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 *Biological Resources Report for the Drew Solar Project* ("Biological Resources Report") dated July 2018 (Dudek 2018c). This report along with associated appendices is provided on the attached CD of Technical Appendices as **Appendix K** of this EIR.

The survey consisted of the Project Area excluding paved roads and other developed areas and a 200-foot buffer (**Figure 4.12-1**) totaling 855 acres. For the purposes of this section, the Full Build-out Scenario with disturbance of the Solar Energy Generation Component, Energy Storage Component, and Drew Switchyard and Gen-Tie Lines represents the worst-case scenario.

4.12.1 REGULATORY FRAMEWORK

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 52 separate Nationwide Permits (NWPs) for different types of projects with impacts to wetlands (as of September 2012). 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.

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 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.

Source: Recon 2018c.

FIGURE 4.12-2
PROJECT SURVEY AREA

Executive Order 11990 – Protection of Wetlands

EO 11990 establishes a national policy to avoid adverse impacts on wetlands whenever there is a practicable alternative.

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.

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.

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.

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.).

California Fish and Game Code

California Native Sections 3511, 4700, 5050, and 5515 of California Fish and Game Code (CFGC) 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 because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction.

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 Applicant.

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 Applicant 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 Applicant becomes the Lake or Streambed Alteration Agreement (SAA). The conditions of agreement and a CWA Section 404 permit often overlap.

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.

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 (Imperial County 2016). In addition, an agriculture policy and program from the Land Use Element that 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 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		
Conservation of Environmental Resources for Future Generations		
Goal 1: Environmental resources shall be conserved for future generations by minimizing environmental impacts in all land use decisions and educating the public on their value.	Yes	The proposed Project is located on previously disturbed agricultural land thereby minimizing impacts to other land undisturbed lands. Therefore, the proposed Project is consistent with this goal under both the Full Build-out Scenario and the Phased CUP Scenario
Objective 1.1: Encourage uses and activities that are compatible with the fragile desert environment and foster conservation.	Yes	By siting the Project on previously disturbed agricultural lands, the Project avoids the fragile desert environmental. Therefore, the proposed Project is consistent with this objective under both the Full Build-out Scenario and the Phased CUP Scenario.
Conservation of Biological Resources		
Objective 2.4: Use the CEQA and NEPA process to identify, conserve and restore sensitive vegetation and wildlife resources.	Yes	The solar field site parcels are proposed for use as a solar energy generating facility on lands historically and currently used for agriculture. As discussed in this section, habitats, and plant and animal species could be impacted by construction, operation, and decommissioning of the

TABLE 4.12-1
IMPERIAL COUNTY GENERAL PLAN CONSISTENCY ANALYSIS

General Plan Goals, Objectives Policies and Policies	Consistent with General Plan?	Analysis
		Project. This EIR, as part of the CEQA review process, includes mitigation measures to address impacts to sensitive vegetation and wildlife resources. Mitigation measures (MM 4.12.1a, MM 4.12.1b, MM 4.12.1c, MM 4.12.1d and MM 4.12.1e) are identified to address impacts to sensitive habitats, plant and animal species. Therefore, the proposed Project is consistent with this objective under both the Full Build-out Scenario and the Phased CUP Scenario.
Objective 2.6: Attempt to identify, reduce, and eliminate all forms of pollution; including air, noise, soil, and water.	Yes	The proposed Project, as a renewable energy project, would reduce pollution by providing a clean source of electricity generation. Therefore, the proposed Project is consistent with this objective under both the Full Build-out Scenario and the Phased CUP Scenario.
Open Space Conservation Policy: The County shall participate in conducting detailed investigations into the significance, location, extent, and condition of natural resources in the County.	Yes	The Applicant prepared the *Biological Resources Report for the Drew Solar Project* (Dudek 2018c) to identify biological resources that are present and could be affected by the Project. This report identifies the existing conditions for each CUP (as appropriate) and the Full Build-out Scenario, potential impacts resulting from Project implementation, and appropriate mitigation measures (MM 4.12.1a, MM 4.12.1b, MM 4.12.1c, MM 4.12.1d and MM 4.12.1e) necessary to avoid significant impacts to natural resources in the County. Therefore, the proposed Project is consistent with this policy under both the Full Build-out Scenario and the Phased CUP Scenario.
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 Biological Resources Report (Dudek 2018c) and wetland permit applications will be submitted to CDFW and USACE for processing if determined necessary for impacting waters upon completing the final engineering design. The Biological

TABLE 4.12-1
IMPERIAL COUNTY GENERAL PLAN CONSISTENCY ANALYSIS

General Plan Goals, Objectives Policies and Policies	Consistent with General Plan?	Analysis
		Resources Report will not be submitted to USFWS as no permits or approvals are required from USFWS for the proposed project. However, CDFW and USFWS will also 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 under both the Full Build-out Scenario and the Phased CUP Scenario.
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 all CUPs, the potential for burrowing owl (BUOW) was examined as part of the *Biological Resources Report for the Drew Solar Project* (Dudek 2018c) prepared for the Project. Refer Impact 4.12.1 and mitigation measures MM 4.12.1a, MM 4.12.1b, MM 4.12.1c, MM 4.12.1d and MM 4.12.1e.
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 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.	Yes	The *Biological Resources Report for the Drew Solar Project* (Dudek 2018c) included focused burrowing owl surveys conducted in April, June and September, 2017 pursuant to the survey guidelines outlined in Appendix D of the Staff Report on Burrowing Owl Mitigation (California Department of Fish and Game [CDFG] 2012. Mitigation measures mitigation measures MM 4.12.1a, MM 4.12.1b, MM 4.12.1c, MM 4.12.1d and MM 4.12.1e address potential impacts to burrowing owl in accordance with CDFW requirements. Therefore, the proposed Project is consistent with this program under both the Full Build-out Scenario and the Phased CUP Scenario.

4.12.2 ENVIRONMENTAL SETTING

A. PROJECT SITE AND ENERGY STORAGE COMPONENT

The proposed Drew Solar Project (Project) involves the development of a solar photovoltaic (PV) energy-generating facility including energy storage and two gen-tie transmission facilities. The proposed Project Area encompasses a total of approximately 855 gross acres in Imperial County, California located approximately 2.5 miles north of the Mexico border, immediately north of Interstate 98 (I-98). The geographic center of the Project roughly corresponds with 32° 41' 13" North and 115° 40' 8" West, at an elevation of 19 feet below sea level.

The Project includes all six CUP areas within which all components of the Project would be located including but not limited to solar field arrays, energy storage facilities, Gen-Tie facilities, O&M buildings, substations, collection systems, inverters, improvements to the existing Drew Switchyard, driveways, County and Caltrans road improvements, connections to canals, drains and dry utility distribution facilities, raw/fire water storage, potable water storage and filtration systems, and access roads plus additional areas outside of the Project footprint (see **Figure 4.12-1**) surveyed during 2017.

Vegetation Communities and Land Cover

A total of four vegetation communities and five land cover types were identified within the Project Area: American bulrush marsh, arrow weed thickets, cattail marshes, tamarisk thickets, open water, unvegetated channel, disturbed habitat, urban developed, and agricultural lands. The vegetation communities and land cover types are described in detail below. Their acreages are presented in **Table 4.12-4**, and their spatial distributions are presented in the Biological Resources Map (**Figure 4.12-2**).

TABLE 4.12-2
VEGETATION COMMUNITIES AND LAND COVERS*

Vegetation Community	Gross Acres
American Bulrush Marsh Alliance	0.08
Arrow Weed Thickets Alliance	4.88
Cattail Marshes Alliance	3.36
Tamarisk Thickets Semi-natural Alliance	1.28
Land Cover	**Gross**
Open Water	2.98
Unvegetated Channel	2.96
Agriculture	760.25
Disturbed Habitat	64.25
Urban Developed	4.16
Total*	844.20

Source: Dudek 2018c.
*Note: Applicant is proposing a Parcel Map application through Imperial County Planning & Development Services to correct a legal and physical boundary discrepancy. After the Parcel Map record, the Project acreage will be 855 gross acres, but the net acreage will remain unchanged at 762.8 net acres.
** Total acreages may not sum due to rounding.

American Bulrush Marsh Alliance

The American bulrush marsh alliance (*Schoenoplectus americanus* herbaceous alliance) includes American bulrush as the dominant or co-dominant in the herbaceous layer. For a stand of vegetation to be classified as American bulrush marsh, American bulrush must be greater than 50% relative cover in

the herbaceous layer. Cover is intermittent to continuous and primarily occurs along streams, around ponds, lakes, in sloughs, swamps, fresh and brackish marshes, and roadside ditches. Soils have a high organic content and are poorly aerated.

Status: The American bulrush marsh is ranked as a G5S3.2 alliance; therefore, it is considered a sensitive biological resource under CEQA (CDFG 2010).

Arrow Weed Thickets Alliance

The arrow weed thickets alliance (Pluchea sericea alliance) includes arrow weed as the dominant or codominant shrub in the canopy. Arrow weed thickets have an intermittent to continuous shrub canopy less than 16 feet in height and a sparse ground layer with seasonal annuals. For a stand of vegetation to be classified as arrow weed thickets, arrow weed must be greater than or equal to 2% absolute cover1 in the shrub canopy. This alliance occurs in wetlands that are seasonally flooded and saturated with fresh water located around seeps, canyon bottoms, irrigation ditches, stream sides, and washes.

Status: The arrow weed thickets alliance is ranked as a G3S3 alliance; therefore, it is considered a sensitive biological resource under CEQA (CDFG 2010).

Cattail Marshes Alliance

The cattail marshes alliance (*Typha* [*angustifolia, domingensis, latifolia*] alliance) includes cattails as the dominant or co-dominant herb in the herbaceous layer. Cattail marshes alliance has a continuous to intermittent canopy less than 4.9 feet in height. For a stand of vegetation to be classified as cattail marshes, cattails (*Typha* ssp.) must be greater than 50% relative cover[2] in the herbaceous layer. The cattail marshes alliance occurs throughout California at elevations ranging from sea level to 1,148 feet amsl. The cattail marshes alliance occurs on clay or silty soils in semi-permanently flooded freshwater or brackish marshes.

Status: The cattail marshes alliance has a rank of G5S5; therefore, it is not considered a sensitive biological resource under CEQA (CDFG 2010). However, it is a wetland community, which is typically afforded protection under CEQA and the Clean Water Act.

Tamarisk Thickets Semi-Natural Alliance

The tamarisk thickets or *Tamarix* spp. semi-natural alliance includes the non-native invasive tamarisk as the dominant shrub in the canopy. Tamarisk thickets have a continuous to open shrub canopy less than 26 feet in height with possible emergent trees and a sparse ground layer (Sawyer et al. 2009 in Dudek 2018c). For a stand of vegetation to be classified as tamarisk thickets, tamarisk must be greater than 3% absolute cover and 60% relative cover in the shrub canopy. This semi- natural stand occurs in and along ditches, rivers, washes, lake margins, and watercourses.

Status: The tamarisk thickets semi-natural alliance is not considered a sensitive biological resource under CEQA (CDFG 2010).

[1] Absolute cover refers to the actual percentage of the ground that is covered by a species. For example, arrow weed covers between 5% and 15% percent of the stand. Absolute cover of all species if added in a stand or plot may total greater or less than 100% because it is not a proportional number (CNPS and CDFG 2007).

