

SECTION 4.12

BIOLOGICAL RESOURCES

This section provides a background discussion of the regulatory framework, the affected environment and impacts to biological resources. The regulatory framework discussion focuses on the federal, state, and local regulations that apply to plants, animals and sensitive habitats. The affected environment discussion focuses on the topography and soils; general vegetation; general wildlife; sensitive biological resources; riparian habitat and sensitive natural communities; jurisdictional waters; and habitat connectivity and wildlife corridors. Information contained in this section is summarized from the *Seville Solar Jurisdictional Delineation Report* dated January 3, 2014 (HELIX 2014a); the *Seville Solar Project Biological Technical Report* dated January 3, 2014 (HELIX 2014b); the “Results of Burrowing Owl Survey for the Seville Solar Project in Imperial County, California” dated November 4, 2013 (HELIX 2013). In addition, two memorandums were prepared regarding proposed modifications to the Anza Substation: “Jurisdictional Resources at the Proposed Expansion of the IID Anza Substation” (HELIX 2014c) and “Biological Resources at the Proposed Expansion of the IID Anza Substation” (HELIX 2014d). As noted in the citations, each of these reports and memoranda was prepared by HELIX Environmental Planning, Inc. Each report along with associated appendices is provided on the attached CD of Technical Appendices as **Appendix I** of this EIR.

For the purposes of this section, “survey area” is defined as 1,729 acres including the proposed 1,238 acre solar farm complex site, other surrounding lands, and 50 feet along either side of the existing IID distribution line. The survey area also includes the expansion area on IID land associated with the Anza Substation modifications (HELIX 2014c and 2014d).

4.12.1 REGULATORY FRAMEWORK

A. FEDERAL

Clean Water Act

The Clean Water Act (CWA [33 U.S.C. 1251 *et seq.*]) is intended to restore and maintain the quality and biological integrity of the nation’s waters. It prohibits the discharge of pollutants into Waters of the United States (WUS) without a National Pollutant Discharge Elimination System (NPDES) permit from the Environmental Protection Agency (EPA). By issuing NPDES permits, the EPA can regulate the discharge of pollutants to protect water quality.

Section 404 of the CWA provides that whenever any person discharges dredged or fill material into WUS (e.g., streams, wetlands, lakes, bays), a permit is required from the United States Army Corps of Engineers (USACE). The USACE has issued 50 separate Nationwide Permits (NWP) for different types of projects with impacts to wetlands (as of March 19, 2007). Depending on the level of impact, projects qualifying for an NWP may be required to provide the USACE with Pre-Construction Notification of the impacts and meet other restrictions. Projects with greater wetland impacts than those allowed under one of the NWPs require an Individual Permit. The process of obtaining an Individual Permit includes public notice and response to all comments received; the permit decision document includes a discussion of the environmental impacts of the project, the public and private needs, alternatives to achieve project purposes if needed, and beneficial and/or detrimental effects of the project on public and private uses. In *SWANCC vs. USACE*, the Supreme Court ruled that the jurisdiction of the USACE does not extend to isolated, intrastate, non-navigable waters and wetlands such as vernal pools, ephemeral streams, and wetlands not associated with a stream channel. HELIX has conducted a formal jurisdictional delineation for the proposed Project to determine USACE jurisdictional boundaries (HELIX 2014a). However, only the USACE can make a final determination on the jurisdictional boundaries.

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. The certification

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must declare that the discharge would comply with water quality standards requirements of the CWA. USACE issuance of a Section 404 permit triggers the requirement that a Section 401 certification also be obtained. In California, the Regional Water Quality Control Boards (RWQCBs) issue this certification.

Executive Order 13112 – Invasive Species

Executive Order (EO) 13112 was signed in February 1999 and established the National Invasive Species Council. To the extent practicable and permitted by law, this EO requires agencies to: prevent the introduction of invasive species; provide for control of invasive species; and minimize the economic, ecological, and human health impacts that invasive species cause

Executive Order 11990 – Protection of Wetlands

EO 11990 establishes a national policy to avoid adverse impacts on wetlands whenever there is a practicable alternative. A jurisdictional delineation was performed for the proposed Project.

Federal Endangered Species Act

The Federal Endangered Species Act (ESA) designates threatened and endangered animals and plants and provides measures for their protection and recovery. “Take” of listed animal species and of listed plant species is prohibited without obtaining a federal permit. Take is defined as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct.” 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 the habitat of (i.e., harm) listed wildlife species require approval from the United States Fish and Wildlife Service (USFWS) for terrestrial species. ESA Section 7 and Section 10 provide two pathways for obtaining authority to take listed species. The ESA also generally requires determination of critical habitat for listed species. If critical habitat has been designated, impacts to areas that contain the primary constituent elements identified for the species, whether or not the species is currently present, is also prohibited. No critical habitat occurs in the survey area, and no federally listed species were observed or are expected to occur.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) implements international treaties between the United States and other nations that protect migratory birds, (including their parts, eggs, and nests) from killing, hunting, pursuing, capturing, selling, and shipping unless expressly authorized or permitted. Generally, the list of species protected under the MBTA includes those where evidence of natural occurrence in the United States or its territories exists, and the documentation of such records has been recognized by the American Ornithologists Union or other competent scientific authorities. Species not protected under the MBTA include those whose occurrences in the United States are strictly the result of intentional human introduction (e.g., Eurasian collared-dove [*Streptopelia decaocto*] observed in the survey area).

California Desert Conservation Area Plan

The California Desert Conservation Area (CDCA) Plan covers approximately 25 million acres of land in southern and southeastern California. Of the 25 million acres, approximately 10 million acres are administered by the BLM, as mandated by the Federal Land Policy and Management Act (FLPMA) of 1976. The CDCA Plan is a comprehensive, long-range plan with goals and specific actions for the management, use, development, and protection of the resources and public lands within the CDCA, and is based on the concepts of multiple use, sustained yield, and maintenance of environmental quality. The survey area is entirely within the CDCA. The proposed transmission line that would be overbuilt along the existing IID

distribution line is on public land administered by the BLM. The proposed solar farm complex site is situated on private property; a 2.0 mile segment of the proposed 92 kV transmission line is on BLM land; and the Anza Substation modifications are proposed on IID land.

Flat-tailed Horned Lizard Rangewide Management Strategy

The Flat-tailed Horned Lizard Rangewide Management Strategy (ICC 2003) (hereafter referred to as the Strategy) was originally developed in 1997 and revised in 2003 by the Interagency Coordinating Committee (ICC). The ICC signatory members who participated in the writing and discussion of the 2003 revision included various state and federal agencies (Anza-Borrego State Park, Arizona Game and Fish [Yuma], Ocotillo Wells State Vehicular Recreation Area, U.S. Bureau of Land Management [El Centro, Palm Springs, and Yuma], U.S. Bureau of Reclamation [Yuma], U.S. Fish and Wildlife Service [City of Carlsbad and Phoenix], U.S. Marine Corps Air Station [Yuma], U.S. Naval Air Facility (El Centro), and U.S. Navy Southwest Division [San Diego]).

The purpose of the Strategy is to provide guidance for the conservation and management of sufficient habitat to maintain extant populations of flat-tailed horned lizards (FTHLs) in each of the five Management Areas (MAs) within the CDCA Plan in perpetuity. In addition, a 76,700 acre Research Area (RA) has been established. Approximately 43,000 acres of the RA are owned by the State and managed as the Ocotillo Wells State Vehicle Recreation Area (OWSVRA). BLM has 20,900 acres, approximately 8,000 acres of which are managed by the OWSVRA. The remaining 12,900 acres of BLM land are managed according to provisions in the CDCA Plan (ICC 2013, p. 36).

The RA was also established to support research in an active off-highway vehicle (OHV) recreation area (BLM 2003, p. i). Within the RA, studies of the FTHL are encouraged and funded by the California Department of Parks and Recreation (CDPR) Division of Off-Highway Motor Vehicle Recreation.

Based on review of Figure 9 (Ocotillo Wells State Recreational Vehicle Area Research Area) of the Strategy, the portion of the transmission line extending through lands managed by the BLM is located with the OWSVRA. Projects that impact FTHL or FTHL habitat are required to implement mitigation measures or pay compensation to minimize impacts.

On November 29, 1993, the United States Fish and Wildlife Service (USFWS) proposed the species for listing as threatened. The proposed listing was based on initial evidence suggesting that habitat loss within the perimeter of the range of the species was causing a decline in specific FTHL habitat. Subsequently, the USFWS withdrew its proposed listing on January 23, 2003, based in part on protections identified in the Strategy. The proposed listing has been reinstated and withdrawn several times since January 23, 2003. On March 14, 2011, after completing an analysis of the conservation status of FTHL, the USFWS announced that the species does not need protection under the ESA. This determination was made because threats to the species as identified in the 1993 proposed rule are not as significant as earlier believed and available data do not indicate the species is likely to become endangered in the foreseeable future throughout all or a significant portion of its range (USFWS 2011).

BLM Right-of-Way Grant to Imperial Irrigation District

In November 2002, the BLM granted a right-of-way (ROW) CACA 044554 to the Imperial Irrigation District (IID) to construct, operate, and terminate a 92 kV transmission line with an underbuilt 12.5 kV distribution line along an 18,740-foot long, 50-foot wide path from the Anza Substation to the San Felipe Substation. The ROW Grant contains terms and conditions that IID must follow to construct, operate, and terminate the lines. The proposed Project requires an electrical interconnection with the IID electrical transmission system. Therefore, a new 92 kV transmission line is proposed to be built in conformance with this ROW on BLM-managed lands outside the proposed solar farm complex site over the existing IID distribution

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line to the Anza Substation. The new line construction would comply with the terms and conditions of the ROW Grant.

B. STATE

California Endangered Species Act

The California Endangered Species Act (CESA) provides protection and prohibits the take of plant, fish, and wildlife species listed by the State of California. Unlike the federal ESA, state listed plants have the same degree of protection as wildlife, but insects and other invertebrates may not be listed. Take is defined similarly to the federal ESA and is prohibited for both listed and candidate species. Take authorization may be obtained from California Department of Fish and Wildlife (CDFW) under California ESA Sections 2091 and 2081. Section 2091, like federal ESA Section 7, provides for consultation between a state lead agency under CEQA and CDFW, with issuance of take authorization if the project does not jeopardize the listed species. Section 2081 allows take of a listed species for educational, scientific, or management purposes. In this case, private developers consult with CDFW to develop a set of measures and standards for managing the listed species including full mitigation for impacts, funding of implementation, and monitoring of mitigation measures. No state listed species were observed or are expected to occur in the survey area.

California Environmental Quality Act

CEQA was enacted in 1970 to provide for full disclosure of environmental impacts to the public before issuance of a permit by state and local public agencies. In addition to federal or state listed species, “sensitive” plants and animals receive consideration under CEQA. Sensitive species include, but are not limited to, wildlife Species of Special Concern listed by CDFW, and plant species on the CNPS’s List 1A (Presumed extinct), List 1B (Rare, threatened, or endangered in California and elsewhere. Eligible for state listing) or List 2 (Rare, threatened, or endangered in California but more common elsewhere. Eligible for state listing.). One sensitive (or special status) species was observed in the survey area. Several others have been reported in the vicinity of the survey area, and yet a few others have some potential to occur based on the presence of potentially suitable habitat (see discussion of Special Status Plant Species in subsection 4.12.2, Environmental Setting).

California Fish and Game Code

California Native Sections 3511, 4700, 5050, and 5515 of California Fish and Game Code outline protection for “fully protected” (i.e. Fully Protected species refer to all vertebrate and invertebrate taxa of concern to the Natural Diversity Data Base regardless of legal or protection status species of mammals, birds, reptiles, amphibians, and fish. These species may not be taken or possessed without a permit from the Fish and Game Commission and/or CDFW. Species that are fully protected by these sections may not be taken or possessed at any time. 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. Furthermore, it is the responsibility of the CDFW to maintain viable populations of all native species. To that end, the CDFW has designated certain vertebrate species as Species of Special Concern (refer to Appendix C of the Biological Technical Report contained in **Appendix I**) because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction. No fully protected species were observed or have potential to occur in the survey area.

Native Plant Protection Act

The Native Plant Protection Act (NPPA) of 1977 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 protect endangered and rare plants from take. The California ESA of 1984 expanded on the original NPPA and enhanced legal protection for plants, but the NPPA remains part of the Fish and Game Code. To align with federal regulations, the California ESA created the categories of "threatened" and "endangered" species. It converted all "rare" animals into the ESA as threatened species but did not do so for rare plants. Thus, there are 3 listing categories for plants in California: rare, threatened, and endangered. Because rare plants are not included in the California ESA, mitigation measures for impacts to rare plants are specified in a formal agreement between CDFW and the project proponent. No rare, threatened, or endangered plant species were observed or have potential to occur in the survey area.

Lake and Streambed Alteration Program

Prior to commencement of any activity that would substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank (which may include associated riparian resources) of a river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake, the project proponent shall submit a complete Lake or Streambed Alteration Program notification package and fee to the CDFW. The Lake and Streambed Alteration Program is a California law that requires that any person, state, local government agency, or public utility notify the CDFW prior to beginning of the activities listed above. The 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 project proponent becomes the Lake or Streambed Alteration Agreement. The conditions of agreement and a CWA Section 404 permit often overlap. HELIX has conducted a formal jurisdictional delineation for the proposed Project to determine CDFW jurisdictional boundaries (HELIX 2014b, p. 17).

Porter-Cologne Act

The intent of the Porter-Cologne Act is to protect water quality and the beneficial uses of water, and applies to both surface and groundwater. Under this law, the California State Water Resources Control Board (SWRCB) develops statewide water quality plans, and the RWQCBs develop 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 Porter-Cologne include isolated waters that are no longer regulated by the USACE. Developments which impact jurisdictional waters must demonstrate compliance with the goals of the Act by developing Storm Water Pollution Prevention Plans (SWPPPs), Standard Urban Storm Water Mitigation Plans, and other measures in order to obtain a CWA Section 401 Water Quality certification.

C. LOCAL

Imperial County General Plan

The Imperial County General Plan contains a variety of goals, objectives, policies and programs that relate to the preservation and conservation of biological resources. **Table 4.12-1** analyzes the consistency of the proposed Project with the applicable goals, objectives, policies and programs relating to biological resources from the Conservation and Open Space Element. In addition, an agriculture policy and program from the Land Use Element directly applies to the Project with regard to burrowing owl is also included. While this EIR analyzes the Project's consistency with the General Plan pursuant to State CEQA Guidelines

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Section 15125(d), the Imperial County Board of Supervisors ultimately determines consistency with the General Plan.

TABLE 4.12-1
IMPERIAL COUNTY GENERAL PLAN CONSISTENCY ANALYSIS

General Plan Goals, Objectives Policies and Policies	Consistent with General Plan?	Analysis
CONSERVATION AND OPEN SPACE ELEMENT		
Preservation of Biological Resources		
Goal 2: The County will preserve the integrity, function productivity, and long-term viability of environmentally sensitive habitats, and plant and animal species.	Yes	The Project area consists of a solar farm complex on lands formerly used for agricultural activities surrounded by open desert; an overbuilt transmission line extending through open desert; and modifications to the Anza Substation also within open desert. In addition As discussed in this section, habitats, and plant and animal species could be impacted by construction and operation of the Project. However, mitigation measures (MM 4.12.1, MM 4.12.2a, MM 4.12.2b, MM 4.12.3, MM 4.12.6, MM 4.12.8, MM 4.12.10, MM 4.12.12a and MM 4.12.1sb and MM 4.12.14) are identified to address these impacts. Therefore, the proposed Project is consistent with this objective.
Objective 2.1 Conserve wetlands, fresh water marshes, and riparian vegetation.	Yes	The solar farm complex site includes jurisdictional wetland areas and vegetation (tamarisk thicket). The proposed Project would impact these features during construction and would mitigate impacts to jurisdictional areas based on the ratios identified in mitigation measures MM 4.12.a and MM 4.12.2b. Therefore, the proposed Project is consistent with this objective.
Objective 2.2 Protect significant fish, wildlife, plant species, and their habitats.	Yes	The proposed Project area contains potential habitat for several sensitive species. While the likelihood of presence is low, mitigation measures are identified to reduce impacts to these species should they be present. Refer to mitigation measures MM 4.12.3 and 4.12.6. Therefore, the proposed Project is consistent with this objective.
Open Space Conservation Policy: The County shall participate in conducting detailed investigations into the		The Applicant prepared the following reports and memoranda to identify biological resources that are present and could be

TABLE 4.12-1
IMPERIAL COUNTY GENERAL PLAN CONSISTENCY ANALYSIS

General Plan Goals, Objectives Policies and Policies	Consistent with General Plan?	Analysis
significance, location, extent, and condition of natural resources in the County.		affected by the Project: the <i>Seville Solar Jurisdictional Delineation Report</i> (HELIX 2014a); the <i>Seville Solar Project Biological Technical Report</i> (HELIX 2014b); the “Results of Burrowing Owl Survey for the Seville Solar Project in Imperial County, California” (HELIX 2013); the “Jurisdictional Resources at the Proposed Expansion of the IID Anza Substation” Memorandum (HELIX 2014c); and the “Biological Resources at the Proposed Expansion of the IID Anza Substation” Memorandum (HELIX 2014d). Therefore, the proposed Project is consistent with this policy.
Program: Notify any agency responsible for protecting plant and wildlife before approving a project which would impact a rare, sensitive, or unique plant or wildlife habitat.	Yes	The Applicant submitted the Jurisdictional Delineation Report to the USACE in February 2014. The Applicant will consult with CDFW early in 2014. In addition, the USFWS will be consulted and provided an opportunity to comment on this EIR prior to the County’s consideration of any Project approvals. Therefore, the proposed Project is consistent with this program.
LAND USE ELEMENT		
Agriculture Policies and Programs		
Land Use Element Policy: The General Plan covers the unincorporated area of the County and is not site specific, however, a majority of the privately owned land is located in the area identified by the General Plan as “Agriculture,” which is also classified as important burrowing owl habitat, typically in the berms and banks of agricultural fields.	Yes	Based on the Agriculture designation of the proposed solar farm complex site, the potential for burrowing owl was examined. Refer to the program discussed below.
Program: Prior to approval of development of existing agricultural land either in form of one parcel or a numerous adjoining parcels equally a size of 10 acres or more shall prepare a Biological survey and mitigate the	Yes	As noted under the Open Space Conservation Policy, above, several biological studies were prepared for the Project site including a focused burrowing owl survey. Mitigation measures MM 4.12.6 would address potential impacts to

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TABLE 4.12-1
IMPERIAL COUNTY GENERAL PLAN CONSISTENCY ANALYSIS

General Plan Goals, Objectives Policies and Policies	Consistent with General Plan?	Analysis
potential impacts. The survey must be prepared in accordance with the United States Fish and Wildlife and California Department of Fish and Wildlife regulations, or as amended.		burrowing owl in accordance with CDFW requirements. Therefore, the proposed Project is consistent with this program.

4.12.2 ENVIRONMENTAL SETTING

A. SOLAR FARM COMPLEX

The proposed solar farm complex site is contained within an approximately 1,729-acre survey area (**Figure 4.12-1**). The survey area consists of the 1,238 acre proposed solar farm complex site, other surrounding lands, and 50 feet along either side of the existing IID distribution line. Nearly all of the survey area supported groundwater-irrigated agricultural land in the past. Although not surveyed directly, a 100-foot buffer beyond the survey area, except the transmission line, was mapped for vegetation communities/land cover types. The portions of the survey area that have not been farmed include approximately 50 acres west of the existing access road along SR 78. The areas that were farmed have not been actively farmed over the last several years (HELIX 2014b, p. 2).

