanEast solar farm; impacts would be **less than significant**.

Swainson's hawk, state-listed threatened, was observed in the LanEast site, but this species no longer nests in Southern California, including San Diego County, but could use the LanEast site during annual migration from wintering habitat in South America to suitable breeding areas in western North America. Nevertheless, because the species is highly mobile and only an occasional visitor to the LanEast site, development of the LanEast solar farm would result in **less-than-significant** impacts to the regional long-term survival of the species.

LanWest

The LanWest solar farm would not impact any federally listed species. As previously mentioned, focused protocol surveys were conducted for federally listed endangered Quino in 2011. No Quino were detected during these surveys. Although two small Quino host plant populations (dark-tip bird's beak [*Cordylanthus rigidus*]) were found in the LanWest site, the low abundance and late emergence of this species and the absence of other host plants (dotseed plantain [*Plantago erecta*], Coulter's snapdragon [*Antirrhinum coulterianum*], and southern Chinese houses [*Collinsia concolor*]) substantially diminish the potential of host resources to support a Quino population in the project area. Therefore, impacts to Quino are not anticipated as a result of implementation of the LanWest solar farm; impacts would be **less than significant**.

The Swainson's hawk, state-listed threatened, was determined to have high potential to occur within the LanWest site as a visiting migrant. The species is not known to nest in San Diego County and winters in South America. The species may, however, use the LanWest site as stopover habitat during migration. Nevertheless, because the species is highly mobile and only an occasional visitor to the project area, development of the LanWest solar farm would not impact the regional long-term survival of the species; impacts would be **less than significant**.

Project Effects Relevant to Guideline B

Tierra del Sol

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

Three County List A plant species would be directly impacted by the Tierra del Sol project—Tecate tarplant, Tecate cypress, and Jacumba milk-vetch—and two County List B plant species would be directly impacted by the Tierra del Sol project—desert beauty and sticky geraea. Figure 2.3-21 shows the Tierra del Sol solar farm impacts to County List A and B plant species on the solar farm site. Jacumba milk-vetch, desert beauty, sticky geraea, and Tecate tarplant have been recorded at the gen-tie alignment site; however, Tecate tarplant will not be impacted by the gen-tie alignment.

Short-term, construction-related, or temporary direct impacts to County List A and B plant species on site would primarily result from construction activities. Clearing, trampling, or grading of special-status plants outside designated construction zones could result from implementation of the Proposed Project. These potential effects could damage individual plants and alter their ecosystem, creating gaps in vegetation that allow exotic, non-native plant species to become established, thus increasing soil compaction and leading to soil erosion. The above listed County List A and B plant species detected on site could be impacted by potential temporary direct impacts, resulting in a **potentially significant impact** (**BI-TDS-1**).

Long-term, or permanent, direct impacts to special-status plant species were quantified by comparing the impact footprint with the occurrence data for each special-status plant species.

County List A Species: Approximately 2,762 individuals of Tecate tarplant (89% of the on-site individuals), a County List A species with a California Rare Plant Rank (CRPR) 1B.2, would be directly impacted by the Tierra del Sol solar farm. No individuals of Tecate tarplant (0%) would be directly impacted by the gen-tie alignment. Approximately 315 individuals of Jacumba milk-vetch (100% of the on-site individuals), a County List A species with a CRPR 1B.2, would be directly impacted by the Tierra del Sol solar farm. An additional 27–150 individuals of Jacumba milk-vetch (11% of the on-site individuals) would be directly impacted by the gen-tie alignment. Additionally, within a landscaped area, 19 individuals of Tecate cypress, a County List A species with a CRPR 1B.2, would be directly impacted by the Tierra del Sol solar farm. No individuals were detected on the gen-tie alignment site. **County List B Species:** Approximately 727 individuals, the entire population of desert beauty, a County List B species with a CRPR 2.3, would be directly impacted by the Tierra del Sol solar farm. Approximately 84–600 individuals of desert beauty (13%–19% of the on-site individuals) would be directly impacted by the gen-tie alignment.

Approximately 274 individuals, the entire population of sticky geraea, a County List B species with a CRPR 2.3, would be directly impacted by the Tierra del Sol solar farm. Approximately 11–50 individuals of sticky geraea (21% of the on-site individuals) would be directly impacted by the gen-tie alignment. Long-term, direct impacts to County List A and B species, including Tecate tarplant, desert beauty, Jacumba milk-vetch, and sticky geraea would be a **potentially significant** impact (**BI-TDS-2**). Long-term, direct impacts to Tecate cypress would not be considered significant because Tecate cypress on the project site are of a single age class, appear to have been planted, and do not appear to naturally occur in the area. Table 2.3-7 summarizes the proposed direct impacts of the Tierra del Sol solar farm and gen-tie alignment to County List A and B Species and the significance of the impacts prior to mitigation.

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

Seven County Group I and/or state SSC animal species were detected within the project area during 2011/2012 surveys: Blainville's horned lizard, Cooper's hawk, Bell's sage sparrow, turkey vulture, loggerhead shrike, San Diego black-tailed jackrabbit (*Lepus californica bennettii*), and San Diego desert woodrat . Figure 2.3-22 shows the Tierra del Sol solar farm impacts in relation to the special-status wildlife observations mapped on site.

In addition, two County Group I and/or state SSC wildlife species have high potential to occur within the project area: northern red-diamond rattlesnake and Belding's orange-throated whiptail (*Aspidoscelis hyperythra beldingi*).

The following County Group I and/or state SSC wildlife species have a high potential to forage in the project area, but not nest or roost: golden eagle and prairie falcon . Suitable foraging habitat for golden eagle is described in Section 2.3.1.3; there are impacts to approximately 68 acres of suitable foraging habitat for golden eagle.

Short-term or temporary direct impacts to special-status wildlife species (County Group I or state SSC animals) including individual amphibians, reptiles, and small mammals would primarily result from construction activities. Clearing, trampling, or grading of vegetation communities could reduce suitable habitat for wildlife species and alter their ecosystem, thus creating gaps in vegetation that allow exotic, non-native plant species to become established. Temporary, direct impacts to suitable habitat for special-status wildlife species on site would be **potentially significant** (**BI-TDS-3**).

Construction-related impacts could result in the loss of active nests and/or young during vegetation clearing activities for Cooper's hawk, Bell's sage sparrow, and loggerhead shrike and would be **potentially significant** (**BI-TDS-4**). Because golden eagle, turkey vulture, and prairie falcon are not expected to nest in the project area, no loss of individual birds as a result of construction-related impacts are anticipated. Additionally, no loss of raptors is anticipated as a result of

helicopter activities during construction and maintenance with implementation of the helicopter noise control plan (**PDF-N-2** and **PDF-N-5**), which shall include provisions for the Project Biologist to accompany all flights to keep a lookout for birds to prevent collisions.

Long-term or permanent direct impacts to special-status wildlife species were quantified by comparing the impact footprint with suitable habitat for wildlife species. Loss of suitable nesting/foraging habitat is considered a **significant** impact (**BI-TDS-5**). Impacts to suitable habitat for County Group I or State SSC species, as a result of implementation of the Tierra del Sol solar farm are shown in Table 2.3-8. Impacts resulting from implementation of the Tierra del Sol gen-tie alignment are not included in the table below. Direct impacts to special-status wildlife species as a result of the gen-tie alignment are small in scope, occur along a linear alignment and are not anticipated to result in the direct loss of species.

Rugged

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

Two County List A plant species would be directly impacted by the Rugged solar farm—Jacumba milk-vetch and Tecate tarplant—and two County List B plant species would be directly impacted by the Rugged solar farm—sticky geraea and desert beauty. Figure 2.3-23 shows the Rugged solar farm impacts to County List A and B plant species on site.

Short-term, construction-related, or temporary direct impacts to County List A and B plant species on site would primarily result from construction activities. Clearing, trampling, or grading of special-status plants could occur. These potential effects could damage individual plants and alter their ecosystem, creating gaps in vegetation that allow exotic, non-native plant species to become established, thus increasing soil compaction and leading to soil erosion. Potential temporary direct impacts to County List A and B plant species on site would be **significant** (**BI-R-1**).

County List A Species: Approximately 66–480 individuals of Jacumba milk-vetch (62% to 63% of the on-site individuals), a County List A species with a CRPR 1B.2, would be directly impacted by the Rugged solar farm. Approximately 20 individuals of Jacumba milk-vetch are located within the proposed off-site access road footprint. Impacts to County List A plant species would be considered **significant** (**BI-R-2**).

Additionally, approximately 1 to 10 individuals of Tecate tarplant (less than 1% of the on-site individuals), a County List A species with a CRPR 1B.2, would be directly impacted by the Rugged solar farm. This proposed impact would be not be considered significant because the loss of less than 1% of the total on-site population is negligible and would not have a substantial

adverse effect on the local long-term survival of that plant or animal taxon on site or in the region. No special-status plant species occur within the off-site access road.

County List B Species: Approximately 161 to 690 individuals of sticky geraea (*Geraea viscida*) (53% to 57% of the on-site individuals), a County List B species with a CRPR 2.3, would be directly impacted by the Rugged solar farm.

Additionally, approximately 414 to 1,820 individuals of desert beauty (35% to 48% of the on-site individuals), a County List B species with a CRPR 2.3, would be directly impacted by the Rugged solar farm. Impacts to both sticky geraea and desert beauty would be considered **significant** (**BI-R-3**). No special-status plant species occur within the off-site access road.

Table 2.3-9 summarizes the proposed direct impacts to County List A and B Species and the significance of the impacts prior to mitigation.

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

Loss of special-status wildlife species (County Group I or state SSC animals) including individual amphibian, reptiles, and small mammals from construction-related activities would be considered significant (**BI-R-4**). Construction activities also have the potential to result in short-term, direct impacts to active nests or young of nesting special-status wildlife species (**BI-R-5**).

Ten County Group I and/or state SSC animal species were detected within the project area during 2011 surveys (Appendix 2.3-3): Belding's orange-throated whiptail, Blainville's horned lizard, Cooper's hawk, Bell's sage sparrow, Swainson's hawk, turkey vulture, northern harrier, prairie falcon, loggerhead shrike, and San Diego black-tailed jackrabbit. Figure 2.3-24 shows the Rugged solar farm impacts in relation to the special-status wildlife observations mapped on site.

In addition, 10 County Group I and/or state SSC wildlife species have high potential to occur within the project area: western spadefoot, northern red-diamond rattlesnake, Coronado skink, coast patch-nosed snake, two-striped gartersnake, Southern California rufous-crowned sparrow, red-shouldered hawk, Dulzura pocket mouse, northwestern San Diego pocket mouse, and San Diego desert woodrat.

The following nine County Group I and/or state SSC wildlife species have high potential to forage in the project area, but not nest/roost: tricolored blackbird, golden eagle, Mexican long-tongued bat, Townsend's big-eared bat, spotted bat, greater western mastiff bat, western red bat, California leaf-nosed bat, and big free-tailed bat. Suitable foraging habitat for golden eagle is described in Section 2.3.1.4; there are impacts to approximately 274 acres of suitable foraging habitat for golden eagle.

Potential permanent direct impacts to the wildlife species described previously, including removal of suitable nesting and/or foraging habitat, are summarized in Table 2.3-10 below for both on-site impacts and off-site access roads. Loss of suitable nesting/foraging habitat is considered a significant impact (**BI-R-6**). While Swainson's hawk was detected in the project area, this species no longer nests in Southern California, including San Diego County, but could use the project area during annual migration. However, based on a comparison of data from Borrego Springs to sites in the vicinity, far fewer migrate over the area and the site does not appear to be an important migration area. Due to the low expected use of the project area by Swainson's hawk, direct impacts to potential stopover habitat are **less than significant**.

LanEast

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

Although focused surveys for special-status plant species have not been conducted for the LanEast solar farm, based on focused surveys for the other three projects, there is a potential for special-status plant species to occur within project area. Short-term, construction-related, or temporary direct impacts to special-status plants would primarily result from construction activities. Clearing, trampling, or grading of special-status plants could occur. These potential effects could damage individual plants and alter their ecosystem, creating gaps in vegetation that allow exotic, non-native plant species to become established, thus increasing soil compaction and leading to soil erosion. Potential temporary direct impacts to all special-status plant species on site would be **significant** (**BI-LE-1**).

Surveys would be conducted to locate special-status plant species on-site and determine potential impacts (quantified by comparing the impact footprint with the occurrence data for each special-status plant species) during processing of the necessary use permit for this project. All direct impacts to special-status plant species may impact the survival of the local population and would be considered **significant** (**BI-LE-2**).

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

Focused surveys for special-status wildlife species have not been conducted on the project site; however, based on focused surveys for the other three projects, there is a potential for special-status wildlife species to occur within the project area.

Short-term, construction-related, or temporary direct impacts to special-status wildlife species would primarily result from construction activities. Clearing, trampling, or grading of vegetation communities could occur. These potential effects could reduce suitable habitat for wildlife species and alter their ecosystem, thus creating gaps in vegetation that allow exotic, non-native

plant species to become established. Potential temporary direct impacts to suitable habitat for special-status wildlife species on site would be **significant** (**BI-LE-3**).

Permanent, direct impacts to special-status wildlife species would include destruction of breeding and foraging habitat associated with the Proposed Project (i.e., solar trackers, fencing, utility poles)The federally listed endangered Quino was not detected during focused protocol surveys. Surveys would be conducted to locate special-status wildlife species and determine potential impacts (quantified by comparing the impact footprint with the occurrence data for each species) during processing of the necessary use permit for this project. Permanent, direct impacts to special-status wildlife species would be s**ignificant** (**BI-LE-4**).

LanWest

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

Two County Group A plant species (Jacumba milk-vetch and Tecate tarplant) and two County Group B plant species (sticky geraea and desert beauty) were detected within the project area. In addition, two County Group A plant species (California hulsea and southern jewelflower) and one County Group B plant species (slender–leaved ipomopsis) were determined to have high potential to occur within the project area.

Short-term, construction-related, or temporary direct impacts to County List A and B plant species on site would primarily result from construction activities. Clearing, trampling, or grading of special-status plants could occur. These potential effects could damage individual plants and alter their ecosystem, creating gaps in vegetation that allow exotic, non-native plant species to become established, thus increasing soil compaction and leading to soil erosion. Potential temporary direct impacts to special-status plant species on site would be **significant** (**BI-LW-1**).

Direct impacts to special-status plant species would result from the permanent removal of habitat and may impact the survival of the local population; direct impacts would be considered **significant** (**BI-LW-2**).

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

No County Group I animal species were detected within the project area during 2011 surveys. However, two species listed as state SSC were detected within the project area during 2011 surveys: coast horned lizard and San Diego black-tailed jackrabbit. Both species are listed as a County Group II species. In addition, 12 County Group I and/or state SSC wildlife species have high potential to occur within the project area: Belding's orange-throated whiptail, Cooper's hawk, tricolored blackbird, Bell's sage sparrow, golden eagle, Swainson's hawk, turkey vulture, northern harrier, yellow warbler, prairie falcon, loggerhead shrike, and northwestern San Diego pocket mouse.

Further, eight County Group I and/or state SSC wildlife species have moderate potential to occur within the project area: sharp-shinned hawk, red-shouldered hawk, Lewis' woodpecker, pallid bat, Townsend's big-eared bat, greater western mastiff bat, western red bat, and American badger.

Short-term, construction-related, or temporary direct impacts to special-status wildlife species would primarily result from construction activities. Clearing, trampling, or grading of vegetation communities could occur. These potential effects could reduce suitable habitat for wildlife species and alter their ecosystem, thus creating gaps in vegetation that allow exotic, non-native plant species to become established. Potential temporary direct impacts to suitable habitat for special-status wildlife species on site would be **significant** (**BI-LW-3**).

Permanent, direct impacts to special-status wildlife species would include destruction of breeding and foraging habitat associated with the Proposed Project (i.e., solar trackers, fencing, utility poles). Surveys would be conducted to locate special-status wildlife species and determine potential impacts (quantified by comparing the impact footprint with the occurrence data for each species) during processing of the necessary use permit for this project. Permanent, direct impacts to special-status wildlife species would be **significant** (**BI-LW-4**).

Project Effects Relevant to Guideline C

Tierra del Sol

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

There will be no direct impacts to County List C plant species resulting from implementation of the Tierra del Sol solar farm.

One County List D plant species would be directly impacted by the Tierra del Sol project: pride-of-California (*Lathyrus splendens*). Figure 2.3-21 shows the Tierra del Sol impacts to County List D plant species on the solar farm site.

More specifically, approximately four individuals of pride-of-California (100% of the on-site individuals), CRPR 4.3, would be directly impacted by the Tierra del Sol solar farm. Pride-of California would not be directly impacted by the gen-tie alignment. These proposed impacts to County List D species would not be considered significant because, based on the species CRPR of 4.3, the species is of limited distribution but not considered rare (CNPS 2012); potential impacts would be mitigated through the vegetation based mitigation proposed for the Tierra del Sol project. Therefore, impacts will not substantially affect long-term survival or the species. Impacts to County List C and D plant species would be **less than significant**.

Special-Status Wildlife Species (County Group II)

County Group II special-status wildlife species that were observed either directly or indirectly (i.e., scat, tracks) within the project area include western bluebird (*Sialia mexicana*) and southern mule deer (*Odocoileus hemionus fuliginata*). Figure 2.3-22 shows the Tierra del Sol solar farm impacts in relation to the special-status wildlife observations mapped on site. Two additional Group II species were observed but are analyzed above because they are state SSC animals: Blainville's horned lizard and San Diego black-tailed jackrabbit.

The following additional County Group II wildlife species have high potential to occur within the project area: coastal western whiptail (*Aspidoscelis tigris stejnegeri*) and rosy boa. Two additional Group II species have high potential to occur but are analyzed above because they are state SSC animals: Belding's orange-throated whiptail and northern red-diamond rattlesnake.

Loss of the rosy boa from construction-related activities would be considered **significant** (**BI-TDS-6**). The potential loss of other County Group II special-status wildlife that are not state SSC animals from construction-related activities is considered less than significant due either to their regional widespread presence or the project area's relative importance to the species. These species occur within a variety of habitats and through a wide geographic, topographic, and elevational range of which there is an abundance in the region. Additionally, if any active nests or young of nesting special-status bird species (County Group II) are impacted through direct grading, these impacts could be considered **significant** (**BI-TDS-7**), based on the MBTA.

Potential permanent direct impacts to suitable habitat for rosy boa could occur as a result of the Tierra del Sol project and would be considered a significant impact (**BI-TDS-8**). Potential permanent direct impacts to suitable habitat for western bluebird, southern mule deer, and coastal western whiptail are not significant due either to their widespread presence or the project area's relative importance to the species; potential impacts would be mitigated through the vegetation based mitigation proposed for the Tierra del Sol project.

Rugged

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

There will be no direct impacts to County List C plant species resulting from implementation of the Rugged solar farm.

Three County List D plant species would be directly impacted by the Rugged solar farm, including desert larkspur, and pride-of-California. The desert monkeyflower and Engelmann oak on site would be 100% avoided. Figure 2.3-23 shows the Rugged solar farm impacts to County List D plant species on site.

More specifically, approximately 118 to 470 individuals of desert larkspur (39% to 42% of the on-site individuals), CRPR 4.3, would be directly impacted by the Rugged solar farm. Additionally, approximately 4 to 40 individuals of pride-of-California (100% of the on-site individuals), CRPR 4.3, would be directly impacted by the Rugged solar farm. Impacts to County List D species would **not be considered significant** because the species is of limited distribution but not considered rare; potential impacts would be mitigated through the vegetation based mitigation proposed for the Rugged solar farm.

Special-Status Wildlife Species (County Group II)

Loss of individual special-status snakes (County Group II[12]), including the San Diego ringneck snake and rosy boa, from construction-related activities would be considered **significant** (**BI-R-7**). Loss of Group II special-status wildlife species that are not state SSC animals from construction-related activities is considered less than significant due to their regional widespread presence or the project area's relative lack of importance to the species. These species may occur within a variety of habitats or wide geographic, topographic, and elevational ranges of which there is an abundance in this region. Potential impacts would be mitigated through the vegetation-based mitigation proposed for the Rugged solar farm. Additionally, if any active nests or young of nesting special-status bird species (County Group II) are impacted through direct grading, these impacts would be considered **significant** (**BI-R-8**), based on the MBTA.

The following County Group II special-status wildlife species were observed either directly or indirectly (i.e., scat, tracks) within the project area: monarch butterfly, coastal western whiptail, California horned lark, and southern mule deer. Figure 2.3-24 shows the Rugged solar farm impacts in relation to the special-status wildlife observations mapped on site. Three additional Group II species were observed but are analyzed above because they are state SSC animals: Belding's orange-throated whiptail, Blainville's horned lizard, and San Diego black-tailed jackrabbit.

The following additional County Group II wildlife species have high potential to occur within the project area: San Diego ringneck snake, rosy boa, western bluebird, barn owl, and mountain lion. Fourteen additional Group II species have high potential to occur but are analyzed above because they are state SSC animals: western spadefoot, northern red-diamond rattlesnake, Coronado skink, coast patch-nosed snake, Dulzura pocket mouse, northwestern San Diego pocket mouse, San Diego desert woodrat, Mexican long-tongued bat, Townsend's big-eared bat, spotted bat, greater western mastiff bat, western red bat, California leaf-nosed bat, and big free-tailed bat.

[12] County Group II special-status wildlife species that are state SSC are addressed in Section 3.2.2.2, *Special-Status Wildlife (Group I).*

Potential permanent direct impacts to suitable habitat for monarch butterfly, coastal western whiptail, California horned lark, western bluebird, barn owl, mountain lion, and southern mule deer are not considered to be significant due to their widespread presence or the project area's relative importance to the species.

Potential permanent direct impacts to suitable habitat for San Diego ringneck snake and rosy boa could occur as a result of the Proposed Project. This impact would be considered a **significant** impact (**BI-R-9**).

LanEast

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

Although focused surveys for special-status plant species have not been conducted for the LanEast solar farm, based on focused surveys for the other three projects, there is a potential for special-status plant species to occur within project area. Short-term, construction-related, or temporary direct impacts to special-status plants would primarily result from construction activities. Clearing, trampling, or grading of special-status plants could occur. These potential effects could damage individual plants and alter their ecosystem, creating gaps in vegetation that allow exotic, non-native plant species to become established, thus increasing soil compaction and leading to soil erosion. Potential temporary direct impacts to all special-status plant species on site would be **significant** (**BI-LE-5**).

Surveys would be conducted to locate special-status plant species on-site and determine potential impacts (quantified by comparing the impact footprint with the occurrence data for each special-status plant species) during the processing of the necessary use permit for this project. Although C and D species are generally mitigated through the vegetation-based mitigation proposed for the project, any direct impacts to special-status plant species that may impact the survival of the local population and would be considered **significant** (**BI-LE-6**).

Special-Status Wildlife Species (County Group II)

Focused surveys for special-status wildlife species have not been conducted on the project site; however, based on focused surveys for the other three projects, there is a potential for special-status wildlife species to occur within project area.

Short-term, construction-related, or temporary direct impacts to special-status wildlife species would primarily result from construction activities. Clearing, trampling, or grading of vegetation communities could occur. These potential effects could reduce suitable habitat for wildlife species and alter their ecosystem, thus creating gaps in vegetation that allow exotic, non-native

plant species to become established. Potential temporary direct impacts to suitable habitat for special-status wildlife species on site would be **significant** (**BI-LE-7**).

Permanent, direct impacts to special-status wildlife species would include destruction of breeding and foraging habitat associated with the Proposed Project (i.e., solar trackers, fencing, utility poles). The federally listed endangered Quino was not detected during focused protocol surveys. Surveys would be conducted to locate special-status wildlife species and determine potential impacts (quantified by comparing the impact footprint with the occurrence data for each species) during processing of the necessary use permit for this project. Although County Group II species are generally mitigated through the vegetation-based mitigation proposed for the project, any permanent, direct impacts to special-status wildlife species would be **significant** (**BI-LE-8**).

LanWest

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

One County Group D plant species (desert larkspur) was detected within the project area. In addition, four County Group D plant species (Payson's jewelflower, Campo pea (Lathyrus splendens), desert monkeyflower, and caraway leaved gilia (*Saltugilia caruifolia*)) were determined to have high potential to occur within the project area. No County List C species were detected.

Short-term, construction-related, or temporary direct impacts to County List D plant species would primarily result from construction activities. Clearing, trampling, or grading of special-status plants could occur. These potential effects could damage individual plants and alter their ecosystem, creating gaps in vegetation that allow exotic, non-native plant species to become established, thus increasing soil compaction and leading to soil erosion. Although C and D species are generally mitigated through the vegetation-based mitigation proposed for the project, any potential temporary direct impacts to special-status plant species on site would be **significant** (**BI-LW-5**).

Direct impacts to special-status plant species would result from the permanent removal of habitat and may impact the survival of the local population; direct impacts would be considered **significant** (**BI-LW-6**).

Special-Status Wildlife Species (County Group II)

Three County Group II wildlife species were observed either directly or indirectly (i.e., scat, tracks) within the project area: coastal western whiptail, southern mule deer, and mountain lion. In addition, seven County Group II wildlife species have high potential to occur within

the project area: monarch butterfly, Belding's orange-throated whiptail, San Diego ringneck snake, yellow warbler, horned lark, western bluebird, and northwestern San Diego pocket mouse. Further, 10 County Group II wildlife species have moderate potential to occur within the project area: green heron (*Butorides virescens*), pallid bat, ringtail, Townsend's big-eared bat, greater western mastiff bat, western red bat, small-footed myotis, long-eared myotis, fringed myotis, and Yuma myotis.

Short-term, construction-related, or temporary direct impacts to special-status wildlife species would primarily result from construction activities. Clearing, trampling, or grading of vegetation communities could occur. These potential effects could reduce suitable habitat for wildlife species and alter their ecosystem, thus creating gaps in vegetation that allow exotic, non-native plant species to become established. Potential temporary direct impacts to suitable habitat for special-status wildlife species on site would be **significant** (**BI-LW-7**).

Permanent, direct impacts to special-status wildlife species would include destruction of breeding and foraging habitat associated with the Proposed Project (i.e., solar trackers, fencing, utility poles). Surveys would be conducted to locate special-status wildlife species and determine potential impacts (quantified by comparing the impact footprint with the occurrence data for each species) during processing of the necessary use permit for this project. Although County Group II species are generally mitigated through the vegetation-based mitigation proposed for the project, any permanent, direct impacts to special-status wildlife species would be **significant** (**BI-LW-8**).

Project Effects Relevant to Guideline D

Tierra del Sol

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 Tierra del Sol quadrangle (CDFG 2012). The project area lacks suitable habitat for this species. The closest USFWS occurrence is approximately 12 miles northwest of the project area (USFWS 2012). Therefore, **no impacts** to arroyo toad are anticipated.

Rugged

No arroyo toads have been detected in the project area, and they are not expected to occur in the project area. Arroyo toads are not known from this area and have not been documented in the Live Oak Springs quadrangle (CDFG 2012). The project area lacks suitable habitat for this species. In addition, focused arroyo toad surveys on the nearby Tule project site were negative (HDR 2010, as cited in Appendix 2.3-2). The closest USFWS occurrence is approximately 12 miles south of the project area (USFWS 2012). Therefore, **no impacts** to arroyo toad are anticipated.

LanEast

Focused surveys have not been conducted on the project site; however, arroyo toads are not known to occur in this area and the project site lacks suitable habitat for this species. Therefore, **no impacts** to arroyo toad are anticipated.

LanWest

No arroyo toads have been detected in the project area, and they are not expected to occur in the project area. Arroyo toads are not known from this area and the project area lacks suitable habitat for this species. Therefore, **no impacts** to arroyo toad are anticipated.

Project Effects Relevant to Guideline E

Tierra del Sol

No active golden eagles nests are known to occur within 4,000 feet of the Tierra del Sol project area (Appendices 2.3-3 and 2.3-4). The Tierra del Sol project area is located within an historical golden eagle territory that is currently extirpated. There is recent golden eagle breeding activity in six territories that surround the project site, however, they do not overlap with the project site. WRI has determined that golden eagle flyway zones includes the project site, although more heavily utilized paths are located north of the project site (see golden eagle territory report, included as Appendix I to Appendix 2.3-1). Nonetheless, impacts to raptor (including golden eagle) foraging habitat on site would be **potentially significant** (**BI-TDS-9**).

Rugged

No active golden eagles nests are known to occur within 4,000 feet of the Rugged area (Appendices 2.3-3 and 2.3-4). A golden eagle pair referred to as the "Boulevard" pair was known to exist within and around the Rugged solar farm site; however, the nest is not active, and the pair is assumed to be extirpated. The Carrizo Canyon and Table Mountain territories, which each support an active breeding pair, are to the east and southeast of the solar farm site. While the core nesting areas for these pairs are outside of the Rugged solar farm site and 4,000-foot buffer, these pairs would be expected to forage over the project site, as their territories overlap slightly with the project site (WRI 2012). The WRI study of the project determined that the project site includes golden eagle flyways. Therefore, impacts to raptor (including golden eagle) foraging habitat are considered **potentially significant (BI-R-10)**.

LanEast

No active golden eagles nests are known to occur within 4,000 feet of the LanEast area (Appendices 2.3-3 and 2.3-4). An extirpated golden eagle territory referred to as "Boulevard"

exists within and around the LanEast solar farm site; however, since the nest is not active, **no impacts** would result. Additionally, the Carizzo Gorge, Table Mountain, and Thing Valley territories, which each support an active breeding pair, are to the east and north of the solar farm site; however, the core nesting area is outside of the LanEast solar farm site and 4,000-foot buffer.

Impacts to raptor (including golden eagle) foraging habitat would be **potentially significant** (**BI-LE-9**).

LanWest

No active golden eagles nests are known to occur within 4,000 feet of the LanWest area (Appendices 2.3-3 and 2.3-4). An extirpated golden eagle territory referred to as "Boulevard" exists within and around the LanWest solar farm site; however, since the nest is not active, **no impacts** would result. Additionally, the Carizzo Gorge, Table Mountain, and Thing Valley territories, which each support an active breeding pair, are to the east and north of the solar farm site; however, the core nesting area is outside of the LanWest solar farm site and 4,000-foot buffer.

Impacts to raptor (including golden eagle) foraging habitat would be **potentially significant** (**BI-LW-9**).

Project Effects Relevant to Guideline F

Tierra del Sol

Several raptors, including Group I and Group II species such as Cooper's hawk, golden eagle, prairie falcon, and turkey vulture, are known or expected to occur within and around the project area. The project area functions as a foraging area for these and other raptor species. The functioning foraging habitat for raptors within the project area include the areas of big sagebrush scrub, montane buckwheat scrub, chamise chaparral, red shank chaparral, and oak woodland habitat, as summarized in Table 2.3-1. Approximately 418 acres of foraging habitat will be impacted by implementation of the Tierra del Sol solar farm and gen-tie alignment. Many of these habitats would be considered suitable foraging habitat for raptors, including golden eagle. Direct impacts to functional foraging habitat for raptors would be **potentially significant** (**BI-TDS-9**).

Rugged

Several raptors, including Group I and Group II species such as Cooper's hawk, golden eagle, red-shouldered hawk, Swainson's hawk, northern harrier, prairie falcon, and turkey vulture are known or expected to occur within and around the project area. The project area functions as a foraging area for these and other raptor species. The functioning foraging habitat for raptors

within the project area include the areas of big sagebrush scrub, montane buckwheat scrub, chamise chaparral, red shank chaparral, non-native grasslands, alkali meadow, tamarisk scrub, and oak woodland habitat, as summarized in Table 2.3-1. Approximately 492.4 acres of vegetation communities and land covers will be impacted through on-site and off-site impacts. Many of these habitats would be considered suitable foraging habitat for raptors, including golden eagle. Direct impacts to functional foraging habitat for raptors would be **potentially significant** (**BI-R-10**).

LanEast

Several raptors, including Group I and Group II species such as Cooper's hawk, sharp-shinned hawk, golden eagle, red-shouldered hawk, northern harrier, and turkey vulture have the potential to occur within and around the project area. The project area functions as a foraging area for these and other raptor species. The functioning foraging habitat for raptors within the project area include the areas of big sagebrush scrub, red shank chaparral, semi-desert chaparral, upper Sonoran subshrub scrub, and oak woodland habitat, as summarized in Table 2.3-1. Direct impacts to functional foraging habitat for raptors, including golden eagle, would be **potentially significant** (**BI-LE-9**).

LanWest

Several raptors, including Group I and Group II species such as Cooper's hawk, sharp-shinned hawk (*Accipter striatus*), golden eagle, red-shouldered hawk, northern harrier, and turkey vulture, are known or expected to occur within and around the project area. The project area functions as a foraging area for these and other raptor species. The functioning foraging habitat for raptors within the project area include the areas of big sagebrush scrub, semi-desert chaparral, wildflower field, and oak woodland habitat, as summarized in Table 2.3-1. Direct impacts to functional foraging habitat for raptors, including golden eagle, would be **potentially significant** (**BI-LW-9**).

Project Effects Relevant to Guideline G

The area relevant to these projects that could be considered a core wildlife area according to Guideline G, includes roughly 2,500 square miles of primarily foothill and mountainous terrain within San Diego County, east of the metropolitan San Diego area. More similar terrain exists to the north and more desert habitat is available to the east. This area includes a variety of chaparral, scrub, grassland, woodland, and forest habitats, though it is predominated by chaparral and scrub habitats similar to the project sites. Within the core wildlife area, only a few rural and exurban communities exist. Most of the area is open and unconstrained lands that are managed by state and federal agencies, or are designated as rural development areas by the County of San

Diego. Where openings in the U.S. border fence occur, wildlife is able to move north and south to further extend the genetic footprint of the core area.

Within this large core wildlife area, there are areas that are more important for special-status species, while other areas generally only support populations of relatively common species at all trophic levels. The project sites generally support relatively common chaparral species with some more important species that are loosely or strongly associated with oak woodland, wildflower, boulder, and creek habitats.

Tierra del Sol

Various sensitive wildlife resources are known to occur on-site, including sensitive wildlife species. While the project area alone is not large enough to support viable populations of most wildlife species, the project area is part of a larger area of scattered rural residential uses and open space supporting multiple wildlife populations that extends for many miles to the north, east and west. Therefore, the project area is a portion of a core wildlife area. Nevertheless, the project area represents only a small fraction of the open space available in the vicinity of the project area, and destruction of wildlife habitat within the project area is not likely to affect the viability of local wildlife populations. Species that are dependent on the resources represented on this site are not constrained by habitat, fencing, or other factors. Genetic flow is anticipated to be maintained for species at all trophic levels. Thus, while implementation of the Tierra del Sol project is not anticipated to impact the viability of a core wildlife area, impacts are **potentially significant (BI-TDS-10)**.

Rugged

Various sensitive wildlife resources are known to occur on site, including sensitive wildlife species. While the project area alone is not large enough to support viable populations of most wildlife species, the project area is part of a larger area of scattered rural residential uses and open space supporting multiple wildlife populations. Therefore, the project area may constitute a portion of a core wildlife area. Nevertheless, the project area represents only a small fraction of the open space available in the vicinity of the project area as discussed above and destruction of wildlife habitat within the project area is not likely to affect the viability of local wildlife populations. Thus, while implementation of the Rugged solar farm is not anticipated to impact the viability of a core wildlife area, impacts would be **potentially significant** (**BI-R-11**).

