

Biological Technical Report

Vega SES 5 Solar Project

Imperial County, California

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LIST OF ACRONYMS AND ABBREVIATIONS

CFR	Code of Federal Regulations
AOU	American Ornithologists’ Union
BCC	Bird of Conservation Concern
BUOW	Burrowing owl

CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CNDDDB	California Natural Diversity Data Base
CNPS	California Native Plant Society
CNPSEI	California Native Plant Society's Electronic Inventory
CRPR	California Rare Plant Rank
CWA	Clean Water Act
ESA	Endangered Species Act
gen-tie	generator intertie
GIS	Geographic Information System
GPS	global positioning system
HCP	habitat conservation plan
IID	Imperial Irrigation District
MBTA	Migratory Bird Treaty Act
MW	megawatt
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NRCS	Natural Resources Conservation Service
Project	Vega SES 5 Solar Project
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SSAR	Society for the Study of Amphibians and Reptiles
SSC	Species of Special Concern
sUAS	small unmanned aircraft system
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	U.S. Geological Survey

1.0 INTRODUCTION

The Vega SES 5 Solar Project (Project) is located on approximately 405 acres, consisting primarily of two parcels and a portion of a third parcel, in Imperial County, California. ECORP Consulting, Inc. conducted a literature review, small unmanned aircraft system (sUAS) survey, and biological reconnaissance survey of the Project to document the existing biological resources, to assess the habitat for its potential to support sensitive plant and wildlife species, and, as required under the California Environmental Quality Act (CEQA), to determine whether Project-related impacts could occur to sensitive biological resources.

1.1 Purpose of the Report

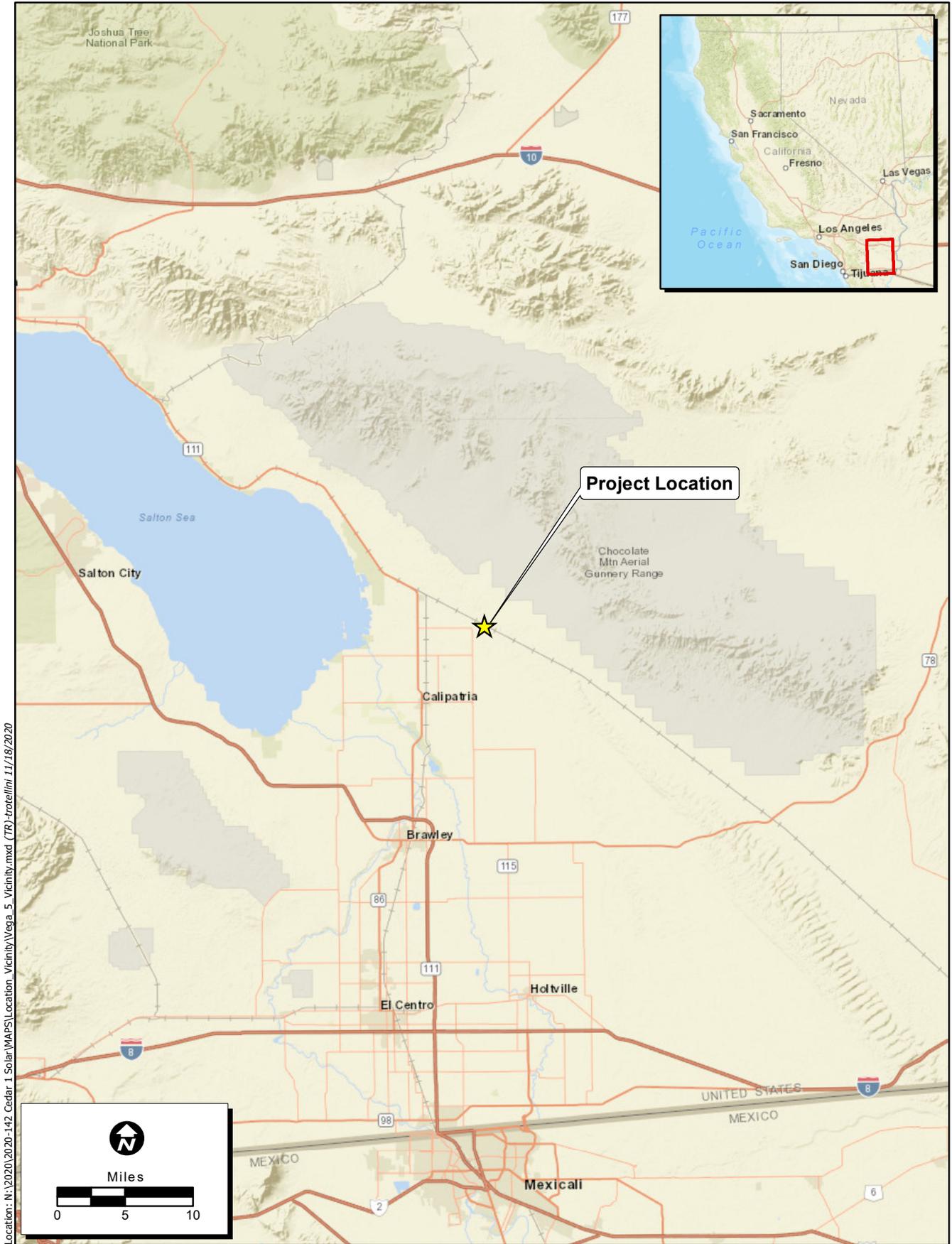
This report was prepared to describe biological resources in the Project Area and to support Project review under CEQA. Assessment of potential occurrences of special-status plants and animals is based on habitat, geographic and elevational range, and data from field surveys conducted by ECORP in 2020. For the purposes of this report, the term *Project Area* refers to the client supplied Project boundary. The term *Impact Area* refers to the areas proposed to be directly affected by implementation of the Project. The term *Survey Area* refers to the areas proposed to be directly impacted by the Project, the 500-foot buffer, and areas potentially subject to temporary impacts.

1.2 Project Location and Description

The proposed Project is a 50-megawatt (MW) alternating current solar photovoltaic energy project with an integrated 50 MW battery storage utility-scale solar project located on approximately 405 acres, including Imperial County Assessor's Parcel Number 025-260-022-000, 025-260-019-000, and a portion of 025-260-011-000. The Project is approximately 10 miles east of the Salton Sea and five miles west of the Chocolate Mountains (Figure 1). The Project Area is bisected by a railroad right-of-way in the northeastern portion of the site and the East Highline Canal intersects the southwest portion of the site (Figure 2). As depicted on the U.S. Geological Survey (USGS) 7.5-minute Iris topographic quadrangle, the Project is located in Sections 8, 16, 17, 18, 19, and 20 of Township 11 South, Range 15 East, San Bernardino Base and Meridian.

The proposed Project will connect to the closest Imperial Irrigation District (IID) substation through a previously established Imperial Irrigation District generator intertie line.

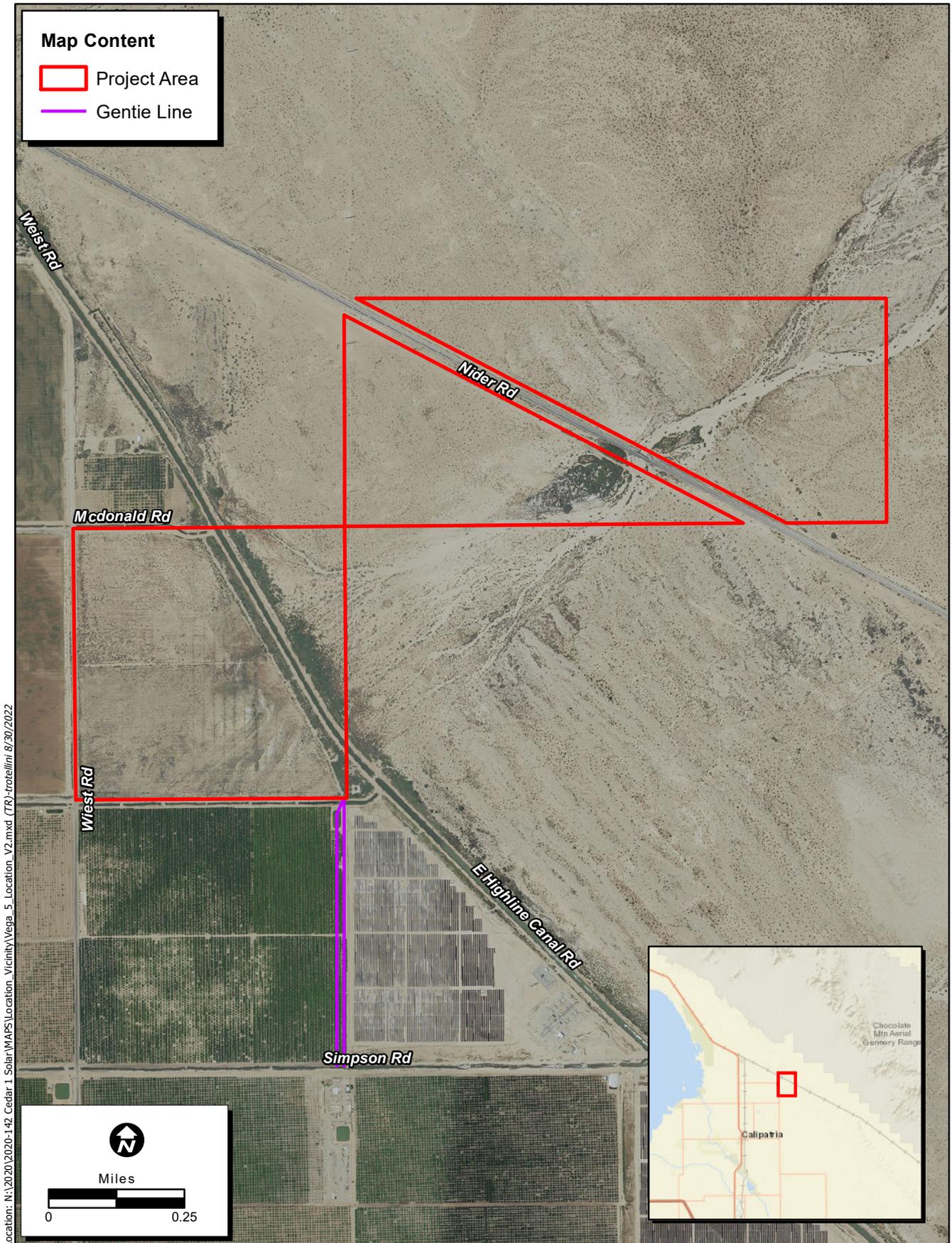
Topography is relatively flat with elevations ranging between -20 meters (-65 feet) and 22 meters (71 feet) above mean sea level. Adjacent land uses include active agricultural land to the west and Open Space/Bureau of Land Management land to the north, east, and south. The East Highline Canal travels through the Project Area from north to south, and a portion of Siphon Five travels through the northeast portion of the Project Area.



Location: N:\2020\2020-142_Cedar_1_Solar\MAPS\Location_Vicinity\Vega_5_Vicinity.mxd (78)-trodellm 11/18/2020

Map Date: 11/18/2020
Sources:

Figure 1. Project Vicinity
2020-144 Vega SES 5



Location: N:\2020\2020-142_Cedar 1 Solar\WAPS\Location_Vicinity\Vega_5_Location_V2.mxd (TR) tracetrim 8/30/2022

Map Date: 8/30/2022
 Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community Photo Source: NADP

Figure 2. Project Location
 2020-144 Vega SES 5

2.0 REGULATORY CONSIDERATIONS

The biological reconnaissance survey was conducted to identify potential constraints and to ensure compliance with state and federal regulations regarding listed, protected, and sensitive species could be achieved. The regulations are detailed below.

2.1 Federal Regulations

2.1.1 *Endangered Species Act*

The federal Endangered Species Act (ESA) protects plants and animals that are listed as endangered or threatened by the United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service. Section 9 of the ESA prohibits the taking of endangered wildlife, where taking is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct" (50 Code of Federal Regulations [CFR] 17.3). For plants, this statute governs removing, possessing, maliciously damaging, or destroying any endangered plant on federal land and removing, cutting, digging up, damaging, or destroying any endangered plant on non-federal land in knowing violation of state law (16 U.S. Code 1538). Under Section 7 of the ESA, federal agencies are required to consult with the USFWS if their actions, including permit approvals or funding, could adversely affect a listed (or proposed) species (including plants) or its critical habitat. Through consultation and the issuance of a biological opinion, the USFWS may issue an incidental take statement allowing take of the species that is incidental to an otherwise authorized activity provided the activity will not jeopardize the continued existence of the species. Section 10 of the ESA provides for issuance of incidental take permits where no other federal actions are necessary provided a habitat conservation plan (HCP) is developed.