The surrounding lands are generally undeveloped desert; however, SR 78 and the existing IID distribution line occur immediately north of the proposed solar farm complex site. The proposed solar farm complex site is surrounded by private properties and land administered by the BLM. The lands surrounding the proposed solar farm complex site, and particularly along the existing IID distribution line ROW adjacent to SR 78 and along the western boundary of the survey area, have been subjected to off-road vehicle use.

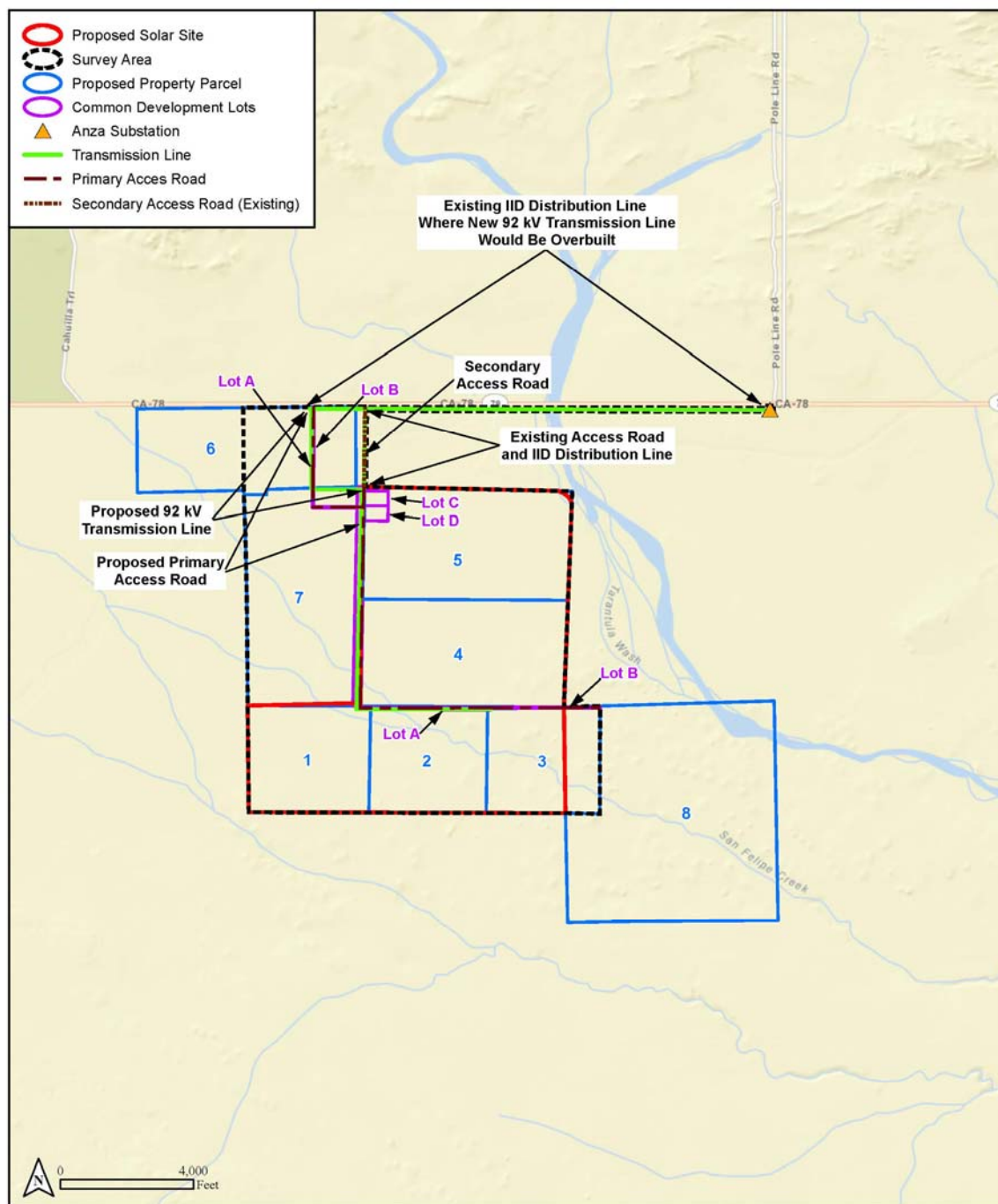
The majority of the soils in the survey area consist of Vint fine sandy loam. Other soils in the survey area include Indio-Vint complex, Rositas sand (0-2 percent slopes), Rositas fine sand (0-2 percent slopes), Meloland fine sand, Indio loam, Glenbar complex, Rositas sand (2-5 percent slopes), Carsitas gravelly sand (0-5 percent slopes), and Glenbar clay loam (HELIX 2014b, p. 1). (Refer to Section 4.6, Geology and Soils for full descriptions of soils within the boundaries of the solar farm complex site).

Vegetation Communities/Land Cover Types

HELIX Environmental Planning, Inc. (HELIX) conducted a search for special status biological resources reported within and near the survey area (**Figure 4.12-1**) using a set of databases consisting of: California Department of Fish and Wildlife, California Natural Diversity Database, California Native Plant Society, CDFW BIOS database, U.S. Fish and Wildlife Service critical habitat, BLM sensitive species, and the National Wetland Inventory.

General biological surveys were conducted in the survey area by HELIX biologist Larry Sward on July 11, 2012, and by Mr. Sward and HELIX biologist Robert Hogenauer on January 29, 2013.

Vegetation communities/land cover types were classified in accordance with the Manual of California Vegetation and CDFW's List of California Vegetation Alliances. Vegetation communities/land cover types were mapped on an aerial photograph base map with a scale of one inch equals 400 feet (HELIX 2014b, p. 3). Plants were identified according to The Jepson Manual: Higher Plants of California.



Source: HELIX 2014b.

**FIGURE 4.12-1
PROJECT SURVEY AREA**

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As depicted in **Figure 4.12-2**, the survey area supports 24 vegetation communities/land cover types. Four of the vegetation types and one of the land cover types is potentially jurisdictional (HELIX 2014a, p. 6). The potentially jurisdictional vegetation types are dominated by wetland vegetation, and include bulrush marsh, quailbush scrub, tamarisk thickets, and tamarisk windbreaks. The potentially jurisdictional non-vegetated habitat type is streambed. Descriptions of each vegetation community and land cover type are provided below as documented in the *Seville Solar Jurisdictional Delineation Report* (HELIX 2014a); the *Seville Solar Project Biological Technical Report* (HELIX 2014b); the “Jurisdictional Resources at the Proposed Expansion of the IID Anza Substation” Memorandum (HELIX 2014c); and, the “Biological Resources at the Proposed Expansion of the IID Anza Substation” Memorandum (HELIX 2014d).

While some of the major components of certain vegetation communities are present (and have been classified accordingly), all of the communities in the survey area are very simple in composition with low biological diversity and, in most cases, have relatively low biomass. The native soil crust has been lost, and the surface topography of much of the survey area has been graded flat or is furrowed due to agricultural operations.

A description of each of the 24 vegetation communities/land cover types is provided below:

Creosote Bush Scrub

Creosote bush (*Larrea tridentata*) is dominant in the shrub canopy of this community and is the most abundant and extensive in the desert southwest. White bursage (*Ambrosia dumosa*), honey sweet, (*Tidestromia oblongifolia*), and desert sand mat (*Chamaesyce polycarpa*) are also present in this habitat.

White Bursage Scrub

White bursage is dominant in the shrub canopy. Associated species include Saharan mustard (*Brassica tournefortii*) and burro bush (*Hymenoclea salsola*).

Creosote Bush – White Bursage Scrub

Creosote bush and white bursage are co-dominant in the shrub canopy. Associated shrub species include white dalea (*Psoralea argemone*).

Creosote Bush – White Bursage Scrub – Sparse

This community is similar to creosote bush–white bursage scrub with the exception being that the shrubs are fewer in number.

Allscale Scrub

Allscale (*Atriplex polycarpa*) is the dominant species in the shrub canopy. Associated species include white bursage, creosote bush, Mediterranean grass (*Schismus barbatus*), and Saharan mustard.

White Dalea Scrub

White dalea scrub is a near monotypic stand of white dalea that appears to be the result of previous disturbance. This species is more typically known as an associated species in creosote bush-white bursage scrub.

Quailbush Scrub

Quail saltbush (*Atriplex lentiformis*) is the dominant species in this community.

Mesquite Thicket

Honey mesquite (*Prosopis glandulosa* var. *torreyana*) is dominant in the tree canopy of this vegetation community. Quail saltbush, mistletoe (*Phoradendron* sp.), and apricot mallow (*Sphaeralcea ambigua*) are also present.

Bulrush Marsh

Alkali bulrush (*Bolboschoenus maritimus* ssp. *paludosus*) is the dominant plant in this community that occurs in the reservoir in the southeastern portion of the proposed solar farm complex site. During the general biological survey, the reservoir was dry, and over 90 percent of the bulrushes appeared to be dead or dormant. Vigorous growth of this vegetation in the survey area is dependent upon artificial hydrology, which is no longer present because agricultural operations have been suspended and the reservoir remains dry except for natural rainfall). Because this habitat is dependent upon artificial hydrology it is not regarded as jurisdictional. Furthermore, this habitat occurs in an excavated reservoir and is isolated from Waters of the U.S. (WUS) and Waters of the State (WS).

Quailbush Scrub

Quail saltbush (*Atriplex lentiformis*) is the dominant species in this community. Quail saltbush is a facultative species. This community occurs along the upper slopes of a drainage ditch and adjacent areas, along the southern edge of the survey area. The landscape position of this community is primarily upland. This habitat is not jurisdictional because it occurs in uplands. Furthermore, this habitat is isolated from WUS and WS.

Desert Saltbush Scrub

Desert saltbush scrub consists of usually low, grayish, microphyllous shrubs, up to one meter (3.2 feet) tall, with some succulent species. Stands are typically dominated by various species of saltbush, including shad scale (*Atriplex canescens*), quail brush (*Atriplex lentiformes*), and allscale (*Atriplex polycarpa*), with total cover often low and much bare ground between the widely spaced shrubs. This vegetation community is found in fine-textured, poorly drained soils with high alkalinity and/or salinity, usually surrounding playas on slightly higher ground. Desert saltbush scrub is widely scattered on margins of dry lake bed in the Mojave and Sonoran deserts. The dominant species in this vegetation community within the survey area is allscale, although patches of quail brush and shad scale are also present.

Tamarisk Thickets

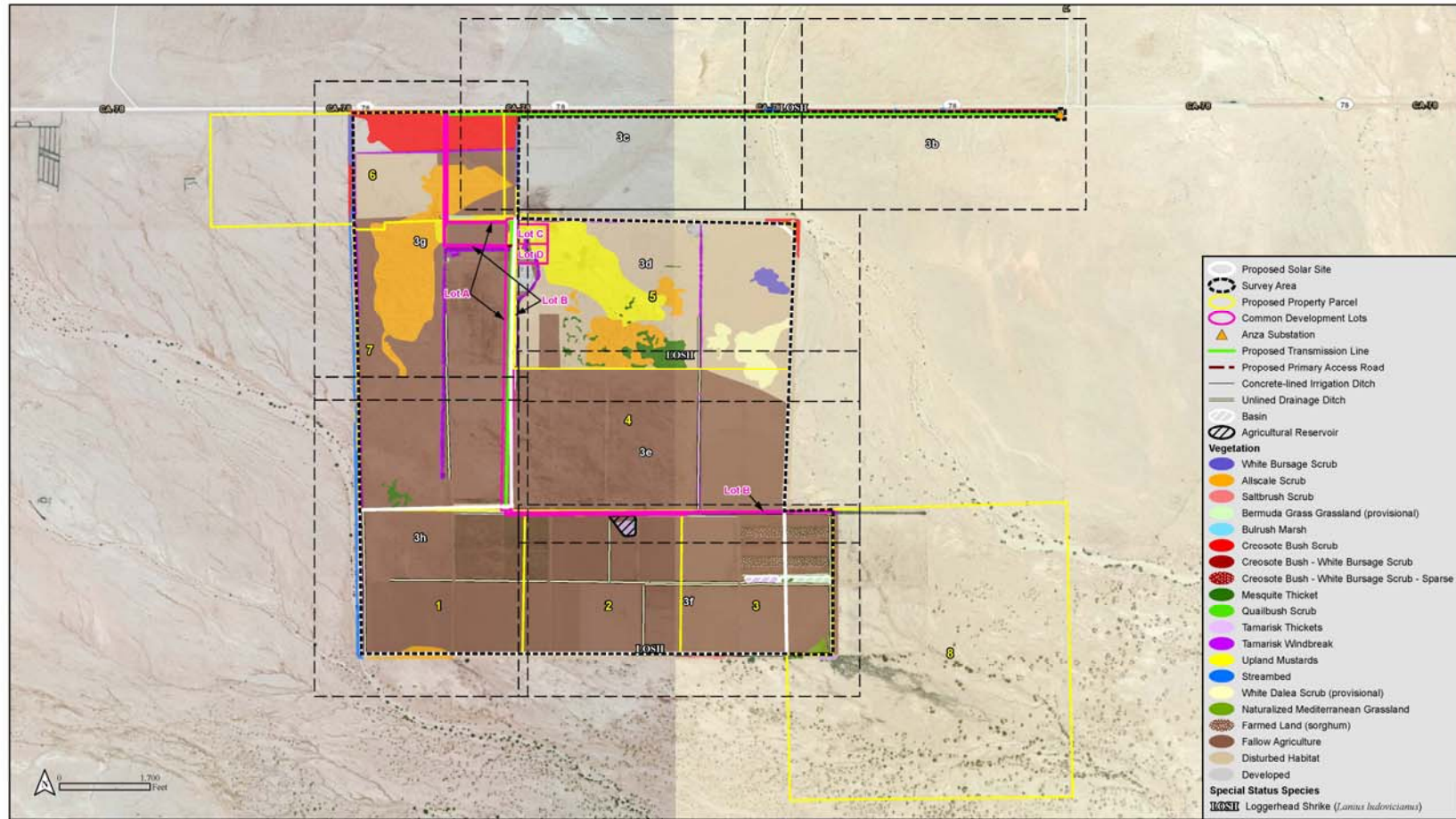
Tamarisk thicket is a monotypic stand of saltcedar (*Tamarix ramosissima*), an invasive, non-native tree species that is known to invade desert wetland and riparian habitats. Saltcedar is a facultative species. Most of this habitat in the survey area was established by well water associated with irrigation runoff. It exists primarily in reservoirs constructed for the agricultural operations and is isolated from off-site jurisdictional areas. Within the survey area, exclusive of Tarantula Wash, this habitat is not jurisdictional because it became established by artificial hydrology and is isolated from WUS and WS.

Tamarisk Windbreak

Tamarisk windbreak is present as narrow bands of athel (*Tamarix aphylla*). This species was intentionally planted in landscape positions to create windbreaks as part of the agricultural operations, isolated from off-site WUS and WS. Athel is a facultative species and exists along drainage ditches and irrigation lines. It is not regarded as WUS or WS because it was artificially established and maintained.

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Source: HELIX 2014b

FIGURE 4.12-2
BIOLOGICAL RESOURCES LAND COVER TYPES – OVERALL PROJECT SITE

Bermuda Grass Grassland

Bermuda grass is a non-native, invasive species that thrives in warm, moist conditions. It often grows in open areas where there are frequent disturbances such as grazing, flooding, and fire. In Imperial County, it is often grown for migratory waterfowl forage.

Naturalized Mediterranean Grassland

Naturalized Mediterranean grassland supports non-native species such as Mediterranean canary grass (*Phalaris minor*) and knotweed (*Polygonum* sp.), the former of which is dominant in the community. Naturalized Mediterranean grassland occurs in the southeastern corner of the survey area.

Upland Mustards

The upland mustards community is dominated by Saharan mustard, a highly invasive, non-native species.

Farmed Land

Farmed land supports an agricultural crop (sorghum; *Sorghum* sp.) that was planted to attract wildlife for the landowner to hunt. Farmed land occurs in the southeastern portion of the proposed solar farm complex site.

Fallow Agriculture

Fallow agriculture consists of areas that are not presently being farmed but still retain a corrugated surface from furrows graded during active agricultural operations. Fallow agriculture supports a very small amount of non-native plant species.

Disturbed Habitat

Disturbed habitat includes: unpaved roads and fallow agricultural areas that support a preponderance of non-native Russian thistle (*Salsola tragus*); un-furrowed fallow agricultural land; and unvegetated areas.

Streambed

A streambed is a river or stream that flows through a bed or channel. In agricultural operations near the Salton Sea, the drainage ditches are typically categorized as streambed and are regarded as WUS and WS. These drainage ditches flow directly into the Salton Sea, which is a WUS and WS. Connection to the Salton Sea is the basis for these agricultural features being jurisdictional. No agricultural runoff leaves the Allegretti Farms property. Instead, water is piped or channeled to several detention basins and allowed to percolate into the ground.

Another distinction between the farms near the Salton Sea and Allegretti Farms is the source of the water. Farms near the Salton Sea obtain waters from the Colorado River conveyed to the area by a series of canals. In contrast, Allegretti Farms obtains groundwater pumped by on-site wells. This combination of well water and detention basins hydrologically isolates the farm.

Basin

Two unlined basins occur in the southeastern portion of the proposed solar farm complex site. This western basin receives runoff via unlined drainage ditches from the surrounding agricultural lands. Tamarisk thickets were present in the basin. This basin overflows to the east, into a shallower basin that supports Bermuda grass grassland and mesquite thickets. The basins comprise approximately 4.5 acres. [Note: Impacts to these areas are reported as the underlying vegetation type. Therefore, impacts to these basins are not reported in **Tables 4.12-5 and 4.12-6**].

Reservoir

A reservoir occurs in the southeastern portion of the proposed solar farm complex site. This reservoir is part of the well water based irrigation system. Tamarisk thickets and bulrush marsh were present in the basin; however, the marsh vegetation appeared to be mostly senescent or dead. This marsh vegetation is dependent upon artificial hydrology. This habitat is no longer considered viable because the agricultural operation and associated artificial hydrology that sustained it in the past have been suspended. The reservoir amounts to approximately 3.1 acres. [Note: Impacts to these areas are reported as the underlying vegetation type. Therefore, impacts to reservoirs are not reported in **Tables 4.12-5** and **4.12-6**].

Unlined Drainage Ditch

Unlined drainage ditch is an earthen-bottomed channel created to convey excess irrigation water from farmed land. The full extent of drainage ditches may have been more extensive when active agriculture was more widespread on site. It appears that there has been no water in these ditches for an extended period of time. The size of these ditches varies, but are typically 6 feet wide. The ditch that drains into the unlined basin, however, is 10 feet wide.

Concrete-lined Irrigation Ditch

A concrete-lined irrigation ditch is an artificially created concrete-lined channel in upland habitat for the purpose of conveying irrigation water for agriculture. Concrete-lined irrigation ditches occur in the east-central portion of the proposed solar farm complex site. The concreted lined irrigation ditches on site are 6 feet wide at the top and 2 feet wide at the bottom.

Plants

Thirty-two plant species were observed in the survey area during the biological surveys. **Table 4.12-2** provides a summary of these species.