LanEast

The LanEast solar farm site is part of a core wildlife area that extends south to the U.S.–Mexico international border, east towards Jacumba, and west towards Campo, and includes much more than 500 acres. Various sensitive wildlife resources are expected to occur on site, including

sensitive wildlife species. While the project area alone is not large enough to support viable populations of most wildlife species, the project area is part of a larger area of scattered rural residential uses and open space supporting multiple wildlife populations. Therefore, the project area constitutes a portion of a core wildlife area. Nevertheless, the project area represents only a small fraction of the open space available in the vicinity of the project area as discussed above, and destruction of wildlife habitat within the project area is not likely to affect the viability of local wildlife populations. Thus, implementation of the LanEast solar farm would not impact the viability of a core wildlife area; impacts would be **less than significant**.

LanWest

The LanWest solar farm site is part of a core wildlife area that extends south to the U.S.–Mexico international border, east towards Jacumba, and west towards Campo, and includes much more than 500 acres. Various sensitive wildlife resources are known to occur on site, including sensitive wildlife species. While the project area alone is not large enough to support viable populations of most wildlife species, the project area is part of a larger area of scattered rural residential uses and open space supporting multiple wildlife populations. Therefore, the project area may constitute a portion of a core wildlife area. Nevertheless, the project area represents only a small fraction of the open space available in the vicinity of the project area as discussed above, and destruction of wildlife habitat within the project area is not likely to affect the viability of local wildlife populations. Thus, implementation of the LanWest solar farm would not impact the viability of a core wildlife area; impacts would be **less than significant**.

Project Effects Relevant to Guideline H

Special-Status Plant Species

Construction activities, such as grading and earthwork associated with the Tierra del Sol project, could potentially lead to short-term indirect impacts to County List A and B plant species found on site. These activities can result in soil disturbance, runoff and sedimentation, erosion, and fugitive dust. Soil disturbance, runoff, sedimentation, and erosion can adversely impact plant populations by damaging individuals or by altering site conditions sufficiently to favor other species (native and exotic nonnatives) that would competitively displace the special-status species. Construction-generated fugitive dust can adversely affect plants by reducing the rates of metabolic processes such as photosynthesis and respiration. Short-term indirect impacts to County List A and B species on site would be considered a **significant** impact (**BI-TDS-11**).

Potential long-term or permanent indirect impacts to County List A and B plant species on site, as a result of the Tierra del Sol 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 County List A and B plant species on site would be considered a **significant** impact (**BI-TDS-12**).

Special-Status Wildlife Species

Short-term indirect impacts to special-status wildlife species on site, as a result of the Tierra del Sol project, include short-term, construction-related, or temporary indirect impacts that could result in the destruction of breeding and foraging habitat; increased shading of the project area by solar trackers; construction-generated dust, noise, and nighttime lighting; and increased human use of the project area. Short-term indirect impacts to special-status wildlife species would be considered a **significant** impact (**BI-TDS-13**).

Potential long-term or permanent indirect impacts to special-status wildlife species include generation of fugitive dust; non-native, invasive plant and animal species; habitat fragmentation; increased human activity; and alteration of the natural fire regime. Potential long-term indirect impacts to special-status wildlife species would be considered a **significant** impact (**BI-TDS-14**).

Artificial structures associated with the Tierra del Sol project (i.e., solar trackers, fencing, utility poles) may provide perches from which avian species could forage, thereby increasing potential risk of fatality associated with collisions and electrocutions from utility poles. The solar panels however, would not be an electrocution threat as they are completely sealed (insulated). Bat species may also have some vulnerability for collisions with solar trackers. Avian species might be susceptible to impacts related to glare, either by thinking that the trackers are a water body thus causing energetic impacts by inadvertently leading them to the array, or disorienting them. These impacts are anticipated to mostly affect migrating birds and birds moving between large water bodies of which there are several in the vicinity. Potential long-term impacts related to gen-tie alignment operations and maintenance activities could result from apron clearing, line washing, helicopter use, and electrocution of, and/or collisions by, listed or special-status bird or bat species; potential long-term impacts would be considered a **significant** impact (**BI-TDS-15**).

Rugged

Special-Status Plant Species

Short-term indirect impacts to County List A and B plant species on site, as a result of the Rugged solar farm, include short-term, construction-related, or temporary indirect impacts such as soil disturbance, runoff and sedimentation, erosion, and fugitive dust. Soil disturbance, runoff, sedimentation, and erosion can adversely impact plant populations by damaging individuals or by altering site conditions sufficiently to favor other species (native and exotic nonnatives) that would competitively displace the special-status species. Construction-generated fugitive dust can adversely affect plants by reducing the rates of metabolic processes such as photosynthesis and

respiration. Short-term indirect impacts to County List A and B plant species on site would be considered a **significant** impact (**BI-R-12**).

Potential long-term or permanent indirect impacts to County List A and B plant species on site, as result of the Rugged solar farm, include the generation of fugitive dust, habitat fragmentation, chemical pollutants (herbicides), non-native invasive species, increased human activity, and the alteration of the natural fire regime. Potential long-term indirect impacts to County List A and B plant species found within the project area would be considered a **significant** impact (**BI-R-13**).

Special-Status Wildlife Species

Short-term indirect impacts to County Group I and II special-status wildlife species on site, as a result of the Rugged solar farm, include construction-related, or temporary indirect impacts such as the destruction of breeding and foraging habitat; increased shading of the project area by solar trackers; construction-generated dust, noise, and nighttime lighting; and increased human use of the project area. Short-term indirect impacts to special-status wildlife species would be considered a **significant** impact (**BI-R-14**).

Potential long-term or permanent indirect impacts to special-status wildlife species on site, as result of the Rugged solar farm, include generation of fugitive dust; non-native, invasive plant and animal species; habitat fragmentation; increased human activity; and alteration of the natural fire regime. Artificial structures associated with the Rugged solar farm (i.e., solar trackers, fencing, utility poles) provide perches from which avian species may forage, thereby, increasing potential risk of fatality associated with collisions and electrocutions. Bat species may also be vulnerable to collisions with solar trackers. These potential long-term indirect impacts to special-status wildlife species would be considered a **significant impact (BI-R-15)**.

LanEast

Special-Status Plant Species

Potential temporary, indirect impacts include soil disturbance, runoff and sedimentation, erosion, fugitive dust, and unauthorized access outside of the limits of disturbance by construction workers. Soil disturbance, runoff, sedimentation, and erosion can adversely impact plant populations by damaging individuals or by altering site conditions sufficiently to favor other species (native and exotic nonnatives) that would competitively displace the special-status species. Construction-generated fugitive dust can adversely affect plants by reducing the rates of metabolic processes such as photosynthesis and respiration.

Permanent, indirect impacts in the form of edge effects, population fragmentation, and introduction of non-native exotic species may also result from implementation of the LanEast

solar farm. Edge effects may result from soil disturbance due to increased access, accidental transport and introduction of non-native seed, runoff and altered water regime from maintenance of solar equipment (i.e., panel washing), sedimentation, erosion, fugitive dust, and conditions favorable for the expansion of invasive exotic species.

All special-status plant species on site could be impacted by **significant** short- and long-term indirect effects such as those discussed above (**BI-LE-10; BI-LE-11**).

Special-Status Wildlife Species

Construction activities associated with the LanEast solar farm may result in indirect impacts to surrounding natural habitat areas from increased human access and presence, introduction of pests or exotic species, nighttime lighting, and increased noise pollution (**BI-LE-12**).

Permanent, indirect impacts in the form of edge effects, population fragmentation, and introduction of non-native exotic species may also result from implementation of the LanEast solar farm. Edge effects may result from soil disturbance due to increased access, accidental transport and introduction of non-native seed, runoff, and altered water regime from maintenance of solar equipment (i.e., panel washing), sedimentation, erosion, fugitive dust, and conditions favorable for the expansion of invasive exotic species. Potential permanent, indirect impacts would be **significant** (**BI-LE-13**).

LanWest

Special-Status Plant Species

Short-term indirect impacts to special-status plant species on site, as a result of the LanWest solar farm, include short-term, construction-related, or temporary indirect impacts such as soil disturbance, runoff and sedimentation, erosion, fugitive dust, and unauthorized access outside of the limits of disturbance by construction workers. Soil disturbance, runoff, sedimentation, and erosion can adversely impact plant populations by damaging individuals or by altering site conditions sufficiently to favor other species (native and exotic nonnatives) that would competitively displace the special-status species. Construction-generated fugitive dust can adversely affect plants by reducing the rates of metabolic processes such as photosynthesis and respiration. Short-term indirect impacts to special-status plant species would be considered a **significant** impact (**BI-LW-10**).

Potential long-term or permanent indirect impacts to special-status plant species on site, as result of the LanWest solar farm, include the generation of fugitive dust, habitat fragmentation, chemical pollutants (herbicides), non-native invasive species, increased human activity, and the

alteration of the natural fire regime. Potential long-term indirect impacts to special-status plant species would be considered a **significant** impact (**BI-LW-11**).

Special-Status Wildlife Species

Short-term indirect impacts to special-status wildlife species on site, as a result of the LanWest solar farm, include short-term, construction-related, or temporary indirect impacts such as the destruction of breeding and foraging habitat; increased shading of the project area by solar trackers; construction-generated dust, noise, and nighttime lighting; and increased human use of the project area. Artificial structures associated with the LanWest solar farm (i.e., solar trackers, fencing, utility poles) provide perches from which avian species may forage, thereby, increasing potential risk of fatality associated with collisions and electrocutions. Bat species may also be vulnerable to collisions with solar trackers. Short-term indirect impacts to special-status wildlife species would be considered a **significant** impact (**BI-LW-12**).

Potential long-term or permanent indirect impacts to special-status wildlife species on site, as a result of the LanWest solar farm, include generation of fugitive dust; non-native, invasive plant and animal species; habitat fragmentation; increased human activity; and alteration of the natural fire regime. These potential long-term indirect impacts to special-status wildlife species would be considered a **significant** impact (**BI-LW-13**).

Project Effects Relevant to Guideline I

Tierra del Sol

No burrowing owls (*Athene cunicularia*) have been detected in the Tierra del Sol project site, and the site does not support occupied burrowing owl habitat; therefore, there are **no impacts** to occupied burrowing owl habitat.

Rugged

No burrowing owls have been detected in the Rugged site, and the site does not support occupied burrowing owl habitat; therefore, there are **no impacts** to occupied burrowing owl habitat.

LanEast

Although focused surveys for burrowing owls have not been conducted on the LanEast site, the site does not support suitable burrowing owl habitat; therefore, **no impacts** to occupied burrowing owl habitat are anticipated.

LanWest

No burrowing owls have been detected in the LanWest site, and the site does not support suitable burrowing owl habitat; therefore, there are **no impacts** to occupied burrowing owl habitat.

Project Effects Relevant to Guideline J

Tierra del Sol

No cactus wrens (*Campylorhynchus brunneicapillus*) have been detected in the Tierra del Sol project, site and the site does not support occupied coastal cactus wren habitat, or formerly occupied habitat that has been burned by wildfire; therefore, there are **no impacts** to occupied cactus wren habitat.

Rugged

No cactus wrens have been detected in the Rugged site, and the site does not support occupied coastal cactus wren habitat, or formerly occupied habitat that has been burned by wildfire; therefore, there are **no impacts** to occupied cactus wren habitat.

LanEast

Although focused surveys for cactus wrens have not been conducted on the LanEast site, the site does not support occupied coastal cactus wren habitat, or formerly occupied habitat that has been burned by wildfire; therefore, **no impacts** to occupied cactus wren habitat are anticipated.

LanWest

No cactus wrens have been detected in the LanWest site, and the site does not support occupied coastal cactus wren habitat, or formerly occupied habitat that has been burned by wildfire; therefore, there are **no impacts** to occupied cactus wren habitat.

Project Effects Relevant to Guideline K

Tierra del Sol

No Hermes copper butterflies (*Lycaena hermes*) have been detected in the Tierra del Sol project site. The butterflies prefer the adult nectaring plant, California buckwheat (*Eriogonum fasciculatum foliolosum*), which occurs throughout the site; however, the larval host plant (i.e., true limiting factor), spiny redberry (*Rhamnus crocea*), has not been detected during plant surveys. Based on the lack of suitable habitat for this species, the Tierra del Sol project site is not considered occupied Hermes copper butterfly habitat. Therefore, **no impacts** are anticipated.

Rugged

No Hermes copper butterflies have been detected in the Rugged site. The adult butterflies prefer the nectaring plant, California buckwheat, which occurs throughout the site; however, the larval host plant (i.e., true limiting factor), spiny redberry, has not been detected during plant surveys. Based on the lack of suitable habitat for this species, the Rugged site is not considered occupied Hermes copper butterfly habitat. Therefore, **no impacts** are anticipated.

LanEast

The LanEast site does not support Hermes copper butterfly habitat; therefore, **no impacts** are anticipated.

LanWest

No Hermes copper butterflies have been detected in the LanWest site, and the site does not support Hermes copper butterfly habitat. Therefore, **no impacts** are anticipated.

Project Effects Relevant to Guideline L

Tierra del Sol

Indirect impacts associated with construction, such as noise, could affect the nesting success of tree-nesting raptors. Construction-related impacts to the nesting success of tree-nesting raptors would be considered a **significant** impact (**BI-TDS-16**).

Impacts to the nesting success of tree-nesting raptors (i.e., Cooper's hawk and red-tailed hawk (*Buteo jamaicensis*)) as a result of habitat removal associated with the Tierra del Sol solar farm are anticipated. Long-term direct impacts to nesting habitat for Cooper's hawk and red-shouldered hawk are summarized in Table 2.3-9, and impacts to general vegetation communities are described below in Table 2.3-12. Impacts to the nesting success of tree-nesting raptors associated with the loss of suitable nesting habitat would be considered **significant** (**BI-TDS-17**).

Coastal cactus wren, coastal California gnatcatcher, least Bell's vireo, southwestern willow flycatcher (*Empidonax traillii extimus*), golden eagle, and light-footed clapper rail (*Rallus longirostris levipes*) do not nest in the project area; therefore, the Tierra del Sol solar farm would not impact the nesting success of those species. No ground-nesting raptors (e.g., northern harrier and short-eared owl (*Asio flammeus*)) are expected to nest in the project area. Therefore, the Tierra del Sol solar farm would not impact the nesting success of those species.

Potential long-term indirect impacts from electrocution of, and/or collisions by, listed or special-status bird or bat species as a result of the Tierra del Sol gen-tie alignment would be considered a significant impact (**BI-TDS-15**).

Rugged

Indirect impacts associated with construction, such as noise, could affect the nesting success of tree-nesting raptors. Construction-related impacts to the nesting success of tree-nesting raptors would be considered a **significant** impact (**BI-R-16**).

Impacts to the nesting success of tree-nesting raptors (e.g., great-horned owl and red-tailed hawk) as a result of habitat removal associated with the Rugged solar farm are anticipated. Long-term direct impacts to nesting habitat for special-status raptors Cooper's hawk and red-shouldered hawk is summarized in Table 2.3-10, and impacts to general vegetation communities are described below in Table 2.3-13. Impacts to the nesting success of tree-nesting raptors associated with the loss of suitable nesting habitat would be considered **significant** (**BI-R-17**).

Coastal cactus wren, coastal California gnatcatcher, least Bell's vireo, southwestern willow flycatcher, golden eagle, and light-footed clapper rail do not nest in the project area; therefore, the Rugged solar farm would not impact the nesting success of those species. No ground-nesting raptors (e.g., northern harrier and short-eared owl) are expected to nest in the project area. Therefore, the Rugged solar farm would not impact the nesting success of those species.

LanEast

Indirect impacts associated with construction, such as noise, could affect the nesting success of tree-nesting raptors. Construction-related impacts to the nesting success of tree-nesting raptors would be considered a **significant** impact (**BI-LE-14**).

Several sensitive bird species are anticipated to occur within the project area due to the presence of suitable nesting habitat. Therefore, habitat removal associated with construction of the LanEast solar farm may significantly affect the nesting success of several sensitive bird species. Impacts to the nesting success of sensitive bird species associated with the loss of suitable nesting habitat would be considered **significant** (**BI-LE-15**).

LanWest

Indirect impacts associated with construction, such as noise, could affect the nesting success of tree-nesting raptors. Construction-related impacts to the nesting success of tree-nesting raptors would be considered a **significant** impact (**BI-LW-14**).

Several sensitive bird species were observed or have the potential to occur within the project area. Southern willow scrub, upland scrub and chaparral habitats, and oak woodland habitats provide suitable nesting habitat for a variety of sensitive bird species. Therefore, habitat removal associated with construction of the LanWest solar farm may significantly affect the nesting success of several sensitive bird species. Impacts to the nesting success of sensitive bird species associated with the loss of suitable nesting habitat would be considered **significant** (**BI-LW-15**).

Proposed Project

The Proposed Project would result in potentially significant direct and indirect impacts to the following sensitive plant species: Tecate tarplant, Jacumba milk-vetch, desert beauty, sticky geraea, and desert larkspur. In addition, the Proposed Project would result in potentially significant direct and indirect impacts to the following detected and potentially occurring sensitive wildlife species: Belding's orange-throated whiptail, Blainville's horned lizard, northern red-diamond, coast patch-nosed snake, Coronado skink, two-striped garter snake, western spadefoot, Bell's sage sparrow, Cooper's hawk, prairie falcon, golden eagle, loggerhead shrike, turkey vulture, northern harrier, red-shouldered hawk, Southern California rufous-crowned sparrow, tricolored blackbird, San Diego black-tailed jackrabbit, San Diego desert woodrat, Dulzura pocket mouse, Northwestern San Diego pocket mouse, Mexican long-tongued bat, Townsend's big-eared bat, spotted bat, greater western mastiff bat, western red bat, California leaf-nosed bat, and the big free-tailed bat. Because of each of the proposed solar farms would result in indirect impacts related to construction effects and operational activities, as well as direct effects related to the permanent removal of suitable habitat, the Proposed Project would result in **significant** impacts related to sensitive species.

2.3.3.2 Riparian Habitat or Sensitive Natural Community

Guidelines for the Determination of Significance

For the purpose of this EIR, the County's *Guidelines for Determining Significance 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:

A. 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 CDFG or USFWS.

B. Project-related grading, clearing, construction, or other activities would temporarily or permanently remove sensitive native or naturalized habitat (as listed in Table 5, County of San Diego 2010, 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.

C. 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 Game (CDFG), 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.

D. 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.

E. 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.

F. 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

Tierra del Sol

Short-term, construction-related, or temporary direct impacts to vegetation communities would primarily result from construction activities. Clearing, trampling, or grading of vegetation outside designated construction zones could occur in the absence of avoidance and mitigation measures. These potential effects could damage vegetation communities and alter their ecosystem, creating gaps in vegetation that allow exotic, non-native plant species to become established, thus increasing soil compaction and leading to soil erosion. Potential temporary direct impacts to sensitive vegetation communities on site would be **significant** (**BI-TDS-18**).

Long-term or permanent direct impacts to vegetation communities were quantified by comparing the impact footprint with the boundaries of the vegetation communities mapped in the project area. Direct impacts to vegetation communities would occur as a result of grading activities. Table 2.3-12 shows the acreage of direct impacts to upland vegetation communities on the Tierra del Sol project site as a result of the limits of grading (Figures 2.3-25a–d).

Permanent direct impacts to disturbed habitat (21.5 acres) and urban/developed lands (0.2 acre) are less than significant. Permanent direct impacts to 406.2 acres of special-status upland vegetation communities would occur as a result of the Tierra del Sol project and would be considered a **significant** impact (**BI-TDS-19**).

The area of open water on site is artificially created, has negligible function and value as a wetland, and is not considered jurisdictional under local, state, or federal regulations. The open water area is largely unvegetated, and therefore, functions similarly to disturbed habitat; impacts to open water are **less than significant**.

Rugged

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 could occur. Potential temporary direct impacts to special-status vegetation communities on site and in the proposed off-site access roads would be **significant** (**BI-R-18**).

Permanent direct impacts to developed land and disturbed habitat are less than significant. Permanent on-site and off-site direct impacts to 398.9 acres of special-status upland vegetation communities would occur as a result of the Rugged solar farm. Permanent direct impacts to special-status upland vegetation communities on site and in the proposed off-site access roads would be considered a **significant** impact (**BI-R-19**).

Table 2.3-13 shows the acreage of direct impacts to upland vegetation communities on the project site as a result of the limits of grading, as well as on-site impacts from the 50-foot fuel modification zone (Figure 2.3-26). Table 2.3-14 shows the acreage of direct impacts to upland vegetation communities as a result of grading for the off-site access road and access road fuel modification zone. Figure 2.3-26 illustrates the distribution of biological resources on site and the locations where proposed impacts would occur.

The Rugged solar farm is designed to avoid oak woodland habitats. An oak root protection zone has been established around the extent of coast live oak woodland and mixed oak woodland habitats within the project area (Figure 2.3-26). The Rugged solar farm has been designed to avoid impacts to the oak root protection zone as well. There are no impacts to oak woodland or the oak root protection zone.

The primary site access road for the Rugged solar farm will be developed and improved as part of the Tule Wind project. Portions of this road will follow an existing dirt road within the project area. New segments are proposed for construction within the project area through the Tule Creek floodplain and east of McCain Valley Road (see Figure 2.3-26). Impacts associated with construction and improvements of this access road have been previously addressed (see HDR 2010, 2011, as cited in Appendix 2.3-2). Therefore, impacts associated with construction and improvement of the primary site access route are not analyzed herein.

LanEast

Short-term, construction-related, or temporary direct impacts to vegetation communities would primarily result from construction activities. Clearing, trampling, or grading of vegetation outside designated construction zones could occur in the absence of avoidance and mitigation measures. These potential effects could damage vegetation communities and alter their ecosystem, creating gaps in vegetation that allow exotic, non-native plant species to become established, thus increasing soil compaction and leading to soil erosion. Potential temporary direct impacts to sensitive vegetation communities on site would be **significant** (**BI-LE-16**).

Direct impacts to vegetation communities would occur as a result of grading activities including mechanized and manual land clearing. Permanent direct impacts to special-status upland vegetation communities would occur as a result of the LanEast solar farm and would be considered a **significant** impact (**BI-LE-17**).

LanWest

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 could occur in the absence of avoidance and mitigation

measures. These potential effects could damage vegetation communities and alter their ecosystem, creating gaps in vegetation that allow exotic, non-native plant species to become established, thus increasing soil compaction and leading to soil erosion. Potential temporary direct impacts to special-status vegetation communities on site would be **significant** (**BI-LW-16**).

Direct impacts to vegetation communities would occur as a result of grading activities including mechanized and manual land clearing. Permanent direct impacts to special-status upland vegetation communities would occur as a result of the LanWest solar farm and would be considered a **significant** impact (**BI-LW-17**).

Project Effects Relevant to Guideline B

Tierra del Sol

No wetlands or "waters of the United States" under the jurisdiction of ACOE, RWQCB, CDFW, or County were identified on the Tierra del Sol solar farm site; **no impacts** would occur.

Within the Tierra del Sol gen-tie alignment site, wetlands and "waters of the United States" under the jurisdiction of ACOE, RWQCB, CDFW, and the County were identified. There will be no impacts to jurisdictional wetlands for the gen-tie alignment. There will be impacts to 317.7 linear feet and 0.03 acre of non-wetland ephemeral waters under the jurisdiction of ACOE/RWQCB/CDFW. Although permits from the agencies may be required, this impact is not considered significant because no wetland or riparian habitat, as described in Guideline B, would be adversely affected in these areas; **no impacts** would occur.

Rugged

The Rugged solar farm has been designed to avoid wetlands to the maximum extent practicable, including a 50-foot buffer surrounding wetland features (Figure 2.3-26).

Short-term, construction-related, or temporary direct impacts to jurisdictional wetlands and waters would primarily result from construction activities. Clearing, trampling, or grading of jurisdictional wetlands and waters outside designated construction zones could occur. Potential temporary direct impacts to jurisdictional wetlands and waters on site would be **significant** (**BI-R-20**).

There is 0.01 acre (446 linear feet) of impacts to ephemeral stream channel under the jurisdiction of ACOE, RWQCB, and CDFW. There are direct impacts to 0.10 acre of wetlands under the jurisdiction of ACOE, RWQCB, CDFG, and the County and impacts to 3.11 acres of tamarisk scrub under CDFW only. Impacts to 0.01 acre (446 linear feet) of ephemeral stream channel, 0.10 acre (996 linear feet) of wetlands, and 3.11 acres (3,462 linear feet) of tamarisk scrub would be considered **significant** (**BI-R-21**). A minimum of a

1:1 ratio is proposed to compensate for impacts to the ephemeral stream channel, and a minimum of 3:1 ratio is proposed for the wetland and tamarisk scrub impacts. Impacts would require permits from the ACOE, CDFW, and RWQCB, which will determine the final mitigation ratio required to compensate for this impact.

Short-term, construction-related, or temporary indirect impacts to jurisdictional wetlands and 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 direct and indirect impacts to jurisdictional wetlands and waters on site would be **significant** (**BI-R-22**).

Long-term indirect impacts that could affect jurisdictional wetlands and waters include generation of fugitive dust, habitat fragmentation, chemical pollutants, non-native invasive species, increased human activity, and alteration of the natural fire regime. Potential long-term indirect impacts to jurisdictional wetlands and waters would be considered a **significant** impact (**BI-R-23**).

LanEast

A jurisdictional wetlands delineation would be conducted for the LanEast solar farm during processing of the necessary use permit for this project.

Short-term, construction-related, or temporary direct impacts to jurisdictional wetlands and waters would primarily result from construction activities. Clearing, trampling, or grading of jurisdictional wetlands and waters outside designated construction zones could occur. Potential temporary direct impacts to special-status vegetation communities on site would be **significant** (**BI-LE-18**).

The LanEast solar farm will be designed to avoid wetlands to the maximum extent possible, and will include a 50-foot buffer around all riparian wetland to protect the functions and value of the existing wetland in accordance with the County's RPO's avoidance requirements. However, clearing and construction could result in permanent, direct impacts to jurisdictional waters, which could potentially result in a **significant** impact (**BI-LE-19**).

Short-term indirect impacts to jurisdictional wetlands and waters are construction-related 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 jurisdictional wetlands and waters would be considered a **significant** impact (**BI-LE-20**).

Potential long-term or permanent indirect impacts to jurisdictional wetlands and waters as a result of the LanEast solar farm 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 jurisdictional wetlands and waters would be considered a **significant** impact (**BI-LE-21**).

LanWest

A jurisdictional wetlands delineation was conducted for the LanWest solar farm, and 0.4 acre of other waters, 0.37 acre of vegetated swale, and 0.16 acre of unvegetated swale were mapped on site.

Short-term, construction-related, or temporary direct impacts to jurisdictional wetlands and waters would primarily result from construction activities. Clearing, trampling, or grading of jurisdictional wetlands and waters outside designated construction zones could occur. Potential temporary direct impacts to special-status vegetation communities on site would be **significant** (**BI-LW-18**).

The LanWest solar farm will be designed to avoid wetlands to the maximum extent possible, and will include a 50-foot buffer around all riparian wetland to protect the functions and value of the existing wetland in accordance with the County's RPO. However, clearing and construction could result in permanent, direct impacts to jurisdictional waters, which could potentially result in a **significant** impact (**BI-LW-19**).

Short-term indirect impacts to jurisdictional wetlands and waters are construction-related 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 jurisdictional wetlands and waters would be considered a **significant** impact (**BI-LW-20**).

Potential long-term or permanent indirect impacts to jurisdictional wetlands and waters as a result of the LanWest solar farm 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 jurisdictional wetlands and waters would be considered a **significant** impact (**BI-LW-21**).

Project Effects Relevant to Guideline C

Tierra del Sol

The solar farm site supports two areas of potentially groundwater-dependent vegetation: two small, isolated areas of open water and coast live oak woodland. The gen-tie alignment site supports three wetlands, one of which supports coast live oak woodland, and several unvegetated stream channels. In addition, approximately 1,800 feet east of the Tierra del Sol site, a blue-line

stream supports a community of coast woodland that extends along the stream both northeast and southeast of the Tierra del Sol site. Coast live oak is a native drought resistant evergreen tree with a root system that consists of a deep taproot with several main roots that may tap groundwater if present within approximately 36 feet of the soil surface (Canadell 1996). The majority of coast live oak and mixed oak woodland is mapped northwest of Well B on a parcel adjacent to the site. The open water area occurs in the central-eastern portion of the site and is a stock pond formed by a manufactured bank along the east side of the area. The lowest portion of the depressional feature is characterized by cracked soils, mostly lacking any vegetation. A surrounding ring of herbaceous vegetation is dominated by rabbit's foot grass (*Polypogon monspeliensis*) and black mustard (*Brassica nigra*). The open water area does not meet CDFW jurisdictional criteria because it is not associated with a lake or streambed. No wetlands or waters of the United States under the jurisdiction of ACOE, RWQCB, CDFW, or County were identified on site.

Based on past experience in San Diego County with fractured rock granitic aquifers conducting long-term pump tests from deep fractures (i.e., >1,000 feet), there is typically limited hydraulic connection with the shallow fracture system that would influence groundwater-dependent habitat that extends to a maximum depth of 36 feet below ground surface (bgs). Furthermore, as no drawdown was observed in on-site shallow wells (Wells 1, 4, and 5) or the nearest off-site shallow wells (Wells RM-2 and RM-3), there appears to be limited hydraulic connection between primary producing fractures of the pumping well (Well B) at greater than 1,000 feet bgs and the shallow aquifer system. However, given hydrogeologic conditions and the limited duration of the 72-hour constant rate test, it is uncertain whether there is hydraulic isolation of the shallow alluvial aquifer associated with Rattlesnake Creek from the deep fractured bedrock aquifer (Appendix 3.1.9-5). The Cooper-Jacob approximation of the non-equilibrium flow equation analysis projects drawdown of 18.3 feet in the fractured rock aquifer at the nearest groundwater dependent habitat as a result of pumping after the approximate 1-year construction period. This drawdown may exceed the County's significance threshold for groundwater dependent habitat (typically a drop of 3 feet or more from historical low groundwater levels (County of San Diego 2010)); and therefore, impacts to groundwater dependent vegetation would be **potentially significant** (**BI-TDS-20**).

Rugged

A Groundwater Resources Investigation Report for the Rugged solar farm was prepared by Dudek and is included as Appendix 3.1.9-6. There are 7 vegetation communities identified on the Rugged solar farm and in the Rugged solar farm vicinity that may potentially depend on groundwater. These vegetation types include species with specific rooting depths that either intercept water the near surface or have deep tap roots that extend to the alluvial water table. Of the seven vegetation communities, only the coast live oak woodland and tamarisk scrub can likely access water from the alluvial aquifer. The other vegetation communities have shallow

root systems and are dependent on surface water or perched groundwater above the water table of the alluvial aquifer.

The nearest coast live oak woodland and tamarisk scrub are located 447 feet and 700 feet, respectively from Wells 6a and 6b. At the end of project construction, drawdown in the aquifer is estimated to be 5.6 feet and 5.4 feet at distances 447 feet and 700 feet from Wells 6a and 6b. After 5 years, which includes 1 year of project construction and 4 years of operation, drawdown in the aquifer is estimated to be 3.2 feet and 2.9 feet at distances of 447 feet and 700 feet from Wells 6a and 6b (Appendix 2.9-6). Summing the current average depth to water of 14 feet bgs and the additional 5.6 feet of maximum project drawdown, the projected water table may be as low as 19.6 feet bgs at the nearest coast live oak woodland. Summing the current average depth to water of 14 feet bgs and the additional 5.4 feet of maximum project drawdown, the projected water table may be as low as 19.4 feet bgs for the tamarisk scrub.

The historical low groundwater level in the vicinity of the oak woodland and tamarisk scrub is not known over the period corresponding to the lifespan of the vegetation. This lack of historical water level data precludes determination of a water level threshold 3 feet below the historical low, and therefore, impacts to groundwater dependent vegetation may be **potentially significant** (**BI-R-24**).

Big sagebrush scrub is the only potential groundwater-dependent habitat mapped near Well 8. Big sagebrush scrub requires groundwater to be present in shallow soil horizons and therefore is dependent on surface water or perched groundwater. The alluvial water table near Well 8 is currently at 16 feet bgs. Thus, the roots of the big sagebrush scrub do not intercept the alluvial aquifer, and therefore, impacts to big sagebrush scrub is anticipated to be **less than significant**.

LanEast

The LanEast solar farm would not use any on-site groundwater wells for any purpose. Water required for construction and O&M activities (i.e., washing of panels) would be delivered by tanker truck. Therefore, no significant impacts to groundwater dependent habitat would occur.

LanWest

The LanWest solar farm would not use any on-site groundwater wells for any purpose. Water required for construction and O&M activities (i.e., washing of panels) would be delivered by tanker truck. Therefore, no significant impacts to groundwater dependent habitat would occur.

Project Effects Relevant to Guideline D

Tierra del Sol

Potential short-term or temporary indirect impacts to special-status vegetation communities in the project area would primarily result from construction activities and include impacts related to or resulting from the generation of fugitive dust; changes in hydrology resulting from construction, including sedimentation and erosion; and the introduction of chemical pollutants (including herbicides). All special-status vegetation communities on site could be affected by these **significant** temporary indirect impacts (**BI-TDS-21**).

Long-term (operation-related) or permanent indirect impacts could result from the proximity of the Tierra del Sol solar farm to special-status vegetation communities after construction, including impacts related to operation and maintenance. O&M activities will occur within the impact footprint. Permanent indirect impacts that could affect special-status vegetation communities include generation of fugitive dust, habitat fragmentation, chemical pollutants, altered hydrology, non-native invasive species, increased human activity, alteration of the natural fire regime, and shading (**BI-TDS-22**).

Rugged

Short-term indirect impacts to special-status upland vegetation communities are construction-related 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 considered a **significant** impact (**BI-R-25**).

Potential long-term or permanent indirect impacts to special-status upland vegetation communities as a result of the Rugged solar farm 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 considered a **significant** impact (**BI-R-26**).

LanEast

Short-term indirect impacts to special-status upland vegetation communities are construction-related 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 considered a **significant** impact (**BI-LE-22**).

Potential long-term or permanent indirect impacts to special-status upland vegetation communities as a result of the LanEast solar farm 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 considered a **significant** impact (**BI-LE-23**).

LanWest

Short-term indirect impacts to special-status upland vegetation communities are construction-related 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 considered a **significant** impact (**BI-LW-22**).

Potential long-term or permanent indirect impacts to special-status upland vegetation communities as a result of the LanWest solar farm 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 considered a **significant** impact (**BI-LW-23**).

Project Effects Relevant to Guideline E

Tierra del Sol

As discussed above, no wetlands or "waters of the United States" under the jurisdiction of ACOE, RWQCB, CDFW, or County were identified on the solar farm site; **no impacts** are anticipated.

