Section 3.4
Biological Resources

This section evaluates the existing biological resource setting and the potential effects caused by implementation of the project, including impacts on sensitive and special-status species and habitat. The following discussion addresses the existing biological resources conditions of the affected environment, evaluates the proposed project's consistency with applicable goals and policies, identifies and analyzes environmental impacts, and requires measures to reduce or avoid adverse impacts anticipated from implementation of the project, as applicable.

The analysis in this section is substantially based on the *Biological Resources Technical Report* prepared by HDR (2018a; see **Appendix E-1**). Additional support for the analysis herein includes the *2018 Spring/Summer Survey Report* (HDR 2018b; see **Appendix E-2**), *Desert Tortoise Pre-Project Survey Report* (HDR 2018e; see **Appendix E-3**), *Jurisdictional Delineation Report* (HDR 2018c; see **Appendix E-4**) and *Special-Status Plant Species Survey Report* (HDR 2018d; see **Appendix E-5**). All of the reports listed here were peer-reviewed by Michael Baker International**.**

ENVIRONMENTAL SETTING

San Bernardino County is divided into three subregions for planning purposes: Valley, Mountain, and Desert. These regions have distinctive climates and geography, which in turn produce differing biological environments. The project site is in the Desert Region of the West Mojave Plan planning area.

Multiple biological surveys have been performed at the project site to identify natural resources—vegetation, jurisdictional resources, and special-status plants—including protocol surveys for burrowing owl (*Athene cunicularia*), Mojave fringe-toed lizard (*Uma scoparia*), and desert tortoise (*Gopherus agassizii*).

EXISTING CONDITIONS

Vegetation Communities

No vegetation communities considered high priority by the California Department of Fish and Wildlife (CDFW) or otherwise considered to be sensitive natural communities identified in local or regional plans, policies, regulations or by the CDFW or the US Fish and Wildlife Service (USFWS) are present in the project site (**Appendix E-1**). **Table 3.4-1, Existing Vegetation Communities/Land Cover Types**, indicates the types and amounts of vegetation communities and land covers on the project site. Approximately 1,726 acres, or about 50 percent of the site,

are in agricultural production. In the project area, agricultural areas consist of active and abandoned alfalfa (*Medicago sativa*) and Bermuda grass (*Cynodon dactlyon*) fields, as well as an active pistachio (*Pistacia chinense*) orchard.[1] The predominant crop being grown on-site is alfalfa. In addition, the approximately 220-acre pistachio orchard on-site consists of rows of young pistachio trees with no understory, aside from some weeds growing near irrigation drips.

The nearest designated Critical Habitat is for desert tortoise, north of I-15 and south of I-40, approximately 1.25 miles north and south of the site.[2] The site is further divided by paved and dirt roads, the SunRay solar project, and transmission corridors.

Jurisdictional Resources

Jurisdictional resources (i.e., non-vegetated waters of the United States, non-vegetated streambed [sometimes referred to as waters of the State], riparian, and wetlands) serve a variety of functions for plants and wildlife. Wetlands and other water features provide habitat, foraging, cover, and migration and movement corridors for both special-status and common species. The Mojave River floodplain extends east–west to the north of the site, directly adjacent to the northwestern parcel. There are no riparian areas or wetlands associated with the dry channel of the Mojave River floodplain near the site.

Table 3.4-1:
Existing Vegetation Communities/Land Cover Types

Plant Community	On-Site Solar Field (acres)	Off-Site Alternative Gen-Tie Alignments (acres)		
		Option 1	Option 2	Option 3
Creosote Bush Scrub Alliance	634.6	35.1	62.9	60.5
Desert Allscale Scrub Alliance	301.4	23.8	7.7	7.7
Disturbed Desert Saltbush Scrub	136.2	28.5	0.1	0.1
Agriculture	1,725.8	1.9	17.9	17.8
Windrows of Tamarix spp. (Tamarisk Thickets)	20.1	6.6	<0.1	<0.1
Developed/Disturbed/Ruderal Habitat	368.6	46.6	87.0	79.8
Total	**3,186.7**	**142.4**	**175.7**	**166.5**

Note: No vegetation communities within the project area are designated as high priority by the CDFW or otherwise afforded special status for CEQA purposes.

1 There are no project facilities proposed over this orchard, although a few trees may be removed to accommodate the gen-tie line.

2 Critical habitat is designated by the USFWS and is defined under the federal Endangered Species Act as areas occupied by species listed as threatened or endangered within which are found physical or geographical features essential to the conservation of the species, or an area not currently occupied by the species which is itself essential to the conservation of the species.

According to the Jurisdictional Delineation Report (HDR 2018c; **Appendix E-4**), there is one jurisdictional feature in the southern portion of the site, immediately north of Powerline Road (identified as "Feature B" in **Appendix E-4**). This approximately 365-foot-long channel (0.08 acres) is disturbed with intermittent cut banks and no clear field evidence of an ordinary high water mark (OHWM). The channel is an isolated feature because it is more than 2.3 miles from (and does not have a significant nexus to) the nearby Mojave River or any other potentially regulated water.

Isolated features that do not have a significant nexus to a traditional navigable water (TNW) or other regulated waters generally are not regulated under Clean Water Act (CWA) Sections 401 and 404. The channel would be regulated by the CDFW under California Fish and Game Code (CFGC) Section 1600, and by the Regional Water Quality Control Board (RWQCB) under California's Porter-Cologne Water Quality Control Act, because it has evidence of a bed and bank and indicators of fluvial transport, and it appears to regularly convey ephemeral flows. Therefore, the project site contains one non-wetland drainage extending across the south-central edge, which is likely under RWQCB and CDFW jurisdiction.

Special-Status Species

Refer to **Appendix E-1** for special-status definitions for federally and state-listed endangered and threatened (FE, SE, FT, ST) species, California Special Species of Concern (SSC) and Fully Protected (FP) species, and California Rare Plant Rankings (CRPR) by the California Native Plant Society (CNPS). The presence and absence of special-status plant and animal species on the site is described below.

Plants

No special-status plants were observed on-site. However, the following have a moderate potential to occur within the identified habitats (refer to **Appendix E-1**, Table 3): Darlington's blazing star (*Mentzelia puberula*) (all native desert scrubs), Beaver Dam breadroot (*Pediomelum castoreum*) (Mojave Creosote Bush Scrub and Desert Saltbush Scrub), and Parish's phacelia (*Phacelia parishii*) (Desert Allscale Scrub and Desert Saltbush Scrub). These species are discussed in more detail below.

Darlington's blazing star (CRPR 2B.2). This perennial herb occurs in sandy or rocky areas in desert scrub habitats, at elevations from 270 to 4,000 feet above mean sea level (amsl). It blooms from March through May.

Beaver Dam breadroot (CRPR 1B.2). This perennial herb occurs in sandy washes or roadcuts in desert scrub habitats, at elevations from 2,000 to 5,000 feet amsl. It blooms from April through May.

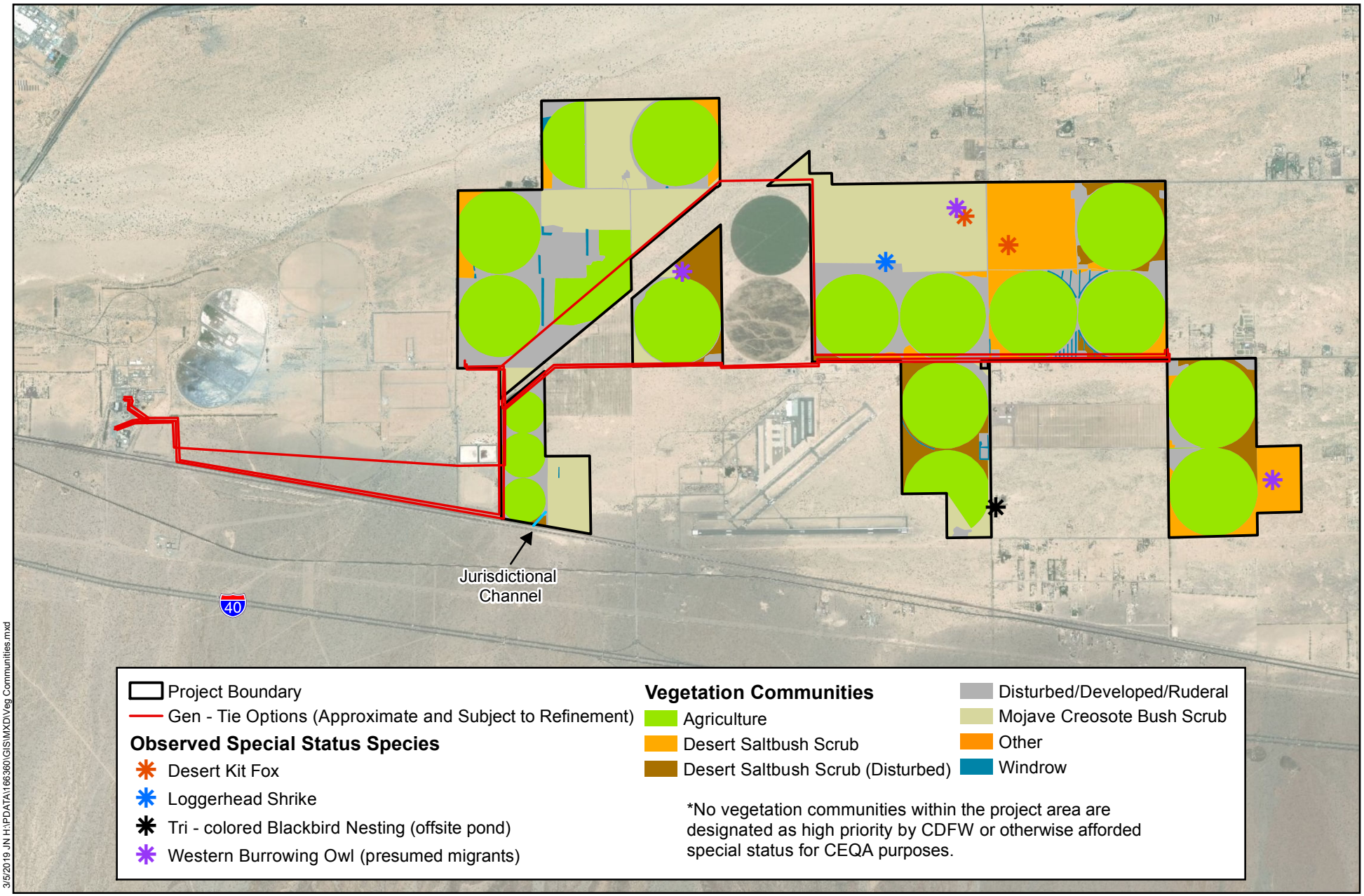
Parish's phacelia (CRPR 1B.1). This annual herb occurs in clay or alkaline soils in desert scrub habitats and playas, at elevations from 1,600 to 3,600 feet amsl. It blooms from April through May, as well as occasionally in June and July.