[2] Relative cover refers to the amount of the stand sampled that is covered by one species as compared to (relative to) the amount of the stand covered by all species (in that group). Thus, 50% relative cover means that half of the total cover of all species is composed of the single species. Relative cover values are proportional numbers and, if added, total 100% for each stand (CNPS and CDFG 2007).

Open Water

The open water mapping unit is not recognized by the Natural Communities List (CDFG 2010)). Open water consists of standing water and contain less than 10% vegetation.

Status: Open water does not support any vegetation; therefore, open water is not considered a sensitive biological resource under CEQA (CDFG 2010).

Unvegetated Channel

Unvegetated channel is not described in Sawyer et al. (2009); however, Oberbauer et al. (2008) describes this land cover type as, the sandy, gravelly, or rocky fringe of waterways or flood channels that are unvegetated on a relatively permanent basis. Variable water lines inhibit the growth of vegetation, although some weedy species of grasses may grow along the outer edges of the wash. Vegetation may exist here but is usually less than 10% total cover. Unvegetated channel land cover found in the Project site is primarily composed of a mix of concrete lined irrigation canals or earthen irrigation canals that have little to no vegetation.

Status: Unvegetated channel land cover does not support any vegetation; therefore, unvegetated channels are not considered a sensitive biological resource under CEQA (CDFG 2010).

Agriculture (AGR)

Agricultural land includes the following agricultural types: agriculture (general), nurseries, orchard agriculture, pastures and crop agriculture, tilled earth, and vineyard–shrub agriculture. Agricultural land is the dominant land cover type in the Project site.

Status: General agriculture is not considered a sensitive biological resource under CEQA (CDFG 2010).

Disturbed Habitat (DH)

Disturbed habitat refers to areas that are not developed yet lack vegetation, and generally are the result of severe or repeated mechanical perturbation.

Status: Disturbed habitat typically does not support any vegetation; therefore, disturbed habitats are not considered a sensitive biological resource under CEQA (CDFG 2010).

Urban/Developed

Urban/developed areas include areas that have been constructed upon or otherwise physically altered to an extent that native vegetation is no longer supported. Urban/developed land is characterized by permanent or semi-permanent structures, pavement or hardscape, and landscaped areas that often require irrigation.

Status: Urban/developed land typically does not support any vegetation or is a landscaped area; therefore, urban/developed lands are not considered a sensitive biological resource under CEQA (CDFG 2010).

Jurisdictional Delineation and Determinations

Dudek performed a formal jurisdictional delineation within the Project Area on December 5, 2017, with methods described in detail in Section 2.2.2. One set of data stations was collected in the Project Area (Appendix A of the Biological Resources Report included in **Appendix K** of this EIR. The results of the delineations are shown on the **Figure 4.12-2**.

Federal Jurisdiction

The Project Area is located within an agricultural area with several irrigation ditches or canals. Based on aerial review, the irrigation ditches/canals receive water from the All American Canal. All of the

water from the drainages/canals eventually outlet into Greeson Wash, which flows into the New River, which terminates at the Salton Sea, a traditional navigable water. The irrigation ditches/canals were created in uplands, however, could be considered jurisdictional waters regulated by the USACE. A preliminary jurisdictional delineation (PJD) report will be submitted to the USACE for review in the event project improvements require impacts to potential USACE waters.

On site, there are both earthen-lined and concrete-lined irrigation ditches/canals; water and vegetation was present in some of the canals and the smaller ditches were dry and void of vegetation. Wetland hydrology indicators were present (i.e., hydrophytic vegetation, hydric soils, or surface water) within some of the canal bottoms or fringes. The Project Area contains approximately 10.2 acres of resources under the jurisdiction of the USACE and RWQCB, including 6 acres of non-wetland waters and 4.2 acres of wetlands.

State Jurisdiction

Water resources are also subject to state laws administered by CDFW. Resources subject to the jurisdiction of the CDFW pursuant to Section 1602 of the California Fish and Game Code include ephemeral, intermittent, and perennial stream channels. CDFW asserts jurisdiction over riparian habitat associated with a streambed.

Based on the jurisdictional delineation, there are approximately 15.5 acres of resources under the jurisdiction of CDFW, including 6 areas of streambed and 9.6 acres of wetlands. Riparian habitat located on the canal slopes that did not meet the three parameters for a federal wetland are mapped as CDFW-only riparian habitat. Jurisdictional resources are summarized in **Table 4.12-3** and shown on the **Figure 4.12-2**.

TABLE 4.12-3
JURISDICTIONAL WETLANDS AND NON-WETLAND WATERS IN THE PROPOSED PROJECT AREA (ACRES)

Vegetation Community	USACE/RWQCB/CDFW	CDFW-Only
Wetland Waters/Riparian Habitat		
American Bulrush	0.08	--
Arrow Weed Thickets	--	4.88
Cattail Marshes	3.36	--
Tamarisk Thickets	0.78	0.50
Wetland Waters Subtotal	4.22	5.38
Non-Wetland Waters/Streambed		
Open Water	2.98	--
Unvegetated Channel	2.96	--
Non-Wetland Waters Subtotal	5.95	--
Grand Total	10.17	5.38

Source: Dudek 2018c.

Source: Recon 2018c.

FIGURE 4.12-2
BIOLOGICAL AND JURISDICTIONAL RESOURCES

Plant Resources

A total of ten species of native or naturalized vascular plants, five native (50%) and five non-native (50%), were recorded within the proposed Project site (see Appendix B of the Biological Resources Report included in **Appendix K** of this EIR). Special-status plant species that have a potential to occur and other plant species that occur in the region, however are not expected to occur within the boundaries of the proposed Project site, are shown below in **Table 4.12-4**.

TABLE 4.12-4
SPECIAL-STATUS PLANTS WITH POTENTIAL TO OCCUR IN THE PROPOSED PROJECT SITE

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Abronia villosa var. aurita	chaparral sand-verbena	None/None/ 1B.1	Chaparral, Coastal scrub, Desert dunes; sandy/annual herb/(Jan)Mar–Sep/245– 5250	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Amaranthus watsonii	Watson's amaranth	None/None/ 4.3	Mojavean desert scrub, Sonoran desert scrub/annual herb/Apr–Sep/65–5575	Not expected to occur. No suitable habitat present.
Astragalus crotalariae	Salton milk-vetch	None/None/ 4.3	Sonoran desert scrub (sandy or gravelly)/perennial herb/Jan–Apr/-195– 820	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Astragalus sabulonum	gravel milk-vetch	None/None/ 2B.2	Desert dunes, Mojavean desert scrub, Sonoran desert scrub; Usually sandy, sometimes gravelly. Flats, washes, and roadsides/annual / perennial herb/Feb– June/-195–3050	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.

TABLE 4.12-4
SPECIAL-STATUS PLANTS WITH POTENTIAL TO OCCUR IN THE PROPOSED PROJECT SITE

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Calliandra eriophylla	pink fairy-duster	None/None/ 2B.3	Sonoran desert scrub (sandy or rocky)/perennial deciduous shrub/Jan– Mar/390–4920	Not expected to occur. Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Castela emoryi	Emory's crucifixion-thorn	None/None/ 2B.2	Mojavean desert scrub, Playas, Sonoran desert scrub; gravelly/perennial deciduous shrub/(Apr)June–July (Sep–Oct)/295–2380	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Croton wigginsii	Wiggins' croton	None/SR/2B. 2	Desert dunes, Sonoran desert scrub (sandy)/perennial shrub/Mar–May/160– 330	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Cylindropuntia wolfii	Wolf's cholla	None/None/ 4.3	Sonoran desert scrub/perennial stem succulent/Mar–May/325–3935	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Eucnide rupestris	annual rock-nettle	None/None/ 2B.2	Sonoran desert scrub/annual herb/Dec– Apr/1640–1970	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.

TABLE 4.12-4
SPECIAL-STATUS PLANTS WITH POTENTIAL TO OCCUR IN THE PROPOSED PROJECT SITE

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Euphorbia abramsiana	Abrams' spurge	None/None/ 2B.2	Mojavean desert scrub, Sonoran desert scrub; sandy/annual herb/(Aug)Sep–	Not expected to occur. No suitable habitat present.
Funastrum utahense	Utah vine milkweed	None/None/ 4.2	Mojavean desert scrub, Sonoran desert scrub; sandy or gravelly/perennial herb/(Mar)Apr–June (Sep–Oct)/325– 4710	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Imperata brevifolia	California satintail	None/None/ 2B.1	Chaparral, Coastal scrub, Mojavean desert scrub, Meadows and seeps (often alkali), Riparian scrub; mesic/perennial rhizomatous herb/Sep– May/0–3985	Low potential to occur. Suitable habitat is sparse and isolated.
Ipomopsis effusa	Baja California ipomopsis	None/None/ 2B.1	Chaparral, Sonoran desert scrub (alluvial fan); sandy/annual herb/Apr–	Not expected to occur. No suitable habitat present.
Johnstonella costata	ribbed cryptantha	None/None/ 4.3	Desert dunes, Mojavean desert scrub, Sonoran desert scrub; sandy/annual herb/Feb–May/-195–1640	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Johnstonella holoptera	winged cryptantha	None/None/ 4.3	Mojavean desert scrub, Sonoran desert scrub/annual herb/Mar–Apr/325–5545	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.

TABLE 4.12-4
SPECIAL-STATUS PLANTS WITH POTENTIAL TO OCCUR IN THE PROPOSED PROJECT SITE

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Lycium parishii	Parish's desert-thorn	None/None/ 2B.3	Coastal scrub, Sonoran desert scrub/perennial shrub/ Mar–Apr/440– 3280	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Malperia tenuis	brown turbans	None/None/ 2B.3	Sonoran desert scrub (sandy, gravelly)/annual herb/(Feb) Mar–Apr/45– 1100	Not expected to occur. No suitable habitat present.
Mentzelia hirsutissima	hairy stickleaf	None/None/ 2B.3	Sonoran desert scrub (rocky)/annual herb/ Mar–May/0–2295	Not expected to occur. No suitable habitat present.
Nama stenocarpa	mud nama	None/None/ 2B.2	Marshes and swamps (lake margins, riverbanks)/annual / perennial herb/Jan–July/15–1640	Low potential to occur. Suitable habitat is sparse and isolated.
Pilostyles thurberi	Thurber's pilostyles	None/None/ 4.3	Sonoran desert scrub/perennial herb (parasitic)/Dec–Apr/0–1200	Not expected to occur. No suitable habitat present.

Source: Dudek 2018c.
Status Legend: State: SR: State Rare **CRPR**: California Rare Plant Rank CRPR 1B: Plants Rare, Threatened, or Endangered in California and Elsewhere CRPR 2B: Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere CRPR 4: Plants of Limited Distribution - A Watch List

No special-status plant species were observed during the 2017 biological survey. There is low potential for special-status plant species to occur on site. In general, due to the sparse nature of suitable habitat, the generally disturbed nature of the site, and proximity of surrounding active agriculture, it is unlikely that any special-species plant species would be present. Therefore, impacts to special-status plants are not discussed further in this analysis.