Within the gen-tie alignment site, one wetland under the jurisdiction of ACOE, RWQCB, CDFW, and the County was identified. Three wetlands under jurisdiction of CDFW and the County were also mapped. All four areas support a predominance of hydrophytic vegetation and connect upstream and downstream via narrow, mostly ephemeral channels. These drainages do not serve as local wildlife corridors and do not have steep slopes. The gen-tie alignment represents a low level of edge effect given the limited human presence compared with most types of development. Given these factors, a buffer of 50 feet is considered adequate for protection of these RPO-wetlands. Therefore, there would be no proposed impacts to these wetlands or wetland buffers; therefore, impacts would be **less than significant**.

Rugged

The Rugged solar farm has been designed to avoid and minimize impacts to wetlands and their surrounding buffers to the maximum extent practicable. Specifically, to the extent practicable, the Rugged solar farm would maintain a 50-foot buffer around wetland features in the central portion of the project area to protect the functions and values of this existing wetland (Figure 2.3-26). There are on-site impacts to 0.10 acre of RPO wetland and 0.15 acre of RPO wetland

buffer for a total of approximately 0.25 acre of impacts on the Rugged site. All on-site impacts to RPO wetland and wetland buffers result from the on-site access roads; these areas would be avoided through construction staking to the extent feasible. Solar panels and trackers will be designed to allow for vegetation underneath the panels in order to reduce indirect impacts to wetlands from soil erosion. In addition, many of the RPO wetlands are disturbed by high cover of non-native grasses and herbs or are composed of non-native hydrophytic vegetation (i.e., tamarisk) and do not support a significant population of special-status species. The limits of impacts will be staked for avoidance to ensure ground-disturbing activities do not encroach into the non-impacted wetlands and their associated buffers. All, project-related components (i.e., trackers) would be located outside of the 50-foot wetland buffer. Impacts to RPO wetland and wetland buffers would be a **significant** impact (**BI-R-27**). Impacts to waters under the jurisdiction of ACOE, RWQCB, and CDFW are discussed in more detail above.

LanEast

The LanEast solar farm will be designed to avoid and minimize impacts to wetlands and their surrounding buffers to the maximum extent practicable. Specifically, the LanEast solar farm would maintain a 50-foot buffer around all jurisdictional waters and wetlands identified on the project site in accordance with the County's RPO. Temporary construction fencing will be installed around the perimeter of jurisdictional wetlands or waters to ensure they are avoided during implementation of the LanEast solar farm. Further, project related components (i.e., solar trackers) would be located outside of this 50-foot wetland buffer. Unavoidable impacts to other waters and unvegetated swale would be minimal, but **potentially significant** (**BI-LE-24**).

LanWest

The LanWest solar farm will be designed to avoid and minimize impacts to wetlands and their surrounding buffers to the maximum extent practicable. Specifically, the LanWest solar farm would maintain a 50-foot buffer around riparian wetland (vegetated swale) in the southern portion of the project area to protect the functions and values of this existing wetland in accordance with the County's RPOe (Figure 2.3-18). Temporary construction fencing will be installed around the perimeter of this wetland buffer to ensure this wetland is avoided during implementation of the LanWest solar farm. Project-related components (i.e., solar trackers) would be located outside of this 50-foot wetland buffer. Unavoidable impacts to other waters and unvegetated swale would be minimal, but **potentially significant** (**BI-LW-24**).

Proposed Project

The Proposed Project would result in a combined permanent, direct impact to 924.2 acres of special-status upland vegetation communities, plus additional acreage of impacts resulting from the LanWest and LanEast solar farms. In addition, indirect impacts resulting from the

construction and operation of the solar farms would also occur, resulting in additional potentially significant impacts related to the generation of fugitive dust, changes in hydrology, noise, habitat fragmentation, and the introduction of chemical pollutants. Therefore, impacts to special-status upland vegetation communities would be **potentially significant**.

The lack of historical low water level data precludes determination of a water level threshold greater than the County's significance threshold (typically a drop of 3 feet or more from historical low groundwater levels) at this time. Therefore, because water levels may drop more than 3 feet after pumping for the approximate 1 year construction period for the Proposed Project, impacts to groundwater-dependent vegetation may be **potentially significant** (see discussion under Guideline C).

2.3.3.3 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, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

Analysis

Federally protected wetlands are defined in Section 404 of the CWA as areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Such wetlands generally include swamps, marshes, bogs, and similar areas.

Tierra del Sol

No wetlands or "waters of the United States" under the jurisdiction of ACOE were identified on the solar farm site. Therefore, **no impacts** to federally protected wetlands would result from the Tierra del Sol solar farm.

Within the Tierra del Sol gen-tie alignment site, wetlands under the jurisdiction of ACOE, RWQCB, CDFW, and the County were identified. However, a 50-foot RPO buffer would be

maintained for each of the wetlands, and therefore, **no impacts** to federally protected wetlands would result from the Tierra del Sol gen-tie alignment.

Rugged

The Rugged solar farm has been designed to avoid wetlands to the maximum extent practicable, including a 50-foot buffer surrounding wetland features (Figure 2-3-26).There are no permanent direct impacts to federal wetlands associated with the Rugged solar farm.

LanEast

A wetlands delineation would be conducted during processing of the necessary use permit for this project to identify any wetlands on-site. The LanEast solar farm would avoid RPO wetlands and maintain a 50-foot buffer around any riparian wetlands identified in accordance with the County's RPO. Therefore, unless allowed by RPO, impacts to federal wetlands would likely also be avoided. However, clearing and construction could potentially impact jurisdictional waters and result in a **significant** impact (**BI-LE-25**).

LanWest

A jurisdictional wetlands delineation was conducted for the LanWest solar farm and 0.40 acre of other waters, 0.37 acre of vegetated swale, and 0.16 acre of unvegetated swale were mapped on site. The LanWest solar farm will be designed to avoid RPO wetlands and will include a 50-foot buffer around all riparian wetland to protect the functions and value of the existing wetland in accordance with the County's RPO. Therefore, unless allowed by RPO, impacts to federal wetlands would likely also be avoided. However, clearing and construction could potentially impact jurisdictional waters and result in a **significant** impact (**BI-LW-25**).

Proposed Project

The Proposed Project would result in no impacts to federally protected wetlands from the implementation of the Tierra del Sol or Rugged solar farms. Impacts from implementation of the LanEast and LanWest solar farms would be **significant (BI-LE-25; BI-LW-25)**.

2.3.3.4 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:

A. 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.

B. The project would impede wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their reproduction.

C. 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.

D. 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.

E. 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.

F. 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.

G. 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

Project Effects Relevant to Guideline A

Tierra del Sol

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** (**BI-TDS-23**).

Permanent direct impacts to approximately 420 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 Tierra del Sol project. Permanent direct impacts to foraging and breeding habitat would be considered a **significant** impact (**BI-TDS-24**).

Short-term and long-term indirect impacts to wildlife access to foraging, breeding, or watering habitat (including impacts to groundwater-dependent habitat from well drawdown) for small and mid-sized animals are potentially significant (**BI-TDS-25**).

Rugged

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. Potential temporary direct impacts to foraging and breeding habitat on site would be **significant** (**BI-R-27**).

Permanent on-site and off-site direct impacts to 462.6 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 Rugged solar farm. There are also on-site and off-site impacts to 53.5 acres of disturbed habitat, which can provide some foraging opportunities for species. Permanent direct impacts to foraging and breeding habitat would be considered a **significant** impact (**BI-R-28**).

Short-term and long-term indirect impacts to wildlife access to foraging, breeding, or watering habitat for small and mid-sized animals would occur. Based on the assessment of groundwater-dependent vegetation mapped near on-site wells (see Appendix 3.1.9-6), potential impacts from

well drawdown to groundwater-dependent vegetation may impede wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their reproduction. Although shallow-rooted vegetation, such as Mexican rush that dominates the alkali meadow, may be less impacted from anticipated drawdown of the aquifer, deep-rooted vegetation such as oak woodland and tamarisk scrub may be **significantly impacted** by well drawdown (**BI-R-29**). There are no impacts to other potential water sources for wildlife, such as the on-site pond.

LanEast

The LanEast solar farm would remove habitat including foraging habitat, breeding habitat, water sources, or other areas necessary for reproduction. In addition, noise as a result of construction could temporarily deter wildlife movement at and near the vicinity of the project area. Potential temporary impacts would be **significant** (**BI-LE-26**).

Development of the LanEast site, including construction of permanent fencing, and increased human presence within the project area would permanently prevent many wildlife species from accessing foraging and breeding habitat within the project area. Although the project area is part of a larger area of scattered rural residential uses and open space allowing relatively unconstrained access to a variety of foraging and breeding habitats, the LanEast solar farm would result in **significant** impacts related to wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for reproduction during project construction (**BI-LE-27**).

LanWest

The LanWest solar farm would remove habitat including foraging habitat, breeding habitat, water sources, or other areas necessary for reproduction. In addition, noise as a result of construction could temporarily deter wildlife movement at and near the vicinity of the project area. Potential temporary impacts would be **significant** (**BI-LW-26**).

Development of the LanWest site, including construction of permanent fencing, and increased human presence within the project area would permanently prevent many wildlife species from accessing foraging and breeding habitat within the project area. Although the project area is part of a larger area of scattered rural residential uses and open space allowing relatively unconstrained access to a variety of foraging and breeding habitats, the LanWest solar farm would result in **significant** impacts related to wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for reproduction during project construction (**BI-LW-27**).

Project Effects Relevant to Guideline B

Tierra del Sol

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 related to the Tierra del Sol project site include mule deer, coyotes, and bobcat. It is unlikely that mountain lion frequent the area due to existing fencing along the border and proximity of occupied properties. 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, but those connections likely occur north of the site, probably on the north side of I-8. Much of this area would be considered to be large, core blocks of habitat for which wildlife would be free to move through with minimal constraint. Local wildlife movement probably occurs where open space exists between rural residences. Rural residences to the north, east, and west are immediately outside the project area and provide pockets of open space that would allow wildlife life to traverse the area. In addition, large areas of undeveloped lands to the east of the project area likely 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 perceived to be a regional wildlife corridor for avian species.

Additionally, the project site itself is not likely to serve as a local or regional wildlife corridor for large mammals due the lack of topography and resources on the site and existing fencing, including the international border fence and chain link fencing surrounding adjacent residential properties. The solar farm site is also currently fenced. All of these factors limit the ability of wildlife to access and traverse the project site. Therefore, due to the constrained nature of the site, specifically the fencing surrounding the solar farm site and to the south and east, the project is unlikely to serve as a local or regional wildlife corridor and installation of new 6-foot fencing with barbed wire around the perimeter of the property is not anticipated to 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 would be **less than significant** for large mammals.

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 farm site would be maintained at a maximum height of 6-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 potentially significant **(BI-TDS-26)**.

Rugged

Currently, wildlife is able to move throughout the project site in a relatively uniform fashion as topography does not differ greatly; there are no significant riparian features (Tule Creek does not have typical riparian band cover for wildlife to utilize within the project site); and there are limited constraining features. The Rugged solar farm is designed to allow for movement through the majority of Tule Creek, which may serve as a local wildlife movement corridor, within the project area by maintaining a minimum 675-foot wide corridor that is suitable for the common types of wildlife using this area (coyote, mule deer, bobcat, skunk, etc.) (see Figure 2.3-15). After the project is developed, wildlife will still be able to move through the vicinity and region within similar habitats, slope, and directions as are currently present. The project maintains connectivity across and through low sloping hills and the valley. Connections across the project area will not be compromised as wildlife will still be able to maintain east/west and north/south connections. The gaps between the various fenced project components are large, with the minimum 675-foot gap occurring between the eastern and southern fenced project blocks for an approximate 500-foot long segment. The remaining gaps are over 1,000 feet wide. Therefore, based on the surrounding land use, including rural residential homes, the Rugged solar farm does not interfere with blocks of habitat or create an artificial wildlife corridor, and would **not be a significant impact**.

Smaller wildlife species (e.g., lizards and small mammals) will still be able to access the developed areas of the site through openings in the fence; however, vegetation within the solar farm site would be maintained at a maximum height of 6 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 **potentially significant (BI-R-30)**.

LanEast

At a local and regional level, the LanEast site does not contain clearly defined wildlife travel routes, corridors, or crossings. Instead, the project area is part of a larger area of scattered rural residential uses and open space allowing relatively unconstrained wildlife movement, except for northward movement which is somewhat constrained by I-8. Therefore, it is expected that wildlife would seek alternate travel routes when moving through the vicinity of the project area. Thus, the LanEast solar farm would not permanently affect connectivity between blocks of habitat.

LanWest

At a local and regional level, the LanWest site does not contain clearly defined wildlife travel routes, corridors, or crossings. Instead, the project area is part of a larger area of scattered rural residential uses and open space allowing relatively unconstrained wildlife movement, except for northward movement which is somewhat constrained by I-8. Therefore, it is expected that wildlife would seek alternate travel routes when moving through the vicinity of the project area. Thus, the LanWest solar farm would not permanently affect connectivity between blocks of habitat.

Project Effects Relevant to Guideline C

Tierra del Sol

As described above, the solar farm site is surrounded by existing fencing and the project site is not considered to be a significant local or regional wildlife corridor for large mammals; therefore, the Tierra del Sol project would not likely create artificial wildlife corridors and would **not have a significant impact**. Smaller wildlife species would likely no longer be able to navigate through the site to access habitat on the far side since the site itself would provide insufficient habitat cover and the size of the site would be insurmountable for small wildlife. Therefore, impacts to movement of small and mid-sized wildlife would be potentially significant **(BI-TDS-26)**.

Rugged

As described above, the Rugged solar farm would be designed to allow for continued movement through the majority of the Tule Creek corridor. Since Tule Creek is a natural topographic feature where wildlife movement typically occurs, and since movement between subareas of the solar farm site would be retained, the Rugged solar farm would not create an artificial wildlife corridor and would **not have a significant impact**. Due to the removal of habitat on portions of the project site, smaller wildlife would be unable to navigate through these portions; impacts would be potentially significant (**BI-R-31).**

LanEast

As described above, the project area is part of a larger area of scattered rural residential uses and open space allowing relatively unconstrained wildlife movement. Therefore, it is expected that wildlife would seek alternate travel routes when moving through the vicinity of the project area. However, access to Walker Creek would be removed and wildlife would likely concentrate their east to west movement south of the project site; therefore, the LanEast solar farm may create artificial wildlife corridors (**BI-LE-27**).

LanWest

As described above, the project area is part of a larger area of scattered rural residential uses and open space allowing relatively unconstrained wildlife movement. Therefore, it is expected that wildlife would seek alternate travel routes when moving through the vicinity of the project area. However, access to Walker Creek would be removed and wildlife would likely concentrate their east to west movement south of the project site; therefore, the LanWest solar farm may create artificial wildlife corridors (**BI-LW-27**).

Project Effects Relevant to Guideline D

Tierra del Sol

Permanent lighting associated with the Tierra del Sol solar farm includes lighting in the building and parking areas. These areas would include security lighting designed to minimize light pollution and preserve dark skies, while enhancing safety, security, and functionality. No lighting is associated with the gen-tie alignment. There would be short-term, construction-related noise. Long-term noise associated with routine maintenance is not expected to impact wildlife movement because these activities will typically occur on an as-needed basis. The potential noise and lighting impacts as a result of the Tierra del Sol project would be **less than significant**.

Rugged

Permanent lighting associated with the Rugged solar farm includes lighting in the building and parking areas. These areas would 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. Long-term noise associated with routine maintenance is not expected to impact wildlife movement because these activities will typically occur within the fenced areas and on an as-needed basis. The potential noise and lighting impacts as a result of the Rugged solar farm would be **less than significant**.

LanEast

Operation of the LanEast solar farm is not expected to increase noise or artificial light, especially due to noise and light associated with the proximity of I-8. However, noise and artificial light as a result of construction activities associated with the LanEast solar farm may temporarily deter wildlife movement at and near the project area, and could result in **potentially significant** impacts (**BI-LW-28**).

LanWest

Operation of the LanWest solar farm is not expected to increase noise or artificial light, especially due to noise and light associated with the proximity of I-8. However, noise and

artificial light as a result of construction activities associated with the LanWest solar farm may temporarily deter wildlife movement at and near the project area, and could result in **potentially significant** impacts (**BI-LW-28**).

Project Effects Relevant to Guideline E

Tierra del Sol

The majority of the solar farm site will be impacted by the Tierra del Sol solar farm. Although the project area is not considered a local or regional wildlife corridor, wildlife does utilize the area. Small wildlife species (e.g., lizards and small mammals) will be able to access the solar farm site through openings in the fence; however, loss of habitat will reduce the amount of small wildlife utilizing the project area. Larger wildlife is not expected to utilize the solar farm site frequently due to existing fencing surrounding the site and fencing to the east and south of the project area. Small and mid-sized wildlife would still be able to access the project site through the fence; however, the loss of suitable habitat on the site would preclude movement of small wildlife across the site to new territories (**BI-TDS-26**).

Glare and pseudo-lake effect of the trackers were deemed to be a low risk to avian movement and migration due to a number of factors, including array design, solar unit design, and site location. Only small portions of the gen-tie alignment route will be impacted by the gen-tie alignment, and the gen-tie alignment site will remain open to wildlife movement. However, the utility poles associated with the gen-tie alignment would provide perches from which avian species may forage, thereby increasing the potential risk of fatality associated with collisions and electrocutions and resulting in a **potentially significant** impact to avian movement (**BI-TDS-15**).

Rugged

As described previously, the majority of Tule Creek will not be impacted or fenced and will remain the most logical movement route due to the removal of cattle from this area and resulting increase in vegetation cover. The width of Tule Creek will remain the same, and wildlife can continue using this open area to move through the region. Therefore, the Rugged solar farm is not expected to reduce an existing wildlife corridor or linkage and would be **less than significant**.

Small wildlife species (e.g., lizards and small mammals) will continue to be able to access the project area through openings in the fence; however, the loss of suitable habitat on the site would impact movement of small and mid-sized wildlife. A **potentially significant** impact would result (**BI-R-31**).

LanEast

Construction of the LanEast solar farm, including permanent perimeter fencing, would permanently impact an existing wildlife movement area. Specifically, the project area may serve as an important area for locally dispersing wildlife and movements related to home range activities in the east/west direction. Moreover, east/west movement through the project area is constrained by SR-94/Old Highway 80 to the south and I-8 to the north. Impacts to potential wildlife movement in the project would be considered **significant** (**BI-LE-29**).

LanWest

Construction of the LanWest solar farm, including permanent perimeter fencing, would permanently impact an existing wildlife movement area. Specifically, the project area may serve as an important area for locally dispersing wildlife and movements related to home range activities in the east/west direction. Moreover, east/west movement through the project area is constrained by SR-94/Old Highway 80 to the south and I-8 to the north. Impacts to potential wildlife movement in the project would be considered **significant** (**BI-LW-29**).

Project Effects Relevant to Guideline F

Tierra del Sol

The fencing between the border of Mexico and the United States already a substantial visual barrier to wildlife movement. The Tierra del Sol solar farm will be situated adjacent to the border fencing, and although visual continuity surrounding the project area could be exacerbated by the addition of solar panels and fencing, the topography is not steep in and around the project area, and wildlife can likely use a variety of local wildlife corridors outside of the project area to move throughout the region; therefore, impacts related to visual continuity would be **less than significant**.

Rugged

The Rugged solar farm is composed of four separate subareas that would be individually fenced. Visual continuity between areas to the north and south of portions of Tule Creek in the project area would be maintained by the open space designation of the MUP over Tule Creek wetlands and wetland buffers. Visual continuity between the east and west could be impacted from the solar panels and fencing. Although there are potential impacts to visual continuity, the topography is not steep in and around the project area, and wildlife can likely use a variety of local wildlife corridors to move throughout the region; therefore, impacts would be **less than significant**.

LanEast

Construction of the LanWest solar farm, including trackers and permanent perimeter fencing, may permanently impact visual continuity within the project area, resulting in a **significant** impact (**BI-LW-30**).

LanWest

Construction of the LanWest solar farm, including trackers and permanent perimeter fencing, may permanently impact visual continuity within the project area, resulting in a **significant** impact (**BI-LW-30**).

Proposed Project

At a local and regional level, the project area does not contain clearly defined wildlife travel routes, corridors, or crossings. Instead, the project area is part of a larger area of scattered rural residential uses and open space allowing relatively unconstrained wildlife movement. However, the Proposed Project would result in the construction of 6-foot perimeter fencing around the solar panel arrays as well as the establishment of security lighting that could inhibit local wildlife movement through the area. In addition, the Proposed Project would result in impacts to foraging and breeding habitat, which could result in potentially significant impacts related to wildlife movement. In addition, LanEast and LanWest, due to their location between I-8 and SR-94, may constrain east-west movement of wildlife. Therefore, the Proposed Project would result in **significant** impacts related to wildlife movement.

2.3.3.5 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:

A. 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.

B. For lands outside of the Multiple Species Conservation Plan (MSCP), the project would impact coastal sage scrub (CSS) vegetation in excess of the County's 5% habitat loss threshold as defined by the Southern California Coastal Sage Scrub Natural Communities Conservation Planning Process (NCCP) Guidelines.

C. The project would preclude or prevent the preparation of the subregional Natural Communities Conservation Planning Process (NCCP). For example, the project proposes development within areas that have been identified by the County or resource agencies as critical to future habitat preserves.

D. The project will impact any amount of wetlands or sensitive habitat lands as outlined in the Resource Protection Ordinance (RPO).

E. The project would not minimize and/or mitigate coastal sage scrub habitat loss in accordance with Section 4.3 of the Natural Communities Conservation Planning Process (NCCP) Guidelines.

F. 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.

G. For lands within the Multiple Species Conservation Program (MSCP), the project would not minimize impacts to Biological Resource Core Areas (BRCAs), as defined in the Biological Mitigation Ordinance (BMO).

H. The project would preclude connectivity between areas of high habitat values, as defined by the Southern California Coastal Sage Scrub Natural Communities Conservation Planning Process (NCCP) Guidelines.

I. The project does not maintain existing movement corridors and/or habitat linkages as defined by the Biological Mitigation Ordinance (BMO).

J. The project does not avoid impacts to MSCP narrow endemic species and would impact core populations of narrow endemics.

K. The project would reduce the likelihood of survival and recovery of listed species in the wild.

L. The project would result in the killing of migratory birds or destruction of active migratory bird nests and/or eggs (Migratory Bird Treaty Act).

M. The project would result in the take of eagles, eagle eggs, or any part of an eagle (Bald and Golden Eagle Protection Act).

Analysis

As described previously in Section 2.3.2, Regulatory Setting, 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

Tierra del Sol

The Tierra del Sol site does not support nor would it impact coastal sage scrub vegetation; **no impacts** are anticipated.

Rugged

The Rugged site does not support nor would it impact coastal sage scrub vegetation; **no impacts** are anticipated.

LanEast

The LanEast site does not support nor would it impact coastal sage scrub vegetation; **no impacts** are anticipated.

LanWest

The LanWest site does not support nor would it impact coastal sage scrub vegetation; **no impacts** are anticipated.

Project Effect as Relevant to Guideline B

Tierra del Sol

The draft East County Multiple Species Conservation Program (ECMSCP) Plan has not yet been adopted. However, the Proposed Project would not preclude or prevent the preparation of the subregional NCCP because the area outside of the adopted MSCP is planned in accordance with the draft ECMSCP Subarea Plan. More specifically, 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 is listed in Table 2.3-15. The Tierra del Sol project would comply with all applicable objectives; impacts would be **less than significant**.

Rugged

The Rugged solar farm would not preclude or prevent the preparation of the subregional NCCP because the area outside of the adopted MSCP is planned in accordance with the draft ECMSCP

Subarea Plan. The Rugged solar farm conforms to the goals and requirements in all applicable regional planning efforts; impacts related to conformance with applicable policies, ordinances, and plans would be **less than significant**.

LanEast

The draft ECMSCP has not yet been adopted. However, the LanEast solar farm would not preclude or prevent the preparation of the subregional NCCP because the area outside of the adopted MSCP is planned in accordance with the draft ECMSCP Subarea Plan. The LanEast solar farm would conform to the goals and requirements in all applicable regional planning efforts; impacts related to conformance with applicable policies, ordinances, and plans would be **less than significant**.

LanWest

The draft ECMSCP has not yet been adopted. However, the LanWest solar farm would not preclude or prevent the preparation of the subregional NCCP because the area outside of the adopted MSCP is planned in accordance with the draft ECMSCP Subarea Plan. The LanWest solar farm would conform to the goals and requirements in all applicable regional planning efforts; impacts related to conformance with applicable policies, ordinances, and plans would be **less than significant**.

Project Effect as Relevant to Guideline C

Tierra del Sol

No County RPO wetlands or wetland buffers or RPO sensitive habitat lands were identified on the solar farm site. County RPO wetlands and wetland buffers were identified within the gen-tie alignment site; however, no wetlands will be impacted as a result of the Tierra del Sol gen-tie route. Therefore, **no impacts** to RPO wetlands or sensitive habitat lands would occur.

The need for water during construction and operation would cause the potential for well drawdown at three locations (the Boundary Creek well site, Pine Valley, and Jacumb), which could result in a potentially significant impact (**BI-TDS-20**).

Rugged

The Rugged solar farm impacts approximately 0.25 acre of RPO wetland and wetland buffer as a result of the proposed on-site access road. While impacts to the RPO wetland would be considered potentially significant (**BI-R-27**), the road impact meets the criteria for permitted uses in RPO wetlands, and therefore, qualifies for an exemption (see Appendix 2.3-2).

Sensitive habitat lands, as described in Section 2.3.3.1, are present because Tule Creek is a wildlife resource that meets the criteria outlined in the sensitive habitat lands definition (land that supports proper function of a balanced natural ecosystem or which serves as a functioning wildlife corridor). Sensitive habitat lands will be avoided and designated as open space on the MUP, and therefore, impacts to sensitive habitat lands would be **less than significant**.

The need for water during construction and operation would cause the potential for well drawdown at three locations (the Boundary Creek well site, Pine Valley, and Jacumba), which could result in a potentially significant impact (**BI-R-24**).

LanEast

To the maximum extent practicable, the LanEast solar farm would be designed to avoid wetlands (including a 50-foot buffer) and other sensitive habitat lands (including Walker Creek for lands which are critical to the proper functioning of a balanced natural ecosystem or which serves as a functioning wildlife corridor) as outlined in the RPO. However, impacts to sensitive habitat lands would occur and would be considered **significant (BI-LE-31).**

LanWest

To the maximum extent practicable, the LanWest solar farm would be designed to avoid wetlands (including a 50-foot buffer) and other sensitive habitat lands (including Walker Creek for lands which are critical to the proper functioning of a balanced natural ecosystem or which serves as a functioning wildlife corridor) as outlined in the RPO. However, impacts to sensitive habitat lands would occur and would be considered **significant (BI-LW-31).**

Project Effect as Relevant to Guideline D

Tierra del Sol

The Tierra del Sol project site does not support, nor would it impact, coastal sage scrub vegetation; **no impacts** are anticipated.

Rugged

The Proposed Project does not support nor would it impact coastal sage scrub vegetation. There is montane buckwheat scrub mapped in the study area, which was originally classified with montane buckwheat scrub, a coastal scrub community (Oberbauer et al. 2008). Coastal sage scrub communities are subject to the NCCP Guidelines and an HLP based on completion of findings pursuant to Section 4(d) of FESA. However, the study area is located outside of focus and satellite areas provided in the *Southern California Coastal Sage Scrub NCCP Conservation Guidelines* (CDFG and CRA 1993); therefore, the Rugged solar farm does not require an HLP. No impacts to coastal sage scrub would result.

LanEast

The LanEast solar farm does not support nor would it impact coastal sage scrub vegetation; **no impacts** are anticipated.

LanWest

The LanWest solar farm does not support nor would it impact coastal sage scrub vegetation; **no impacts** are anticipated.

Project Effect as Relevant to Guideline E

Tierra del Sol

No other applicable regional planning efforts apply to the Tierra del Sol project.

Rugged

No other applicable regional planning efforts apply to the Rugged solar farm project.

LanEast

No other applicable regional planning efforts apply to the LanEast solar farm project.

LanWest

No other applicable regional planning efforts apply to the LanWest solar farm project.

Project Effect as Relevant to Guideline F

Tierra del Sol

The Tierra del Sol project site is not located within the MSCP. Therefore, the Tierra del Sol project is not subject to the BMO; **no impacts** would result.

Rugged

The Rugged site is not located within the MSCP. Therefore, the Rugged solar farm is not subject to the BMO; **no impacts** would result.

LanEast

The LanEast site is not located within the MSCP. Therefore, the LanEast solar farm is not subject to the BMO; **no impacts** would result.

LanWest

The LanWest site is not located within the MSCP. Therefore, the LanWest solar farm is not subject to the BMO; **no impacts** would result.

Project Effect as Relevant to Guideline G

Tierra del Sol

The Tierra del Sol solar project is outside the focus area for the Southern California Coastal Sage Scrub Natural Communities Conservation Planning Process Guidelines. **No impacts** will occur.

Rugged

The Rugged solar farm is outside the focus area for the Southern California Coastal Sage Scrub Natural Communities Conservation Planning Process Guidelines. **No impacts** will occur.

LanEast

The LanEast solar project is outside the focus area for the Southern California Coastal Sage Scrub Natural Communities Conservation Planning Process Guidelines; **no impacts** will occur.

LanWest

The LanWest solar project is outside the focus area for the Southern California Coastal Sage Scrub Natural Communities Conservation Planning Process Guidelines; **no impacts** will occur.

Project Effect as Relevant to Guideline H

Tierra del Sol

The Tierra del Sol site is not located within the MSCP. Therefore, the Tierra del Sol solar farm is not subject to the BMO; **no impacts** would result.

Rugged

The Rugged site is not located within the MSCP. Therefore, the Rugged solar farm is not subject to the BMO; **no impacts** would result.

LanEast

The LanEast site is not located within the MSCP. Therefore, the LanEast solar farm is not subject to the BMO; **no impacts** would result.

LanWest

The LanWest site is not located within the MSCP. Therefore, the solar farm is not subject to the BMO; **no impacts** would result.

Project Effect as Relevant to Guideline I

Tierra del Sol

Narrow endemic species covered by the future ECMSCP have not yet been defined. Therefore, **no impacts** are anticipated.

Rugged

Narrow endemic species covered by the future ECMSCP have not yet been defined. Therefore, **no impacts** are anticipated.

LanEast

Narrow endemic species covered by the future ECMSCP have not yet been defined. Therefore, **no impacts** are anticipated.

LanWest

Narrow endemic species covered by the future ECMSCP have not yet been defined. Therefore, **no impacts** are anticipated.

Project Effect as Relevant to Guideline J

Tierra del Sol

No federally or state-listed plant or wildlife species have been observed on the Tierra del Sol project site. Therefore, **no impacts** are anticipated.

Rugged

No federally or state-listed plant or wildlife species have been observed in the Rugged site except for Swainson's hawk. As discussed above, Swainson's hawk no longer nests in Southern California, including San Diego County. Therefore, this species is expected only as an occasional and temporary visitor to the project area, and the Rugged solar farm would not reduce its likelihood of survival or recovery. Impacts would be **less than significant**.

LanEast

The Swainson's hawk is the only listed species (state-listed threatened) expected to occur in the LanEast site. However, this species is highly mobile and expected in the project area only as an occasional visitor during migration. Thus, development of the LanEast solar farm would not reduce the likelihood of survival and recovery of the species; impacts would be **less than significant**.

LanWest

The Swainson's hawk was the only listed species (state-listed threatened) documented from the vicinity of the LanWest site during 2011/2012 surveys. This species was observed using habitat north of the project area. Further, this species is highly mobile and expected in the project area only as an occasional visitor during migration. Thus, development of the LanWest solar farm would not reduce the likelihood of survival and recovery of the species; impacts would be **less than significant**.

Project Effect as Relevant to Guideline K

Tierra del Sol

Short-term, temporary, or construction-related impacts to migratory birds and active migratory bird nests and/or eggs protected under the MBTA are considered a **significant** impact (**BI-TDS-27**).

Solar reflection, or glare, from CPV panels may mimic water bodies and inadvertently attract migrating or dispersing wetland birds, resulting in fatalities due to collision with trackers. As discussed in Section 2.1, Aesthetics, glare produced by the trackers is reported to be lower than that of many man-made surfaces, including metal roofs and glass, and water. Additionally, the size and design of the trackers would result in a site configuration where trackers are spaced further apart than typical PV panels, reducing the potential to create a "lake effect." The Tierra del Sol solar farm is located within the Pacific Flyway for migratory avian species; however, the project site is located east of the main coast migration route and west of the primary route between the Gulf of California and the Salton Sea. Therefore, most species are not expected to fly over the project site. Additionally, many birds are known to migrate at night (Emlen 1975, Lowery 1951, USGS 2013), which reduces glare-related impacts to migrants. Therefore, due to the specific technology (CPV) proposed, distance from primary migration routes, and configuration of the trackers, glare is not expected to result in significant impacts to migrating avian species. There is very little scientific information available regarding the "pseudo-lake effect," and an adequate discussion of the potential impacts would be speculative.

Rugged

Short-term, temporary, or construction-related impacts to migratory birds and active migratory bird nests and/or eggs protected under the MBTA are considered a **significant** impact (**BI-R-32**).

Solar reflection, or glare, from trackers may mimic water bodies and inadvertently attract migrating or dispersing wetland birds, resulting in fatalities due to collision with solar panels. As discussed in Section 2.1, Aesthetics, glare produced by the trackers is reported to be lower than that of many man-made surfaces, including metal roofs and glass, and water. Additionally, the size and design of the trackers would result in a site configuration where solar panels are spaced further apart than typical PV panels, reducing the potential to create a "lake effect." The Rugged solar farm is located within the Pacific Flyway for migratory avian species; however, the project site is located east of the main coast migration route and west of the primary route between the Gulf of California and the Salton Sea. Therefore, most species are not expected to fly over the project site. Additionally, many birds are known to migrate at night (Emlen 1975, Lowery 1951, USGS 2013), which reduces glare-related impacts to migrants. Therefore, due to the specific technology (CPV) proposed, distance from primary migration routes and typical migration patterns, and configuration of the trackers, glare is not expected to result in significant impacts to migrating avian species. There is very little scientific information available regarding the "pseudo-lake effect," and an adequate discussion of the potential impacts would be speculative.

LanEast

Several bird species protected by the MBTA have the potential to occur within the project area. Short-term, temporary, or construction-related impacts to migratory birds and active migratory bird nests and/or eggs protected under the MBTA are considered a **significant** impact (**BI-LE-32**).