Wildlife

The following special-status wildlife species were observed on the project site: tricolored blackbird (*Agelaius tricolor*), golden eagle (*Aquila chrysaetos*), short-eared owl (*Asia flammeus*), burrowing owl, red-tailed hawk (*Buteo jamaicensis*), ferruginous hawk (*Buteo regalis*), Swainson's hawk (*Buteo swainsoni*), northern harrier (*Circus hudsonius*), prairie falcon (*Falco mexicanus*), American kestrel (*Falco sparverius*), loggerhead shrike (*Lanius ludovicianus*), and desert kit fox (*Vulpes macrotis arsipus*). In addition, the following have a moderate to high potential to occur within the identified areas on-site (refer to **Appendix E-1**, Table 3): burrowing owl (all habitats), loggerhead shrike (all habitats), Le Conte's thrasher (*Toxostoma lecontei*) (all native desert scrubs), Townsend's big-eared bat (*Corynorhinus townsendii*) (abandoned buildings), and American badger (*Taxidea taxus*) (all habitats); refer to additional discussion below. Additionally, although desert tortoise and Mojave fringe-toed lizard were found to have a low potential to occur on-site, these species are discussed due to their significance in the surrounding area.

Tricolored blackbird (SSC). This species is primarily found in open areas, foraging in grassland and cropland habitats. It nests in large groups near fresh water, preferably in emergent wetland with tall, dense cattails (*Typha* spp.) or tules (*Schoenoplectus* spp.), but also in thickets of willow (*Salix* spp.), blackberry (*Rubus* spp.), wild rose (*Rosa californica*), or tall herbs, which provide cover for roosting. Tricolored blackbirds were incidentally observed during the above-mentioned Mojave fringe-toed lizard surveys in May 2018 foraging in the on-site agricultural fields near Minneola Road, south of Silver Valley Road, flying to and from an off-site artificial pond with cattails in the backyard of an adjacent residence on the east side of Minneola Road outside of the project boundary (see **Exhibit 3.4-1, Vegetation Communities and Observed Special Status Species within the Project Area**). It is likely that these birds nest in this pond due to their presence in large numbers during the nesting season.

Burrowing owl (SSC). This species is primarily found in open areas with short vegetation and bare ground in deserts, grasslands, and shrub-steppe environments. Breeding commonly occurs in native prairies, pastures, fallow fields, road and railway rights-of-way, canal embankments, and urban habitats. Burrowing owls are dependent on the presence of pre-existing mammal burrows that are used for nesting and roosting. The project site contains approximately 1,461 acres of suitable burrowing owl habitat, and the gen-tie alternative alignments also support approximately 166.2 acres of suitable habitat.



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DAGGETT SOLAR POWER FACILITY
ENVIRONMENTAL IMPACT REPORT

Vegetation Communities and Observed Special Status Species within the Project Area

Exhibit 3.4-1

Michael Baker INTERNATIONAL

0 2,000 4,000 8,000 Feet

Source: San Bernardino County

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Burrowing owls, sign, and active/inactive burrows were observed on-site during focused protocol-level surveys conducted from March through June of 2018. Approximately 90 burrows or burrow complexes with a diameter of 3–4 inches or greater were mapped throughout suitable habitat. Of these, 27 burrows had potential burrowing owl sign (whitewash, pellets, or scat) or were actively used by owls. Six individual burrowing owls were observed during surveys conducted in March 2018 (see **Exhibit 3.4-1**) but not in subsequent surveys. In addition, a pair of burrowing owls was incidentally observed during a desert tortoise survey on April 18, 2018, but the pair was not observed in subsequent surveys. Because the owls observed in March and April were not found during May and June, when nesting occurs in the region, it is likely that the observed owls were wintering or migrating through the area.

Other special-status raptors. Although no nesting habitat was identified on the site for golden eagle (FP), two individuals were observed foraging over an on-site agricultural field being plowed (see **Exhibit 3.4-1**) in April and June 2018 during the focused raptor nest surveys. In addition, no golden eagle nests were observed in the gen-tie alternative alignments during the spring 2018 surveys. Two historic golden eagle nest locations (i.e., Occurrences #274 and #277), as documented by the CDFW's California Natural Diversity Database (CNDDB), were viewed with a scope (about 0.3–0.4 miles away) to determine if the nests were still active. Occurrence #274 is located near the town of Newberry Springs, about 5 miles southeast of the project site, and eagles have not been documented at this nesting location since 1979. At this location, several large whitewash deposits were observed, at least one potential nest appeared to be an active common raven (*Corvus corax*) nest, and none of the other nests appeared to be active. Golden eagles were not observed in the vicinity of Occurrence #274 during three visits to this area.

Occurrence #277 is located on Elephant Mountain, approximately 5 miles northwest of the site, and eagles have not been documented at this nesting location since 1978. At this location, a large whitewash deposit was observed, and this potential nest appeared to be an active common raven nest. Golden eagles were not observed in the vicinity of Occurrence #277 during three visits to this area.

Furthermore, all accessible lattice structures and other large transmission-line structures within 5 miles of the site were examined at least one time during the spring of 2018 for eagle nests. No golden eagle nests were documented during the spring 2018 surveys of accessible transmission towers within 5 miles of the project site.

Based on CNDDB records and a literature search, Swainson's hawks have been observed overwintering and migrating within and near the project area, but have not been recently recorded nesting there. The nearest recorded nest is in Apple Valley, about 25 miles south of the project site, and nesting was last observed there in 1932. The nearest recent nesting area is the Antelope Valley (approximately 60 miles to the west). Four individuals were observed in April

2018 foraging over an on-site agricultural field being plowed (see **Exhibit 3.4-1**). Swainson's hawks were not observed nesting on-site, and none were observed during subsequent surveys after April. Several other raptors, including the northern harrier, red-tailed hawk,[3] ferruginous hawk, American kestrel, and prairie falcon, were also observed foraging on-site during the spring 2018 surveys, likely due to an abundance of exposed prey during the plowing activities.

Loggerhead shrike (SSC). This species occurs in open habitats (e.g., cropland, pastures, old orchards, cemeteries, golf courses), riparian areas, and open woodlands with scattered small trees, fences, utility lines, or other perches. It breeds mainly in shrublands or open woodlands. Suitable habitat occurs throughout the site, with nesting limited to less disturbed areas. Loggerhead shrikes were observed on multiple occasions on-site (see **Exhibit 3.4-1**) during focused surveys in the spring of 2018.

Le Conte's thrasher (SSC). This species inhabits sparsely vegetated desert flats, sand dunes, alluvial fans, washes, and gently rolling hills with a high proportion of saltbush or cholla for nesting. It is an uncommon and local resident in low desert scrub throughout most of the Mojave Desert. Its breeding range in California extends from these areas into the eastern Mojave, north into the Owens Valley, and south into the lower Colorado Desert and eastern Mojave. The native desert scrub communities on the project site provide suitable foraging and nesting habitat. This species was not detected on-site during focused surveys in the spring of 2018.

Special-status mammals. Townsend's big-eared bat (SSC) uses caves, mines, tunnels, bridges, buildings, rock crevices, and hollow trees for roosting. This species has been documented within 6 miles of the site. The abandoned houses and buildings on-site could support roosts. However, no bats were observed during the spring 2018 surveys.

Desert kit fox favors arid climates, such as desert scrub, chaparral, and grasslands at elevations of 1,300 to 6,200 feet amsl, and can be found in urban and agricultural areas.[4] It is mostly nocturnal, hunting shortly after sunset for small animals such as kangaroo rats (*Dipodomys* spp.), meadow voles (*Microtus pennsylvanicus*), prairie dogs (*Cynomys* spp.), rabbits, insects, lizards, snakes, and ground-dwelling birds, but it sometimes ventures out of its den during the day. It will scavenge carrion, and while primarily carnivorous, if food is scarce, it has been known to eat cactus fruits.