TABLE 4.12-2
PLANT SPECIES OBSERVED SEVILLE SOLAR FARM COMPLEX SITE

Family	Scientific Name	Common Name
Amaranthaceae	<i>Tidestromia oblongifolia</i>	honey sweet
Asteraceae	<i>Ambrosia dumosa</i> <i>Encelia frutescens</i> <i>Hymenoclea salsola</i> <i>Palafoxia arida</i> <i>Pluchea sericea</i> <i>Stephanomeria pauciflora</i>	white bursage rayless encelia burrobush Spanish-needle arrow weed wire-lettuce
Boraginaceae	<i>Tiquilia plicata</i>	fanleaf crinklemat
Brassicaceae Chenopodiaceae	<i>Brassica tournefortii</i> * <i>Atriplex canescens</i> <i>Atriplex lentiformis</i> <i>Atriplex polycarpa</i> <i>Chenopodium album</i> * <i>Salsola tragus</i> *	Saharan mustard shad-scale quail saltbush allscale lamb's quarters Russian thistle
Cyperaceae	<i>Bolboschoenus maritimus</i> ssp. <i>paludosus</i>	alkali bulrush
Euphorbiaceae	<i>Chamaesyce polycarpa</i>	desert sand mat

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**TABLE 4.12-2
PLANT SPECIES OBSERVED SEVILLE SOLAR FARM COMPLEX SITE**

Family	Scientific Name	Common Name
Fabaceae	<i>Prosopis glandulosa</i> <i>Psoralea argemone</i>	Mesquite Emory's indigo bush, white dalea
Malvaceae	<i>Sphaeralcea ambigua</i>	apricot mallow
Onagraceae	<i>Camissonia</i> sp.	sun cup
Poaceae	<i>Avena fatua</i> <i>Cynodon dactylon</i> * <i>Leptochloa fusca</i> sp. <i>Phalaris minor</i> * <i>Schismus barbatus</i> *	wild oat Bermuda grass Mexican sprangle-top Mediterranean canary grass Mediterranean grass
Polygonaceae	<i>Polygonum</i> sp.*	knotweed
Solanaceae	<i>Datura discolor</i>	desert thornapple
Tamaricaceae	<i>Tamarix aphylla</i> * <i>Tamarix ramosissima</i> *	athel saltcedar
Typhaceae	<i>Typha domingensis</i>	Southern cattail
Viscaceae	<i>Phoradendron</i> sp.	Mistletoe
Zygophyllaceae	<i>Larrea tridentata</i>	creosote bush

Source: HELIX 2014b, Appendix A. of the Biological Technical Report included as Appendix I of this EIR.

Animals

Twenty-seven animal species were observed or detected in the survey area during the biological surveys. **Table 4.12-3** provides a summary of these species.

**TABLE 4.12-3
ANIMAL SPECIES OBSERVED SEVILLE SOLAR FARM COMPLEX SITE**

Family	Scientific Name	Common Name
Invertebrates		
Apidae	<i>Apis mellifera</i>	Honey bee
Formicidae	<i>Messor</i> and <i>Pogonomyrmex</i> spp.	Harvester ant
Nymphalidae	<i>Vanessa cardui</i>	painted lady
(Order) Odonata	Undetermined	dragonfly
Tenebrionidae	Undetermined	darkling beetle
Birds		
Alaudidae	<i>Eremophila alpestris</i>	horned lark
Columbidae	<i>Streptopelia decaocto</i> <i>Zenaida asiatica</i> <i>Zenaida macroura</i>	Eurasian collared-dove white-winged dove mourning dove
Corvidae	<i>Corvus corax</i>	Common raven
Cuculidae	<i>Geococcyx californianus</i>	Greater roadrunner
Emberizidae	<i>Amphispiza belli</i> <i>Amphispiza bilineata</i>	Black-throated sparrow
Fringillidae	<i>Carpodacus mexicanus</i>	House finch

**TABLE 4.12-3
ANIMAL SPECIES OBSERVED SEVILLE SOLAR FARM COMPLEX SITE**

Family	Scientific Name	Common Name
Hirundinidae	<i>Stelgidopteryx serripennis</i>	Northern rough-winged swallow
Icteridae	<i>Sturnella neglecta</i>	Western meadowlark
Laniidae	<i>Lanius ludovicianus</i>	Loggerhead shrike
Odontophoridae	<i>Callipepla gambelii</i>	Gambel's quail
Parulidae	<i>Dendroica coronata</i>	yellow-rumped warbler
Ptilonotidae	<i>Phainopepla nitens</i>	Phainopepla
Tyrannidae	<i>Sayornis saya</i>	Say's phoebe
Mammals		
Canidae	<i>Canis lupus familiaris</i>	Domestic dog
Felidae	<i>Felis domesticus</i>	Domestic cat
	<i>Lynx rufus</i>	Bobcat
Leporidae	<i>Sylvilagus audubonii</i>	Desert cottontail
	<i>Lepus californicus</i>	Black-tailed jackrabbit

Source: HELIX 2014b, Appendix A. of the Biological Technical Report included as Appendix I of this EIR.

Jurisdictional Areas

According to the National Wetland Inventory, a wetland (i.e., riverine/intermittent/unconsolidated shore/intermittently flooded; part of San Felipe Creek) occurs immediately west of the survey area (HELIX 2014a, p. 4). This feature is separated from the proposed solar farm complex site by a berm and is at a slightly lower elevation. San Felipe Creek (a wetland classified as palustrine/scrub-shrub/temporarily flooded according to the Nationwide Inventory [NWI]) also occurs southeast of the survey area. This creek once flowed through the survey area prior to the agricultural operations. Additionally, Tarantula Wash trends approximately south-north just east of the proposed solar farm complex site (**Figure 4.12-3**).

Federal (USACE) jurisdictional areas associated with the proposed project include 0.05 acre of tamarisk thicket and 0.58 acre of non-wetland WUS (i.e., streambed and drainage ditch), along a total length of 1,043 linear feet (HELIX 2014b, p. 8).

State (CDFW) jurisdictional areas associated with the proposed project include 0.05 acre of tamarisk thicket and 0.67 acre of streambed (including the drainage ditch) and comprise a total of 0.72 acre along 1,043 linear feet (HELIX 2014b, p. 8).

Sensitive Resources

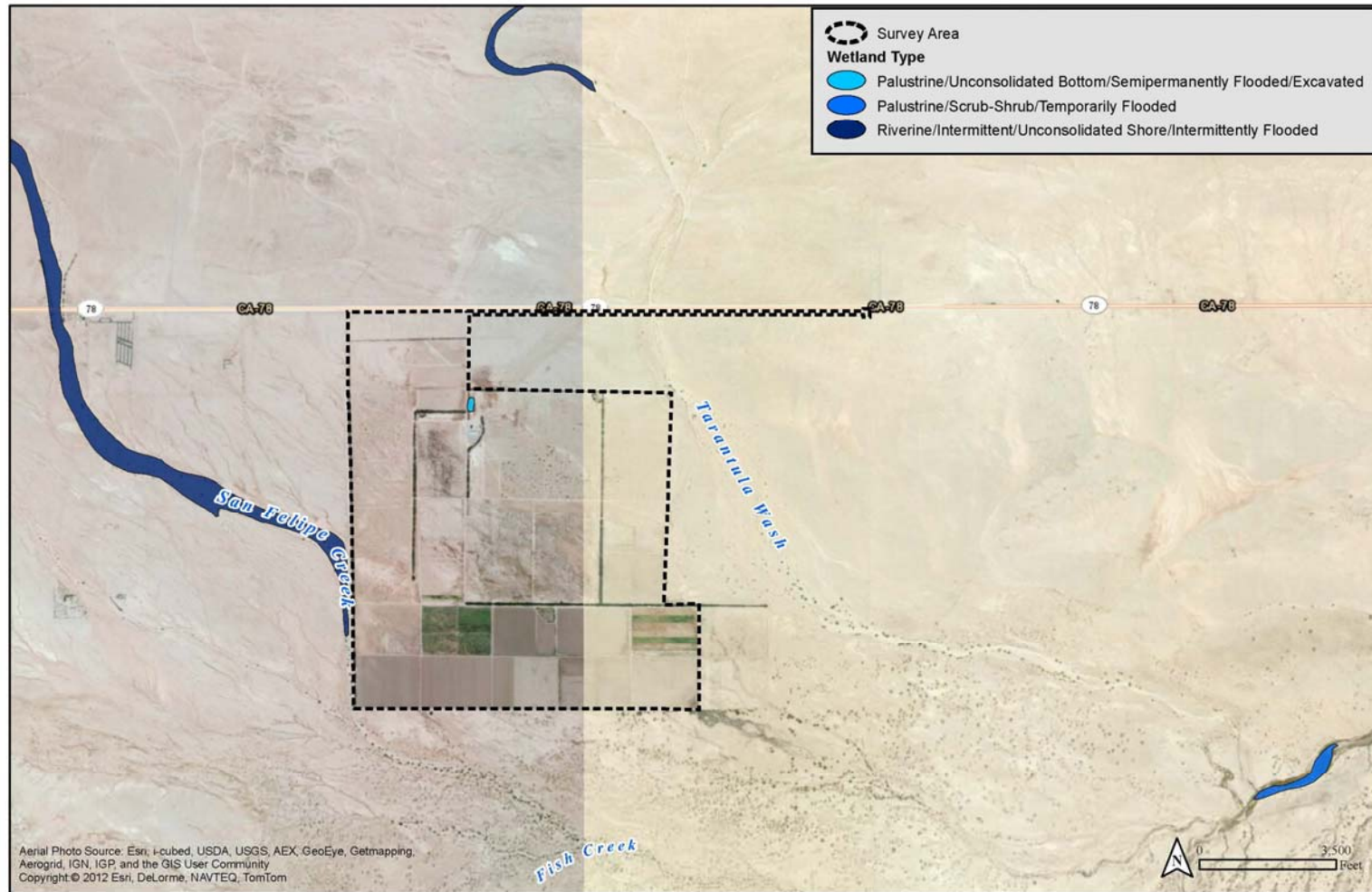
Sensitive Vegetation Communities

Sensitive vegetation communities are either rare within the region or considered sensitive by CDFW, depleted, naturally uncommon, or support special status plant or animal species. Mesquite thicket is the only sensitive vegetation community in the survey area. A total of 13.2 acres of mesquite thicket occurs in the survey area. It is considered highly imperiled by the CDFW. None of the other communities are considered sensitive by the CDFW or Conservation and Open Space Element and Land Use Element of the Imperial County General Plan (HELIX 2014b, p. 8).

Special Status Plant Species

Special status plant species are those that are: 1) only found in the Imperial Valley region; 2) a local representative of a species or association of species not otherwise found in the region; and/or 3) severely depleted within their ranges or within the region. These plants include those listed by federal or state

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Source: HELIX 2014a

FIGURE 4.12-3
NATIONAL WETLAND INVENTORY MAP

agencies or by the CNPS. No special status plant species were observed within the survey area, although the general biological surveys were conducted in January and July, which is outside the typical blooming period. Because the proposed solar farm complex site has been completely disturbed through agricultural operations, no special status plant species are expected to occur (HELIX 2014b, p. 8).

Special Status Plant Species with Potential to Occur

Two special status plant species have been reported to the searched databases in the vicinity of the survey area: Peirson's pincushion (*Chaenactis carphoclinia* var. *peirsonii*) and Wiggins' cholla (*Cylindropuntia wigginsii*). HELIX conducted a focused survey for special status plant species, with particular emphasis on Peirson's pincushion, on March 19, 2013. Both species are described below. However, no special status plant species were found during the focused survey (refer to **Table 4.12-2**).

Peirson's Pincushion

Peirson's pincushion is an annual herb that occurs in sandy areas in Sonoran desert scrub at elevations from sea level up to 1,500 feet. It flowers from March to April.

Status: **CNPS Rare Plant Rank 1B.3**

1B = Rare, threatened, or endangered in California and elsewhere. Eligible for state listing.

.3 = Not very endangered in California (less than 20 percent of occurrences threatened, or no current threats known).

Peirson's pincushion is not expected to occur on the proposed solar farm complex site due to the extensive ground disturbance associated with past and ongoing agricultural operations.

Wiggins' Cholla

Wiggins' cholla is no longer a valid taxon. The plants formerly regarded as Wiggins' cholla have been grouped with another much more common and widespread species, silver cholla (*Cylindropuntia echinocarpa*).

Special Status Animal Species

Special status animal species are those that are: 1) threatened, endangered, proposed, or candidates for listing under the ESA or CESA; 2) considered sensitive by the BLM; or 3) considered fully protected or species of special concern by CDFW (HELIX 2103a, p. 9). One special status animal species, the loggerhead shrike (*Lanius ludovicianus*), was observed during the biological surveys along the proposed transmission line overbuild (**Figure 4.12-5**) (HELIX 2014b, p. 9). This species is described below.

Loggerhead Shrike

In southern California, loggerhead shrike inhabit grasslands, agricultural fields, chaparral, and desert scrub. This species hunts from perches for its prey that includes insects, amphibians, small reptiles, small mammals, and birds.

Status: **USFWS Bird of Conservation Concern (BCC)** - Species, subspecies, and populations of all migratory non-game birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act of 1973.

CDFW Species of Special Concern (SSC).

The loggerhead shrike was observed along the southern border of the proposed solar farm complex site (**Figure 4.12-4**).

Special Status Animal Species with Potential to Occur

Three special status animal species have been reported to the searched databases in the vicinity of the survey area. The three special status animal species include desert pupfish (*Cyprinodon macularius*), flat-tailed horned lizard (*Phrynosoma mcallii*; FTHL), and prairie falcon (*Falco mexicanus*). In addition, five other species have potential to occur in the survey area due to the presence of potentially suitable habitat. These include Couch's spadefoot (*Scaphiopus couchii*), burrowing owl (*Athene cunicularia*), Mountain plover (*Charadrius montanus*), northern harrier (*Circus cyaneus*), and American badger (*Taxidea taxus*). Each is discussed below.

Note: Based on the list of bat species recorded in Imperial, cross-referenced with the species' specific habitat requirements and preferences, the potential for any bat species to occur in the survey area is none to very low. As a result, bats are not addressed further, except with regard to bat collision risk (refer to Impact 4.12.9).

Desert Pupfish

The desert pupfish is found in shallow water of desert springs, small streams, and marshes below 5,000 feet in elevation. The species tolerates high salinities and high water temperatures. In California, it is restricted to three natural populations (San Felipe Creek is one) and the non-natural irrigation drains around the Salton Sea. The species has been impacted by the introduction and spread of predatory and competitive fishes, water impoundment and diversion, water pollution, stream channelization, and habitat modification. Critical habitat for the desert pupfish has been designated in San Felipe Creek approximately two miles southeast of the survey area.

Status: **Federally Listed Endangered**
State Listed Endangered

There is no appropriate habitat for the desert pupfish in the survey area. Therefore, desert pupfish it would not be expected to be present in the survey area.

Flat-Tailed Horned Lizard

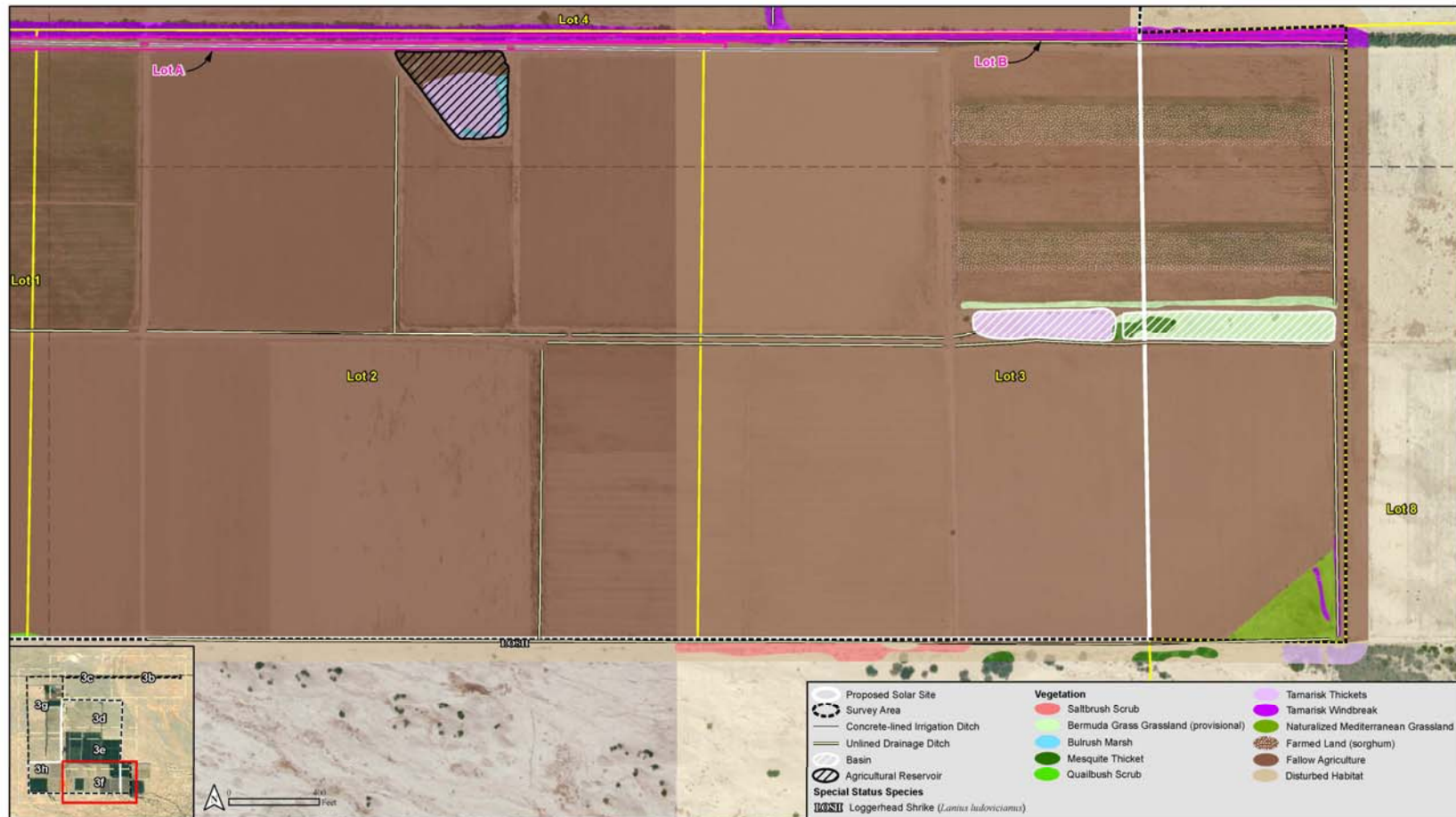
The FTHL is found in the low deserts of southwestern Arizona, southeastern California, and adjacent portions of northwestern Sonora, and northern Baja California, Mexico. In California, the FTHL is restricted to desert washes and desert flats in central Riverside, eastern San Diego, and Imperial counties. The majority of the habitat for the species is in Imperial County (HELIX 2014b, p. 10). It occurs with cobbly, gravelly, or sandy soils and requires the presence of native ant populations, particularly harvester ants (*Pogonomyrmex* sp.).

Status: **BLM Sensitive** - Species requiring special management consideration to promote their conservation and reduce the likelihood and need for future listing under the Federal Endangered Species Act.
CDFW Species of Special Concern

Much of the survey area has been heavily impacted by agricultural operations. The areas with the greatest potential to support FTHL occur in the northern portion of the survey area that supports some native vegetation communities. The survey area is not within a FTHL Management Area, although the West Mesa Management Area occurs just east and south of the eastern end of the proposed transmission line. The nearest observation of FTHL reported to the CNDDDB is in the west Tarantula Wash area, 0.8 mile west/northwest of the junction of Tarantula Wash and SR 78 in the OWSRVA. The occurred in May 2008.