Solar reflection, or glare, from trackers may mimic water bodies and inadvertently attract migrating or dispersing wetland birds, resulting in fatalities due to collision with solar panels. As discussed in Section 2.1, Aesthetics, glare produced by the trackers is reported to be lower than that of many man-made surfaces, including metal roofs and glass, and water. Additionally, the size and design of the trackers would result in a site configuration where solar panels are spaced further apart than typical PV panels, reducing the potential to create a "lake effect." The LanEast solar farm is located within the Pacific Flyway for migratory avian species; however, the project site is located east of the main coast migration route and west of the primary route between the Gulf of California and the Salton Sea. Therefore, most species are not expected to fly over the project site. Additionally, many birds are known to migrate at night (Emlen 1975, Lowery 1951, USGS 2013), which reduces glare-related impacts to migrants. Therefore, due to the specific technology (CPV) proposed, distance from primary

migration routes and typical migration patterns, and configuration of the trackers, glare is not expected to result in significant impacts to migrating avian species. There is very little scientific information available regarding the "pseudo-lake effect," and an adequate discussion of the potential impacts would be speculative.

LanWest

Several bird species protected by the MBTA were observed and/or have the potential to occur within the project area. Short-term, temporary, or construction-related impacts to migratory birds and active migratory bird nests and/or eggs protected under the MBTA are considered a **significant** impact (**BI-LW-32**).

Solar reflection, or glare, from trackers may mimic water bodies and inadvertently attract migrating or dispersing wetland birds, resulting in fatalities due to collision with solar panels. As discussed in Section 2.1, Aesthetics, glare produced by the trackers is reported to be lower than that of many man-made surfaces, including metal roofs and glass, and water. Additionally, the size and design of the trackers would result in a site configuration where solar panels are spaced further apart than typical PV panels, reducing the potential to create a "lake effect." The LanWest solar farm is located within the Pacific Flyway for migratory avian species; however, the project site is located east of the main coast migration route and west of the primary route between the Gulf of California and the Salton Sea. Therefore, most species are not expected to fly over the project site. Additionally, many birds are known to migrate at night (Emlen 1975, Lowery 1951, USGS 2013), which reduces glare-related impacts to migrants. Therefore, due to the specific technology (CPV) proposed, distance from primary migration routes and typical migration patterns, and configuration of the trackers, glare is not expected to result in significant impacts to migrating avian species. There is very little scientific information available regarding the "pseudo-lake effect" and an adequate discussion of the potential impacts would be speculative.

Project Effect as Relevant to Guideline L

Tierra del Sol

No active golden eagle nests are present within the Tierra del Sol project site. However, as discussed above, golden eagle territories are located within the vicinity of the Tierra del Sol project site, and foraging habitats may potentially overlap with the project site. Impacts to functional foraging habitat would be **significant** (**BI-TDS-9**).

Rugged

As previously stated, WRI biologists observed two golden eagles flying between the eastern edge of the Rugged solar farm site and its 4,000-foot buffer zone on April 5, 2011. On the same day, one golden eagle was observed flying from the southwest to the northeast just outside the Rugged solar farm 4,000-foot buffer zone, and a second golden eagle exhibited a territorial undulating flight pattern chasing the other golden eagle out of its territory.

The exact flight paths between each bird's GPS locations are unknown; however, the short time duration between points and the altitude readings (averaging 1,000 meters above ground level) suggest trajectories over the project area. One golden eagle was estimated via satellite telemetry to have flown just shy of the western edge of the Rugged solar farm site. A second golden eagle was estimated to have flown into the 4,000-foot buffer zone to within 0.09 nautical mile of the western edge of the Rugged solar farm site. And a third golden eagle was also estimated to have flown directly over the Rugged solar farm site.

Golden eagles at Table Mountain and Carrizo Gorge territories use land apportioned in the Rugged site (Appendices 2.3-3 and 2.3-4). The Rugged site is located at the western edge of both Carrizo Gorge and Table Mountain golden eagle territories; therefore usage at the site is expected to be less than that in their core nesting areas. However, eagles will fly several miles to acquire food or water; Tule Lake, located just east of the Rugged footprint is an area that the Table Mountain golden eagles frequent to drink, bathe, or hunt for waterfowl based on visual observations by WRI Senior Golden Eagle Biologist Dave Bittner and BLM Biologist Randy West (Appendices 2.3-3 and 2.3-4). Impacts to functional foraging habitat would be **significant** (**BI-R-10**).

LanEast

No golden eagles were detected within the LanEast area, and it is unlikely that eagles would nest within 4,000 feet of the project area due to lack of suitable nesting habitat; nevertheless, the LanEast area supports suitable golden eagle foraging habitat and is within 10 miles of known eagle territories. Therefore, there is a potential for golden eagle to forage over the area. Impacts to golden eagle would be **significant** (**BI-LE-9**).

LanWest

No golden eagles were detected within the LanWest area and it is unlikely that eagles would nest within 4,000 feet of the project area due to lack of suitable nesting habitat; nevertheless, the LanWest area supports suitable golden eagle foraging habitat and is within 10 miles of known eagle territories. Therefore, there is a potential for golden eagle to forage over the area. Impacts to golden eagle would be **significant** (**BI-LW-9**).

Proposed Project

The draft ECMSCP has not yet been adopted; however, the Proposed Project would not preclude or prevent the preparation of the subregional NCCP. The Proposed Project does have the potential to temporarily impact migratory birds protected under the MBTA from construction activities, which would be considered a **potentially significant** impact. In addition, golden eagles are known to forage over the project area; any impacts to golden eagles would also be **significant**.

2.3.4 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 chosen to define the biological resources cumulative study area. This eco-geographic extent was chosen because, as described in the Jepson Flora Project, 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 2013) Based on this system, the Peninsular Ranges would define an appropriate study area for biological resources assessed in this EIR. The biological cumulative analysis study area is shown in Figure 2.3-27, and 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 1-12; a list of those projects within the biological cumulative analysis study area is included in Table 2.3-16.

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 Mexico.

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 1-12. Reasonably foreseeable cumulative projects located in the eastern portion of the overall cumulative analysis area shown on Figure 1-12 are not included because they would affect more arid vegetation communities than those present on-site, and 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 and central portion of the cumulative analysis area (within San Diego County) within the Peninsular Ranges of the California Floristic Province, 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. Therefore, as described above, the geographic extent of the biological cumulative analysis study area for impacts to plant and wildlife species and natural vegetation communities is limited to the extent shown on Figure 2.3-27.

The cumulative analysis for wildlife movement and local and regional planning is similarly limited to the western and central portions of the cumulative study area. Wildlife movement is constrained to the east by the Peninsular Range which separates the California Floristic Province from the Desert Province. 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.

2.3.4.1 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 2.3-1 for vegetation communities and associated acreage in the Proposed Project area) that supports or has the potential to support numerous special-status plant species, and

construction of the Proposed Project would result in the 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 1,826.5 acres of disturbance to similar vegetation communities and land covers as the Proposed Project (see Table 2.3-17) and would have the potential to impact the same special-status plant species as the Proposed Project.

In order to determine the potential cumulative impacts to special-status plant species that have been observed or have high potential to occur on site, a habitat model was prepared for each of the following species: caraway-leaved woodland-gilia (*Saltugilia caruifolia*), desert beauty, desert larkspur, desert monkeyflower, Engelmann oak, Jacumba milk-vetch, narrow-petal rein orchid (*Piperia leptopetala*), Parish's Rupertia (*Ruperita rigida*), Payson's jewel-flower, pride-of-California (*Lathyrus splendens*), San Bernardino aster, sticky geraea, Tecate cypress, and Tecate tarplant. The habitat model included (1) suitable vegetation communities that are being impacted within the biological cumulative analysis study area and (2) suitable elevation ranges for the plant species. The suitable habitats and elevation ranges are based on those listed in CNPS (2012) and the Jepson Flora Project (Jepson Flora Project 2013). The habitat model for each species is provided as Appendix 2.3-5, 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.

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 on Table 2.3-16 and depicted in Figure 2.3-27), 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 466,564 acres. The combined Proposed Project impacts (1,235 acres) and cumulative project impacts (1,826.5 acres) are approximately 3,061 acres, or 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 have the potential to result in a reduced distribution of the species in the region.

The Proposed Project would preserve in permanent open space an off-site property of substantial acreage (**M-BI-PP-1**), which adequately mitigates for the loss of special-status species along with vegetation community impacts (based on County Requirements). It is reasonable to assume that the cumulative projects also adequately mitigate for sensitive species impacts because the cumulative vegetation communities impacts amount to less than 1% of the land covers within the biological cumulative analysis study area. The reason is that while the impacted sensitive status plant species are sensitive due to their restricted range, they are not particularly rare within the cumulative study area (refer to section 2.4.2). The cumulative projects would mitigate under standard County Requirements, and cumulative impacts to the sensitive status plant species would be **less-than-significant**.

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 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. Reasonably foreseeable 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 1,826.5 acres). The impacts related to the introduction and spread of invasive, non-native, or noxious

plant species resulting from the Proposed Project would be mitigated to below a level of significance. Furthermore, 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, and therefore, cumulative impacts would be **less than significant**.

Fugitive Dust

Ground-disturbance activities and increased vehicle and human uses associated with construction of the Proposed Project have the potential to generate dust that could degrade vegetation communities in the area. However, the incorporation of air quality mitigation measures requiring dust control would reduce the creation of dust leading to the degradation of vegetation resulting from the Proposed Project, and impacts would be less than significant.

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 reasonably foreseeable cumulative projects within the biological cumulative analysis study area involve a variety of project types. There is a potential cumulative effect associated with these projects due to dust generated by construction activities. Additionally, most of the cumulative analysis area is generally characterized by undisturbed native vegetation communities (see Table 2.3-17).

Based on available project status information as listed in Table 1-12, most of the reasonably foreseeable cumulative projects within a few miles of the Proposed Project would not be constructed simultaneously. However, construction of some cumulative projects may only partially overlap (e.g., Tule Wind project) or would be complete prior to commencement of Proposed Project construction activities (e.g., Sunrise Powerlink), 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. However, the Proposed Project would not result in substantial dust generation based on the estimated area of disturbance and implementation of a dust control plan; other reasonably foreseeable cumulative projects would be required to control dust impacts through air quality regulations and grading plan conditions. Therefore, the potential for cumulatively significant construction dust generation resulting in vegetation (and sensitive plant species) degradation is low, and cumulative impacts would be **less than significant**.

Special-Status Wildlife Species

Direct

Construction of the Proposed Project has the potential to result in direct impacts to numerous occurring or potentially occurring special-status species and their habitat on the site. Direct impacts to numerous special-status wildlife species resulting from the Proposed Project would be less than significant under CEQA with the implementation of mitigation measures.

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 reasonably foreseeable 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 1,826.5 acres.

As described above, the biological cumulative analysis study area includes the extent of the cumulative projects that are located within the Peninsular Ranges eco-geographic extent as defined by the Jepson Flora Project (Jepson Flora Project 2013). 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 2.3-5, 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 Proposed Project would preserve in permanent open space native habitats (**M-BI-PP-1**), which would mitigate for the habitat loss of special-status species from the Proposed Project. Additionally, the combined Proposed Project and cumulative project impacts (3,061.3 acres) are only approximately 0.7% of the total acreage of vegetation communities analyzed in

the biological cumulative analysis study area (466,564 acres). Furthermore, most of the special-status wildlife species included in the cumulative impact analysis can adequately move out of the way of project disturbance, with the possible exception of the small mammals and reptiles. Therefore, cumulative impacts (direct, loss of habitat) would be **less-than-significant** to special-status wildlife species.

Indirect

Increased vehicle and human presence, noise, and other construction-related activities would result from construction of the Proposed Project. Except where such activities resulted in the mortality of and/or disturbance to special-status wildlife species, the potential construction-related mortality of and disturbance to common wildlife species would remain less than significant. Mitigation measures implemented to avoid, minimize, and mitigate construction-related impacts to special-status wildlife species would also be protective of other common wildlife species.

Given the nature, location, and timing of the reasonable foreseeable cumulative projects, the potential for cumulatively significant indirect construction-related activities is low. Reasonably foreseeable cumulative projects within the biological cumulative analysis study area involve a variety of project types (see Table 2.4-16 for estimates of cumulative area of disturbance, and Figure 2.4-27 for geographic extent of estimated impacts. Projects within a few miles of the Proposed Project are generally not anticipated to be constructed simultaneously (see discussion above).

However, construction of some reasonably foreseeable cumulative projects in close proximity to the Proposed Project may overlap, such as the Tule Wind project, 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 reasonably foreseeable cumulative project areas could lead to decreased population numbers and reduced productivity. However, the Proposed Project and other reasonably foreseeable cumulative projects are located in a rural area and adjacent properties would provide open space areas for wildlife to evacuate. Additionally, reasonably foreseeable cumulative projects would comply with County construction noise ordinances and posted vehicle speed limits, thereby further reducing the potential for a cumulative indirect impact to special-status wildlife species. Project implementation of avoidance and minimization measures during construction would reduce permanent physical cumulative impacts to wildlife such that the Proposed Project would not contribute to a cumulatively considerable impact. Suitable habitat will remain available for wildlife species on portions of the project sites or immediately adjacent. Therefore, the

potential for construction-related wildlife disturbance and mortality from the Proposed Project combined with the reasonably foreseeable cumulative projects would be low and would result in **less-than-significant** impacts with implementation of mitigation.

MBTA – Nesting Birds

Construction of the Proposed Project would result in the removal of vegetation potentially supporting nesting birds protected by the MBTA. The Proposed Project would result in approximately 1,235 acres of permanent impacts to vegetation communities in the project area (all native and non-native vegetation communities in the project area are considered potential nesting and foraging habitat). However, given the largely undeveloped nature of the project area and geographic extent of the biological cumulative analysis study area (see Figure 2.3-27), the direct and indirect impact to nesting birds resulting from the Proposed Project would be less than significant with the implementation of mitigation.

The reasonably foreseeable cumulative projects are spread over the entire cumulative analysis study area and involve a variety of project types. As shown in Table 2.3-17, the reasonably foreseeable cumulative projects would potentially impact approximately 1,633 acres of vegetation communities that could support nesting birds. However, the reasonably foreseeable cumulative projects are not likely to be constructed simultaneously (see discussion above). Given the nature, location, and timing of the reasonable foreseeable cumulative projects, the potential for cumulatively significant construction loss of nesting birds is low; however, if all of the reasonably foreseeable cumulative projects in close proximity to the Proposed Project were to be constructed simultaneously, increased human presence, vehicle traffic, and construction noise could cause modification of bird nesting behavior such that nests are never started, are subsequently abandoned, or have reduced success, which could lead to reduced population numbers. However, the MBTA applies to all construction and as a state regulation, similar mitigation related to bird nesting implemented for the Proposed Project would be implemented as part of the other cumulative projects in the area and the likelihood of all, or even a substantial number, of projects being constructed at the same time is remote (the status of cumulative projects is included in Table 2.3-16). Indirect impacts are buffered because the total acreage of vegetation communities analyzed in the biological cumulative analysis study area is approximately 466,564 acres. The Proposed Project and cumulative project result in impacts to approximately 0.7% of the total acreage of the study area. Therefore, because the impacts of construction-related loss of nesting birds from the cumulative projects would be regulated and because of the undeveloped nature of the study area cumulative impacts would be **less-than-significant**.

Transmission Lines – Electrocution and Collisions

The risk of electrocution and collision to special-status bird species from transmission lines and towers of the gen-tie portions of the Proposed Project would be potentially significant, given the known bird use and identified nesting birds in the vicinity of the Proposed Project; several special-status bird and bat species have a significant risk of mortality due to electrocution and collision. However, the risk of mortality due to electrocution and collision by other special-status bird species resulting from the Proposed Project can be mitigated to a level that is less than significant based on the proposed mitigation measures, and therefore, would be less than significant.

A majority of the reasonably foreseeable cumulative projects would not result in structures with the potential to result in electrocution or collision by special-status bird or bat species. The energy-related reasonably foreseeable cumulative projects, which include wind and transmission projects such as the Tule Wind project and the SDG&E Master Special Use Permit project, could result in a significant increase of the risk of electrocution by transmission lines and/or collision with operating turbines for special-status bird and bat species; however, it is reasonable to expect that because of existing laws and regulations, other reasonably foreseeable cumulative projects would implement appropriate measures to prevent electrocution or collision. Additionally, the Proposed Project would implement appropriate measures to prevent electrocution or collision and would mitigate all potentially significant impacts; therefore, the Proposed Project would **not contribute to a cumulatively considerable impact** related to the potential electrocution or collision with transmission lines.

2.3.4.2 Riparian Habitat or Sensitive Natural Community

The Proposed Project would have an adverse impact on vegetation communities. Adverse impacts to riparian and wetland vegetation communities that coincide with jurisdictional waters of the United States would be considered significant. In addition, adverse impacts to upland, riparian, and wetland vegetation communities supporting special-status species would be significant. Mitigation measures are provided that would reduce these effects to a level below significance.

The reasonably foreseeable cumulative projects listed in Table 2.3-16 have the potential to result in adverse impacts to vegetation communities (shown on Table 2.3-17). Reasonably foreseeable cumulative projects have the potential to affect more than 1,826.5 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 1,235 acres of vegetation communities and land covers. As shown on Table 2.3-17 and Figure 2.3-28, 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.

As shown on Table 2.3-17, the Proposed Project's impacts to vegetation communities in the cumulative analysis study area ranges from less than 0.01% to 6.5%, and overall impacts total approximately 0.2% of the cumulative analysis study area. The Proposed Project combined with the reasonably foreseeable cumulative projects would impact approximately 0.6% 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, and for no particular vegetation community would impact more than 8% of the total inventory of that community; 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**. The Applicant has identified an off-site property to provide mitigation for vegetation communities impacted by the Proposed Project. Therefore, in addition to impacting less than 0.2% of the total cumulative analysis study area, incremental cumulative adverse impacts to native vegetation communities by the Proposed Project would be off-set by mitigation and the Proposed Project's contribution to cumulative impacts would be **less than significant**.

2.3.4.3 Federally Protected Wetlands

The Proposed Project would potentially result in adverse effects to federal jurisdictional resources. Mitigation measures are required by federal regulations that would reduce potential impacts of the project and of the cumulative projects to **less than significant**.

2.3.4.4 Wildlife Movement

The Proposed Project would result in the construction of 6-foot perimeter fencing around the solar panel arrays as well as the establishment of security lighting that could inhibit wildlife

movement through the area. In particular, LanEast and LanWest could inhibit east/west movement due to its location between I-8 and Highway 80, which limit north/south movement and funnel wildlife through the area in an east/west direction. However, given that the area does not serve as a defined wildlife corridor due to the lack of riparian corridors or other topographical features, and given the expansive and generally rural nature of the area that does not constrain wildlife movement to the Proposed Project sites, the Proposed Project is not anticipated to have a significant impact after mitigation on the movement of wildlife.

A cumulative impact to linkages or wildlife movement corridors, the movement of fish, and/or native wildlife nursery sites would occur if the reasonably foreseeable 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 the 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 (Map ID 2) and the 2,160-acre Star Ranch Tentative Map (Map ID 34), could block wildlife movement due to their size and location; 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. Many of the smaller reasonably foreseeable cumulative projects (including tentative parcel map projects) would not result in any substantial constraints or blockages to wildlife movement due to their nature, size, and/or location.

The Proposed Project combined with the reasonably foreseeable cumulative projects 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 open space and wildlife movement opportunity. Additionally, the total acreage of vegetation communities analyzed in the biological cumulative analysis study area is approximately 466,564 acres and the Proposed Project combined with reasonably foreseeable cumulative projects would only impact approximately 0.7% of the total acreage. Therefore, the Proposed Project combined

with the reasonably foreseeable cumulative projects would remain a **less-than-significant cumulative** impact to habitat linkages and wildlife movement corridors.

2.3.4.5 Local Policies, Ordinances, and Adopted Plans

The Proposed Project is not covered by an MSCP. Although the ECMSCP has not yet been adopted, the Proposed Project is consistent with the plans goals and objectives applicable to regional planning efforts and does not preclude or prevent the implementation of the subregional NCCP.

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. Projects occurring in the eastern portion of the cumulative analysis study area are located within Imperial County, and therefore, are subject to different regional planning documents and programs than the Proposed Project. 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, and 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.

2.3.5 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 impacts related to the potential to reduce the distribution and/or the overall population size of one or more of these special-status plant species, including Jacumba milk-vetch, Tecate tarplant, desert beauty, and sticky geraea; impacts related to the potential to reduce the distribution and/or the overall population size of one or more special-status wildlife species; impacts to up to 1,137.8 acres of sensitive vegetation communities; impacts to more than 0.25 acre of RPO wetland and wetland buffers; impacts to approximately 3.21 acres of jurisdictional resources, including 3.11 acres of tamarisk scrub; impacts to wildlife movement; and conflicts with the MBTA.

2.3.6 Mitigation Measures

The following mitigation measures are required to reduce potential impacts associated with the Proposed Project.

2.3.6.1 Candidate, Sensitive, or Special-Status Species

Proposed Project

The Proposed Project would allow for the construction of four solar farms (Tierra del Sol (including both the solar farm and the gen-tie alignment), Rugged, LanEast, and LanWest) that would have significant adverse effects to candidate, sensitive, or special-status species. The mitigation measures described below have been identified to reduce potentially significant impacts and are applicable to all projects.

M-BI-PP-1 The applicant will preserve in permanent open space an acreage of native habitats equivalent to or greater than the acreage of project impacts; the native habitats shall be generally consistent with the assemblage of vegetation communities impacted by the project. This will mitigate for project impacts to upland scrub and chaparral communities (acreages to be preserved per County mitigation ratios as shown in Table 2.3-18) as well as habitat loss of special-status plant and wildlife species (additional acreage to be preserved to equal the total acreage of project impacts, at a minimum). The off-site open space conservation area shall be evaluated to determine if the off-site area provides similar or greater biological function and value when compared with the identified significant impacts. This assessment shall include vegetation community mapping and an assessment of associated flora and fauna to the extent necessary to determine if the off-site conservation area provides commensurate biological function and value for each significantly impacted biological resource (vegetation communities, special-status plant species, and special-status wildlife species). The off-site open space conservation area may be composed of more than one set of contiguous parcels. Mitigation for the loss of special-status plant species shall be a minimum of 2:1 mitigation to impact ratio for Jacumba milk-vetch and Tecate tarplant and 1:1 mitigation to impact ratio for sticky geraea and desert beauty unless otherwise negotiated to a different ratio with the Wildlife Agencies. The assessment of the number of individuals of these species supported within the impact and mitigation areas shall be conducted in comparable survey years to appropriately account for potential annual variation in the number of individuals.

Preservation of off-site open space shall be provided through one of the following options:

Option 1: If purchasing Mitigation Credit from the mitigation bank, the evidence of purchase shall include the following information to be provided by the mitigation bank:

a. A copy of the purchase contract referencing the project name and numbers for which the habitat credits were purchased.

b. If not stated explicitly in the purchase contract, a separate letter must be provided identifying the entity responsible for the long-term management and monitoring of the preserved land.

c. To ensure the land will be protected in perpetuity, evidence must be provided that a dedicated conservation easement or similar land constraint has been placed over the mitigation land.

d. An accounting of the status of the mitigation bank must be provided that shall include the total amount of credits available at the bank, the amount required by this project, and the amount remaining after utilization by this project.

Option 2: If mitigation credit is not purchased in a mitigation bank, then the applicant shall provide for the conservation of habitat of the same amount and type of land located in San Diego County indicated as follows:

a. Prior to purchasing the land for the proposed mitigation, the location should be pre-approved by the County Department of Planning and Development Services (PDS).

b. A Resource Management Plan (RMP) shall be prepared and approved pursuant to the County of San Diego *Guidelines for Determining Significance and Report Format and Content Requirements: Biological Resources* to the satisfaction of the director of PDS. If the off-site mitigation is proposed to be managed by Department of Parks and Recreation (DPR), the RMP shall also be prepared and approved to the satisfaction of the director of DPR.

c. An open space easement over the land shall be dedicated to the County of San Diego or like agency to the satisfaction of the director of PDS. The land shall be protected in perpetuity.

d. The purchase and dedication of the land and selection of the resource manager and establishment of an endowment to ensure funding of annual ongoing basic stewardship costs shall be complete prior to approval of the RMP.

In lieu of providing a private habitat manager, the applicant may contract with a federal, state, or local government agency with the primary mission of resource management to take fee title and manage the mitigation land). Evidence of satisfaction must include a copy of the contract with the agency, and a written statement from the agency that (1) the land contains the specified acreage and the specified habitat, or like functioning habitat, and (2) the land will be managed by the agency for conservation of natural resources in perpetuity. Documentation: The applicant shall purchase the off-site mitigation credits and provide evidence to PDS for review and approval. If the off-site mitigation is proposed to be owned or managed by DPR, the applicant must provide evidence to PDS that DPR agrees to this proposal. It is recommended that the applicant submit the mitigation proposal to PDS for a pre-approval. If an RMP is going to be submitted in lieu of purchasing credits, then the RMP shall be prepared, and an application for the RMP shall be submitted to PDS. Timing: Prior to issuance of a grading permit the mitigation shall occur.

Monitoring: PDS shall review the mitigation purchase for compliance with this condition. Upon request from the applicant, PDS can pre-approve the location and type of mitigation only. The credits shall be purchased before the requirement can be completed. If the applicant chooses option 2, then PDS shall accept an application for an RMP, and PDS and DPR shall review the RMP submittal for compliance with this condition and the RMP Guidelines.

The applicant is currently assessing 2,619 acres of open space located just west of the project area to mitigate for the loss of sensitive vegetation communities and habitat 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 sensitive plant and wildlife species to occur, is included in Appendix 2.3-6.

M-BI-PP-2 To prevent inadvertent disturbance to areas outside the limits of grading, all grading shall be monitored by a biologist. A County-approved “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, occasionally during, and after construction pursuant to the most current version of the County of San Diego *Guidelines for Determining Significance and Report Format and Content Requirements: Biological Resources*, 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 consulting company and the County of San Diego 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 of San Diego Report Format and Content Requirements, Biological Resources, 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 and 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; see M-BI-PP-3 for required best management practices (BMPs)).

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 PDS.

Documentation: The applicant shall provide a copy of the biological monitoring contract, cost estimate, and MOU to 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: 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. DPW shall add the cost of the monitoring to the grading bond costs.

M-BI-PP-3 The SWPPP shall include, at a minimum, the BMPs listed as follows. 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 and sensitive vegetation communities during construction. The Project Biologist shall verify 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. When construction operations are completed, any excess materials or debris will be removed from the work area.
3. Fully covered trash receptacles that are animal-proof and weatherproof 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.
4. Pets on or adjacent to construction sites will not be permitted by the operator.
5. 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-PP-4 To ensure that the biological monitoring occurred during the grading phase of the project, the Project Biologist shall prepare a final biological monitoring report.

The report shall substantiate the supervision of the grading activities and confirm that grading or construction activities did not impact any areas outside of the designated construction zone or any other sensitive biological resources. The report shall conform to the County of San Diego *Guidelines for Determining Significance and Report Format and Content Requirements: 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 Project Biologist was on site
3. Photos of the site after the grading and clearing activities
4. Documentation: The Project Biologist shall prepare the final report and submit it to 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: 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-PP-5 The applicant shall develop a Fugitive Dust Control Plan in compliance with San Diego County Air Pollution Control District Regulations to reduce particulate matter less than 10 microns (PM_{10}) 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 operations and maintenance facility 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 shall not increase any other environmental impacts including loss of vegetation.

c. All material excavated or graded shall be sufficiently watered to prevent excessive dust. Watering will occur as needed with complete coverage of disturbed areas. The excavated soil piles shall be 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, or 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-PP-6 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-PP-7 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 on the project area
4. Littering on the project area.

M-BI-PP-8 To minimize the potential exposure of the project area to fire hazards, all features of the project's Fire Protection Plan (see Appendices 3.1.4-5 and 3.1.4-6) shall be implemented in conjunction with development of the Tierra del Sol solar farm.

M-BI-PP-9 Weed control treatments shall include any 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 advisor (PCA) and implemented by a licensed applicator. Where manual and/or mechanical methods are used, disposal of the plant debris shall 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.

M-BI-PP-10 To avoid impacts to nesting birds the applicant shall:

1) Submit to the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS) a Nesting Bird Management, Monitoring, and Reporting Plan (NBMMRP) for review and approval prior to commencement project activities during the breeding season (February 1 to August 31, and as early as January 1 for some raptors). The NBMMRP should include the following:

1. Nest survey protocols describing the nest survey methodologies
2. A management plan describing the methods to be used to avoid nesting birds and their nests, eggs, and chicks
3. A monitoring and reporting plan detailing the information to be collected for incorporation into a regular Nest Monitoring Log (NML) with sufficient details to enable USFSW and CDFW to monitor the applicant's compliance with Fish and Game Code Sections 3503, 3503.5, 3511, and 3513
4. A schedule for the submittal (usually weekly) of the NML
5. Standard buffer widths deemed adequate to avoid or minimize significant project-related edge effects (disturbance) on nesting birds and their nests, eggs, and chicks
6. A detailed explanation of how the buffer widths were determined
7. All measures the applicant will implement to preclude birds from utilizing project-related structures (i.e., construction equipment, facilities, or materials) for nesting.

and

2) Conduct preconstruction nesting bird surveys within 72 hours of construction-related activities and implement appropriate avoidance measures for identified nesting birds.

To determine the presence of nesting birds that the project activities may affect, surveys should be conducted beyond the project area—300 feet for passerine birds and 500 feet for raptors. The survey protocols should include a detailed description of methodologies utilized by CDFW-approved avian biologists to search for nests and describe avian behaviors that indicate active nests. The protocols should include but are not limited to the size of the project area being surveyed, method of search, and behavior that indicates active nests.

Each nest identified in the project area should be included in the NML. The NMLs should be updated daily and submitted to the CDFW weekly. Since the purpose of the NMLs is to allow the CDFW to track compliance, the NMLs should include information necessary to allow comparison between nests protected by standard buffer widths recommended for the project (300 feet for passerine birds, 500 feet for raptors) and nests whose standard buffer width was reduced by encroachment of project-related activities. The NMLs should provide a summary of each nest identified, including the species, status of the nest, buffer information, and fledge or failure data. The NMLs will allow for tracking the success and failure of the buffers and will provide data on the adequacy of the buffers for certain species.

The applicant(s) will rely on its avian biologists to determine the appropriate standard buffer widths for nests within the project area to employ based on the sensitivity levels of specific species or guilds of avian species. The determination of the standard buffer widths should be site- and species-/guild-specific and data-driven and not based on generalized assumptions regarding all nesting birds. The determination of the buffer widths should consider the following factors:

1. Nesting chronologies
2. Geographic location
3. Existing ambient conditions (human activity within line of sight—cars, bikes, pedestrians, dogs, noise)
4. Type and extent of disturbance (e.g., noise levels and quality—punctuated, continual, ground vibrations—blasting-related vibrations proximate to tern colonies are known to make the ground-nesting birds flush the nests)

5. Visibility of disturbance
6. Duration and timing of disturbance
7. Influence of other environmental factors
8. Species' site-specific level of habituation to the disturbance.

Application of the standard buffer widths should avoid the potential for project-related nest abandonment and failure of fledging, and minimize any disturbance to the nesting behavior. If project activities cause or contribute to a bird being flushed from a nest, the buffer must be widened.

M-BI-PP-11 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 daily (i.e., each morning) by a qualified biologist to monitor for wildlife entrapment. Excavations shall provide an earthen ramp to allow for a wildlife escape route.

M-BI-PP-12 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.

Tierra del Sol

No additional mitigation measures are required.

Tierra del Sol Gen-Tie

M-BI-TDS-1 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 Tierra del Sol project shall implement recommendations by the APLIC (2006), which will protect raptors and other birds from electrocution. These measures are sufficient to protect even the largest birds that may perch or roost on transmission lines or towers from electrocution. Specifically, these measures will include guidance on proper pole and cross member dimensions,

phasing, and insulator design and dimensions to preclude wire-to-wire contact with a goal of providing 150 centimeters (59 inches) of separation between energized conductors and energized hardware and ground wire. In addition, bird diverters or other means to make lines more visible to birds will be installed to help avoid collisions.

Rugged

No additional mitigation measures are required.

LanEast

No additional mitigation measures are required.

LanWest

No additional mitigation measures are required.

2.3.6.2 Riparian Habitat or Sensitive Natural Community

Proposed Project

The following mitigation measures have been identified to reduce potentially significant impacts to riparian habitat and sensitive natural communities and are applicable to all projects.

Mitigation for short-term, direct impacts to special-status vegetation communities include Mitigation Measures **M-BI-PP-2** (biological monitoring), **M-BI-PP-3** (preparation and implementation of an SWPPP), and **M-BI-PP-4** (preparation of a biological monitoring report).

Mitigation Measure **M-BI-PP-1** will mitigate for permanent, direct impacts to special-status vegetation communities through off-site compensatory mitigation.

Mitigation for short-term and long-term indirect impacts to special-status vegetation communities include Mitigation Measures **M-BI-PP-1** (habitat preservation), **M-BI-PP-2** (biological monitoring), **M-BI-PP-3** (preparation and implementation of an SWPPP), **M-BI-PP-4** (preparation of a biological monitoring report), **M-BI-PP-5** (implementation of a Fugitive Dust Control Plan), **M-BI-PP-6** (biological review of landscape plans), **M-BI-PP-7** (restrictions on operation and maintenance personnel activity), **M-BI-PP-8** (implementation of a Fire Protection Plan), and **M-BI-PP-9** (regulated herbicide application).

Permanent, direct impacts to wetlands and waters under the jurisdiction of ACOE, RWQCB, and CDFW on the Rugged, LanEast, and LanWest solar farms will be reduced through implementation of mitigation measures **M-BI-PP-1** (habitat preservation), and **M-BI-PP-13**, described below.

M-BI-PP-13 To comply with the state and federal regulations for impacts to "waters of the United States and 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 PDS that such an agreement or permit is not required:
   a. A Clean Water Act, Section 401/404 permit issued by the California Regional Water Quality Control Board (RWQCB) and the U.S. Army Corps of Engineers (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 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: PDS shall review the permits/agreement for compliance with this condition. Copies of these permits should be implemented on the grading plans.

Impacts to groundwater-dependent vegetation will be mitigated through implementation of groundwater monitoring as described in **M-BI-PP-14**:

M-BI-PP-14 The groundwater monitoring program will establish the current status and health of the existing oak woodland and document oak conditions up to a 5-year post-construction time frame. The goal is to determine if the project's use of groundwater is impacting area oak trees/woodlands. If water levels in Wells RM-1, RM-3 and RSD-1 do not drop more than 3 feet below baseline during the first year construction period, monitoring will cease at that time because impacts would be expected to be less than significant.