2.1.2 *Migratory Bird Treaty Act*

The Migratory Bird Treaty Act (MBTA) implements international treaties between the United States and other nations devised to protect migratory birds, any of their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. As authorized by the MBTA, the USFWS issues permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits can be found in 50 CFR Part 13 General Permit Procedures and 50 CFR Part 21 Migratory Bird Permits. The State of California has incorporated the protection of birds of prey in Sections 3800, 3513, and 3503.5 of the California Fish and Game Code.

2.1.3 *Clean Water Act*

The purpose of the Clean Water Act (CWA) is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." Section 404 of the CWA prohibits the discharge of dredged or fill material into Waters of the U.S. without a permit from the U.S. Army Corps of Engineers (USACE). The definition of Waters of the U.S. includes rivers, streams, estuaries, the territorial seas, ponds, lakes, and

wetlands. Wetlands are defined as those areas “that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 CFR 328.3 7b). The U.S. Environmental Protection Agency (USEPA) acts as a cooperating agency to set policy, guidance and criteria for use in evaluation permit applications and also reviews USACE permit applications.

The USACE regulates “fill” or dredging of fill material within its jurisdictional features. “Fill material” means any material used for the primary purpose of replacing an aquatic area with dry land or changing the bottom elevation of a water body. Substantial impacts to wetlands may require an individual permit. Projects that only minimally affect wetlands may meet the conditions of one of the existing Nationwide Permits. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions; this certification or waiver is issued by the State Water Quality Control Board, administered by each of nine California Regional Water Quality Control Boards (RWQCBs).

2.2 State and Local Regulations

2.2.1 California Endangered Species Act

The California ESA generally parallels the main provisions of the ESA but, unlike its federal counterpart, the California ESA applies the take prohibitions to species proposed for listing (called “candidates” by the State). Section 2080 of the California Fish and Game Code prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit or in the regulations. Take is defined in Section 86 of the California Fish and Game Code as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” The California ESA allows for take incidental to otherwise lawful development projects. State lead agencies are required to consult with California Department of Fish and Wildlife (CDFW) to ensure that any action they undertake is not likely to jeopardize the continued existence of any endangered or threatened species or result in destruction or adverse modification of essential habitat.

2.2.2 Fully Protected Species

The State of California first began to designate species as “fully protected” prior to the creation of the federal and California ESAs. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction, and included fish, amphibians and reptiles, birds, and mammals. Most fully protected species have since been listed as threatened or endangered under federal and/or California ESAs. The regulations that implement the Fully Protected Species Statute (California Fish and Game Code § 4700) provide that fully protected species may not be taken or possessed at any time. Furthermore, CDFW prohibits any state agency from issuing incidental take permits for fully protected species, except for necessary scientific research.

2.2.3 Native Plant Protection Act

The Native Plant Protection Act (NPPA) of 1977 (California Fish and Game Code §§ 1900-1913) was created with the intent to “preserve, protect and enhance rare and endangered plants in this State.” The NPPA is administered by CDFW. The Fish and Wildlife Commission has the authority to designate native

plants as “endangered” or “rare” and to protect endangered and rare plants from take. The California ESA of 1984 (California Fish and Game Code § 2050-2116) provided further protection for rare and endangered plant species, but the NPPA remains part of the California Fish and Game Code.

2.2.4 Porter Cologne Water Quality Control Act

The RWQCB implements water quality regulations under the federal CWA and the Porter-Cologne Water Quality Act. These regulations require compliance with the National Pollutant Discharge Elimination System (NPDES), including compliance with the California Storm Water NPDES General Construction Permit for discharges of storm water runoff associated with construction activities. General Construction Permits for projects that disturb one or more acres of land require development and implementation of a Storm Water Pollution Prevention Plan. Under the Porter-Cologne Water Quality Act, the RWQCB regulates actions that would involve “discharging waste, or proposing to discharge waste, with any region that could affect the water of the state” [Water Code 13260(a)].

Waters of the State are defined as “any surface water or groundwater, including saline waters, within the boundaries of the state” (Water Code 13050[e]). The RWQCB regulates all such activities, as well as dredging, filling, or discharging materials into Waters of the State that are not regulated by the USACE due to a lack of connectivity with a navigable water body. The RWQCB may require issuance of Waste Discharge Requirements for these activities.

On April 2, 2019, the SWRCB adopted the *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* (referred to as the Procedures) for inclusion in the *Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (Resolution No. 2019-0015). The new Procedures include:

- definition of wetlands and aquatic resources that are Waters of the State,
- description of application requirements for individual orders (not general orders) for water quality certification, or waste discharge requirements,
- description of information required in compensatory mitigation plans, and
- definition of exemptions to application procedures.

The Office of Administrative Law approved the procedures on August 28, 2019, and the rule went into effect May 28, 2020.

2.2.5 Conservation and Open Space Element

Imperial County created the Conservation and Open Space Element plan to provide details and measures for management and preservation of biological resources as well as various other resources (i.e. cultural, soils, minerals). This plan focuses on protecting scarce resources and preventing wasteful exploitation, neglect, and destruction of California’s natural resources. The plan outlines areas with sensitive habitat and sensitive species, also labelled “Resource Areas”. Open space easements and protection of riparian habitat, rock outcrops, California fan palm oases, and wildlife corridors are also discussed in the plan. As it

currently stands, the open space element follows CEQA guidelines with special focus on its scarce resources.

2.2.6 California Fish and Game Code

2.2.6.1 Streambed Alteration Agreement

Section 1602 of the California Fish and Game Code requires that a Notification of Lake or Streambed Alteration be submitted to CDFW for “any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake.” The CDFW reviews the proposed actions and, if necessary, submits to the Applicant a proposal for measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by CDFW and the Applicant is the Streambed Alteration Agreement (SAA). Often, projects that require an SAA also require a permit from the USACE under Section 404 of the CWA. In these instances, the conditions of the Section 404 permit and the SAA may overlap.

2.2.6.2 Migratory Birds

The CDFW enforces the protection of nongame native birds in §§ 3503, 3503.5, and 3800 of the California Fish and Game Code. Section 3513 of the California Fish and Game Code prohibits the possession or take of birds listed under the MBTA. These sections mandate the protection of California nongame native birds’ nests and also make it unlawful to take these birds. All raptor species are protected from “take” pursuant to California Fish and Game Code § 3503.5 and are also protected at the federal level by the MBTA of 1918 (USFWS 1918).

2.2.7 CEQA Significance Criteria

Section 15064.7 of the CEQA Guidelines encourages local agencies to develop and publish the thresholds the agency uses in determining the significance of environmental effects caused by projects under its review. However, agencies may also rely upon the guidance provided by the expanded Initial Study checklist contained in Appendix G of the CEQA Guidelines. Appendix G provides examples of impacts that would normally be considered significant. Based on these examples, impacts to biological resources would normally be considered significant if the project would:

- have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or USFWS;
- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFW or USFWS;
- have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, and coastal) through direct removal, filling, hydrological interruption, or other means;

- interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and
- conflict with the provisions of an adopted HCP, Natural Community Conservation Plan, or other approved local, regional or state HCP.

An evaluation of whether an impact on biological resources would be substantial must consider both the resource itself and how that resource fits into a regional or local context. Substantial impacts would be those that would diminish, or result in the loss of, an important biological resource, or those that would obviously conflict with local, state, or federal resource conservation plans, goals, or regulations. Impacts are sometimes locally important but not significant according to CEQA. The reason for this is that although the impacts would result in an adverse alteration of existing conditions, they would not substantially diminish, or result in the permanent loss of an important resource on a population-wide or region-wide basis.

3.0 METHODS

3.1 Literature Review

Prior to conducting the biological reconnaissance survey, ECORP biologists performed a literature review using the CDFW's California Natural Diversity Data Base (CNDDDB; CDFW 2020a) and the California Native Plant Society's (CNPS') Electronic Inventory (CNPSEI; CNPS 2020) to determine the special-status plant and wildlife species that have been documented in the vicinity of the Project. The CNDDDB and CNPSEI database searches were conducted on September 24, 2020. ECORP searched CNDDDB and CNPSEI records within the Project site as depicted on USGS 7.5-minute Iris topographic quadrangle, and the surrounding eight topographic quadrangles: Wister, Iris Wash, Lion Head Mountain, Niland, Tortuga, Westmorland East, Wiest, and Amos. The CNDDDB and CNPSEI contain records of reported occurrences of federally or state-listed endangered, threatened, proposed endangered or threatened species, California Species of Special Concern (SSC), and/or other special-status species or habitat that may occur within or in the vicinity of the Project. Additional information was gathered from the following sources and includes, but is not limited to the following:

- U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS) Web Soil Survey (NRCS 2020a);
- Special Animals List (CDFW 2020b);
- State and Federally Listed Endangered and Threatened Animals of California (CDFW 2020c);
- The Jepson Manual: Vascular Plants of California (Baldwin et al. 2012);
- The Manual of California Vegetation, 2nd Edition (Sawyer et al. 2009); and

- various online websites (e.g., CalFlora 2020).

A desktop review of the National Wetlands Inventory (USFWS 2020a) and the corresponding USGS topographic maps was also conducted to determine if there were any blue line streams or drainages that might potentially fall under the jurisdiction of either federal or state agencies were present in the Survey Area.

3.2 Field Survey

3.2.1 sUAS Survey and Vegetation Mapping

Due to the extensive size of the area and limited road access, an initial survey utilizing a small unmanned aircraft system sUAS was conducted to quickly assess current site conditions and gather high resolution imagery. Upon arrival at the site, an initial field reconnaissance was conducted by the drone pilot to obtain an understanding of the site topography, access, vegetation densities, and staging areas for controlling the aerial flights. The drone was programmed to do a systematic flight over the property to collect high-resolution aerial photographs of the entire property. The photos collected were then combined into a single orthomosaic image that was incorporated into mapping files in a Geographic Information System (GIS).

The information gathered from the sUAS/drone survey were then used to assist the biologists with accurate mapping of the vegetation communities. A botanist utilized the high-resolution drone imagery to map vegetation communities. Vegetation classifications were in accordance with *A Manual of California Vegetation* (Sawyer et al. 2009). Vegetation communities that did not fit within the Sawyer classification system were described following Holland or Cowardin (alternative methods). Areas of the site(s) that had already been graded, developed, and/or disturbed were mapped as such. Acreages of each vegetation community were calculated based on GIS data collected during the sUAS survey.

3.2.2 Biological Reconnaissance Survey

The biological reconnaissance survey was conducted by walking the entire Survey Area to determine the vegetation communities and wildlife habitats present within the Survey Area. Private property and inaccessible areas within the buffer were surveyed utilizing 8x42 binoculars. The biologists documented the plant and animal species present in the Survey Area and conditions within the Survey Area were assessed for their potential to provide habitat for special-status plant and wildlife species, including those from the literature review. Data were recorded on global positioning system (GPS) devices, data sheets, and maps. In instances where a special-status species was observed, the date, species, location and habitat, and GPS coordinates were recorded. The locations of special-status species observations were recorded using a handheld GPS in NAD 83, UTM coordinates, Zone 11S. Photographs were also taken during the survey to provide visual representation of the various vegetation communities within the Survey Area. The Survey Area was also examined to assess its potential to facilitate wildlife movement or function as a movement corridor for wildlife moving throughout the region.

Plant and wildlife species, including any special-status species that were observed during the survey, were recorded. Plant nomenclature follows that of *The Jepson Manual: Vascular Plants of California* (Baldwin et

al. 2012). Wildlife nomenclature follows that of *The American Ornithologists' Union (AOU) Checklist of North American Birds* (AOU 2020), the Society for the Study of Amphibians and Reptiles (SSAR 2017), and the *Revised Checklist of North American Mammals North of Mexico* (Bradley et al. 2014).

3.2.3 Aquatic Resources Delineation

An aquatic resources delineation was conducted by ECORP biologists in conjunction with the biological reconnaissance survey, the results of which are presented under a separate cover (ECORP 2022).

3.3 Potential for Occurrence Determinations

Using information from the literature review and observations in the field, a list of special-status plant and animal species that have potential to occur within the Survey Area was generated. For the purposes of this assessment, special-status species are defined as plants or animals that:

- have been designated as either rare, threatened, or endangered by CDFW, CNPS, or the USFWS, and/or are protected under either the federal or California ESAs;
- are candidate species being considered or proposed for listing under these same acts;
- are fully protected by the California Fish and Game Code, §§ 3511, 4700, 5050, or 5515;
- are of expressed concern to resource and regulatory agencies or local jurisdictions.

Special-status species reported for the region in the literature review or for which suitable habitat occurs on the Survey Area were assessed for their potential to occur within the Survey Area based on the following guidelines:

Present: The species was observed on site during a site visit or focused survey.

High: Habitat (including soils and elevation factors) for the species occurs within the Survey Area and a known occurrence has recently been recorded (within the last 20 years) within five miles of the area.

Moderate: Habitat (including soils and elevation factors) for the species occurs within the Survey Area and a documented observation occurs within the database search, but not within five miles of the area; a historic documented observation (more than 20 years old) was recorded within five miles of the Survey Area; or a recently documented observation occurs within five miles of the area and marginal or limited amounts of habitat occurs in the Survey Area.