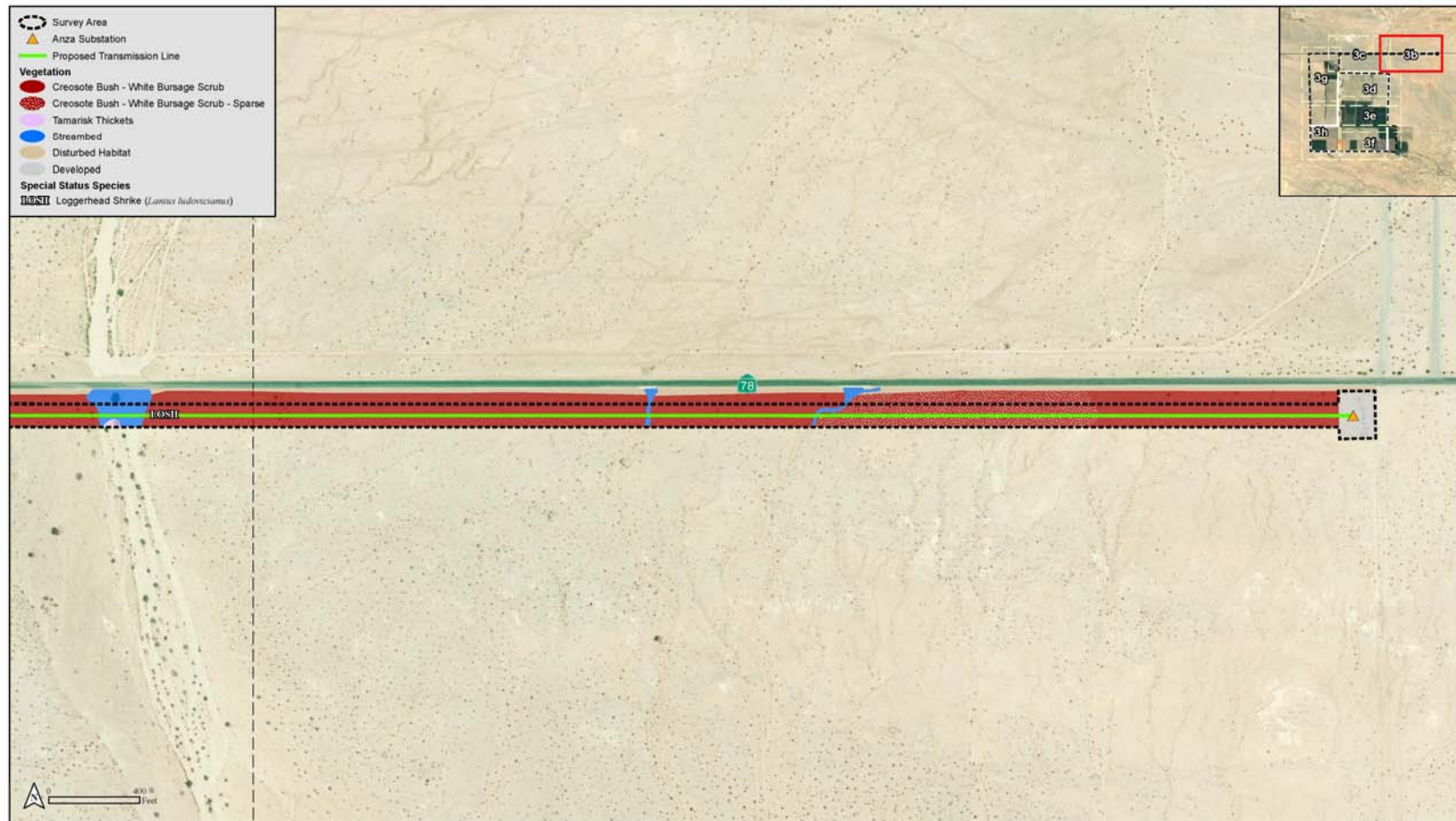
Prairie Falcon

The prairie falcon is a resident species of the desert regions in all seasons except summer. It nests on cliff or bluff ledges or occasionally in old hawk or raven nests and on utility poles and towers. It forages in grassland or desert habitats.



Source: HELIX 2014b.

FIGURE 4.12-4
BIOLOGICAL RESOURCES LAND COVER TYPES - SOUTHERN BORDER OF SOLAR FARM COMPLEX SITE



Source: HELIX 2014b.

FIGURE 4.12-5
BIOLOGICAL RESOURCES LAND COVER TYPES – TRANSMISSION LINE ALIGNMENT

Status: *USFWS Bird of Conservation Concern (BCC)* - Species, subspecies, and populations of all migratory non-game birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act of 1973.

There is limited nesting habitat for the prairie falcon in the survey area; however, the prairie falcon has potential to forage in the survey area.

Couch's Spadefoot

In California, the Couch's spadefoot occurs in scattered populations east of the Algodones sand dunes in Imperial County, north into San Bernardino County. The Couch's spadefoot occupies grassland, prairie, mesquite, creosote bush, thorn forest, and sandy washes from sea level to 5,900 feet in elevation. Reproduction is aquatic. Couch's spadefoots breed during times when scarce desert rainfall creates temporary pools from May through September. Temporary pools are often in rocky streambeds, washes, at the edges of agricultural fields, in depressions beside roads and railroad tracks, and cattle tanks. In order for the eggs to hatch and larvae to successfully transform, the water needs to remain for a minimum of 7 to 8 days.

Status: *BLM Sensitive* - Species requiring special management consideration to promote their conservation and reduce the likelihood and need for future listing under the Federal Endangered Species Act.

CDFW Species of Special Concern (SSC)

While it is possible that the reservoir or basin on the proposed solar farm complex site could provide the temporary pools necessary for reproduction, the fact that the survey area has been so heavily disturbed, and the species only occurs in scattered populations that are east of the Algodones Dunes (which are more than 50 miles east of the proposed solar farm complex site), it is highly unlikely that the species would be present.

Burrowing Owl

The burrowing owl is found throughout the length of the State of California. This small owl is a year-long resident of open, dry grassland and desert habitats. It is also found as a resident in grass, forb, and open shrub stages of pinyon-juniper and ponderosa pine habitats, as well as agricultural lands. The burrowing owl is migratory over much of its range, even in southern California.

"Habitat loss, degradation, and fragmentation are the greatest threats to burrowing owls in California," according to DeSante et al. (HELIX 2014b, p. 12). "The vast majority of burrowing owls [now] occur in the wide, flat lowland valleys and basins of the Imperial Valley and Great Central Valley [where] for the most part...the highest rates of residential and commercial development in California are occurring" (HELIX 2014b, p. 12).

Status: *BLM Sensitive* - Species requiring special management consideration to promote their conservation and reduce the likelihood and need for future listing under the Federal Endangered Species Act.

USFWS Bird of Conservation Concern (BCC) - Species, subspecies, and populations of all migratory non-game birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act of 1973.

CDFW Species of Special Concern (SSC)

During HELIX's habitat assessment on January 29, 2013, it was determined that 1,100 acres of the survey area had potential to be burrowing owl habitat. This habitat was comprised primarily of fallow agriculture and disturbed habitats but also included small amounts of sparsely vegetated shrub communities. Burrows with potential to support burrowing owl mainly occurred within three areas totaling 207 acres, along with a

number of scattered outlying burrows. Two burrows were noted to have been filled in by some means early on during the burrowing owl survey (HELIX 2013).

During the habitat assessment, three pellets, each deteriorated from time and weather, were observed. These pellets were more than a year old and comprised primarily of beetle carapaces and were believed to be from a burrowing owl. The pellets were not associated with a burrow, however. As no other sign of burrowing owl was observed, it was presumed that the pellets were deposited by a migratory owl and not a resident. No burrowing owl or additional burrowing owl sign was observed on or in the immediate vicinity of the proposed Project survey area during the habitat assessment, burrow survey, and focused owl survey, which were conducted from January through June 2013. It was confirmed, however, that the survey area does support burrowing owl habitat and a number of fossorial (i.e. adapted to digging and life underground) mammal burrows with potential to support burrowing owl (HELIX 2013).

Mountain Plover

The mountain plover does not breed, but it does winter, in California where it can be found in extremely dry shrublands, shortgrass prairies, barren agricultural fields, and other sparsely vegetated areas including grazed alfalfa fields and burned Bermuda grass fields. Its reported current winter range in Imperial County is primarily in the agricultural lands south of the Salton Sea (HELIX 2014b, p. 12).

Status: ***BLM Sensitive*** - Species requiring special management consideration to promote their conservation and reduce the likelihood and need for future listing under the Federal Endangered Species Act.

CDFW Species of Special Concern (SSC)

While the survey area does have potentially suitable wintering habitat, due to the species' current wintering distribution in Imperial County (i.e., primarily south of the Salton Sea), and the fact that it has not been documented in this part of Imperial Valley, the potential for the mountain plover to occur in the survey area is low.

Northern Harrier

The northern harrier is a raptor that is distributed in patches across California with a highly fragmented distribution in southern California. Sloughs, wet meadows, marshlands, swamps, prairies, plains, grasslands, and shrublands provide habitat for this species. It nests on the ground, usually near water, or in tall grass, open fields, clearings, or on the water (HELIX 2014b, p. 12). Abundant prey including rodents and small mammals is also required HELIX 2014b, p. 13).

Status: ***CDFW Species of Special Concern (SSC)***

There is no suitable nesting habitat within or near the survey area. However, there is a low to moderate potential for the harrier to forage in the survey area.

American Badger

The American badger is a carnivorous member of the weasel family that consumes fossorial (i.e. adapted to digging and life underground) rodents such as rats, mice, ground squirrels, and pocket gophers. It is an uncommon but permanent resident in dry open stages of shrub, forest, and herbaceous habitats with friable soils where it digs burrows.

Status: ***CDFW Species of Special Concern (SSC)***

The potential for the badger to be present in the survey area is low because this species is typically uncommon.

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B. TRANSMISSION LINE

The proposed 92 kV transmission line that would be overbuilt along the existing IID distribution line aligns through approximately 2.0 miles of public land administered by the BLM. The transmission line corridor extending east from the solar farm complex site to the Anza Substation was included in the Project survey area (refer to **Figures 4.12-1** and **4.12-5**). This corridor has not been farmed. The potential for special status plant species to occur along the transmission line alignment and in the northwestern portion of the survey area that has not be impacted by agricultural operations is higher. This is due to the fact that the extent of ground disturbance is much less in these areas compared to the solar farm complex site.

The modifications to the Anza Substation would occur in an area of relatively flat terrain with scant vegetation due to past and on-going human related disturbances (HELIX 2014c).

Vegetation Communities and Land Cover Types

Tamarisk Thicket

A small patch of tamarisk thicket occurs in Tarantula Wash along the IID transmission corridor. This patch is regarded as WS jurisdictional habitat because it contains tamarisk, a wetland species, that occurs in a streambed. It is also regarded as wetland WUS. This location met the wetland vegetation and hydrology indicators specified in the Arid West Supplement. Soils in this wash consist of coarse sands that rarely exhibit wetland soil indicators, but nonetheless may be wetland soils based on the National Technical Committee for Hydric Soils definition of wetland soil (HELIX 2014a, pp. 6-7).

Creosote Bush – White Bursage Scrub

Vegetation in the area where the proposed Anza Substation modifications would occur is mapped as creosote bush – white bursage scrub, although it is very sparse due to past and on-going human related disturbances (HELIX 2014c). Creosote bush and white bursage are co-dominant in the shrub canopy. Associated shrub species include white dalea (*Psoralea emoryi*).

Developed

Developed land in the survey area of the transmission line includes the IID Anza Substation.

Non Wetland WUS and WS

Streambed occurs in several places along the proposed 92 kV transmission line (i.e. along the existing IID 12.5 kV distribution line) at the northwest corner of the survey area. These areas are regarded as non-wetland WUS and unvegetated WS because they periodically convey surface flows and are connected to off-site areas recognized as WUS or WS. Tarantula Wash trends approximately south-north just east of the proposed solar farm complex site, and crosses the proposed transmission line alignment.

4.12.3 IMPACTS AND MITIGATION MEASURES

A. STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following CEQA Guidelines as listed in Appendix G. The project would result in a significant impact to biological resources if it would result in any of the following:

- a) 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 California Department of Fish and Game or U.S. Fish and Wildlife Service.

- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
- c) 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.
- d) Interfere substantially with the movement of any 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.
- e) Conflict with any local policies or ordinances protecting biological resource, such as a tree preservation policy or ordinance.
- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

B. METHODOLOGY

For the purposes of the biological resources impact analysis, HELIX assumed that the entire proposed solar farm complex site would be permanently impacted (HELIX 2014b, p. 18). Additionally, it has been assumed that the entire 48-foot wide area for the primary access road (24-foot wide road with 12-foot wide shoulders) would be permanently impacted. Also, it is assumed that there would be minor temporary and permanent impacts from pole installation for the new proposed 92 kV transmission line (assumption of less than 1 acre of total impact) and temporary impacts to approximately 0.1 acre from the use of up to 3 pull sites. The impact numbers include access to these locations.

Finally, it has been assumed that there would be no ground disturbance (other than use of the ROW by vehicles) for construction of the segment of the proposed 92 kV transmission line where it would be overbuilt on the existing IID 12.5 kV distribution line (HELIX 2014b, p. 18).

Jurisdictional Delineation

HELIX biologists Larry Sward and Ben Rosenbaum conducted a jurisdictional delineation for the proposed Project on February 13, 2013 (HELIX 2014a). USACE wetland boundaries were determined using the three criteria (vegetation, hydrology, and soils) established for wetland delineations, as described in the *Wetlands Delineation Manual and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region*.

Areas were determined to be non-wetland WUS if there was evidence of regular surface flow (e.g., bed and bank) but neither the vegetation nor soils criterion was met, and the feature was connected to a WUS. Jurisdictional limits for these areas were defined by the ordinary high water mark (OHWM), which is defined in 33 CFR Section 329.11 as “that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank; shelving; changes in the character of the soil; destruction of terrestrial vegetation; the presence of litter or debris; or other appropriate means that consider the characteristics of the surrounding areas.” The USACE has issued further guidance on the OHWM (HELIX 2014a, p. 3), which also has been used for this delineation. The OHWM widths were measured to the nearest foot at various locations along mapped drainages.

The CDFW jurisdictional boundaries were determined based on the presence of riparian vegetation or regular surface flow. Streambeds within CDFW jurisdiction were delineated based on the definition of streambed as “a body of water that flows at least periodically or intermittently through a bed or

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channel having banks and supporting fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports riparian vegetation” (Title 14, Section 1.72). This definition for CDFW jurisdictional habitat allows for a wide variety of habitat types to be jurisdictional, including some that do not include wetland species (e.g., oak woodland and alluvial fan sage scrub). Definitions of CDFW jurisdictional areas are presented in Appendix I (State Jurisdictional Information) of the *Seville Solar Project Jurisdictional Delineation Report* (HELIX 2014a) included as **Appendix I** of this EIR. Streambed widths were measured to the nearest foot at various locations along the channel. The CDFW publication on dryland watersheds (HELIX 2014a, p. 3) was also used as an aid to map streambeds.

Jurisdictional determinations also took into account the source of any wetland hydrology. Both natural and artificial hydrology exists on solar farm complex site. The artificial hydrology is related to the past farming operations.

Two sample points were studied (**Figure 4.12-6**); standard data forms were completed for each sample point in the field and are included in Appendix C of the *Seville Solar Project Jurisdictional Delineation Report* (HELIX 2014) included as **Appendix I** of this EIR. A sample point is a place where vegetation, soils, and hydrology are evaluated for wetland indicators, as described in the Arid West Supplement (HELIX 2014a, p. 3). These sample points were chosen because they exemplified areas within the survey area that supported wetland vegetation and were potentially WUS or WS.

Focused Survey for Burrowing Owl

HELIX completed the required focused burrowing owl (*Athene cunicularia*) survey for the proposed Project. The focused burrowing owl survey was conducted in accordance with the CDFW guidelines outlined in Appendix D of the California Department of Fish and Wildlife Staff Report for Burrowing Owl Mitigation. The habitat assessment, burrow survey, and focused owl surveys were conducted between January and June 2013. The burrowing owl survey area consisted of portions of the Allegretti Farms property and the proposed 92 kV transmission line alignment (**Figure 4.12-7**).

Table 4.12-4 summarizes survey times and conditions.

TABLE 4.12-4
SURVEY TIMES AND CONDITIONS

Date	Time	Surveyor	Conditions	Survey
1/29/13	0820-1330	Rob Hogenauer Larry Sward	Partly cloudy, 50°F-62°F, wind 5-10 mph	Habitat Assessment and Burrow Survey
3/19/13	0705-0945	Rob Hogenauer	Partly cloudy, 68°F-79°F, wind 3-6 mph	Survey 1
3/19/13	1000-1400	Rob Hogenauer Larry Sward	Partly cloudy, 80°F-88°F, wind 1-5 mph	Burrow Survey
4/2/13	0645-1000	Rob Hogenauer Jesse Miller	Clear, 69°F-81°F, wind 1-4 mph	Survey 1
4/2/13	1705-1815	Rob Hogenauer Jesse Miller	Partly Cloudy, 86°F-91°F, wind 0-3 mph	
4/3/13	0615-1000	Rob Hogenauer Jesse Miller	Clear, 68°F-84°F, wind 0-2 mph	
4/30/13	0530-1110	Rob Hogenauer Jesse Miller	Clear, 77°F-96°F, wind 2-6 mph	Survey 2
5/29/13	1751-2000	Rob Hogenauer	Clear, 87°F-92°F, wind 3-12 mph	Survey 3

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**TABLE 4.12-4
SURVEY TIMES AND CONDITIONS**

Date	Time	Surveyor	Conditions	Survey
5/30/13	0510-0940	Rob Hogenauer Jesse Miller	Clear, 68°F-81°F, wind 1-3 mph	Survey 4
6/25/13	1800-1950	Rob Hogenauer	Clear, 95°F-100°F, wind 0-3 mph	
6/26/13	0520-0930	Rob Hogenauer Jesse Miller	Clear, 85°F-94°F, wind 1-3 mph	

Source: HELIX 2013. F = Fahrenheit, mph = miles per hour

Survey 1 and the burrow survey consisted of walking transects throughout the entire 1,100 acres of potential burrowing owl habitat within the survey area. Surveys 2, 3 and 4 concentrated on the 207 acres of Areas 1, 2 and 3 (**Figure 4.12-7**), along with surveying the outlying burrows. A 150-meter (approximately 492 foot) buffer around the survey area was visually inspected via binoculars and spotting scope during all surveys. A radius of approximately 50 meters (approximately 164 feet) was surveyed around each outlying burrow or cluster of burrows (HELIX 2013, p. 3).