The baseline data would be collected over the course of approximately 1 year prior to project-related groundwater extraction. Potentially affected native trees within the study area will be evaluated for overall physical condition and attributes. The trees

shall be inventoried by an International Society of Aboriculture (ISA) Certified Arborist or Registered Professional Forester with specific experience evaluating native oak species, in particular coast live oaks. The baseline monitoring evaluations will include the following:

- Establishment of 28 pseudo-randomized 0.2-acre plots around oak groupings and scattered individual trees. Sample plots would include the range of existing habitat conditions, including elevation, slope and aspect, proximity to roads, and other land uses. If an oak woodland monitoring site is less than 0.1 acre, the entire site will be evaluated.
- Tagging of trees and recording species, tag number, trunk diameter at breast height (dbh) (inches), height (feet) and dominance (i.e., whether the tree is under the canopy of another tree or forms the uppermost canopy). Slope, aspect, and elevation of each tree location, existing understory species (including proportion of natives to exotics), presence of debris and litter, and soil type, depth, and parent material will be noted for each tree or plot.
- Placement of tensiometers (or similar) to measure soil moisture levels
  - Soil moisture levels will be recorded quarterly at depths up to 48 inches.
- Assessment of tree status, including documentation of:
  - Trunk diameter at breast height (dbh), measured at 4.5 feet above ground (according to standard practices)
  - Number of stems
  - Overall tree height (based on ocular estimates)
  - Tree crown spread (measurement in each cardinal direction, based on ocular estimate)
  - Overall tree health condition (Good, Fair, Poor, Dead)
  - Overall tree structural condition (Good, Fair, Poor, Dead)
  - Pest presence (Type, Extent – minimal, moderate, high)
  - Disease presence (Type, Extent – minimal, moderate, high)
  - Other specific comments.
- Assessment of acorn production, seedling establishment, and sapling tree densities and conditions
- The data collection procedure will include full data collection at each plot so that consistency is maintained among sampling plots.
- Creation of oak tree database using GIS or similar application.

Ongoing monitoring will be carried out quarterly during the 1-year project construction period. If the Certified Arborist or Registered Professional Forester observes an impact to the oak woodland after this period, monitoring will continue in years 2 through 5 following initiation of project-related groundwater extraction. Monitoring will include the following components:

- Monitoring inspections will include re-evaluation of the baseline data as well as collection of soil moisture data from pre-placed tensiometers.
- Monitoring will include re-evaluating the trees to determine if changes are occurring that may indicate ground water drawdown is having a deleterious effect on oak woodlands or individual trees. The following information will be recorded during each monitoring visit and the data will be compared to previous monitoring results:
  - Trunk diameter at breast height (dbh), measured at 4.5 feet above ground (according to standard practices)
  - Number of stems
  - Overall tree height (based on ocular estimates)
  - Tree crown spread (measurement in each cardinal direction, based on ocular estimate)
  - Overall tree health condition (Good, Fair, Poor, Dead)
  - Overall tree structural condition (Good, Fair, Poor, Dead)
  - Pest presence (Type, Extent – minimal, moderate, high)
  - Disease presence (Type, Extent – minimal, moderate, high)
  - Other specific comments.

In particular, monitoring evaluations will focus on examining crowns for discoloration, loss of vigor, foliage curling, and/or pest presence; and trunks and root crowns for beetle/borer symptoms, bleeding cankers, or seeping areas (indicative of fungal infections). These and similar signs may indicate that a tree or a grouping of trees is experiencing stress, which can be corroborated by tensiometer readings. Trees under stress are more susceptible to disease and insect attacks.

The following mitigation criteria will be established to protect groundwater resources and groundwater-dependent habitat in the project area:

- If the groundwater levels at off-site wells located within 0.5 mile of Well B (RM-1, RM-3, or RSD-1) drops 10 feet below the baseline water levels,

groundwater pumping at Well B will cease until the water level at the well that experienced the threshold exceedance has increased above the threshold and remained there for at least 30 continuous days. Additionally, written permission from the County PDS must be obtained before production may be resumed.

- If the groundwater levels in the vicinity of the groundwater dependent habitat (RM-1 or RM-3) drops below 10 feet of the pre-pumping static water level and there is evidence of deteriorating oak tree health as determined by the Certified Arborist or Registered Professional Forester, there may be a temporary or permanent cessation of pumping at Well B. If evidence of deterioration persists after the 5-year period, mitigation will consist of off-site wetland/oak woodland credits at a 3:1 ratio.
- If an impact to the oak woodland habitat is observed by the monitoring Certified Arborist or Registered Professional Forester over the duration of the project construction period, routine monitoring of the oak woodland will continue for a maximum up to 5 years following initiation of project-related groundwater extraction. The monitoring Certified Arborist or Registered Professional Forester will base mitigation recommendations on the type and extent of tree issues observed. If groundwater drawdown is determined to be the cause of tree stress, resulting in the presence of secondary pests (insects and/or disease), halting groundwater extraction may be recommended.
- If less than 3 feet of drawdown is observed at monitoring wells RM-1 and RM-3 at the end of project construction and no deleterious health effects are observed in the oak woodland habitat, monitoring can cease at the end of the first year of project operation as long as the wells operate only as intended under the project's conditions of approval.
- For the 1-year construction period, 18 acre-feet (AF) of water is proposed to be pumped from on-site supply Well B. For subsequent years, 6 acre-feet per year (AFY) will be pumped from Well B for operation and maintenance of the project. The groundwater storage within 0.5-mile radius study area surrounding Well B is estimated at 387 AF. The average annual recharge for the study area within 0.5-mile radius of Well B is estimated at 27 AFY. Thus, average annual recharge within the 0.5-mile radius study area is sufficient to meet project construction and operational water demands.

A groundwater monitoring report will be completed by a Certified Hydrogeologist registered in the State of California and submitted to the County PDS each month, no later than 28 days following the end of the monitoring month. The report will include the following information:

- Water level hydrographs and tabulated water level data for each monitoring well
- Tabulated groundwater production volumes from each production well
- Documentation of groundwater drawdown at off-site monitoring wells RM-1 and RM-3
- Documentation of any threshold-included curtailment of groundwater production
- Appendix documenting groundwater dependent habitat monitoring as described above.

If the baseline water levels at the off-site monitoring wells RM-1, RM-3, and RSD-1 are exceeded by 5 feet, the County PDS will be notified via letter and electronic mail within five working days of the exceedance. Additionally, if water level thresholds at the off-site wells are exceeded by 10 feet, pumping of Well B shall cease and the County PDS notified via letter and electronic mail within five working days.

In addition to the monthly groundwater monitoring reports, annual reports will also be submitted to the County PDS summarizing groundwater-dependent habitat monitoring efforts and any mitigation recommendations implemented in the field during the monitoring year. The monitoring year will coincide with the calendar year. The annual reports will document tree health and mortality, tensiometer readings, water level readings, well production, and success of mitigation efforts (if any were necessary). Annual reports will be completed prior to the end of January in the next calendar year.

Tierra del Sol

No additional mitigation measures are required.

Rugged

In addition to the mitigation measures listed above, Mitigation Measure M-BI-R-1, described below, is included to reduce permanent, direct impacts to 0.01 acre (446 linear feet) of impacts to ephemeral stream channel under the jurisdiction of ACOE, RWQCB, and CDFW; 0.10 acre (996

linear feet) of wetlands under the jurisdiction of ACOE, RWQCB, CDFW, and the County; and 3.11 acres (3,462 linear feet) of tamarisk scrub under the jurisdiction of CDFW only.

M-BI-R-1 Option 1: A Revegetation Plan for 0.30 acre of mitigation is required for impacts to alkali meadow and disturbed alkali meadow (ACOE/RWQCB/CDFW/County jurisdictional wetland). ACOE, RWQCB, and/or CDFW staff may require additional mitigation for non-Resource Protection Ordinance (RPO) jurisdictional waters/riparian habitat impacted by the project.

The Revegetation Plan shall conform to the most current version of the County of San Diego Report Format and Content Requirements for Revegetation Plans. In order to ensure project completion and success of the Revegetation Plan, a surety shall be provided and an agreement shall be executed with the County of San Diego consisting of a letter of credit, bond, or cash for 100% of the estimated costs associated with the implementation of the Revegetation Plan and a 10% cash deposit of the cost of all improvements (no less than $3,000; no more than $30,000). The surety shall be released upon completion of the Revegetation Plan provided the installed vegetation is in a healthy condition and meets the plan's success criteria. An RMP shall be prepared and approved pursuant to the County of San Diego *Guidelines for Determining Significance and Report Format and Content Requirements: Biological Resources* to the satisfaction of the Director of PDS. If the off-site mitigation is proposed to be owned and/or managed by DPR, the RMP shall also be approved by the Director of DPR.

Option 2: If purchasing Mitigation Credit, the mitigation bank shall be approved by the CDFW. The following evidence of purchase shall include the following information to be provided by the mitigation bank:

1. A copy of the purchase contract referencing the project name and numbers for which the habitat credits were purchased.
2. If not stated explicitly in the purchase contract, a separate letter must be provided identifying the entity responsible for the long-term management and monitoring of the preserved land.
3. To ensure the land will be protected in perpetuity, evidence must be provided that a dedicated conservation easement or similar land constraint has been placed over the mitigation land.
4. An accounting of the status of the mitigation bank. This shall include the total amount of credits available at the bank, the amount required by this project, and the amount remaining after utilization by this project.

Documentation: The applicant shall purchase the off-site mitigation credits and provide the evidence to the PDS for review and approval. If the off-site mitigation is proposed to be owned or managed by DPR, the applicant must provide evidence to PDS that DPR agrees to this proposal. It is recommended that the applicant submit the mitigation proposal to PDS for a pre-approval. If an RMP is going to be submitted in-lieu of purchasing credits, then the RMP shall be prepared, and an application for the RMP shall be submitted to PDS.

Timing: Prior to the approval of the map and prior to the approval of any plan and issuance of any permit, the mitigation shall be completed.

Monitoring: PDS shall review the mitigation purchase for compliance with this condition. Upon request from the applicant, PDS can preapprove the location and type of mitigation only. The credits shall be purchased before the requirement can be completed. If the applicant chooses option 2, then PDS shall accept an application for an RMP, and PDS shall review the RMP submittal for compliance with this condition and the RMP Guidelines.

LanEast

No additional mitigation measures are required.

LanWest

No additional mitigation measures are required.

2.3.6.3 Jurisdictional Wetlands and Waters

Proposed Project

The following mitigation measures have been identified to reduce potentially significant impacts to jurisdictional wetlands and waters and are applicable to all projects, except for Tierra del Sol for which there are **no impacts** to jurisdictional wetlands or waters.

Short-term, direct impacts to jurisdictional wetlands and waters will be reduced through implementation of Mitigation Measures **M-BI-PP-2** (biological monitoring), **M-BI-PP-3** (preparation and implementation of an SWPPP), and **M-BI-PP-4** (preparation of a biological monitoring report).

Permanent, direct impacts to wetlands and waters under the jurisdiction of ACOE, RWQCB, and CDFW will be reduced through implementation of Mitigation Measures **M-BI-PP-1** (habitat preservation), and **M-BI-PP-13** (federal and state permits).

Short-term, indirect impacts to jurisdictional wetlands and waters will be reduced through implementation of Mitigation Measures **M-BI-PP-2** (biological monitoring), **M-BI-PP-3** (preparation and implementation of an SWPPP), **M-BI-PP-4** (preparation of a biological monitoring report), and **M-BI-PP-5** (implementation of a Fugitive Dust Control Plan).

Long-term, indirect impacts to jurisdictional wetlands and waters will be reduced through implementation of Mitigation Measures **M-BI-PP-1** (habitat preservation), **M-BI-PP-5** (implementation of a Fugitive Dust Control Plan), **M-BI-PP-6** (biological review of landscape plans), **M-BI-PP-7** (restrictions on operation and maintenance personnel activity), **M-BI-PP-8** (implementation of a Fire Protection Plan), and **M-BI-PP-9** (regulated herbicide application).

Tierra del Sol

The project will not result in any significant impacts to jurisdictional wetlands or waters, therefore, no mitigation measures are required.

Rugged

In addition to the mitigation measures listed above, Mitigation Measure **M-BI-R-1** (3:1 wetland mitigation) is included to reduce permanent, direct impacts to 0.01 acre (446 linear feet) of impacts to ephemeral stream channel under the jurisdiction of ACOE, RWQCB, and CDFW; 0.10 acre (996 linear feet) of wetlands under the jurisdiction of ACOE, RWQCB, CDFW, and the County; and 3.11 acres (3,462 linear feet) of tamarisk scrub under the jurisdiction of CDFW only.

LanEast

No additional mitigation measures are required.

LanWest

No additional mitigation measures are required.

2.3.6.4 Wildlife Movement

Proposed Project

The following mitigation measures have been identified to reduce potentially significant impacts to wildlife movement and are applicable to all projects.

Mitigation for short-term, direct impacts to potential foraging and breeding habitat includes Mitigation Measures **M-BI-PP-2** (biological monitoring), **M-BI-PP-3** (preparation and implementation of an SWPPP), and **M-BI-PP-4** (preparation of a biological monitoring report).

Mitigation for long-term, direct impacts to potential foraging and breeding habitat for wildlife species and to wildlife movement includes Mitigation Measure **M-BI-PP-1** (habitat preservation and management).

Mitigation for impacts to groundwater-dependent vegetation as a result of well drawdown includes Mitigation Measure **MI-BI-PP-14** (groundwater monitoring and mitigation plan).

Tierra del Sol

In addition to the measures listed above, impacts to avian movement resulting from collision and electrocution with the Tierra del Sol gen-tie alignment would be mitigated through implementation of Mitigation Measure **M-BI-TDS-1** (implement recommendations by the Avian Power Line Interaction Committee).

Rugged

No additional mitigation measures are required.

LanEast

In addition, to reduce potential long-term, direct impacts to wildlife movement on the LanEast solar farm, the following mitigation measure applies:

M-BI-LE-1 A wildlife movement corridor shall be established along Walker Creek to allow for continued movement across the LanEast solar farm site. The corridor shall be established consistent with County standards (minimum 1,000 feet wide with a 400-foot wide pinch point for no more than 500 feet in length), and shall include an appropriate Resource Protection Ordinance (RPO) wetland buffer.

LanWest

In addition, to reduce potential long-term, direct impacts to wildlife movement on the LanWest solar farm, the following mitigation measure applies:

M-BI-LW-1 A wildlife movement corridor shall be established along Walker Creek to allow for continued movement across the LanWest solar farm site. The corridor shall be established consistent with County standards (minimum 1,000 feet wide with a 400-foot-wide pinch point for no more than 500 feet in length), and shall include an appropriate RPO wetland buffer.

2.3.6.5 Local Policies, Ordinances, and Adopted Plans

Proposed Project

The following mitigation measures have been identified to reduce potentially significant impacts related to the Proposed Project's conformance with local plans, policies, and ordinances, and are applicable to all projects.

Impacts to County RPO wetlands and wetland buffers would be mitigated through Mitigation Measures **M-BI-PP-1** (habitat preservation and management) and **M-BI-R-1** (3:1 wetland mitigation).

Potential short-term, direct impacts to migratory birds protected under the MBTA would be reduced through implementation of Mitigation Measure **M-BI-PP-10** (surveys for nesting birds).

Tierra del Sol

No additional mitigation measures are required.

Rugged

No additional mitigation measures are required.

LanWest

No additional mitigation measures are required.

LanEast

No additional mitigation measures are required.

2.3.7 Conclusion

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

Tierra del Sol

All potentially significant impacts would be reduced to **less than significant** with incorporation of mitigation (see Table 2.3-19).

Rugged

All potentially significant impacts would be reduced to **less than significant** with incorporation of mitigation (see Table 2.3-20).

LanEast

All potentially significant impacts would be reduced to **less than significant** with incorporation of mitigation (see Table 2.3-21).

LanWest

All potentially significant impacts would be reduced to **less than significant** with incorporation of mitigation (see Table 2.3-22).

Proposed Project

The Proposed Project would result in over 805.1 acres of impacts to sensitive vegetation communities, many of which support sensitive plant and wildlife species. However, with incorporation of mitigation measures **M-BI-PP-1** through **M-BI-PP-14, M-BI-TDS-1, M-BI-R-1, M-BI-LE-1,** and **M-BI-LW-1**, potentially significant impacts as a result of the Proposed Project would be reduced to **less than significant**.

Table 2.3-1
Vegetation Communities and Land Cover Types

Habitat Types/Vegetation Communities[1]	Code[2]	Tierra del Sol (acres)	TDS Gen-Tie (acres)	Rugged (acres)	LanEast (acres)	LanWest (acres)	Total (acres)
Upland Scrub and Chaparral							
Big Sagebrush Scrub*	35210	16.2	0.9	82.5	24.8	6.5	130.9
Big Sagebrush Scrub (Disturbed)*	35210	—	—	14.8	17.3	5.3	37.4
Montane Buckwheat Scrub/Red Shank Chaparral*	32800/ 37300	2.0	—	—	—	—	2.0
Granitic Chamise Chaparral*	37210	177.0	—	117.8	—	2.0	296.8
Granitic Chamise Chaparral (Disturbed)*	37210	—	—	—	—	1.6	1.6
Granitic Chamise Chaparral/Montane Buckwheat Scrub*	37210/ 32800	2.2	—	—	—	—	2.2
Granitic Northern Mixed Chaparral*	37131	68.2	113.2	11.3	—	—	192.7
Granitic Northern Mixed Chaparral/Montane Buckwheat Scrub*	37131/ 32800	13.3	—	—	—	—	13.3

Table 2.3-1
Vegetation Communities and Land Cover Types

Habitat Types/Vegetation Communities[1]	Code[2]	Tierra del Sol (acres)	TDS Gen-Tie (acres)	Rugged (acres)	LanEast (acres)	LanWest (acres)	Total (acres)
Montane Buckwheat Scrub*	37K00	41.0	18.2	83.0	—	—	142.2
Montane Buckwheat (Disturbed) Scrub*	37K00	2.3	—	9.7	—	—	12.0
Red Shank Chaparral *	37300	68.5	38.6	42.3	14.4	3.4	167.2
Scrub Oak Chaparral*	37900	6.0	3.7	66.6	—	—	76.3
Scrub Oak Chaparral (Disturbed)*	37900	—	—	0.5	—	—	0.5
Semi-Desert Chaparral *	37400	—	—	112.6	38.6	14.5	165.8
Semi-Desert Chaparral – Rock*	37400	—	—	12.4	—	3.0	15.4
Semi-Desert Chaparral (Disturbed)*	37400	—	—	1.8	3.7	3.3	8.8
Upper Sonoran Subshrub Scrub*	39000	—	—	—	14.3	—	14.3
Upper Sonoran Subshrub Scrub (Disturbed)*	39000	—	—	—	5.4	—	5.4
	Subtotal	*396.7*	*174.6*	*555.3*	*118.5*	*39.7*	*1284.8*
Upland Woodland and Savannah							
Coast Live Oak Woodland*	71160	0.9	6.6	7.2	5.6	0.1	20.4
Coast Live Oak Woodland (Disturbed)*	71160	—	3.8	—	5.2	1.6	10.6
Engelmann Oak Woodland*	71180	—	—	--	0.4	—	0.4
Mixed Oak Woodland*	77000	—	—	3.3	2.6	—	5.9
Mixed Oak Woodland (Disturbed)*	77000	—	—	—	0.4	0.5	0.9
	Subtotal	*0.9*	*10.4*	*10.5*	*14.2*	*2.2*	*38.2*
Riparian Herb							
Wet Montane Meadow	45110	—	*0.1*	—	—	—	*0.1*
Alkali Meadow*	45300	—	—	*14.5*	—	—	*14.5*
Alkali Meadow (Disturbed)*	45300	—	—	*4.6*	—	—	*4.5*
Alkali Seep*	45320	—	—	—	*32.5*	—	*32.5*
Alkali Seep (Disturbed)*	45320	—	—	—	*11.4*	—	*11.4*
Freshwater Seep*	45400	—	—	—	*23.1*	—	*23.1*
Wildflower Field (Disturbed)*	42300	—	—	—	*4.2*	*10.7*	*14.9*
	Subtotal	—	*0.1*	*19.1*	*71.2*	*10.7*	*101*
Riparian Scrub							
Riparian Habitat*	60000		—				0
Mulefat Scrub (Disturbed)*	63310	—	—	1.2	—	—	1.2
Southern Cottonwood-Willow Riparian Forest*	61330	—	—	—	1.0	—	1

Table 2.3-1
Vegetation Communities and Land Cover Types

Habitat Types/Vegetation Communities[1]	Code[2]	Tierra del Sol (acres)	TDS Gen-Tie (acres)	Rugged (acres)	LanEast (acres)	LanWest (acres)	Total (acres)
Southern Cottonwood-Willow Riparian Forest (Disturbed)*	61330	—	—	—	0.8	—	0.8
Southern Willow Scrub*	63320	—	0.5	—	—	—	0.5
Southern Willow Scrub (Disturbed)*	63320	—	—	—	2.3	0.6	2.9
Tamarisk Scrub*	63810	—	—	4.8	—	—	4.8
	Subtotal	—	*0.5*	*6.0*	*4.1*	*0.6*	*11.2*
Unvegetated Waters							
Open Water*	64100	0.1	—	0.2	—	—	0.3
Non-Vegetated Channel*	64200	—	—	1.0	1.3	0.7	3.0
	Subtotal	*0.1*	—	*1.2*	*1.3*	*0.7*	*3.3*
Non-Native Communities and Land Covers							
Disturbed Habitat	11300	21.9	11.7	64.2	17.8	1.0	116.6
Non-Native Grassland*	42200	—	7.7	106.9	3.9	—	118.6
Urban/Developed	12000	—	4.8	1.0	1.4	—	7.2
	Subtotal	*21.9*	*23.4*	*172.1*	*23.1*	*1.0*	*241.6*
Total	—	419.6	208.9	764.1	232.4	54.9	1,680.0

[1] 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 the table with an asterisk (*).
[2] Code is based on the *Draft Vegetation Communities of San Diego County* (Oberbauer et al. 2008).

Table 2.3-2
Tierra del Sol Solar Farm Site Data Station Point Summary

Data Station	Wetland Determination Field Indicators			Stream Association	Determination	Jurisdiction
	Vegetation	*Hydric Soils*	*Hydrology*			
1		✓	✓	No	Isolated wetland	None[1]
2	✓	✓	✓	No	Isolated wetland	None[2]
3				No	Upland	None

[1] Although two of three field indicators for wetlands were met, area is considered exempt from a RPO wetlands designation.
[2] All three field indicators for wetlands were met; however, results of the significant nexus determination concluded no hydrologic connectivity to a TNW or tributary to a TNW (i.e., no significant nexus). Area is considered exempt from a RPO wetlands designation.

Table 2.3-3
Tierra del Sol Gen-Tie Alignment Site Data Station Point Summary[1]

Data Station	Wetland Determination Field Indicators			Stream Association?	Determination	Jurisdiction
	Vegetation	*Hydric Soils*	*Hydrology*			
1				No	Upland	None
2			✓	Yes	Water table and saturation present; located in stream channel; on edge of wet montane meadow	None
3				No	Upland; on secondary bench of floodplain	None
4	✓		✓	Yes	In channel; in understory of willows	CDFW/County
5			✓	Yes	In channel with surface water present; in oak woodlands	CDFW/County
6	✓	✓	✓	No	Artificial impoundment; in southern willow scrub	ACOE/CDFW/ RWQCB/County
7				Yes – blue line stream	Upland	None

[1] Data station 5 is located outside gen-tie alignment and buffer. However, this data station was used to determine the extent of the wetland mapping and to delineate wetland polygons.

Table 2.3-4
Proposed Rugged Off-Site Access Roads Vegetation Communities and Land Cover Types

Vegetation Communities	Code	Northern Off-site Access Road
Upland Scrub and Chaparral		
Big Sagebrush Scrub*	35210	—
Montane Buckwheat Scrub	37K00	0.1
Granitic Chamise Chaparral*	37210	—
Granitic Northern Mixed Chaparral*	37121	—
Red Shank Chaparral*	37300	—
Scrub Oak Chaparral*	37900	—
Semi-Desert Chaparral	37400	—
Subtotal	—	
Riparian Scrub		
Disturbed Southern Willow Scrub	63320	0.1
Riparian Herb		
Alkali Meadow	45300	—
Non-Native Communities and Land Covers		
Disturbed Habitat	11300	0.1
Non-Native Grassland	42200	0.4
Urban/Developed	12000	0.9
Subtotal	—	1.4
Total	—	1.6

Table 2.3-5
Rugged Jurisdictional Delineation Summary

Vegetation Community/ Waters Type	Jurisdiction				Total Acres
	ACOE, RWQCB, CDFW, County (acres)	*ACOE, RWQCB, CDFW (acres)*	*CDFW, County (acres)*	*CDFW Only (acres)*	
Alkali Meadow	14.49	—	—	—	14.49
Disturbed Alkali Meadow	3.48	—	1.13	—	4.61
Disturbed Mulefat Scrub	—	—	1.18	—	1.18
Tamarisk Scrub	0.79	—	—	3.98	4.77
Wetlands Subtotal	*18.76*	—	*2.31*	*3.98*	—
Ephemeral Stream Channel	—	0.15[1]	—	—	—
Non-Vegetated Channel	—	0.98	—	—	0.98
Jurisdictional Total	18.76	0.98	2.31	3.98	26.02

[1] Ephemeral stream channel is an overlay on the vegetation mapping and is not counted toward the overall acreage.

Table 2.3-6
LanWest Jurisdictional Delineation Summary

Vegetation Community/ Waters Type	Jurisdiction		Total Acres
	ACOE, RWQCB, CDFW, County (acres)[1]	*RWQCB, CDFW (acres)[2]*	
Southern Willow Scrub	—	0.37	0.37
Wetlands Subtotal	—	*0.37*	*0.37*
Ephemeral Stream Channel	—	0.16	0.16
Non-Vegetated Channel	0.40	—	0.40
Jurisdictional Total	0.40	0.53	0.93

[1] Although the County does provide regulations for "Environmentally Sensitive Lands" such as wetlands and other aquatic features, the jurisdiction(s) of the delineated potential aquatic features occurring within the project area will be determined during a formal jurisdictional delineation. However, it should be noted that all delineated features may meet the definition of wetland as outlined by Sec. 86.602 of Chapter 6 of the RPO and may still be subject to buffer requirements and mitigation, avoidance, and permitting requirements (if impacted) pursuant to the County's RPO (Appendix 2.3-4).

[2] Based on Section 86.602 (q)(2)(aa) of the RPO, the swales may not be considered "wetlands" by the County (Appendix 2.3-4).

Table 2.3-7
Summary of Direct Impacts to County List A and B Species – Tierra del Sol Project

County List	Species	CRPR	Solar Farm Site			Gen-Tie Alignment Site			Significance Prior to Mitigation
			Approximate Number of Individuals within Project Area[1]	*Approximate Number of Individuals within On-Site Development Footprint*	*Estimated Percentage of Occurrences Impacted On Site*	*Approximate Number of Individuals within Gen-Tie Alignment*	*Approximate Number of Individuals within On-Site Development Footprint*	*Estimated Percentage of Occurrences Impacted On Site*	
A	Tecate tarplant	1B.2	3,103	2,762	89%	637-1,775	None	0%	Significant
	Tecate cypress	1B.1	19	19	100%	Not detected	None	0%	Less than Significant
	Jacumba milk-vetch	1B.2	315	315	100%	250-1,520	27-150	11%	Significant
B	Desert beauty	2.3	727	727	100%	660-3,210	84-600	13-19%	Significant
	Sticky geraea	2.3	274	274	100%	50-240	11-50	21%	Significant

[1] Totals may not add due to rounding.

Table 2.3-8
Impacts to Suitable Habitat for Group I and/or SSC Wildlife Species – Tierra del Sol Solar Farm

Species Name	Suitable Habitat	
	Existing Acreage	*Impacts Acreage*
Amphibians and Reptiles		
Belding's orange-throated whiptail	573	426
Blainville's horned lizard	626	428
Northern red-diamond	626	428
Birds		
Bell's sage sparrow	499	357
Cooper's hawk—foraging	513	344
Cooper's hawk—nesting	152	93
Prairie falcon—foraging	627	428
Golden eagle—foraging	497	351
Loggerhead shrike	606	426
Turkey vulture—foraging	609	422
Mammals		
San Diego black-tailed jackrabbit	581	404
San Diego desert woodrat	573	428

Table 2.3-9
Summary of Direct Impacts to County List A and B Species – Rugged Solar Farm

County List	Species	CRPR	Approximate Number of Individuals within Project Area[1]	Approximate Number of Individuals within Impact Footprint	Estimated Percentage of Occurrences Impacted On Site	Significance Prior to Mitigation
A	Jacumba milkvetch	1B.2	106 to 760	166 to 480	62 to 63%	Significant
	Tecate tarplant	1B.2	11,602 to 16,350	1 to 10	Less than 1%	Less than Significant
B	Sticky geraea	2.3	279 to 1,300	161 to 690	53% to 57%	Significant
	Desert beauty	2.3	1,170 to 3,800	414 to 1,820	35% to 48%	Significant

[1] The estimate is based on the range of data collected by AECOM (Appendix 2.3-4), which collected point data in the following ranges: 1–10, 10–50, 51–100, 101–500, 501–1000, 1001–5000, and >10,000. Therefore, the ranges are based on the minimum and maximum individuals for each point.

Table 2.3-10
Impacts to Suitable Habitat for Group I and/or SSC Wildlife Species – Rugged Solar Farm

Species Name	Suitable Habitat	
	Existing Acreage	*Impacts Acreage**
Amphibians and Reptiles		
Belding's orange-throated whiptail	738.7	443.9
Blainville's horned lizard	738.7	443.9
Coast patch-nosed snake	737.6	443.9
Coronado skink	763.6	446.9
Northern red-diamond	738.5	443.9
Two-striped garter snake	25.3	3.0
Western spadefoot	398.5	228.8
Birds		
Bell's sage sparrow	513.2	311.2
Cooper's hawk—foraging	251.6	135.5
Cooper's hawk—nesting	77.6	53.2
Golden eagle—foraging	488.5	274.0
Loggerhead shrike	574.3	364.4
Northern harrier—foraging	396.5	227.9
Prairie falcon—foraging	765.8	449.6
Red-shouldered hawk—foraging	251.8	140.2
Red-shouldered hawk—nesting	77.6	57.5
Southern California rufous-crowned sparrow	555.5	343.6
Tricolored blackbird—foraging	190.8	100.2
Turkey vulture—foraging	763.6	446.9

Table 2.3-10
Impacts to Suitable Habitat for Group I and/or SSC Wildlife Species – Rugged Solar Farm

Species Name	Suitable Habitat	
	Existing Acreage	*Impacts Acreage**
Mammals		
Dulzura pocket mouse	631.2	394.6
Northwestern San Diego pocket mouse	733.3	445.2
San Diego desert woodrat	566.0	344.0
Mexican long-tongued bat—foraging	763.8	446.9
Townsend's big-eared bat—foraging	763.8	446.9
Spotted bat—foraging	763.8	446.9
Greater western mastiff bat—foraging	763.8	446.9
Western red bat—foraging	763.8	446.9
California leaf-nosed bat—foraging	763.8	446.9
Big free-tailed bat—foraging	763.8	446.9

* This includes impacts associated with proposed on-site and off-site access roads.

Table 2.3-11
Summary of Direct Impacts to County List C and D Plant Species – Rugged Solar Farm

County List	Species	CRPR	Approximate Number of Individuals within Project Area[1]	Approximate Number of Individuals within On-Site Impact Footprint	Estimated Percentage of Occurrences Impacted On Site	Level of Significance
C	Payson's jewelflower	4.2	1 to 10	—	0%	Less than Significant
D	Desert larkspur	4.3	707 to 2,820	118 to 470	39% to 42 %	Less than Significant
	Pride-of-California	4.3	4 to 40	4 to 40	100%	Less than Significant
	Desert monkeyflower	4.3	1 to 10	—	0%	Less than Significant
	Engelmann oak	4.2	1 to 10	—	0%	Less than Significant

[1] The estimate is based on the range of data collected by AECOM (Appendix 2.3-4), which collected point data in the following ranges: 1–10, 10–50, 51-100, 101–500, 501–1000, 1001–5000, and >10,000. Therefore, the ranges are based on the minimum and maximum individuals for each point.

Table 2.3-12
Tierra del Sol Impacts – Vegetation Communities

Habitat Types/ Vegetation Communities	Existing Acreage of TDS and Gen-Tie (Ac.)[1]	Development Footprint			Impact Neutral[2]
		Limits of Grading (Ac.)	*Fuel Modification (Ac.)*	*Gen-Tie*	
Upland Scrub and Chaparral					
Big Sagebrush Scrub*	17.2	16.1	0.1	0.0	1.0
Montane Buckwheat Scrub*	59.1	38.1	2.8	0.8	17.4
Montane Buckwheat Scrub (Disturbed)*	2.3	2.3	0.0	0.0	0.0
Montane Buckwheat Scrub/Red Shank Chaparral*	2.0	2.0	0.0	0.0	0.0
Granitic Chamise Chaparral*	177.0	155.5	21.4	0.0	0.1
Granitic Chamise Chaparral/Montane Buckwheat Scrub*	2.2	2.2	0.0	0.0	0.0
Granitic Northern Mixed Chaparral*	181.3	58.4	9.7	7.1	106.1
Granitic Northern Mixed Chaparral/Montane Buckwheat Scrub*	13.3	13.3	0.0	0.0	0.0
Red Shank Chaparral *	107.1	66.1	2.3	1.4	37.3
Scrub Oak Chaparral*	9.7	3.7	2.3	0.6	3.1
Subtotal	*571.1*	*357.7*	*38.6*	*9.9*	*164.6*
Upland Woodland and Savannah					
Coast Live Oak Woodland*	7.5	0.9	0.0	0.3	6.3
Coast Live Oak Woodland (Disturbed)*	3.8	0.0	0.0	0.3	3.5
Subtotal	*11.3*	*0.9*	*0.0*	*0.6*	*9.8*
Riparian Scrub					
Wet Montane Meadow*	*0.1*	*0.0*	*0.0*	*0.0*	*0.1*
Southern Willow Scrub*	*0.5*	*0.0*	*0.0*	*0.0*	*0.5*
Subtotal	*0.6*	*0.0*	*0.0*	*0.0*	*0.6*
Non-Native Communities and Land Covers					
Disturbed habitat	33.2	13.3	7.9	0.3	11.7
Open Water	0.1	0.1	0.0	0.0	0.0
Urban/Developed	4.8	0.0	0.0	0.2	4.6
Non-Native Grassland	7.7	0.0	0.0	0.3	7.4
Subtotal	*45.8*	*13.4*	*7.9*	*0.8*	*23.7*
Oak Root Zone[3]	1.41	0.53	0.88	--	0.0
Total	628.9	372.0	46.5	11.3	199.1

1 Totals may not add due to rounding.

2 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"; these areas include Resource Protection Ordinance (RPO) wetlands and wetland buffers, and isolated pockets of open space. At this time, all areas that are not impacted by the limits of grading or access road are considered impact neutral.

3 Oak root zone is overlaid on the biological resources and is not counted toward the overall acreage.

* Vegetation community is considered special-status by the County and requires mitigation.