WildlifeResources

A total of 21 wildlife species were recorded within the proposed Project Area (see Appendix C). Bird species observed include common raven (*Corvus corax*), black phoebe (*Sayornis nigricans*), American kestrel (*Falco sparverius*), western meadowlark (*Sturnella neglecta*), mourning dove (*Zenaida macroura*), greater yellowlegs (*Tringa melanoleuca*), cattle egret (*Bubulcus ibis*), great egret (*Ardea alba*), turkey vulture (*Cathartes aura*), and burrowing owl (*Athene cunicularia*; CDFW SSC). Two mammal species or their sign were observed including coyote (*Canis latrans*) and raccoon (*Procyon lotor*).

Results of focused burrowing owl surveys are discussed below. No additional special-status wildlife species were detected incidentally during the 2017 biological surveys. Special- status wildlife species that have the potential to occur in the proposed Project site are listed in **Table 4.12-5** and discussed in

terms of their life history. Those that occur in the region but that are not expected to occur in the proposed Project site, due for example, to a lack of suitable habitat, are also included in **Table 4.12-5**. The wildlife species that have a low to no likelihood of occurring are not discussed further in this report because no significant direct, indirect, or cumulative impacts are expected to result from the proposed Project. Because focused surveys were not conducted for wildlife species other than burrowing owl, the potential for the species to occur is based on a literature review and the data collected during the general biological survey for the proposed Project.

TABLE 4.12-5
SPECIAL-STATUS WILDLIFE SPECIES POTENTIAL TO OCCUR IN THE PROPOSED PROJECT AREA

Scientific Name	Common Name	Status (Federal/State /Other)	Primary Habitat Associations	Potential to Occur
Amphibians				
Lithobates pipiens (native populations	northern leopard frog	None/SSC	Adjacent to permanent and semi-permanent water in a range of habitats	Low potential to occur. Last known observation in Project vicinity in 1929.
Lithobates yavapaiensis	lowland (=Yavapai, San Sebastian & San Felipe)	None/SSC	Streams, river side channels, springs, and artificial and natural ponds in desert scrub, grassland, woodland, and pinyon–	Low potential to occur. Habitat is sparse and isolated by surrounding agricultural practices.
Reptiles				
Phrynosoma mcallii	flat-tailed horned lizard	None/SSC	Desert washes and flats with sparse low-diversity vegetation cover and sandy soils.	Not expected to occur. No suitable habitat present.
Birds				
Athene cunicularia (burrow sites & some wintering sites)	burrowing owl	BCC/SSC	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows	Observed. This species and active burrow sites were observed on-site during surveys conducted between April 12, 2017 and September 28, 2017. None were observed during the general site visit on April 12, 2018, which focused on the western portions of the site.

TABLE 4.12-5
SPECIAL-STATUS WILDLIFE SPECIES POTENTIAL TO OCCUR IN THE PROPOSED PROJECT AREA

Scientific Name	Common Name	Status (Federal/State /Other)	Primary Habitat Associations	Potential to Occur
Charadrius montanus (wintering)	mountain plover	BCC/SSC	Winters in shortgrass prairies, plowed fields, open sagebrush, and sandy deserts	Not expected to winter on site. No suitable wintering or nesting habitat present. There is low potential for this species could forage on site during migration.
Laterallus jamaicensis coturniculus	California black rail	None/ST, FP	Tidal marshes, shallow freshwater margins, wet meadows, and flooded grassy vegetation; suitable habitats are often supplied by canal leakage in Sierra Nevada foothill populations	Moderate potential to occur. Suitable habitat present within the canals onsite; however, they are narrow and poorly vegetated – therefore, do not provide as high quality habitat compared to larger canals in the area.
Pyrocephalus rubinus (nesting)	vermilion flycatcher	None/SSC	Nests in riparian woodlands, riparian scrub, and freshwater marshes; typical desert riparian with cottonwood, willow, mesquite adjacent to irrigated fields, ditches, or pastures	Low potential to nest on site. Site has been heavily disturbed by agricultural practices. Potential nesting habitat exists within some irrigation canals, however it is sparse and non-contiguous. May forage on site.
Rallus obsoletus yumanensis	Yuma Ridgway's rail	FE/ST, FP	Freshwater marsh dominated by *Typha* spp., *Scirpus* spp., *Schoenoplectus* spp., *and Bolboschoenus* spp.; mix of riparian tree and shrub species along the marsh edge; many occupied areas are now man-made, such as managed ponds or effluent-supported marshes	Moderate potential to occur. Suitable habitat present within the canals onsite; however, they are narrow and poorly vegetated -therefore, do not provide as high quality habitat compared to larger canals in the area.

TABLE 4.12-5
SPECIAL-STATUS WILDLIFE SPECIES POTENTIAL TO OCCUR IN THE PROPOSED PROJECT AREA

Scientific Name	Common Name	Status (Federal/State /Other)	Primary Habitat Associations	Potential to Occur
Setophaga petechia (nesting)	yellow warbler	BCC/SSC	Nests and forages in riparian and oak woodlands, montane chaparral, open ponderosa pine, and mixed-conifer habitats.	Low potential to nest. No suitable habitat present in Project site.
Mammals				
Eumops perotis californicus	western mastiff bat	None/SSC	Chaparral, coastal and desert scrub, coniferous and deciduous forest and woodland; roosts in crevices in rocky canyons and cliffs where the canyon or cliff is vertical or nearly vertical, trees, and tunnels.	Low potential to occur. No suitable roosting habitat present. May use the site to forage.
Lasiurus xanthinus	western yellow bat	None/SSC	Valley–foothill riparian, desert riparian, desert wash, and palm oasis habitats; below 2,000 feet above mean sea level; roosts in riparian and palms.	Low potential to occur. No suitable roosting habitat present. May use the site to forage.
Neotoma albigula venusta	Colorado Valley woodrat	None/None	Desert areas; closely associated with patches of beavertail cactus and mesquite	Low potential to occur. Site has been heavily disturbed by agricultural practices. Potential habitat exist within some irrigation canals, however it is sparse and non-contiguous.
Nyctinomops femorosaccus	pocketed free- tailed bat	None/SSC	Pinyon–juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oases; roosts in high cliffs or rock outcrops with drop-offs, caverns, and buildings.	Low potential to occur. No suitable roosting habitat present. May use the site to forage.

TABLE 4.12-5
SPECIAL-STATUS WILDLIFE SPECIES POTENTIAL TO OCCUR IN THE PROPOSED PROJECT AREA

Scientific Name	Common Name	Status (Federal/State /Other)	Primary Habitat Associations	Potential to Occur
Nyctinomops macrotis	big free-tailed bat	None/SSC	Rocky areas; roosts in caves, holes in trees, buildings, and crevices on cliffs and rocky outcrops;	Low potential to occur. No suitable roosting habitat. May use the site to forage.
Sigmodon hispidus eremicus	Yuma hispid cotton rat	None/SSC	Backwater sloughs, marshy areas adjacent to Colorado River	Low potential to occur. Site has been heavily disturbed by agricultural practices. Potential habitat exist within some irrigation canals, however it is sparse and non-contiguous.
Taxidea taxus	American badger	None/SSC	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils	Not expected to occur. No suitable habitat. Site has been heavily disturbed by agricultural practices.

Source: Dudek 2018c.
Federal: FE**:** Federally Endangered BCC = USFWS bird of conservation concern
State: SSC: California Species of Special Concern ST: State Threatened FP: California Fully Protected Species

Burrowing Owl

The burrowing owl (*Athene cunicularia*) is a Species of Special Concern (SSC) and Bird of Conservation Concern (BCC) that inhabits much of California. Burrowing owls prefer open, dry, annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. They usually nest in the old burrow of a ground squirrel, badger, or other small mammal, although they may dig their own burrow in soft soil. Within disturbed or developed areas, burrowing owls may also nest in burrow surrogates (e.g., rock cavities, pipes, culverts, debris piles). Their prey consists mostly of insects, small mammals, reptiles, birds, and carrion.

Due to the high potential for burrowing owl to occur (i.e., flat topography, open vegetation, suitable burrow structures) within the Project Area, Dudek conducted focused surveys for burrowing owl between April 12, 2017 and September 28, 2017. The Project Area is dominated by heavily disturbed, fallow fields developed for cropland and agricultural fields. Thus, the survey was conducted such that 100% coverage of the entire Project Area was covered.

Biologists observed burrows during all four survey passes and burrowing owls during the first three survey passes. A total of 17 active burrow locations were recorded (**Figure 4.12-2**). Single and complexes of burrows of appropriate size detected on site that supported burrowing owls included ground burrows, gaps in concrete culverts, pipes, and burrows from water erosion cavities. Burrowing owl sign was observed and recorded at burrow entrances in order to assess burrowing owl activity. A total of 5 burrowing owls were observed within the Project Area, including one pair (**Figure 4.12-2**).

California Black Rail

The California black rail (*Laterallus jamaicensis coturniculus*) is designated as State threatened and a fully-protected species in California and primarily occurs in California, Arizona, Baja California, and the Colorado River delta in Sonora. Suitable California black rail habitat generally includes salt marshes, freshwater marshes, and wet meadows. The species is typically identified in conjunction with common threesquare (*Schoenoplectus pungens*), arrowweed (*Pluchea sericea*), Fremont cottonwood (*Populus fremontii*), and seepwillow (*Baccharis salicifolia*). The California black rail typically prey on small (<1 centimeter [0.39 inch]) invertebrates, chiefly insects, gleaned from marsh vegetation and mudflats; they also eat small seeds. No California black rail were detected in the proposed Project site during the 2017 general biological survey. There are no CNDDB occurrences found within the Project Area and no focused surveys were performed. The closest records are located approximately 8.5 miles north of the Project Area near the New River and are dated 2001. Suitable habitat is present within irrigation ditches located in the Project Area (**Figure 4.12-2**).

Yuma Ridgeway's Rail

The Yuma Ridgeway's rail (*Rallus obsoletus yumanensis*) is designated as threatened and a fully-protected species in California and is federally listed as endangered. The Yuma Ridgeway's rail is primarily known to breed in freshwater, but winter in brackish water. The preferred habitat consists of cattails (Typha spp.) and bulrush (*Scirpus ssp*.). The Yuma Ridgeway's rail primarily feeds on introduced species of crayfish, small fish, insects, amphibian larvae, clams, and other aquatic invertebrates. No Yuma Ridgeway's rail were detected in the proposed Project site during the 2017 general biological survey. There are no CNDDB or USFWS occurrences found within the Project Area and no focused surveys were performed. The closest records are from 2007 and 2014, located in a marsh approximately 5 miles north of the Project Area. Suitable habitat is present within irrigation ditches located in the Project Area (**Figure 4.12-2**).

Critical Habitat

There is no USFWS-designated critical habitat for within 5 miles of the Project area.

WildlifeMovement

Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for the migration of animals. Habitat linkages are small patches that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation; they may be continuous habitat or discrete habitat islands that function as stepping stones for wildlife dispersal.

Because the proposed Project site is primarily surrounded by and includes extensive historical and present day agricultural practices along with operating solar facilities (see **Figure 4.12-2**), the site has limited value as a potential wildlife corridor or habitat linkage for most wildlife species. The irrigation canals are not large enough to support large populations of birds, amphibians and other wildlife species associated with water and riparian vegetation; however, it could provide stopover habitat for migratory species. The agriculture fields provide habitat for migratory birds that forage in open fields. As such, the Project site likely does not serve as an important wildlife corridor or habitat linkage for larger mammals and species that are limited to native habitats but does provide foraging or stopover habitat for migratory birds.