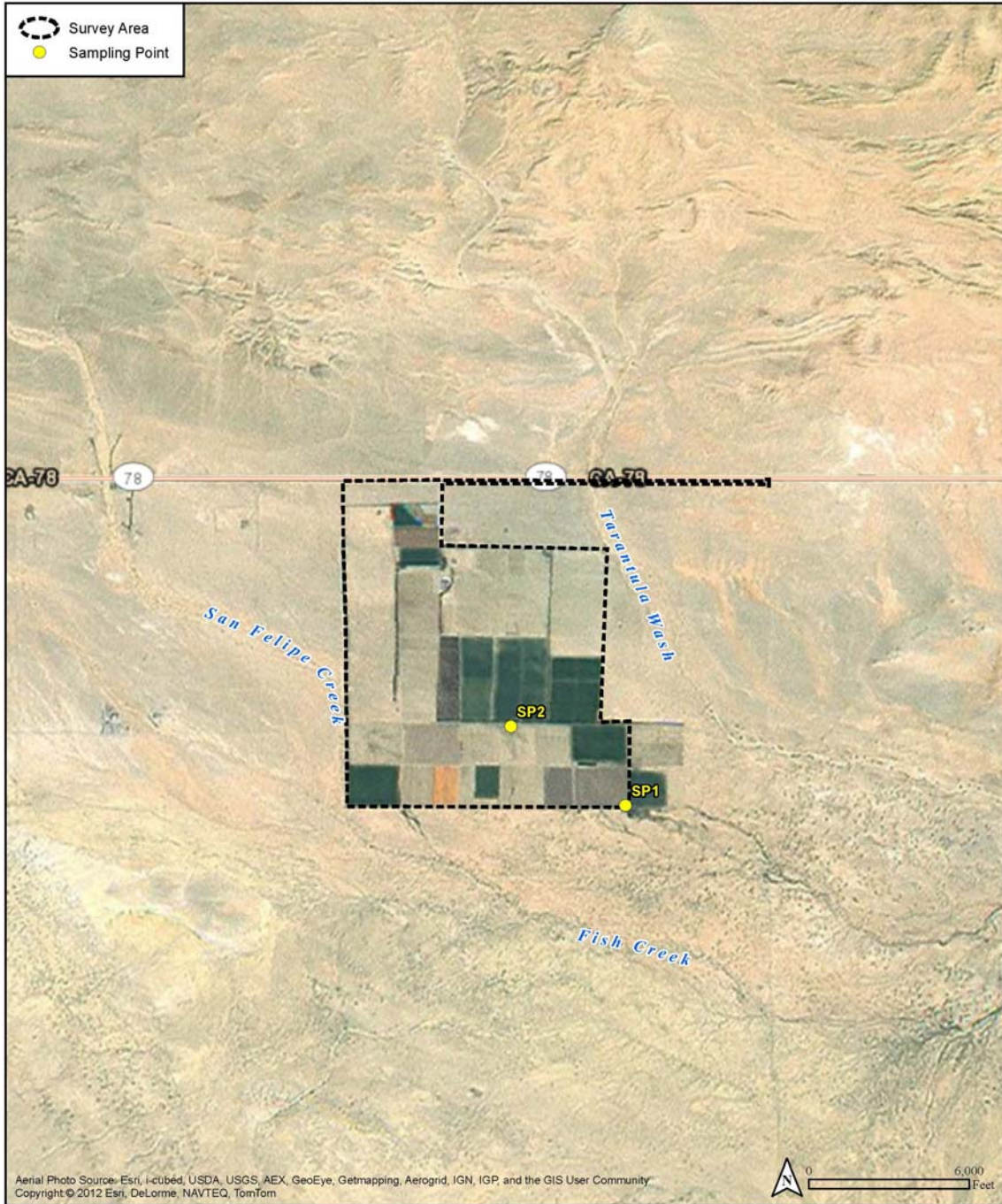
The biologists surveyed transects in the burrowing owl habitat no greater than 20 meters (approximately 65 feet) wide. They walked slowly and methodically, closely checking the areas that met the basic requirements of owl habitat, which include:

- Open expanses of sparsely vegetated areas (less than 30 percent canopy cover for trees and shrubs);
- Gently rolling or level terrain;
- An abundance of small mammal burrows, especially those of the California ground squirrel (*Spermophilus beecheyi*); and
- Fence posts, rocks, or other low perching locations.

All potential owl burrows were checked for signs of recent owl occupation. Burrows that have potential to support burrowing owl or that showed signs of burrowing owl use were mapped. Signs of occupied burrows include:

- Pellets/castings (regurgitated fur, bones, and/or insect parts);
- White wash (excrement); and/or
- Feathers.

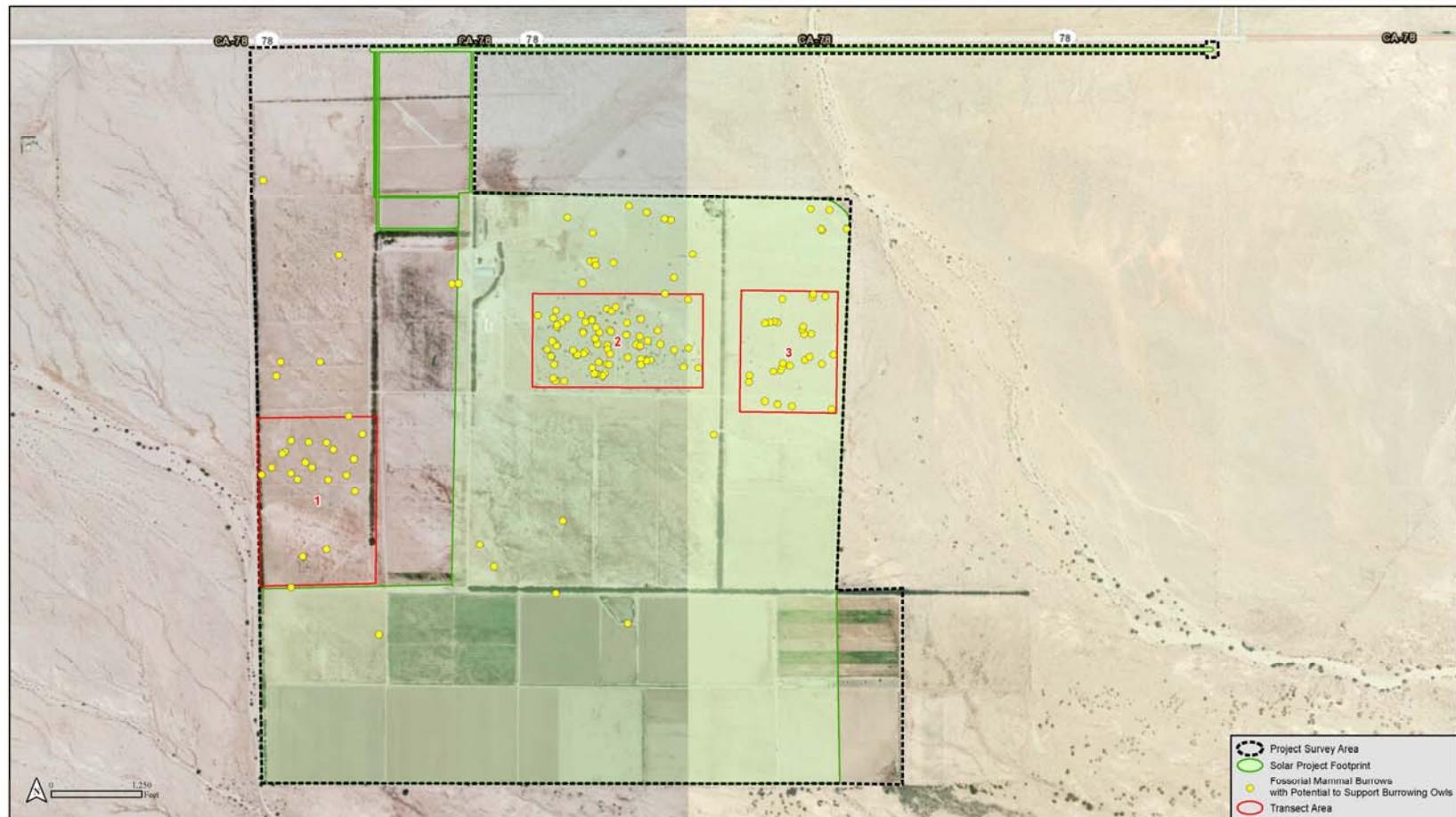
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Source: HELIX 2014a.

FIGURE 4.12-6
JURISDICTIONAL DELINEATION SAMPLING POINTS

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Source: HELIX 2013.

FIGURE 4.12-7
BURROWING OWL SURVEY DETAILS AND RESULTS

C. ISSUES SCOPE OUT AS PART OF THE INITIAL STUDY

Checklist criterion f was scoped out because Imperial County does not have a Habitat Conservation Plan (HCP). Thus, no conflicts or impacts would occur between the proposed Project and an adopted HCP. The Project is not an ACEC of the CDCA. Therefore, no impact would occur.

D. PROJECT IMPACTS AND MITIGATION MEASURES

Impacts to Sensitive Vegetation Community/Land Cover Type

Impact 4.12.1 Construction of the proposed Project would result in the removal of approximately 1,238 acres of vegetation community/land cover type on the solar farm complex site including 13.2 acres of mesquite thicket, a sensitive vegetation community. This is considered a **potentially significant impact**.

Construction**Solar Farm Complex Site**

While construction of the proposed solar farm complex site would result in temporary conversion of idle farmland to a solar energy facility, HELIX assumed that construction of the proposed Project would result in permanent impacts to approximately 1,238 acres of vegetation communities/land cover types. This would occur as a result of vegetation removal, grading, and installation of Project components on the proposed solar farm complex site. **Table 4.12-5** summarizes the impacts (identified by HELIX) to vegetation communities and land cover types on the solar farm complex site.

Of the vegetation community/land cover types presented in **Table 4.12-5**, mesquite thicket is the only sensitive vegetation community present and impacted on the proposed solar farm complex site. Because mesquite thicket is a sensitive community, removal of 13.2 acres to accommodate construction of the proposed Project is considered a **significant impact**. Removal of other communities/land cover types on the solar farm complex site that are not sensitive would result in **less than significant impacts**.

TABLE 4.12-5
IMPACTS TO VEGETATION COMMUNITIES/LAND COVER TYPES ON THE PROPOSED SOLAR FARM COMPLEX SITE

VEGETATION COMMUNITY/LAND COVER TYPE	ACREAGE IMPACTED
White Bursage Scrub	4.5
Creosote Bush Scrub	1.1
Creosote Bush – White Bursage Scrub	0.3
Allscale Scrub	31.6
White Dalea Scrub (provisional)	19.8
Quailbush Scrub	0.4
Mesquite Thicket	13.2
Bulrush Marsh	0.3
Naturalized Mediterranean Grassland	2.3
Tamarisk Thickets	16.3
Tamarisk Windbreak	28.8
Bermuda Grass Grassland (provisional)	3.9
Upland Mustards	67.2
Farmed Land	13.2
Fallow Agriculture	834.3

TABLE 4.12-5
IMPACTS TO VEGETATION COMMUNITIES/LAND COVER TYPES ON THE PROPOSED SOLAR
FARM COMPLEX SITE

VEGETATION COMMUNITY/LAND COVER TYPE	ACREAGE IMPACTED
Disturbed Habitat	195.5
Developed	5.6
TOTAL¹	1,238

Source: HELIX 2014b, p. 19. ¹ Total reflects rounding.

Transmission Line

It is assumed that no ground disturbance would occur in association with overbuilding the proposed 92 kV transmission line on the existing IID distribution line poles (other than use of the ROW by vehicles where off-road vehicle activity has already occurred). Minor temporary and permanent impacts (assumption of less than one acre of total impact) are anticipated from pole installation. Temporary impacts to approximately 0.1 acre are anticipated from the use of up to three pull sites (approximately 1,500 square feet of impact for each) for the new proposed 92 kV transmission line and approximately 0.24 acres would be disturbed in association with modifications to the Anza Substation. The proposed 92 kV transmission line would be located in, or span, non-sensitive vegetation communities (i.e., creosote bush scrub, allscale scrub, tamarisk windbreak, and fallow agriculture). Likewise, the Anza Substation modifications would occur in an area that is subject to on-going human related disturbances with no rare plants observed (HELIX 2014d). Surrounding communities are also non-sensitive. Therefore, impacts to vegetation communities/land cover types resulting from construction of the proposed 92 kV transmission line and Anza Substation modifications are considered **less than significant**.

Access Road

Impacts would also occur from construction of the primary access road outside the proposed solar farm complex site. **Table 4.12-6** provides a summary of impacts to vegetation communities and land cover types that would occur as a result of construction of the proposed primary access road.

TABLE 4.12-6
IMPACTS TO VEGETATION COMMUNITIES/LAND COVER TYPES
RESULTING FROM CONSTRUCTION OF THE PROPOSED PRIMARY ACCESS ROAD

VEGETATION COMMUNITY/LAND COVER TYPE	ACREAGE IMPACTED
Creosote Bush Scrub	0.80
Allscale Scrub	1.10
Tamarisk Windbreak	0.08
Fallow Agriculture	2.30
Bermuda Grass Grassland	0.01
Upland Mustards	0.50
TOTAL	4.80

Source: HELIX 2014a, p. 19. ¹ Total reflects rounding.

As shown in **Table 4.12-6**, all impacts associated with construction of the proposed primary access road would be to non-sensitive vegetation communities/land cover types. Therefore, these impacts would be **less than significant**.

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Operation

Impacts to a sensitive vegetation community or land cover type would occur during construction in association with preparation of the solar farm complex site. **No impact** to a sensitive vegetation community or land cover type is anticipated during Project operation.

Reclamation

Reclamation would occur at the end of the Project's useful life. In the interim, the solar farm complex site, 92 kV transmission line corridor, and IID Anza Substation areas would be maintained to avoid establishment of a sensitive vegetation community or land cover type. Therefore, **no impact** to a sensitive vegetation community or land cover type would occur during Project reclamation.

Mitigation Measures

MM 4.12.1 The loss of mesquite thicket shall be mitigated through a combination of compensation and/or restoration at a minimum 1:1 ratio, or as required by permitting agencies. Habitat compensation shall be accomplished through agency-approved land preservation or through mitigation fee payment for land supporting comparable habitat to that impacted by the proposed Project. Restoration may be appropriate mitigation for impacts if demonstrated to be feasible, and if the restoration effort is implemented pursuant to a Habitat Restoration/Revegetation Plan.

Timing/Implementation: Prior to issuance of grading permits.

Enforcement/Monitoring: Project Applicant in collaboration with CDFW.

Significance After Mitigation

Implementation of MM 4.12.1 would reduce impacts to mesquite thicket through the use of compensation and/or restoration with a Habitat Restoration/Revegetation Plan. These techniques would reduce impacts to mesquite thicket to **less than significant**.

Impacts to Jurisdictional Areas

Impact 4.12.2 Construction of the proposed transmission line may result in impacts to potential federal and state jurisdictional areas. This is considered a **potentially significant impact**.

The survey area used in the Jurisdictional Delineation Report covered the proposed solar farm complex site; the existing transmission line ROW along SR 78 (where the proposed 92 kV transmission line would be overbuilt); the new primary access road; and the north-south proposed secondary, emergency access road (refer to **Figure 4.12-1**). Jurisdictional areas within the survey area consist of a single wetland type along with non-wetland WUS/CDFW streambed (HELIX 2014a, p. 10).

Construction

Solar Farm Complex Site

Two wetland delineation points were sampled within the solar farm complex site (**Figures 4.12-8 and 4.12-9**). A summary description of these samples is provided below along with indicator codes in parenthesis [Note: full descriptions of the primary and secondary indicator codes are provided as part of Appendix A to the Seville Solar Project Jurisdictional Delineation Report included in **Appendix I** of this EIR]. As shown in **Table 4.12-7**, four species were present within the sample points. The species' indicator status ranged from obligate wetland to obligate upland.

TABLE 4.2-7
PLANT SPECIES OBSERVED AT SAMPLE POINTS

FAMILY	SPECIES	COMMON NAME	INDICATOR STATUS†
Chenopodiaceae	<i>Atriplex canescens</i>	shad-scale	UPL
Cyperaceae	<i>Bolboschoenus maritimus ssp. paludosus</i>	alkali bulrush	OBL
Poaceae	<i>Phalaris minor</i> *	Mediterranean canary grass	UPL
Polygonaceae	<i>Polygonum sp.</i>	knotweed	FACW ^Θ
Tamaricaceae	<i>Tamarix ramosissima</i> *	saltcedar	FAC

Source: HELIX 2014a, p. 9. † FAC=facultative species, FACW=facultative wetland species, OBL=obligate wetland species;

UPL=obligate upland species. Please also see Appendix A. * Non-native species.

Θ Not identified to species, assumed to be wetland plant by best professional judgment.

Sample Point 1

Sample Point 1 was located in a low lying area at the southeastern corner of the survey area. This location is the lowest part of the solar farm complex site. Runoff is conveyed into the basin from a nearby, constructed drainage ditch. The basin did not have any outlet and was not connected to any WUS or waters of the State. A soil pit was excavated to a depth of 12 inches but did not reveal any hydric soil indicators. Wetland hydrology was indicated by the presence of a primary indicator surface soil cracks (B6). Dominant species present included two upland species (*Atriplex canescens* [shad-scale] and Mediterranean canary grass [*Phalaris minor*]), one facultative species (*Tamarix ramosissima* [saltcedar]), and one potentially facultative wetland species (*Polygonum sp.* [knotweed]). Because *Polygonum* was not identifiable to species, its wetland indicator status is not known (Table 4.12-7) but was assumed to be a wetland plant. Vegetation was dominated by upland species and did not qualify as wetland vegetation by either the dominance test or prevalence index. No hydric soil indicators were noted. Possible wetland hydrology was noted by the presence of soil surface cracks (B6), a primary wetland hydrology indicator. The primary source of surface water that created these cracks is thought to be from wells associated with past agricultural operations. Sample Point 1 is an upland and not under the jurisdiction of the USACE or CDFW (HELIX 2014a, p. 13).

Sample Point 2

Sample Point 2 was located in an agricultural reservoir. Water for this reservoir is supplied by wells. Most of the vegetation at this sample point was senescent (i.e. old). The habitat was dominated by a wetland species, alkali bulrush (*Bolboschoenus maritimus ssp. paludosus*), thus meeting the Dominance Test for wetland vegetation. Alkali bulrush only had seven percent total cover, with most of the standing biomass of this species being senescent. Biotic crust covered 90 percent of the soil surface. A soil pit excavated to a depth of 15 inches revealed a depleted matrix (F3), a hydric soil indicator. Wetland hydrology was indicated by the presence of two primary indicators: surface soil cracks (B6) and biotic crust (B12); and one secondary indicator: FAC-neutral test (D5).

Unlike other wetland habitats within agricultural operations in Imperial County, this stand is not regarded as wetland WUS or WS. Other agricultural operations in the county are irrigated by Colorado River water. Excess irrigation water collects in drains that then flow into the Salton Sea, a WUS and WS. Irrigation water at Allegretti Farms is from on-site wells. Rather than flowing off site, irrigation water is directed to detention basins where it percolates into the ground. Sample Point 2 is regarded as upland due to artificial hydrology (that created the observed wetland vegetation, wetland soil, and hydrology indicators) and its isolation from other jurisdictional areas. It is not under the jurisdiction of the USACE or CDFW (HELIX 2014a, p. 13).

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Based on the results of Sample Point 1 and Sample Point 2, **no impacts** to federal and state jurisdictional areas would occur in association with construction of the proposed solar farm complex site.

Transmission Line

Federal Jurisdiction

Federal (USACE) jurisdictional areas include 0.05 acre of tamarisk thicket and 0.58 acre of non-wetland WUS (i.e., streambed and drainage ditch), along a total of 1,043 linear feet within the transmission line alignment (**Figure 4.12-8; Table 4.12-8**). Thus, impacts to wetland and non-wetland WUS are considered **potentially significant**. No jurisdictional resources are located in the area of the Anza Substation modifications (HELIX 2014c).

TABLE 4.12-8
WATERS OF THE U.S.

WATERS OF THE U.S.	AREA ¹ (acres)	LENGTH ² (feet)
WETLAND		
Tamarisk Thicket	0.05	35
NON-WETLAND		
Non-wetland Waters of the U.S.	0.58	1,008
TOTAL	0.63	1,043

Source: HELIX 2014a, p. 11. ¹Rounded to the nearest one-hundredth. ²Rounded to the nearest foot.