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[3] Also observed nesting on the project site (see **Exhibit 3.4-1**).

[4] Desert kit fox is not listed by the USFWS or CDFW under any special-status designation and was included in the special-status species list and surveys per the request of CDFW staff. It is considered a "fur-bearing mammal," protected from take under the California Fish and Game Commission's 2017–2018 Mammal Hunting Regulations (Subdivision 2, Chapter 5).

American badgers (SSC) prefer friable soils in relatively open uncultivated ground in grasslands, woodlands, and desert; therefore, the project site supports suitable habitat for this species. All dens and other burrows found during the above-mentioned surveys for desert tortoises and burrowing owls were examined for sign of kit fox and badger, which was observed for both species at some locations, indicating they could be used by both species. Wildlife camera traps were set up on three occasions in May and June 2018 at some of the potential kit fox burrow complexes and badger burrows.

A kit fox was photographed at an on-site burrow complex southeast of the intersection of Valley Center Road and Minneola Road in June 2018, and another was incidentally observed at a burrow complex southwest of this intersection on June 27, 2018 (see **Exhibit 3.4-1**). No badgers were observed or photographed, although potential signs, including burrows, scat, and claw marks, were documented within the project area. It should be noted that these potential signs are not completely indicative of badgers being present on-site, as the burrows, scat, and claw marks could have been made by other wildlife.

Desert tortoise (FT, ST). Although this species was determined to have a low potential for occurrence, it is discussed here because marginally suitable habitat is present (936.1 acres), especially the less-disturbed Mojave Creosote Bush Scrub and Desert Saltbush Scrub in the eastern and southern portions of the site. The species' low potential for occurrence is due to the site's isolation from occupied habitat, including designated Critical Habitat units to the north and south, by highways, roadways, and railroad tracks, and due to ongoing disturbance that results in sparse herbaceous and shrub cover. In addition, no tortoises or definitive signs were detected during the protocol-level presence/absence surveys conducted in the spring of 2018. A potential burrow in the southeast corner of the project site was determined to likely be a partially collapsed mammal burrow.

The gen-tie alternative alignments also support a total of 144.8 acres of marginally suitable habitat. During the above-mentioned protocol-level presence/absence surveys, a potential burrow in the southernmost gen-tie alternative alignment near the Coolwater Generating Station was determined to likely be created by other wildlife and shaped by erosion.

Mojave fringe-toed lizard (SSC). This species is restricted to areas with fine, aeolian sand, including both large and small dunes, margins of dry lakebeds and washes, and isolated pockets against hillsides. These lizards require access to shaded sand to allow for predator evasion and thermoregulatory burrowing. They are typically active from March to September. Although this species was determined to have a low potential for occurrence, it is discussed here because the southeastern portions of the project site support a total of 80 acres of fine, sandy soils that could provide marginally suitable habitat (see **Exhibit 3.4-1**) and are adjacent to better quality habitat immediately off-site. Habitat within the project site is marginally suitable for this species and is

unlikely to be an important part of any dispersal corridor between areas with better quality habitat because (1) the sites do not have extensive or well-developed sand sheets (relative to areas farther east in the Mojave Valley), (2) are partially disturbed, and (3) are adjacent to cultivated fields. The sites surveyed are on the western edge of deeper and more extensive sandy soils and dunes that extend along the Mojave River and into the lower Mojave Valley (USDA 1937, 1986, 2017). Sand transport in this region generally is to the east along the Mojave River toward Soda Lake, Devil's Playground, and Kelso Dunes (Muhs et al. 2003).

The lizard's low potential for occurrence is due to the relatively small amount of suitable habitat on the project site. No Mojave fringe-toed lizards were detected during the presence/absence surveys conducted in April–June 2018 based on protocol for Coachella Valley fringe-toed lizard (*Uma inornata*), which occupies similar habitat and exhibits similar behavior as Mojave fringe-toed lizard.

Wildlife Corridors and Habitat Linkages

Wildlife corridors are landscape elements that provide for species movement and dispersal between two or more open spaces or large core habitat areas, allowing gene flow through diffusion of populations over a period of generations, as well as allowing "jump-dispersal" for some species between neighboring habitats. Habitat linkages are typically large open space areas (on a landscape scale) containing natural habitats that provide such connections. Linkages can form large tracts of natural open space and serve as "live-in" or "resident" habitats.

There are no wildlife corridors traversing the project site, as designated by the San Bernardino County General Plan, West Mojave Plan, or Desert Renewable Energy Conservation Plan (DRECP). The site is unlikely to be used as a local habitat linkage for desert tortoise between USFWS Critical Habitat for the tortoise in the Newberry Mountains Wilderness to the south and the Mojave River to the north because of I-40 running between the project and the Critical Habitat on the south and I-15 running between the project and the Critical Habitat to the north as well as the railroad. Similarly, the lack of desert tortoise observations, the presence of only marginally suitable habitat on the project site, and the large area of the site in active agricultural production further support the determination that the project site does not likely serve as a local habitat linkage.

REGULATORY FRAMEWORK

FEDERAL

Endangered Species Act

The federal Endangered Species Act (ESA) establishes the legal framework for the listing and protection of species (and their habitats) identified as being endangered, threatened with extinction, or candidates for both. Actions that jeopardize federally listed species and the habitats upon which they rely are considered a "take" under the ESA and are prohibited without a special permit. The ESA allows for take of a threatened or endangered species incidental to proposed actions pursuant to Incidental Take Permit (ITP) regulations. Section 7 of the ESA also allows for such takes when a federal permit is required (e.g., CWA Section 404 permit) after formal consultations have deemed that proposed disturbance activities will not jeopardize the continued existence of the species.

Clean Water Act

CWA Section 401 requires any applicant for a federal license or permit that is conducting any activity that may result in a discharge of a pollutant into waters of the United States to obtain a certification from the appropriate RWQCB that the discharge will comply with applicable effluent limitations and water quality standards. CWA Section 404 prohibits the discharge of dredged or fill material into waters of the United States without a permit from the US Army Corps of Engineers (USACE).

In addition to streams with a defined bed and bank, the definition of waters of the United States includes wetland 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" (33 Code of Federal Regulations [CFR] 328.3 7b). The lateral extent of non-tidal waters is determined by delineating the OHWM (33 CFR Section 328.4[c][1]). For adjacent wetlands, the limits of jurisdiction extend beyond the OHWM to the outer edge of the wetlands. The presence and extent of jurisdictional wetlands are determined through the examination of vegetation, soils, and hydrology, and exhibit hydrophytic vegetation, wetland hydrology, and hydric soils.

Impacts to jurisdictional resources require either a nationwide permit or an individual permit, depending on extent. Mitigation of such impacts is required as a condition of the Section 404 permit and may include on-site and/or off-site preservation, creation, restoration, and/or enhancement. To achieve no net loss of wetlands, the characteristics of the restored or enhanced wetlands must be equal to or better than those of the affected wetlands.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 United States Code [USC] Section 703 et seq.) implements international treaties between the United States and other nations devised to protect migratory birds, their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. The State of California incorporates the protection of birds of prey in CFGC Sections 3800, 3513, and 3503.5. All raptors and their nests are protected from take or disturbance under the MBTA and CFGC Section 3503.5.

Bald and Golden Eagle Protection Act

In addition to MBTA protections, the golden eagle and bald eagle are afforded additional protection under this act, amended in 1973 (16 USC Section 668 et seq.).

Bureau of Land Management West Mojave Plan

The West Mojave Plan, a habitat conservation plan (HCP) and federal land use plan amendment for the California Desert Conservation Area Plan, is implemented on Bureau of Land Management (BLM) administered public lands. The plan outlines the special-status species in the counties that fall within the plan's purview, including San Bernardino County, establishes a framework for conservation of natural communities in which these species reside, and provides a streamlined program for complying with ESA/California Endangered Species Act (CESA) requirements. Although the project site is located within its boundaries, this plan is not applicable to projects on private lands.

Desert Renewable Energy Conservation Plan

In response to Executive Order S-14-08, which established a target of obtaining 33 percent of the state's electricity from renewable resources by 2020, the California Energy Commission (CEC), CDFW, BLM, and USFWS have developed the Desert Renewable Energy Conservation Plan. The plan area encompasses the Mojave and Colorado Desert regions in California, including all or a portion of the following counties: Kern, Los Angeles, San Bernardino, Inyo, Riverside, Imperial, and San Diego.

The DRECP is a joint state and federal natural communities conservation plan (NCCP) and part of one or more HCPs that is intended provide for effective protection and conservation of desert ecosystems while allowing for the appropriate development of renewable energy projects. The plan is anticipated to provide long-term endangered species permit assurances to renewable energy developers and provide a process for conservation funding to implement the DRECP. It would also serve as the basis for one or more habitat conservation plans under the ESA.

In 2016, the BLM issued a Record of Decision, approving a Land Use Plan Amendment that represents the conclusion of Phase I of the DRECP, which identifies priority areas for renewable energy development while setting aside millions of acres for conservation and outdoor recreation. The BLM plan complements the non-federal land component of the DRECP (Phase II), which is ongoing, led by the CEC.