Table 2.3-13
Rugged Impacts – Vegetation Communities

Habitat Types/Vegetation Communities	Existing Acreage (Ac.)[1]	Impacts – Limits of Grading (Ac.)	Fuel Modification Zone (Ac.)	Impact Neutral (Ac.)
Upland Scrub and Chaparral				
Big Sagebrush Scrub*	82.5	59.4	8.5	14.6
Big Sagebrush Scrub (Disturbed)*	14.8	4.7	2.3	7.8
Granitic Chamise Chaparral*	117.8	54.8	10.4	17.8
Granitic Northern Mixed Chaparral*	11.3	5.5	1.8	2.4
Montane Buckwheat Scrub*	83.0	84.3	12.5	21
Montane Buckwheat (Disturbed) Scrub*	9.7	—	—	11.3
Red Shank Chaparral*	42.3	32.4	3.5	6.4
Scrub Oak Chaparral*	66.6	52.3	6.4	7.9
Scrub Oak Chaparral (Disturbed)*	0.5	0.5	—	0
Semi-Desert Chaparral*	112.6	46.9	10.4	55.3
Semi-Desert Chaparral – Rock*	12.4	1.5	—	10.9
Semi-Desert Chaparral (Disturbed)*	1.8	0.2	—	1.6
Subtotal	*555.3*	*342.5*	*55.9*	*156.9*
Upland Woodland and Savannah				
Coast Live Oak Woodland*	7.2	—	—	7.2
Mixed Oak Woodland*	3.3	—	—	3.3
Subtotal	*10.5*	—	—	*10.5*
Riparian Herb				
Alkali Meadow*	14.5	—	—	*14.5*
Alkali Meadow (Disturbed)*	4.6	0.1	—	*4.4*
Subtotal	*19.1*	*0.1*	—	*18.9*
Riparian Scrub				
Mulefat Scrub (Disturbed)*	1.2	—	—	*1.2*
Tamarisk Scrub*	4.8	2.6	0.5	*1.7*
Subtotal	*6.0*	*2.6*	*0.5*	*2.9*
Unvegetated Waters				
Open Water*	0.2	—	—	*1*
Non-Vegetated Channel*	1.0	—	—	*0.2*
Subtotal	*1.2*	—	—	*1.2*
Non-Native Communities and Land Covers				
Disturbed Habitat	64.2	50.3	3.1	10.8
Non-Native Grassland*	106.9	47.7	12.6	46.7

Table 2.3-13
Rugged Impacts – Vegetation Communities

Habitat Types/Vegetation Communities	Existing Acreage (Ac.) [1]	Impacts – Limits of Grading (Ac.)	Fuel Modification Zone (Ac.)	Impact Neutral (Ac.)
Urban/Developed	1.0	0.7	—	0.3
Subtotal	*172.1*	*98.8*	*15.7*	*57.7*
Oak Root Zone [3]	35.1	—	—	35.1
Total	764.1	444.1	72.1	247.9

1 Totals may not add due to rounding.

2 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"; these areas include Resource Protection Ordinance (RPO) wetlands and wetland buffers, and isolated pockets of open space. At this time, all areas that are not impacted by the limits of grading (including on-site access roads) and fuel modification zones are considered impact neutral. On-site areas impacted by Rough Acres Ranch Road are also included in the impact neutral category since impacts associated with the development of this road has already been considered per MUP 3300-09-019 and HDR 2010.

3 Oak root zone is overlaid on the biological resources and is not counted toward the overall acreage.

* Considered special-status by the County (2010).

Table 2.3-14
Rugged Impacts – Proposed Northern Off-Site Access Road[1]

Habitat Types/Vegetation Communities	Northern Off-Site Access Road	Northern Off-Site Access Road Fuel Modification Zone[2]
Upland Scrub and Chaparral		
Montane Buckwheat Scrub (Disturbed)*	0.1	—
Subtotal	*0.1*	—
Riparian Scrub/Herb		
Southern Willow Scrub (Disturbed)*	0.1	—
Subtotal	*0.1*	—
Non-Native Communities and Land Covers		
Disturbed Habitat	0.1	—
Non-native Grassland*	0.4	—
Urban/Developed	0.9	0.1
Subtotal	*1.4*	*1.1*
Total	1.6	0.1

1 The off-site road impacts are located outside of the project area.

2 The Northern Off-Site Access Road Fuel Modification Zone includes a 20-foot buffer on each side of the access road.

* Considered special-status by the County (2010).

Table 2.3-15
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;	Project, with mitigation, will help to preserve a diversity of plant and animal communities.
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 Conversed 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; and	Not applicable
Set forth specific habitat-based goals and objectives expressed in terms of amount, quality, and connectivity of habitat	Not applicable

Table 2.3-16
Cumulative Projects List within the Biological Cumulative Analysis Study Area

Project	Project No.	Project Type	Project Location	Map ID
Wind Energy Projects				
Tule Wind Farm, General Plan Amendment, 11-001	3300-09-019	Public Facilities and Utilities (128 Wind Turbines)	Mountain Empire; North of I-8, Hwy 94, and Old Hwy 80	2
Transmission and Other Energy Projects				
ECO Substation	N/A	Substation and Transmission Lines (13.3-mile 138 kV line)	Mountain Empire; South of I-8 and Old Hwy 80; East of Jacumba	12
SDG&E Master Special Use Permit	N/A	Public Facilities and Utilities	Cleveland National Forest	13
Residential Development Projects (County)				
Star Ranch	3300-13-004	Residential	South of Big Potrero and west of Buckman Springs Road	22
Vaughn, TM 5417	3100-5417	Residential	30069 Canvasback Drive, Campo, just west of Buckman Springs Road	23
Mcclintock, TPM 20755	3200-20755	Residential	Basso Road in the Campo/Lake Morena Community	24
Bartlett, TPM 20754	3200-20686	Residential	1850 Lake Moreno Drive	25

Table 2.3-16
Cumulative Projects List within the Biological Cumulative Analysis Study Area

Project	Project No.	Project Type	Project Location	Map ID
Tibbot, TPM 20686	3200-20686	Residential	20774 Bee Valley Road	26
Dart, TPM 20675	3200-20675	Residential	Ribbonwood Road and Roadrunner Lane	27
Grizzle, TPM 20719	3200-20719	Residential	McCain Valley Road and I-8	28
Arellano, TPM 20756	3200-20756	Residential	Hauser Creek Road west of Lake Morena Drive	29
Pijnenburg, TPM 20778	3200-20778	Residential	Barrett Smith Road, North of Hwy 94	30
Other County Development Projects				
Rough Acres Foundation Campground Facility, MPA 11-002	3300-12-021		2750 McCain Valley Road, Boulevard; north of I-8 and Hwy 94	33

Table 2.3-17
Cumulative Impacts – Vegetation Communities

Vegetation Community[1, 2]	Inventory of Vegetation Communities in the Cumulative Analysis Study Area	Project Impacts[2]	Cumulative Project Impacts		Cumulative Analysis Study Area	
			Total Impacts to Vegetation Communities in the Biological Cumulative Analysis Study Area[3]	*Total Cumulative Impacts*	*Project impacts as percentage of Cumulative Analysis Study Area*	*Total Cumulative Impacts as percentage of Cumulative Analysis Study Area*
Chaparral	363,891	798.2	923.7	1,721.9	0.2%	0.5%
Cismontane Woodland	25,512	14.4	33.6	48.0	0.1%	0.2%
Coastal Scrub	18,537	0	132.7	132.7	0%	0.7%
Freshwater Marsh	2,139	23.1	0	23.1	1.1%	1.1%
Great Basin Scrub	2,277	145.0	32.0	177.0	6.4%	7.8%
Meadows and Seeps	4,436	44.0	0.9	44.9	1.0%	1.0%
Mixed Oak Woodland	211	3.5	1.3	4.8	1.7%	2.3%
Riparian Forests	7,106	1.8	2.0	3.8	0.03%	0.1%
Riparian Scrubs	1,414	6.1	0.4	6.5	0.4%	0.5%
Unvegetated Habitat	1,724	2.1	1.5	3.6	0.1%	0.2%
Upper Sonoran Subshrub Scrub	4,914	19.7	101.5	121.2	0.4%	2.5%

Table 2.3-17
Cumulative Impacts – Vegetation Communities

Vegetation Community[1, 2]	Inventory of Vegetation Communities in the Cumulative Analysis Study Area	Project Impacts[2]	Cumulative Project Impacts		Cumulative Analysis Study Area	
			Total Impacts to Vegetation Communities in the Biological Cumulative Analysis Study Area[3]	*Total Cumulative Impacts*	*Project impacts as percentage of Cumulative Analysis Study Area*	*Total Cumulative Impacts as percentage of Cumulative Analysis Study Area*
Valley and Foothill Grassland	10,472	79.9	160.0	239.8	0.8%	2.3%
Subtotal	*442,633*	*1,137.8*	*1,389.5*	*2,527.3*	*0.3%*	*0.6%*
Other						
Urban/Developed	12,190	97.1	193.5	290.5	0.8%	2.4%
Other[4]	39,148	n/a	243.5	243.5	n/a	0.6%
Subtotal	*51,338*	*97.1*	*437.0*	*534.1*	*0.2%*	*1.0%*
Total	493,970	1,234.8	1,826.5	3,061.3	0.2%	0.6%

Source: SANGIS 2010, GAP 98, and CPUC and BLM 2011. See also Appendices 2.3-3 and 2.3-4.

1 Only vegetation types identified on the Proposed Project sites are considered in the cumulative analysis. Additional vegetation communities and types were identified within the cumulative analysis area and are categorized as "Other" under Vegetation Community.

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

3 This total includes total impacts for Rugged and Tierra del Sol/Gen-tie, and 100% of the vegetation communities within LanEast and LanWest boundaries.

4 This category includes both native and non-native vegetation communities that are not found on the project site.

Table 2.3-18
Summary of Mitigation for Vegetation Communities and Jurisdictional Areas

Habitat Types/Vegetation Communities[1]	Mitigation Ratio[2]	Mitigation Required (Ac.)				Total (Ac.)	Available Mitigation Lands (Ac.)
		Tierra del Sol (acres)[3]	*Rugged (acres)[4]*	*LanEast (acres)[5]*	*LanWest (acres)[6]*		
Non-Jurisdictional Vegetation Communities							
Upland Scrub and Chaparral							
Big Sagebrush Scrub*	2:1	32.4	135.8	49.6	13.0	230.8	46.2
Big Sagebrush Scrub (Disturbed)*	1:1	—	7.0	17.3	5.3	29.6	—
Montane Buckwheat Scrub/Red Shank Chaparral*	1:1	2.0	—	—	—	2.0	8.9
Granitic Chamise Chaparral*	0.5:1	88.5	48.4	—	2.0	138.9	165.2
Granitic Chamise Chaparral (Disturbed)*	0.5:1	—	—	—	1.6	1.6	—
Granitic Chamise Chaparral/Montane Buckwheat Scrub*	1:1	2.2	—	—	—	2.2	—
Granitic Northern Mixed Chaparral*	0.5:1	37.6	—	—	—	37.6	984.0

Table 2.3-18
Summary of Mitigation for Vegetation Communities and Jurisdictional Areas

Habitat Types/Vegetation Communities[1]	Mitigation Ratio[2]	Mitigation Required (Ac.)				Total (Ac.)	Available Mitigation Lands (Ac.)
		Tierra del Sol (acres)[3]	*Rugged (acres)[4]*	*LanEast (acres)[5]*	*LanWest (acres)[6]*		
Granitic Northern Mixed Chaparral - Rock*	0.5:1	—	—	—	—	—	244.1
Granitic Northern Mixed Chaparral/Montane Buckwheat Scrub*	1:1	13.3	—	—	—	13.3	6.0
Montane Buckwheat Scrub*	1:1	41.7	65.2	—	—	106.9	—
Montane Buckwheat (Disturbed) Scrub*	1:1	2.3	7.3	—	—	9.6	—
Red Shank Chaparral*	1:1	69.8	36.0	14.4	3.4	123.6	932.8
Red Shank Chaparral (Disturbed)*	1:1	—	—	—	—	—	1.6
Red Shank Chaparral - Rock*	1:1	—	—	—	—	—	4.9
Scrub Oak Chaparral*	1:1	6.6	58.7	—	—	65.3	0.3
Scrub Oak Chaparral (Disturbed)*	1:1	—	0.5	—	—	0.5	—
Semi-Desert Chaparral *	1:1	—	57.8	38.6	14.5	110.9	—
Semi-Desert Chaparral – Rock*	1:1	—	1.5	—	3.0	4.5	—
Semi-Desert Chaparral (Disturbed)*	1:1	—	0.3	3.7	3.3	7.3	—
Upper Sonoran Subshrub Scrub*	1:1	—	—	14.3	—	14.3	—
Upper Sonoran Subshrub Scrub (Disturbed)*	1:1	—	—	5.4	—	5.4	—
	Subtotal	*296.4*	*418.5*	*143.3*	*46.1*	*904.3*	*2,463.6*
Upland Woodland and Savannah							
Coast Live Oak Woodland*	3:1	Included in oak root zone mitigation	—	16.8	0.3	17.1	17.1
Coast Live Oak Woodland (Disturbed)*	3:1	Included in oak root zone mitigation	—	15.6	4.8	20.4	—
Engelmann Oak Woodland*	3:1	—	—	1.2	—	1.2	—
Mixed Oak Woodland*	3:1	—	—	7.8	—	7.8	—
Mixed Oak Woodland (Disturbed)*	3:1	—	—	1.2	1.5	2.7	—
Oak Root Zone[7]	—	7.5	—	—	—	7.5	—
	Subtotal	*7.5*	—	*42.6*	*6.6*	*56.7*	*17.1*
Non-Native Communities and Land Covers							
Disturbed Habitat	N/A	—	—	—	—	—	—
Non-Native Grassland*	0.5:1	0.2	30.2	2.0	—	32.4	50.6
Urban/Developed	N/A	—	—	—	—	—	—
	Subtotal	*0.2*	*30.2*	*2.0*	—	*32.4*	*50.6*
Total Non-Jurisdictional Vegetation Communities		304.1	448.7	187.9	52.7	993.4	2,531.3

Table 2.3-18
Summary of Mitigation for Vegetation Communities and Jurisdictional Areas

Habitat Types/Vegetation Communities[1]	Mitigation Ratio[2]	Mitigation Required (Ac.)				Total (Ac.)	Available Mitigation Lands (Ac.)
		Tierra del Sol (acres)[3]	*Rugged (acres)[4]*	*LanEast (acres)[5]*	*LanWest (acres)[6]*		
Jurisdictional Waters and Wetlands							
Riparian Herb							
Alkali Meadow*	3:1	—	0.06	—	—	0.06	—
Alkali Meadow (Disturbed)*	3:1	—	0.24	—	—	0.24	—
Alkali Seep*	3:1	—	—	97.5	—	97.5	—
Alkali Seep (Disturbed)*	3:1	—	—	34.2	—	34.2	—
Freshwater Seep*	3:1	—	—	69.3	—	69.3	—
Wildflower Field (Disturbed)*	3:1	—	—	12.6	32.1	44.7	—
	Subtotal	—	*0.30*	*213.6*	*32.1*	*246.0*	—
Riparian Scrub							
Riparian Habitat*	—	—	—	—	—	—	—
Southern Cottonwood-Willow Riparian Forest*	3:1	—	—	3.0	—	3.0	—
Southern Cottonwood-Willow Riparian Forest (Disturbed)*	3:1	—	—	2.4	—	2.4	—
Southern Willow Scrub (Disturbed)*	3:1	—	—	6.9	1.8	8.7	—
Tamarisk Scrub*	3:1	—	9.3		—	9.3	—
	Subtotal	—	*9.3*	*12.3*	*1.8*	*23.4*	—
Unvegetated Waters							
Open Water*	N/A	—	—	—	—	—	—
Non-Vegetated Channel*	3:1	—	—	3.9	2.1	6.0	—
	Subtotal	—	—	*3.9*	*2.1*	*6.0*	
Total Jurisdictional Vegetation Communities	—	—	9.3	229.8	36.0	275.4	—
Total	—	304.1	458.6	417.7	88.7	1268.8	2,531.3

1 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 the table with an asterisk (*).

2 Code is based on the *Draft Vegetation Communities of San Diego County* (Oberbauer et al. 2008).

3 Includes mitigation required for both the Tierra del Sol solar farm and gen-tie sites.

4 Includes mitigation required for off-site Northern Access Road.

5 Since impacts to the LanEast site are unknown at this time, mitigation acreages required were calculated based on the most conservative assumption that the entire site would be impacted. However, as discussed in Section 2.3.3.2 and 2.3.3.3, all RPO wetlands and a 50-foot buffer would be avoided to the maximum extent practicable.

6 Since impacts to the LanWest site are unknown at this time, mitigation acreages required were calculated based on the most conservative assumption that the entire site would be impacted. However, as discussed in Section 2.3.3.2 and 2.3.3.3, all RPO wetlands and a 50-foot buffer would be avoided to the maximum extent practicable.

7 Because the oak root zone impacts require a higher mitigation ratio, acres of vegetation communities included in the oak root zone category that have less than a 3:1 mitigation ratio are not counted in the vegetation communities and land cover types.

* Considered special-status by the County (2010).

Table 2.3-19
Summary of Significant Impacts – Tierra del Sol

Section of Report Analysis is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation
Guideline 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 USFWS.*					
2.3.3.1	Impact BI-TDS-1	Special-Status Plants, County List A and B: • Tecate tarplant • Desert beauty • Jacumba milk-vetch • Sticky geraea	Short-term Direct	M-BI-PP-2 (biological monitoring) M-BI-PP-3 (no planting or seeding of invasive plant species) M-BI-PP-4 (preparation of a biological monitoring report)	Less than significant
2.3.3.1	Impact BI-TDS-2	Special-Status Plants, County List A and B: • Tecate tarplant • Jacumba milk-vetch • Desert beauty • Sticky geraea	Long-term Direct	M-BI-PP-1 (habitat preservation)	Less than significant
2.3.3.1	Impact BI-TDS-3	Special-Status Wildlife, County Group I	Short-term Direct	M-BI-PP-2 (biological monitoring) M-BI-PP-3 (restrictions on construction vehicle speed limits) M-BI-PP-4 (preparation of a biological monitoring report) M-BI-PP-11 (monitoring excavated areas and soil piles)	Less than significant
2.3.3.1	Impact BI-TDS-4	Special-Status Wildlife, County Group I or CDFW Species of Special Concern Impacts to active nests or young of nesting County Group I or CDFW Species of Special Concern	Short-term Direct	M-BI-PP-10 (preconstruction surveys for nesting birds and setbacks)	Less than significant
2.3.3.1	Impact BI-TDS-5	Special-Status Wildlife, County Group I or CDFW Species of Special Concern Removal of suitable habitat of County Group I wildlife species (see Table 2.3-10 for details) including: • Belding's orange-throated whiptail • Blainville's horned	Long-term Direct	M-BI-PP-1 (habitat preservation)	Less than significant

Table 2.3-19
Summary of Significant Impacts – Tierra del Sol

Section of Report Analysis is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation
		lizard • Northern red-diamond rattlesnake • Bell's sage sparrow • Cooper's hawk • Prairie falcon • Golden eagle • Loggerhead shrike • Turkey vulture • San Diego black-tailed jackrabbit • San Diego desert woodrat			
2.3.3.1	Impact BI-TDS-6	Special-Status Wildlife, County Group II Snakes Rosy boa	Short-term Direct	M-BI-PP-2 (biological monitoring) M-BI-PP-3 (restrictions on construction vehicle speed limits) M-BI-PP-4 (preparation of a biological monitoring report) M-BI-PP-11 (monitoring excavated areas and soil piles)	Less than significant
2.3.3.1	Impact BI-TDS-7	Special-Status Wildlife, County Group II Impacts to active nests or young of nesting County Group II species	Short-term Direct	M-BI-PP-10 (preconstruction surveys for nesting birds and setbacks)	Less than significant
2.3.3.1	Impact BI-TDS-8	Special-Status Wildlife, Group II Loss of suitable habitat for rosy boa	Long-term Direct	M-BI-PP-1 (habitat preservation)	Less than significant
2.3.3.1	Impact BI-TDS-9	Special-Status Wildlife, Loss of foraging habitat for raptors (including golden eagle)	Long-term Direct	M-BI-PP-1 (habitat preservation)	Less than significant
2.3.3.1	Impact-BI-TDS-10	Special-Status Wildlife, Core wildlife areas	Long-term Direct	M-BI-PP-1 (habitat preservation)	Less than significant
2.3.3.1	Impact BI-TDS-11	Special-Status Plants, County List A and B: • Tecate tarplant • Desert beauty	Short-term Indirect	M-BI-PP-2 (biological monitoring) M-BI-PP-3 (preparation and implementation of a SWPPP) M-BI-PP-4 (preparation of a	Less than significant

Table 2.3-19
Summary of Significant Impacts – Tierra del Sol

Section of Report Analysis is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation
		• Jacumba milk-vetch • Sticky geraea		biological monitoring report) M-BI-PP-5 (implementation of a Fugitive Dust Control Plan)	
2.3.3.1	Impact BI-TDS-12	Special-Status Plants, County List A and B: • Tecate tarplant • Desert beauty • Jacumba milk-vetch • Sticky geraea	Long-term Indirect	M-BI-PP-1 (habitat preservation) M-BI-PP-5 (implementation of a Fugitive Dust Control Plan M-BI-PP-6 (biological review of landscape plans) M-BI-PP-7 (restrictions on operation and maintenance personnel activity) M-BI-PP-8 (implementation of a Fire Protection Plan) M-BI-PP-9 (regulated herbicide application)	Less than significant
2.3.3.1	Impact BI-TDS-13	Special-Status Wildlife, Detected or Potentially Occurring (Appendix E)	Short-term Indirect	M-BI-PP-2 (biological monitoring) M-BI-PP-3 (restrictions on construction vehicle speed limits and preparation and implementation of a SWPPP) M-BI-PP-4 (preparation of a biological monitoring report) M-BI-PP-5 (implementation of a Fugitive Dust Control Plan) M-BI-PP-11 (monitoring excavated areas and soil piles) M-BI-PP-12 (minimize night lighting)	Less than significant
2.3.3.1	Impact BI-TDS-14	Special-Status Wildlife, Detected or Potentially Occurring (Appendix E)	Long-term Indirect	M-BI-PP-1 (habitat preservation) M-BI-PP-5 (implementation of a Fugitive Dust Control Plan) M-BI-PP-6 (biological review of landscape plans) M-BI-PP-7 (restrictions on operation and	Less than significant

Table 2.3-19
Summary of Significant Impacts – Tierra del Sol

Section of Report Analysis is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation
				maintenance personnel activity) M-BI-PP-8 (implementation of a Fire Protection Plan)	
2.3.3.1	Impact BI-TDS-15	Special-Status Wildlife, Potential Electrocution and/or Collision with Overhead Transmission Lines	Long-term indirect	M-BI-TDS-1 (implement recommendations by the Avian Power Line Interaction Committee)	Less than significant
2.3.3.1	Impact BI-TDS-16	Special-Status Wildlife, Nesting Success of Tree-Nesting Raptors, Construction-related (e.g., noise)	Short-term Indirect	M-BI-PP-10 (preconstruction surveys for nesting birds and setbacks)	Less than significant
2.3.3.1	Impact BI-TDS-17	Special-Status Wildlife, Nesting Success of Tree-Nesting Raptors, Loss of Suitable Nesting Habitat	Long-term Direct	M-BI-PP-1 (habitat preservation)	Less than significant
Guideline 2 *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 USFWS.*					
2.3.3.2	Impact BI-TDS-18	Special-Status Upland Vegetation Communities	Short-term Direct	M-BI-PP-2 (biological monitoring) M-BI-PP-3 (preparation and implementation of a SWPPP) M-BI-PP-4 (preparation of a biological monitoring report)	Less than significant
2.3.3.2	Impact BI-TDS-19	Special-Status Upland Vegetation Communities	Long-term Direct	M-BI-PP-1 (habitat preservation)	Less than significant
2.3.3.2	Impact BI-TDS-20	Groundwater-Dependent Vegetation	Short-term Indirect	M-BI-PP-14 (groundwater monitoring and mitigation plan)	Less than significant
2.2.3.2	Impact BI-TDS-21	Special-Status Upland Vegetation Communities	Short-term Indirect	M-BI-PP-2 (biological monitoring) M-BI-PP-3 (preparation and implementation of a SWPPP) M-BI-PP-4 (preparation of a biological monitoring report) M-BI-PP-5 (implementation of a Fugitive Dust Control Plan)	Less than significant

Table 2.3-19
Summary of Significant Impacts – Tierra del Sol

Section of Report Analysis is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation
2.3.3.2	Impact BI-TDS-22	Special-Status Upland Vegetation Communities	Long-term Indirect	M-BI-PP-1 (habitat preservation) M-BI-PP-5 (implementation of a Fugitive Dust Control Plan M-BI-PP-6 (biological review of landscape plans) M-BI-PP-7 (restrictions on operation and maintenance personnel activity) M-BI-PP-8 (implementation of a Fire Protection Plan) M-BI-PP-9 (regulated herbicide application)	Less than significant
Guideline 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.*					
2.3.3.3	No Impact	Jurisdictional Wetlands and Waterways	N/A	N/A	N/A
Guideline 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.*					
2.3.3.4	Impact BI-TDS-23	Foraging and Breeding Habitat	Short-term Direct	M-BI-PP-2 (biological monitoring) M-BI-PP-3 (preparation and implementation of a SWPPP) M-BI-PP-4 (preparation of a biological monitoring report)	Less than significant
2.3.3.4	Impact BI-TDS-24	Foraging and Breeding Habitat	Long-term Direct	M-BI-PP-1 (habitat preservation)	Less than significant
2.3.3.4	Impact BI-TDS-25	Foraging and Breeding Habitat Groundwater-Dependent Vegetation	Short-term Indirect	M-BI-PP-14 (groundwater monitoring and mitigation plan)	Less than significant
2.3.3.4	Impact BI-TDS-26	Wildlife Movement	Long-term Direct	M-BI-PP-1 (habitat preservation)	Less than significant

Table 2.3-19
Summary of Significant Impacts – Tierra del Sol

Section of Report Analysis is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation
Guideline 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.*					
2.3.3.5	Impact BI-TDS-27	Migratory Bird Treaty Act	Short-term Direct	M-BI-PP-10 (preconstruction surveys for nesting birds and setbacks)	Less than significant

Table 2.3-20
Summary of Significant Impacts – Rugged

Section of Report Analysis is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation
Guideline 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 USFWS.*					
2.3.3.1	Impact BI-R-1	Special-Status Plants, County List A and B: • Tecate tarplant • Desert beauty • Jacumba milk-vetch • Sticky geraea	Short-term Direct	M-BI-PP-2 (biological monitoring) M-BI-PP-3 (no planting or seeding of invasive plant species) M-BI-P-4 (preparation of a biological monitoring report)	Less than significant
2.3.3.1	Impact BI-R-2	Special-Status Plants, County List A and B: • Jacumba milk-vetch	Long-Term Direct	M-BI-PP-1 (habitat preservation)	Less than significant
2.3.3.1	Impact BI-R-3	Special-Status Plants, County List A and B: • Sticky geraea • Desert beauty	Long-Term Direct	M-BI-PP-1 (habitat preservation)	Less than significant

Table 2.3-20
Summary of Significant Impacts – Rugged

Section of Report Analysis is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation
2.3.3.1	Impact BI-R-4	Special-Status Wildlife, County Group I	Short-term Direct	M-BI-PP-2 (biological monitoring) M-BI-PP-3 (restrictions on construction vehicle speed limits) M-BI-PP-4 (preparation of a biological monitoring report) M-BI-PP-11 (monitoring excavated areas and soil piles)	Less than significant
2.3.3.1	Impact BI-R-5	Special-Status Wildlife, County Group I or CDFW Species of Special Concern Impacts to active nests or young of nesting County Group I or CDFW Species of Special Concern	Short-term Direct	M-BI-PP-10 (preconstruction surveys for nesting birds and setbacks)	Less than significant
2.3.3.1	Impact BI-R-6	Special-Status Wildlife, County Group I or CDFW Species of Special Concern Removal of suitable habitat of County Group I wildlife species (see Table 2.3-13 for details) including: • Belding's orange-throated whiptail • Blainville's horned lizard • Northern red-diamond rattlesnake • Bell's sage sparrow • Cooper's hawk • Prairie falcon • Golden eagle • Loggerhead shrike • Turkey vulture • San Diego black-tailed jackrabbit • San Diego desert woodrat	Long-term Direct	M-BI-PP-1 (habitat preservation)	Less than significant

Table 2.3-20
Summary of Significant Impacts – Rugged

Section of Report Analysis is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation
2.3.3.1	Impact BI-R-7	Special-Status Wildlife, County Group II Snakes Coastal western whiptail Rosy boa	Short-term Direct	M-BI-PP-2 (biological monitoring) M-BI-PP-3 (restrictions on construction vehicle speed limits) M-BI-PP-4 (preparation of a biological monitoring report) M-BI-PP-11 (monitoring excavated areas and soil piles)	Less than significant
2.3.3.1	Impact BI-R-8	Special-Status Wildlife, County Group II Impacts to active nests or young of nesting County Group II	Short-term Direct	M-BI-PP-10 (preconstruction surveys for nesting birds and setbacks)	Less than significant
2.3.3.1	Impact BI-R-9	Special-Status Wildlife, Group II Loss of suitable habitat for rosy boa and San Diego ringneck snake	Long-term Direct	M-BI-PP-1 (habitat preservation)	Less than significant
2.3.3.1	Impact BI-R-10	Special-Status Wildlife, Loss of foraging habitat for raptors (including golden eagle)	Long-term Direct	M-BI-PP-1 (habitat preservation)	Less than significant
2.3.3.1	Impact BI-R-11	Special-Status Wildlife, Core Wildlife Area	Long-term Direct	M-BI-PP-1 (habitat preservation)	Less than significant
2.3.3.1	Impact BI-R-12	Special-Status Plants, County List A and B: • Tecate tarplant • Desert beauty • Jacumba milk-vetch • Sticky geraea	Short-term Indirect	M-BI-PP-2 (biological monitoring) M-BI-PP-3 (preparation and implementation of a SWPPP) M-BI-PP-4 (preparation of a biological monitoring report) M-BI-PP-5 (implementation of a Fugitive Dust Control Plan)	Less than significant
2.3.3.1	Impact BI-R-13	Special-Status Plants, County List A and B: • Tecate tarplant • Desert beauty • Jacumba milk-vetch • Sticky geraea	Long-term Indirect	M-BI-PP-1 (habitat preservation) M-BI-PP-5 (implementation of a Fugitive Dust Control Plan M-BI-PP-6 (biological review of landscape plans) M-BI-PP-7 (restrictions on	Less than significant

Table 2.3-20
Summary of Significant Impacts – Rugged

Section of Report Analysis is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation		Level of Significance After Mitigation
					operation and maintenance personnel activity)	
				M-BI-PP-8	(implementation of a Fire Protection Plan)	
				M-BI-PP-9	(regulated herbicide application)	
2.3.3.1	Impact BI-R-14	Special-Status Wildlife, Detected or Potentially Occurring (Appendix E)	Short-term Indirect	M-BI-PP-2 M-BI-PP-3 M-BI-PP-4 M-BI-PP-5 M-BI-PP-11 M-BI-PP-12	(biological monitoring) (restrictions on construction vehicle speed limits and preparation and implementation of a SWPPP) (preparation of a biological monitoring report) (implementation of a Fugitive Dust Control Plan) (monitoring excavated areas and soil piles) (minimize night lighting)	Less than significant
2.3.3.1	Impact BI-R-15	Special-Status Wildlife, Detected or Potentially Occurring (Appendix E)	Long-term Indirect	M-BI-PP-1 M-BI-PP-5 M-BI-PP-6 M-BI-PP-7 M-BI-PP-8	(habitat preservation) (implementation of a Fugitive Dust Control Plan) (biological review of landscape plans) (restrictions on operation and maintenance personnel activity) (implementation of a Fire Protection Plan)	Less than significant
2.3.3.1	Impact BI-R-16	Special-Status Wildlife, Nesting Success of Tree-Nesting Raptors, Construction-related (e.g., noise)	Short-term Indirect	M-BI-PP-10	(preconstruction surveys for nesting birds and setbacks)	Less than significant
2.3.3.1	Impact BI-R-17	Special-Status Wildlife, Nesting Success of Tree-Nesting Raptors, Loss of Suitable Nesting Habitat	Long-term Direct	M-BI-PP-1	(habitat preservation)	Less than significant

Table 2.3-20
Summary of Significant Impacts – Rugged

Section of Report Analysis is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation
Guideline 2 *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 USFWS.*					
2.3.3.2	Impact BI-R-18	Special-Status Upland Vegetation Communities	Short-term Direct	M-BI-PP-2 (biological monitoring) M-BI-PP-3 (preparation and implementation of a SWPPP) M-BI-PP-4 (preparation of a biological monitoring report)	Less than significant
2.3.3.2	Impact BI-R-19	Special-Status Upland Vegetation Communities	Long-term Direct	M-BI-PP-1 (habitat preservation)	Less than significant
2.3.3.2	Impact BI-R-20	Jurisdictional Wetlands and Waters	Short-term Direct	M-BI-PP-2 (biological monitoring) M-BI-PP-3 (restrictions on construction vehicle speed limits) M-BI-PP-4 (preparation of a biological monitoring report)	Less than significant
2.3.3.2	Impact BI-R-21	Jurisdictional Wetlands and Waters	Long-term Direct	M-BI-PP-1 (habitat preservation) M-BI-PP-13 (federal and state permits) M-BI-R-1 (3:1 wetland mitigation)	Less than significant
2.3.3.2	Impact BI-R-22	Jurisdictional Wetlands and Waters	Short-term Indirect	M-BI-PP-2 (biological monitoring) M-BI-PP-3 (preparation and implementation of a SWPPP) M-BI-PP-4 (preparation of a biological monitoring report) M-BI-PP-5 (implementation of a Fugitive Dust Control Plan)	Less than significant
2.3.3.2	Impact BI-R-23	Jurisdictional Wetlands and Waters	Long-term Indirect	M-BI-PP-1 (habitat preservation) M-BI-PP-5 (implementation of a Fugitive Dust Control Plan M-BI-PP-6 (biological review of landscape plans) M-BI-PP-7 (restrictions on operation and maintenance	Less than significant

Table 2.3-20
Summary of Significant Impacts – Rugged

Section of Report Analysis is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation
				personnel activity) M-BI-PP-8 (implementation of a Fire Protection Plan) M-BI-PP-9 (regulated herbicide application)	
2.3.3.2	Impact BI-R-24	Groundwater-Dependent Vegetation	Short-term Indirect	M-BI-PP-14 (groundwater monitoring and mitigation plan)	Less than significant
2.3.3.2	Impact BI-R-25	Special-Status Upland Vegetation Communities	Short-term Indirect	M-BI-PP-2 (biological monitoring) MBI-PP-3 (preparation and implementation of a SWPPP) M-BI-PP-4 (preparation of a biological monitoring report) M-BI-PP-5 (implementation of a Fugitive Dust Control Plan)	Less than significant
2.3.3.2	Impact BI-R-26	Special-Status Upland Vegetation Communities	Long-term Indirect	M-BI-PP-1 (habitat preservation) M-BI-PP-5 (implementation of a Fugitive Dust Control Plan M-BI-PP-6 (biological review of landscape plans) M-BI-PP-7 (restrictions on operation and maintenance personnel activity) M-BI-PP-8 (implementation of a Fire Protection Plan) M-BI-PP-9 (regulated herbicide application)	Less than significant
2.3.3.2	Impact BI-R-27	Jurisdictional Wetlands and Waters	Long-term Direct	M-BI-PP-1 (habitat preservation) M-BI-PP-13 (federal and state permits) M-BI-R-1 (3:1 wetland mitigation)	Less than significant