Low: Limited or marginal habitat for the species occurs within the Survey Area and a recently documented observation occurs within the database search, but not within five miles of the area; a historic documented observation (more than 20 years old) was recorded within five miles of the Survey Area; or suitable habitat strongly associated with the species occurs on site, but no records or only historic records were found within the database search.

Presumed Absent: Species was not observed during a site visit or focused surveys conducted in accordance with protocol guidelines at an appropriate time for identification; habitat (including soils and

elevation factors) does not exist on site; or the known geographic range of the species does not include the Survey Area.

Note: Location information on some special-status species may be of questionable accuracy or unavailable. Therefore, for survey purposes, the environmental factors associated with a species' occurrence requirements may be considered sufficient reason to give a species a positive potential for occurrence. In addition, just because a record of a species does not exist in the databases does not mean it does not occur. In many cases, records may not be present in the databases because an area has not been surveyed for that particular species.

4.0 RESULTS

The results of the literature review and field surveys, including site characteristics, vegetation communities, wildlife, special-status species, and special-status habitats (including any potential wildlife corridors) are summarized below.

4.1 Literature Review

4.1.1 *Special-Status Plants and Wildlife*

Special-status plants and wildlife species reported for the region in the literature review or for which suitable habitat occurs were evaluated for their potential to occur within the Project Area or in the buffer areas within the Survey Area where indirect impacts could occur. Of all available records, a total of 22 special-status plant species and 23 special-status wildlife species were identified as having the potential for occurrence in the vicinity of the Project site (Attachments B and C).

4.1.2 *U.S. Fish and Wildlife Service Designated Critical Habitat*

The Project site is not located within any USFWS-designated critical habitat. The closest designated critical habitat is for Peirson's milk-vetch (*Astragalus magdalenae* var. *peirsonii*) located approximately nine miles to the southeast of the Project site, and desert tortoise (*Gopherus agassizii*) critical habitat located approximately 10 miles east of the Project site.

4.2 Biological Reconnaissance Survey

The biological reconnaissance survey was conducted on September 29-30, 2020, by ECORP biologists Christina Congedo and Caroline Garcia. Summarized below are the results of the biological reconnaissance survey, including site characteristics, plants and plant communities, wildlife, special-status species, and special-status habitats (including any potential wildlife corridors). Weather conditions during the survey are summarized in Table 2.

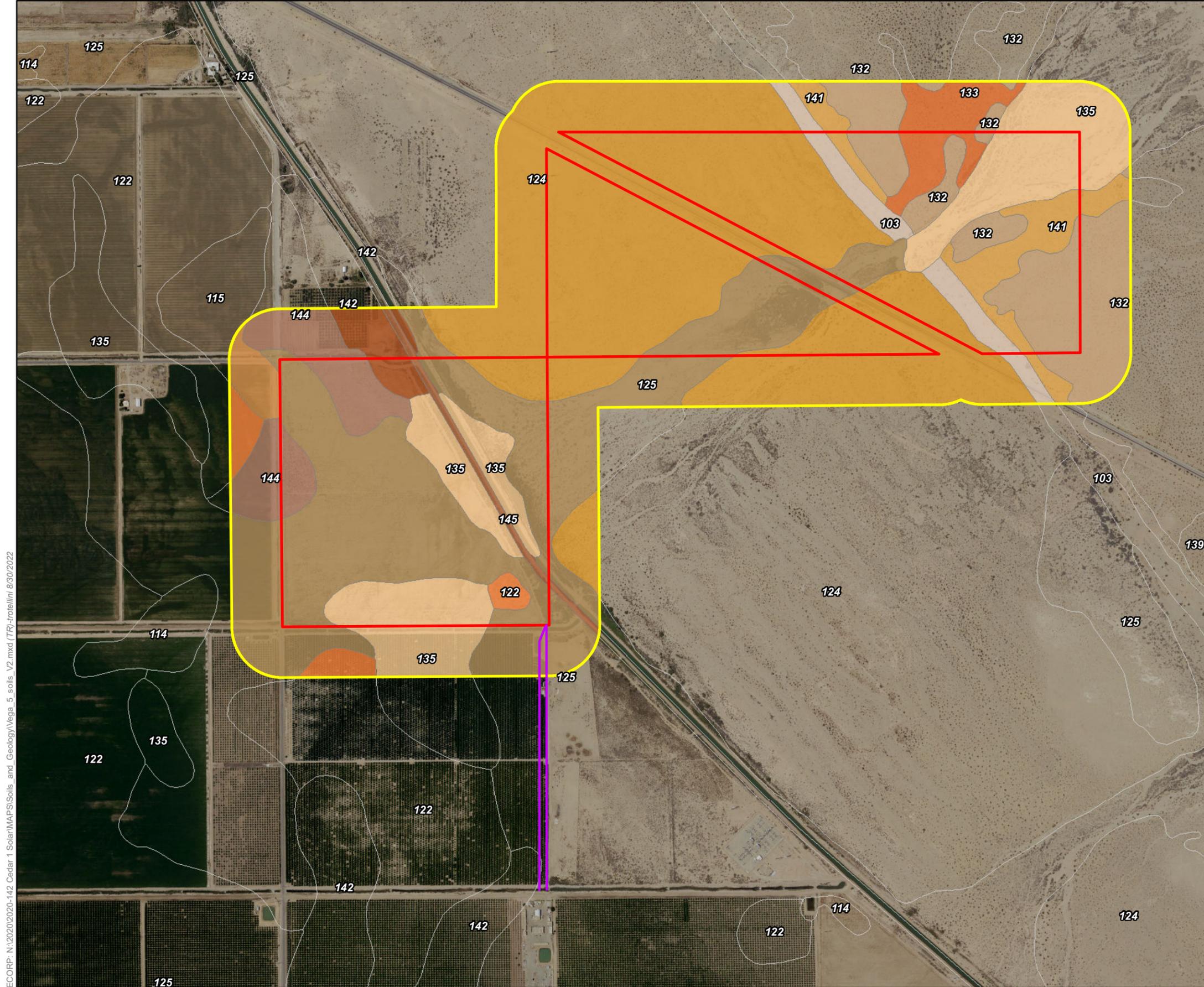
Date	Time		Temperature (°F)		Cloud Cover (%)		Wind Speed (mph)	
	Start	End	Start	End	Start	End	Start	End
09/29/2020	0630	1400	67	105	0	0	4	3-6
09/30/2020	0640	1200	69	105	0	0	4-5	7

4.2.1 Property Characteristics

The southwestern portion of the Project Area is primarily composed of undeveloped land that was historically used for agriculture. The northeastern section is comprised of an ephemeral drainage and associated wetland and riparian habitats on undeveloped land. The northern border of the Project Area appears to have been graded and/or filled in at several areas near the railroad tracks. The ephemeral drainage system flows southwest under the railroad tracks via a concrete underpass. Riparian habitat lines the banks and bed of the ephemeral drainage system and portions directly north and east of the East Highland canal. Wetlands exist within the riparian habitat directly south of the railroad right-of-way, abutting the ephemeral drainages, connected with Siphon 5. The southwestern portion of the Project Area consists of a fallow agricultural field with ruderal vegetation. The fallow field is bordered to the north and south by two offshoot irrigation channels and a wetland associated with the East Highland canal to the northeast. The Project Area is surrounded to the west, south, and north by agricultural fields and undeveloped land to the east.

Topography throughout the Project Area is relatively flat, but gently slopes from northeast to southwest away from the railroad right-of-way. A soils analysis search was conducted using NRCS soil survey data (NRCS 2020a). Nine soil series occur within the Project Area (Figure 3). These include:

- 103 - Carsitas gravelly sand, 0 to 5 percent slopes
- 115 - Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes
- 122 - Meloland very fine sandy loam, wet
- 124 - Niland gravelly sand
- 125 - Niland gravelly sand, wet
- 132 - Rositas fine sand, 0 to 2 percent slopes
- 133 - Rositas fine sand, 2 to 9 percent slopes
- 135 - Rositas fine sand, wet, 0 to 2 percent slopes
- 141 - Torriorthents and Orthids, 5 to 30 percent slopes
- 142 - Vint loamy very fine sand, wet
- 144 - Vint and Indio very fine sandy loams, wet
- 145 - Water



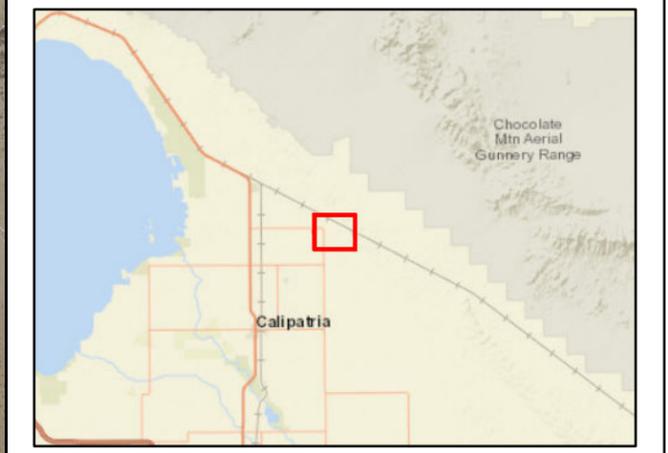
Map Features

- Project Area
- 500-ft Buffer
- Gentie Line

Series Designation - Series Description

- 103 - Carsitas gravelly sand, 0 to 5 percent slopes
- 115 - Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes
- 122 - Meloland very fine sandy loam, wet
- 124 - Niland gravelly sand
- 125 - Niland gravelly sand, wet
- 132 - Rositas fine sand, 0 to 2 percent slopes
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- 144 - Vint and Indio very fine sandy loams, wet
- 145 - Water

Sources: NAIP (2018)
 Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community



ECORP: N:\2020\2020-142 Cedar 1 Solar\MAPS\Soils_and_Geology\Vega_5_soils_V2.mxd (TR) - 8/30/2022

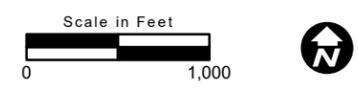


Figure 3. Natural Resources Conservation Service Soil Types

Both the Niland gravelly sand and Niland gravelly sand, wet soils contain hydric components (NRCS 2020b). The Niland series soils exist on the western and eastern portions of the site and are characterized as well- to moderately well-drained soils with low surface runoff. The Carsitas gravelly sand soil is restricted to the eastern corner of the Project Area and is characterized as deep, excessively drained soil. The Imperial-Glenbar silty clay loam soils are restricted to the northwestern edge of the site and are characterized as moderately well drained soils. The Meloland very fine sandy loam soils are restricted to the southwestern portion of the site and are characterized as moderately well drained with low surface runoff. Vint loamy very fine sand soils exist in the northwestern portion of the site and are characterized as having moderately well-drained soils with very low surface runoff. Vint and Indio very fine sandy loams exist in the northwestern portion of the site and are characterized as having moderately well-drained soils with low surface runoff. The Rositas fine sand soils exist in the western and eastern portions of the site and are characterized as having moderately well-drained with very low surface runoff. The Torriorthents and Orthids soils exist in the northeastern portion of the site and are characterized as having variable permeability and rapid surface runoff.