B. Drew Switchyard and Gen-Tie Lines

The area encompassed by the Drew Switchyard and Gen-Tie Lines contains Disturbed Habitat and Urban/Developed area (refer to **Figure 4.12-2**).

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 Wildlife 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 Wildlife or U.S. Fish and Wildlife Service.

c) Have a substantial adverse effect on state or federally protected wetlands (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 a 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.

Definition of Impacts

Two types of impacts are identified with regard to analyzing the potential effects of the proposed Project on biological resources.

Direct Impacts refer to 100% loss of a biological resource. For purposes of this report, direct permanent impacts refer to the areas where the development, roads, and other features are proposed. Direct temporary impacts refer to the areas where grading and temporary construction areas are proposed within the open space; these areas will be restored and thus are considered temporary. Direct impacts were quantified by overlaying the proposed impacts on GIS-located biological resources.

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

B. METHODOLOGY

The Biological Resources Report prepared for the proposed Project describes the existing biological resources located within the vicinity of the Project; details the methodologies used to assess potential impacts to sensitive habitats and species; provides results of the assessment; and presents avoidance, minimization, and mitigation measures to reduce potential impacts (Dudek 2018c).

Literature Review

Special-status biological resources present or potentially present on site were identified through an extensive literature search using the following sources: U.S. Fish and Wildlife Service Critical Habitat and Occurrence Data (USFWS 2017a), California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) (CDFW 2017c), California Native Plant Society's (CNPS) *Online Inventory of Rare and Endangered Vascular Plants* (CNPS 2017 in Dudek 2018c).

For the jurisdictional delineation, Dudek reviewed aerial maps from Bing (2017); the USFWS National Wetlands Inventory (NWI) (USFWS 2017b in Dudek 2018c); the USGS National Hydrography Dataset (NHD) (USGS 2017); the State List of Hydric Soils (USDA 2017b) in Dudek 2018c; and historical aerials and topographic maps (Google Earth 2017; Historic Aerials Online 2017). The NHD contains water features such as lakes, ponds, streams, rivers, canals, dams, and stream gages (USGS 2017b in Dudek 2018c). The USFWS created the NWI to "provide biologists and others with information on the distribution and type of wetlands to aid in conservation efforts" (USFWS 2017b in Dudek 2018c). Potential wetlands and waters are mapped by the USFWS based on aerial images and that data is provided to the public. This compilation of data was reviewed to gain a better understanding of the hydrologic setting of the study area.

Field Reconnaissance

General Biological Survey

A general biological survey of the approximate 855-acre Project Area (**Figure 4.12-1**) was conducted by Dudek Biologist Marshall Paymard and Callie Amoaku on December 5, 2017 and by Shana Carey on April 12, 2018 (**Table 4.12-6**). The biological survey included the mapping of vegetation communities and land covers present within the Project Area, an evaluation of jurisdictional wetlands or waters, and an evaluation of the potential for special-status species to occur on the Project Area.

TABLE 4.12-6
GENERAL BIOLOGICAL SURVEY CONDITIONS

Date	Time	Personnel	Survey Conditions
12/05/2017	1200–1645	Marshall Paymard Callie Amoaku	69–58 Degrees Fahrenheit (°F) , 10%-40% cloud cover (cc), 0–1 miles per hour (mph) wind
4/12/2018	1115–1333	Shana Carey	76–81°F; 0% cc, 8–11 mph wind

Source: Dudek 2018c.
°F = degrees Fahrenheit; cc = cloud cover; mph = miles per hour

Focused Burrowing Owl Surveys

Biological surveys for burrowing owl included a habitat assessment, followed by focused surveys in suitable habitat (e.g., grasslands, disturbed lands, and other open habitats where suitable burrow resources exist, and are relatively flat or have low slopes) within the Project Area and a 200-foot buffer surrounding the Project Area (**see Figure 4.12-1**). Biologists conducted surveys pursuant to the survey

guidelines outlined in Appendix D of the Staff Report on Burrowing Owl Mitigation (California Department of Fish and Game [CDFG] 2012).

Dudek wildlife biologists Ben Delancey, Abby Bergsma, and Shane Valiere conducted a four-pass survey for burrowing owl between April 12, 2017 and September 28, 2017, which captured the majority of the breeding season as well as the beginning of the migration period (**Table 4.12-7**). The survey consisted of the Project Area excluding paved roads and other developed areas and a 200-foot buffer (**Figure 4.12-1**). The survey consisted of walking the entire survey area where suitable open habitat occurred, while searching for burrowing owls, sign (i.e., owl pellets, molted feathers, abundant insect remains, white wash, etc.), and potential burrow sites. The survey was conducted such that 100% coverage of the entire Project Area, plus a 200-foot buffer where legal access was granted, was covered (i.e., approximate 50-foot transects were walked across the entire site). Climatic conditions at the time of the survey were within protocol guidelines (CDFG 2012) where suitable burrow resources are present.

TABLE 4.12-7
SCHEDULE OF BURROWING OWL SURVEYS

Date	Personnel	Survey Pass	Time	Conditions (temperature, cloud cover, and wind)
4/12/2017	BD	1	8:00 AM–10:45 AM	70–80°F; 10% cc; 3 mph wind
4/13/2017	BD, AB	1	7:00 AM–10:45 AM	70–80°F; 10% cc; 3 mph wind
4/14/2017	BD, AB	1	6:15 AM–10:55 AM	56–73°F; 0–10% cc; 0–3 mph wind
6/02/2017	SV	2	6:41 AM–11:45 AM	75–87°F; 0% cc; 0–1 mph wind
6/22/2017	SV	3	6:48 AM–10:40 AM	84–99°F; 0% cc; 0–4 mph wind
9/28/2017	SV	4	7:20 AM–11:05 AM	67–87°F; 0% cc; 0–2 mph wind

Source: Dudek 2018c.

Notes: BD = Ben Delancey; AB = Abby Bergsma; SV = Shane Valiere; °F = degrees Fahrenheit; cc = cloud cover; mph = miles per hour.

Vegetation Mapping

The survey was conducted on foot to visually cover 100% of the Project Area. A 300-scale (i.e., 300 feet = 1 inch) aerial photograph map (Bing 2017) with an overlay of the Project Area was utilized to map the vegetation communities and record any special-status biological resources directly in the field.

Plant community classifications follow the List of Vegetation Alliances and Associations with modifications to accommodate the lack of conformity of the observed communities to those of California Department of Fish and Game (CDFG) (CDFG 2010 in Dudek 2018c). Vegetation community and land cover mapping was conducted for the Project Area. Observable biological resources including perennial plants and conspicuous wildlife (i.e., birds and some reptiles) commonly accepted as regionally sensitive by CDFW and USFWS were recorded on the field map, where applicable. Following completion of the field work, Dudek Geographic Information System (GIS) specialist Andrew Greis digitized the mapped results using ArcGIS and calculated coverage acreages using ArcCAD. The structure of dominant layer, associated species and estimated absolute cover, total vegetative cover of each strata, approximate stand size, disturbance information, other observations, and photographs were used.

Jurisdictional Delineation

Dudek conducted a formal (routine) jurisdictional delineation within the Project Area. The Project Area was surveyed on foot for areas under the jurisdiction of the Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act, Regional Water Quality Control Board (RWQCB) pursuant to Section 401 of the federal Clean Water Act and the Porter- Cologne Water Quality Control Act, and the CDFW pursuant to Section 1600 of the California Fish and Game Code.

CDFW asserts jurisdiction over rivers, streams, and lakes, and riparian vegetation associated with these features. Waters of the state (WS) were delineated based on watercourse characteristics present in the field, which include surface flow, sediment transportation and sorting, physical indicators of channel forms, channel morphology, and drainage swales. These characteristics are based on the CDFW guidance document, *A Review of Stream Processes and Forms in Dryland Watersheds* (Vyverberg 2010 in Dudek 2018c).

RWQCB typically asserts jurisdiction over the same areas as USACE. Non-wetland waters subject to USACE and RWQCB jurisdiction were delineated based on the presence of an ordinary high water mark (OHWM), as determined by USACE guidance (USACE 1987 in Dudek 2018c). Wetland waters subject to USACE and RWQCB jurisdiction were mapped based on methods described in the 1987 Corps of Engineers Wetlands Delineation Manual (USACE 1987 in Dudek 2018c) and the Regional Supplement to the Corps of Engineers Wetland

Delineation Manual: Arid West Region (USACE 2008b in Dudek 2018c). A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (USACE 2008a) and the Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (USACE 2010 in Dudek 2018c). Pursuant to the federal Clean Water Act, USACE and RWQCB jurisdictional areas include those supporting all three wetlands criteria described in the USACE manual: hydric soils, hydrology, and hydrophytic vegetation. To assist in the determination of jurisdictional areas, data was collected at three data stations (Appendix A of the Biological Resources Report included in **Appendix K** of this EIR). Hydrology, vegetation, and soils were assessed, and data were collected on approved USACE forms. The site was evaluated for evidence of an OHWM, surface water, saturation, and wetland vegetation. The extent of any identified jurisdictional areas was determined by mapping the areas with similar vegetation and topography to the sampled locations. The location of data stations and the limits of wetlands were collected in the field using a 300-scale (1 inch = 300 feet) aerial photograph, topographic base, and Trimble GeoXT GPS unit with sub-meter accuracy. The jurisdictional extents were digitized in GIS based on the 1-foot contours (Revolution Labs 2017 in Dudek 2018c), GPS data and data collected directly onto field maps into a Project-specific GIS using ArcGIS software. A more detailed description of the methods is described below.

Hydrophytic Vegetation

During the delineation, a data station point was considered positive for hydrophytic vegetation if it passed the basic dominance test (Indicator 1), meaning that more than 50% of the dominant species sampled were characterized as either obligate, facultative wetland, and/or facultative per the *Arid West 2016 Regional Wetland Plant List* (Lichvar et al. 2016 in Dudek 2018c), or if it passed the prevalence index (Indicator 2), which takes into account all plant species in the community, not just dominants. The standard plot sampling technique was used to sample vegetation within a 10-foot radius for herbaceous vegetation and a 30-foot radius for trees, shrubs, and woody vines (USACE 1987 in Dudek 2018c). All plant species observed during the surveys were identified and recorded (see Appendix B of the Biological Resources Report included in **Appendix K** of this EIR).

Hydric Soils

According to the National Technical Committee for Hydric Soils, hydric soils are "soils that are formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part" (USDA 2017b in Dudek 2018c). Soil pits were prepared using a "sharp shooter" shovel to determine if hydric soils were present. The presence of hydric soils was determined through consultations with the *USACE 1987 Wetlands Delineation Manual* (USACE 1987 in Dudek 2018c) as well as Field Indicators of Hydric Soils in the United States (USDA and NRCS

2017) and *USACE's Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Version 2.0) (USACE 2008b in Dudek 2018c). Munsell Soil Color Charts were used to determine soil chroma and value. Where feasible, soil pits were prepared to depths ranging from 16 to 18 inches. Dry soils were moistened to obtain the most accurate color. In general, soils from test pits were determined to be hydric if found to be of a chroma one or chroma two with mottles. Excavated soils were examined for evidence of hydric conditions, including low chroma values and mottling, vertical streaking, sulfidic odor, and high organic matter content in the upper horizon. Evidence of previous ponding or flooding was assessed, along with the slope, slope shape, existing landform characteristics, soil material/composition, and hydrophytic vegetation to determine if hydric soils were present.