STATE

California Environmental Quality Act

The California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et seq.) was established by the state legislature to inform both state and local governmental decision-makers and the public about significant environmental effects of proposed activities (including impacts on biological resources), to identify ways to avoid or reduce significant adverse effects on the environment, and to disclose the reasons why a project is approved if significant environmental impacts would result.

California Endangered Species Act

The CESA establishes the State's policy to conserve, protect, restore, and enhance threatened or endangered species and their habitats. The act mandates that state agencies not approve projects which would jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy. There are no state agency consultation procedures under the CESA. For projects that affect both a federally and state-listed species, compliance with the federal ESA will satisfy the CESA if the California Department of Fish and Wildlife determines that the federal incidental take authorization is "consistent" with the CESA under CFGC Section 2080.1. For projects that result in take of a state-only listed species, the project proponent must apply for an ITP under CFGC Section 2081(b).

State Water Resources Control Board/Regional Water Quality Control Board

For waters of the State that are federally regulated under the CWA, the State Water Resources Control Board (SWRCB) (through its RWQCBs) must provide state water quality certification pursuant to CWA Section 401 for activities requiring a federal permit or license that may result in discharge of pollutants into waters of the United States. Where no federal jurisdiction exists over waters of the United States, the SWRCB (through its RWQCBs) retains regulatory authority to protect water quality through provisions of California's Porter-Cologne Water Quality Control Act via application for or waiver of waste discharge requirements.

California Fish and Game Code

Native Plant Protection Act

The Native Plant Protection Act (CFGC Sections 1900–1913) prohibits the take, possession, or sale in California of any plants with a state designation of rare, threatened, or endangered (as defined by the CDFW). Under specified circumstances, landowners can take listed plants, provided they first notify the CDFW and give the agency at least 10 days to retrieve the plants before they are impacted (CFGC Section 1913).

Birds of Prey

Under CFGC Section 3503.5, it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by the CFGC or any regulation adopted pursuant thereto.

"Fully Protected" Species

California statutes also afford "fully protected" status to certain species that cannot be taken, even with an ITP. Relative to the species that could occur on the project site, CFGC Section 3505 makes it unlawful to take "any bird of prey, or any part of such birds"; CFGC Section 3511 protects from take the American peregrine falcon (*Falco peregrinus*), golden eagle, southern bald eagle (*Haliaeetus leucocephalus*), and white-tailed kite (*Elanus leucurus*); and CFGC Section 4700 protects from take the bighorn sheep (*Ovis canadensis*), except Nelson bighorn sheep (*Ovis canadensis nelsoni*).

Species of Special Concern

Species of special concern are broadly defined as animals not listed under the CESA, but nonetheless of concern to the CDFW because they are declining at a rate that could result in listing, or historically occurred in low numbers and known threats to their persistence currently exist. This designation focuses research and management attention on these species to avert their need for listing by stimulating collection of additional information on the biology, distribution, and status of poorly known at-risk species and by identifying recovery efforts that might ultimately be required. Species of special concern are included in the Special Animals List tracked in the CNDDB.

Porter-Cologne Water Quality Control Act

This act defines waters of the State as any surface water or groundwater, including saline waters, in California. The RWQCBs protect all waters in their regulatory scope but have special

responsibility for isolated wetlands and headwaters that have high resource value, are vulnerable to filling, and may not be regulated by other programs (e.g., CWA Section 404). In addition to the Porter-Cologne Water Quality Control Act, the RWQCBs regulate waters of the State under CWA Section 401 (i.e., the Water Quality Certification Program) in connection with a CWA Section 404 permit, as previously discussed. If a project does not require a federal license or permit but may result in a discharge of harmful substances to waters of the state, the applicable RWQCB has the option to regulate such activities under its state authority in the form of waste discharge requirements or certification of waste discharge requirements.

Lake and Streambed Alteration Program

CFGC Section 1602 requires a Lake or Streambed Alteration Agreement notification to the CDFW prior to initiating any activity that would (1) divert or obstruct the natural flow of or substantially change or remove material from the bed, channel, or bank of any river, stream, or lake; or (2) result in the disposal or deposition of debris, waste, or other material into any river, stream, or lake. The state definition of "lakes, rivers, and streams" includes those that flow at least periodically or permanently through a well-defined bed or channel (with banks) and support fish or other aquatic life, and watercourses with surface or subsurface flows that support or have supported riparian vegetation.

Natural Community Conservation Planning Act of 1991

The Natural Community Conservation Planning Act is aimed at conserving natural communities at the ecosystem scale for comprehensive regional protection of natural wildlife diversity and management of species, while allowing appropriate and compatible land development. The CDFW is primarily responsible for implementing this act.

California Desert Native Plants Act

Division 23 of the California Food and Agricultural Code protects California desert native plants from unlawful harvesting on both public and private lands, and it contains provisions to legally harvest native plants so as to ultimately transplant them with the greatest possible chance of survival. This act is applicable only in Imperial, Inyo, Kern, Los Angeles, Mono, Riverside, San Bernardino, and San Diego counties.

CNPS Rare or Endangered Plant Species

Vascular plants listed as rare or endangered by the CNPS that are evaluated under CEQA are:

- List 1A: Plants presumed extirpated in California and either rare or extinct elsewhere
- List 1B: Plants rare, threatened, or endangered in California and elsewhere

- List 2A: Plants presumed extirpated in California but common elsewhere
- List 2B: Plants rare, threatened, or endangered in California, but more numerous elsewhere

LOCAL

County of San Bernardino General Plan

The County's General Plan identifies the following relevant goals and policies for the Desert Planning Region, in which the project site is located, for the protection of biological resources.

Conservation Element

GOAL CO 2 The County will maintain and enhance biological diversity and healthy ecosystems throughout the County.

Policy CO 2.1 The County will coordinate with state and federal agencies and departments to ensure that their programs to preserve rare and endangered species and protect areas of special habitat value, as well as conserve populations and habitats of commonly occurring species, are reflected in reviews and approvals of development programs.

Policy CO 2.2 Provide a balanced approach to resource protection and recreational use of the natural environment.

Policy CO 2.3 In addition to conditions of approval that may be required for specific future development proposals, the County shall establish long-term comprehensive plans for the County's role in the protection of native species because preservation and conservation of biological resources are statewide, Regional, and local issues that directly affect development rights. The conditions of approval of any land use application approved with the Biotic Resources (BR) overlay district shall incorporate mitigation measures identified in the report required by Section 82.13.030 (Application Requirements), to protect and preserve the habitats of the identified plants and/or animals.

Policy CO 2.4 All discretionary approvals requiring mitigation measures for impacts to biological resources will include the condition that the mitigation measures be monitored and modified, if necessary, unless a finding is made that such monitoring is not feasible.

Renewable Energy and Conservation Element

GOAL RE 4 The County will establish a new era of sustainable energy production and consumption in the context of sound resource conservation and renewable energy development practices that reduce greenhouse gases and dependency on fossil fuels.

Policy RE 4.1 Apply standards to the design, siting, and operation of all renewable energy facilities that protect the environment, including sensitive biological resources, air quality, water supply and quality, cultural, archaeological, paleontological and scenic resources.

Policy RE 4.7 Renewable Energy project site selection and site design shall be guided by the following priorities relative to habitat conservation and mitigation:

- Avoid sensitive habitat, including wildlife corridors, during site selection and project design.
- Where necessary and feasible, conduct mitigation on-site.
- When on-site habitat mitigation is not possible or adequate, establish mitigation off-site in an area designated for habitat conservation.

Policy RE 4.8 Encourage mitigation for Renewable Energy generation facility projects to locate habitat conservation offsets on public lands where suitable habitat is available.

- RE 4.8.1: Collaborate with appropriate state and federal agencies to facilitate mitigation/habitat conservation activities on public lands.

Policy RE 4.9 Encourage Renewable Energy facility developers to design projects in ways that provide sanctuary (i.e., a safe place to nest, breed and/or feed) for native bees, butterflies and birds where feasible and appropriate, according to expert recommendations.

Community Plans and Action Plans

The project site is not located in an area covered by a Community Plan adopted in support of the County's General Plan. However, the County is currently preparing action plans for review by the Board of Supervisors sometime in 2019 to address land use planning issues relative to the Daggett, Newberry Springs, and Yermo areas. The policy-guiding documents will be included in the County Policy Plan once adopted by the Board of Supervisors. After the adoption of the County Policy Plan, the Development Code will be updated to reflect the new policies.

No specific goals or policies for guiding future development are applicable to the project as Community Plans are still being reviewed for inclusion in the County Policy Plan.

San Bernardino County Development Code

Development Code Section 88.01.060 is a subset of the Plant Protection and Management Code, which focuses on the conservation of specified desert plant species and is therefore applicable to the project site since it is in the County's Desert Planning Region.

Division 2, Land Use Zoning Districts and Allowed Land Uses

Chapter 82.11, Biotic Resources (BR) Overlay, implements General Plan policies for the protection and conservation of beneficial unique, rare, threatened, or endangered plants and animal resources and their habitats in certain unincorporated areas identified by a federal, state, or county agency. For new developments or increased development of existing land uses by more than 25 percent, the land use application must include a biotic resources report evaluating all biotic resources on and adjacent to the site which could be impacted and identifying mitigation measures for significant impacts.