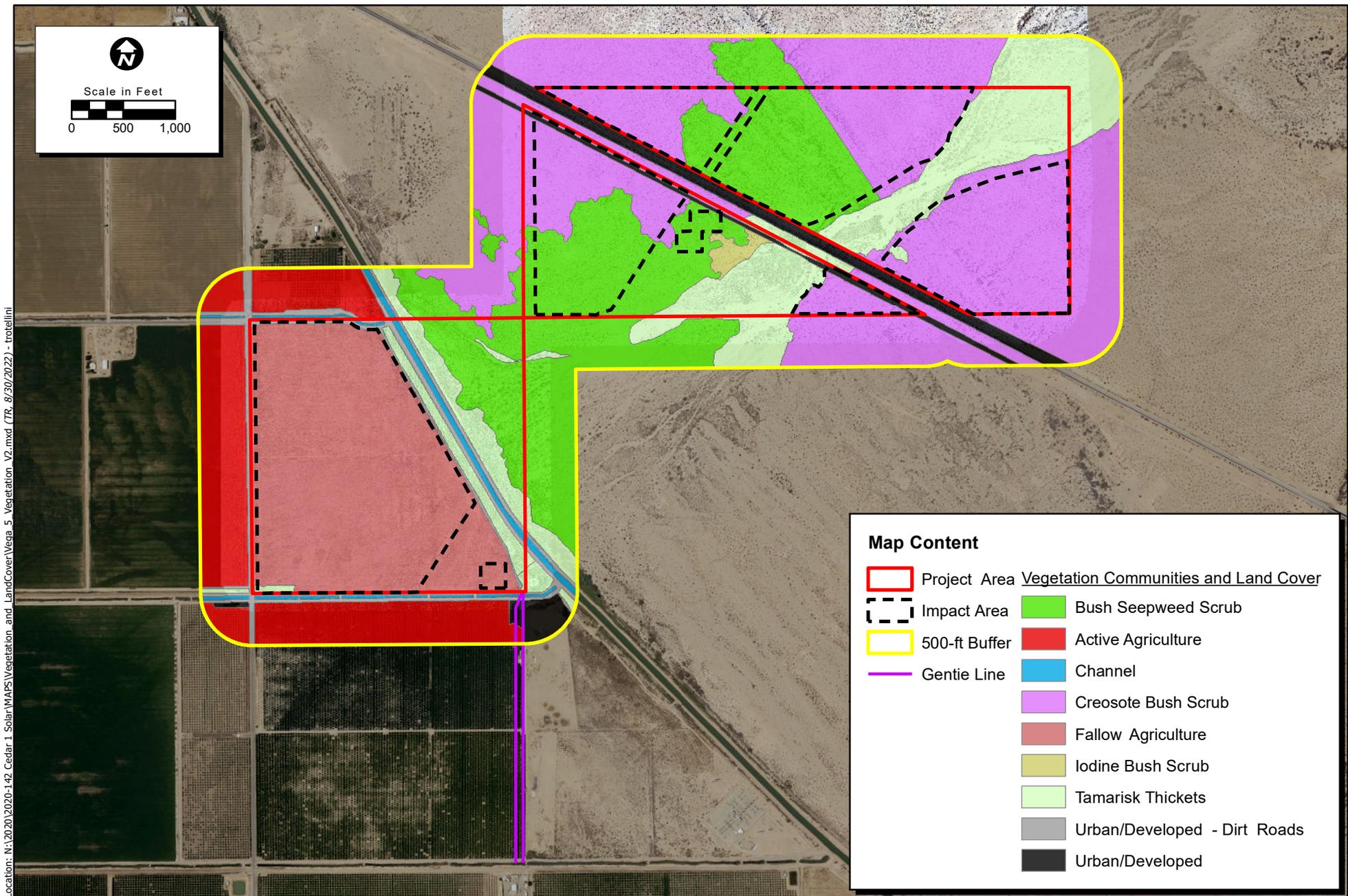
4.2.2 Vegetation Communities/Land Use

The majority of the Project Area consists of fallow agricultural land and creosote bush scrub. The location of each vegetation community in the Project Area and wider Survey Area are described in detail below and presented in Figure 4. Acreage of each habitat and vegetation community in the Impact Area are shown in Table 2. Representative photographs of the habitats within the Project Area are included within Attachment A.

Vegetation Communities and Land Covers	Acres
Bush seepweed scrub	60.25
Creosote bush scrub	103.26
Fallow agricultural land	101.27
Tamarisk thickets	1.54
Urban/Developed	2.49
Urban/Developed (Roads)	0.30
Impact Area Total	269.11

4.2.2.1 Bush seepweed Scrub (*Suaeda [moquinii] nigra* Shrubland Alliance)

Bush sweepweed scrub is found on flat to gently sloping valley bottoms, bajadas, and toe slopes adjacent to alluvial fans. Bush seepweed scrub is dominated by bush sweepweed, a USFWS Wetland Inventory OBL species (USACE 1996), and can be co-dominant with four-wing saltbush (*Atriplex canescens*) and/or alkali goldenbush (*Isocoma acradenia*). This vegetation community typically has a sparse to intermittent herbaceous layer. On this Project, bush sweepweed dominated the shrub cover with occasional occurrences of four-wing saltbush, arrow weed (*Pluchea sercia*), big saltbush (*Atriplex lentiformis*), alkali goldenbush, and tamarisk (*Tamarix* sp.).



Location: N:\2020\2020-142 Cedar 1 Solar\MAPS\Vegetation and LandCover\Vega 5_Vegetation_V2.mxd (TR, 8/30/2022) - troelini

Map Date: 8/18/2022
 Photo Source: NAIP (2018), ECORP UAS Imagery (2020)

Figure 4. Vegetation Communities and Land Covers

4.2.2.2 Creosote Bush Scrub (Disturbed *Larrea tridentata* Shrubland Alliance)

Creosote bush scrub is found on alluvial fans, bajadas, upland slopes, mesas, erosional highlands, basins, and washes. Creosote was typically dominant in the shrub canopy, but occasionally was co-dominant with white bursage, with an absent to intermittent herbaceous layer of seasonal annuals. Other plant species include four-wing saltbush, big saltbush, Mediterranean grass (*Schismus barbatus*) and occasional bush seepweed on the banks of established drainages.

4.2.2.3 Tamarisk Thickets (*Tamarix* spp. Shrubland Semi-Natural Alliance)

Tamarisk thickets are characterized by a weedy monoculture of tamarisk. This habitat is typically in ditches, washes, rivers, arroyo margins, lake margins, and other watercourses. On the Project site, tamarisk and arrow weed were often co-dominant in this vegetation community. Other plant species observed include arrow weed, bush seepweed, four-wing saltbush, and big saltbush.

4.2.2.4 Other Land Cover Types

Fallow Agricultural Land

Fallow agricultural lands include remnant signs of row crops with open space between rows. Agricultural lands often occur in upland areas with high soil quality, or floodplains and are almost always artificially irrigated. This land cover was observed in the southern portion of the Project Area. On this Project, the areas consisted primarily of ruderal vegetation including bush seepweed, amaranth (*Amaranthus* sp.), and sudangrass (*Sorghum bicolor* ssp. *drummondii*) and occasional big saltbush.

Urban/Developed

Urban/Developed areas do not constitute a vegetation classification, but rather a land cover type. Areas mapped as developed have been constructed upon or otherwise physically altered to an extent that natural vegetation communities are no longer supported. There may be irrigated landscaped, ornamental species present between the hardscape. On the Project site, this land cover was dominant and consisted primarily of compacted dirt roads, structures, including utility towers.

4.2.2.5 Vegetation Communities and Land Covers within the Survey Area

One additional vegetation community and one additional land cover were observed within the buffer, but not within the Project Area. No impacts are expected as a result of Project-related activities.

Iodine bush scrub (Allenrolfea occidentalis Shrubland Alliance)

Iodine bush scrub is found on playas perched above drainages, seep, and dry lakebed margins. Iodine bush, a USFWS Wetland Inventory FACW+ species (USACE 1996), is dominant in the shrub and herbaceous layers in an open to continuous canopy. Other plant species observed within this community include four-wing saltbush, tamarisk, and bush seepweed.

Active Agricultural Land

Active agricultural lands include planted, typically monotypic rows of crops of annual and perennial species with open space between rows. Species composition frequently changes by season and year. Agricultural lands often occur in upland areas with high soil quality, or floodplains and are almost always artificially irrigated. This land cover was observed in the southwestern portion of the 500-foot buffer.

4.2.3 Wildlife Observed

Wildlife species and sign observed included bobcat (*Lynx rufus*), burrowing owl (*Athene cunicularia*), American kestrel (*Falco sparverius*), Gambel’s quail (*Callipepla gambelii*), turkey vulture (*Cathartes aura*), house finch (*Haemorhous mexicanus*), loggerhead shrike (*Lanius ludovicianus*), black-tailed gnatcatcher (*Polioptila melanura*), desert cottontail (*Sylvilagus audubonii*), black phoebe (*Sayornis nigricans*), white-crowned sparrow (*Zonotrichia leucophrys*), antelope ground squirrel (*Ammospermophilus* sp.), coyote (*Canis latrans*), and common side-blotched lizard (*Uta stansburiana*). In addition, potential kangaroo rat (*Dipodomys* sp.) burrows were observed throughout the Survey Area.

4.3 Special-Status Species Assessment

The literature review resulted in 22 special-status plant and 23 special-status wildlife species that historically have been recorded in the vicinity of the Project or that are highly associated with habitat that occurs on the Project site. Special-status plants were evaluated for their potential to occur within the Project limits where impacts could occur. Special-status wildlife were evaluated for their potential to occur within the Survey Area, a broader area which includes the Project Area and buffer, where direct or indirect impacts could occur. Potential for Occurrence tables are included in Attachments B and C.

4.3.1 Plants

Numerous special-status plant species have been recorded within five miles of the Project Area, according to the CNDDDB (CDFW 2020a), IPaC (USFWS 2020b), and CNPSEI (CNPS 2020). Of all available records, a total of 22 species were identified as those with the potential for occurrence within the vicinity of the Project Area. Descriptions of the CNPS designations are found in Table 3 and a list of the special-status plant species identified in the literature review is presented following Table 3.

Table 3. CNPS Status Designations	
List Designation	Meaning
1A	Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere
1B	Plants Rare, Threatened, or Endangered in California and Elsewhere
2A	Plants Presumed Extirpated in California, But Common Elsewhere
2B	Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
3	Plants about which we need more information; a review list
4	Plants of limited distribution; a watch list

Table 3. CNPS Status Designations	
List Designation	Meaning
List 1B, 2, and 4 extension meanings:	
.1	Seriously threatened in California (over 80 percent of occurrences threatened / high degree and immediacy of threat)
.2	Moderately threatened in California (20-80 percent occurrences threatened / moderate degree and immediacy of threat)
.3	Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

Note: According to CNPS (Skinner and Pavlik 1994), plants on Lists 1B and 2 meet definitions for listing as threatened or endangered under Section 1901, Chapter 10 of the California Fish and Game Code (California Department of Fish and Game [CDFG] 1984). This interpretation is inconsistent with other definitions.

4.3.1.1 Plant Species with a High Potential to Occur

Due to the presence of suitable habitat and several known recent occurrences within five miles of the Project Area, the following species were determined to have a high potential to occur:

- Gravel milk-vetch (*Astragalus sabulonum*) is a CNPS California Rare Plant Rank (CRPR) 2B.2 plant species. This species is known to occur at elevations between -60 and 930 meters (-197 and 3,051 feet) and blooms between February and June. Gravel milk-vetch is known to occur in creosote scrub habitat within sandy, sometimes gravelly flats, washes, and roadsides (CNPS 2020). One historic CNDDDB record located approximately four miles northwest of the site near the City of Niland. Potential habitat occurs on site for this species in the form of creosote bush scrub habitat.
- Glandular ditaxis (*Ditaxis claryana*) is a CRPR 2B.2 plant species. This species is known to occur at elevations between sea level and 465 meters (sea level and 1,526 feet) and blooms between October and March. Glandular ditaxis is known to occur in creosote scrub habitat within sandy soils (CNPS 2020). One historic CNDDDB record located approximately two miles northeast of the site. Potential habitat occurs onsite for this species in the creosote bush scrub habitat.

4.3.1.2 Plant Species with a Moderate Potential to Occur

The following species were found to have moderate potential to occur because habitat (including soils and elevation factors) for the species occurs in the Project Area and a known occurrence exists within the database search, but not within five miles of the Project; or a known occurrence exists within five miles of the site and marginal or limited amounts of habitat occurs in the Project Area:

- Salton milk-vetch (*Astragalus crotalariae*) is a CRPR 4.3 plant species. This species is known to occur at elevations between -60 and 250 meters (197 and 820 feet) and blooms between January and April. Salton milk-vetch is known to occur in creosote scrub habitat within sandy or gravelly soils. Potential habitat occurs onsite for this species in the disturbed creosote bush scrub habitat.
- Borrego milk-vetch (*Astragalus lentiginosus* var. *borreganus*) is a CRPR 4.3 plant species. This species is known to occur at elevations between 30 and 895 meters (98 and 2,936 feet) and

blooms between February and May. Borrego milk-vetch is known to occur in creosote scrub habitat within sandy soils. Potential habitat occurs on site for this species in the disturbed creosote bush scrub habitat.