Federal Permitting

Placement of fill and spoils (impacts) to jurisdictional areas are regulated by the USACE under Section 404 of the CWA (33 USC 401 et seq.; 33 USC 1344; USC 1413; and Department of Defense, Department of the Army, Corps of Engineers 33 CFR Part 323). A federal CWA Section 404 Permit would be required for the project to place fill in WUS. A CWA Section 401 Water Quality Certification administered by the SWRCB must be issued prior to any 404 Permit. All USACE jurisdictional areas would be subject to the 401 Certification.

It is likely that impacts to WUS associated with the transmission line are avoidable. If WUS cannot be avoided, the Project should qualify for a Nationwide Permit No. 12.

State Jurisdiction

As depicted in **Figure 4.12-9** and summarized in **Table 4.12-9**, State (CDFW) jurisdictional areas impacted by the proposed transmission line include tamarisk thicket and streambed (including the drainage ditch), and comprise a total 0.72 acre and 1,043 linear feet. This small patch of habitat occurs at the point where the transmission line crosses Tarantula Wash.

TABLE 4.12-9
WATERS OF THE STATE

HABITAT	AREA ¹ (acres)	LENGTH ² (feet)
Tamarisk Thicket	0.05	35
Streambed	0.67	1,008
TOTAL	0.72	1,043

Source: HELIX 2014a, p. 12. ¹Rounded to nearest one-hundredth. ²Rounded to nearest foot.

State Permitting

CDFW regulates alterations or impacts to streambeds or lakes under California Fish and Game Code 1602. The CDFW requires a Streambed Alteration Agreement (SAA) for projects that will divert or obstruct the natural flow of water; change the bed, channel, or bank of any stream; or use any material from a streambed. The SAA is a contract between the applicant and CDFW stating what activities can occur in the riparian zone and stream course (HELIX 2014a, p. 12). Impacts to jurisdictional areas during construction of the transmission line are considered **potentially significant**. Therefore, a SAA may be necessary for activities along the transmission line.

Operation

Impacts to jurisdictional areas would occur in association with construction of the transmission line. However, **no impact** to a jurisdictional area is anticipated during Project operation. Should any maintenance activities be required that would impact jurisdictional areas, they would be addressed through implementation of the mitigation measures identified below.

Reclamation

Reclamation would occur at the end of the Project's useful life. The IID-owned facilities (IID switchyard and 92 kV transmission line on the Property, 92 kV transmission line with underbuilt 12.5 kV distribution line, and the 12.5 kV distribution line system constructed on the Property) would not be decommissioned until IID determined that these improvements were no longer needed and could be retired and removed. As a result, USACE jurisdictional areas and non-wetland WUS (i.e., streambed and drainage ditch) along a total of 1,043 linear feet within the transmission line alignment would not be disturbed. Therefore, **no impact** to a jurisdictional area would occur during Project reclamation.

Mitigation Measures

MM 4.12.2a The Applicant shall create, restore, and/or enhance jurisdictional wetland areas impacted by the proposed transmission line. A 2:1 ratio shall be required for any wetland habitat with at least 1:1 of the mitigation ratio to include creation of wetland habitat (so there would be no net loss of jurisdictional habitat). The other 1:1 ratio shall consist of acquisition and preservation of existing jurisdictional habitat acceptable to the permitting agencies.

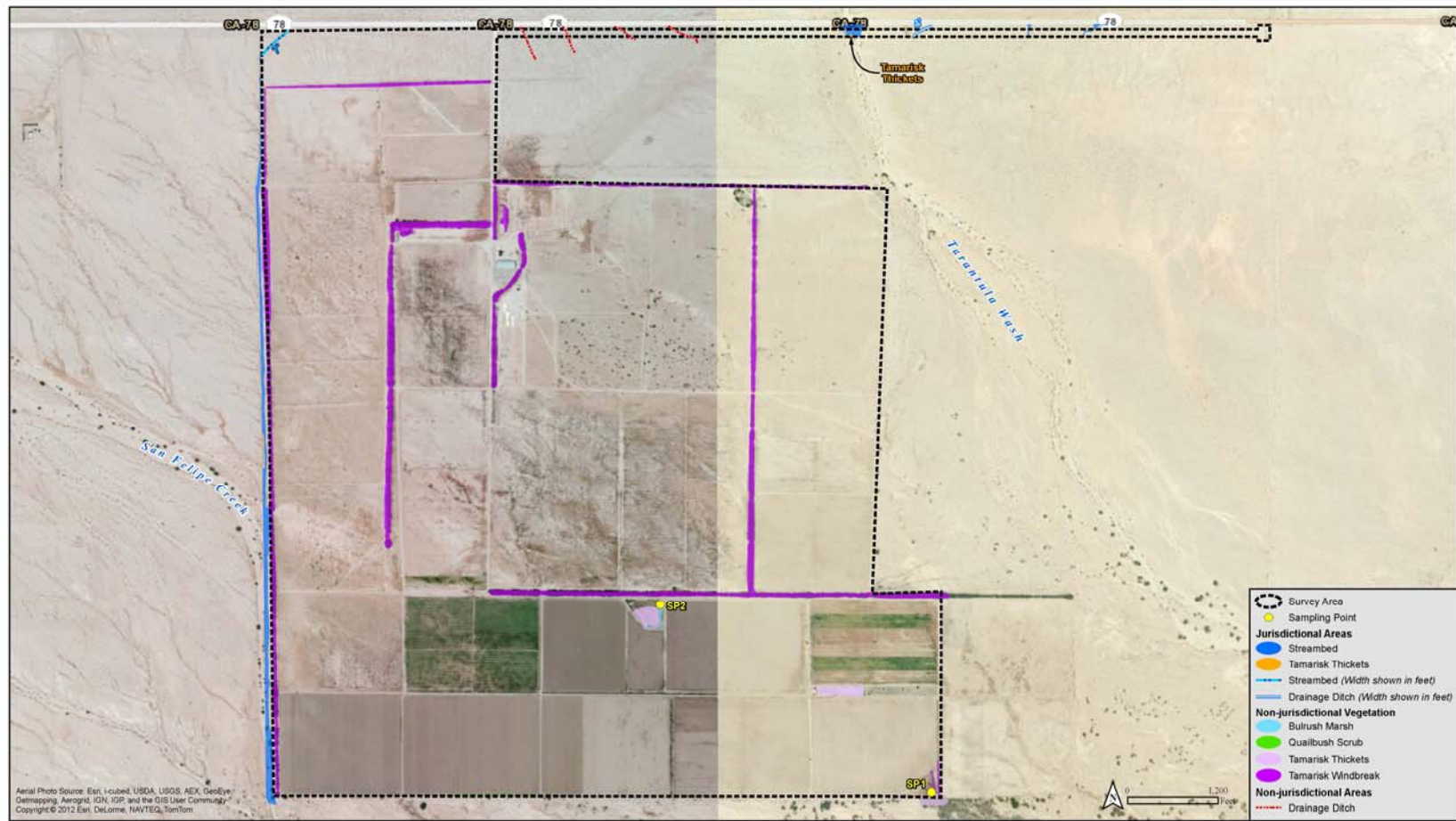
MM 4.12.2b A 1:1 ratio shall also be required for impacts to non-wetland jurisdictional waters in the form of wetland enhancement, restoration, or creation as determined in consultation with the permitting agencies. Permits shall be obtained from the USACE, RWQCB, SWRCB, and CDFW, as appropriate, prior to initiating construction in jurisdictional areas.

Timing/Implementation: Prior to issuance of permits/prior to initiating construction in jurisdictional areas.

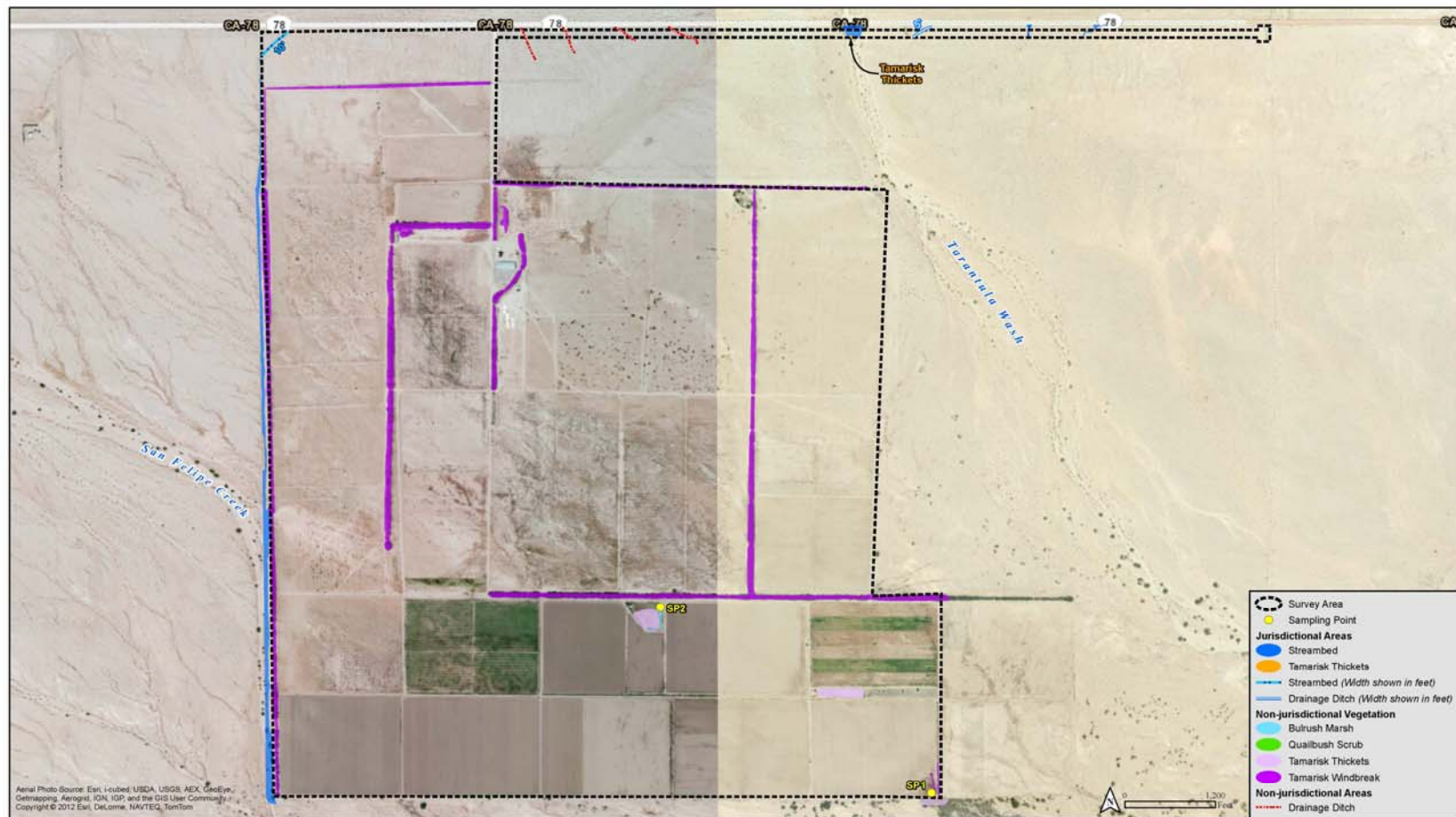
Enforcement/Monitoring: USACE, RWQCB, State Water Resources Control Board, and CDFW, as appropriate.

Significance After Mitigation

Implementation of **MM 4.12.2a** and **MM 4.12.2b** would reduce impacts to jurisdictional and non-wetland jurisdiction through the application of mitigation ratios. These ratios would create wetland habitat, require the acquisition and preservation of existing jurisdictional habitat, and enhance wetland areas. Following implementation of these measures, impacts to federal and state jurisdictional areas resulting from construction of the proposed transmission line would be reduced to **less than significant**.



**FIGURE 4.12-8
WATERS OF THE U.S.**



**FIGURE 4.12-9
WATERS OF THE STATE**

Impacts to Special Status Animal Species – Flat tailed horned lizard (FTHL)

Impact 4.12.3 Construction of the proposed Project could potentially affect FTHL. This is considered a **potentially significant impact**.

Construction

Solar Farm Complex

While the FTHL is a State species of special concern (like the loggerhead shrike and northern harrier), the anticipated impacts to this species within the solar farm complex site are considered to be limited due to the majority of the survey area being heavily impacted by agricultural operations (HELIX 2014b, p. 21). Nevertheless, if FTHL are discovered during construction, it would present a **potentially significant impact**.

Transmission Line

The new 92 kV transmission line would be overbuilt within the existing IID ROW. Transmission line construction is expected to require approximately three and a half months and an estimated 12 worker trips and two haul truck trips daily over an average of 0.80 miles of unpaved private road. During construction, no ground disturbance is proposed other than use of the ROW by vehicles. Nevertheless, because the FTHL is a State species of special concern, and there is potential for this species to be on BLM-managed lands, impacts are considered **potentially significant**.

Operation

Once the Project is operational, the potential for FTHL would be diminished as a result of development of the solar farm complex. However, FTHL could occur on BLM-managed lands and if any maintenance activities are required along the transmission line, a **potentially significant impact** could occur during Project operation. Any maintenance activity potentially impacting FTHL would be addressed through implementation of the mitigation measures identified below.

Reclamation

Reclamation would occur at the end of the Project's useful life. Reclamation activities on the solar farm complex site would include dismantling and demolition of above-ground structures; concrete removal; removal and dismantling of underground utilities; excavation and removal of soil; and final site contour. The IID-owned facilities (IID switchyard and 92 kV transmission line on the Property, 92 kV transmission line with underbuilt 12.5 kV distribution line, and the 12.5 kV distribution line system constructed on the Property) would not be decommissioned until IID determined that these improvements were no longer needed and could be retired and removed. While the potential for impacts to FTHL during reclamation of the solar farm complex site would likely be low based on the disturbed nature of the site, the potential still exists for the species to be present. Therefore, potential for impacts to FTHL during Project reclamation are **considered potentially significant** and would be addressed through implementation of the mitigation measures identified below. Upon reclamation of the solar farm complex site to its end state of idle farmland, no impacts to FTHL are anticipated.

Mitigation Measures

MM 4.12.3 The proposed Project shall implement the following mitigation measures in accordance with the terms and conditions of IID's ROW Grant.

- A worker education program shall be developed and implemented for all construction personnel.

- A field contact representative (FCR) shall be designated prior to Project initiation to: ensure compliance with the protective measures; serve as the primary agency contact; and have authority and responsibility to stop any activities that violate these measures. The FCR shall be authorized by CDFW to handle the FTHL.
- All project work areas shall be clearly flagged or similarly marked at the outer boundaries to define the limit of work activities. All construction workers shall restrict their activities and vehicles to areas which have been flagged to avoid impacts to the FTHL.
- FTHL that are relocated by the FCR shall be placed in the shade of a large shrub a short distance from the construction in the direction of undisturbed habitat. Captured FTHL shall be kept in a dry container. FTHL shall be held at temperatures between 25°C and 35°C and shall not be exposed to any direct sunlight. Release shall occur as soon as possible during daylight hours (32°C to 40°C). The FCR shall use judgment and discretion to ensure the survival of the FTHL.
- Existing roads shall be used for travel and equipment storage whenever possible.
- The area of disturbance of vegetation and soils shall be the minimum required for the Project. Clearing of vegetation and grading shall be minimized.
- No construction holes shall be left open overnight. Covers shall be secured in place at the end of construction each day. Covers shall be strong enough to prevent wildlife from falling through the cover and into a hole.

Timing/Implementation: Prior to and during construction, as appropriate.
Enforcement/Monitoring: CDFW.

Significance After Mitigation

Implementation of **MM 4.12.3** would reduce impacts to FTHL through worker education, designation of an FCR, demarcation of work areas, relocation of FTHL, use of existing roads, minimizing grading and vegetation clearance and covering of construction holes. Each of these measures would serve to reduce the likelihood of impacting FTHL should they be present. Following implementation of these measures, impacts to FTHL would be reduced to **less than significant**.

Impacts to Special Status Animal Species – Loggerhead Shrike

Impact 4.12.4 Loggerhead shrike was observed during biological surveys of the Project area. This species has a lower level of sensitivity than other special status species. In addition, superior habitat is available adjacent to the Project area. Therefore, impacts to loggerhead shrike are considered **less than significant**.

Construction

Solar Farm Complex

The loggerhead shrike is a State species of special concern. One loggerhead shrike was observed in the survey area along the southern border of the proposed solar farm complex site (**Figure 4.12-4**). Potential shrike habitat on the proposed solar farm complex site is not high quality. The surrounding desert habitat is more typical of loggerhead shrike habitat. Loggerhead shrike has a lower level of sensitivity than other special status animal species. In addition, superior habitat for this species occurs adjacent to the proposed

4.12 BIOLOGICAL RESOURCES

solar farm complex site and elsewhere in the region. Therefore, potential impacts to the loggerhead shrike during construction of proposed Project are considered **less than significant**.

Transmission Line

Loggerhead shrike was also observed in the survey area along the existing IID distribution line (**Figure 4.12-5**). However, there would be no change in loggerhead shrike habitat in the IID ROW from the overbuild of the new 92 kV transmission line. Therefore, impacts to this species during construction of the proposed transmission line are considered **less than significant**.

Operation

Once the Project is operational, the solar farm complex site would be developed with solar facilities. This would make the solar farm complex site less desirable for loggerhead shrike. In addition, superior habitat for this species occurs adjacent to the proposed solar farm complex site and elsewhere in the region. Therefore, potential impacts to the loggerhead shrike from construction of proposed Project are considered **less than significant**.

Reclamation

Reclamation activities would be similar to construction activities and would disturb the solar farm complex site. Because superior habitat for loggerhead shrike occurs adjacent to the proposed solar farm complex site and elsewhere in the region, this species is not anticipated to be impacted during reclamation. Therefore, potential impacts to the loggerhead shrike during reclamation of proposed Project are considered **less than significant**. Upon reclamation of the solar farm complex site to its end state of idle farmland, no impacts to loggerhead shrike are anticipated.

Impacts to Special Status Animal Species with Potential to Occur on the Project site

Impact 4.12.5 Couch's spadefoot, mountain plover, northern harrier, and American badger are special status animal species with potential to occur in the area. However, each of these species have either low potential to occur or low to moderate potential to forage in the area. Therefore, impacts to these special status animal species are considered **less than significant**.

The Biological Technical Report identified Couch's spadefoot, mountain plover, northern harrier and American badger as having potential to occur within the survey area due to the presence of potentially suitable habitat (HELIX 2014b, p.10). However, each of these species has low potential to occur in the survey area or has low to moderate potential to forage in the survey area (e.g., northern harrier). None of these species are state or federally listed. Based on the low level of sensitivity and the presence of habitat occurring adjacent to the solar farm complex site and elsewhere in the region (similar to loggerhead shrike discussed in Impact 4.12.4, above) (HELIX 2014b, p.20), impacts to these species during construction, should they be present, would be **less than significant**. Each species is described below.

Construction

Solar Farm Complex and Transmission Line

Couch's Spadefoot

The reservoir or basin on the proposed solar farm complex site could provide the temporary pools necessary for reproduction. However, the fact that the survey area has been so heavily disturbed, and the species only occurs in scattered populations that are east of the Algodones Dunes (which are more than 50 miles east of the proposed solar site). Therefore, it is highly unlikely that the species would be present.

Mountain Plover

The survey area does have potentially suitable wintering habitat for mountain plover. However, due to the species' current wintering distribution in Imperial County (i.e., primarily south of the Salton Sea), and the fact that it has not been documented in this part of Imperial Valley, the potential for the mountain plover to occur in the survey area is low.