Division 8, Resource Management and Conservation

Chapter 88.01, Plant Protection and Management, includes regulations and guidelines for the management of biotic resources in unincorporated areas under private or public ownership, including conservation of native plant heritage; regulation of native plant and tree removal activities; protection and maintenance of local watersheds; preservation of habitats for rare, endangered, or threatened plants; and protection of wildlife with limited or specialized habitats. Chapter 88.01 also requires a permit prior to removal of regulated trees and plants.

IMPACT ANALYSIS AND MITIGATION MEASURES

An evaluation of the significance of potential impacts on biological resources must consider both direct effects to the resource and indirect effects in a local or regional context. Potentially significant impacts would generally result in the loss of a biological resource or conflict with local, state, or federal agency conservation plans, goals, policies, or regulations.

THRESHOLDS FOR DETERMINATION OF SIGNIFICANCE

Based on CEQA Guidelines Appendix G, a significant impact on biological resources would occur if the proposed project would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS.
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the CDFW or USFWS.
- Have a substantial adverse effect on federally protected wetlands as defined by CWA Section 404 (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors.
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- Conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state HCP.

PROJECT IMPACTS AND MITIGATION

SUBSTANTIAL EFFECT ON CANDIDATE, SENSITIVE, OR SPECIAL-STATUS SPECIES

Impact 3.4-1	**The project could have a potentially adverse effect, either directly or through habitat modifications, on species identified as candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS. Impacts would be less than significant with mitigation.**

SPECIAL-STATUS PLANT SPECIES

No special-status plant species were observed within the proposed development footprint on the project site. Therefore, no direct or indirect impacts are anticipated.

SPECIAL-STATUS WILDLIFE SPECIES

Direct Impacts

Desert Tortoise

Although the 2018 protocol surveys were negative and the potential for desert tortoise to be on the site is considered low, portions of the site provide marginally suitable habitat for the species. It is therefore assumed conservatively that tortoises could be present prior to construction and therefore that project disturbance activities (e.g., vegetation clearing, site grading, excavation earthwork) could significantly impact desert tortoises. This potential direct impact would be mitigated to less than significant with implementation of mitigation measure **BIO-1.** Mitigation measure **BIO-1** would reduce impacts to desert tortoise by requiring a preconstruction clearance survey to determine species presence, and ensuring that construction workers are properly trained to identify signs of the species and implement appropriate procedures to avoid potential impacts (i.e., alerting a biological monitor if desert tortoise is observed on-site, removing daily trash to detract desert tortoise predators from the project area, etc.).

Burrowing Owl

The project has the potential to impact burrowing owl individuals if they are present on the project site at the time of scheduled disturbance activities. This potential direct impact would be mitigated to less than significant with implementation of mitigation measure **BIO-2**. This mitigation measure would reduce direct impacts to burrowing owl by requiring a preconstruction clearance survey to determine species presence and identifying proper measures for avoidance of and/or species relocation, as needed. Mitigation measure **BIO-2** would further reduce

potential impacts by requiring provision of a buffer around occupied burrows via flagging or fencing to minimize potential disturbance and monitoring of construction activities, as specified.

Tricolored Blackbirds

As previously discussed, tricolored blackbirds were incidentally observed foraging in on-site agricultural fields near Minneola Road and flying to and from a possible off-site nesting area in an artificial pond with cattails located in the backyard of a residence on the east side of Minneola Road. The off-site pond would not be disturbed by the project, but some on-site foraging habitat (i.e., the agricultural field closest to the pond) would be converted to solar arrays. Nevertheless, the project would not result in direct impacts to tricolored blackbirds, nor cause individuals of this state-protected species to be killed or otherwise incidentally taken, because they are highly mobile and would leave any active construction sites as activities begin.

Raptors

Nesting Habitats. A nesting site was identified on the project site for red-tailed hawk. As previously discussed, no active golden eagle nests were documented during the spring 2018 surveys within 5 miles of the project site; therefore, the project would not result in a potential direct impact to any active golden eagle nests. With respect to Swainson's hawks, the CDFW (2010) has developed guidance for minimizing impacts from renewable energy projects located near nests. That guidance suggests that loss of foraging habitat located within 5 miles of a nest should be mitigated at a ratio of 2:1. However, this recommendation is not applicable to the project as Swainson's hawks do not nest in the Mojave Valley or elsewhere in that portion of central San Bernardino County. As previously discussed, based on CNDDB records and a literature search, the nearest recorded nest is in Apply Valley about 25 miles south of the project site, and nesting was last observed there in 1932. The nearest recent Swainson's hawk nesting area is in the Antelope Valley, approximately 60 miles to the west. As such, project development is not expected to impact any Swainson's hawks nesting areas.

Foraging Habitats. Portions of the site were observed being used as foraging habitat by golden eagle, short-eared owl, burrowing owl, red-tailed hawk, ferruginous hawk, Swainson's hawk, northern harrier, prairie falcon, and American kestrel. In San Bernardino County, there are approximately 77,000 acres of agricultural land (as of 2012, per the USDA). The proposed project would convert about 1,740 acres of agricultural land, or about 2 percent of such lands. Further, some prey may inhabit the area around solar modules, especially as some vegetation re-establishes between the panels, in order to escape detection from raptors flying overhead (due to the cover that the solar modules would provide). Even after conversion of agricultural land to solar generation, raptors may still be able to hunt for rodents, small birds, and reptiles in solar

fields from perches such as the solar modules themselves or fencing and utility structures surrounding the facilities.

With respect to Swainson's hawks, this state-protected species is occasionally observed foraging throughout the region during spring and fall migration and possibly at other times during the summer. In particular, it forages in irrigated alfalfa fields and pastures, other active and fallow agricultural fields, and dry lands with a sufficient prey base (Dudek 2014; CDFW 2010). Given the small number of Swainson's hawks in the vicinity and the absence of known recent nests within 60 miles, the conversion of the agricultural fields to solar generation uses would not constitute a significant loss of foraging land. There would continue to be sufficient remaining nesting and foraging habitat in the vicinity to support viable raptor populations on a regional scale.

In general, although the project would result in the conversion of agricultural fields used for foraging by raptors, it would not cause individuals to be killed or otherwise significantly harmed because the birds are highly mobile, would naturally avoid the active construction site for nesting, and would be afforded adequate foraging habitat during project operation and after decommissioning. As such, the project would result in less than significant impacts.

Mammals

Mohave ground squirrels (*Xerospermophilus mohavensis*), which are classified as threatened by the State of California, do not occur in or near the project area (HDR 2018a; **Appendix E-1**). The nearest suitable habitat for this species is to the west and north of Barstow, which is over 10 miles away from the project site. Therefore, no direct or indirect impacts to Mohave ground squirrel are anticipated to occur.

Although potential signs were documented in the project area, the observed burrows, scat, and claw marks are not completely indicative of American badgers being present on-site and could have been made by other wildlife. Further, no badgers were observed or photographed in the project area during the 2018 surveys. Therefore, no direct or indirect impacts to American badger are anticipated to occur.

Desert kit fox was observed on-site. The project could directly impact suitable habitat for desert kit fox and has the potential to impact individual foxes if they are present on-site at the time of scheduled disturbance activities. This potential direct impact would be reduced to less than significant with implementation of mitigation measures **BIO-3** and **BIO-4.** These measures would reduce impacts because they require development of a Desert Kit Fox Management Plan that contains a worker education program designed to educate on-site employees on how to avoid the species, as well as other special-status species, so that individuals would not be adversely

impacted. Monitoring activities are also required to confirm the effectiveness of avoidance measures implemented.

Nesting Birds and Avian/Bat Collisions

Nesting Birds. Removal of on-site vegetation communities during project disturbance activities could result in direct impacts to avian nests protected by the MBTA and CFGC (e.g., nest abandonment or mortality of young), if nesting birds are present on the site at the time of construction. This potential direct impact would be reduced to less than significant with implementation of mitigation measure **BIO-5**. This measure would reduce impacts to nesting birds because the mitigation measure defines the roles of the qualified personnel on-site during preconstruction, construction, and decommissioning activities and outlines procedures to undertake if nesting bird(s) or active nests are observed in the project area.

Avian Collisions. It has been hypothesized that PV solar arrays could be an attractant to birds, which might detect an array of panels as water (i.e., the "lake effect hypothesis"), attempt to land there, and collide with or be trapped among panels or other infrastructure at PV solar facilities (Lovich and Ennen 2011; BLM and DOE 2012; Kagan et al. 2014). When oriented in a horizontal position, solar panels could mimic the "lake effect," in which birds and their insect prey can mistake them for a water body, or "spot water ponds," and then fly toward them, often resulting in death by colliding into the hard surfaces.

Walston et al. (2016) reviewed information on the lake effect hypothesis and synthesized available information on avian monitoring and mortality at utility-scale solar energy facilities in the United States. The study identified three concentrating solar power facilities for which there was sufficient information to calculate avian mortality. One of those facilities, the now closed California Solar One [CSO] facility, is adjacent to the proposed Daggett Solar Power Facility (McCrary et al. 1986). The other two facilities are also located in Southern California.

After adjusting to account for average searcher efficiency and average carcass persistence, Walston et al. (2016) estimated that annual rates of avian mortality attributed to these three solar facilities, combined, ranged from 0.5 (for CSO) to 10.24 birds per megawatt per year, but that total avian mortality at each of the sites was more consistent and averaged 9.9 birds per MW per year. For comparison, this rate of mortality, if calculated for all solar facilities in Southern California, is far lower than other common causes of avian mortality, such as collision with transmission lines, predation trauma, electrocution, and emaciation; the cause of death frequently could not be determined or was not reported. Avian collisions with solar panels are not considered significant on a population level.