- Spiny abrojo (*Condalia globosa* var. *pubescens*) is a CRPR 4.2 plant species. This species is known to occur at elevations between 85 and 100 meters (164 and 279 feet) and blooms between March and May. Spiny abrojo is known to occur in creosote scrub habitat. Potential habitat occurs onsite for this species in the creosote bush scrub habitat.
- Abrams' spurge (*Euphorbia abramsiana*) is a CRPR 2B.2 plant species. This species is known to occur at elevations between -5 and 1,310 meters (16 and 4,298 feet) and blooms between September and November. Abrams' spurge is known to occur in creosote scrub habitat within sandy flats, including playas, fields, disturbed areas, and washes. Potential habitat occurs onsite for this species in the creosote bush scrub habitat.
- Ribbed cryptantha (*Johnstonella costata*) is a CRPR 4.3 plant species. This species is known to occur at elevations between -60 and 500 meters (197 and 1,640 feet) and blooms between February and May. Ribbed cryptantha is known to occur in desert dunes and creosote scrub habitat within sandy soils. Potential habitat occurs onsite for this species in the creosote bush scrub habitat.
- Slender-spined all thorn (*Koeberlinia spinosa* var. *tenuispina*) is a CRPR 2B.2 plant species. This species is known to occur at elevations between 150 and 510 meters (492 and 1,673 feet) and blooms between May and July. Slender-spined all thorn is known to occur in riparian woodland and creosote scrub habitats. Potential habitat occurs onsite for this species in the riparian and creosote bush scrub habitats.
- Slender cottonheads (*Nemacaulis denudata* var. *gracilis*) is a CRPR 2B.2 plant species. This species is known to occur at elevations between -50 and 400 meters (164 and 1,312 feet) and blooms between April and May. Slender cottonheads is known to occur in desert dunes and creosote scrub habitat. Potential habitat occurs onsite for this species in the disturbed creosote bush scrub habitat.
- Sand food (*Pholisma sonora*) is CRPR 1B.2 plant species. This species is known to occur at elevations between sea level and 200 meters (sea level and 656 feet) and blooms between April and June. Sand food is known to occur in desert dunes and creosote scrub habitat within sandy soils. Potential habitat occurs onsite for this species in the creosote bush scrub habitat.
- Mecca-aster (*Xylorhiza cognata*) is a CRPR 1B.2 plant species. This species is known to occur at elevations between 20 and 400 meters (66 and 1,312 feet) and blooms between January and June. Mecca-aster is known to occur in creosote scrub habitat. Potential habitat occurs onsite for this species in the creosote bush scrub habitat.

4.3.1.3 Plant Species with Low Potential to Occur

The following species were found to have a low potential to occur on the Project Area because limited habitat for the species occurs on the site and a known occurrence has been reported in the database, but not within five miles of the site, or suitable habitat strongly associated with the species occurs on the site, but no records were found in the database search:

- chaparral sand-verbena (*Abronia villosa* var. *aurita*), CRPR 1B.1
- Harwood's milk-vetch (*Astragalus insularis* var. *harwoodii*), CRPR 2B.2
- Peirson's milk-vetch (*Astragalus magdalenae* var. *peirsonii*), CRPR 1B.2
- pink fairy-duster (*Calliandra eriophylla*), CRPR 2B.3
- sand evening-primrose (*Chylismia arenaria*), CRPR 2B.2
- Wiggins' croton (*Croton wigginsii*), CRPR 2B.2
- Munz's cholla (*Cylindropuntia munzii*), CRPR 1B.3
- Algodones Dunes sunflower (*Helianthus niveus* var. *tephrodes*), CRPR 1B.2
- giant Spanish-needle (*Palafoxia arida* var. *gigantea*), CRPR 1B.3
- roughstalk witch grass (*Panicum hirticaule* var. *hirticaule*), CRPR 2B.1
- Coves' cassia (*Senna covesii*), CRPR 2B.1

4.3.2 Wildlife

The literature search documented 23 special-status wildlife species in the vicinity of the Project Area, six of which are federally and/or state listed. Of the 23 special-status wildlife species identified in the literature review, three were present within the Project Area, one was found to have a high potential to occur, three were found to have a moderate potential to occur, and seven were found to have a low potential to occur; the remaining nine species are presumed absent from the Project Area. Descriptions of the federal and state wildlife designations are found in Table 4, and a brief natural history and discussion of the special-status wildlife species found onsite that have a high or moderate potential to occur on the Project Area are provided below. Special-status wildlife species observed during the reconnaissance survey are depicted on Figure 5.

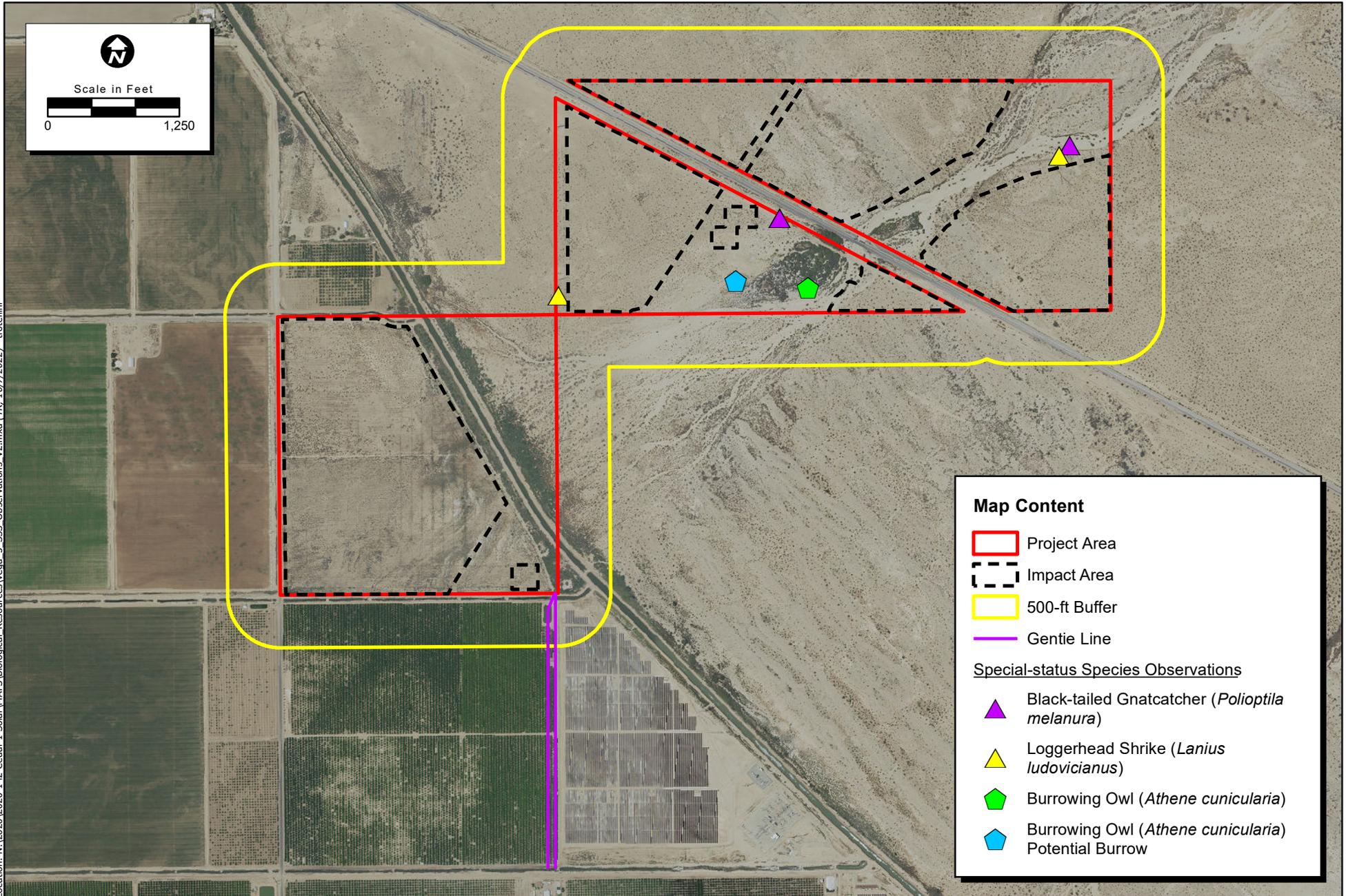
List Designation	Meaning
Federal Designation	Jurisdiction under United States Fish and Wildlife Service (USFWS)
END	Federally listed as Endangered
THR	Federally listed as Threatened
CAN	Federal Candidate Species
FSC	Federal Species of Concern
FPD	Federal Proposed for Delisting
BBC	Bird of Conservation Concern
State Designation	Jurisdiction under California Fish and Wildlife Service (CDFW)
END	State listed as Endangered
THR	State listed as Threatened
SSC	California Species of Special Concern
FP	Fully Protected Species
WL	Watch List

4.3.2.1 Special-Status Wildlife Species Present

The following species were either observed during the reconnaissance survey:

- Black-tailed gnatcatcher is a CDFW WL species. This species remains in pairs all year, defending permanent territories. Black-tailed gnatcatchers prefer dry washes or desert brush with varied growth of mesquite, acacias, and paloverdes, but are also known to inhabit tamarisk scrub. One individual was observed foraging within the bush seepweed scrub along the railroad right-of-way and another individual was observed foraging within the tamarisk thickets of the Project Area (Figure 5).
- Loggerhead strike is a USFWS Bird of Conservation Concern (BCC) and a CDFW SSC. This species prefers open country with scattered shrubs and trees. They frequent agricultural fields, abandoned orchards, desert scrublands, and riparian areas. One individual was observed perched in the bush seepweed scrub in the center of the Project Area and another individual was observed foraging in the creosote bush scrub in the northwestern portion of the Project Area (Figure 5).

Location: N:\2020\2020-142_Cedar_1_Solar\MAPS\Biological_Resources\Vega_5_SSS_Observations_V2.mxd (TR, 10/7/2022) - trotellini



Map Date: 10/7/2022
Photo Source: NAIP (2020), ECORP UAS Imagery (2020)

Figure 5. Special-status Species Observations

- Burrowing owl (BUOW) is a USFWS BBC and CDFW SSC. It is typically found in dry open areas with few trees and short grasses; it is also found in vacant lots near human habitation. It uses uninhabited mammal burrows for roosts and nests, often times in close proximity to California ground squirrel colonies. It primarily feeds on large insects and small mammals but will also eat birds and amphibians. The creosote scrub and portions of the riparian habitats provides potential habitat throughout the Project Area and buffer. Ground squirrel burrows that could be utilized by owls were detected within the Project Area. One burrowing owl was observed during the survey and potential burrows were detected within the Project Area. Twelve CNDDDB records (2007) occur within five miles of the Project Area, with the closest record overlapping the Project boundary.

4.3.2.2 Special-Status Wildlife Species with a High Potential to Occur

One species was found to have high potential to occur within the Project Area due to the presence of suitable habitat for the species occurring onsite and a known occurrence has been recorded within five miles of the Project Area:

- Mountain plover (*Charadrius montanus*) is a USFWS BCC and a CDFW SSC. This species is most commonly found in grassy semidesert with scattered saltbush, sage, prickly pear, and yucca. It is also found in fallow or recently plowed agricultural fields and in overgrazed landscapes that mimic their natural shortgrass habitat. Three recent CNDDDB observations have been recorded within five miles of the Project, the closest observation being approximately two miles away. The old agricultural land west and south of the East Highline Canal provides suitable habitat for the mountain plover.

4.3.2.3 Special-Status Wildlife Species with a Moderate Potential to Occur

Three species were found to have moderate potential to occur within the Project Area because habitat (including soils and elevation factors) for the species occurs onsite and a known occurrence exists within the database search, but not within five miles of the Project Area; or a known occurrence exists within five miles of the site and marginal or limited amounts of habitat occurs within the Project Area:

- California black rail (*Laterallus jamaicensis ssp. coturniculus*) is a USFWS BBC, state threatened, and CDFW fully protected species. California black rail are typically found in marsh habitat, including riparian marshes, saltmarshes, and wetlands. This species prefers consistent shallow water within the habitats. There is suitable habitat during the rainy season and shortly after for the California black rail within the wetlands in the Survey Area. There is one recent CNDDDB record from 2015 approximately three miles from the Project Area and four historic CNDDDB records, two of which are located within the Project Area.
- Merlin (*Falco columbarius*) is a CDFW WL species. This species prefers open and semi-open areas within woodlands near water bodies including rivers, lakes, and wetlands. There are suitable open areas within the upland habitats adjacent to the tamarisk thickets that provide suitable habitat for the merlin. Therefore, wintering individuals have a moderate potential to occur within the Project Area. There is a CNDDDB record from 2007 located approximately three miles from the Project Area.

- Yuma hispid cotton rat (*Sigmodon hispidus eremicus*) is a CDFW SSC. This species occurs in open fields or on the borders of open fields where there is dense grass habitat and/or agricultural fields. There is potential for this species to occur near the East Highline Canal and creosote bush scrub habitat of the Survey Area.

4.3.2.4 Wildlife Species with Low Potential to Occur

Seven species were found to have a low potential to occur within the Project Area because limited habitat for the species occurs onsite and a known occurrence has been reported in the database, but not within five miles of the Project Area, or suitable habitat strongly associated with the species occurs onsite, but no records were found in the database search:

- desert tortoise, federally listed threatened and state listed threatened,
- flat-tailed horned lizard (*Phrynosoma mcallii*), CDFW SSC,
- northern harrier (*Circus hudsonius*), CDFW SSC,
- Yuma Ridgway's rail (*Rallus obsoletus ssp. yumanensis*), federally listed endangered, state listed threatened, and CDFW FP,
- California leaf-nosed bat (*Macrotus californicus*), CDFW SSC,
- pallid bat (*Antrozous pallidus*), CDFW SSC, and
- western yellow bat (*Lasiurus xanthinus*), CDFW SSC.