Hydrology

In accordance with the guidelines prescribed in *USACE's Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Version 2.0) (USACE 2008b in Dudek 2018c), wetland hydrology indicators are separated into four major groups: Group A, B, C, and D. Group A indicators are based on direct observations of surface flow, ponding, and soil saturation/groundwater. Group B indicators consist of evidence that the site has been or is currently subjected to ponding, including, but not limited to water marks, drift deposits, and sediment deposits. Group C indicators include signs of previous and/or current saturation, including oxidized rhizospheres surrounding living roots and the presence of reduced iron or sulfur, both of which are indicative of extended periods of soil saturation. Group D indicators consist of "vegetation and soil features that are indicative of current rather than historic wet conditions and include a shallow aquitard and results of the FAC-Neutral test." Each group is subdivided into primary and secondary categories based on their frequency and reliability to occur in the Arid West region. See Appendix A of the Biological Resources Report included in **Appendix K** of this EIR for the completed data station forms.

Flora

All plant species encountered during the field survey were identified and recorded directly into a field notebook. Those species that could not be identified immediately were brought into the laboratory for further investigation and identification. A compiled list of plant species observed in the Project site is presented in Appendix B of the Biological Resources Report included in **Appendix K** of this EIR.

Latin and common names for plant species with a California Rare Plant Rank (CRPR) (formerly CNPS List) follow the *CNPS On-Line Inventory of Rare, Threatened, and Endangered Plants of California* (CNPS 2017). For plant species without a CRPR, Latin names follow the *Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California* (Jepson Flora Project 2017 in Dudek 2018c) and common names follow the *List of Vegetation Alliances and Associations* (CDFG 2010 in Dudek 2018c) or the United States Department of Agriculture Natural Resources Conservation Service's Plants Database (USDA 2017a).

Fauna

Surveys for burrowing owl were conducted pursuant to the CDFG (2012) survey guidelines. Biologists recorded burrowing owl observations, potential burrowing sites, and owl sign found within the Project Area. Other wildlife species observed or detected the general and focused biological survey by sight, calls, tracks, scat, or other signs were recorded. Binoculars (10 mm × 40 mm) were used to aid in the identification of observed wildlife. In addition to species actually observed, expected wildlife usage of the site was determined according to known habitat preferences of regional wildlife species and knowledge of their relative distributions in the area. Latin and common names of animals follow Crother (2012 in Dudek 2018c) for reptiles and amphibians, American Ornithologists' Union (AOU) (2016) for birds, Wilson and Reeder (2005 in Dudek 2018c) for mammals, North American

Butterfly Association (NABA) (2001 in Dudek 2018c) or San Diego Natural History Museum (SDNHM) (2002 in Dudek 2018c) for butterflies, and Moyle (2002 in Dudek 2018c) for fish. All wildlife species observed during the surveys were identified and recorded (see Appendix C of the Biological Resources Report included in **Appendix K** of this EIR).

C. Issues Scoped Out as Part of the Initial Study

Checklist criterion "f" was eliminated from further evaluation 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.

BLM has adopted the Desert Renewable Energy Conservation Plan (DRECP), which provides protection and conservation of desert ecosystems while allowing for appropriate development of renewable energy Projects. The Draft DRECP was originally developed as an HCP/Natural Community Conservation Plan (NCCP) and a BLM Land Use Plan Amendment covering both public and private lands across seven counties, including Imperial County. In October 2015, the DRECP BLM Land Use Plan Amendment and Final EIS, which addresses renewable energy, land use, and conservation on BLM lands only, was released (USBLM 2015 in Dudek 2018c). Although the DRECP plan area includes the Project area, the DRECP currently only applies to renewable energy Projects on BLM-managed lands and therefore would not be applicable to the proposed Project. The DRECP does not preclude or otherwise prevent or restrict development of renewable energy projects outside of BLM-managed land. Therefore, the proposed Project would not conflict with the goals and policies of the DRECP.

The proposed Project is not located within any other local, regional, or state conservation planning areas. The Project would have no impact on an adopted HCP, NCCP, or other approved local, regional, or state habitat conservation plan.

D. Project Impacts and Mitigation Measures

Impacts to Special Status Species (Burrowing Owl)

Impact 4.12.1 The Project Area contains suitable habitat for burrowing owl. Several owls were discovered during field surveys of the Project site. Therefore, potential for impacts to special status species is considered **potentially significant** under both the Full Build-out and Phased CUP Scenarios.

FULL BUILD-OUT SCENARIO AND PHASED CUP SCENARIOS

Special-Status Wildlife

As described the in **Table 4.12-5**, burrowing owl is the only special-status species that was observed in the Project site during biological surveys conducted in 2017. Two other special-status wildlife species have at least a moderate potential to occur in the proposed Project site: California black rail and Yuma Ridgeway's rail. Potential impacts to each are discussed below under construction impacts and operation impacts. No other special-status wildlife species have high or moderate potential to occur.

Construction

Direct Impacts

Two types of construction-related direct impacts can potentially occur to special-status wildlife species: impacts to habitat and impacts to the species from injury or mortality of individuals of the species. Impacts causing injury or mortality of individuals could include crushing of low-mobility species during grading, entombment of burrowing species during grading, collisions with construction equipment, and

destruction of bird nests during vegetation removal or grading. Construction-related indirect impacts include noise, human activity, and dust.

Burrowing owls and active burrow sites were recorded within the Project site during focused surveys conducted in 2017. Potential construction-related direct impacts to burrowing owl could result from unintentional clearing, trampling, or grading outside of the construction zone. Additionally, ground disturbances could potentially result in destruction of burrowing owl dens, destruction of nests, eggs, and young, and entombment of adults. Burrowing owls could be affected by construction-related noise and increased human presence. Burrowing owl is an SSC that has experienced declines in California and loss of individuals, destruction of occupied nests, and indirect impacts that result in either of these impacts are prohibited by federal and state law and considered a **potentially significant impact** under both the Full Build-out and Phased CUP Scenarios.

Operational

Solar Energy Generation Component

Potential impacts to burrowing owl during Project operations could result from lighting, noise, dust, increased human activity, collision hazards, electromagnetic affects, and altered hydrology generated from the solar and energy storage facilities.

All permanent lighting would be low-profile fixtures that point inward toward the solar energy facility with directional hoods or shades to reduce light from shining into the adjacent habitat and disturbing birds or exposing them to increased visibility by predators. In addition, any lighting not required daily for security purposes will have motion sensor or temporary use capabilities. As such, no significant impact under CEQA due to lighting is anticipated to occur to migratory birds because the vast majority of the light will be directed onto the facility, not onto adjacent habitat and because the lights will not be on continuously. Thus, the lighting will not interfere substantially with the movement of migratory bird species or have a substantial effect on habitat.

The Project Area is actively farmed and there are solar facilities operating to the east and south of the Project. No equipment or components are anticipated to produce noise that would exceed ambient noise in the vicinity (refer to Section 4.8, Noise). No significant impact under CEQA due to noise would occur to migratory birds because their movement and habitat will not be substantially affected under both the Full Build-out and Phased CUP Scenarios.

Dust from vehicles could affect suitable habitat for special-status species. Increased human activity can deter wildlife from using habitat areas near the Project site as well as increase the potential for vehicle collisions.

The proposed Project could also potentially increase the risk of collisions due to sky reflection (or "pseudo-lake effect"). Although avian collisions with towers and structures have been well documented, there are few published papers that study the possibility that large areas of solar PV panels in the desert environment may mimic water bodies and inadvertently attract migrating or dispersing wetland bird species. Polarized reflections from solar PV arrays have been observed to attract insects, which could in turn attract other sensitive wildlife, such as bats, but the magnitude of this effect is unknown, since no comprehensive scientific studies have been conducted for this potential phenomenon.

Anecdotal studies are beginning to show that some gleaning bat species may actually benefit from solar facilities and use those facilities for foraging purposes more than adjacent areas. Currently, the research is insufficient to assess the magnitude or likely risk associated with collisions with solar fields. The solar PV modules would be coated to be non-reflective and are designed to be highly absorptive of all light that strikes the glass surface. Based on the evidence available—non-reflective design of the solar panels,

distance from large water bodies, distance from agricultural areas, typical migration patterns, comparatively few documented deaths—glare and pseudo-lake effect are not expected to result in significant impacts to migrating or local avian species.

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

Water would be used for operational purposes for cleaning the solar modules and for reapplication of the nontoxic permeable soils stabilizers that may alter the on-site hydrologic regime. These hydrologic alterations may affect special-status wildlife species. Water, and associated runoff, used during operation and maintenance activities will be contained within the proposed Project Area, thereby reducing those impacts to less than significant. Overall, operational impacts are considered **less than significant** under both the Full Buildout and Phased CUP Scenarios.

Drew Switchyard and Gen-Tie Lines

Bats are not expected to be affected by collision with the static facilities as they would "view" or "see" these facilities (through echolocation) as any other stable physical obstacle in their environment (like boulders, trees, and buildings). If not installed underground, overhead gen-tie transmission lines would increase the potential for avian collisions. This is considered a **potentially significant impact** under both the Full Buildout and Phased CUP Scenarios.

Potential indirect impacts associated with dust, increased human activities and collisions are considered a **potentially significant impact** under both the Full Buildout and Phased CUP Scenarios. Mitigation measure MM 4.12.1a minimizes long-term effects from dust by imposing speed limits on site and limits allowed activities to reduce effects from increased human activity; Mitigation measure MM 4.12.1b provides worker training operational staff to minimize impacts associated with increased human activity; and Mitigation measure MM 4.12.1e requires all transmission towers and lines to implement measures that protect raptors and other birds from electrocution.

Decommissioning/Reclamation

Similar to construction, decommissioning will consist of various activities with potential for impacts if burrowing owls are present on or around the vicinity of the Project site. This is considered a **potentially significant impact**. Following reclamation, lands would be restored to current conditions.

Mitigation Measures

MM 4.12.1a General Avoidance and Minimization Measures

Debris/Non-native Vegetation/Pollution

- Fully covered trash receptacles that are animal-proof will be installed and used onsite to contain all food, food scraps, food wrappers, beverage containers, and other miscellaneous trash.
- No litter or debris will be discharged into state-jurisdictional waters.
- Work areas shall be kept clean of debris, such as trash, and construction materials.
- Vehicle and Equipment Restrictions and Maintenance

- Night-time construction should be minimized to the extent possible. However, if night-time activity (e.g., equipment maintenance) is necessary, then the speed limit shall be 10 mph.
- Vehicle operation within jurisdictional resources when surface water is present will be prohibited except as necessary to perform work in IID facilities pursuant to USACE, RWQCB, and/or CDFW permits and/or authorizations. Any equipment or vehicles driven and/or operated within or adjacent to a state-jurisdictional channel will be checked and maintained by the operator daily to prevent leaks of oil or other petroleum products that could be deleterious to aquatic life if introduced to the watercourse.
- Vehicles and equipment access will be limited to the identified impact areas and speed limit of 15 mph will be enforced. The work areas and sensitive areas will be flagged prior to construction in order to ensure construction activities remain within the approved work limits. During operations and maintenance, vehicles and equipment will be restricted from entering sensitive habitat, and limited to maintenance access roads, where feasible, and the minimal area necessary to perform the work.
- Staging and storage areas for spoils, equipment, materials, fuels, lubricants, and solvents will be located outside the state-jurisdictional channels and within the designated impact area. Stationary equipment, such as motors, pumps, generators, compressors, and welders, located adjacent to state-jurisdictional waters shall be positioned over drip-pans or other containment. Prior to refueling and lubrication, vehicles and other equipment shall be moved away from the jurisdictional waters.