Aside from the potential lake effect, and as with any other man-made structures (such as buildings, windows, and communications towers), avian species may directly collide with the project's PV modules. However, it should be noted that avian mortality resulting from collision with man-made structures is typically highest when projects are sited in areas of high bird use such as wetlands, riparian areas, migration corridors, and other avian habitat features (Lovich and Ennen 2011; Walston et al. 2016). Although the project site is along the Pacific Flyway, in general, it is distant from known major avian migratory routes or stopover locations in California, such as the Colorado River, Salton Sea, and Mono Lake. Additionally, while there are a number of ponds and other small open bodies of water in the Daggett/Barstow area, no waterfowl or other water birds were observed on-site during the 2018 surveys.

Impacts to avian species may occur during project construction, operation, and decommissioning, including collision risks associated with project transmission wires, telecommunications towers, fencing, array structures, and heavy equipment. Risk factors associated with such collisions include the size of facility, height of structures, and specific attributes of structures (guy wires and lighting/light attraction), as well as siting in high risk areas, frequency of inclement weather, type of development, and species or taxa at potential risk.

Risk factors that have been empirically demonstrated to result in elevated avian collision risks (e.g., tall buildings, communication towers, wind turbines, concentrating solar thermal heliostats) are not contemplated as part of the proposed project. While impacts to individual birds from collisions may be expected to occur over the life of the proposed project, the frequency and nature of collisions would not be expected to be significantly exacerbated due to the project, and no population-level impacts are anticipated. As such, project impacts associated with bird collisions are considered less than significant.

The applicant implements a company-wide wildlife incident reporting program (WIRP) that all on-site facility staff are required to follow. The WIRP includes training to staff for identifying and responding to encounters with sensitive biological resources. Downed state- and/or federally listed species, if found, will be reported to state and/or federal wildlife agencies in accordance with applicable law.

Bat Collisions. Post-development direct impacts to bats protected by the CFGC may also occur from collisions with the proposed PV solar panels. A laboratory study undertaken by Siemers and Grief (2010) in a flight room showed that bats attempted to drink from the panels and, if vertically aligned, occasionally collided with them when attempting to fly through them, with juvenile bats more prone to this behavior. This study concluded that bats have an innate ability to echolocate water, by recognizing the echo from smooth surfaces, and that bats may therefore perceive all smooth surfaces as water. However, the authors do not suggest that bats will be negatively affected by this mistake.

Another similar study by Russo et al. (2012) assessed the ability of bats to tell the difference between water and smooth surfaces in the wild. In this experiment, an existing water trough used by bats was covered with Perspex (commonly referred to as acrylic glass) and another left open. A third water trough was half covered in Perspex, with the other half left open. There was no difference in the number of bats visiting each trough. However, the authors found that having had a number of failed drinking attempts from the Perspex side of the trough, the bats would either return to drink from the water side of the trough or leave the site in search of water elsewhere. There was no mention of bats colliding with the Perspex. Based on available data, and for the reasons provided above, potential project impacts on bat species are considered less than significant.

Decommissioning of Facilities

Over time, vegetation may re-establish between the panels through succession, and wildlife may inhabit the project site. Potential direct impacts to such post-development wildlife habitats that may become established on-site could occur in the decommissioning phases, similar to impacts during the initial construction phase but in the future. Such potential direct impacts would be reduced to less than significant with implementation of mitigation measures **BIO-1** through **BIO-7**. The mitigation measures identified would reduce impacts through determination of species presence prior to construction; worker education; identification of proper procedures to follow if a species, or signs of the species, is observed within the project disturbance area; and implementation of other standard avoidance and and/or minimization measures.

All decommissioning activities would comply with federal, state, and local standards and all regulations that exist when the project is decommissioned, including the requirements of San Bernardino County Development Code Section 84.29.060.

Indirect Impacts

During project construction, indirect effects may include dust, which could disrupt plant vitality in the short term, or construction-related soil erosion and runoff. Long-term edge effects could include intrusions by humans and possible trampling of individual plants, invasion by exotic plant and wildlife species, exposure to urban pollutants (fertilizers, pesticides, herbicides, and other hazardous materials), soil erosion, litter, fire, and hydrologic changes (e.g., surface water and groundwater level and quality).

Mitigation measure **BIO-6** would provide for the implementation of best management practices (BMPs) and erosion control, revegetation of temporary impact areas, and avoidance of toxic substances that could affect plant life at the project site, and therefore would reduce indirect impacts to special-status plants to less than significant levels.

Decommissioning of Facilities

Potential indirect impacts could occur to wildlife or plant life during the decommissioning phase, similar to impacts during the initial construction phase but in the future. Implementation of mitigation measure **BIO-6** would reduce such potential impacts to less than significant by requiring implementation of BMPs and other measures (i.e., erosion control, avoidance of wildlife entrapment, use of nontoxic chemicals) to minimize indirect effects.

All decommissioning activities would comply with federal, state, and local standards and all regulations that exist when the project is decommissioned, including the requirements of San Bernardino County Development Code Section 84.29.060.

Mitigation Measures:

BIO-1 To avoid construction-level impacts to desert tortoise, not more than 45 days prior to ground-disturbing activities for the construction and/or decommissioning phase(s), qualified personnel shall perform a preconstruction clearance survey for desert tortoise. If the species is present on-site, individual(s) shall be allowed to leave the site on their own, and in consultation with California Department of Fish and Wildlife (CDFW), the applicant may be required to install exclusionary/perimeter fencing, with mesh attached to the fence fabric extending from approximately 12 inches below grade to approximately 24 inches above grade to ensure no tortoises re-enter the work limits. No person(s) shall be allowed to touch a tortoise without authorization from the US Fish and Wildlife Service (USFWS) and CDFW.

Disturbance activities shall be monitored, as follows:

- Environmental awareness training shall be provided for all construction personnel to educate them on desert tortoise, protective status, and avoidance measures to be implemented by all personnel, including looking under vehicles and equipment prior to moving. If tortoises are encountered, such vehicles shall not be moved until the tortoises have voluntarily moved away from them or a qualified biologist has moved the tortoises out of harm's way.

- If a tortoise is present, a biological monitor shall be present during all disturbance activities in the vicinity of exclusionary fencing (if required) and shall have the authority to stop work as needed to avoid direct impacts to tortoises. Periodic biological inspections and maintenance shall be conducted during the construction period to ensure the integrity of

exclusionary fencing (if required). Work may proceed within the excluded area when the biologist confirms all tortoises have left the excluded area.

- Should tortoises be found during construction activities, the biological monitor shall have the authority to stop work as needed to avoid direct impacts to tortoises, and further consultations with the USFWS and CDFW shall take place.

- Trash and food items shall be contained in closed containers and removed daily to reduce attractiveness to opportunistic predators of desert tortoise (e.g., ravens, coyotes, feral dogs).

- Employees shall not bring pets to the construction site, which may predate on tortoises.

BIO-2 To avoid construction-level impacts to burrowing owl, not more than 45 days prior to project disturbance activities, qualified personnel shall perform a preconstruction clearance survey for burrowing owl in accordance with CDFW guidelines. If the species is present on-site and/or within 500 feet of the site, the biologist shall prepare and submit a passive relocation plan to the CDFW for review/approval and shall implement the approved plan to allow commencement of disturbance activities on-site.

Fencing or flagging shall be installed at a 250-foot radius from occupied burrows to create a non-disturbance buffer area where no work activities may be conducted. Through consultation with the CDFW, the non-disturbance buffers/fence lines may be reduced to 160 feet if all project-related activities that might disturb burrowing owls would be conducted during the nonbreeding season (i.e., September 1 through January 31).

If avoidance of an occupied burrow is infeasible, the owls may be passively relocated by a qualified biologist during the non-breeding season, in accordance with the passive relocation plan. (Note: Occupied burrows may not be disturbed during the breeding season [February 1 to August 31].) At a minimum, the plan shall include the following performance standards:

- Excavation shall require hand tools. Sections of flexible plastic pipe or burlap bag shall be inserted into the tunnels during excavation to maintain an escape route for any animals inside the burrow. One-way doors shall be installed at the entrance to the active burrow and other potentially active burrows within 160 feet of the active burrow and monitored for at least 48

hours after installation. If burrows will not be directly impacted by the project, one-way doors shall be installed to prevent use and shall be removed after ground-disturbing activities have concluded in the area. Only burrows that will be directly impacted by the project shall be excavated and filled.

- Detailed methods and guidance for passive relocation of burrowing owls to off-site "replacement burrow site(s)" consisting of a minimum of two suitable, unoccupied burrows for every burrowing owl or pair to be passively relocated.

- Monitoring and management of the replacement burrow site(s) and a reporting plan. The objective shall be to manage the replacement burrow sites for the benefit of burrowing owls (e.g., minimizing weed cover), with the specific goals of maintaining the functionality of the burrows for a minimum of 2 years.

If preconstruction surveys indicate construction activities would occur within 500 feet of off-site occupied burrows during the breeding season (February 1 through August 31), qualified personnel shall monitor project disturbance activities and the off-site active burrows to ensure they are not being adversely affected. If so, the biologist in consultation with the CDFW shall implement additional measures to avoid such disturbances of active nesting efforts.