4.3.2.5 Wildlife Species Presumed Absent

The following nine species are presumed absent from the Project due to the lack of suitable habitat within the Project Area:

- razorback sucker (*Xyrauchen texanus*), federally listed endangered, state listed endangered, and CDFW FP,
- Sonoran desert toad (*Incilius alvarius*), CDFW SSC,
- barefoot gecko (*Coleonyx switaki*), state listed threatened,
- western mastiff bat (*Eumops perotis ssp. californicus*), CDFW SSC,
- pocketed free-tailed bat (*Nyctinomops femorosaccus*), CDFW SSC,
- Mexican long-tongued bat (*Choeronycteris mexicana*), CDFW SSC,
- big free-tailed bat (*Nyctinomops macrotis*), CDFW SSC,
- Townsend's big-eared bat (*Corynorhinus townsendii*), CDFW SSC, and
- peninsular bighorn sheep (*Ovis canadensis ssp. nelson*), federally listed endangered, state listed endangered, and CDFW FP.

4.4 Wildlife Movement Corridors, Linkages, and Significant Ecological Areas

The concept of habitat corridors addresses the linkage between large blocks of habitat that allow the safe movement of mammals and other wildlife species from one habitat area to another. The definition of a corridor is varied, but corridors may include such areas as greenbelts, refuge systems, underpasses, and biogeographic land bridges, for example. In general, a corridor is described as a linear habitat, embedded in a dissimilar matrix, which connects two or more large blocks of habitat. Wildlife movement corridors are critical for the survivorship of ecological systems for several reasons. Corridors can connect water, food, and cover sources, spatially linking these three resources with wildlife in different areas. In addition, wildlife movement between habitat areas provides for the potential of genetic exchange between wildlife species populations, thereby maintaining genetic variability and adaptability to maximize the success of wildlife responses to changing environmental conditions. This is especially critical for small populations subject to loss of variability from genetic drift and effects of inbreeding. Naturally, the nature of corridor use and wildlife movement patterns varies greatly among species.

The Project Area was assessed for its ability to function as a wildlife corridor. The Project Area has an ephemeral drainage braided system with an associated riparian corridor in the eastern section of the Project that provides cover for migrating and nesting birds. It also provides foraging habitat for raptors and small and large mammals, including rodents and canids. The tamarisk thicket-dominated wetlands located near the canal boundaries are likely utilized by wildlife moving through the area. Therefore, these features and associated riparian habitat would be considered necessary linkages between natural habitat areas to the north and east. The southwestern portion is restricted by the East Highland canal, off-shoot channels, roads, and agricultural fields. Although the canals, roads, and agricultural fields inhibit or deter large mammal movement, avian species and small mammals may forage and pass through these features.

The bush seepweed scrub, iodine scrub, and creosote bush scrub habitats offer little shelter, but moderate-quality foraging habitat. This natural pocket of habitat is semi-open with barriers to the north and south, leaving the terrain accessibility constrained for wildlife access. The eastern portion of the Project Area currently provides wildlife movement opportunities to the northwest and southeast because it consists of open and relatively unimpeded land. However, this portion of the Project would not be considered a wildlife movement corridor that would need to be preserved to allow wildlife to move between important natural habitat areas due to the lack of conserved natural lands in the immediate vicinity and the Project's proximity to farming lands. The Project is surrounded to the north, west, and south by agriculture. The scrub habitat within the Project boundaries is exposed and does not contain any major features that would be considered critical movement corridors for wildlife. Therefore, the scrub habitat acts as more of a buffer between agricultural lands and wildlands to the northeast, but not as a corridor for mammals.

5.0 PROJECT IMPACTS

Implementation of the Project has potential to impact creosote bush scrub habitat, bush seepweed scrub, and tamarisk thickets. These communities may provide suitable nesting and foraging habitat for passerines, including California black rail, BUOW, mountain plover, loggerhead strike, black-tailed

gnatcatcher, raptor foraging habitat, and habitat for Salton milk-vetch, Borrego milk-vetch, gravel milk-vetch, spiny abrojo, glandular ditaxis, Abram's spurge, ribbed cryptantha, slender-spined all thorn, slender cottonheads, sand food, and Mecca-aster. The following recommendations would be required to determine if the Project would result in significant impacts to vegetation communities, special-status plant and wildlife species, jurisdictional waters, and wildlife movement corridors.

5.1.1 Special-Status Species

5.1.1.1 Special-Status Plants

The literature review identified 22 special-status plant species that have the potential to occur within the Project Area. However, 11 of these plant species have a low potential to occur due to limited suitable habitat. These species include chaparral sand-verbena, Hardwood's milk-vetch, Peirson's milk-vetch, Munz's cholla, pink fairy-duster, sand evening-primrose, Wiggins' croton, Algodones Dunes sunflower, giant Spanish-needle, roughstalk witch grass, and Coves' cassia.

There is moderate or high potential for 11 rare plant species (i.e. Salton's milk-vetch, Borrego milk-vetch, gravel milk-vetch, spiny abrojo, glandular ditaxis, Abram's spurge, ribbed cryptantha, slender-spined all thorn, slender cottonheads, sand food, and Mecca-aster) to be present within the Project Area. Suitable habitat for these species is present within the washes and creosote bush scrub habitats. Impacts that may occur to the species includes loss of individuals, habitat, and seedbank. Depending on the size of the population, this impact may be significant. Implementation of **BIO-1** and **BIO-2** is recommended to decrease the chances of a significant impact.

5.1.1.2 Special-Status Wildlife

The literature review identified 23 special-status wildlife species that have the potential to occur within the Project Area. However, 16 of these species have a low or no potential to occur due to the lack of suitable and limited habitat within the Project site. Wildlife species that are presumed absent from the Project Area include: Sonoran desert toad, barefoot gecko, western mastiff bat, pocketed free-tailed bat, Mexican long-tongued bat, Townsend's big-eared bat, big free-tailed bat, and peninsular bighorn sheep. Wildlife species with a low potential to occur include desert tortoise, razorback sucker, flat-tailed horned lizard, northern harrier, Yuma's ridgeway rail, California leaf-nosed bat, pallid bat, and western yellow bat.

Four species have a moderate or high potential to occur within the Project Area, these species are mountain plover, merlin, California black rail, and Yuma hispid cotton rat. Additionally, three special-status wildlife species were observed onsite during the habitat assessment. Black-tailed gnatcatchers, BUOW, and loggerhead strikes were observed in the tamarisk thickets and creosote bush scrub in the northern portion of the Project Site. Direct impacts to these species that could occur include injury, mortality, nest failures, and loss of young. Indirect impacts include loss of nesting and foraging habitat, increase in anthropogenic effects (i.e. noise levels, introduction of invasive/nonnative species, increase in human activity, increase in dust). Impacts to these species could be considered significant; therefore, implementation of **BIO-2**, **BIO-3**, **BIO-4**, **BIO-5**, and **BIO-7** is recommended.

Foraging habitat for a number of raptor species and breeding habitat for numerous passerine species that are protected by the MBTA occurs throughout the Project Area. The site provides nesting habitat for ground-nesting species as well as species that nest in creosote scrub and riparian scrub habitats. Due to the lack of large trees within the Survey Area, there is no suitable nesting habitat for tree-nesting raptor species. Direct impacts to nesting avian species include injury, mortality, loss of young, and nest failure. Indirect impacts include loss of foraging and nesting habitat for passerine and raptors species, increase in noise and human activities, potential introduction of invasive/nonnative species. Implementation of **BIO-4**, **BIO-5**, and **BIO-7** are recommended to mitigate for potential impacts.

5.1.2 Sensitive Natural Communities

The approximately 405-acre site is comprised of fallow agricultural, creosote bush scrub, bush seepweed scrub, tamarisk thickets, and urban/developed land, that would be directly impacted by the Project. Active agricultural land, creosote bush scrub, iodine bush scrub, and tamarisk thickets occur within the Project buffer. In-kind mitigation, up to 3:1 ratio, may be required by CDFW to offset impacts to bush seepweed scrub and tamarisk thickets in order to reduce impacts to less than significant. Implementation of **BIO-7** and **BIO-8** is recommended to reduce potential impacts to a less than significant threshold.

5.1.3 State- and/or Federally Protected Wetlands and Waters

The results of the Aquatic Resources Delineation and discussion of potential impacts on state or federally protected wetlands or Waters of the U.S are discussed in the Aquatic Resources Delineation Report (ECORP 2020), prepared under a separate cover. Implementation of **BIO-6** and **BIO-8** is recommended to mitigate for potential significant impacts.

5.1.4 Wildlife Corridors and Nursery Sites

The Project Area is located adjacent to areas containing existing disturbances (i.e., roads, railroad tracks, and active agricultural land). The majority of the Project site does not contain suitable vegetation or cover to support wildlife movement and is nestled between agricultural and development; therefore, wildlife movement opportunities connecting the Project Site to large, undeveloped natural areas is limited. However, the riparian corridor could act as a potential corridor and nurse site for migrating wildlife species. Therefore, implementation of **BIO-2**, **BIO-4**, **BIO-5**, **BIO-6**, and **BIO-7** are recommended to mitigate for potential significant impacts.

5.1.5 Habitat and Conservation Plans and Natural Community Conservation

The Project will follow the guidelines in Imperial County's Conservation and Open Space Element and meet the requirements outlined in the plan. Consultation with County of Imperial - Department of Planning and Development, USFWS, and CDFW would be required should listed plant and/or wildlife species be found to occur.

6.0 RECOMMENDATIONS AND MITIGATION MEASURES

The following recommendations have been developed in accordance with the CEQA impacts analysis for the Project (see Section 5) but should not be considered mitigation measures at this point in the Project planning process. These actions are recommended prior to Project implementation:

- BIO-1 Rare Plant Surveys:** Rare plant surveys should be conducted within suitable habitat on the Project Area during the appropriate blooming period for the Salton milk-vetch, Borrego milk-vetch, gravel milk-vetch, spiny abrojo, glandular ditaxis, Abram's spurge, ribbed cryptantha, slender-spined all thorn, slender cottonheads, sand food, and Mecca-aster. The surveys should be conducted by a botanist or qualified biologist in accordance with the USFWS Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants (USFWS 1996); the CDFW Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities (CDFW 2018); and the CNPS Botanical Survey Guidelines (CNPS 2001). If any special-status species are observed during the rare plant surveys, the location of the individual plant or population will be recorded with a submeter GPS device for mapping purposes. If Project-related impacts to rare plants on the Project site are unavoidable, then consultation with CDFW may be required to develop a mitigation plan or additional avoidance and minimization measures. Mitigation measures that may be implemented if the species is observed include establishing a no-disturbance buffer around locations of individuals or a population and additional monitoring requirements.
- BIO-2 Biological Monitoring:** A qualified biologist should be present to monitor all ground-disturbing and vegetation-clearing activities conducted for the Project. During each monitoring day, the biological monitor should perform clearance survey "sweeps" at the start of each work day that vegetation clearing takes place to minimize impacts on special-status species with potential to occur (including, but not limited to, special-status (i.e. Yuma hispid cotton rat and/or nesting bird species). The monitor will be responsible for ensuring that impacts to special-status species, nesting birds, and active nests will be avoided to the greatest extent possible. Biological monitoring should take place until the Project Site has been completely cleared of any vegetation. If an active nest is identified, the biological monitor should establish an appropriate disturbance limit buffer around the nest using flagging or staking. Construction activities should not occur within any disturbance limit buffer zones until the nest is deemed no longer active by the biologist. If special-status wildlife species are detected during biological monitoring activities, consultation with the USFWS and/or CDFW should be conducted and a mitigation plan should be developed to avoid and offset impacts to these species. Mitigation measures may consist of work restrictions or additional biological monitoring activities after ground-disturbing activities are complete.
- BIO-3 Pre-Construction Surveys for Burrowing Owl:** Pre-construction surveys for burrowing owl should be conducted within the Project Area and adjacent areas prior to the start of ground-

disturbing activities. The surveys should follow the methods described in the CDFW's *Staff Report on Burrowing Owl Mitigation* (CDFW 2012). Two surveys should be conducted, with the first survey being conducted between 30 and 14 days before initial ground disturbance (grading, grubbing, and construction), and the second survey being conducted no more than 24 hours prior to initial ground disturbance. If burrowing owls and/or suitable burrowing owl burrows with sign (e.g., whitewash, pellets, feathers, prey remains) are identified on the Project site during the survey and impacts to those features are unavoidable, consultation with the CDFW should be conducted and the methods described in the CDFW's *Staff Report on Burrowing Owl Mitigation* (CDFW 2012) for avoidance and/or passive relocation should be followed.