Other Restrictions on Activities and Personnel

- No pets, such as cats or dogs, permitted on the Project site during construction or operations and maintenance.
- Any contractor, employee, or agency personnel who kills, injures, or traps a wildlife species shall immediately report the incident to the Project biologist during construction and the operations manager during operations and maintenance.
- All pipes, culverts, or similar structures with a diameter of 4 inches or more that are stored at a construction site for one or more overnight periods shall be thoroughly inspected for special-status wildlife and nesting birds before the pipe is subsequently buried, capped, or otherwise used or moved in any way, and subsequently covered to prevent entry to nesting birds and other wildlife. If an animal is discovered inside a pipe, that section of pipe shall not be moved until the Project biologist has been consulted and the animal has either moved from the structure on its own accord or until the animal has been captured and relocated by a qualified biologist.

Timing/Implementation: *During construction and operation, as appropriate/Applicant and Project Contractor.*

Enforcement/Monitoring: *Imperial County Planning and Development Services Department.*

MM 4.12.1b Environmental Awareness Training, Biological Monitoring, and Compliance

Worker Environmental Awareness Program and Ongoing Training

Prior to the initiation of any on-site grading, all construction/contractor personnel working on site must complete training through a Worker Environmental Awareness Program (WEAP). New construction workers engaged in construction activities (e.g., grading, utility installation, etc.) shall complete WEAP training within the first week of deployment on the site. Additionally, operational staff shall complete WEAP training prior to deployment on the site.

Biological Monitoring and Compliance Documentation

- The Project biologist shall perform the biological monitoring and compliance documentation for the Project during construction, including the following:
- Prior to the initiation of any on-site grading, the Project biologist will document that required pre-construction surveys and/or relocation efforts have been implemented.
- The Project biologist will periodically monitor activities during initial grading.
- The Project biologist will note any evidence of trash and, if present, communicate the presence and requirement to remove the trash to the construction manager.
- The Project Biologist shall have the following minimum qualifications: (1) Have a bachelor's degree in biological sciences, zoology, botany, ecology or a closely related field; (2) Have at least 2 years of experience in biological compliance for construction projects; and (3) Have at least 1 year of field experience with biological resources found in the geographic region of the Project.

Timing/Implementation: *During construction and operation, as appropriate/Applicant, Project Contractor and Operator.*
Enforcement/Monitoring: *Imperial County Planning and Development Services Department.*

MM 4.12.1c Burrowing Owl Surveys and Avoidance/Relocation.

- No more than 14 days prior to ground-disturbing activities (vegetation clearance, grading), a qualified wildlife biologist (i.e., a wildlife biologist with previous burrowing owl survey experience) shall conduct pre-construction take avoidance surveys on and within 656 feet of the construction zone (where safe and legally accessible) to identify occupied breeding or wintering burrowing owl burrows. The two-pass take avoidance burrowing owl surveys shall be conducted in accordance with the Staff Report on Burrowing Owl Mitigation (2012 Staff Report; CDFG 2012) and shall consist of walking parallel transects 22 feet to 65 feet apart, adjusting for vegetation height and density as needed, and noting any suitably sized burrows with fresh burrowing owl sign or presence of burrowing owls. As each burrow is investigated, biologists shall also look for signs of American badger and desert kit fox. Copies of the burrowing owl survey results will be submitted to the CDFW.

- If burrowing owls are detected on site, no ground-disturbing activities will be permitted within 656 feet of an occupied burrow during the breeding season (February 1 to August 31), unless otherwise authorized by CDFW. During the nonbreeding season (September 1 to January 31), ground-disturbing work can proceed near active burrows as long as the work occurs no closer than 165 feet from the burrow. Depending on the level of disturbance, a smaller buffer may be established in consultation with CDFW.

- If avoidance of active burrows is infeasible during the nonbreeding season, then, before breeding behavior is exhibited and after the burrow is confirmed empty by site surveillance and/or scoping, a qualified biologist shall implement a passive relocation program in accordance with Appendix E (i.e., Example Components for Burrowing Owl Artificial Burrow and Exclusion Plans) of the 2012 Staff Report. Passive relocation consists of excluding burrowing owls from occupied burrows by closing or collapsing the burrows and providing suitable artificial burrows nearby for the excluded burrowing owls.

- Where required buffering will not be feasible, passive relocation is an option in consultation with CDFW, but it is preferred to install appropriate artificial burrows (in accordance with the negotiated Plan) and then let the owls decide whether they would like to abandon the existing burrow. Only burrows that are in danger by construction should be collapsed if at all possible.

- A Burrowing Owl Relocation Plan will be prepared and approved by CDFW prior to commencement of burrowing owl exclusion activities if this method of mitigation is required. The plan will detail the procedures of the passive relocation effort, the location of constructed replacement burrows, design of replacement burrows, and post relocation monitoring requirements.

Timing/Implementation: *No more than 14 days prior to ground-disturbing activities/ qualified wildlife biologist.*

Enforcement/Monitoring: *Imperial County Planning and Development Services Department.*

MM 4.12.1d Nesting Bird Pre-Construction Surveys and Avoidance Plan

- The Project biologist shall conduct pre-construction surveys no earlier than 7 days prior to any on-site grading and construction activities that occurs during the nesting season defined as February 1 – September 15 or as determined by the Project biologist. Pre-construction surveys shall be conducted within the designated construction area and a 500-foot buffer (where safe and legally accessible). Burrowing owl measures are addressed in MM 4.12.1c.

- The purpose of the pre-construction surveys will be to determine whether occupied nests are present in the construction zone or within 500 feet of the construction zone boundary on lands that are legally accessible.

- If occupied nests are found, then limits of construction to avoid occupied nests shall be established by the Project biologist in the field with flagging, fencing, or other appropriate barriers (e.g., 250 feet around active passerine nests to 500 feet around active raptor nests), and construction personnel shall be instructed on the

sensitivity of nest areas. The Project biologist may adjust the 250-foot or 500-foot setback at his or her discretion depending on the species and the location of the nest (e.g., if the nest is well protected in an area buffered by dense vegetation the setback may be reduced). Once a Project biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival, construction may proceed.

Timing/Implementation: *No earlier than 7 days prior to any on-site grading and construction activities that occurs during the nesting season/ Project biologist.*
Enforcement/Monitoring: *Imperial County Planning and Development Services Department.*

MM 4.12.1e Transmission Line Design

All transmission towers and lines are designed to conform to Avian Power Line Interaction Committee (APLIC) standards. APLIC standards identify the necessary physical separation between energized and/or grounded structures, conductors, hardware, or equipment to avoid the potential for that to be bridged by birds, thus avoiding the potential for electrocution. The proposed Project shall implement recommendations by the APLIC (2006, 2012) to protect raptors and other birds.

Timing/Implementation: *During Project design/As part of Project construction*
Enforcement/Monitoring: *Imperial County Planning and Development Services Department.*

Significance After Mitigation

Mitigation measure MM 4.12.1a (general construction-related avoidance and minimization measures) would limit vehicles and construction equipment to identified non-impact areas and would limit ingress and egress to established roads. Mitigation measure MM 4.12.1b (WEAP training, biological monitoring, and compliance) would further ensure no take of, and avoidance of impacts to, burrowing owls. Construction mitigation measure MM 4.12.1c (burrowing owl pre-construction surveys and avoidance/relocation plan) and MM 4.12.1d (nesting bird pre-construction surveys and avoidance plan) would result in identification of any burrowing owls present at the time of construction within areas potentially impacted by the Project, establishment of appropriate buffers, and avoidance/minimization of impacts to burrowing owl. Following implementation of mitigation measures MM 4.12.1a, MM 4.12.1b, MM 4.12.1c and MM 4.12.1d, construction-related direct impacts to burrowing owl would reduced to **less than significant** under both the Full Buildout and Phased CUP Scenarios.

Lastly, mitigation measure MM 4.12.1e requires the Project to implement recommendations by the APLIC. With implementation of this measure, potential for raptors and other birds to be electrocuted would be reduced to **less than significant** under both the Full Buildout and Phased CUP Scenarios.

Impacts to Special Status Species (California Black Rail and Yuma Ridgeway's Rail)

Impact 4.12.2 Suitable habitat for California Black Rail and Yuma Ridgeway's Rail is present within irrigation ditches located within the boundaries of the Project site. Therefore, potential for impacts to special status species is considered **potentially significant** during Project construction under both the Full Buildout and Phased CUP Scenarios.

FULL BUILD-OUT SCENARIO/PHASED CUP SCENARIO

Construction

California black rail and Yuma Ridgeway's rail were not recorded during the 2017 surveys. However, suitable habitat occurs in small quantities within the irrigation drains and laterals throughout the Project site. Focused surveys were not conducted within the proposed Project site, therefore, impacts are conservatively based upon the presence of a small amount of suitable habitat within the drains and laterals.

The closest record for Yuma ridgeway's rail is located approximately five miles north and for California black rail, approximately 8.5 miles north. Potential construction-related direct impacts to California black rail and Yuma Ridgeway's rail could result from unintentional clearing, trampling, or grading outside of the construction zone. Very small potential impact areas are located within the IID drains (see **Figure 4.12-2**), which are required to install drainage connections. Direct impacts to suitable habitat total approximately 0.03 acre spread among various drainage connections. Therefore, loss of such a small amount of potential habitat is less than significant. Ground disturbances could potentially result in destruction of nests, eggs, and/or young if one of both of these species nests on site. Rails could be affected by construction-related noise and increased human presence. Loss of individuals or destruction of nests, or indirect impacts that cause loss of individuals, is considered a **potentially significant impact** during Project construction under both the Full Buildout and Phased CUP Scenarios.

Operation

Once the Project is in operation, no habitat for California black rail and Yuma Ridgeway's rail would be present. Therefore, **no impact** to California black rail or Yuma Ridgeway's rail would occur during Project operation.

Decommissioning/Reclamation

As discussed under "Operation", no habitat for California black rail and Yuma Ridgeway's rail would be present during Project decommissioning. Thus, potential for impacts is considered **less than significant** under both the Full Buildout and Phased CUP Scenarios. Once reclamation is complete, habitat may again reestablish as the Project site would reclaimed to its original condition

Mitigation Measures

Implement mitigation measure MM 4.12.1a, MM 4.12.1b and MM 4.12.1d.