Table 2.3-20
Summary of Significant Impacts – Rugged

Section of Report Analysis is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation
Guideline 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.*					
2.34.3.3	N/A	None			
Guideline 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.*					
2.3.3.4	Impact BI-R-27	Foraging and Breeding Habitat	Short-term Direct	M-BI-PP-2 (biological monitoring) M-BI-PP-3 (preparation and implementation of a SWPPP) M-BI-PP-4 (preparation of a biological monitoring report)	Less than significant
2.3.3.4	Impact BI-R-28	Foraging and Breeding Habitat	Long-term Direct	M-BI-PP-1 (habitat preservation)	Less than significant
2.3.3.4	Impact BI-R-29	Foraging and Breeding Habitat Groundwater-Dependent Vegetation	Short-term Indirect	M-BI-PP-1 (habitat preservation)	Less than significant
2.3.3.4	Impact BI-R-30	Wildlife Movement	Long-term Direct	M-BI-PP-1 (habitat preservation)	Less than significant
2.3.3.4	Impact BI-R-31	Wildlife Movement	Long-term Direct	M-BI-PP-1 (habitat preservation)	Less than significant
Guideline 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.*					
2.3.3.5	Impact BI-R-32	Migratory Bird Treaty Act	Short-term Direct	M-BI-PP-10 (preconstruction surveys for nesting birds and setbacks)	Less than significant

Table 2.3-21
Summary of Significant Impacts – LanEast

Section of Report Analysis is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation
Guideline 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 USFWS.*					
2.3.3.1	Impact BI-LE-1	Special-Status Plants, County List A and B	Short-term Direct	M-BI-PP-2 (biological monitoring) M-BI-PP-3 (no planting or seeding of invasive plant species) M-BI-PP-4 (preparation of a biological monitoring report)	Less than significant
2.3.3.1	Impact BI-LE-2	Special-Status Plants, County List A and B	Long-term Direct	M-BI-PP-1 (habitat preservation)	Less than significant
2.3.3.1	Impact BI-LE-3	Special-Status Wildlife, County Group I	Short-term Direct	M-BI-PP-2 (Biological monitoring) M-BI-PP-3 (restrictions on construction vehicle speed limits) M-BI-PP-4 (preparation of a Biological monitoring report) M-BI-PP-11 (monitoring excavated areas and soil piles)	Less than significant
2.3.3.1	Impact BI-LE-4	Special-Status Wildlife, County Group I, Removal of suitable habitat of special-status wildlife species	Long-term Direct	M-BI-PP-1 (habitat preservation)	Less than significant
2.3.3.1	Impact BI-LE-5	Special-Status Plants, County Group C and D	Short-term Direct	M-BI-PP-2 (biological monitoring) M-BI-PP-3 (preparation and implementation of a SWPPP) M-BI-PP-4 (preparation of a biological monitoring report) BI	Less than significant
2.3.3.1	Impact BI-LE-6	Special-Status Plants, County Group C and D	Long-term Direct	M-BI-PP-1 (habitat preservation)	Less than significant
2.3.3.1	Impact BI-LE-7	Special-Status Wildlife, County Group II	Short-term Direct	M-BI-PP-2 (biological monitoring) M-BI-PP-3 (restrictions on construction vehicle speed limits)	Less than significant

Table 2.3-21
Summary of Significant Impacts – LanEast

Section of Report Analysis is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation
				M-BI-PP-4 (preparation of a biological monitoring report) M-BI-PP-11 (monitoring excavated areas and soil piles)	
2.3.3.1	Impact BI-LE-8	Special-Status Wildlife, County Group II, Removal of suitable habitat of special-status wildlife species	Long-term Direct	M-BI-PP-1 (habitat preservation)	Less than significant
2.3.3.1	Impact BI-LE-9	Special-Status Wildlife, Loss of foraging habitat for raptors	Long-term Direct	M-BI-PP-1 (habitat preservation)	Less than significant
2.3.3.1	Impact BI-LE-10	Special-Status Plants,	Short-term Indirect	M-BI-PP-2 (Biological monitoring) M-BI-PP-3 (preparation and implementation of a SWPPP) M-BI-PP-4 (preparation of a Biological monitoring report) M-BI-PP-5 (implementation of a Fugitive Dust Control Plan)	Less than significant
2.3.3.1	Impact BI-LE-11	Special-Status Plants,	Long-term Indirect	M-BI-PP-1 (habitat preservation) M-BI-PP-5 (implementation of a Fugitive Dust Control Plan M-BI-PP-6 (Biological review of landscape plans) M-BI-PP-7 (restrictions on operation and maintenance personnel activity) M-BI-PP-8 (implementation of a Fire Protection Plan) M-BI-PP-9 (regulated herbicide application)	Less than significant
2.3.3.1	Impact BI-LE-12	Special-Status Wildlife, Detected or Potentially Occurring	Short-term Indirect	M-BI-PP-2 (biological monitoring) M-BI-PP-3 (restrictions on construction vehicle speed limits and preparation and implementation of a SWPPP)	Less than significant

Table 2.3-21
Summary of Significant Impacts – LanEast

Section of Report Analysis is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation
				M-BI-PP-4 (preparation of a biological monitoring report) M-BI-PP-5 (implementation of a Fugitive Dust Control Plan) M-BI-PP-11 (monitoring excavated areas and soil piles) M-BI-PP-12 (minimize night lighting)	
2.3.3.1	Impact BI-LE-13	Special-Status Wildlife, Detected or Potentially Occurring	Long-term Indirect	M-BI-PP-1 (habitat preservation) M-BI-PP-5 (implementation of a Fugitive Dust Control Plan) M-BI-PP-6 (biological review of landscape plans) M-BI-PP-7 (restrictions on operation and maintenance personnel activity) M-BI-PP -8 (implementation of a Fire Protection Plan)	Less than significant
2.3.3.1	Impact BI-LE-14	Special-Status Wildlife, Nesting Success of Tree-Nesting Raptors, Construction-related (e.g., noise)	Short-term Indirect	M-BI-PP-10 (preconstruction surveys for nesting birds and setbacks)	Less than significant
2.3.3.1	Impact BI-LE-15	Special-Status Wildlife, Impacts to active nests or young of nesting sensitive bird species	Long-term Direct	M-BI-PP-10 (preconstruction surveys for nesting birds and setbacks)	Less than significant
Guideline 2 *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 USFWS.*					
2.3.3.2	Impact BI-LE-16	Special-Status Upland Vegetation Communities	Short-term Direct	M-BI-PP-2 (biological monitoring) M-BI-PP-3 (preparation and implementation of a SWPPP) M-BI-PP-4 (preparation of a biological monitoring report)	Less than significant
2.3.3.2	Impact BI-LE-17	Special-Status Upland Vegetation Communities	Long-term Direct	M-BI-PP-1 (habitat preservation)	Less than significant

Table 2.3-21
Summary of Significant Impacts – LanEast

Section of Report Analysis is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation
2.3.3.2	Impact BI-LE-18	Jurisdictional Wetlands and Waters	Short-term Direct	M-BI-PP-2 (Biological monitoring) M-BI-PP-3 (restrictions on construction vehicle speed limits) M-BI-PP-4 (preparation of a Biological monitoring report)	Less than significant
2.3.3.2	Impact BI-LE-19	Jurisdictional Wetlands and Waters	Long-term Direct	M-BI-PP-1 (habitat preservation) M-BI-PP-13 (federal and state permits)	Less than significant
2.3.3.2	Impact BI-LE-20	Jurisdictional Wetlands and Waters	Short-term Indirect	M-BI-PP-2 (Biological monitoring) M-BI-PP-3 (preparation and implementation of a SWPPP) M-BI-PP-4 (preparation of a Biological monitoring report) M-BI-PP-5 (implementation of a Fugitive Dust Control Plan)	Less than significant
2.3.3.2	Impact BI-LE-21	Jurisdictional Wetlands and Waters	Long-term Indirect	M-BI-PP-1 (habitat preservation) M-BI-PP-5 (implementation of a Fugitive Dust Control Plan M-BI-PP-6 (BIlogical review of landscape plans) M-BI-PP-7 (restrictions on operation and maintenance personnel activity) M-BI-PP-8 (implementation of a Fire Protection Plan) M-BI-PP-9 (regulated herbicide application)	Less than significant
2.3.3.2	Impact BI-LE-22	Special-Status Upland Vegetation Communities	Short-term Indirect	M-BI-PP-2 (biological monitoring) M-BI-PP-3 (preparation and implementation of a SWPPP) M-BI-PP-4 (preparation of a biological monitoring report) M-BI-PP-5 (implementation of a Fugitive Dust Control Plan)	Less than significant

Table 2.3-21
Summary of Significant Impacts – LanEast

Section of Report Analysis is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation
2.3.3.2	Impact BI-LE-23	Special-Status Upland Vegetation Communities	Long-term Indirect	M-BI-PP-1 (habitat preservation) M-BI-PP-5 (implementation of a Fugitive Dust Control Plan M-BI-PP-6 (biological review of landscape plans) M-BI-PP-7 (restrictions on operation and maintenance personnel activity) M-BI-PP-8 (implementation of a Fire Protection Plan) M-BI-PP-9 (regulated herbicide application)	Less than significant
2.3.3.2	Impact BI-LE-24	Jurisdictional Wetlands and Waters	Long-term Direct	M-BI-PP-1 (habitat preservation) M-BI-PP-13 (federal and state permits)	Less than significant
Guideline 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.*					
2.3.3.3	Impact BI-LE-25	Jurisdictional Wetlands and Waters	Long-term Direct	M-BI-PP-1 (habitat preservation) M-BI-PP-13 (federal and state permits)	Less than significant
Guideline 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.*					
2.3.3.4	Impact BI-LE-26	Foraging and Breeding Habitat	Short-term Direct	M-BI-PP-2 (biological monitoring) M-BI-PP-3 (preparation and implementation of a SWPPP) M-BI-PP-4 (preparation of a biological monitoring report)	Less than significant
2.3.3.4	Impact BI-LE-27	Wildlife Movement, Wildlife access	Long-term Direct	M-BI-LE-1 (wildlife corridor)	Less than significant
2.3.3.4	Impact BI-LE-28	Wildlife Movement, Noise and/or nighttime lighting	Long-term Indirect	M-BI-PP-1 (habitat preservation)	Less than significant
2.3.3.4	Impact BI-LE-29	Wildlife Movement, Barrier to movement	Short- and Long-term	M-BI-PP-1 (habitat preservation) M-BI-PP-5 (implementation of a Fugitive Dust Control Plan)	Less than significant

Table 2.3-21
Summary of Significant Impacts – LanEast

Section of Report Analysis is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation
			Indirect	M-BI-PP-6 (biological review of landscape plans) M-BI-PP-7 (restrictions on operation and maintenance personnel activity) M-BI-PP-8 (implementation of a Fire Protection Plan) M-BI-LE-1 (wildlife corridor)	
2.3.3.4	Impact BI-LE-30	Wildlife Movement, Visual continuity	Short- and Long-term Indirect	M-BI-PP-1 (habitat preservation) M-BI-LE-1 (wildlife corridor)	Less than significant
Guideline 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.*					
2.3.3.3	Impact BI-LE-31	Jurisdictional Wetlands and Waters	Long-term Direct	M-BI-PP-1 (habitat preservation) M-BI-PP-13 (federal and state permits)	Less than significant
2.3.3.5	Impact BI-LE-32	Migratory Bird Treaty Act	Short-term Direct	M-BI-PP-10 (preconstruction surveys for nesting birds and setbacks)	Less than significant
2.3.3.5	Impact BI-LE-33	Special-Status Wildlife, Loss of foraging habitat for golden eagles	Long-term Direct	M-BI-PP-1 (habitat preservation)	Less than significant

Table 2.3-22
Summary of Significant Impacts – LanWest

Section of Report Analysis is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation
Guideline 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 USFWS.*					
2.3.3.1	Impact BI-LW-1	Special-Status Plants	Short-term Direct	M-BI-PP-2 (biological monitoring) M-BI-PP-3 (no planting or seeding of invasive plant species) M-BI-PP-4 (preparation of a biological monitoring report)	Less than significant
2.3.3.1	Impact BI-LW-2	Special-Status Plants	Long-Term Direct	M-BI-PP-1 (habitat preservation)	Less than significant
2.3.3.1	Impact BI-LW-3	Special-Status Wildlife, County Group I	Short-term Direct	M-BI-PP-2 (Biological monitoring) M-BI-PP-3 (restrictions on construction vehicle speed limits) M-BI-PP-4 (preparation of a Biological monitoring report) M-BI-PP-11 (monitoring excavated areas and soil piles)	Less than significant
2.3.3.1	Impact BI-LW-4	Special-Status Wildlife, County Group I, Removal of suitable habitat of special-status wildlife species	Long-term Direct	M-BI-PP-1 (habitat preservation)	Less than significant
2.3.3.1	Impact BI-LW-5	Special-Status Plants, County Group C and D	Short-term Direct	M-BI-PP-2 (Biological monitoring) M-BI-PP-3 (preparation and implementation of a SWPPP) M-BI-PP-4 (preparation of a Biological monitoring report	Less than significant
2.3.3.1	Impact BI-LW-6	Special-Status Plants, County Group C and D	Long-term Direct	M-BI-PP-1 (habitat preservation)	Less than significant
2.3.3.1	Impact BI-LW-7	Special-Status Wildlife, County Group II	Short-term Direct	M-BI-PP-2 (Biological monitoring) M-BI-PP-3 (restrictions on construction vehicle speed limits) M-BI-PP-4 (preparation of a	Less than significant

Table 2.3-22
Summary of Significant Impacts – LanWest

Section of Report Analysis is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation
				Biological monitoring report) M-BI-PP-11 (monitoring excavated areas and soil piles)	
2.3.3.1	Impact BI-LW-8	Special-Status Wildlife, County Group II, Removal of suitable habitat of special-status wildlife species	Long-term Direct	M-BI-PP-1 (habitat preservation)	Less than significant
2.3.3.1	Impact BI-LW-9	Special-Status Wildlife, Loss of foraging habitat for raptors	Long-term Direct	M-BI-PP-1 (habitat preservation)	Less than significant
2.3.3.1	Impact BI-LW-10	Special-Status Plants,	Short-term Indirect	M-BI-PP-2 (Biological monitoring) M-BI-PP-3 (preparation and implementation of a SWPPP) M-BI-PP-4 (preparation of a Biological monitoring report) M-BI-PP-5 (implementation of a Fugitive Dust Control Plan)	Less than significant
2.3.3.1	Impact BI-LW-11	Special-Status Plants,	Long-term Indirect	M-BI-PP-1 (habitat preservation) M-BI-PP-5 (implementation of a Fugitive Dust Control Plan M-BI-PP-6 (Biological review of landscape plans) M-BI-PP-7 (restrictions on operation and maintenance personnel activity) M-BI-PP-8 (implementation of a Fire Protection Plan) M-BI-PP-9 (regulated herbicide application)	Less than significant
2.3.3.1	Impact BI-LW-12	Special-Status Wildlife, Detected or Potentially Occurring	Short-term Indirect	M-BI-PP-2 (BIlogical monitoring) M-BI-PP-3 (restrictions on construction vehicle speed limits and preparation and implementation of a SWPPP) M-BI-PP-4 (preparation of a	Less than significant

Table 2.3-22
Summary of Significant Impacts – LanWest

Section of Report Analysis is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation
				biological monitoring report) M-BI-PP-5 (implementation of a Fugitive Dust Control Plan) M-BI-PP-11 (monitoring excavated areas and soil piles) M-BI-PP-12 (minimize night lighting)	
2.3.3.1	Impact BI-LW-13	Special-Status Wildlife, Detected or Potentially Occurring	Long-term Indirect	M-BI-PP-1 (habitat preservation) M-BI-PP-5 (implementation of a Fugitive Dust Control Plan) M-BI-PP-6 (biological review of landscape plans) M-BI-PP-7 (restrictions on operation and maintenance personnel activity) M-BI-PP-8 (implementation of a Fire Protection Plan)	Less than significant
2.3.3.1	Impact BI-LW-14	Special-Status Wildlife, Nesting Success of Tree-Nesting Raptors, Loss of Suitable Nesting Habitat	Long-term Direct	M-BI-PP-10 (preconstruction surveys for nesting birds and setbacks)	Less than significant
2.3.3.1	Impact BI-LW-15	Special-Status Wildlife Impacts to active nests or young of nesting special-status bird species	Short-term Indirect	M-BI-PP-10 (preconstruction surveys for nesting birds and setbacks)	Less than significant
Guideline 2 *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 USFWS.*					
2.3.3.2	Impact BI-LW-16	Special-Status Upland Vegetation Communities	Short-term Direct	M-BI-PP-2 (biological monitoring) M-BI-PP-3 (preparation and implementation of a SWPPP) M-BI-PP-4 (preparation of a biological monitoring report)	Less than significant
2.3.3.2	Impact BI-LW-17	Special-Status Upland Vegetation Communities	Long-term Direct	M-BI-PP-1 (habitat preservation)	Less than significant

Table 2.3-22
Summary of Significant Impacts – LanWest

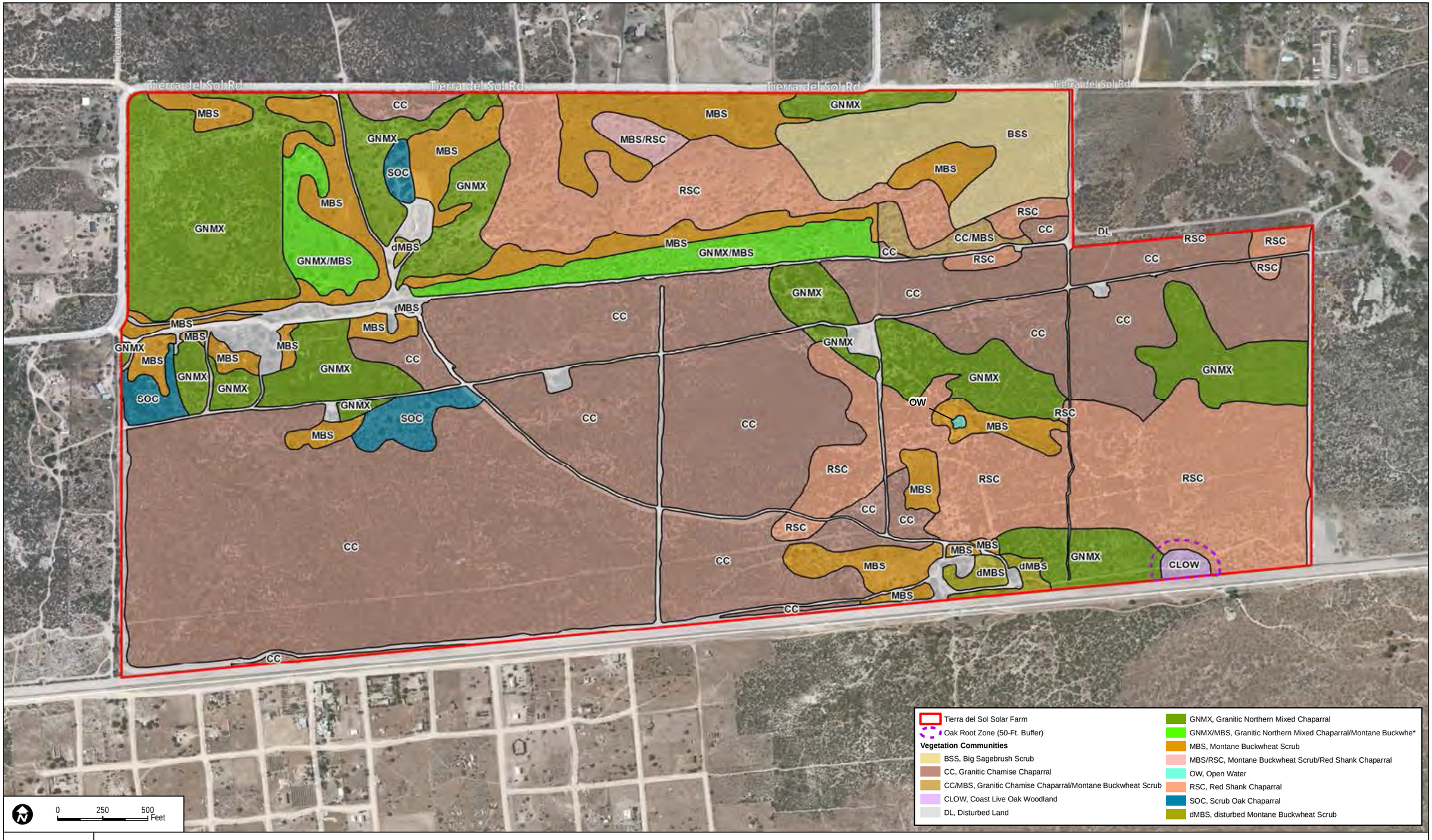
Section of Report Analysis is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation
2.3.3.2	Impact BI-LW-18	Jurisdictional Wetlands and Waters	Short-term Direct	M-BI-PP-2 (Biological monitoring) M-BI-PP-3 (restrictions on construction vehicle speed limits) M-BI-PP-4 (preparation of a Biological monitoring report)	Less than significant
2.3.3.2	Impact BI-LW-19	Jurisdictional Wetlands and Waters	Long-term Direct	M-BI-PP-1 (habitat preservation) M-BI-PP-13 (federal and state permits)	Less than significant
2.3.3.2	Impact BI-LW-20	Jurisdictional Wetlands and Waters	Short-term Indirect	M-BI-PP-2 (Biological monitoring) M-BI-PP-3 (preparation and implementation of a SWPPP) M-BI-PP-4 (preparation of a Biological monitoring report) M-BI-PP-5 (implementation of a Fugitive Dust Control Plan)	Less than significant
2.3.3.2	Impact BI-LW-21	Jurisdictional Wetlands and Waters	Long-term Indirect	M-BI-PP-1 (habitat preservation) M-BI-PP-5 (implementation of a Fugitive Dust Control Plan M-BI-PP-6 (Biological review of landscape plans) M-BI-PP-7 (restrictions on operation and maintenance personnel activity) M-BI-PP-8 (implementation of a Fire Protection Plan) M-BI-PP-9 (regulated herbicide application)	Less than significant
2.3.3.2	Impact BI-LW-22	Special-Status Upland Vegetation Communities	Short-term Indirect	M-BI-PP-2 (biological monitoring) M-BI-PP-3 (preparation and implementation of a SWPPP) M-BI-PP-4 (preparation of a biological monitoring report) M-BI-PP-5 (implementation of a Fugitive Dust Control Plan)	Less than significant

Table 2.3-22
Summary of Significant Impacts – LanWest

Section of Report Analysis is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation
2.3.3.2	Impact BI-LW-23	Special-Status Upland Vegetation Communities	Long-term Indirect	M-BI-PP-1 (habitat preservation) M-BI-PP-5 (implementation of a Fugitive Dust Control Plan M-BI-PP-6 (biological review of landscape plans) M-BI-PP-7 (restrictions on operation and maintenance personnel activity) M-BI-PP-8 (implementation of a Fire Protection Plan) M-BI-PP-9 (regulated herbicide application)	Less than significant
2.3.3.2	Impact BI-LW-24	Jurisdictional Wetlands and Waters	Long-term Direct	M-BI-PP-1 (habitat preservation) M-BI-PP-13 (federal and state permits)	Less than significant
Guideline 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.*					
2.3.3.3	Impact BI-LW-25	Jurisdictional Wetlands and Waters	Long-term Direct	M-BI-PP-1 (habitat preservation) M-BI-PP-13 (federal and state permits)	Less than significant
Guideline 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.*					
2.3.3.4	Impact BI-LW-26	Foraging and Breeding Habitat	Short-term Direct	M-BI-PP-2 (biological monitoring) M-BI-PP-3 (preparation and implementation of a SWPPP) M-BI-PP-4 (preparation of a biological monitoring report)	Less than significant
2.3.3.4	Impact BI-LW-27	Wildlife Movement, Wildlife access	Long-term Direct	M-BI-LW-1 (wildlife corridor)	Less than significant
2.3.3.4	Impact BI-LW-28	Wildlife Movement, Noise and/or nighttime lighting	Long-term Indirect	M-BI-PP-1 (habitat preservation)	Less than significant
2.3.3.4	Impact BI-LW-29	Wildlife Movement, Barrier to movement	Short- and Long-	M-BI-PP-1 (habitat preservation) M-BI-PP-5 (implementation of a Fugitive Dust Control	Less than significant

Table 2.3-22
Summary of Significant Impacts – LanWest

Section of Report Analysis is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation
			term Indirect	Plan) M-BI-PP-6 (biological review of landscape plans) M-BI-PP-7 (restrictions on operation and maintenance personnel activity) M-BI-PP-8 (implementation of a Fire Protection Plan) M-BI-LW-1 (wildlife corridor)	
2.3.3.4	Impact BI-LW-30	Wildlife Movement, Visual continuity	Short- and Long-term Indirect	M-BI-PP-1 (habitat preservation) M-BI-LW-1 (wildlife corridor)	Less than significant
Guideline 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.*					
2.3.3.3	Impact BI-LW-31	Jurisdictional Wetlands and Waters	Long-term Direct	M-BI-PP-1 (habitat preservation) M-BI-PP-13 (federal and state permits)	Less than significant
2.3.3.5	Impact BI-LW-32	Migratory Bird Treaty Act	Short-term Direct	M-BI-PP-10 (preconstruction surveys for nesting birds and setbacks)	Less than significant
2.3.3.5	Impact BI-LW-33	Special-Status Wildlife, Loss of foraging habitat for golden eagles	Long-term Direct	M-BI-PP-1 (habitat preservation)	Less than significant



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SOURCE: Bing Maps

FIGURE 2.3-1a

Biological Resources - Tierra del Sol Solar Farm Vegetation Communities

SOITEC SOLAR DEVELOPMENT PROGRAM EIR

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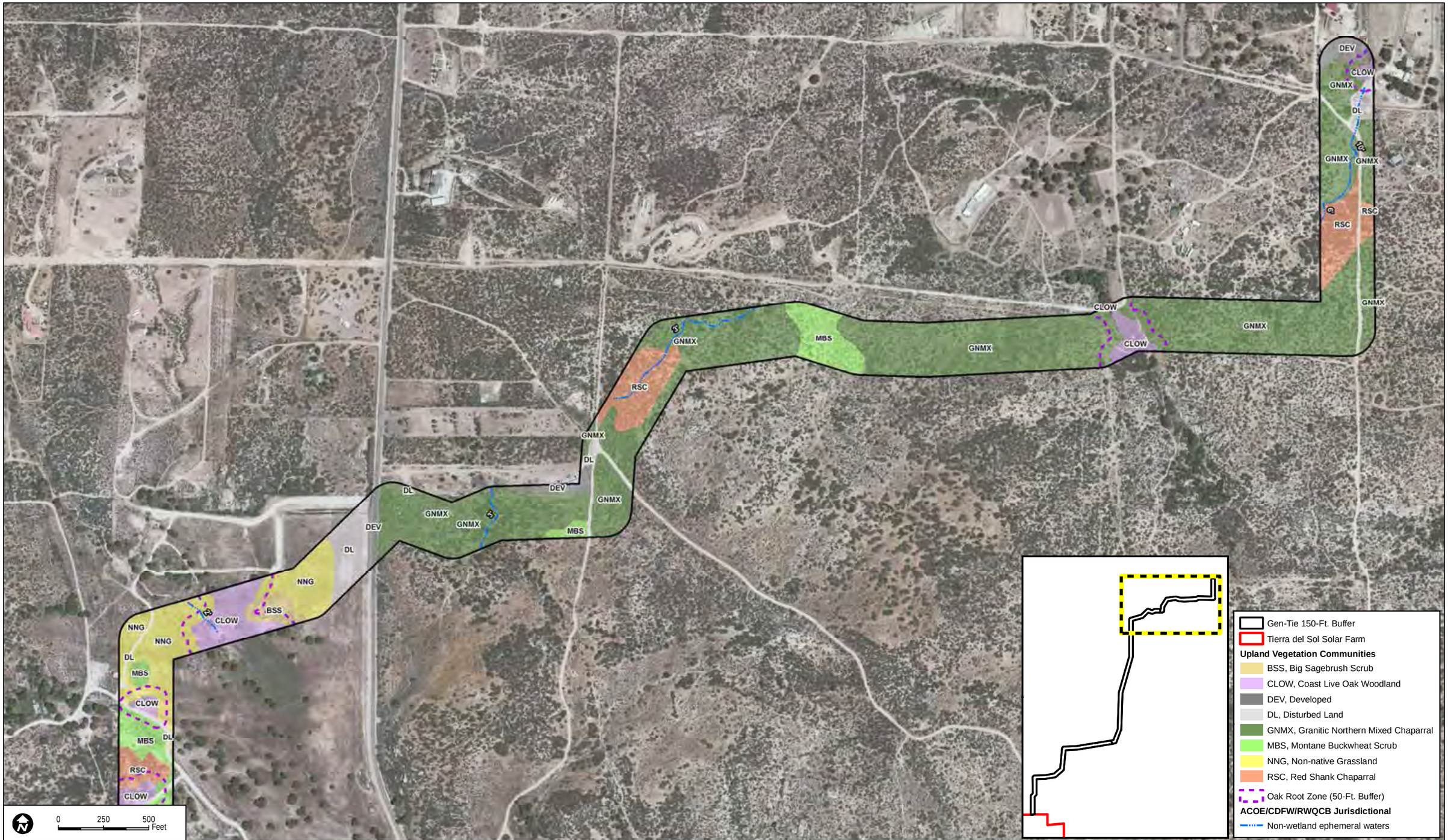

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SOURCE: SANDAG; Bing Maps

FIGURE 2.3-1b

Biological Resources - Tierra del Sol Gen-Tie Vegetation Communities

SOITEC SOLAR DEVELOPMENT PROGRAM EIR

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Gen-Tie 150-Ft. Buffer
Tierra del Sol Solar Farm

Upland Vegetation Communities

BSS, Big Sagebrush Scrub
CLOW, Coast Live Oak Woodland
DEV, Developed
DL, Disturbed Land
GNMX, Granitic Northern Mixed Chaparral
MBS, Montane Buckwheat Scrub
NNG, Non-native Grassland
RSC, Red Shank Chaparral
SOC, Scrub Oak Chaparral
dCLOW, disturbed Coast Live Oak Woodland
WMM, Wet Montane Meadow
SWS, Southern Willow Scrub
Oak Root Zone (50-Ft. Buffer)

ACOE/CDFW/RWQCB Jurisdictional

Non-wetland ephemeral waters

Jurisdictional Wetlands

ACOE/CDFW/RWQCB
CDFW/County
RPO 50-Ft. Buffer
Data Stations

Jewel Valley Rd

DS-1
DS-2
DS-3
DS-4
DS-5
DS-6
DS-7

0 375 750 Feet

SOURCE: SANDAG; Bing Maps

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FIGURE 2.3-1c

Biological Resources - Tierra del Sol Gen-Tie Vegetation Communities

SOITEC SOLAR DEVELOPMENT PROGRAM EIR

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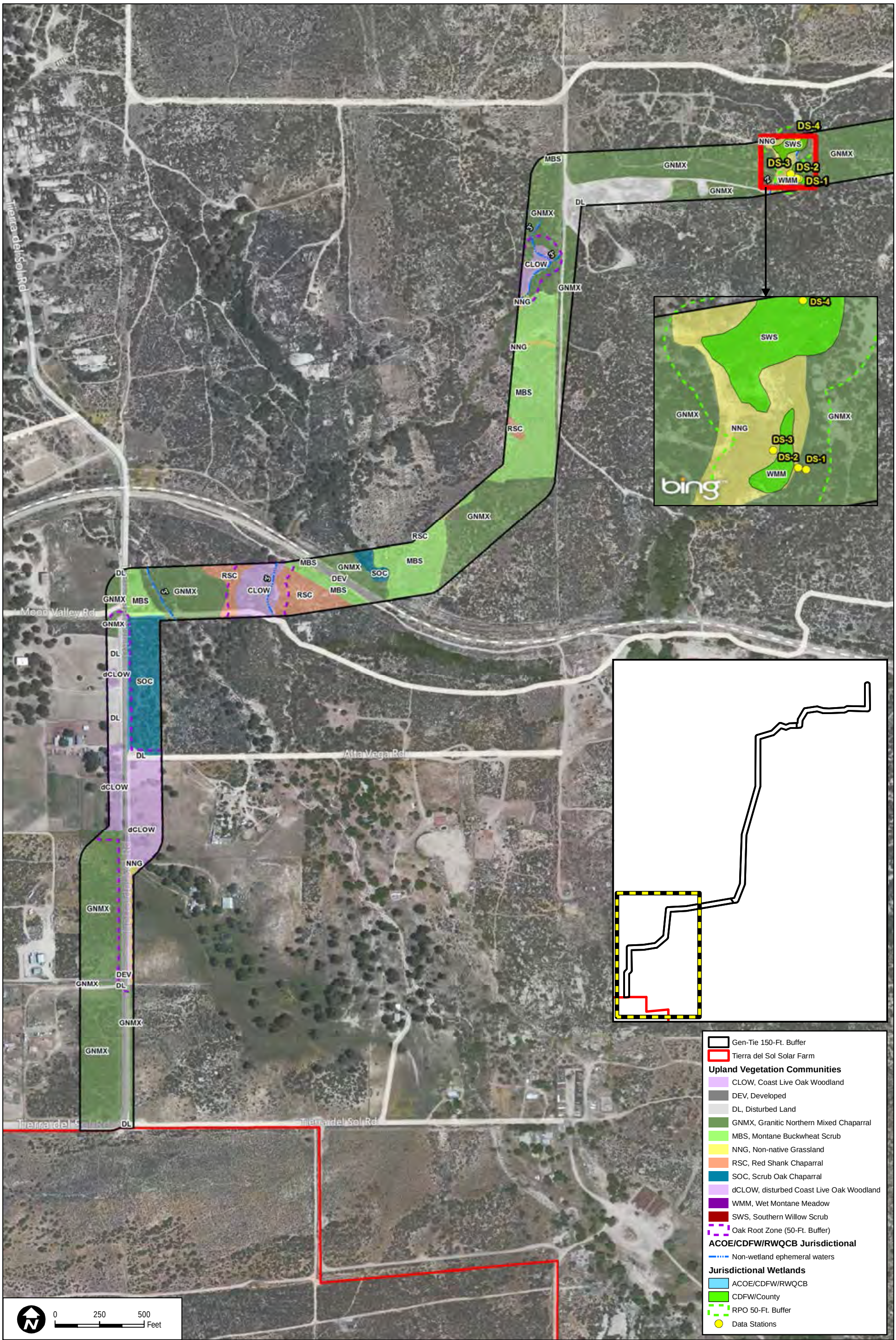