BIO-3 To avoid construction level impacts to desert kit fox, at least 45 days prior to project ground disturbance activities during the construction phase, a Desert Kit Fox Management Plan shall be prepared and submitted to the County and the CDFW that (1) incorporates pre-approval survey data of the desert kit fox population; (2) identifies preconstruction survey methods for kit foxes; (3) describes preconstruction and construction-phase biological monitoring and passive relocation methods, or outlines any identified CDFW permit and Memorandum of Understanding requirements for active relocation, if either are necessary; and (4) includes contingency measures if canine distemper is documented in any individuals on-site.

BIO-4 To avoid construction-level impacts to desert kit fox, not more than 45 days prior to project disturbance activities, qualified personnel shall perform a preconstruction clearance survey for desert kit fox in accordance with CDFW guidelines. Surveys shall also consider the potential presence of active dens within 100 feet of the boundaries of the on-site disturbance footprint, access roads, and

selected alignment for the gen-tie line. If dens are detected, each shall be classified as either inactive, potentially active, or definitely active, and the following actions taken:

- Inactive dens that would be directly impacted shall be excavated by hand and backfilled to prevent reuse by kit fox.
- Potentially and definitely active dens that would be directly impacted shall be monitored by a biologist for 3 consecutive nights using a tracking medium (e.g., diatomaceous earth, fire clay) and/or infrared camera stations at the den entrance.
- If no tracks are observed or no photos of the species are captured after 3 nights, the den shall be excavated and backfilled by hand.
- If tracks are observed, the den entrance shall be progressively blocked with natural materials (e.g., rocks, dirt, sticks, vegetation) for the next 3 to 5 nights to discourage the fox from continued use of the den. After verification that the den is unoccupied, it shall then be excavated and backfilled by hand to ensure no foxes are trapped in the den.
- If an active natal den (i.e., with pups) is detected on-site, per the procedures above, the CDFW shall be contacted within 24 hours to determine the appropriate course of action to minimize the potential for harm or mortality. The course of action shall depend on the age of the pups, on-site location of the den (e.g., central area, perimeter), status of the perimeter fence (completed or not), and pending construction activities proposed near the den. A 500-foot non-disturbance buffer shall be maintained around all active natal dens.

The following measures are required to reduce the likelihood of distemper transmission:

- No pets shall be allowed on-site prior to or during construction, with the possible exception of kit fox scat detection dogs during preconstruction surveys, and then only with prior CDFW approval.
- If the biological monitor deems it necessary to repel foxes attempting to enter the construction zones, animal repellents such as coyote urine shall be used only with prior CDFW approval.

- Any sick or diseased fox, or documented fox mortality, shall be reported to the CDFW within 24 hours of identification. If a dead fox is observed, it shall be protected from scavengers until the CDFW determines whether the collection of necropsy samples is justified.

BIO-5 To avoid construction-level impacts to nesting birds, no earlier than 3 days prior to commencement of scheduled ground disturbance during the nesting bird breeding season (February 1 through August 31), qualified personnel shall perform a nest survey within 500 feet of the disturbance footprint, as accessible. If active nests are found, project disturbance activities shall be postponed or halted within a non-disturbance buffer surrounding each active nest (to be established by the biologist) that is suitable to the particular bird species and nest location(s) until the nest(s) are vacated and juveniles have fledged, as determined by the biologist. Any such buffer(s) shall be clearly demarcated in the field with highly visible construction fencing or flagging, and construction personnel shall be instructed on the sensitivity of nest areas. A biologist shall monitor construction activities near all such buffer(s) to ensure no inadvertent impacts on active nest(s). If listed species are involved, the CDFW and/or USFWS shall be notified immediately for consultation on how to proceed.

BIO-6 The following best management practices shall be implemented during project grading and construction and decommissioning activities to address potential indirect impacts:

- The potential for wildlife entrapment shall be avoided as follows:
    - **Backfill trenches.** At the end of each workday, all potential wildlife pitfalls (e.g., trenches, bores, excavation pits) shall be backfilled, covered, or sloped to allow wildlife egress. Should wildlife become trapped, a qualified biologist shall be notified by construction personnel to remove and relocate the individual(s).
    - **Cover materials**. All open ends of pipes, culverts, or other hollow materials temporarily installed in open trenches or stored in staging/laydown areas shall be covered/capped at the end of each workday. Any such materials that have not been capped shall be inspected by construction personnel for wildlife before being moved, buried, or handled. Should wildlife become trapped, a qualified biologist shall be notified by construction personnel to remove and relocate the individual(s).

- Minimize construction impacts. The construction limits shall be flagged prior to ground-disturbing activities. All construction activities, including equipment staging and maintenance, shall be conducted within the flagged disturbance limits.

- Avoid toxic substances on road surfaces. Soil binding and weighting agents used on unpaved surfaces shall be nontoxic to wildlife and plants.

- Minimize spills of hazardous materials. All vehicles and equipment shall be maintained in proper condition to minimize the potential for fugitive emissions of motor oil, antifreeze, hydraulic fluid, grease, or other hazardous materials. Hazardous spills shall be immediately cleaned up and the contaminated soil shall be properly handled or disposed of at a licensed facility. Servicing of construction equipment shall take place only at a designated staging area.

- Worker guidelines. All trash and food-related waste shall be placed in self-closing containers and removed regularly from the site to prevent overflow. Workers shall not feed wildlife or bring pets to the project site.

- Best management practices/erosion/runoff. The project shall incorporate methods to control runoff, including a stormwater pollution prevention plan to meet National Pollutant Discharge Elimination System (NPDES) regulations. Implementation of stormwater regulations is expected to substantially control adverse edge effects (e.g., erosion, sedimentation, habitat conversion) during and following construction, both adjacent to and downstream from the project area. Typical construction best management practices specifically related to reducing impacts from dust, erosion, and runoff generated by construction activities shall be implemented. During construction, material stockpiles shall be placed such that they cause minimal interference with on-site drainage patterns, which will protect sensitive vegetation from being inundated with sediment-laden runoff. Dewatering shall be conducted in accordance with standard regulations of the Colorado River Regional Water Quality Control Board. An NPDES permit, issued by the RWQCB to discharge water from dewatering activities, shall be required prior to the start of dewatering. This permit will minimize erosion, siltation, and pollution in sensitive vegetation communities.

Level of Significance: Less than significant with mitigation.

SUBSTANTIAL ADVERSE EFFECT ON RIPARIAN HABITAT OR OTHER SPECIAL-STATUS HABITATS

Impact 3.4-2	**The project could impact special-status riparian habitats or have a substantial adverse effect on sensitive or other special-status natural vegetation communities identified in local or regional plans, policies, or regulations or by the CDFW or USFWS. This impact would be less than significant with mitigation.**

SPECIAL-STATUS VEGETATION COMMUNITIES

Direct Impacts

Table 3.4-1 summarizes existing on-site (solar facility) and off-site (gen-tie line) vegetation communities. Due to proposed grading and construction requirements, it is anticipated that the project would directly impact all vegetation communities and land cover shown in **Table 3.4-1** (e.g., impact acreage would be equivalent to existing acreage). As previously described, the site contains one non-riparian drainage extending across the south-central edge (identified as "Feature B" in **Appendix E-4**) under RWQCB and CDFW jurisdiction. However, the project would avoid this on-site jurisdictional feature.

None of the vegetation communities in the project disturbance area are identified as sensitive or special-status natural vegetation communities in local or regional plans, policies, or regulations or by the CDFW or USFWS. The vegetation communities on the project site are prevalent in the region and do not represent designated critical habitat. Special-status animal species, such as burrowing owl and desert tortoise, may use some of the vegetation communities as habitat.

As described previously, implementation of mitigation measure **BIO-2** would reduce direct impacts to burrowing owl by requiring preconstruction determination of species presence, environmental awareness training for employees, and other measures such as buffering construction activities from occupied burrows or passive relocation of individuals during the non-breeding season. Since burrowing owls use a wide range of habitats, the loss of habitat from development of the site would not have a significant impact on individuals or the region's burrowing owl population since they are mobile and can relocate to similar habitat within the surrounding area.

The site also supports marginally suitable desert tortoise habitat; however, desert tortoises were not identified during protocol surveys conducted for the project, and therefore, are not considered to be present on-site. However, the project applicant would implement mitigation measure **BIO-1** to reduce potential direct impacts to desert tortoise by requiring pre-construction surveys for the species, environmental awareness training, construction monitoring, and/or

implementation of proper measures to buffer construction activities from and/or minimize potential disturbance of the species if present.

For these reasons, project impacts to vegetation communities and other special-status habitats would be less than significant.

Decommissioning of Facilities

Although the project would not result in a significant impact to vegetation communities or other special-status habitats, the County would prepare and adopt a Decommissioning Plan that outlines habitat restoration actions to be implemented at the end of the project's life. Over time, vegetation communities may re-establish between the panels through succession. Potential direct impacts to such vegetation communities or habitat may occur during decommissioning, similar to impacts that may result during the initial construction phase. Implementation of mitigation measure **BIO-7** would reduce such potential impacts to less than significant. This mitigation would reduce potential habitat impacts associated with project decommissioning activities by requiring preparation and implementation of a revegetation plan (for incorporation in the Decommissioning Plan) that outlines procedures and performance standards to restore on-site vegetation communities at the end of the project's life.