Northern Harrier

No suitable nesting habitat for the northern harrier exists within or near the survey area. However, this species has low to moderate potential to forage in the survey area.

American Badger

The American badger is an uncommon but permanent resident in dry open stages of shrub, forest, and herbaceous habitats with friable soils where it digs burrows. Because this species is typically uncommon in areas with the characteristics of the survey area, the potential for the badger to be present is low.

Operation

Once the Project is operational, the solar farm complex site would be developed with solar facilities. Development will likely make the solar farm complex site less desirable for Couch's spadefoot, mountain plover, northern harrier and American badger to occur or forage. Because habitat for these species is present adjacent to the solar farm complex site and elsewhere in the region, potential impacts to Couch's spadefoot, mountain plover, northern harrier and American badger during Project operation are considered **less than significant**.

Reclamation

Reclamation activities would be similar to construction activities and would disturb the solar farm complex site. Because habitat for Couch's spadefoot, mountain plover, northern harrier and American badger is present adjacent to the solar farm complex site and elsewhere in the region, potential impacts these species during Project reclamation are considered **less than significant**. Upon reclamation of the solar farm complex site to its end state of idle farmland, no impacts to Couch's spadefoot, mountain plover, northern harrier and American badger are anticipated.

Mitigation Measures

None required.

Significance after Mitigation

Not Applicable.

Impacts to Special Status Animal Species – Burrowing Owl

Impact 4.12.6 The Project area supports burrowing owl habitat. The burrowing owl is a BLM Sensitive species, USFWS Bird of Conservation Concern, and CDFW Species of Special Concern. Therefore, impacts to burrowing owl are considered **potentially significant**.

As discussed in subsection 4.12.2, Environmental Setting, a focused burrowing owl survey was conducted by HELIX in accordance with CDFW guidelines in 2013 (HELIX 2013). While no burrowing owl or additional burrowing owl sign (other than three old pellets) was observed on or in the immediate vicinity of the survey area, it was determined that the survey area does support burrowing owl habitat and a number of fossorial mammal burrows with potential to support burrowing owl (HELIX 2013).

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Construction

Solar Farm Complex

Direct effects to the burrowing owl from construction could include destruction of burrows/burrow entrances, mortality, and loss of habitat surrounding occupied burrows. “Occupied” is defined as a burrow that shows sign of burrowing owl occupancy (e.g., an owl, its molted feathers, cast pellets, prey remains, eggshell fragments, or excrement at or near a burrow entrance) within the last three years (HELIX 2013, p. 22). Construction activities such as grading, movement of construction vehicles or heavy equipment, and installation of the proposed Project components could result in: the direct mortality of burrowing owls through crushing of adults, young, or eggs within burrows; entrapment of/injury to owls within burrows if burrow entrances become blocked; or the loss of nesting burrows, satellite burrows, foraging habitat, or wintering habitat (HELIX 2013, p. 22). Therefore, impacts to burrowing owl during Project construction are considered **potentially significant**.

Transmission Line

Two burrows with potential to support burrowing owl were observed within the proposed transmission line alignment during the habitat assessment. These burrows were noted to have been filled in by windblown debris, off-highway vehicles, or some other incidental method between Surveys 1 and 2. The burrows remained closed for the subsequent surveys and are shown on the map depicting potential burrowing owl burrows (**Figure 4.12-6**). During one of the burrowing owl surveys, HELIX inspected the entire perimeter of the existing substation, including the expansion area. No burrowing owl were observed in the substation expansion area (HELIX 2014d).

Operation

Once the Project is operational, the potential for burrowing owl on the solar farm site would be diminished because the site would be developed with solar facilities rather than former agricultural land. Impacts to burrowing owl during Project operation are therefore considered **less than significant**. Should any maintenance activities be required that would impact burrowing owl, they would be addressed through implementation of the mitigation measures identified below.

Reclamation

Reclamation would occur at the end of the Project’s useful life. Reclamation activities on the solar farm complex site would include dismantling and demolition of above-ground structures; concrete removal; removal and dismantling of underground utilities; excavation and removal of soil; and final site contour. The potential for impacts to burrowing owl during reclamation of the solar farm complex site would likely be low based on its use as a solar farm complex. Therefore, impacts to burrowing owl during reclamation are considered **less than significant**. Upon reclamation of the solar farm complex site to its end state of idle farmland, no impacts to burrowing owl are anticipated.

Mitigation Measures

MM 4.12.6a The following measures will avoid, minimize, or mitigate potential impacts to burrowing owls during construction activities:

- In accordance with the Staff Report on Burrowing Owl Mitigation (CDFW 2012), a pre-construction take avoidance survey shall be conducted 14 days prior to any ground disturbing activities. If the burrowing owl is absent, then no mitigation is required.

MM 4.12.6b If burrowing owl is present, the following mitigation shall be implemented:

- If burrowing owls and their habitat can be protected in place on or adjacent to a project site, disturbance impacts shall be minimized through the use of buffer zones, visual screens, or other measures in accordance with CDFW (2012).
- Occupied burrows shall be avoided during the breeding period from February 1 through August 31 (CDFW 2012). “Occupied” is defined as a burrow that shows sign of burrowing owl occupancy within the last 3 years.
- Occupied burrows shall also be avoided during the non-breeding season. Burrow exclusion is a technique of installing one-way doors in burrow openings during the non-breeding season to temporarily exclude burrowing owls, or permanently exclude burrowing owls and close burrows after verifying burrows are empty by site monitoring and scoping. Eviction of burrowing owls is a potentially significant impact under CEQA and would require CDFW approval of a Burrowing Owl Exclusion Plan (CDFW 2012).
- Mitigation for impacts to nesting, occupied, and satellite burrows and/or burrowing owl habitat is required such that the habitat acreage, number of burrows and burrowing owls impacted are replaced based on the burrowing owl life history information provided in Staff Report on Burrowing Owl Mitigation (CDFW 2012).
- Coordination with CDFW may be necessary for the development of site-specific avoidance and mitigation measures.

Timing/Implementation: Prior to commencing construction.

Enforcement/Monitoring: Project Applicant in collaboration with CDFW.

Significance After Mitigation

Implementation of mitigation measures MM 4.12.6a and MM 4.12.6b would reduce impacts to burrowing owl through implementation of a pre-construction survey and associated measures to avoid the species if present. Consultation with CDFW regarding site-specific avoidance and mitigation measures is also required. Implementation of these measures would reduce potential impacts to burrowing owl throughout construction, operation and reclamation to **less than significant** levels.

Impacts to Special Status Animal Species - Desert Pupfish

Impact 4.12.7 The desert pupfish as a federal and state listed endangered species. While critical habitat has been designated in the vicinity of the Project area, this species does not occur within the survey area. Therefore, impacts to desert pupfish are considered **less than significant**.

Solar Farm Complex Site and Transmission Line

Construction

The desert pupfish does not occur in the survey area. However, critical habitat for the species occurs approximately 2 miles southeast of the survey area (i.e. San Filipe Creek). Based on the distance of the species from the survey area, and the requirement that the Project prepare and comply with a Storm Water Pollution Prevention Plan (SWPPP), impacts to desert pupfish during construction are considered **less than significant**.

Operation

Runoff and reduced water quality impacts to the desert pupfish critical habitat are not anticipated from operation of the proposed Project for the following reasons. First, the proposed Project includes on-site retention basins that will fully retain the 100-year, 24-hour peak flood volume resulting from on-

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site precipitation. Additionally, the existing berms on the west and north sides of the proposed solar farm complex site that currently divert off-site flow around the Property will be maintained. However, any flows which breach the berms will be allowed to flow unimpeded across the solar farm complex site and under the solar panels. Finally, the proposed Project would be required to conform to Policy 4 of the Water Element in the Imperial County General Plan (County of Imperial 1993) regarding the protection of water resources, and prepare and comply with a Storm Water Pollution Prevention Plan (SWPPP) (HELIX 2014b, p. 21). Therefore impacts to desert pupfish during operation are considered **less than significant**.

Reclamation

As noted under the discussion of construction, above, based on the distance of the species from the survey area, and the requirement that the Project prepare and comply with a Storm Water Pollution Prevention Plan (SWPPP), impacts to desert pupfish during reclamation are considered **less than significant**. Likewise, upon reclamation of the solar farm complex site to its end state of idle farmland, no impacts desert pupfish are anticipated.

Mitigation Measures

None required.

Significance After Mitigation

Less than significant.

Impacts to Nesting and Migratory Birds

Impact 4.12.8 The proposed Project could result in direct impacts to avian nesting protected under California Fish and Wildlife Code and the MBTA. This is considered a **potentially significant impact**.

Construction

Solar Farm Complex Site and Transmission Line

The proposed Project could result in direct impacts to avian nesting protected under California Fish and Wildlife Code sections 3503.5 and 3511 and the MBTA. Violation of the California Fish and Wildlife Code and the MBTA is not allowed. Construction activities, involving removal of vegetation, could cause destruction or abandonment of nests or the mortality of adults, young, or eggs through vehicle strikes, crushing, etc. (Note: Impacts to burrowing owl, specifically, were addressed in Impact 4.12.6). This is considered a **potentially significant impact**.

Operation

The California desert is part of the Pacific Flyway, one of four major bird migration corridors in North America. Lakes in arid and semi-arid parts of the west were important rest and refueling stops for long-distance migrants. In the last two centuries human activity has altered, displaced, or dried up many of the lakes and wetlands migrating birds once depended on as they traveled the Pacific Flyway. Remaining rest stops such as the Salton Sea, are crucial, widely separated oases in the desert section of the Flyway (Clarke 2013).

A few solar projects (Desert Sunlight Solar Farm and the Genesis Solar Energy Project) within the Flyway have experienced bird mortalities associated with strikes against PV arrays. A large portion of the mortalities associated with the strikes occur to water birds. PV solar panels can generate reflective glare that mimics a lake for birds flying overhead. Light reflecting off non-metallic surfaces tends to become

polarized. Both water and the semiconducting surfaces of PV panels are non-metallic. As a result, the glare from PV panels may resemble the glare from water if the birds are sensitive to light polarization. Many birds are many are in fact sensitive to light polarization (Clarke 2013).

The Project proposes to use non-reflective PV or CPV panels which are not anticipated to create glare. One exception of possible winter-time glare may be visible to residences west of the solar farm complex site if fixed-tilt PV arrays are used. As a result, impacts from bird strikes are not anticipated to be substantial. Bird mortalities would be documented as part of long-term operational mitigation by a qualified biologist. Therefore, impacts to migratory birds during Project operation are considered **less than significant**.

Reclamation

Reclamation would occur at the end of the Project's useful life and include dismantling and demolition of above-ground structures; concrete removal; removal and dismantling of underground utilities; excavation and removal of soil, etc. While vegetation removal during reclamation is not anticipated to be at the level that occurred during construction, reclamation activities could cause destruction or abandonment of nests or the mortality of adults, young, or eggs through vehicle strikes, crushing, etc. Therefore, impacts to nesting birds during reclamation are considered **potentially significant** but could be addressed through the mitigation identified below. Removal of the PV panels would eliminate glare on the solar farm complex site and reduce the potential for bird strikes during reclamation. Upon reclamation of the solar farm complex site to its end state of idle farmland, no impacts to nesting and migratory birds are anticipated.

Mitigation Measure

MM 4.12.8 Vegetation clearing shall take place outside of the general avian breeding season (February 1 through August 31). If vegetation clearing cannot occur outside the avian breeding season, a qualified avian biologist will conduct a pre-vegetation clearing survey for nesting birds no more than 7 days prior to vegetation clearing. If no active nests are found, clearing can proceed. "Active" shall be defined as from nest construction through fledging of young. If active nests are found, no clearing shall be allowed within 100 feet of the active nests of non-listed species, within 300 feet of the active nests of listed species, and within 500 feet of active raptor nests until the biologist determines the nest is no longer active or the nest is abandoned or fails. The biologist will submit the results of the survey to the CDFW and USFWS. Any requests for reductions to these prescribed buffers shall be made to the CDFW and USFWS.

Timing/Implementation: Prior to issuance of grading permits for the solar farm complex site and maintained throughout the operation.

Enforcement/Monitoring: Project Applicant in collaboration with CDFW and USFWS.

Significance After Mitigation

Implementation of mitigation measure MM 4.12.8 would reduce impacts to nesting birds protected under California Fish and Wildlife Code and the MBTA. A pre-vegetation clearing survey for nesting birds would determine the presence of active nests and whether buffers are needed. In addition, the Project biologist will be required to coordinate with CDFW and USFWS regarding buffer distances. Implementation of these measures would reduce potential impacts to nesting birds during construction to **less than significant** levels.

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Impacts Associated with Avian and Bat Collision Risk

Impact 4.12.9 The proposed transmission line presents a minor risk for avian and bat collision. This can be addressed through Project conformance with Avian Power Line Interaction Committee standards. Therefore, this is considered a **less than significant impact**.

Construction

Transmission Line

Impacts associated with avian and bat collision are not anticipated during construction due to the activities involved with the overbuild. The new 92 kV transmission line and existing distribution lines would be strung or re-strung as necessary below the new conductors. As a last step, the old poles would be removed. Based on the level of construction activities, avian and bat collision impacts associated with the transmission line are considered **less than significant** during construction.

Operation

Above-ground electrical transmission lines pose a risk to bird and bat species due to collision and/or electrocution. However, as previously noted, the potential for any bat species to occur in the survey area is none to very low. While there would be an increase in potential risk for avian (and bat) collision or electrocution, the risk would be incrementally small for the overbuilt 92 kV transmission line and no mitigation would be required. Nevertheless, to minimize the incremental risk, it is recommended that the transmission line and components conform to Avian Power Line Interaction Committee (APLIC) standards for collision-reducing techniques (APLIC 2012). Impacts associated with avian and bat collision during Project operation are considered **less than significant**.

Reclamation

Decommissioning of the transmission line would only occur upon termination of the ROW. Because the construction and operation of the 92 kV transmission line is already authorized by the BLM as an IID system upgrade project, the overbuilt portion of the 92 kV transmission line will not be removed when all of the solar projects are reclaimed. Therefore, risk of avian and bat collision during reclamation would remain a **less than significant impact** as occurs during Project operation. Likewise, upon reclamation of the solar farm complex site to its end state of idle farmland, no impacts with regard to avian and bat collisions would occur.

Mitigation Measures

None required.

Significance After Mitigation

Not applicable.

Indirect Impacts - Dust on Plants

Impact 4.12.10 Increased levels of dust can adversely affect plants on multiple levels. Dust generated during construction represents a **potentially significant impact** to plants and subsequently to wildlife.

Construction

Solar Farm Complex and Transmission Line

Activities such as grading and driving equipment on unpaved roadways have the potential to result in indirect impacts to surrounding vegetation communities from increased levels of dust that may settle

on the plants. The accumulation of dust on plants can adversely affect plants' photosynthetic capabilities, productivity and nutritional qualities, and degrade the overall health of the vegetation communities. This in turn may also adversely affect wildlife dependent on these plants for food and shelter. Therefore impacts resulting from dust on plants, and subsequently on wildlife, are considered **potentially significant** during Project construction.

Operation

The level of activities associated with maintenance during Project operation would be substantially less than would occur during construction. Nine worker round trips and one delivery round trip are anticipated daily. In addition, dust would be controlled during operations by the periodic application and maintenance of soil binders to exposed soil surfaces. As a result, the amount of dust generated that may settle on plants would result in a **less than significant impact** during Project operation.

Reclamation

Reclamation activities have the potential to result in generation of dust in association with dismantling and demolition of above-ground structures; concrete removal; removal and dismantling of underground utilities; excavation and removal of soil; and final site contour. Therefore impacts resulting from dust on plants, and subsequently on wildlife, are considered **potentially significant** during Project reclamation. Upon reclamation of the solar farm complex site to its end state of idle farmland, no impacts with regard dust on plants are anticipated.

Mitigation Measures

Implement mitigation measure MM 4.4.1a (Compliance with ICAPCD Regulation VIII in Section 4.4, Air Quality).

Significance After Mitigation

Mitigation measure MM 4.4.1a would reduce impacts to plants resulting from construction dust through the implementation of a Fugitive Dust Control Plan. The Plan would be prepared in compliance with APCD Regulation VIII which addresses control of fine particulate matter (i.e. through application of water, dust suppressants, reduced speeds to 15 mph on unpaved roads, etc.). Implementation of MM 4.4.1a would reduce potential impacts to dust on plants to **less than significant** levels.

Indirect Impacts - Noise

Impact 4.12.11 Construction noise could adversely affect burrowing owl breeding behavior and reproductive success. This is considered a **potentially significant impact**.

Construction

Solar Farm Complex and Transmission Line

Breeding birds and mammals may temporarily or permanently leave their territories to avoid noisy activities, which could lead to reduced reproductive success and increased mortality. Elevated construction noise levels have the potential to make mating calls difficult to hear or frighten birds away from foraging in the area. These impacts would be temporary and less than significant for non-special status animal species. However, construction noise could adversely affect burrowing owl breeding behavior and reproductive success. This is considered a **potentially significant impact**.

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Operation

During Project operation, noise would be generated from equipment on the solar farm complex site (substation transformer, power conversions stations, HSAT trackers) as well as from the transmission line (Corona discharge). In addition, operational traffic noise would be generated by nine worker round trips and one delivery round trip per day daily. Overall, the amount of noise generated during operations would be substantially less than would occur during construction. Therefore, impacts from operational noise on burrowing owl breeding behavior and reproductive success is considered **less than significant**.

Reclamation

Reclamation activities would generate increased noise levels in association with dismantling and demolition of above-ground structures; concrete removal; removal and dismantling of underground utilities; excavation and removal of soil; and final site contour. As a result, noise levels associated with reclamation would likely be similar to those generated during construction. Therefore, reclamation noise could adversely affect burrowing owl breeding behavior and reproductive success. This is considered a **potentially significant impact**. Upon reclamation of the solar farm complex site to its end state of idle farmland, no impacts with regard to noise adversely affecting burrowing owl breeding behavior and reproductive success would occur.

Mitigation Measure

In accordance with the CDFW (2012), avoidance is the preferred method for dealing with potential impacts to burrowing owls. If avoidance is not feasible, mitigation measure MM 4.12.8, which requires use of buffers and coordination with CDFW and USFWS, shall be applied.

Significance After Mitigation

Implementation of MM 4.12.8 requires the use of buffers to separate construction activities from nesting areas. Compliance with the buffer distances specified is contingent upon the specie impacted (listed or non-listed) as well as the activity in the nest (active or abandoned). These buffer areas would also serve to reduce impacts associated with noise on burrowing owl breeding behavior and reproductive success to **less than significant** levels.

Impacts Associated with Night Lighting

Impact 4.12.12 Artificial night lighting could cause an increased loss of native wildlife and disrupt breeding/nesting behavior of the burrowing owl. Therefore, impacts associated with night lighting are considered **potentially significant**.

Construction

Solar Farm Complex and Transmission Line

Artificial night lighting that spills into desert habitat adjacent to the Project area could provide nocturnal predators with an unnatural advantage over their prey. This could cause an increased loss of native wildlife and would be of particular concern for species such as the burrowing owl which is a BLM Sensitive, USFWS Bird of Conservation Concern, and CDFW Species of Special Concern. Night lighting also has the potential to disrupt breeding/nesting behavior of the burrowing owl if the lighting is placed in proximity to occupied burrows. Therefore, night lighting impacts to burrowing owl during construction are considered **potentially significant**.