- BIO-4 Pre-Construction Nesting Bird Survey:** If construction or other project activities are scheduled to occur during the bird breeding season (Typically February 1 through August 31 for raptors and March 15 through August 31 for the majority of migratory bird species), a pre-construction nesting-bird survey should be conducted by a qualified avian biologist to ensure that active bird nests, including those for the black-tailed gnatcatcher, BUOW, and loggerhead strike, will not be disturbed or destroyed. The survey should be completed no more than three days prior to initial ground disturbance. The nesting-bird survey should include the Project Area and adjacent areas where Project activities have the potential to affect active nests, either directly or indirectly due to construction activity or noise. If an active nest is identified, the biologist should establish an appropriately sized disturbance limit buffer around the nest using flagging or staking. Construction activities should not occur within any disturbance limit buffer zones until the nest is deemed inactive by the qualified biologist.
- BIO-5 Pre-Construction Survey for Special-Status Species:** A pre-construction survey should be conducted for special-status wildlife species within all areas of potential permanent and temporary disturbance. The pre-construction survey should take place no more than 14 days prior to the start of ground-disturbing activities. The pre-construction surveys should take place regardless of breeding season timing and should focus on identifying the presence of special-status wildlife species present within the Project Area or that were identified as having a high potential to occur within the Project Area. These species include, but are not limited to, mountain plover, California black rail, merlin, Yuma hispid cotton rat, BUOW, black-tailed gnatcatcher, and loggerhead strike. Should any special-status species be identified during the pre-construction survey, consultation to develop suitable avoidance and minimization measures with the appropriate agency (USFWS, CDFW) may need to be undertaken.
- BIO-6 Aquatic Resources Regulatory Permitting:** If Project-related impacts will occur to areas under the jurisdiction of the USACE, CDFW or RWRCB, a regulatory permit with those agencies is needed prior to the impact occurring. Permitting includes preparation and submittal of a Pre-Construction Notification under Section 404 of the federal Clean Water Act, an Application for Water Quality Certification under Section 401 of the federal Clean

Water Act and a Notification of Lake or Streambed Alteration under Section 1600 of the California Fish and Game Code. Other items such as finalized project plans, quantities of fill material, supporting technical studies and so on are also submitted along with the applications. As a part of this process, the Project must also identify and approve mitigation through the respective agencies. Mitigation can include onsite or offsite options or could include payment of an in-lieu fee to a conservation organization. Types of mitigation can include restoration, creation, rehabilitation, enhancement or other types of habitat improvement. Typically, the type of mitigation and acreage of mitigation is negotiated with the regulatory agencies during the permitting process.

BIO-7 Sensitive Habitat Avoidance: To the greatest extent possible, plans should avoid impacts to bush seepweed scrub and tamarisk thicket habitats to minimize potential impacts to special-status species. Excluding these habitats from the Project should also minimize mitigation and permitting requirements to meet the less than significance threshold.

BIO-8 Minimization of Impacts to Wetland/Riparian Habitat: Solar panels, structures, and new access roads should not be placed within 50 feet of wetland and riparian habitat boundaries. A construction buffer of 300 feet should be established around the wetlands and riparian habitat during bird breeding season (February 1 – August 31). Prior to construction, fencing should be installed approximately 10 feet from the wetland and riparian habitat boundaries within 50 feet of the Project. Fencing should be easily visible to construction. Plans should clearly delineate access roads and staging areas. The extensive alluvial fan system should not be used as an access road between Project Areas.

The following best management practices are not mitigation measures pursuant to CEQA but are recommended to further reduce impacts to special-status species that have potential to occur on the property:

- Confine all work activities to a pre-determined work area. Prior to the initiation of ground disturbing activities, the project footprint, including laydown and staging areas, will be clearly delineated using fencing. All equipment and materials shall use existing roads and parking areas for equipment staging and laydown.
- To prevent inadvertent entrapment of wildlife during the construction phase of the Project, all excavated, steep-walled holes or trenches more than two feet deep should be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen fill or wooden planks should be installed. Before such holes or trenches are filled, they should be thoroughly inspected for trapped animals.
- Wildlife are often attracted to burrow- or den-like structures, such as pipes and may enter stored pipes and become trapped or injured. To prevent wildlife use of these structures, all construction pipes, culverts, or similar structures with a diameter of four inches or greater should be capped while stored onsite.

- All food-related trash items such as wrappers, cans, bottles, and food scraps should be disposed of in securely closed containers and removed at least once a week from a construction or Project site.
- Use of rodenticides and herbicides on Project site should be restricted. This is necessary to prevent primary or secondary poisoning of wildlife, including burrowing owl and the depletion of prey populations on which they depend. All uses of such compounds should observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and federal legislation. If rodent control must be conducted, zinc phosphide should be used because of a proven lower risk to BUOW.

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LIST OF ATTACHMENTS

Attachment A - Representative Site Photographs

Attachment B - Special-Status Plant Potential for Occurrence Table

Attachment C - Special-Status Wildlife Potential for Occurrence Table

ATTACHMENT A

Representative Site Photographs

Attachment A: Representative Site Photographs



Photo 1. Cross-section of the ephemeral drainage braided system in the eastern section of the Survey Area, facing east.



Photo 2. Creosote bush scrub within the Project Area, facing east.

Attachment A: Representative Site Photographs



Photo 3. One of the main channels of the ephemeral drainage system in the eastern section of the Project Area, surrounded by tamarisk thickets, with the bridge underpass in the background, facing north.



Photo 4. Bush seepweed scrub in the southwestern section of the Project Area with an ephemeral drainage in the center, facing north.

Attachment A: Representative Site Photographs



Photo 5. Iodine bush scrub of the Project Area with tamarisk thickets in the background, facing southeast.



Photo 6. Fallow agricultural field in southwest section of Project Area, facing south.



Photo 7. View of the East Highland canal within the Project Area lined with common reed and arrow weed, facing north.

Special-Status Plant Potential for Occurrence Table

Special-Status Plant Species with Potential to Occur within the Project site

Scientific Name Common Name	Status	Blooming Period/ Elevation Range (meters)	Habitat	Potential to Occur in the Project
<i>Abronia villosa</i> var. <i>aurita</i> chaparral sand-verbena	USFWS: None CDFW: None CRPR: 1B.1 BLM: Sensitive	Mar-Sep (75 - 1600)	Chaparral Coastal scrub Desert dunes	Low: Limited habitat occurs within the Project site; known occurrence exists within the CNPS nine quadrant search.
<i>Astragalus crotalariae</i> Salton milk-vetch	USFWS: None CDFW: None CRPR: 4.3 BLM: None	Jan-Apr (-60 - 250)	Sonoran desert scrub	Moderate: Habitat for this species occurs within the Project site; known occurrence exists within CNPS nine quadrat search.
<i>Astragalus insularis</i> var. <i>harwoodii</i> Harwood's milk-vetch	USFWS: None CDFW: None CRPR: 2B.2 BLM: None	Jan-May (0 - 710)	Desert dunes Mojavean desert scrub	Low: Limited habitat occurs within the Project site; known occurrence exists within CNPS nine quadrat search.
<i>Astragalus lentiginosus</i> var. <i>borreganus</i> Borrego milk-vetch	USFWS: None CDFW: None CRPR: 4.3 BLM: None	Feb-May (30 - 895)	Mojavean desert scrub Sonoran desert scrub	Moderate: Habitat for this species occurs within the Project site; known occurrence exists within CNPS nine quadrat search.
<i>Astragalus magdalenae</i> var. <i>peirsonii</i> Peirson's milk-vetch	USFWS: Threatened CDFW: Endangered CRPR: 1B.2 BLM: Federal Threatened	Dec-Apr (60 - 225)	Desert dunes	Low: Limited habitat occurs within the Project site; known occurrence exists within CNPS nine quadrat search.
<i>Astragalus sabulorum</i> gravel milk-vetch	USFWS: None CDFW: None CRPR: 2B.2 BLM: None	Feb-Jun (-60 - 930)	Desert dunes Mojavean desert scrub Sonoran desert scrub	High: Habitat for this species occurs within the Project site; historic CNNDDB record (1906) approximately 3 miles from the Project.
<i>Calliandra eriophylla</i> pink fairy-duster	USFWS: None CDFW: None CRPR: 2B.3 BLM: None	Jan-Mar (120 - 1500)	Sonoran desert scrub	Low: Limited habitat occurs within the Project site; known occurrence exists within CNPS nine quadrat search.
<i>Chylismia arenaria</i> sand evening-primrose	USFWS: None CDFW: None CRPR: 2B.2 BLM: None	Nov-May (-70 - 915)	Sonoran desert scrub	Low: Limited habitat occurs within the Project site; known occurrence exists within database.

Special-Status Plant Species with Potential to Occur within the Project site

Scientific Name Common Name	Status	Blooming Period/ Elevation Range (meters)	Habitat	Potential to Occur in the Project
<i>Condalia globosa</i> var. <i>pubescens</i> spiny abrojo	USFWS: None CDFW: None CRPR: 4.2 BLM: None	Mar-May (85 – 1000)	Sonoran desert scrub	Moderate: Habitat occurs within the Project site; known occurrence exists within CNPS nine quadrat search.
<i>Croton wigginsii</i> Wiggins' croton	USFWS: None CDFW: Rare CRPR: 2B.2 BLM: Sensitive	Mar-May (50 - 100)	Desert dunes Sonoran desert scrub	Low: Limited habitat for this species occurs within the Project site; known CNDDDB occurrence (1986) approximately 4 miles from the Project.
<i>Cylindropuntia munzii</i> Munz's cholla	USFWS: None CDFW: None CRPR: 1B.3 BLM: Sensitive	May (150 – 600)	Sonoran desert scrub	Low: Limited habitat for this species occurs within the Project site; known CNDDDB occurrence (2017) exists within 1 mile of the Project. This species was not observed during the reconnaissance survey.
<i>Ditaxis claryana</i> glandular ditaxis	USFWS: None CDFW: None CRPR: 2B.2 BLM: None	Oct, Dec, Jan, Feb, Mar (0 – 465)	Mojavean desert scrub Sonoran desert scrub	High: Habitat for the species occurs in the Project site and a known CNDDDB occurrence (1978) has been recorded within one mile of the Project.
<i>Euphorbia abramsiana</i> Abrams' spurge	USFWS: None CDFW: None CRPR: 2B.2 BLM: None	Sep-Nov (-5 - 1310)	Mojavean desert scrub Sonoran desert scrub	Moderate: Habitat for this species occurs within the Project site; known occurrence exists within CNPS nine quadrat search.
<i>Helianthus niveus</i> var. <i>tephrodes</i> Algodones Dunes sunflower	USFWS: None CDFW: Endangered CRPR: 1B.2 BLM: None	Sep-May (50 - 100)	Desert dunes	Low: Limited habitat occurs within the Project site; known occurrence exists within CNPS nine quadrat search.
<i>Johnstonella costata</i> ribbed cryptantha	USFWS: None CDFW: None CRPR: 4.3 BLM: None	Feb-May (-60 - 500)	Desert dunes Mojavean desert scrub Sonoran desert scrub	Moderate: Habitat for this species occurs within the Project site; known occurrence exists within CNPS nine quadrat search.
<i>Koeberlinia spinosa</i> var. <i>tenuispina</i> slender-spined all thorn	USFWS: None CDFW: None CRPR: 2B.2 BLM: None	May-Jul (150 - 510)	Riparian woodland Sonoran desert scrub	Moderate: Habitat occurs within the Project site; known occurrence exists within CNPS nine quadrat search.

Special-Status Plant Species with Potential to Occur within the Project site				
Scientific Name Common Name	Status	Blooming Period/ Elevation Range (meters)	Habitat	Potential to Occur in the Project
<i>Nemacaulis denudata</i> <i>var. gracilis</i> slender cottonheads	USFWS: None CDFW: None CRPR: 2B.2 BLM: None	Apr-May (-50 - 400)	Coastal dunes Desert dunes Sonoran desert scrub	Moderate: Habitat for this species occurs within the Project site; known occurrence exists within CNPS nine quadrat search.
<i>Palafoxia arida</i> <i>var. gigantea</i> giant Spanish-needle	USFWS: None CDFW: None CRPR: 1B.3 BLM: Sensitive	Jan-May (15 - 100)	Desert dunes	Low: Limited habitat occurs within the Project site; known occurrence exists within CNPS nine quadrat search.
<i>Panicum hirticaule</i> <i>var. hirticaule</i> roughstalk witch grass	USFWS: None CDFW: None CRPR: 2B.1 BLM: None	Aug-Dec (45 – 315)	Desert dunes Joshua tree woodland Mojavean desert scrub Sonoran desert scrub	Low: Limited habitat occurs within the Project site; known occurrence exists within CNPS nine quadrat search.
<i>Pholisma sonorae</i> sand food	USFWS: None CDFW: None CRPR: 1B.2 BLM: Sensitive	Apr-Jun (0 - 200)	Desert dunes Sonoran desert scrub	Moderate: Habitat for this species occurs within the Project site; known occurrence exists within CNPS nine quadrat search.
<i>Senna covesii</i> Coves' cassia	USFWS: None CDFW: None CRPR: 2B.1 BLM: None	Aug-Dec (45 – 1315)	Desert dunes Joshua tree woodland Mojavean desert scrub Sonoran desert scrub	Low: Limited habitat occurs within the Project site; known occurrence exists within CNPS nine quadrat search.
<i>Xylorhiza cognata</i> Mecca-aster	USFWS: None CDFW: None CRPR: 1B.2 BLM: Sensitive	Jan-Jun (20 – 400)	Sonoran desert scrub	Moderate: Habitat for this species occurs within the Project site; known occurrence exists within CNPS nine quadrat search.