Significance After Mitigation

Construction mitigation measure MM 4.12.1a (general construction-related avoidance and minimization measures) would limit vehicles and construction equipment to identified non-impact areas and would limit ingress and egress to established roads. Mitigation measure MM 4.12.1b (WEAP training, biological monitoring, and compliance) would further ensure avoidance of impacts to California black rails and Yuma Ridgeway's rails. Mitigation measure MM 4.12.1d (nesting bird pre-construction surveys and avoidance plan) would result in identification of any California black rails and Yuma Ridgeway's rails within areas potentially impacted by construction of the Project, establishment of appropriate buffers, and avoidance of impacts to California black rail and Yuma Ridgeway's rail. Following implementation of these mitigation measures, construction-related direct impacts to California black rail and Yuma Ridgeway's rail would be avoided and thereby reduced to **less than significant** under both the Full Buildout and Phased CUP Scenarios.

Impacts on Riparian Habitat, Wetland Community or other Sensitive Natural Community (Arrow Weed Thicket and Cattail Marsh Alliance)

Impact 4.12.3 The Project site contains Arrow Weed Thickets and Cattail Marshes Alliance. Arrow Weed Thicket is a sensitive biological resource under CEQA and Cattail Marshes Alliance is a wetland community, which is typically afforded protection under CEQA and the Clean Water Act. Implementation of the proposed Project would require permanent removal of both vegetation communities within the boundaries of CUP#17-0033. This is considered a **potentially significant impact** during Project construction under both the Full Buildout and Phased CUP Scenarios.

CUP#17-0033

Construction

Special-status or sensitive vegetation communities found within the Project Area includes arrow weed thickets alliance. Although not considered a sensitive vegetation community according to the Natural Communities List (CDFG 2010), an additional wetland/riparian vegetation community is found within the Project site: cattail marshes alliance. Sensitive vegetation communities are located within IID drainage facilities that are not anticipated for improvements beyond minor drain improvements (e.g. installation of new drain outflow pipes which reduce erosion within the IID drains) and 34.5-kV collection crossings.

All ground-disturbing impacts will occur within the Project Area. The approximate acreage of impacts to vegetation and land cover types by CUP is provided in **Table 4.12-8** based on the preliminary impact footprint that has been determined at this time. **Figure 4.12-2** shows the areas where impacts are anticipated to occur and is subject to change based on final engineering design.

TABLE 4.12-8
POTENTIAL GROUND-DISTURBING IMPACTS TO VEGETATION AND LAND COVERS (ACRES) BY CUP

Vegetation Communities	Permanent Impact Acres	CUP #17-0031	CUP #17-0032	CUP #17-0033	CUP #17-0034	CUPs #17-0035 #18-0001
Arrow Weed Thickets	0.02	--	--	0.02	--	--
Cattail Marshes Alliance	<0.01	--	--	0.01	--	--
Tamarisk Thickets	0.01	--	--	0.01	--	--
Land Covers	**Permanent Impact Acres**	**CUP #17-0031**	**CUP #17-0032**	**CUP 3 #17-0033**	**CUP 4 #17-0034**	**CUPs #17-0035 #18-0001**
Open Water	<0.01	--	0.01	--	--	--
Agriculture	749.86	152.12	160.9	152.41	156.26	128.2
Disturbed Habitat	23.05	7.34	2.16	5.5	8.01	
Total Acreage*	**772.95**	159.46	163.07	157.95	164.27	128.2

Source: Dudek 2018c.
*Total acreages may not sum due to rounding.

As shown in **Table 4.12-8** and illustrated in **Figure 4.12-2**, the proposed Project will potentially permanently impact two sensitive vegetation communities/regulated resources on CUP#17-0033: arrow weed thickets alliance and tamarisk thickets. In addition, cattail marsh is a wetland community which is typically afforded protection under CEQA and the Clean Water Act. Despite the small quantity of acreage affected, impacts to riparian habitat or other sensitive natural community are considered **potentially significant** within the boundaries of CUP#17-0033 under both the Full Buildout and Phased CUP Scenarios.

Operation

During operations, vegetation on the site would be maintained and controlled thus making it unlikely that vegetation communities such as Arrow Weed Thickets, Cattail Marshes Alliance and Tamarisk Thickets would re-establish. Invasive/weedy species would be controlled and any non-invasive vegetation that re-establishes within the Project site would be controlled within the solar field. Vegetation growing within the boundaries of the Project site would be removed manually. Therefore, impacts to riparian habitat or other sensitive natural community are considered **less than significant** under both the Full Buildout and Phased CUP Scenarios.

Decommissioning/Reclamation

During decommissioning, all solar field components and the two Gen-Tie lines will be removed. Because the site would have been maintained during operations, sensitive vegetation communities would not have reestablished on the Project site. Therefore, impacts to riparian habitat or other sensitive natural community are considered **less than significant** during decommissioning under both the Full Buildout and Phased CUP Scenarios. Following reclamation, the site will be reclaimed to its original condition.

Mitigation Measures

MM 4.12.3 CUP#17-0033 - Federal and State Agency Permits

To comply with the state and federal regulations for impacts to jurisdictional resources regulated by the United States and State of California, the following permits and agreement shall be obtained, or evidence shall be provided from the respective resource agency satisfactory to the County that such an agreement or permit is not required if development activities are proposed within jurisdictional waters:

- A Clean Water Act Section 404 permit issued by the USACE for all Project-related disturbances of jurisdictional non-wetland waters and/or wetlands.
- A Clean Water Act Section 401 permit issued by the RWQCB for all Project-related disturbances of jurisdictional non-wetland waters and/or wetlands.
- A Section 1602 Streambed Alteration Agreement issued by the CDFW for all Project-related disturbances of any streambed and associated riparian habitat.

Timing/Implementation: *Prior to issuance of a Building Permit/In accordance with USACE, RWQCB and CDFW requirements.*

Enforcement/Monitoring: *Imperial County Planning and Development Services Department, USACE, RWQCB and CDFW.*

Significance After Mitigation

Direct impacts to sensitive vegetation and wetland communities within the boundaries of CUP#17-0033 will be mitigated with implementation of mitigation measure MM 4.12.3 which requires compliance with federal and state agency permits that may include compensatory mitigation or habitat restoration. Following implementation of mitigation measure MM 4.12.3, permanent direct impacts to riparian habitat or other sensitive natural community would be **less than significant** under both the Full Buildout and Phased CUP Scenarios.

Impacts on Wetlands/Jurisdictional Resources

Impact 4.12.4 Implementation of the proposed Project would result in the loss of both wetland waters under the jurisdiction of the USACE as well as riparian habitat during construction within the boundaries of CUP#17-0033. This is considered a **potentially significant impact** under both the Full Buildout and Phased CUP Scenarios.

CUP#17-0033

The approximate acreage of jurisdictional resources impacted (by CUP) by Project construction are summarized in **Table 4.12-9**. **Figure 4.12-2** shows the areas where impacts are anticipated to occur. However, it should be noted that these areas are subject to change based on final engineering design.

Construction

Potential impacts to USACE waters could occur pending final project design (i.e. USACE waters onsite that cannot be avoided) (**Table 4.12-9**). Approximately 0.02 acre of Arrow Weed Thickets along with <0.01 acre of Cattail Marshes and <0.01 of Tamarisk Thickets within the boundaries of CUP#17-0033 would be permanently and directly impacted by Project construction. This is considered a **potentially significant impact** under both the Full Buildout and Phased CUP Scenarios.

Operation

No long-term operations-related direct impacts to jurisdictional waters are expected to occur because these features would be removed during construction and would not reestablish while the Project is in operation. Therefore, impacts on wetlands and jurisdictional resources would be **less than significant** during Project operation under both the Full Buildout and Phased CUP Scenarios.

TABLE 4.12-9
POTENTIAL GROUND-DISTURBING IMPACTS TO JURISDICTIONAL RESOURCES (ACRES) BY CUP

Vegetation Communities	CUP #17-0031 USACE/ RWQCB/ CDFW	CUP #17-0031 CDFW-Only	CUP #17-0032 USACE/ RWQCB/ CDFW	CUP #17-0032 CDFW-Only	CUP #17-0033 USACE/ RWQCB/ CDFW	CUP #17-0033 CDFW-Only	CUP #17-0034 USACE/ RWQCB/ CDFW	CUP #17-0034 CDFW-Only	CUP #17-0035 #18-0001 USACE/ RWQCB/ CDFW	CUP #17-0035 #18-0001 CDFW-Only
Wetland Waters/Riparian Habitat										
Arrow Weed Thickets	--	--	--	--	--	0.02	--	--	--	--
Cattail Marshes Alliance	--	--	--	--	--	--	--	--	--	--
Tamarisk Thickets	--	--	--	--	0.01	0.01	--	--	--	--
Wetland Waters/ Riparian Habitat	--	--	--	--	--	--	--	--	--	--
Subtotal	0	0	0	0	0.01	0.03	0	0	0	0
Vegetation Communities	**CUP #17-0031 USACE/ RWQCB/ CDFW**	**CUP #17-0031 CDFW-Only**	**CUP #17-0032 USACE/ RWQCB/ CDFW**	**CUP #17-0032 CDFW-Only**	**CUP #17-0033 USACE/ RWQCB/ CDFW**	**CUP #17-0033 CDFW-Only**	**CUP #17-0034 USACE/ RWQCB/ CDFW**	**CUP #17-0034 CDFW-Only**	**CUP #17-0035 #18-0001 USACE/ RWQCB/ CDFW**	**CUP #17-0035 #18-0001 CDFW-Only**
Non-Wetland Waters/Streambed										
Open Water	--	--	0.01	--	--	--	--	--	--	--
Non-wetland Waters/Streambed Subtotal	--	--	--	--	0.01	0.01	--	--	--	--
Grand Total	0	0	**0.01**	0	**0.04**	**0.04**	0	0	0	0

Source: Dudek 2018c.
*Total acreages may not sum due to rounding.

Decommissioning/Reclamation

During decommissioning, all solar field components and the two Gen-Tie lines will be removed. Because the site would have been maintained during operations, wetlands and jurisdictional resources would not have reestablished on the Project site. Therefore, impacts to impacts on wetlands and jurisdictional are considered **less than significant** during decommissioning under both the Full Buildout and Phased CUP Scenarios. Following reclamation, the site will be reclaimed to its original condition.

Mitigation Measures

Implement mitigation measure MM 4.12.3, CUP#17-0033 - Federal and State Agency Permits.

Significance After Mitigation

Permanent impacts to jurisdictional waters within the boundaries of CUP#17-0033 will be mitigated through mitigation measure MM 4.12.3 which requires the Applicant to obtain the necessary permits from USACE for impacts to jurisdictional resources and provide compensatory mitigation. As a result, permanent direct impacts to jurisdictional wetlands would be **less than significant** under both the Full Buildout and Phased CUP Scenarios.

Impacts to Wildlife Corridors/Habitat Linkage

Impact 4.12.5 The Project site is primarily surrounded by, and includes, extensive historical and present day agricultural practices. The Project site is also bordered on the east and south by operating solar facilities. Therefore, impacts to wildlife corridors or habitat linkage are considered **less than significant** under both the Full Buildout and Phased CUP Scenarios.

Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for the migration of animals. Because the Project site is surrounded by active agricultural land and solar facilities, the site has limited value as a potential wildlife corridor or habitat linkage for most wildlife species. As such, the proposed Project site is not likely to have direct or indirect impacts on movement of any native resident or migratory fish or wildlife species. Therefore, Impacts to wildlife movement would be **less than significant** under both the Full Buildout and Phased CUP Scenarios.