Operation

As with construction, artificial illumination could be present in association with security lighting. Night lighting has the potential to disrupt breeding/nesting behavior of the burrowing owl if the lighting is placed in proximity to occupied burrows. Therefore, night lighting impacts to burrowing owl during operation are considered **potentially significant**.

Reclamation

During reclamation, all facilities on the solar farm complex site would be removed, including any security lighting. Once the lighting is removed and the site is reclaimed to its end state, night lighting impacts to burrowing owl during Project reclamation are considered **less than significant**. Upon reclamation of the solar farm complex site to its end state of idle farmland, no impacts associated with night lighting would occur.

Mitigation Measures

MM 4.12.12a Night lighting shall be minimized during construction to avoid illumination of adjacent natural areas and the night sky. Techniques may include, but are not limited to, shielding light sources and use of directional lighting pointed downward.

Timing/Implementation: Prior to issuance of grading permits/during construction.

Enforcement/Monitoring: Applicant in collaboration with CDFW, BLM and USFWS, as appropriate.

MM 4.12.12b During operation, night lighting shall only be used when necessary for worker safety. If night lighting is used for security purposes, it shall be motion or heat activated, shielded and directed downward.

Timing/Implementation: Maintained throughout operation.

Enforcement/Monitoring: Applicant in collaboration with CDFW, BLM and USFWS, as appropriate.

Significance After Mitigation

Implementation of MM 4.12.12a and MM 4.12.12b requires that night lighting be minimized during both construction and operation. Reduced levels of illumination would be feasible through use of shielding and directional lighting. Implementation of these measures would reduce impacts resulting from night lighting to **less than significant**.

Impacts Associated with Runoff/Decreased Water Quality

Impact 4.12.13 Runoff from the proposed solar farm complex site could decrease water quality. The Project is required to conform to Policy 4 of the Imperial County General Plan Water Element. Therefore, impacts resulting from runoff/decreased water quality would be **less than significant**.

Construction

Solar Farm Complex and Transmission Line

During construction, the Applicant would file a Notice of Intent (NOI) to comply with the general permit for construction activities with the State Water Resources Control Board (SWRCB) and prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) consistent with the requirements of the SWRCB. The SWPPP would address impacts to water quality during construction. Therefore, impacts resulting from runoff/decreased water quality would be **less than significant** during Project construction.

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Operation

Runoff from the proposed solar farm complex site has the potential to significantly impact native species if it resulted in decreased water quality, particularly in San Felipe Creek or Tarantula Wash. The proposed Project would be required to conform to Policy 4 of the Water Element in the Imperial County General Plan (Imperial County 1993). This policy addresses the protection of water resources and requires all development proposals brought before the County of Imperial to be reviewed for potential adverse effects on water quality and quantity. All projects are required to implement appropriate mitigation measures for any significant impacts (Imperial County 1993, p. 33). In addition, the Project would be required to prepare and comply with the SWPPP. Mandatory compliance with these requirements would reduce potential impacts resulting from runoff and decreased water quality to **less than significant** levels during Project operation.

Reclamation

As with construction and operation, the Project would be required to comply with the SWPPP. Compliance with the SWPPP would reduce potential impacts resulting from runoff and decreased water quality to **less than significant** levels during Project reclamation. Upon reclamation of the solar farm complex site to its end state of idle farmland, no impacts with regard runoff and decrease in water quality are anticipated.

Mitigation Measures

None required.

Significance After Mitigation

Not applicable.

Impacts Associated with Invasive Species

Impact 4.12.14 Non-native, invasive plant species can reduce native species diversity, change ground and surface water levels, and cause adverse effects on native wildlife dependent on native plants. The potential spread of these species from the proposed solar farm complex site into adjacent desert habitat is considered a **potentially significant impact**.

Construction

Solar Farm Complex and Transmission Line

Non-native, invasive plant species can colonize sites disturbed by construction and can spread into adjacent native habitats. Some of these species (e.g., Saharan mustard and Russian thistle) are already present in the survey area. Non-native, invasive plant species can reduce native species diversity, change ground and surface water levels, and cause adverse effects on native wildlife that depend on the native plants. The potential spread of these species into adjacent desert habitat from the solar farm complex site would be considered a **potentially significant impact** during Project construction.

Operation

During Project operation, both Invasive / weedy species and any non-invasive vegetation that re-establishes within the solar farm complex site would be controlled within each solar field. Vegetation growing within the Project area would be periodically removed manually and/or treated with herbicides. Therefore, impacts associated with the potential spread of invasive species are considered **less than significant** during Project operation.

Reclamation

Similar to construction, reclamation activities have the potential to spread non-native, invasive species into adjacent desert habitat. Reclamation activities would involve substantial soil disturbance in association with dismantling and demolition of above-ground structures; concrete removal; removal and dismantling of underground utilities; excavation and removal of soil; and final site contour. Therefore, impacts associated with the potential spread of invasive species are considered **potentially significant** during reclamation. Upon reclamation of the solar farm complex site to its end state of idle farmland, no impacts with regard to spread of invasive species are anticipated.

Mitigation Measures

MM 4.12.14 All vegetation and soil removed for the proposed project shall be disposed of in a safe and legal manner such that the plant material and soil (which contains seeds) are not released into the surroundings (e.g., trucks hauling such material shall be tightly covered).

Timing/Implementation: Prior to issuance of grading permits/Maintained throughout the operation.

Enforcement/Monitoring: Project Applicant in collaboration with the CDFW, USFWS and BLM, as appropriate.

Significance After Mitigation

Implementation of MM 4.12.14 requires safe and secure removal of vegetation and soils containing seeds from the Project area. These actions would reduce the potential for the spread of non-native, invasive plant species by limiting the potential for their release/transport to the surrounding areas. Therefore, MM 4.12.14 would reduce impacts associated with spread of invasive species to **less than significant**.

Impacts to Wildlife Movement

Impact 4.12.15 The proposed solar farm complex site would be developed on an island of disturbed agricultural land surrounded by open desert. Therefore, impacts of the proposed solar farm complex site on wildlife movement are considered **less than significant**.

Construction

Solar Farm Complex

The proposed solar farm complex site is essentially an island of disturbed agricultural land within an otherwise relatively undisturbed desert habitat. Based on these conditions, it is unlikely that animals regularly use the solar farm complex site as a wildlife movement corridor. The introduction of the proposed Project therefore would not constitute a barrier to the movement of animals through the Project area. However, a six-foot high chain link fence is proposed to be constructed around the perimeter of the solar farm complex site during construction and would remain in place throughout operation. The presence of the fence would impact the ability of medium and large mammals to move through the solar farm complex site. However, the fence should not inhibit movement of medium and large mammals in the area. Therefore, impacts to wildlife movement are considered **less than significant**.

Operation

The fence constructed around the perimeter of the solar farm complex site would remain in place throughout Project operation. The presence of the fence would impact the ability of medium and large mammals to move through the solar farm complex site. However, the fence should not inhibit

4.12 BIOLOGICAL RESOURCES

movement of medium and large mammals in the area. Therefore, impacts to wildlife movement are considered **less than significant**.

Reclamation

As part of reclamation, the chain link fence around the perimeter of the solar farm complex site would be removed. As a result, the ability of medium and large animals to move through the solar farm complex site would no longer be inhibited. Therefore, **no impact** to wildlife movement would occur after reclamation activities are completed and the solar farm complex site is reclaimed to its end state of idle farmland.

Mitigation Measures

None required.

Significance After Mitigation

Not applicable.

4.12.4 CUMULATIVE SETTING, IMPACTS AND MITIGATION MEASURES

A. CUMULATIVE SETTING

The cumulative setting for biological resources is the Imperial County region. Within this region, the geographic scope for cumulative impacts varies for each species. The geographic scope for considering cumulative impacts on FTHL includes the OWSVRA. Flat-tailed horned lizard is currently listed as a special-status species in OWSVRA and significant management attention is given to this species. OWSVRA participates in the Interagency Coordinating Committee and Management Oversight Group to help address management of this species (OWSVRA Working Paper #2 2013, p. 99).

The geographic scope for considering cumulative impacts for migratory birds, including raptors, is the Imperial Valley, which is part of the Pacific Migration Flyway for birds migrating between as far south as South America and as far north as the arctic circle. The Pacific Migration Flyway serves as an important stopover site for many species for rest and foraging. Likewise, the Pacific Migration Flyway serves as breeding grounds for some species. Although burrowing owls and some raptors do not migrate along the Pacific Migration Flyway, the species occur throughout the Imperial Valley. Therefore, the Imperial Valley is the geographic scope considered for the evaluation of cumulative impacts to burrowing owl.

The geographic scope for considering cumulative impacts for jurisdictional waters is the Imperial Hydrologic Unit of the Salton Sea watershed in the Colorado River region.

Development anticipated as part of the cumulative setting is reflected in the land uses shown on the County's General Plan Land Use Map, and the other large scale cumulative renewable energy projects which are currently proposed, approved or reasonably foreseeable as identified in Table 3.0-1 in Chapter 3.0, Introduction to the Environmental Analysis and Assumptions Used.

B. CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Impacts to Biological Resources

Impact 4.12.16 Implementation of the proposed Project could have cumulative impacts on special status species, sensitive natural communities, and protected waters. However, mitigation measures are proposed to help ensure that the proposed Project does not cumulatively affect any of these biological resources. Therefore, cumulative impacts are considered **less than cumulatively considerable**.

Construction – Solar Farm Complex and Transmission Line

Construction activities could result in cumulative impacts on federal and/or state listed species, as well as BLM sensitive wildlife species, including FTHL, burrowing owl, mesquite thicket and jurisdictional waters.

Flat-tailed Horned Lizard (FTHL)

Flat-tailed Horned Lizard receives protection via the BLM's Flat-tailed horned-lizard Rangewide Management Strategy (RMS). The Flat-tailed Horned Lizard Interagency Coordinating Committee (ICC)'s FTHL RMS designated five Management Areas (MAs) to help focus conservation and management of FTHL key populations. The survey area is not within a FTHL Management Area, although the West Mesa Management Area occurs just east and south of the eastern end of the proposed transmission line (HELIX 2014b, pp. 10-11). FTHL habitat disturbances will be mitigated on a project-specific level in accordance with mitigation measure MM 4.12.3, thereby reducing the Project's contribution to cumulative impacts to FTHL to a less than significant level.

Based on the USFWS determination not to list the FTHL, the success of BLM's FTHL RMS, implementation of mitigation measure MM 4.12.3, and the compensatory mitigation requirements, the proposed Project would result in a **less than cumulatively considerable contribution** to impacts to FTHL. Likewise, the proposed Project, when combined with other cumulative projects, would result in a **less than cumulatively considerable impact** to FTHL.

Burrowing Owl

Burrowing owls are relatively widespread throughout the Imperial Valley. The initial habitat assessment indicated that approximately 1,100 acres of the survey area had potential to be burrowing owl habitat. Two burrows with potential to support burrowing owl were observed within the proposed transmission line alignment during the habitat assessment. These burrows were noted to have been filled in by windblown debris, off-highway vehicles, or some other incidental method between Surveys 1 and 2. The burrows remained closed for the subsequent surveys and are shown on the map depicting potential burrowing owl burrows (refer to **Figure 4.12-6**).

The number of active burrowing owl burrows within the cumulative projects identified in Table 3.0-1 is not available for this analysis. Burrowing owls are protected by the CDFW mitigation guidelines for burrowing owl (1995) and Consortium guidance (1993), which require a suite of mitigation measures to ensure direct effects to burrowing owls during construction activities are avoided and indirect effects through burrow destruction and loss of foraging habitat are mitigated at prescribed ratios. BLM also considers burrowing owls a sensitive species, and generally follows CDFG recommendations for burrowing owl issues occurring under BLM jurisdiction.

The measures outlined in mitigation measure MM 4.12.6 are consistent with the CDFW Staff Report on Burrowing Owl Mitigation. Mitigation measure MM 4.12.6 identifies avoidance, protection and compensatory mitigation to address impacts to burrowing owl. This measure would reduce the Project's contribution to cumulative impacts to burrowing owl to a less than significant level.

Cumulative projects have the potential to impact burrowing owls through direct impacts to burrowing owls and their burrows. It is anticipated that many of the cumulative projects would also have indirect impacts to burrowing owls through conversion of foraging habitat, including sparsely-vegetated scrub communities and agricultural fields. With implementation of mitigation measure MM 4.12.6, the proposed Project would result in a **less than cumulatively considerable contribution** to impacts to burrowing owl. Likewise, the proposed Project, when combined with other cumulative projects, would result in a **less than cumulatively considerable impact** to burrowing owl.

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Nesting Birds

Nesting birds are known to occur throughout the geographic scope for cumulative projects identified in Table 3.0-1. Avian nesting is protected under California Fish and Game Code sections 3503.5 and 3511 and the MBTA. The number of nesting raptors within the geographic scope is not available and therefore cannot be quantified as part of this analysis.

Mitigation measure MM 4.12.8 requires that vegetation clearing take place outside of the general avian breeding season (February 1 through August 31) and identifies buffers to be employed if nests are discovered. Any cumulative projects that include a transmission line are required to implement a similar measure. With implementation of these mitigation measures, the proposed Project would result in a **less than cumulatively considerable contribution** to impacts to nesting birds. Likewise, the proposed Project, when combined with other cumulative projects, would result in a **less than cumulatively considerable impact** to nesting birds.

Migratory Birds

The proposed Project and cumulative projects could have direct impacts on migratory birds as a result of vehicle strikes, nest crushing, or collisions. Indirect impacts to migratory birds may occur from noise and night lighting impacts, making mating calls hard to hear or frightening birds away from foraging activities. Birds listed at 50 CFR 10.3 are protected by the MBTA (16 U.S.C. 703 et seq.), a Federal statute that implements treaties with several countries on the conservation and protection of migratory birds. The geographic scope includes the Pacific Flyway, which is a major north-south migration route for birds travelling between North and South America.

Mitigation measure MM 4.12.8 is provided to reduce the potential impacts to avian nesting protected under California Fish and Game Code and the MBTA through the use of buffers to avoid nests. In addition, as noted under Impact 4.12.9, it is recommended that the transmission line and components conform to APLIC standards for collision-reducing techniques. With implementation of mitigation measure MM 4.12.8 and conformance with APLIC standards, the proposed Project would result in a **less than cumulatively considerable contribution** to impacts to migratory birds. Likewise, the proposed Project, when combined with other cumulative projects, would result in a **less than cumulatively considerable impact** to migratory birds.

Sensitive Vegetation Communities

Sensitive vegetation communities (i.e., natural communities) are designated by the CDFW for various reasons including: restricted range, cumulative losses throughout the region, and a high number of endemic sensitive plant and wildlife species that occur in the vegetation communities. Soil disturbed due to grading during construction, continued use of the solar farm complex during Project operation, and cumulative projects could result in the introduction or increased density of non-native invasive plant species. The extent of the cumulative project's impacts to sensitive vegetation communities is not available for this analysis.

Mesquite thicket is the only special status sensitive vegetation community potentially affected by the proposed Project. Approximately 13.2 acres of mesquite thicket would be impacted by construction of the solar farm complex. As specified in mitigation measure MM 4.12.1, mitigation for impacts to mesquite thicket would be addressed through a combination of compensation and/or restoration at a minimum 1:1 ratio, or as required by permitting agencies. Alternatively, restoration may be appropriate as mitigation for impacts provided that restoration is demonstrated to be feasible, and the restoration effort is implemented pursuant to a Habitat Restoration/Revegetation Plan.

Mitigation measure MM 4.12.14 would also protect sensitive vegetation communities through minimizing potential for spread of non-native and invasive plant species. Cumulative projects are individually required to implement similar mitigation to avoid noxious, invasive and non-native weeds thereby reducing impacts to sensitive vegetation communities. With implementation of these measures, the proposed Project would result in a **less than cumulatively considerable contribution** to impacts to sensitive vegetation communities. Likewise, the proposed Project, when combined with other cumulative projects, would result in a **less than cumulatively considerable impact** to sensitive vegetation communities.

Jurisdictional Waters

Construction activities could result in cumulative impacts on federal and state jurisdictional waters. As shown in **Table 4.12-8** the proposed Project would impact approximately 0.63 acres of WUS. Likewise **Table 4.12-9** identifies that the proposed Project would impact approximately 0.72 acres of WS.

Not all of the cumulative projects identified in Table 3.0-1 in Chapter 3.0, Introduction to the Environmental Analysis and Assumptions Used, have published environmental documents available. As a result, it is not possible to provide a definitive conclusion regarding the cumulative impacts of these projects on jurisdictional waters. Mitigation measures MM 4.12.2a and MM 4.12.2b identify mitigation ratios for jurisdictional areas and non-wetland jurisdictional areas. These ratios would be effective to reduce Project impacts to these resources to less than significant levels. Any cumulative project that results in an impact to jurisdictional waters would be required to implement similar measures to reduce the impact in accordance with federal and state law. With implementation of mitigation measures, the proposed Project would result in a **less than cumulatively considerable contribution** to impacts to jurisdictional waters. Likewise, the proposed Project, when combined with other cumulative projects, would result in a **less than cumulatively considerable impact** to jurisdictional waters.

Operation

As described above, the construction phase of the proposed Project would directly and indirectly impact biological resources. Direct impacts would occur in the form of permanent loss of mesquite thicket, WUS, WS, etc. Indirect impact would result from increased dust, noise and night lighting. While these impacts would take place during the construction phase, some would continue to exist throughout Project operation. Additional impacts could occur during Project operation from a variety of maintenance activities including lighting and traffic generated by night maintenance work, if it were to occur. Specific mitigation measures (MM 4.12.12b) are proposed to help ensure that the proposed Project does not cumulatively affect any of these biological resources during Project operation. With implementation of these measures, the proposed Project would result in a **less than cumulatively considerable contribution** to impacts to biological resources. Likewise, the proposed Project, when combined with other cumulative projects, would result in a **less than cumulatively considerable impact** to biological resources during Project operation.

Reclamation

Reclamation activities would be similar to construction activities. However, it is not possible to accurately predict which projects in the cumulative projects list would undergo decommissioning at the same time as the proposed Project. The mitigation measures identified in association with Project construction would also apply during reclamation and would result in a **less than cumulatively considerable contribution** to impacts to biological resources. Likewise, the proposed Project, when combined with other cumulative projects, would result in a **less than cumulatively considerable impact** to biological resources during Project reclamation with implementation of project-specific mitigation measures. Upon

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reclamation of the solar farm complex site to its end state of idle farmland, no impacts to biological resources are anticipated.

Mitigation Measures

As discussed throughout this section, the proposed Project would be subject to all mitigation measures identified to address project-specific impacts. These include MM 4.12.2a and MM 4.12.2b (to mitigate impacts to federal and state jurisdictional areas); MM 4.12.3 (to mitigate impacts to FTHL); MM 4.12.6 (to mitigate impacts to burrowing owl); MM 4.12.8 (to mitigate impacts to nesting birds and noise impacts on burrowing owl breeding behavior); MM 4.12.10 (to mitigate impacts to plants caused from dust); MM 4.12.12a and MM 4.12.12b (to mitigate impacts from night lighting during construction and operation); and MM 4.12.14 (to mitigate impacts associated with the spread of invasive species).

Significance After Mitigation

Following implementation of the mitigation measures identified above, cumulative impacts to biological resources including jurisdictional areas, FTHL, burrowing owl, nesting birds and invasive species would be reduced to less than cumulatively considerable levels. Indirect impacts resulting from dust, noise and night lighting would also be reduced to less than significant at the project-level and result in a less than cumulatively considerable contribution to impacts biological resources. Following mitigation, all cumulative impacts to biological resources would be considered **less than cumulative considerable**.