Indirect Impacts

There are no off-site riparian areas or wetlands associated with the dry channel of the Mojave River floodplain near the project site. Therefore, the project would not result in significant riparian or wetland impacts (off-site) that could otherwise be related to indirect effects from dust, construction-related soil erosion and runoff, invasive plant species, and increased human presence during both the initial construction phase and the decommissioning phase.

Mitigation Measures:

BIO-7 Prior to commencement of the decommissioning phase, the project applicant shall prepare a revegetation plan as part of the Decommissioning Plan to identify performance standards necessary for revegetation of the site with native plants. The Decommissioning Plan shall specify success criteria, including, but not limited to, site preparation methods, installation specifications, maintenance requirements, and monitoring/report measures to ensure certain botanical thresholds are met such as adequate cover, density, and species richness. Standards of success shall include at least a 50 percent revegetation success rate compared to baseline conditions and shall include annual monitoring for 2 years. If 50 percent revegetation has not been achieved within 2 years due to lack of water or other environmental factors, the applicant shall work with the County to

identify and implement an alternate solution to achieve the identified success rate.

Level of Significance: Less than significant with mitigation.

SUBSTANTIAL ADVERSE EFFECT ON WETLANDS

Impact 3.4-3	**The project would not have a substantial adverse effect on federally protected wetlands as defined by CWA Section 404 (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. No impact would occur.**

As previously described, the project site contains one non-wetland drainage extending across the south-central edge (identified as "Feature B" in **Appendix E-4**) under RWQCB and CDFW jurisdiction. However, the project would avoid this on-site jurisdictional feature. Therefore, the project would not result in significant direct impacts to any on-site jurisdictional resources.

In addition, there are no off-site riparian areas or wetlands associated with the dry channel of the Mojave River floodplain near the site. Therefore, the project would not result in significant riparian or wetland impacts (off-site) that could otherwise be related to indirect effects from dust, construction-related soil erosion and runoff, invasive plant species, and increased human presence during both the initial construction phase and the decommissioning phase.

Mitigation Measures: None required.

Level of Significance: No impact.

MOVEMENT OF WILDLIFE SPECIES OR MIGRATORY WILDLIFE CORRIDORS

Impact 3.4-4	**The project would not interfere with the movement of native resident wildlife species or wildlife corridors, and it would not impede the use of native wildlife nursery sites. No impact would occur.**

The project site does not likely serve as a local habitat linkage for desert tortoise between the Mojave River to the north and the USFWS Critical Habitat designated for the tortoise in the Newberry Mountains Wilderness to the south. The project site is sandwiched between I-15 and I-40; therefore, any such potential corridor that may be used by the desert tortoise across the site is already disrupted. Because of the intervening highways, roadways, and railroad, the active and historic cultivation of 54 percent of the project area, and the very small percentage of the site that qualifies as marginally suitable habitat, the project would not result in significant impacts related to the movements of native resident wildlife species, nor would it result in significant

impacts to potential regional or local migratory wildlife corridors/linkages, nor would it impede the use of native wildlife nursery sites.

Mitigation Measures: None required.

Level of Significance: No impact.

CONFLICT WITH ANY LOCAL POLICIES OR ORDINANCES PROTECTING BIOLOGICAL RESOURCES

Impact 3.4-5	**The project could conflict with local policies or ordinances protecting biological resources. Impacts would be less than significant with mitigation.**

The project site is within the planning area of several adopted local plans, including the West Mojave Plan (BLM 2006), the County General Plan (County of San Bernardino 2007), and the DRECP. However, the West Mojave Plan and the DRECP apply only to BLM-administered lands and therefore do not apply to the project. As such, the following analysis demonstrates project consistency with the following relevant County goals and policies relating to the protection of biological resources:

Conservation Element Goal CO 2 and Policies CO 2.1, CO 2.2, CO 2.3, and CO 2.4. With implementation of mitigation measures **BIO-1** through **BIO-7**, the project would be consistent with the stated intent of this element to maintain and enhance biological diversity because the project would not interfere with the County's programs to:

- Protect areas of special habitat value;
- Conserve populations and habitats of commonly occurring species;
- Provide a balanced approach to resource protection, preservation of rare and endangered species, and conservation of biological resources;
- Establish long-term comprehensive plans to protect native species;
- Establish conditions of approval for land use applications within the BR Overlay district for habitat protection and preservation of identified plants and/or animals specific to this district; and
- Adopt a Mitigation Monitoring and Reporting Program as a condition of approval for projects requiring mitigation measures for impacts to biological resources.

Renewable Energy and Conservation Element Goal RE 4 and Policies RE 4.1, RE 4.7, RE 4.8, RE 4.8.1, and RE 4.9. With implementation of mitigation measures **BIO-1** through **BIO-7**, the

proposed project would be consistent with the stated intent of this element to collaborate with appropriate federal and state agencies to facilitate mitigation/habitat conservation offsets on public lands where suitable habitat is available because the project would not interfere with the County's programs to:

- Balance sustainable energy production with sound resource conservation;
- Apply standards to the design, siting, and operation of renewable energy facilities that protect special-status biological resources; and
- Select and design renewable energy sites to conserve habitat; avoid impacts to special-status habitats and wildlife corridors; and provide sanctuary for native bees, butterflies, and birds, where feasible and appropriate.

Development Code Section 88.01.060. With implementation of mitigation measures **BIO-1** through **BIO-7**, the project would be consistent with the stated intent of this code section to conserve specified desert plant species because the project would not impact special-status plants.

Development Code Chapter 82.11. This EIR is consistent with the requirement of Development Code Chapter 82.11 for a biotic resources report evaluating significant project impacts to and mitigation measures for biotic resources on and adjacent to the site. In addition, the proposed project would not interfere with the County's programs to protect and conserve beneficial unique, rare, threatened, or endangered plants and animal resources and their habitats in unincorporated areas because the project would implement mitigation measures to reduce potential direct and indirect impacts to special-status habitats and wildlife species to less than significant levels.

Development Code Chapter 88.01. Because the project would implement mitigation measures to reduce potential direct and indirect impacts to special-status habitats and wildlife species to less than significant levels, the proposed project would be consistent with and would not interfere with the County's programs for the:

- Management of biotic resources in unincorporated areas under private or public ownership, including conservation of native plant heritage;
- Regulation of native plant and tree removal activities;
- Protection and maintenance of local watersheds;
- Preservation of habitats for rare, endangered, or threatened plants; and
- Protection of wildlife with limited or specialized habitats.

Mitigation Measures: Implement mitigation measures **BIO-1** through **BIO-7**.

Level of Significance: Less than significant with mitigation.

CONFLICT WITH AN ADOPTED CONSERVATION PLAN

Impact 3.4-6	**There are no adopted local, regional, or state HCPs or NCCPs with which the proposed project must comply. No impact would occur.**

As stated above, the project is in the planning area for the West Mojave Plan, which applies only to BLM-administered public lands. The proposed project would be located on private land and therefore is not subject to this plan. Additionally, the DRECP applies to the Mojave and Colorado deserts and will provide binding, long-term endangered species permit assurances and facilitate renewable energy project review and approval processes. Although the project site is identified as a Development Focus Area in the DRECP, the proposed project is not subject to the DRECP because the site is on private land. As such, the project would not be under the jurisdiction of an adopted HCP or NCCP. In addition, as evaluated above, the project would not result in the loss or adverse modification of Critical Habitat. The project would have no impact.

Mitigation Measures: None required.

Level of Significance: No impact.

CUMULATIVE IMPACTS

Impact 3.4-7	**The proposed project in conjunction with other related projects could result in cumulatively considerable impacts to biological resources in the region. Impacts would be less than significant with mitigation.**

The geographic scope for considering cumulative impacts on biological resources includes other related projects in the County's Desert Region. **Table 3.0-1, Cumulative Projects,** and **Exhibit 3.0-1, Cumulative Projects Map**, in Section 3.0 of this EIR identify the related projects considered for this cumulative impact analysis, which consist primarily of other renewable energy projects.

Development of cumulative projects could result in direct take to special-status plant and wildlife species; construction, operational, and decommissioning disturbances; and/or special-status habitat conversion. While most of the cumulative projects would convert undeveloped land into renewable energy facilities, over time, vegetation communities would re-establish between the panels, fencing, and utility structures, allowing wildlife (e.g., rodents, raptors, small birds, and reptiles) to continue inhabiting and foraging on the sites over the lifetime of the projects (approximately 30 years). Decommissioning plans, required for solar projects, also outline revegetation requirements for potential habitat growth. Therefore, while habitat would be

temporarily disturbed or removed during the construction and decommissioning phases, operation and post-operation of such renewable energy facilities would not result in substantial permanent impacts to special-status species and habitats, and the affected lands could return to existing conditions for the foreseeable future.

Further, as with the proposed project, these cumulative projects would also be required to avoid and/or mitigate impacts to special-status species and habitats in accordance with County, CDFW, and USFWS requirements. Therefore, the project's less than significant impacts with mitigation incorporated, in combination with other reasonably foreseeable development projects in the County's Desert Region, would not result in significant cumulative impacts to special-status species or habitats. Accordingly, the proposed project would not result in a considerable contribution to a significant cumulative impact.

Mitigation Measures: Implement mitigation measures **BIO-1** through **BIO-7**.

Level of Significance: Less than significant with mitigation.