Mitigation Measures

None required.

Significance After Mitigation

Not Applicable.

4.12.4 CUMULATIVE SETTING, IMPACTS AND MITIGATION MEASURES

A. CUMULATIVE SETTING

The geographic scope for considering cumulative impacts on species that use agricultural fields for foraging includes the entire irrigated 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, and, for some, as breeding grounds. Table 3.0-1, Proposed, Approved and Reasonably Foreseeable Projects in the Region, in Chapter 3.0, Introduction to the Environmental Analysis and Assumptions Used, identifies the list of cumulative projects that were considered for this analysis. The County's list of renewable energy projects currently totals approximately 22,257 acres (excluding the proposed Project) converted from agricultural uses (refer to Table 4.9-14, Summary of Agricultural Acreage Temporarily or Permanently Converted in Section 4.9, Agricultural Resources) to other land uses that generally do not support avian species' breeding or foraging needs.

Another potential source of cumulative loss of farm fields as foraging habitat not included in Table 3.0-1 is the Quantification Settlement Agreement (QSA), the State Water Resources Control Board (SWRCB) orders, and IID Water Transfer Agreement. According to IID's Equitable Distribution Plan Negative Declaration (2006), IID implemented a rotation fallowing program to successfully create conserved water to deliver to the Salton Sea with IID plans to increase fallowing incrementally to a maximum of about 25,000 acres (Imperial County 2014, p. 4.12-160).

The IID plans to phase out EDP fallowing in 2018. Thus, losses due to IID's EDP fallowing that are not offset by solar fallowing will overlap with Project-related loss of agriculture for up to three years.

B. CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Impacts to Biological Resources

Impact 4.12.6 Implementation of the proposed Project in combination with other proposed, approved and reasonably foreseeable projects in the region could have cumulative impacts on special status species, sensitive vegetation communities, and jurisdictional waters. However, impacts to biological resources are addressed and mitigated on a project-by-project basis. Therefore, cumulative impacts to biological resources are considered **less than cumulatively considerable** under both the Full Buildout and Phased CUP Scenarios.

FULL BUILD-OUT SCENARIO/PHASED BUILD-OUT SCENARIO

Construction

Construction of both the Full Build-out Scenario and each individual CUP (CUP#17-0031 thru CUP#17-0035 and CUP#18-0001) proposed as part of the Phased CUP Scenario could contribute to cumulative impacts to sensitive vegetation communities, federal and/or state jurisdictional waters and wetlands, state non-listed special status plant species, federal and/or state listed wildlife species, migratory birds, and wildlife movement. However, impacts associated with construction would be reduced to less than significant at the Project-specific level with the implementation of mitigation measures MM 4.12.1a, MM 4.12.1b, MM 4.12.1c, MM 4.12.1d, MM 4.12.1e and MM 4.12.2.

Loss of Agriculture

As described above, cumulative projects considered for their potential significant cumulative loss to foraging habitat would result in an over 22,000-acre conversion of agricultural land to a non-agricultural land. Like the proposed Project, which would result in a long-term fallowing of agricultural land, most other cumulative projects identified in Table 3.0-1, Proposed, Approved and Reasonably Projects in the Region would also result in a long-term fallowing/agricultural land use conversion. Unlike a permanent conversion of agricultural land to urban or industrial use, the solar projects are considered long-term fallowing because these projects are required to restore the sites back to pre-Project conditions which in the case of the proposed Project is agricultural land.

The proposed Project and all cumulative projects must comply with requirements that reduce and mitigate impacts on biological resources. The Federal ESA, MBTA (16 U.S.C. 703 et seq.) and CFGC Sections 3503.5, 3503, and 3513 are among the statutory and regulatory requirements that the Project and cumulative projects may be required to comply with in order to reduce the effects of reduced farm fields for foraging for those special-status animal species.

CDFW mitigation guidelines for burrowing owl define mitigation measures to avoid and minimize direct effects to this species during construction as well as provide compensatory mitigation for indirect effects caused by loss of foraging habitat. As noted in the discussion of the setting, surveys for burrowing owl were conducted pursuant to the CDFG (2012) survey guidelines. Likewise, mitigation measure MM 4.12.1c requires pre-construction surveys conducted in accordance with the guidelines.

The Imperial County General Plan has provisions to protect biological resources as well as stringent measures to protect agricultural land uses in the Imperial Valley. The Project consistency with the provisions of the Conservation and Open Space Element are analyzed in **Table 4.12-1**, above.

Mitigation for loss of burrowing owl foraging habitat (agricultural fields) provided by the Project (the equivalent of 762.8 acres of core foraging habitat) through short-term farm agreements or conservation

easements contributes to the other cumulative projects' mitigation that are also conserving farm field foraging lands for the benefit of burrowing and other wildlife species. For these reasons, cumulative impacts from the Project and the cumulative projects identified in Table 3.0-1, Proposed, Approved and Reasonably Foreseeable Projects in the Region identified to have potentially significant foraging habitat impacts would be **less than cumulatively considerable** under both the Full Buildout and Phased CUP Scenarios.

The Federal Clean Water Act and California's Porter-Cologne Water Quality Control Act provide protection for water-related biological resources by controlling pollution, setting water quality standards, and preventing jurisdictional streams, lakes, and rivers from being filled without a federal permit. The proposed Project would comply with these and other laws, regulations and guidelines and therefore would not contribute substantially to a cumulative biological resources impact. Similarly, the cumulative projects within the geographic scope of the proposed Project (Table 3.0-1, Proposed, Approved and Reasonably Foreseeable Projects in the Region) will be required to mitigate impacts on a project-by-project basis and comply with all applicable local, federal and state laws.

As with the proposed Project, each of the cumulative projects identified in Table 3.0-1, Proposed, Approved and Reasonably Foreseeable Projects in the Region would also be required to provide mitigation for any unavoidable impacts to wetlands and jurisdictional waters. For this reason, the cumulative impact to wetlands and jurisdictional waters from the Project and cumulative projects identified in Table 3.0-1, Proposed, Approved and Reasonably Foreseeable Projects in the Region would be **less than cumulatively considerable** under both the Full Buildout and Phased CUP Scenarios**.**

Finally, BLM and Department of Energy (DOE) analyzed the cumulative impacts of solar development across a six-state study area on biological resources in the Final Solar Programmatic Environmental Impact Statement (PEIS). BLM and DOE concluded that cumulative impacts on wildlife from foreseeable development in the six-state region would be small provided mitigation measures to preserve important habitat and migration corridors are implemented (or sufficient alternative lands are set aside as compensation).

In summary, upon implementation of mitigation measures MMs 4.12.1a, MM 4.12.1b, MM 4.12.1c, MM 4.12.1d, MM 4.12.1e and MM 4.12.2 construction of the Full Build-out Scenario or Phased Build-out Scenario would result in a **less than cumulatively considerable contribution** to impacts to sensitive vegetation communities, federal and/or state jurisdictional waters and wetlands, state non-listed special status plant species, federal and/or state listed wildlife species, migratory birds, and wildlife movement. Likewise, the proposed Project, when combined with other cumulative projects, would result in a **less than cumulatively considerable impact** to sensitive vegetation communities, federal and/or state jurisdictional waters and wetlands, state non-listed special status plant species, federal and/or state listed wildlife species, migratory birds, and wildlife movement under both the Full Buildout and Phased CUP Scenarios.

Operation

Operation of both the Full Build-out Scenario and each individual CUP (CUP#17-0031 thru CUP#13-0035 and CUP#18-0001) proposed as part of the Phased CUP Scenario could contribute to cumulative impacts to sensitive vegetation communities, federal and/or state jurisdictional waters and wetlands, state non-listed special status plant species, federal and/or state listed wildlife species, migratory birds, and wildlife movement. However, the potential Project impacts to biological resources during operations would be reduced to less than significant at the Project-specific level with implementation of mitigation measures MMs 4.12.1a, MM 4.12.1b, MM. 4.12.1c, MM 4.12.1d, MM 4.12.1e and MM 4.12.2.

Operation of the proposed Project would not contribute to loss of agricultural land or foraging habitat beyond that identified in association with construction. Therefore, upon implementation of mitigation measures comply with the legal frameworks set forth above, as well as others. The cumulative actions will be, operation of the proposed Full Build-out Scenario would result in a **less than cumulatively considerable contribution** to impacts to sensitive vegetation communities, federal and/or state jurisdictional waters and wetlands, state non-listed special status plant species, federal and/or state listed wildlife species, migratory birds, and wildlife movement. Likewise, operation of the proposed Project, when combined with other cumulative projects, would result in a **less than cumulatively considerable impact** to sensitive vegetation communities, federal and/or state jurisdictional waters and wetlands, state non-listed special status plant species, federal and/or state listed wildlife species, migratory birds, and wildlife movement under both the Full Buildout and Phased CUP Scenarios.

Decommissioning/Reclamation

Decommissioning activities within both the Full Build-out Scenario and each individual CUP proposed as part of the Phased CUP Scenario could contribute to cumulative impacts to sensitive vegetation communities, federal and/or state jurisdictional waters and wetlands, state non-listed special status plant species, federal and/or state listed wildlife species, and migratory birds. However, the Project's potential decommissioning-phase impacts to biological resources would be reduced to less than significant at the Project-specific level with implementation of mitigation measures MM 4.12.1a, MM 4.12.1b, MM 4.12.1c, MM 4.12.1d, MM 4.12.1e and MM 4.12.2.

Decommissioning of the proposed Project would not contribute to loss of agricultural land or foraging habitat beyond that identified in the construction-phase analysis. Decommissioning would result in the reclamation of the Project area (as a whole) to pre-Project conditions, thereby providing a beneficial contribution to agricultural lands in the County. Therefore, upon implementation of mitigation measures MM 4.12.1a, MM 4.12.1b, MM 4.12.1c, MM 4.12.1d, MM 4.12.1e and MM 4.12.2, decommissioning of the proposed Full Build-out Scenario would result in a **less than cumulatively considerable contribution** to impacts to sensitive vegetation communities, federal and/or state jurisdictional waters and wetlands, state non-listed special status plant species, federal and/or state listed wildlife species, and migratory birds. Likewise, decommissioning of the proposed Project, when combined with other cumulative projects, would result in a **less than cumulatively considerable impact** to sensitive vegetation communities, federal and/or state jurisdictional waters and wetlands, state non-listed special status plant species, federal and/or state listed wildlife species, migratory birds, and wildlife movement under both the Full Buildout and Phased CUP Scenarios.

Mitigation Measures

As discussed throughout this section, the proposed Project would be subject to all mitigation measures (MM 4.12.1a, MM 4.12.1b, MM 4.12.1c, MM 4.12.1d, MM 4.12.1e and MM 4.12.2) identified to address Project-specific impacts. Following implementation of the mitigation measures identified above, direct and indirect cumulative impacts to biological resources including sensitive vegetation communities, federal and/or state jurisdictional waters and wetlands, state non-listed special status plant species, federal and/or state listed wildlife species, migratory birds, and wildlife movement would be reduced to less than cumulatively considerable levels. Following mitigation, all cumulative impacts to biological resources would be considered **less than cumulative considerable** under both the Full Buildout and Phased CUP Scenarios.

THIS PAGE INTENTIONALLY LEFT BLANK.