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SOURCE: SANDAG; Bing Maps

FIGURE 2.3-1d

Biological Resources - Tierra del Sol Gen-Tie Vegetation Communities

SOITEC SOLAR DEVELOPMENT PROGRAM EIR

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Rugged Solar Project Boundary

Oak Root Zone (50-Ft. Buffer)

Upland Vegetation Communities

BSS, Big Sagebrush Scrub

CC, Granitic Chamise Chaparral

CLOW, Coast Live Oak Woodland

DEV, Urban/Developed

DH, Disturbed Habitat

GNMX, Granitic Northern Mixed Chaparral

MBWS, Montane Buckwheat Scrub

MOW, Mixed Oak Woodland

NNG, Non-Native Grassland

OW, Open Water

RSCH, Red Shank Chaparral

SDC, Semi-Desert Chaparral

SDC-rock, Semi-Desert Chaparral - Rock

SOC, Scrub Oak Chaparral

dBSS, disturbed Big Sagebrush Scrub

dMBWS, disturbed Montane Buckwheat Scrub

dSDC, disturbed Semi-Desert Chaparral

dSOC, disturbed Scrub Oak Chaparral

Wetlands Vegetation Communities

AM, Alkali Meadow

NVC, Non-Vegetated Channel

TS, Tamarisk Scrub

dAM, disturbed Alkali Meadow

dMFS, disturbed Mulefat Scrub

dSWS, disturbed Southern Willow Scrub

0 500 1,000 Feet

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SOURCE: SanGIS 2012; Bing Maps

FIGURE 2.3-2

Rugged Solar Vegetation Map

SOITEC SOLAR DEVELOPMENT PROGRAM EIR

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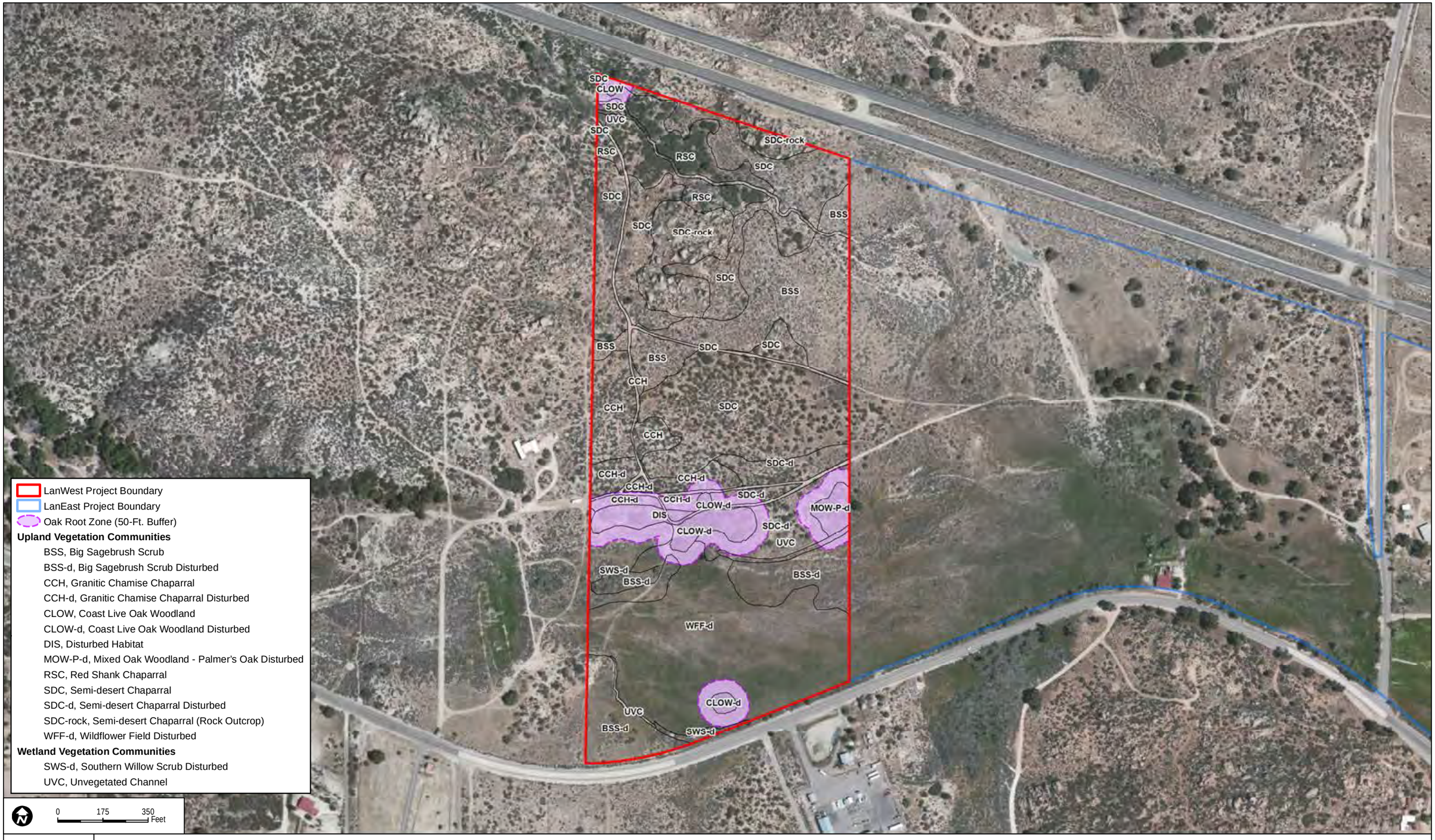

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SOURCE: AECOM 2012; Bing Maps

FIGURE 2.3-3

LanWEST Solar Vegetation Map

SOITEC SOLAR DEVELOPMENT PROGRAM EIR

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LanEast Project Boundary
LanWest Project Boundary
Oak Root Zone (50-Ft. Buffer)

Upland Vegetation Communities

BSS, Big Sagebrush Scrub
BSS-d, disturbed Big Sagebrush Scrub
CLOW, Coast Live Oak Woodland
CLOW-d, disturbed Coast Live Oak Woodland
DEV, Developed
DIS, Disturbed Habitat
EOW-d, disturbed Englemann Oak Woodland
MOW-P, Mixed Oak Woodland - Palmer's Oak
MOW-P-d, disturbed Mixed Oak Woodland - Palmer's Oak
NNG-d, disturbed Nonnative Grassland
RSC, Red Shank Chaparral
SDC, Semi-desert Chaparral
SDC-d, disturbed Semi-desert Chaparral
SSS, Upper Sonoran Subshrub Scrub
SSS-d, disturbed Upper Sonoran Subshrub Scrub
WFF, Wildflower Field
WFF-d, disturbed Wildflower Field

Wetland Vegetation Communities

AKS, Alkali Seep
AKS-d, disturbed Alkali Seep
CWRF, Southern Cottonwood-Willow Riparian Forest
CWRF-d, disturbed Southern Cottonwood-Willow Riparian Forest
FWS, Freshwater Seep
SWS-d, disturbed Southern Willow Scrub
UVC, Unvegetated Channel

0 250 500 Feet

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SOURCE: AECOM 2012; Bing Maps

FIGURE 2.3-4

LanEAST Solar Vegetation Map

SOITEC SOLAR DEVELOPMENT PROGRAM EIR

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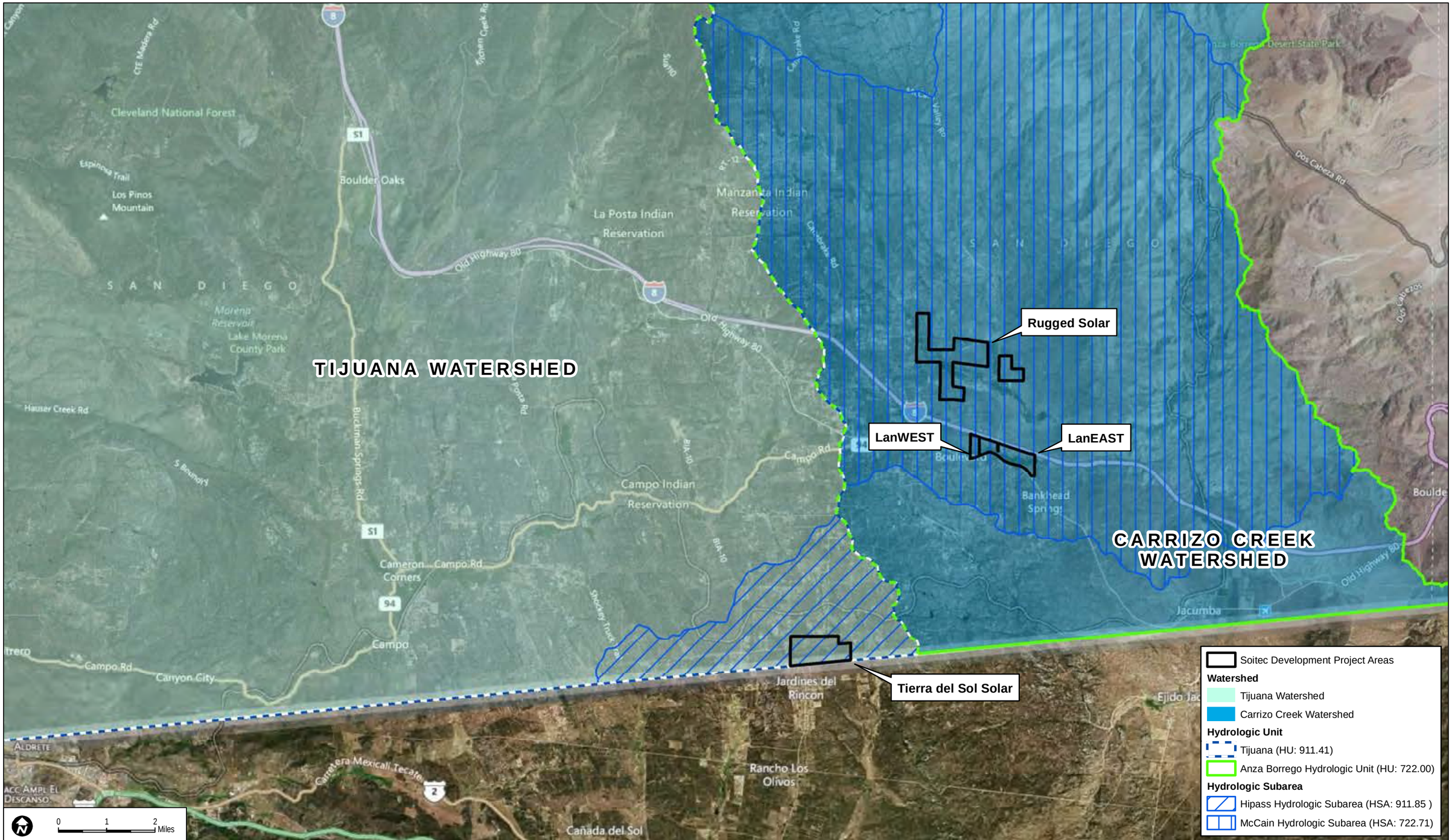

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SOURCE: U.S. Geological Survery National Hydrography Dataset (USGS 2012)

FIGURE 2.3-5

Hydrologic Setting Map

SOITEC SOLAR DEVELOPMENT PROGRAM EIR

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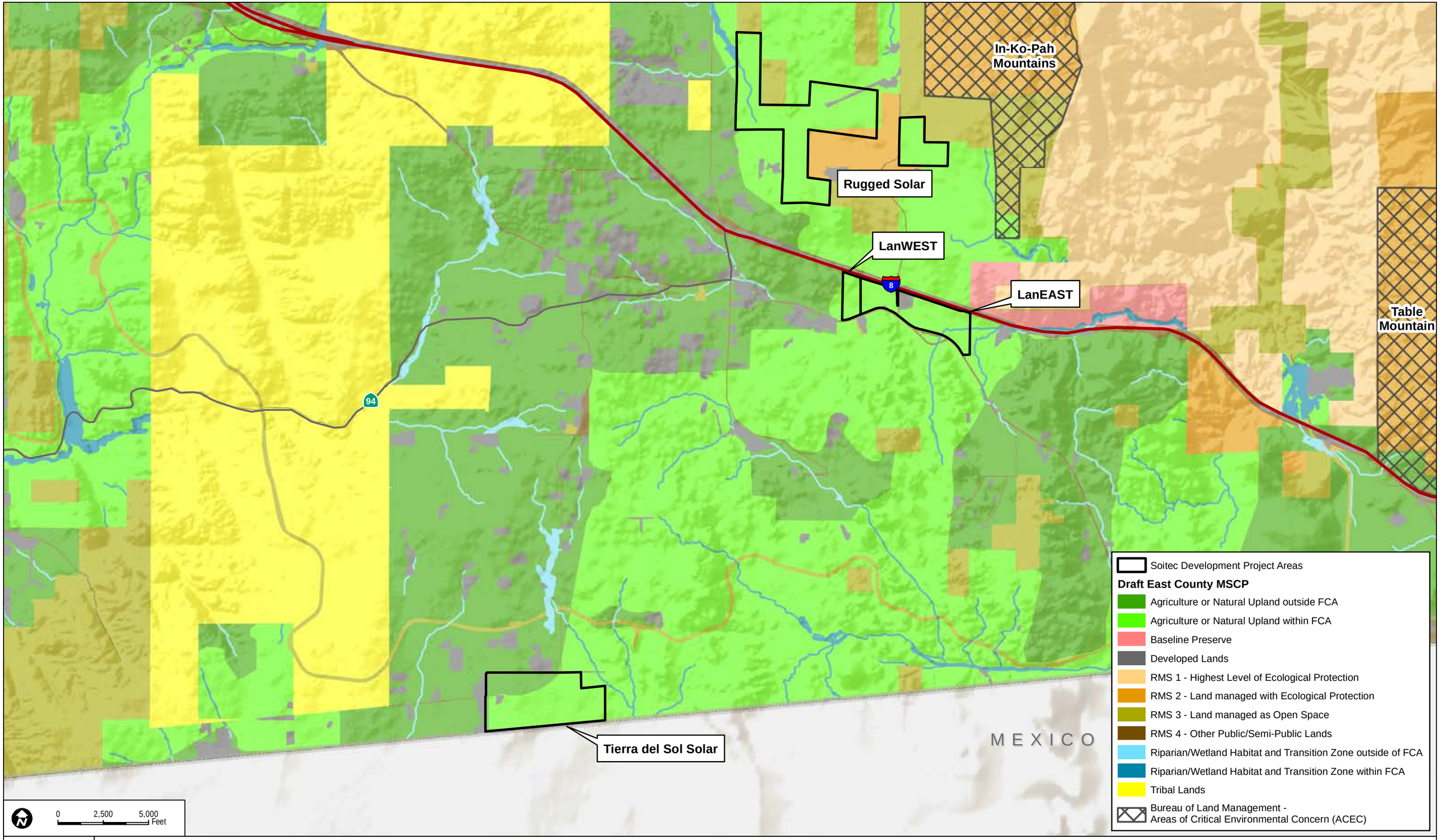

DUDEK

7345

SOURCE: SanGIS 2012, BLM 2010

FIGURE 2.4-6

Regional Context Map

SOITEC SOLAR DEVELOPMENT PROGRAM EIR

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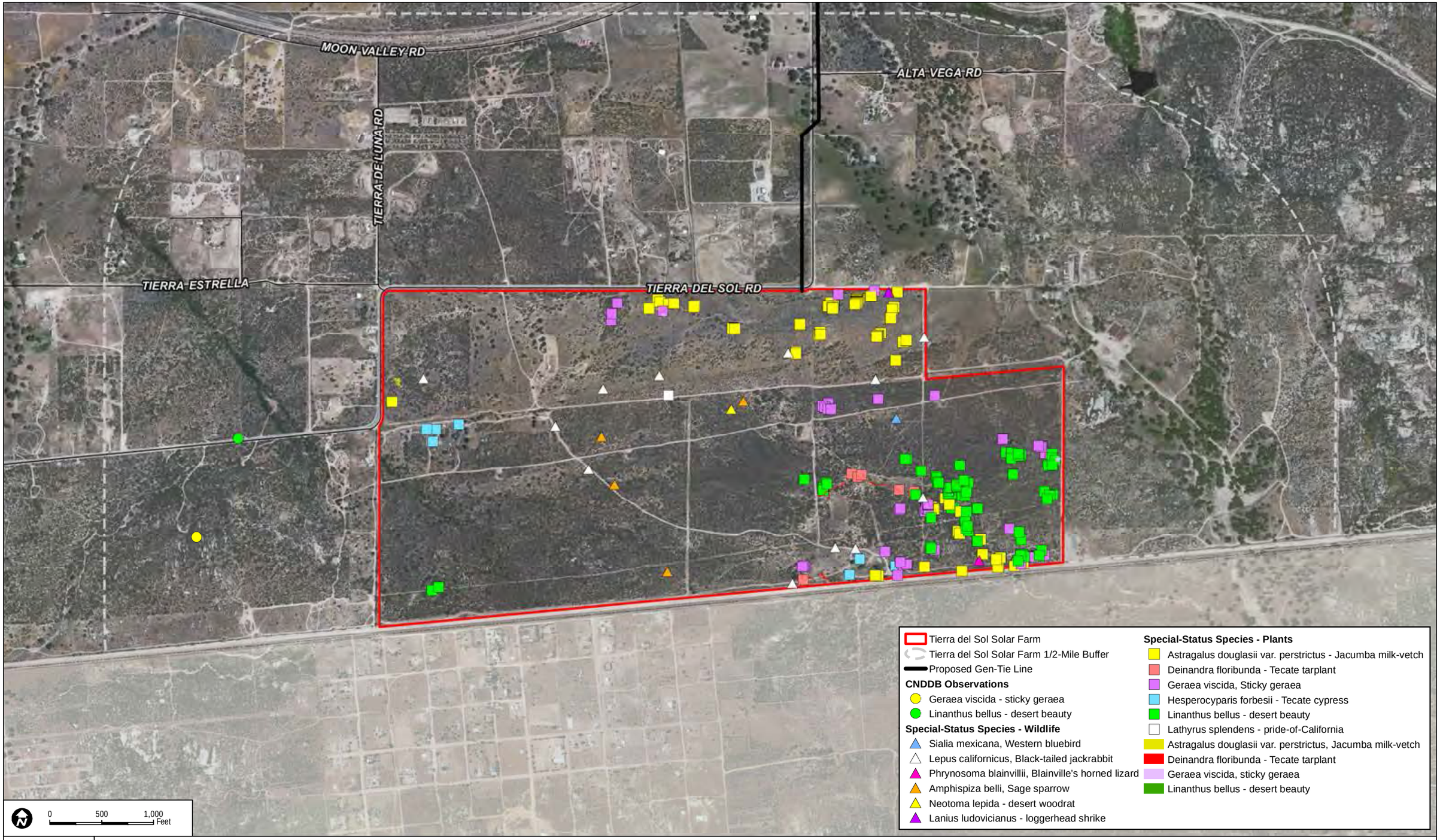

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SOURCE: CNDDB 2012; Bing Maps

FIGURE 2.3-7

Tierra del Sol Rare Plant Observations Map

SOITEC SOLAR DEVELOPMENT PROGRAM EIR

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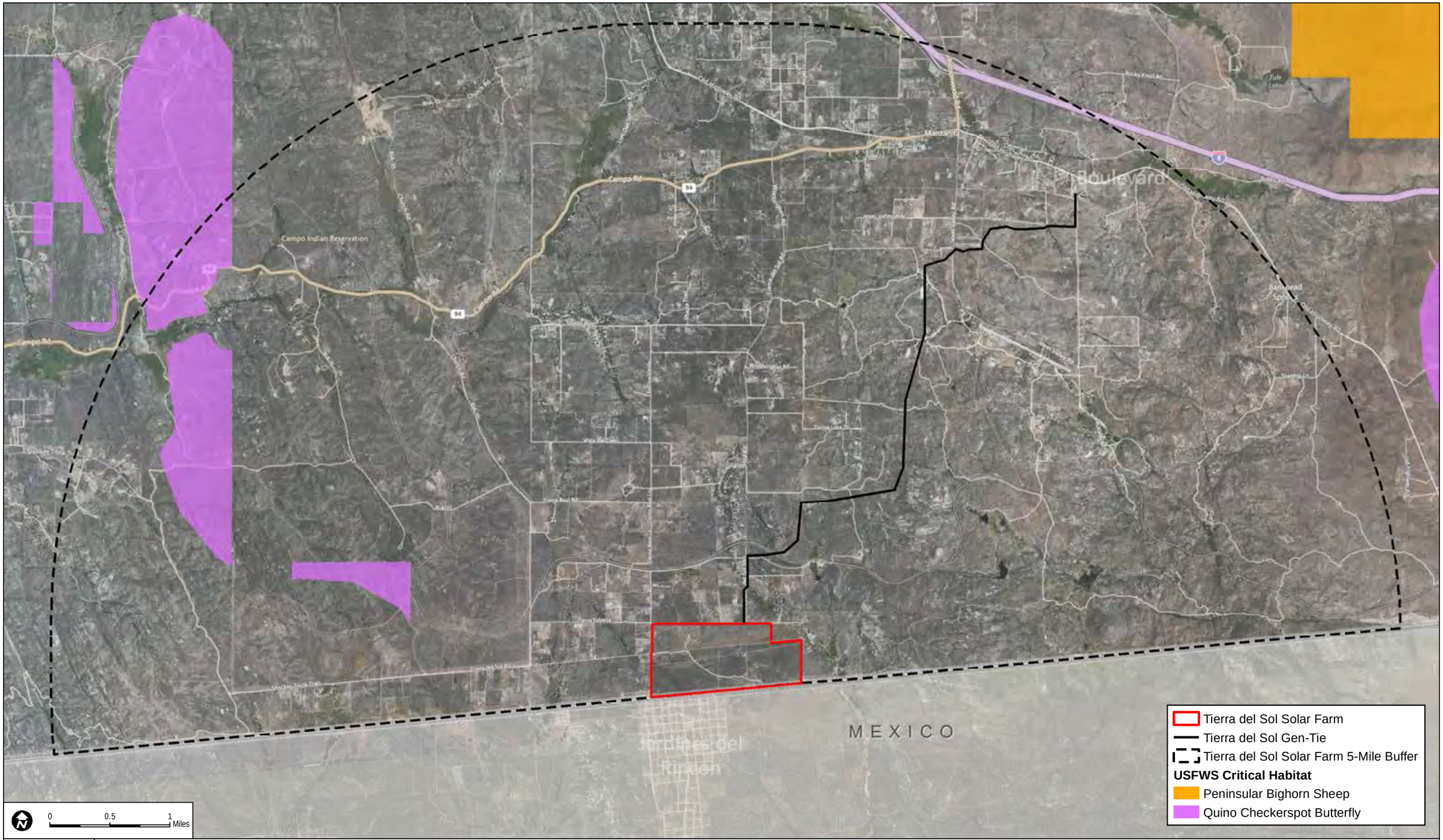

SOURCE: USFWS 2012; Bing Maps

FIGURE 2.3-8

Tierra del Sol USFWS Critical Habitats Map

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SOITEC SOLAR DEVELOPMENT PROGRAM EIR

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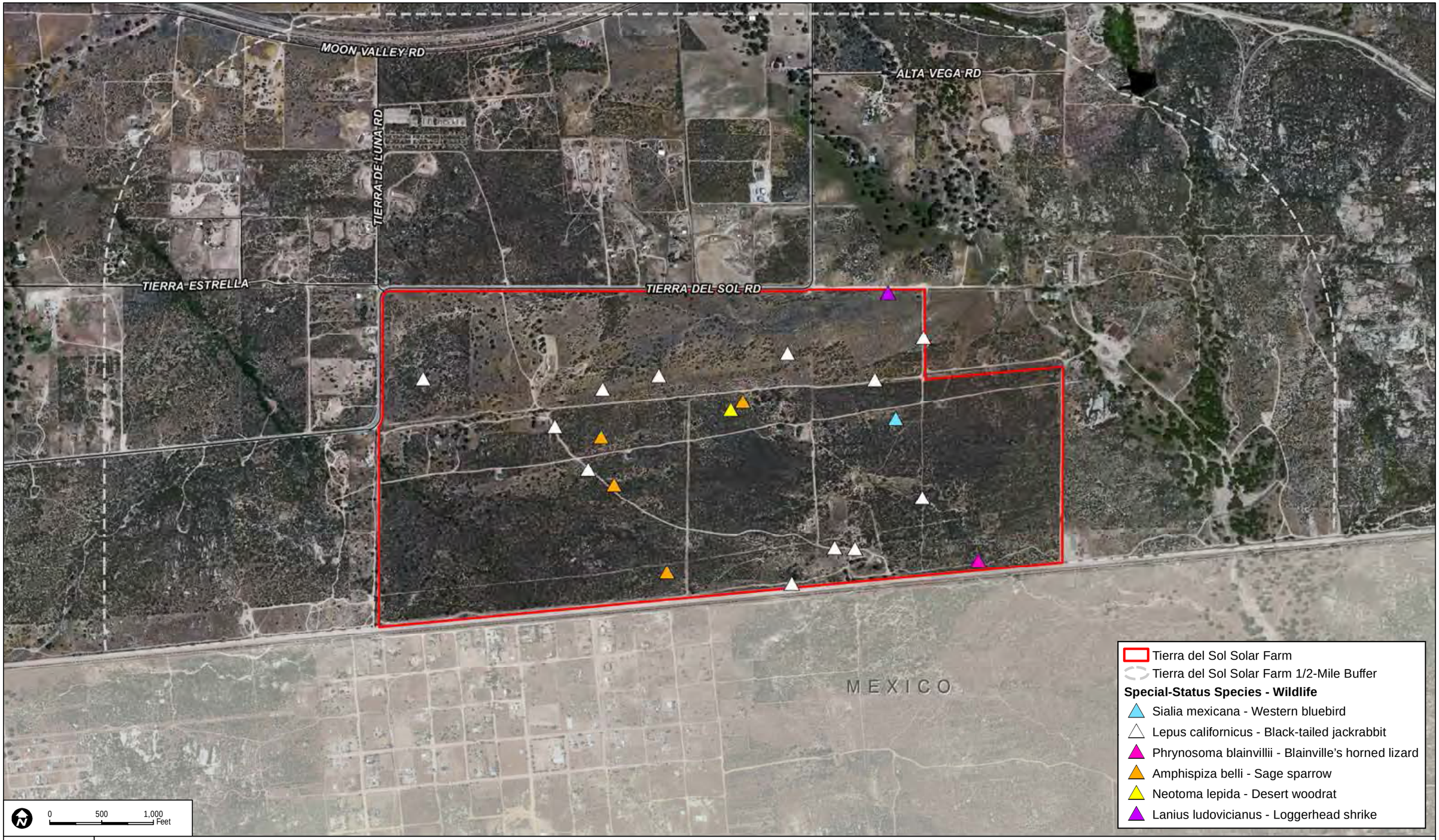

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SOURCE: CNDDB 2012; Bing Maps

FIGURE 2.3-9

Tierra del Sol Special Status Wildlife Observations Map

SOITEC SOLAR DEVELOPMENT PROGRAM EIR

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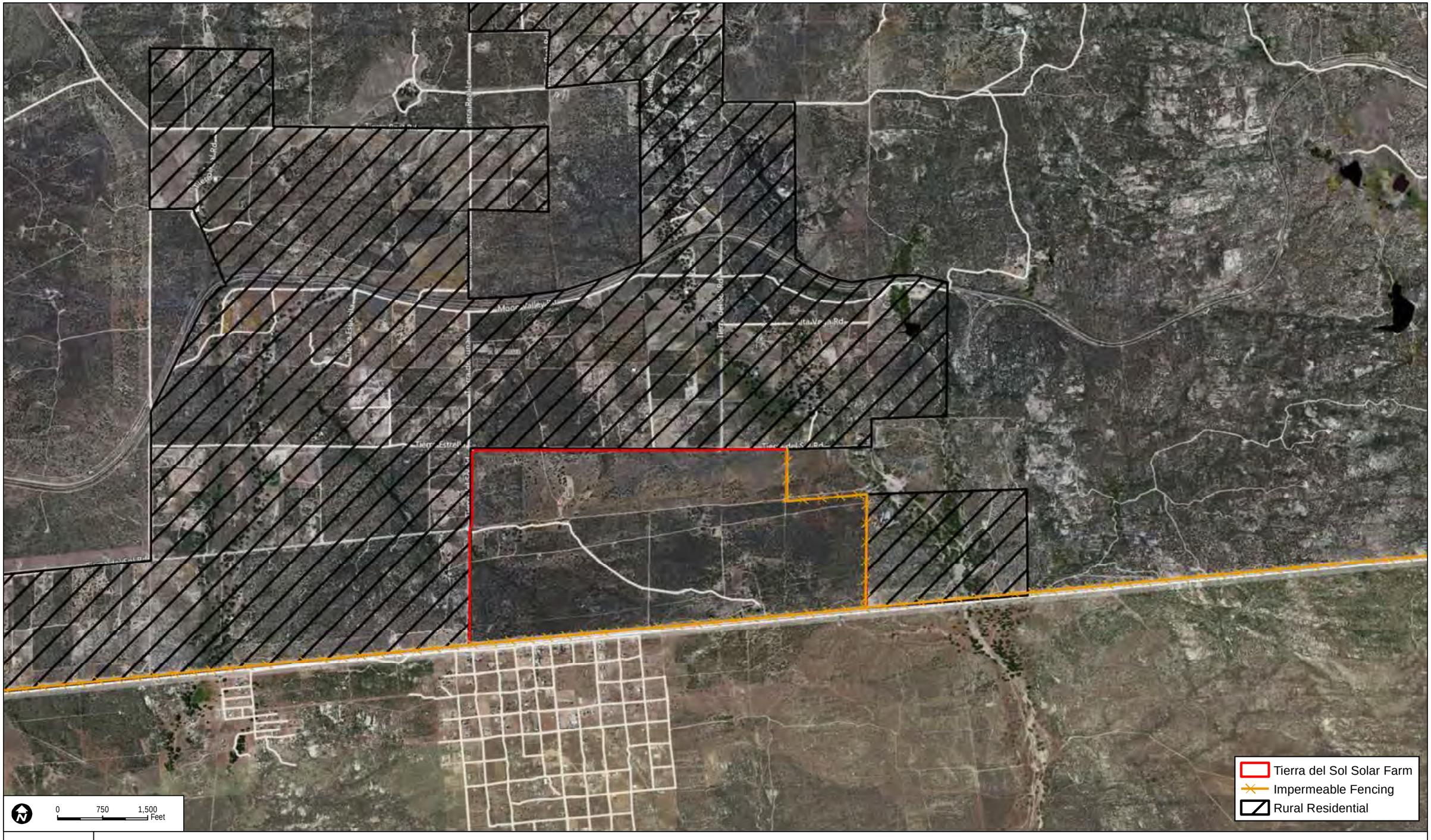

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SOURCE: Bing Maps

FIGURE 2.3-10

Tierra del Sol Wildlife Corridors and Habitat Linkages Map

SOITEC SOLAR DEVELOPMENT PROGRAM EIR

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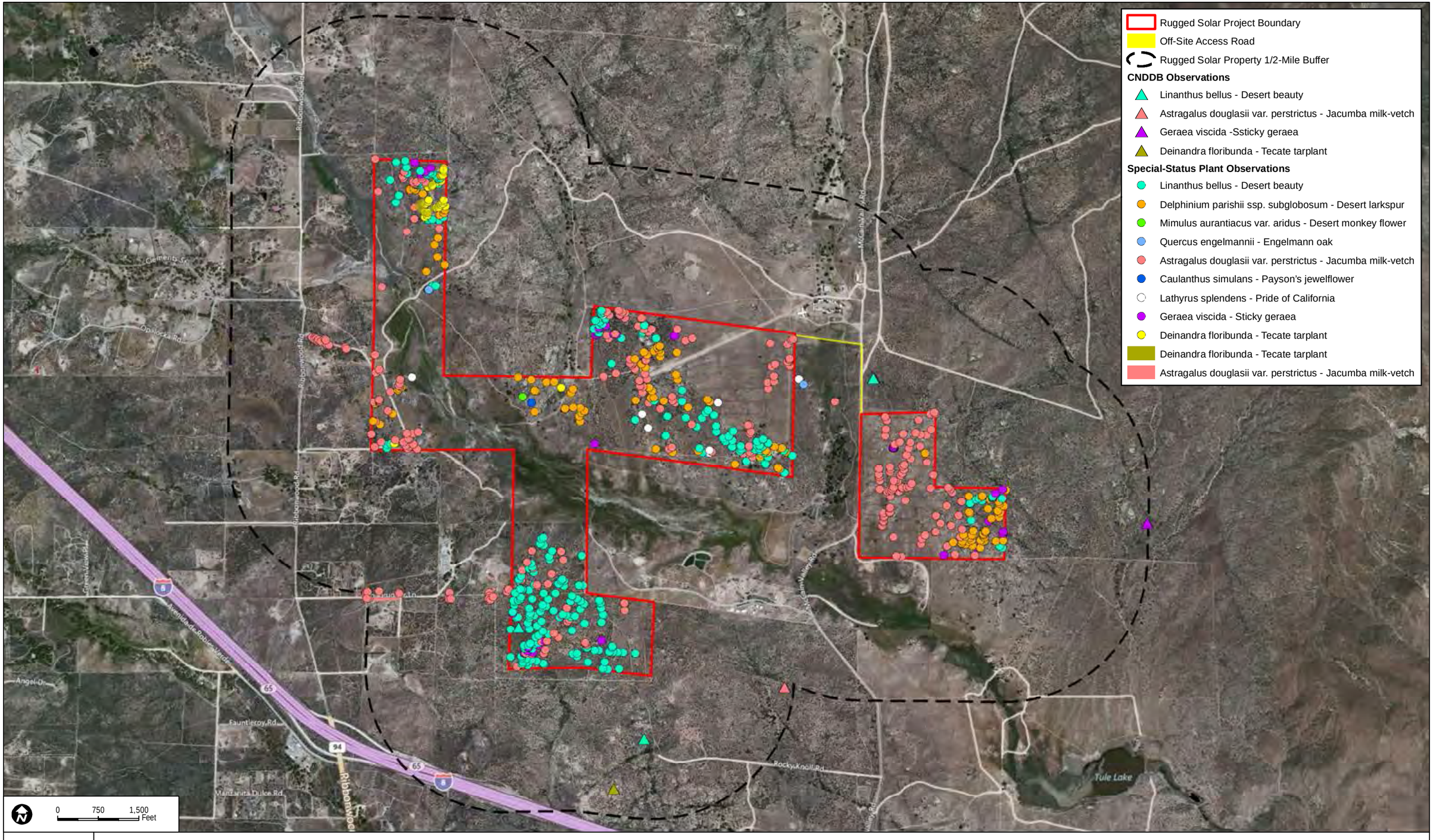

DUDEK

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SOURCE: USFWS; SanGIS 2012; Bing Maps

FIGURE 2.3-11

Rugged Solar Rare Plant Observations Map

SOITEC SOLAR DEVELOPMENT PROGRAM EIR

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