California Native Plant Society (CNPS) Rare Plant Ranks:

1B: Plants rare, threatened, and endangered in California and elsewhere.

2B: Plants rare, threatened, or endangered in California, but more common elsewhere.

4: Plants of limited distribution; a watch list.

CNPS Threat Ranks:

0.1: Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)

0.2: Fairly threatened in California (20-80% of occurrences threatened / moderate degree and immediacy of threat)

0.3-Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

Sources:

California Natural Diversity Data Base (CNDDB) (CDFW 2020)

CNPS Rare and Endangered Plant Inventory (CNPS 2020)

Calflora Information on California Plants (Calflora 2020)

IPaC (USFWS 2020)

Special Status Plants (BLM 2015)

Special-Status Wildlife Potential for Occurrence Table

Special-Status Wildlife Species Potential For Occurrence

<i>Scientific Name</i> Common Name	Status	Habitat Requirements	Potential for Occurrence
VERTEBRATES			
OSTEICHTHYES (BONY FISH)			
CATOSTOMIDAE (suckers)			
<i>Xyrauchen texanus</i> razorback sucker	USFWS: CDFW:	END END, FP	Rivers and lakes in the southwestern United States Presumed absent. No suitable habitat on site. Perennial canal present in buffer. One historic (1974), but no recent CNDDB record within 5 miles of the site.
AMPHIBIANS			
BUFONIDAE (true toads)			
<i>Incilius alvarius</i> Sonoran Desert toad	USFWS: CDFW:	none SSC	Creosote bush desert scrub, grasslands up into oak-pine woodlands, thorn scrub and tropical deciduous forest in Mexico. Presumed absent. Suitable habitat on site and within the buffer; however, population may be extirpated (Jennings and Hayes 1994). One historic (1916), but no recent CNDDB record within 5 miles of the site.
REPTILES			
GEKKONIDAE (geckos)			
<i>Coleonyx switaki</i> barefoot gecko	USFWS: CDFW:	none THR	Arid rocky areas on flatlands, canyons, thorn scrub, especially where there are large boulders and rock outcrops, and where vegetation is sparse. Presumed absent. Habitat such as canyons, thorn scrub, large boulders, and rock outcrops not present on site. No CNDDB records occur within 5 miles of the site.
PHRYNOSOMATIDAE (spiny lizards)			
<i>Phrynosoma mcallii</i> flat-tailed horned lizard	USFWS: CDFW:	none SSC	Desert scrub on sandy flats and valleys with little or no windblown sand, salt flats, and areas with gravelly soils. There are three regional populations of flat-tailed horned lizard in California; two of these (representing the majority of the range in the State) occur in Imperial County. These are on the west side of the Salton Sea/Imperial Valley and on the east side of the Imperial Valley. Low. Suitable habitat on site. No CNDDB records occur within 5 miles of the site.
TESTUDINDAE (land tortoises)			
<i>Gopherus agassizii</i> Mojave desert tortoise	USFWS: CDFW:	THR THR	Sandy flats to rocky foothills, including alluvial fans, washes and canyons where suitable soils for den construction might be found. Low. Suitable habitat within the site and buffer. Desert tortoise critical habitat is approximately 10 miles northeast of the site. No CNDDB records occur within 5 miles of the site.

BIRDS				
ACCIPITRIDAE (hawks, kites, harriers, and eagles)				
<i>Circus hudsonius</i> northern harrier	USFWS: CDFW:	none SSC	Undisturbed tracts of grasslands and wetlands with low, thick vegetation. Prefers to breed in dry upland habitats, old fields, grazed meadows, drained marshlands, and high-desert shrubsteppe. Also found in pasturelands, croplands, and open floodplains.	Low. Marginally suitable habitat onsite. No nesting habitat onsite. No CNDDDB records occur within 5 miles of the site.
CHARADRIIDAE (plovers and lapwings)				
<i>Charadrius montanus</i> mountain plover	USFWS: CDFW:	BCC SSC	Shortgrass prairie, especially where blue grama, buffalo grass, and western wheat grass are dominant; and in grassy semidesert with scattered saltbush, sage, prickly pear, and yucca, at elevations ranging from 2,100 to 10,663 feet. Also found in fallow or recently plowed agricultural fields and in overgrazed landscapes that mimic their natural shortgrass habitat.	High. Suitable habitat such as agricultural fields onsite. Three CNDDDB records occur within 5 miles of the project site with the closest one being two miles away (2011).
FALCONIDAE (falcons and caracaras)				
<i>Falco columbarius</i> merlin	USFWS: CDFW:	none WL	Open and semi-open areas in fragmented woodlots, near rivers, lakes, or bogs, and on lake islands.	Moderate. Suitable river and wetland habitat within the site and buffer. One recent CNDDDB record (2007) occurs within 3 miles of the site.
LANIIDAE (shrikes)				
<i>Lanius ludovicianus</i> loggerhead shrike (nesting)	USFWS: CDFW:	BCC SSC	Open country with short vegetation and well-spaced shrubs or low trees, particularly those with spines or thorns, agricultural fields, pastures, old orchards, riparian areas, desert scrublands, savannas, prairies, golf courses, and cemeteries.	Present. One adult was observed in the southwestern corner of the Project. Suitable habitat such as agricultural fields onsite. One CNDDDB record (2007) within 1/10 of a mile of the site.

POLIOPTILIDAE (gnatcatchers)				
<i>Polioptila melanura</i> black-tailed gnatcatcher	USFWS: CDFW:	none WL	Semiarid and desert thorn scrub habitats. This species is well adapted to dry habitats and tend to be most common in areas with less than 8 inches of annual rainfall. They often live far from streams and other bodies of water.	Present. A pair was observed foraging in the tamarisk thickets within the northeastern corner of the Project. Desert scrub habitat within the site is suitable for this species. No CNDDDB records occur within 5 miles of the site.
RALLIDAE (rails)				
<i>Laterallus jamaicensis</i> <i>ssp. coturniculus</i> California black rail	USFWS: CDFW:	BCC THR, FP	Riparian marshes, coastal prairies, saltmarshes, and impounded wetlands. All of its habitats have stable shallow water, usually just 1.2 inches deep at most.	Moderate. The presence of riparian habitat and wetlands onsite provides suitable habitat. One recent CNDDDB record occurs from 2015. Four historic CNDDDB records occur with two being less than 1 mile from the site.
<i>Rallus obsoletus</i> spp. <i>yumanensis</i> Yuma Ridgway's rail	USFWS: CDFW:	END THR, FP	Consistently found in freshwater marshes that are composed of cattail and bulrush. This emergent vegetation averages greater than 6 feet tall. Water depth tends to be around 3.5 inches deep. Range extends from Nevada, California, and Arizona to Baja California and Sonora Mexico.	Low. Presence of the canal and freshwater forested/shrub wetland habitat within the site and buffer could be suitable. No CNDDDB records within 5 miles of the site.
STRIGIDAE (owls)				
<i>Athene cunicularia</i> burrowing owl	USFWS: CDFW:	BCC SSC	Open grasslands including prairies, plains, and savannah, or vacant lots and airports. Nests in abandoned dirt burrows.	Present. An adult was observed perched on a mound on the border of the tamarisk thickets in the eastern portion of the Project. Twelve CNDDDB records occur within 5 miles of the site with the closest overlapping the project boundary. Twelve owls were found in the area in 2007.
MAMMALS				
MOLOSSIDAE (free-tailed bats)				
<i>Eumops perotis</i> spp. <i>californicus</i> western mastiff bat	USFWS: CDFW:	none SSC	Roosts high above ground in rock and cliff crevices, shallow caves, and rarely in buildings. Occurs in arid and semiarid regions including rocky canyon habitats.	Presumed absent. No suitable roosting habitat within site or in buffer. No CNDDDB records within 5 miles of the site.

<i>Nyctinomops femorosaccus</i> pocketed free-tailed bat	USFWS: CDFW:	none SSC	Roosts in crevices of outcrops and cliffs, shallow caves, and buildings. Found along rugged canyons, high cliffs, and semiarid rock outcroppings.	Presumed absent. No suitable roosting habitat within site or in buffer. No CNDDDB records within 5 miles of the site.
<i>Nyctinomops macrotis</i> big free-tailed bat	USFWS: CDFW:	none SSC	Roosts in cliff crevices, and less often in buildings, caves, and tree cavities. Occurs in rocky areas of rugged and hilly country including woodlands, evergreen forests, river floodplain-arroyo habitats, and desert scrub.	Presumed absent. No suitable roosting habitat within site or in buffer. No CNDDDB records within 5 miles of the site.
PHYLLOSTOMIDAE (leaf-nosed bats)				
<i>Choeronycteris mexicana</i> Mexican long-tongued bat	USFWS: CDFW:	none SSC	Roosts in caves, rock fissures, old mines, and rarely in buildings. Found in desert shrublands, tropical deciduous forests, deep mountain canyons with riparian vegetation, oak-conifer woodlands and forests.	Presumed absent. No suitable roosting habitat within site or in buffer; however, there is suitable foraging habitat. No CNDDDB records within 5 miles of the site.
<i>Macrotus californicus</i> California leaf-nosed bat	USFWS: CDFW:	none SSC	Roosts in caves, abandoned mines, or natural rock fissures in canyons during the day. May roost in buildings, under bridges, or in porches during the night. Found in lowland desert scrub. Foraging usually takes place in dry desert washes.	Low. No suitable roosting habitat within site or in buffer; however, there is suitable foraging habitat. No CNDDDB records within 5 miles of the site.
VESPERTILIONIDAE (evening bats)				
<i>Antrozous pallidus</i> pallid bat	USFWS: CDFW:	none SSC	Roosts in rock crevices, caves, mines, buildings, bridges, and in trees. Generally, in mountainous areas, lowland desert scrub, arid grasslands near water and rocky outcrops, and open woodlands.	Low. There is a bridge spanning the river in the northeast corner of the Project; however, there was no bat sign observed during the habitat assessment. Desert scrub provides suitable foraging habitat. No CNDDDB records within 5 miles of the site.
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	USFWS: CDFW:	none SSC	Roosts in mines, caves, buildings, or other crevices, sometimes trees. Usually requires large crevices. Most common in moist areas or those with access to water.	Presumed absent. There is no suitable roosting habitat within the site and buffer. No CNDDDB records occur within 5 miles of the site.

<p><i>Lasiurus xanthinus</i> western yellow bat</p>	<p>USFWS: CDFW:</p>	<p>none SSC</p>	<p>Roosts in trees, particularly palms, in desert wash, desert riparian, valley foothill riparian, and palm oasis habitats.</p>	<p>Low. There is limited suitable roosting habitat within the site and buffer. No CNDDDB records occur within 5 miles of the site.</p>
<p>BOVIDAE (sheep and relatives)</p>				
<p><i>Ovis canadensis ssp. nelsoni</i> peninsular bighorn sheep</p>	<p>USFWS: CDFW:</p>	<p>END END, FP</p>	<p>Dry, rocky, low-elevation desert slopes, canyons, and washes from the San Jacinto and Santa Rosa mountains near Palm Springs, California south into Baja California, Mexico.</p>	<p>Presumed absent. There is no suitable habitat such as canyons and mountains within the project site and buffer. No CNDDDB records occur within 5 miles of the site.</p>
<p>CRICETIDAE (New World rats and mice)</p>				
<p><i>Sigmodon hispidus ssp. eremicus</i> Yuma hispid cotton rat</p>	<p>USFWS: CDFW:</p>	<p>none SSC</p>	<p>Inhabits a variety of habitats, but generally associated with drainage ditches, canals, and seeps vegetated with plants such as arrow weed, saltgrass, common reed, cattails, sedges, tamarisk, heliotrope, and annual grasses. They utilize runways through dense herbaceous growth and nests are built of woven grass. Noted presence in moist agricultural fields.</p>	<p>Moderate. There is marginally suitable habitat within the site and buffer. No CNDDDB records within 5 miles of the Project.</p>
<p>Federal Designations: (Federal Endangered Species Act, USFWS)</p> <p>END: Federally-listed, Endangered THR: Federally-listed, Threatened CAN: Federal Candidate Species FSC: Federal Species of Concern FPD: Federal Proposed for Delisting BCC: Bird of Conservation Concern</p>			<p>State Designations: (California Endangered Species Act, CDFW)</p> <p>END: State-listed, Endangered THR: State-listed, Threatened CAN: State Candidate Species SSC: California Species of Special Concern FP: Fully Protected Species WL: Watch List</p>	